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Pertussis and the Pertussis Vaccine

Scott W. McKercher, M.D.*

ABSTRACT
Recent news media coverage concerning the safeness of the DTP vaccine has made many parents skeptical of having their children pursue full vaccination status. Unfortunately, little information is given in these news broadcasts to the potentially devastating effects of the disease pertussis, nor to the success that has been achieved in diminishing the incidence of whooping cough with the vaccine. Complications of the disease are many and include problems as varied as subdural hematomas, hernias, pneumonias, convulsions, apnea, encephalitis, and death in 5 out of 1000 children. The DTP vaccine does have a certain low frequency number of adverse reactions such as anaphylactic reactions, seizures and encephalopathy, but as a whole, it is an efficient, reasonably safe, cost effective means of adequately protecting children from pertussis.

PERTUSSIS
The first description of pertussis was in 1578 in Paris. The term pertussis was not used, however, until 1670. In the early part of this century pertussis was one of the leading causes of death around the world, with an attack rate in the 1930’s of 872 per 100,000 people. The recent attack rate has been only 1 per 100,000 people.1 (Fig. 1)

I. Epidemiology and Etiology
Most cases of pertussis are caused by a small, gram negative, nonmotile rod — Bordetella pertussis; some cases of a “pertussis syndrome” may be due to Bordetella parapertussis, Bordetella bronchiseptica and, occasionally, adenoviruses type 1, 2, 3 and 5.3 It grows easiest on a Bordet-Gengou agar (glycerin, potato, blood), with penicillin to inhibit the growth of other organisms.

Man appears to be the only host for Bordetella pertussis. All ages can be affected, but infants and children are most susceptible. Approximately 62% of cases occur in children less than one year of age, and 43% occur in children less than five months.5, 6 The greatest mortality from pertussis also takes place in the young, with almost 72% of deaths in infants less than one year.7 Whooping cough is extremely communicable, approximately 90% of
nonimmune household contacts acquire the disease when in contact with an infected individual. Spread is via large droplets from the respiratory tract.

II. Clinical Course

The disease can be divided into four stages: incubation, the catarrhal stage, paroxysmal stage, and the convalescent stage. The total duration of illness, from exposure to return to normalcy, is about 6 to 8 weeks. The incubation stage is the period from exposure to the development of symptoms, and lasts from 6 to 20 days, with an average of 7 days.  

The catarrhal stage lasts from 1 to 2 weeks and has nondescript symptoms suggestive of the common cold. Rhinorrhea, lacrimation, mild cough, conjunctivitis, and low grade fever are common. Positive cultures and fluorescent antibodies for pertussis are likely during this stage.

It is during the paroxysmal stage, lasting 2 to 4 weeks, that the classic description of the “whooping cough” develops. This sound is made by an inspiratory effort against a narrowed glottis. Coughing episodes occur in paroxysms of 5 to 10 with associated cyanosis, salivation, bulging eyes, and distention of the neck vessels. Episodes are triggered by many variables — yawning, eating, drinking or exertion. Between paroxysms the patient may be fairly asymptomatic.

The convalescent stage completes the course and lasts 1 to 2 weeks. There is a decrease in the number of paroxysmal episodes, until the patient is asymptomatic. Some may have intermittent coughing episodes associated with upper respiratory infections for months or years after the initial episode.

III. Complications

Complications from pertussis are frequent and may be grouped in three primary categories: pressure effects, respiratory problems, and CNS difficulties. Pressure effects result from the increased force applied because of the severity of the coughing paroxysms. The most common is subconjunctival hemorrhage, but subdural hematoma, spinal epidural hematoma, rupture of the diaphragm, umbilical hernia, inguinal hernia, rectal prolapse, and subcutaneous emphysema do occur.

The most frequent complication is pneumonia, which occurs in 29%, and accounts for 90% of the deaths. The pneumonia may be due to the Bordetella pertussis infection itself, but is more likely secondary to pneumococcus or staphylococcus. Other respiratory complications include atelectasis, bronchiectasis, subcutaneous emphysema, laryngitis, and bronchitis.

Convulsions occur in approximately 2 to 4% of children with pertussis. Apnea occurs in 40% of children and may necessitate ventilator support. Some children present with coma secondary to cerebral hypoxia. Encephalitis due to pertussis takes place in 4 of 1000 individuals with the disease, with permanent damage in 1 of 8000. The death rate from pertussis is 0.5% (5 out of 1000), with 5 to 20 individuals dying in the United States each year.

IV. Diagnosis

The white blood cell count can be helpful in establishing the diagnosis. Frequently children have a leukocytosis of from 20,000 to 50,000 with a lymphocytosis. Characteristically the sedimentation rate is extremely low. Chest x-rays vary from normal to nonspecific perihilar infiltrates or atelectasis.

The diagnosis aid of choice is a nasopharyngeal swab cultured on Bordet-Gengou media. It is best to obtain the culture in the catarrhal or early paroxysmal stage. Immunofluorescent antibody to pertussis is more sensitive, but less specific than culture.

V. Treatment

The antibiotic of choice is Erythromycin in a dose of 50 mg, per kg, daily for 10 days. Antibiotic therapy will not shorten the duration of the disease if started in the paroxysmal stage. If started early in the incubation or catarrhal stage, Erythromycin may shorten the total duration of infection. Major reasons for antibiotics in pertussis are to eliminate the organism from the nasopharynx, shortening the period of communicability, and to reduce morbidity and mortality from secondary bacterial infection.

Supportive measures are very important in treatment of pertussis; these include measures to dimin-
ish coughing, maintain hydration, and the use of oxygen with apneic episodes or pneumonia. Children should be isolated 7 days if Erythromycin has been started, up to 3 weeks if the decision is to not treat with antibiotic.

The risk of development of disease after exposure is quite high. Almost 90% of nonimmune household contacts will acquire the disease. Those at high risk include Day Care Center contacts, those in institutes for the neurologically impaired, and children in underdeveloped countries where use of vaccine is not widespread. Contacts less than 7 years of age should receive DTP vaccine if he or she has not had the vaccine within 6 months. There is controversy concerning older children and adults; some authors recommend that during epidemics adolescents and medical workers should receive a quarter dose of DTP. All contacts should receive a 10 day course of Erythromycin since, if started in the incubation stage, the disease will be aborted.

THE PERTUSSIS VACCINE

I. History

Bordetella pertussis was initially isolated in 1906. The first attempt to vaccine children took place in 1912, a number of experimental vaccines were developed, clinical trials were carried out, and the vaccine as we now know it, was developed in 1947. DTP vaccine is a highly concentrated suspension of killed whole organisms. An extract vaccine was developed by Lilly and sold as Tri-Solgen between 1967 and 1972. Lilly vacated the biological business in 1976 and ceased production of the vaccine. No studies were done on the efficacy of that vaccine or its side effects; many researchers felt that Tri-Solgen was less efficacious than the other vaccines.

II. Dosage

Current recommendations for pertussis vaccine involve two stages. The primary series consists of giving the vaccine to the child at 2, 4 and 6 months of age. Each vaccination involves 0.5 ml. of material, comprising 4 protective units. The total primary series involves administration of approximately 12 protective units. A fourth dose is given one year after the third, and the last (fifth) dose is given upon entering kindergarten. The guidelines are not rigid; vaccine may be given as early as 2 weeks of age, and doses as close as 4 weeks apart, particularly during pertussis epidemics.

DTP may be administered to premature children based on chronologic age, without regard to weight or hospitalization. If a child is older than one year and has not been started in a vaccination program, the primary series will consist of two shots with two subsequent boosters. If there are gaps in the sequence of vaccination, one may begin where the vaccination left off.

III. Efficacy

In the United States 18 to 20 million doses of DTP vaccine are given to children each year. Published efficacy rates range from 80 to 95%. However, children who have received the vaccine but develop the disease have a less severe course.

ADVERSE EFFECTS

Abnormal reactions to pertussis vaccine are reported to two agencies: The U.S. Federal Drug Administration (FDA), and The Monitoring System for Adverse Side Events Following Immunizations. Approximately one-half of the vaccine received by children in the United States is given via publicly funded programs. All adverse side effects must be reported to The Monitoring System for Adverse Events Following Immunizations. Most of the U.S. statistics regarding side effects from vaccinations arise from these efforts.

I. Minor Reactions

Cherry and Baraff reported, in 1981, the common local reactions noted with pertussis vaccination. (Table I) The most frequent complications were fret-

<table>
<thead>
<tr>
<th>TABLE I</th>
<th>REACTIONS OCCURRING WITHIN 48H OF PERTUSSIS IMMUNIZATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE</td>
<td>Rate (%)</td>
</tr>
<tr>
<td>Redness at site &gt;2.4 cm.</td>
<td>7.2</td>
</tr>
<tr>
<td>Swelling at site &gt;2.4 cm.</td>
<td>8.9</td>
</tr>
<tr>
<td>Pain at site</td>
<td>51</td>
</tr>
<tr>
<td>Fever:</td>
<td></td>
</tr>
<tr>
<td>temperature &gt;38C</td>
<td>47</td>
</tr>
<tr>
<td>temperature &gt;40.5C</td>
<td>0.3</td>
</tr>
<tr>
<td>Drowsiness</td>
<td>32</td>
</tr>
<tr>
<td>Fretfulness</td>
<td>53</td>
</tr>
<tr>
<td>Anorexia</td>
<td>21</td>
</tr>
<tr>
<td>Vomiting</td>
<td>6</td>
</tr>
<tr>
<td>Persistent crying (3 to 21 hours duration)</td>
<td>1</td>
</tr>
<tr>
<td>High-pitched, unusual cry</td>
<td>0.1</td>
</tr>
<tr>
<td>Convulsions</td>
<td>0.06</td>
</tr>
<tr>
<td>Collapse with shock-like state</td>
<td>0.06</td>
</tr>
</tbody>
</table>

These data are derived from 15,752 DTP immunizations (Modified from Cody, C. L., Baraff, L. J., Cherry, J. D., Marcy, S. M. and Manclark, C. R. Nature and rates of adverse reactions associated with DPT and DT immunizations in infants and children. Pediatrics. 68:650, 1981.)

fulness (53%), pain at the vaccination site (41%), and low grade fevers (47%). Baraff and Cherry compared rates of local reactions to the DTP vaccine with those for DT vaccine; the incidence of local reactions was 50% in the former and 18% in the
latter, suggesting that local reactions are likely due to the pertussis component in DTP vaccine.9

II. Hypotensive, Hyporesponsive Episodes

Anaphylactic reactions (IgE mediated) consisting of shock or vascular collapse, have occasionally been noted shortly after immunizations. Local anaphylaxis is rare, and systemic anaphylaxis is even more unusual, occurring in 2 to 5 of 100,000 vaccinations.16

III. Convulsions

Whether grand mal seizures are more frequent after pertussis vaccine has been argued for years; there are many environmental factors, such as febrile seizures, that are common in the age group that receives pertussis vaccinations. It is currently felt that from 5 to 10 per 100,000 children who receive the vaccine may have a grand mal seizure secondary to vaccination, usually within the first 24 hours.17, 18 A seizure with the primary series rather than booster shots is most common; the prognosis is good if there is no associated encephalopathy.9

IV. Infantile Spasms

Infantile spasms are an unusual type of seizure disorder, and result from a variety of neurologic insults to the brain. The electroencephalographic appearance of hypsarrhythmia is characteristic of this disorder, as is progression to severe development delay. Approximately 77% of infantile spasms develop before age 6 months, also the age that the primary series of the DTP vaccine is given. This has led to association between the two in the past.

A study by Melchior of Denmark in 1970-1975 compared the incidence of infantile spasms in two groups of children; the first received vaccine at 5 weeks, 9 weeks and 10 months; the second group received the vaccine at 5, 6 and 15 months. It was postulated that if pertussis vaccine was a factor in infantile spasms, an earlier occurrence of the disorder would be seen when the vaccine was given at the earlier age. Results showed no significant difference in time of onset in the two series, suggesting no probable relationship between infantile spasms and pertussis vaccine.19

V. Screaming Episodes

Many infants cry after receipt of DTP vaccine, but severe, high pitched screaming episodes lasting several hours are infrequent. These are of questionable encephalopathic origin; there is no increase in WBC’s in the CSF in children so vaccinated.

VI. Sudden Infant Death Syndrome

Most cases of sudden infant death occur within the first 6 months of life. Attempts have been made to correlate vaccination with sudden infant death. In 1979, there were 4 episodes of sudden infant death in Tennessee in a 4 month period in children who had received DTP vaccine from the same lot within 24 hours of injection.20 The National Institute of Child Health recently completed a case control study showing that sudden infant death is less likely to occur in children who have had the vaccine, compared to unimmunized children.21 Other studies suggest the same results.22, 23

VII. Encephalopathy

Encephalopathy is an altered level of consciousness in a child with simultaneous occurrence of convulsions, irritability, or other neuromuscular signs. To be related to DTP immunization, the onset must be within 48 hours after the vaccine is received. The British National Childhood Encephalopathy Study was a case control study of 1000 cases of encephalopathy. Of 100,000 children, only 35 had received DTP vaccine within 7 days of becoming ill, in contrast to 34 of 1,955 controls matched for age, sex and area of residence. This gave an incidence of encephalitis of 1 per 110,000 injections; with a frequency of permanent damage present one year later of 1 per 310,000 injections.24

CONTRAINDICATIONS TO THE VACCINATION

The Infectious Disease Committee of the American Academy of Pediatrics considers absolute contraindications to pertussis vaccination to include the following, if occurring immediately after pertussis immunization: 1) Convulsions; 2) Encephalitis; 3) Focal neurologic signs and; 4) Vascular collapse. Relative contraindications to vaccination include: 1) Excessive somnolence; 2) Persistent high pitched screaming episodes of greater than 3 hours duration and; 3) Temperature of greater than 105 degrees Fahrenheit.12

Recent data suggests that children who have previously had convulsions are more likely to have seizures after pertussis vaccination. The American Academy of Pediatrics recommends deferring the pertussis part of the DTP vaccine if there is a severe, uncontrolled seizure disorder, or any evolving neurologic defect. If the above contraindications resolve, the patient may gradually be caught up on the pertussis part. A family history of seizure disorders, cerebral palsy, or any type of developmental retardation are not contraindications for the vaccine.25
DOSE REDUCTIONS

Dose reduction has been used by some in an attempt to reduce local or systemic reactions to DTP vaccine. The current stand of the Center for Disease Control is that split doses may: 1) Increase the risk of neurologic reaction by increasing the number of times that the antigen is introduced and, 2) Fail to stimulate an adequate production of antibodies for protection against pertussis. Recent studies possibly refute this; until more data is available, the current recommendation is against split dosing.

RISK/BENEFIT FACTOR

A situation in some developed countries permits comparison of mortality and morbidity from whooping cough, with and without the vaccine. In Japan, after 2 reported deaths in 1975 were felt to be vaccine related, the pertussis vaccine was discontinued. Over the next 7 to 8 year period after withdrawal of the vaccine, there were 35,000 cases of pertussis in Japan with 118 deaths. In a 3 year period after withdrawal of the vaccine in Great Britain in 1977, there were 102,500 cases of pertussis with 25 deaths. (Fig. 2) In 1982 there were 65,785 cases of pertussis and 14 deaths in Great Britain. In an interesting study by Hinman and Koplan, a hypothetical cohort of 1,000,000 children from birth to 6 years of age, with and without the vaccine, were compared. (Table II) There was an extremely favorable benefit cost ratio with the vaccine program. Without the program the total number of health dollars spent on the hypothetical 1,000,000 children was projected to be 53.5 million dollars. With the vaccine program, only 9.4 million dollars would be spent yearly, including vaccine cost and reimbursement for vaccine related injuries.

The authors developed an extrapolation from the 3½ million children born each year (the U.S. national average), and estimated the annual number of cases of pertussis, hospitalizations for the disease and vaccine complications, deaths and encephalitis. (Table III) There is a marked reduction, not only in cases of pertussis (from 356,566 cases without the program, to 34,048 cases with the program), but a drop in total hospital days spent (581,700 without the program, to 63,147 with the program). There is a reduction in total deaths from 457 to only 44 with the vaccine program. The majority of deaths in those who received the vaccine were attributed to death from pertussis despite vaccination. The total number

![Figure 2*](image-url)

**Figure 2**

Pertussis attack rates by year for the United States and England and Wales.

### TABLE II†

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>COSTS DOLLARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WITHOUT</td>
<td>WITH</td>
</tr>
<tr>
<td>PROGRAM</td>
<td>PROGRAM</td>
</tr>
<tr>
<td><strong>Disease</strong></td>
<td></td>
</tr>
<tr>
<td>Cases not hospitalized</td>
<td>$4,570,149</td>
</tr>
<tr>
<td>Cases hospitalized</td>
<td>47,402,736</td>
</tr>
<tr>
<td>Encephalitis - residual</td>
<td>1,555,500</td>
</tr>
<tr>
<td>Subtotal</td>
<td>53,528,385</td>
</tr>
<tr>
<td><strong>Vaccine</strong></td>
<td></td>
</tr>
<tr>
<td>Cost of vaccine</td>
<td>$130,035</td>
</tr>
<tr>
<td>Minor reactions</td>
<td>866,598</td>
</tr>
<tr>
<td>Convulsion and collapse</td>
<td>433,461</td>
</tr>
<tr>
<td>High pitched, unusual cry</td>
<td>99,477</td>
</tr>
<tr>
<td>Encephalitis</td>
<td></td>
</tr>
<tr>
<td>Acute care</td>
<td>179,233</td>
</tr>
<tr>
<td>Residual defects</td>
<td>2,653,500</td>
</tr>
<tr>
<td>Subtotal</td>
<td>4,362,604</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$53,528,385</td>
</tr>
</tbody>
</table>

* Cohort of 1 million children followed up from birth to 6 years.

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*Permission from Dr. James D. Cherry and Yearbook Medical Publishers.
†Permission from Dr. Allen R. Hinman, Centers for Disease Control, Atlanta.
of cases of encephalitis showed a slight increase in those children with the vaccine program (54 as compared to 29). Other studies have suggested that the risks/benefits may even be greater than those mentioned.1, 2

| TABLE III* |
| ESTIMATED ANNUAL NUMBERS OF SELECTED EVENTS WITHOUT AND WITH A PERTUSSIS VACCINATION PROGRAM* |

<table>
<thead>
<tr>
<th>EVENT</th>
<th>WITHOUT PROGRAM</th>
<th>WITH PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases of pertussis</td>
<td>356,566</td>
<td>34,048</td>
</tr>
<tr>
<td>Hospitalizations — total</td>
<td>38,787</td>
<td>6,529</td>
</tr>
<tr>
<td>Pertussis</td>
<td>38,787</td>
<td>3,710</td>
</tr>
<tr>
<td>Vaccine complication</td>
<td>0</td>
<td>2,819</td>
</tr>
<tr>
<td>Hospital days — total</td>
<td>581,700</td>
<td>63,147</td>
</tr>
<tr>
<td>Pertussis</td>
<td>581,700</td>
<td>55,650</td>
</tr>
<tr>
<td>Vaccine complication</td>
<td>0</td>
<td>7,497</td>
</tr>
<tr>
<td>Deaths</td>
<td>457</td>
<td>44</td>
</tr>
<tr>
<td>Residual defect from encephalitis — total</td>
<td>29</td>
<td>54</td>
</tr>
<tr>
<td>Pertussis</td>
<td>29</td>
<td>3</td>
</tr>
<tr>
<td>Vaccine complication</td>
<td>0</td>
<td>41</td>
</tr>
</tbody>
</table>

* Birth cohort of 3.5 million children

THE FUTURE OF THE VACCINE

The major problems with DTP vaccine as we know it today are less than optimal efficacy, and rare, serious side effects. In Japan an extract vaccine is used and has been given to over 1,000,000 children. Preliminary data suggest a 90% reduction in local side effects; however, cases of encephalitis occurred in 3 of 1,000,000 children, giving an incidence of 1 in 330,000; basically the same as our current DTP vaccine.28 Several other laboratories are conducting clinical trials with extract vaccines, including the Michigan Department of Public Health, The National Institute for Child Health, and a new program in China.14

CONCLUSION

With the current DTP vaccine, we have seen an impressive reduction in mortality and morbidity from the once dread pertussis. This disease was associated with a high mortality and a number of unfortunate complications. Despite impressive statistics, continuation of controversy concerning the vaccine, based on its infrequent but serious side effects, persists.

Parents are particularly susceptible to guilt concerning possible side effects that may befall their children, based on decisions over which the child has no control. The risk of contracting pertussis despite immunization is 1 in 100,000, compared to 872 in 100,000 if no DTP vaccine program were in effect. The risk of dying after contracting pertussis is 1 in 200. For the serious side effects of the vaccine, the risk of permanent neurologic damage is 1 in 310,000, and the risk of dying from complications from vaccine is 1 in 1,700,000; essentially the same risk of dying being struck by lightning.

We should learn from the experience in Japan and England. There are potential, although uncommon, serious problems with DTP vaccine; however, there is a higher incidence of serious problems and great risk to our children and our society if we go unvaccinated.

ACKNOWLEDGEMENTS

Thanks to Kristy Puthoff for the excellent work transcribing this article, and to W. F. Stanage, M.D., for his review and corrections.

REFERENCES

18. Medical Research Council: Vaccination Against Whooping
Physicians Needed

General Surgeon, OB/Gyn and Internist, to join seven doctor family practice clinic in Cloquet, MN, a community of 12,000 (30,000 service area), located 20 minutes from Duluth-Superior. Clinic facility is located one block from modern, well equipped 77-bed hospital. Cloquet enjoys a stable economy (forest products). Additionally, our community is noted for its excellent school system. First year salary guarantee, paid malpractice, health and disability insurance, vacation and study time.

Contact: John Turonie, Administrator
Raiter Clinic, LTD
417 Skyline Boulevard
Cloquet, MN 55720
Phone: (218) 879-1271

South Dakota Society Of Pathologists

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Tom C. Johnson, M.D., Vice President
Jerry L. Simmons, M.D., Secretary-Treasurer

JANUARY 1986
The South Dakota Foundation for Medical Care has just completed its first full year as the Peer Review Organization (PRO) for South Dakota. The past year has been a very hectic one as we have seen many changes in the Medicare Prospective Payment Program and Peer Review Process. SDFMC has continued to be on target with the achievement of utilization objectives contracted with the Health Care Financing Administration. Thanks to the review activities of our organization and the individual hospitals, and the cooperation of the physicians in the State, we have seen a reduction in the total number of hospital admissions, as well as reductions in the number of admissions for lens extractions, carpal tunnel release, and non-operated gastric disorders and medical back problems, all of which are negotiated contract objectives.

As PROs near the end of their contract periods, plans are underway at the Health Care Financing Administration to measure past performance and renew successful PROs. Toward this aim, HCFA has contracted with Systemetrics, Inc. to evaluate PRO review decisions. Systemetrics is a physician organization in Chicago involved in the development of criteria and review methodology for utilization and quality review. Their evaluation will be performed on a random sample of cases reviewed by each PRO.

Our contract renewal as a PRO will depend upon the results of the Systemetrics evaluation, evaluations by regional review teams from HCFA, successful completion of all contracted objectives and deliverables, and general impact on utilization and quality of care. The physicians and hospitals in the State are to be commended for making peer review a success in South Dakota.
I am sure most of you have read or are aware of Massachusetts recently passed law that compels each physician who treats Medicare patients to accept assignment or lose their license to practice medicine in that state. Needless to say, the Massachusetts State Medical Society and the AMA will challenge it in federal court.

Along this same line, I would urge all of you to write letters to our Representative and Senators urging repeal of the Medicare Payment Freeze. Granted you’ll get a patronizing reply but at least let us be heard from. Maybe the old adage “The squeaking wheel receives the oil” will hold true.

In another medical magazine an article that caught my attention was from California. It had to do with various hospitals wanting to change the by-laws to allow them to do the credentialing and certification. Their plan was to make the medical staff a department of the hospital such as housekeeping, dietary, etc. They very definitely want to change the present medical staff-hospital administration relationship. The next step is undoubtedly to hire physicians and close the staff.

I think it all boils down to the fact that we independent practitioners must maintain our professionalism and remain united. It is imperative we become a very cohesive organization able to intelligently evaluate and act upon the various changes being thrust upon us.

R. G. Gere, M.D., President
South Dakota State Medical Association
How Should the Medical Profession Handle the "Malpractice Crisis"?

Frank Alvine, M.D.*

The delivery of health care as we know it in the United States is being seriously threatened by the "malpractice crisis." The burden imposed on a practicing physician by being exposed to unlimited liability has changed and it is going to change the practice of medicine. The blame for the mounting insurance costs and high awards seems to fluctuate between the insurance industry, legal profession and medical profession.

At the moment, the medical profession is paying the entire premium for this unlimited liability and it is consuming, in some instances, up to 10-15% of the physician's gross income. This has resulted in many specialists changing their type of practice, such as dropping OB in the OB-GYN specialty, to referring many high risk operations or simply not doing some high risk surgery. Older physicians are retiring early and younger physicians are being discouraged from going into certain states that have a poor malpractice climate. In the state of Michigan, for example, 70% of all residents finishing their training are leaving the state because of high malpractice premiums. Even if insurance can be purchased, recent awards are much higher than available insurance. A ten million dollar award to a ninety-three year old individual in the state of Missouri is a good example of this. All too often the high awards are not compensating the patient with 60-80% of the funds being consumed by attorneys and insurance companies.

The question arises what can the medical profession do to protect its industry. The airline industry has placed a $750,000 cap on awards for all individuals injured in airline accidents. Five states have implemented medical caps on awards with many other states considering caps and various other tort reform packages. The truly injured patient, however, must be kept in mind and none of the tort reform measures are geared at eliminating fair compensation.

Hopefully the various tort reform measures presently being developed in the state of South Dakota can be passed and a more favorable climate achieved for the practicing physician.

*Chairman, Commission on Professional Liability, SDSMA. Sioux Falls, SD.
Dear Doctor:

Please remember that you are encouraged to invite your legislator(s) as YOUR guest to a 6:30 social hour and dinner on Monday, January 27, 1986 at the Holiday Haus, Pierre, S.D. The Auxiliary is taking responsibility for organizational details. Chairman Peggy Huber (Mrs. Tom), 706 Bridgeview, Pierre, SD 57501, Phone: 224-1834, should receive your reservation by January 22.

Everyone’s efforts are needed in expanding relationships and communication with our legislators on issues that are in the best interest of the public and medicine.

My 5th goal “Urge the medical community and the government to work towards promoting a ‘Smoke-Free’ society by the year 2000” is also the goal of the Surgeon General, the National AMA Auxiliary and will, I hope, become your goal and that of the public.

Reducing the incidence of smoking and use of tobacco products requires your commitment. U.S. consumption is no longer increasing but continues to remain the highest in the world.

Expected legislation this year includes an excise tax on smokeless tobacco products; a new “Clean Air” bill to restrict smoking in government buildings and to require larger restaurants to have no

smoking sections. I ask you to support these measures by making your legislators aware of your concerns and to influence your patients’ health choices. Encourage abstinence from smoking by your advice and through referral to smoking cessation programs. Provide information to clarify the risks associated with smoking and to accentuate the addictive nature of tobacco.

I realize that you may have legislative priorities directly affecting your practice as well as medicine in general. Your willingness to advocate for a “Smoke-Free” society can demonstrate your concern for medical interests important to the general public. Perception is sometimes as important as reality, and the negative public image of the physician interested solely in health legislation that is self-serving can be counteracted by your action in this important public health issue. An added bonus will be the enormous impact on the health and economy of our nation.

For everyone’s sake, please give EMPHASIS to the major preventable cause of disease, disability and premature death.

With my gratitude for your concern

Shirley Ryan, President
South Dakota State Medical Association Auxiliary

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The Anxieties of Aging: Crises at Midlife

Doug Soule, Ph.D.*
Andrea Kruse†

ABSTRACT

Throughout our lives we experience changes in all aspects of our lives. It has often been thought that once we reach adulthood we no longer suffer through these changes, but rather adapt to them with ease. This is untrue. Some of our most difficult changes may come as adults when we no longer have the security of parental guidance. If we divide our lives into halves (birth to 40; and 40 to death) we find that the transition often presents a period of reflection — a time in which we may experience crisis because we have not reached our goals and death is looming in the distance. To many this crisis represents a time of dramatic change. Some turn to alcohol and drugs, others seek divorce and removal from their families, some lose their jobs, and some even seek suicide as an answer. But, midlife can also bring changes for the good. Happiness in life is not the absence of conflict, but our ability to resolve the conflict in a way that is constructive and growth oriented.

INTRODUCTION

We unfold and grow, we have fallow periods and seasons of sudden spurts of change; we are not the same today as we were yesterday, and we will have gone, before we die, through at least three or four distinctively different growth periods.¹

Sociologist Charlotte Buhler, while studying the course of human life came up with five stages of life corresponding to five biological phases:

1. Birth to 15 — Child lives at home prior to self-determination of goals;
2. 15 to 25 — Preparatory expansion and experimental self-determination of goals;
3. 25 to 45 — A time of culmination with definite and specific self-determination of goals;
4. 45 to 65 — Very often accompanied by crisis; a time of self-assessment of the results of striving toward personal goals;
5. 65+ — Experience of fulfillment or failure with remaining years spent in either continuation of previous activities or a return to need-satisfying orientations of childhood.²

Throughout our lives we experience changes, not only in our physical, mental, and psychological capacities, but also in our relationships to outside influences such as family, friends, occupations, and societal norms. What influenced us as teenagers is now a completely new set of factors. As adults we can no longer look to our parents for the security they once afforded us. We are conditioned to think of life changes only as changes for the bad, but change can be good as well. This message is but faintly heard in a nation obsessed by youth, muscle, sex, and hedonism.³

Anxieties which accompany the aging process are rooted in two sets of fears, one, that we not accomplish our goals, and two, that we lose our strength, develop pain and sickness, and eventually face the finitude of death.⁴ According to A. Maslow, we all have two sets of forces within us, those which prevent us from growing away from the primitive communication associated with the security of the womb, and those which enable us to discover the wholeness of self. In other words, one force stemming from fear, and another from confidence.⁵

The first half of life, with its apex in the 40's, entails fulfilling our needs and wishes. It is during
the second half, or the latter 40’s and beyond that we begin to reflect backwards and project forward assessing what has and what will dominate our lifestyles and beliefs. This second half of life is when we as adults take time to develop ideals and become more involved in our conscience. We have a tendency to look for a deeper personal meaning to life. It is at this phase we shift in emphasis from outer to inner orientation and even find ourselves leaning toward greater introversion.  

**Anxieties which accompany the aging process are rooted in two sets of fears. . . .**

Somewhere in the transition between the 1st and 2nd halves of our lives, perhaps between the ages of 35 and 45 roughly, we experience what has come to be termed as “midlife crisis.” Our bodies are changing, children are leaving home, the job isn’t quite as satisfying as it once was, the marriage partner is losing appeal, previous ambitions have not been realized, you or someone you know may have contacted a serious illness, parents may be reaching the end of their own life spans, female menopause and male climacteric are taking place, etc. In essence, time is running short and death is looming around the corner. William A. Nolan, in his book *Crisis Time*, states unequivocally that a midlife crisis is an inevitable part of life. According to Dr. Nolan, 70-80% of males will go into a crisis accompanied by the symptoms of restlessness, unhappiness, frustration, and fear. If he and his wife can communicate well, they will make adjustments for the 6 months to 2 years following the onset of crisis. On the other hand, 20-30% of males will go into crisis accompanied by radical changes. His marriage may dissolve, he may make a drastic change in his career, he may turn to alcohol and/or drugs, chasing women may appeal to him — all in search of a younger self — a frantic grasp at what he sees slipping out of his world as he slips into the second half of his lifetime. At any rate, whether the change be radical or not, the man in crisis deserves all the help and support he can find.  

**STAGES OF DEVELOPMENT**

Development is a continuing process whereby the individual goes from a less differentiated to a more differentiated state, from a less complex to a more complex organism, from a lower or early stage to a higher or later stage of an ability, skill, or trait. During our lifetimes we experience normal turning points precipitant of new adaptations. Of E. Erikson’s eight stages of development, three have been classified as adult stages: 1) early adulthood; 2) middle adulthood; and 3) late adulthood. Early adulthood is characterized by mutually satisfying and intimate relationships. Failure to develop intimate relationships leads to preoccupation with self and superficial interactions with others. Middle adulthood is a period of reassessments: Are they making significant contributions to the next generation? Are they being productive and creative members of society? When failing to achieve this sense of generativity, individuals often experience feelings of stagnation and personal impoverishment. Late adulthood deals with facing death with integrity. If one feels they have lived a life void of meaning, death will come too quickly. When a person feels it is “too late” to make up for a life that does not measure up to one’s final assessment, life will end in despair, bitterness, and depression. These developmental stages are distinguished by a series of tasks determined by societal norms.

As the life cycle evolves through the stages of development, it has been noted that adult male and female developmental crises are out of sync with each other. There is uneven growth in different directions. While a male in adolescence is developing a strong sense of identity (who am I), the same stage of growth is more akin to her feelings of intimacy (to whom and in what manner do I relate). As young adults, the male becomes more concerned with intimacy, whereas the female is experiencing feelings of generativity (how do I bear and influence my children in a meaningful way). The adult male, now established in his career, is ready to be concerned with generativity at the same time his female companion is searching for a strong sense of identity denied her by attending to needs of the husband and children all these years. These differences in development can result in opposing feelings and desires at the onset of “midlife.” While the male is feeling more despair, time is closing in, a need to lessen time spent on the job, desire to become more home oriented, an uncertain sex drive, and becoming emotionally introspective, the woman is full of hope, feels time opening up, needs to open up career possibilities, becomes less home oriented, feels a greater sexual awareness, and becomes competitive and assertive. When midlife crisis hits, these opposite stages of development and a serious lack of communication can transform what might have been a minor problem into a major one.

**Intimate Relationships**

Throughout our adult development, we should work toward development and maintenance of stable intimate relationships. This is not easy given the opposing stages of development males and females experience at the same time. Perhaps the romantic love ideal that a perfect match exists to the "happily
ever after” requires replacement by the practice of conjugal love or commitment and respect to the promise “till death do us part” working through the rough spots together and developing a strong friendship with open lines of communication. Midlife crisis is a time when many men dissatisfied with themselves or their achievements may lash out by terminating family bonds in search of proverbial youth. The fact is that the majority of men whose crises lead to radical changes such as divorce later regret those changes.11

As the life cycle evolves through the stages of development, it has been noted that adult male and female developmental crises are out of sync with each other.

The middle age syndrome is complex, but, basically for men, it originates from two major aspects of life, one of which is a decline in sexual potency and physical strength. It is during this phase of our biological development that the release of sex hormones begins to diminish. In females it is characterized by menopause or a cessation in the menstrual cycle. In males it is characterized most often by impotence. Because males more often associate erections with manliness, the onset of the male climacteric is more traumatic to the male than menopause is to the female. Once a man experiences his newfound impotence, more than likely, his psyche will dominate his ability to perform rather than his hormones. This is the time when a man goes out in search of “the new woman” to arouse him and prove to him that all he really needs is a new wife. Perhaps the man in this situation is clinging to the myth “if you don’t use it, you’ll lose it.” A good long-term marriage never just happens, it needs nourishment. Given time, energy, understanding, and wisdom, and seeking help when needed, a good marriage can endure even the most tumultuous tides of midlife crisis. Emphasis should be focused on loving rather than sexual performance. A strong bond with a marriage partner is a definite plus for weathering the storm.

Health

If we want to stay alive we need to keep the body very much connected to head, to feelings, which influence our physical well-being to an absolutely staggering degree.12 An alarming proportion of us neglect to include physical fitness in our everyday lives. We push our bodies to the limit — eating non-nutritional foods, soaking up caffeine and alcohol to get us up and then to get us down, sitting in front of our television sets instead of using our bodies, filling our lungs with tobacco smoke, etc. — actually challenging them to stop functioning, and finally when we start to feel so unfit, we might, just might set up a program to improve our physical strength. Imagine how much easier and how much more efficient it is for the muscles in our bodies to hold up the bones rather than the bones holding up the muscle and fat. Midlife more than ever is a time to become very intentional and wise about our bodies than perhaps we have ever been before. Fifty percent of all deaths in the United States are a result of cardio-vascular disease.13 If you are in the mid stage of your adult life and you haven’t shown much concern for your physical self, now is the time to start.

Begin to care for your health by having a thorough physical examination. Try to set up a reasonable program of daily exercise in which you increase your heart rate from the normal pulse. Talk to your physician. Tell him the small things that are bothering you. Don’t be afraid to mention troubles you may be having with sexual response or depression. The most common pathologies of male midlife are related to sexual problems — impotence of all kinds, promiscuity, and sexual deviations — whereas depression is the primary female symptom. However, variations of each do occur in both males and females. Dr. Nolan at the apex of his midlife crisis, was afflicted with insomnia and depression. His answer was to turn to barbituates and alcohol as a remedy for his sleeplessness. At the point where he was alternating 30-60mg of Valium and 300-900mg of Quaalude, with strong drinks (a dose that would more than likely be fatal to a normal man) he finally decided to seek help. Following his ordeal, his prescription for symptoms of midlife crisis (insomnia, excessive use of alcohol, impotence) reads as follows: exercise regularly, go to bed and get up at the same time everyday, eat or drink (non-alcohol) before bed,

Our society has again made demands upon its inhabitants by measuring manhood against his ability to climb and continue climbing up the silver runged ladder of success.

sleep in a dark room, make sure your bed and pillow are comfortable, move to a quiet bedroom away from outside noise, play some relaxing music, don’t watch the clock, have a positive attitude — sleep is not a need, stay away from alcohol absolutely — especially under stress its effects are likely to be greater!14 Take care of the self and the self will take care of you. Become aware of your body by listening to its pressures. Allow yourself outward expression of emotions — don’t remain all bottled up inside. Learn to relax and enjoy the time with those around
PROFESSIONAL ACCOMPLISHMENT

An issue equally important in the complex middle age syndrome is an abnormal concern with professional accomplishment. Our society has again made demands upon its inhabitants by measuring manhood against his ability to climb and continue climbing up the silver runged ladder of success. A man needs to feel his job is important, he needs to feel respected for what he does. Failure to elicit such respect, or to lose it in later life can constitute a critical phase in his life. This need represents somewhat of a catch-22 as in our highly industrialized society not many careers are sufficient to highly excite and motivate a man for 40-50 working years.

Much of the literature concerning midlife crisis has its focus on the male. This is not surprising given the fact that our society has been male dominated for many years. The traditional role for the woman has been in the home caring for children. Women still have the primary responsibility for child care in most families. The General Mills American Family Report 1980-81 reports that 59% of child care is the primary responsibility of the mother, 36% is shared by both equally, and a minuscule 3% is the responsibility of the father primarily. Is it any wonder that men occasion more serious problems during the mid stage of life? For the most part, he has been the primary bread winner, out in the working world most of his adult life, concerned more with occupation than with family, and to top it all off, at the point when he is finally ready to come back to the nest and reacquaint himself with his loved ones, they are ready to fly. The wife is ready to adventure out and build a career of her own and the children are most likely in college or preoccupied with thoughts of marriage and branching off on their own. Though women are typically thought of as the homemakers, their appearance in the job market is rapidly increasing. According to estimates by the Urban Institute of Washington, nearly 70% of all women between the ages of 16 and 54 will be in the labor market by 1990. Additionally, because midlife for women is accompanied by a more obvious physical change, the impact constitutes less of a surprise. A woman knows menopause will eventually occur whereas a man may be caught totally unawares at the advent of impotence. A woman’s sex appeal is socially diminished by the time she reaches mid-life whereas a man’s identity is strongly associated with his sexual prowess for the majority of his life. Regardless of gender, it is important that a person balance the needs of the self with the needs of society, placing the self as the number one priority.

TIME

“...So we play a game with time, pretending a glorious past and a promising future, but no present. Although it is a fantasy, we take the game with a certain absurd seriousness. In our romanticism we dream of those good old days, and in our messianisms we dream of the great deliverances to come, but in the meantime, we live as if the present had no being, or as if its being had no value. Real values and means lie behind us and before us in time, but certainly not now.”

Becoming aware of the finitude of one’s personal time causes the shock that twists the middle-age man out of his habitual causes. Instead of furnishing the basis for rational consideration of the future, it often tangles him in a web of confusion, sense of loss, and self recrimination about mistakes and failures of the past, things he did badly or failed to do at all.

Oftentimes we measure our accomplishments according to society’s standards of success. After all, that is what this world teaches us. To have lived a worthwhile life, we must have been successful in how we chose to use our time. But, at times it seems that the societal view of success is somewhat one-sided. Viewed in terms of fame and fortune, success becomes that piece of pie in the sky — that fulfillment of the great American dream that we all reach for. Success according to an anonymous contributor reads as such:

What Is Success?

To laugh often and love much;
To win the respect of intelligent persons and the affection of children;
To earn the approval of honest critics and endure the betrayal of false friends;
To appreciate beauty;
To find the best in others;
To give of one’s self without the slightest thought of return;
To have accomplished a task, whether by a healthy child, a rescued soul, a garden patch or a redeemed social condition;
To have played and laughed with enthusiasm and sung with exaltation;
To know that even one life has breathed easier because you have lived;
This is to have succeeded.
How many of us would slow down and enjoy our lives much more if we could truly live to this description of success rather than plunging into the ladder climbing, ego satisfying, self-indulgent, methods of success defined to us by society? How many of us are more typically described as approaching the point of stress by portraying such characteristics as chronic sense of time urgency; constant involvement in multiple projects subject to deadlines; persistent desire for recognition and advancement; excessive competitive drive; neglect of all aspects of life except work; a tendency to take on excessive responsibility; explosiveness of speech and pushing the pace of normal conversation. How many of us now, upon retirement following a lifetime of striving for success with neglect to the importance of keeping minds and bodies healthy, hear the drumfire of uselessness and despair rattling in our ears? It is all too easy to see the mountains of statistics pouring in from sociological studies shouting in our ears that the average white male dies 30 to 40 months after retirement, that men over 65 account for one quarter of United States suicides, that one third of all marriages decline after retirement, and that afflictions related to alcoholism and mental illness spurt upwards. Is that what we are racing through life at breakneck speed trying to be socially successful for? Only to be brickwalled at the end of our careers? Let us slow down a little. Let us reconsider the importance of our lives. Perhaps a sabbatical is an alternative to impending doom. Take some time off from whatever you’re doing. Don’t use the excuse of not having enough time, because chances are greater that if you don’t take the time now, it won’t be yours to take later. A sabbatical is a marvelous way by which one can be refreshed, spiritually and in the emotional sense, and of course, replenished intellectually and professionally. It represents a wonderful opportunity to concentrate on yourself, improve your health, both mental and physical. Time off will enable you to give some careful consideration to what kind of plans you want to lay down for the future. Perhaps this is the time to begin a new course in education — take a new tack in your career or begin a new one. And, very importantly, it is an opportunity to rediscover your spouse, family, and other people you love. Just as every person changes while he grows up, he will continue to change while he grows old. But aging will not destroy the continuities between what he has been, what he is, and what he will be. Recognition of this fact should lessen the fear of growing old.

CONCLUSION

Midlife crisis represents a turning point in the life cycle, a period of opportunities or nonchange. It can be a rich opportunity of personal awareness and growth — reading, communicating, group sharing, meditation and reflection — in which we mature in grace and power of relationships or it can be a time of deterioration and dehumanization. Erikson defines the challenges of middle life as: 1) valuing wisdom vs. physical power; 2) socializing vs. sexualizing in human relationships; 3) widening involvements outside the home as children leave and parents die (cathetic flexibility vs. cathetic impoverishment); and 4) mental flexibility vs. mental rigidity. But, he also points out social contradictions related to these challenges. How can we value wisdom in a society that values physical power? How can we value nonsexual relationships when our society sexualizes everything from soup to nuts via the mass media? How can we form wider involvements in a basically nuclear-family-oriented society that is traditionally based on the ideal stereotype of a family consisting of two adults and two-and-a-half children? As for mental flexibility, what are we to do with the ideal of an early retirement that encourages fishing and fun rather than thinking? We need to make it a challenge to make those changes necessary to coordinate our needs with the remaining years of our lives. There seems to be a great deal of agreement among both laymen and professionals that midlife crisis is a time to develop a strong sense of self. We need to strengthen the inner support network. Knowing who we are will provide a sense of stability and internal consistency making us less vulnerable to external change. Having an identity as a unique individual is essential if one is to end life with integrity. As we grow old, we are given the ability and time to grow in intimacy of relationships cultivating the spiritual self or the soul.

Midlife is a time for reassessment. Ask yourself these questions: Am I satisfied with my life the way it is? What childhood or youthful dreams have I yet to fulfill? modify? or give up? What new dreams are occurring to me now? How do I recover my energy, my enthusiasm for anything? What do I deeply want to do before I die? Stop for a moment and take a deep breath, turn a one eighty if need be, plan some idleness everyday, read books, savor food, discover a retreat at home, plan leisurely vacations, enrich yourself, learn to laugh and love with enthusiasm. Don’t let the chance for growth and change pass you by. Crises are practically always a source of enrichment and of renewal because they encourage the search for new solutions.

Franz Riklin, in a lecture delivered in Zurich, described midlife crisis by use of an analogy. He likened the human life cycle to that of a water fountain, with the middle of life representing the highest point of the fountain’s jet. Until the zenith is
reached, the powerful will and consciousness of the individual has developed through overcoming the forces of gravity. One day he reaches the peak unexpectedly. During the period of upward-striving, everything is made and done from consciousness, rather than from gazing into the images and abys of the unconscious.

The natural, unconscious progress of life is reversed when the middle period is reached. Even so the intoxicated consciousness and will persist along the old lines. Thus an increasingly dangerous discrepancy occurs between the intentions of consciousness, which desires to keep the individual up at ever greater heights, while below the stream of psychic life inevitably hurries towards its resting-place in the earth. The day soon comes when there occurs quite unexpectedly, and for no apparent reason, a breakdown, sometimes even a terrifying crash.

When the high point of the fountain is reached, every former orientation is reversed by the new course of the life-energy. Men become substantially gentler and even more feminine, while women frequently become sterner and more masculine. The reversal of values also signifies that in the unconscious the aim of life at its peak no longer lies in reality, but in the irrational and the eternal. At the moment of the zenith unconscious psyche gives birth to death. This indicates to the individual that the light of his consciousness should turn from the outer world to his inner one, in which it discovers experiences and facts about the unconscious soul, and can participate in values which far transcend the realm of consciousness.29

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4. Ibid. p.5.
15. Still. p.34.
22. Ibid. p.163.
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27. Olson. p.63.
NEW SDSMA Members

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Letters To The Editor

Dear SDSMA:
I was the fortunate recipient of the South Dakota State Medical Association Scholarship for 1985. I sincerely want to thank you for this award. As you know, medical school tuition is expensive, and any financial aid given to help ease the financial burden is greatly appreciated. The five hundred dollars will certainly be used wisely.

I am very happy that you feel my academic performance was such that I deserved this award. I will continue to work hard to uphold the faith you had in me. We have just begun year two of medical school, and I am greatly looking forward to the upcoming schedule of classes and clinical experiences. The scholarship which was awarded to me has helped make this second year of medical school begin very smoothly. Once again, please accept my thanks for this award.

Sincerely,
Michael Hovland

Dear SDSMA:
I am happy to have received the South Dakota State Medical Association Scholarship award. It was very generous and greatly appreciated. A portion of the award has already been applied toward the cost of textbooks for the junior year. Thank you again, and I hope to continue to meet the criteria for which I was selected for this award.

Sincerely,
James Rector
L. P. Mills, D.O., Platte, died recently at the age of 70. He was born in Low Ground, Missouri and graduated from high school in Queen City, Missouri. He graduated from Still College of Osteopathy, Des Moines, Iowa in 1941 and served his residency at Wilder Hospital in Des Moines. Dr. Mills moved to Platte in 1943 where he practiced medicine until his retirement in 1981.

Survivors include his wife Jeanen, two sons: Richard, Rawlins, Wyoming; and Patrick, Williston, ND; a daughter, Mrs. Doug (Connie) Peterson, Platte; six grandchildren; and a sister, Mrs. Norman (Mildred) Strom, Des Moines, Iowa.

* * * *

A longtime Watertown physician, Dr. Valdis Brakss, recently died at the age of 75.

Dr. Brakss was born in Riga, Latvia. He attended the University of Latvia at Riga, received his degree in medicine in 1933 and was certified by the Board of Surgeons in 1938. He served in the Latvian Army as a physician with the rank of lieutenant. He came to the United States in 1950; practiced for four years in Castlewood; and then moved to Watertown.

Survivors include his wife, Skaidrite; two daughters, Ingrid Brakss of Watertown; and Mrs. Steven (Leva) Porter, Las Vegas, Nev.; a son, John of Pierre; and four grandchildren.

* * * *

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Tschetter-Hohm Clinic, Huron, has announced that **Dr. Alan Stalheim** has joined their staff. Dr. Stalheim, who specializes in general and vascular surgery, is a native of South Dakota. He received his medical degree from the Univ. of Wisconsin in Madison, Wisc. in 1969. He interned at the Univ. of Southern California Medical Center, Los Angeles and did his surgical residency at Santa Barbara County General in Santa Barbara, Calif. from 1970-1974. He was in private practice in Albert Lea, Minn. from 1975-1985 prior to coming to South Dakota. Dr. Stalheim is board certified and is a member of the American College of Surgeons.

* * * *

Joining the staff at Black Hills Regional Eye Institute, Rapid City, was **Timothy Minton, M.D.**, a specialist in neuro-ophthalmology, ocular plastic surgery and orbital disease. Dr. Minton, a Rapid City native, received his medical degree in 1980 from USD School of Medicine and completed his internship at LaCrosse Lutheran Hospital, La Crosse, Wisc. in 1981. In 1984, he completed an ophthalmology residency at the Univ. of Michigan Hospitals in Ann Arbor and in 1985, completed a neuro-ophthalmology and orbital surgery fellowship at the Mayo Clinic, Rochester, Minn.

* * * *

Philip has a new doctor, **Dr. Kin Wong**, family practice. Dr. Wong was born in Canton, China and moved to the U.S. fifteen years ago. He received his medical degree from Tufts Univ. of Medicine in Boston, Mass. in 1982. He served his residency at the Univ. of California at Irvine from 1982-1985.

* * * *

**Noel Chicoine, M.D.**, family practice and obstetrics, has joined the Dakota Plains Clinic in Pierre. He graduated from USD School of Medicine in 1981 and completed his internship at the Univ. of Oklahoma in Tulsa in 1982. He served his family practice residency until 1984 and completed a fellowship in obstetrics in 1985 at the Univ. of Oklahoma in Oklahoma City.

Dr. Chicoine and his wife, Teresa, enjoy outdoor sports, including water and snow skiing and sailing, and he hunts and fishes. They have two daughters.

**Dr. David Wolff**, family practice, has recently begun his medical practice at the new Bowdle Clinic in Bowdle. Dr. Wolff received his medical degree from the Univ. of California, Irvine, Calif. in 1982. He completed two years of a family practice residency at the Western Medical Center, Santa Ana, Calif. and a third year at the Modesto Family Practice Prog., Modesto, Calif. in 1985.

Dr. Wolff enjoys bicycling and building home furniture. He and his wife, Cynthia, have two children.

* * * *

**Dr. David Klopfenstein**, a native of Washington, has opened his medical practice in Custer. He is a family practice physician. He received his medical degree from the Univ. of Washington in Seattle in 1980. He completed a three year family practice residency at the Univ. of Wyoming in Casper in 1983 and two years of emergency medicine in Rich-land, Wash., before moving to Custer with his wife, Susie.
February

Congestive Heart Failure, Radisson Univ. Hotel, Minneapolis, MN, Feb. 12. AMA Category I credit available. Contact: Univ. of Minn., CME Off., Box 202 Mayo Mem. Bldg., 420 Delaware St., SE, Minneapolis, MN 55455. Phone: (612)373-8012.


March

Eleventh Annual Vail Primary Care Conference, Marriott’s Mark Resort, Vail, CO, Mar. 1-8. Fee: $345. 22 hrs. AMA Category I & AAFP credit. Vail Primary Care Conf., P. O. Box 11338, Denver, CO 80211-0338. Phone: (800) 525-5810.


1986 Pan American Allergy Society Training Course and Seminar, Four Seasons Hotel, San Antonio, TX, Mar. 7-9. Fee: $450. 31 hrs. AMA Category I & AAFP credit. Contact: Betty Kahler, PAAS, 229 Parking Way, Lake Jackson, TX 77566. Phone: (409) 297-9864.

Cardiology For The Primary Care Physician, Palm Springs Spa Hotel, Palm Springs, CA, Mar. 7-9. 18 hrs. AMA Category I & AAFP credit. Contact: CME Off., M-017, UCSD School of Med., La Jolla, CA 92039. Phone: (619)452-3940.

Family Practice Refresher Course-1986, Palm Springs Spa Hotel, Palm Springs, CA, Mar. 10-14. 29 hrs. AMA Category I & AAFP credit. Contact: CME Off., M-017, UCSD School of Med., La Jolla, CA 92039. Phone: (619)452-3940.


April

Peripheral Nerve Problems, Snowbird Ski and Summer Resort, Snowbird, UT, Apr. 2-4. Fee: $500. 14 hrs. AMA Category I credit. Contact: Norma Lubben, Central Plains Clinic, 2727 S. Kiwanis, Sioux Falls, SD 57105. Phone: (605)335-2727.

Seventh Annual “Topics in Clinical Medicine” Symposium, Holiday Inn City Centre, Sioux Falls, SD, Apr. 4-5. Contact: Norma Lubben, Central Plains Clinic, 2727 S. Kiwanis, Sioux Falls, SD 57105. Phone: (605)335-2727.

Eye Enucleation, 2-155 Jackson Hall, U. of Minn., Minneapolis, MN, Apr. 4-5. AMA Category I credit available. Contact: CME, Box 202 Mayo Mem. Bldg., 420 Delaware St., SE., Minneapolis, MN 55455. Phone: (612)373-8012.

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Incest

Roy C. Knowles, M.D.*

**ABSTRACT**

Though a series of eighteen articles were read prior to the preparation of this paper, the actual substance of the paper comes from the personal experience of this physician in the diagnosis and treatment of incest in its many forms. Incest is so prevalent that it will come to the attention of physicians all too often, and the function of the physician in working with cases of incest is very important.

As we start this paper, I would like to share with you two ideas that I try to keep in mind during my work as a psychiatrist. One is that the human being is such a complex and magnificent being that one dare not apply absolute rules or ideas of beliefs to everyone. The other is that the human being is the only animal that can take a good idea and louse it up.

**CASE 1**

A nine year old boy traveling cross country with his mother was given a bedroom next to hers in a motel. He, after undressing and getting ready for bed, entered her room as if to say good night to her, but instead pushed her toward her bed and told her, “Lie down and I’ll put my penis in your vagina and we’ll make a baby.” When she told this story she seemed to feel that this idea on the part of this little boy came out of nowhere, but later she giggled as she was recalling an episode in her home when this little boy was age five. She and the father were in the living room reading when this little boy got out of the bathtub and came dancing around the room asking them to look at his penis which was sticking out and hard. In the presence of the boy, this mother turned to the father and said, “Isn’t it too bad that yours isn’t that good?” Is this incest?

**CASE 2**

A mother presenting her view of her son’s sudden, acute psychotic agitation indicated that he was very agitated the night before, but it was very inconvenient to have to bring him in to the hospital from quite a distance during the night. “I know what it takes to quiet a man so I took him to bed and let him have it and he slept through the night.” Is this incest?

While we are at a stage in this article of handing out caveats, permit me to offer yet another warning. Remember that we are working as physicians in areas of health and human services which cause us to be constantly in contact with people with recognizeable and significant trouble. In order to keep a perspective, we must remember that there are people who, by genetic gifts or personality characteristics or something else, are apparently invulnerable. And even the invulnerability varies. An individual may collapse under a calamity perpetrated by a person but not the same calamity perpetrated by another. A certain insult at a certain time of life may disastrously mold one person but not another.

I say the preceding things to try to help us keep a reasonable perspective of an extremely troublesome subject, of an extremely emotionally laden subject. Incest almost always calls to mind a man mistreating a female, be she adult or child. Two out of a total of eighteen articles that I read in preparation for this paper mentioned incest involving males as the victim.

I’m going to appear to deviate at this point by writing about the media perpetrated conflict concerning abuse when a city official was reported to have jokingly indicated that some women enjoy abuse. The responses were in the form that there is no such thing as a woman or a child liking to be abused. Professionals dealing with problems such as sexual abuse and physical abuse including incest should be careful not to blind themselves to absolute beliefs. Oftentimes our problems with absolute beliefs are in the translation of the words used. There are people who ask to be beaten up. There are people who asked to be raped. There are people who ask to have their life savings stolen. There are people who, in one way or another, ask for continued trouble. Maybe they don’t ask for it, but they bring it about or they help it to happen or they choose associates who

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*Professor, USD School of Medicine, Department of Psychiatry, Sioux Falls, SD.
will make it happen, and so on.

CASE 3

A boy in his early teens was seen by me because he was constantly into fights. When I asked him to describe to me how the fighting developed, he indicated that he would go into a movie and wait until his eyes got adjusted to the darkness, then he would try to find three or four boys sitting together. He would get in a seat behind them and then pester and pester and pester until they would finally invite him out into the alley and then he would fight all three or four of those kids until he was thoroughly beaten up. When I asked him how he felt after such an episode he responded, “I feel clean.” Did he enjoy being beat up? Did he ask to be battered? Was he the victim?

CASE 4

A woman in her early thirties, mother of three children, involved in group therapy, repeatedly presented to the group a black eye or various bruises stating, “That bastard husband of mine did this to me.” The group was very uncomfortable with this and would not respond. When I, assuming a systems kind of base to her interaction with her husband, asked her, “Tell us how you stuck your eye out to get it hit.” She became very angry, but she stayed with the group. Finally the bruises ceased to be presented and things went along apparently quite well for a long time. Then one day she said to the group, “You used to make me mad by asking me how I stuck my eye out to get it hit. Right now my husband is sitting at home watching television, taking care of the children, and waiting for me to come home, and there is nothing I would like any better than to go home and start a fight with the son of a bitch.” Did she enjoy being beat up? Did she enjoy being battered? Actually in her case it turned out that this was her way of punishing her husband because after such a battering she would be very loving and attentive to him and look him in the eye so that he would see her black eye or her bruises and he cringed and felt guilty and miserable. Who was battered?

The above illustrations or examples do not take the place of all the others. You cannot step off from two examples like this and insist that everybody likes to be beat up. You do have to include that everyone in some way or another contributes to the situation. When we are considering children, the contribution takes different forms than that when we are considering adults who have more individual choice.

CASE 5

A woman, foster mother of a little five year old girl brought the girl to me to see if I could give any recommendations concerning the care of the child since the child had just recently been placed with her and her husband after removal from her parental home because of incest by her father. I cannot recall all of the details of that hour long session, but toward the end of that session I indicated to the foster mother that she and her husband were going to have to consider the possibility that this little girl would try to seduce her new daddy into doing with her what her other daddy had done. I did not know when this move would be made, but I thought it would be. The mother began to smile and said that the move had already been made. She and her husband were sitting at home and this little girl climbed up on daddy’s lap. She began to wiggle her bottom around on his lap in an obviously sexually stimulating way. I asked the woman how her husband handled it. She said, “He looked at me and winked.” I commended her and her husband for handling this situation in an ideal way and reassured her that though I felt the little girl would make one or more plays yet, that they had pretty well won the battle and very soon they would be able to treat her just like a little girl and the little girl would be able to lay aside whatever impression her biological father had placed upon her. (This hopeful remark was based on the reasonable possibility that this child would be left in foster care and not returned to this particular set of biological parents.)

I give you this case not to call names at the little girl and say that she was asking for trouble. She was truly not asking for trouble. She was trying to see whether the things she had been previously taught were part and parcel of the behavior expected in this new home. She had very well learned the task of getting along with and getting special attention from daddy. I am not using this example to indicate that this little girl was asking for sexual stimulation from the father person, but one can see the prospects that are built into a situation like this when the child is placed in a foster home in which the foster father or some other male adult is not in control of himself. The various caseworkers and counselors in placement and child protection agencies can keep in mind that a little girl and indeed a little boy subjected to incest within his/her own family and moved into a foster home is very likely to appear to be saying to the foster parents, “I want it” when really they are asking “Is this what is expected of me?”

Another aspect of the tendency of these children to appear continued sexual contact and stimulation is that sexual contact is pleasant and indeed exciting from birth. Some people have defined that the kitling and wiggling of an infant when it is diaper changing time is an indication that he knows he is going to be tickled. This goes on through the subsequent years. It is quite normal for two year olds to masturbate and for masturbation to continue in various degrees in children all the way to the time when they can substitute heterosexual activity and even well beyond that time. Thus we know that genital stimulation is a source of interest and pleasure at almost any age.

And now it gets more complex. The child wants to be cuddled, wants to be held, wants to feel close like he/she belongs to the important adults. If the adult does not keep things in an appropriate perspective and begins to change being close into sexual stimulation, the child accepts the sexual stimulation as a sign that daddy loves me or mommy loves me. One of the prices of incest, therefore, is that the child never makes the distinction between closeness or intimacy and sexual activity. Few, indeed, are the women who do not fully appreciate and enjoy when the husbands will, on occasion, just cuddle. Few, indeed, are the men who do not appreciate being able to hug and cuddle with their wives in a way which says, “You are very special to me.” This message is quite different from the one expressed by sex or
sexual intercourse. It is to be feared that the victims of incest having been taught there is only one form of intimacy and affection will go seeking that form and will be able to measure his/her personal worth and success in life according to genital contact no matter with whom, how frequently, or under what circumstances.

The approach I’ve been taking up till now is in no way intended to imply that incest is not important, is not troublesome, is not dangerous, is not destructive. My intent is to request that we not fix our minds on some formulation of cause and effect and, therefore, some treatment approach, but rather that we allow a broad look so that we will be able to listen to the people we have contact with and give them their individual consideration. If we, the physicians, have been personally subjected to the insult of incest, we must believe that though there may be certain features common to our own in cause and effect there will be other features which are not common. We must also be willing to even admit that there are instances in which the popular concern for the problem of incest permits some people to lie and thus cause an injustice to fall upon others.

CASE 6
A little girl about seven convinced her mother that her uncle had molested her and that he had even tried to have intercourse with her. In this case the mother immediately jumped in to defend her daughter and even allowed it to go to a legal hearing. The defense attorney carefully led the little girl into describing the event of near-intercourse and then asked her to describe what her uncle’s penis looked like. “It was long and hard and red and shiny.” The mother’s instantaneous response was, “My God, she’s lying!”

We all grew up having to make peace with our own hostility and with our own sexual feelings, and not infrequently when we run into a case of some man who has raped a woman and especially a little girl or has had an incestuous relationship with a woman or a little girl, we find the protective wall that we had built around our basic hostility threatening to crumble and we find ourselves thinking thoughts such as the bastard should be castrated. I will leave to you the pleasure of expressing your own thoughts. However, there is no doubt there comes in a feeling that he should be punished. Related to women involved in incest with boys or girls, we are somewhat less clear about our reactions, but we still seem to have a basic sense that the woman should be punished. I shall not suggest to you that you consider incest a sin or a crime. I shall not stand in judgment of the societies of the world now and centuries past in which the punishment for incest was death, imprisonment, or any of a number of mutilations. If you are going to work in a counseling or advisory situation, I suggest only that you be fully aware of your own feelings lest you counsel falsely.

If you read much of the literature you will find that even the small number of references to incest between mother and son will identify the mother as being psychotic. Since these writers have seen only a few male incest victims and since the mother’s psychotic state brings the case to their attention and since they have not seen cases in which there were non-psychotic mothers it becomes assumed that any mother who would have incest with her son is psychotic. I do not know what the relative proportion is of male victims as opposed to female victims. I will give you a couple of other examples of male incest to let you see that it is not the work of a psychotic mother — though individual cases may be:

CASE 7
One woman presented herself for help because she was having difficulties within her marriage and particularly with the sexual part of her marriage. Somewhere in the midst of our sessions she bragged that she had had intercourse with each of her four sons. Her purpose was, to her, a pure and saintly one. She wanted to be sure that these boys learned sex as it should be. She did not want them “learning about sex from those dirty girls that they were going to school with.” She was not psychotic.

CASE 8
A boy, age fifteen, was seen because he had apparently set fire to his uncle’s barn. The boy was given a choice between going to the youth correctional institution or to psychiatric care. He chose the latter. We were together for a long time, during which he spent most of his appointments cussing out the judge for sending him to a shrink. I let him do this without getting angry at him or without insisting that he talk about why he was really seeing a shrink, and finally he told me that he had burned the barn down because his thirteen year old cousin, a female, kept trying to entice him into the haymow to have sex with her. He didn’t want to do that and the only convenient way that he could see to avoid it was to burn up the haymow. From then on he stopped cussing out the judge and he gave more and more information of his own battle to try to find some kind of rational position for himself. He was forever taking chances, dangerous chances, but nobody seemed to pay attention to that. Then he even slashed up a bunch of his father’s belongings and the father didn’t pay any more attention to it than that he obviously needed to continue to go to a psychiatrist. One day, we were now two years into treatment, he brought in a picture of his girl friend with whom he was going to have a date that night. He showed me the picture of this very pretty girl and then said, “Do you know what my mom will say when I start out on a date with her tonight? She will say, remember what causes syphilis.” My response was, “My God she takes the girl’s pants off before you ever get into the car!” He agreed with that and indicated that this had always been so. With that I called in the mother who gave me a story that when she was in college she went with Mr. Macho whose greatest thrill other than laying women was driving his car dangerously. He lost and was killed. She switched and began to go with Mr. Dodo who was dull and uninteresting, but safe. This is the man she married. From the time she gave birth to a boy child she fantasized that he was going to be like that other lover. We have no idea whether she sexually stimulated this boy when he was indeed a little boy, but she was able to indicate that the greatest thrill in her life now was when her son went out on a date. She would then sit home alone fantasizing how good that girl was feeling as he had sex with her. She was ultimately able to see that she was not taking the girl’s pants
off before her son and the girl got into the car, she was indeed taking her son’s pants off. He then settled down. Please keep in mind it took two years to get that far in treatment.

To the helping person the above case opens yet another subject. The cases that people are talking about when they speak of trying to help incest victims are cases in which the people involved have said they are victims of incest. That is the starting point — though they may not use that word — incest. Perhaps since this subject has more or less come out of the closet, it may be that more and more of the victims will identify themselves earlier. It remains so, however, that many of the incest victims, now adult woman, do not speak of incest when they first seek help. They will speak of their concern about the possible sexual activity of their daughters or sons. They will speak of their own difficulties getting along with other people, and most especially with males, and the incest thing only comes later. Indeed, the incest events may have been laid aside so far that they are not truly easily recalled. That will come only with time and patience and a sense of security or comfort with the helping person.

Some of the cases of incest come with the little girl (notice I leave out little boys) indicating something like, “He touches my nasties.” (I find myself at least as offended with parents teaching their little girls that their genitals are their nasties as I am when I know there has actually been sexual fondling and stimulation.) Sometimes the little girl will report to the mother that daddy or Uncle John or big brother “hurt me” and then she’ll have to indicate the part of her anatomy that was hurt. In the teenage girls there is frequently an approach to some adult female after there has been some educational movie in school. Occasionally the girl will really be snitching on the male. She may have been quite comfortable tolerating the sexual attention and then the boy or man does not follow through with a promise. He makes her mad, and she tells on him.

However, we must keep in mind again that these children are growing in families in which they are but part of the overall family picture. They may have fulfilled a family requirement with or without enjoyment on their part through their early years, but they finally come to a point as they approach their adolescence that they realize that this is wrong or freaky or sinful or dangerous or something bad including that they could get pregnant. And yet they say nothing. Instead of saying, they may act. There may be a sudden significant change in behavior. They may become school failures or at least diminish markedly in their school productivity. They may cease to have anything to do with their friends. They may become ill and isolated and obviously depressed. Or they may swing in quite the opposite direction and become obstinate, obnoxious, fighting, and they may take to running away, lying, stealing, prostitution. The reaction of the reporting adult is that she has changed so much in a negative way. No matter whether a particular girl chooses the direction of acting out or withdrawal, she is emphasizing to us something which says that “in my family I have been assigned a role that I can no longer fulfill, and yet I am not permitted to squeal or reveal.” The strength of this position is easy to recognize when you think of the cases you have seen in which the girl has spoken aloud in accusation against primarily the father, but also other important males only to be forced into changing her mind and withdrawing her complaint since the mother or other important females in the family will not support her and will, indeed, condemn her or she learns that the family will fall apart and she will be to blame.

Of course, there is the situation in which the girl is involved in a relationship with her father or other male, but especially the father or stepfather, and she finds encouragement from the mother because the mother is trying to find a way to get away from the man anyway and now she has a real opportunity if the daughter will continue.

**WHAT TO DO AND HOW TO DO IT:**

First of all, don’t go into the business of trying to work with incest victims because you’re mad at the people who commit incest and want to punish them or get even with them. Laying aside the systems concept of everyone in the family being assigned a role and just simply accepting that the little or big girl or little or big boy that you are seeing is a victim who hurts and needs help, you can add the additional thought that there are at least three layers of victims or people who are hurting: The direct victim is primary, then there is a secondary group who might be mother or brothers and sisters or any of a group of relatives, and then there is the third victim who is the perpetrator himself or herself. The temptation is to consider the perpetrator to be just bad, but the perpetrator is also a victim of the family and the world from which he came. He may have so much bought the concept that little children are to be fondled and diddled, that he in no way feels it to be evil and he has brought himself to consider it an obligation to teach the child this wonderful business which he himself is enjoying — this wonderful business of sex. Such a perpetrator may have to be put away in order to avoid injury to others. However, some of the perpetrators actually feel terribly guilty, terribly annoyed with themselves, and ashamed that they cannot produce well sexually with adults, and thus they must turn to children. If we keep a clear head, we may be able to help some of these. It pays not to
feel terrible anger at the mother who permits her daughter to take her place. It may be that you will find one who wants to be helped to assume an adult sexual role, rather than one of being a perpetual tease to her husband since she is there, but then turns the task over to her child.

Working with the primary victim is sometimes very difficult, partly because of our legal system. The child, once incest is known or suspected, is taken away from the home environment. She/he is taken to a doctor for examination; she/he is taken to a child protection agency and to a court and she/he is asked over and over and over again what happened, which in a sense, puts a perpetual spotlight on her/his crotch which, in itself, is a form of stimulation and this may lead her/him to find ways to exhibit herself/himself or may lead her/him to give up, withdraw her/his charges, and take her/his chances. If the young girl or boy can come into contact with a person who is rather more understanding than sympathetic and whom the child can come to trust, there becomes an automatic feeling of relief and of no longer being strange or undesirable.

CASE 9

I once was seeing a young girl, a teenager, who was beginning to come to the point of talking relatively freely about all kinds of things. One day as we were approaching the office I put my hand on her back to steer her through the door of the office so I wouldn’t bump into her and she ducked away from me. After we got into the office and were seated, I asked to see one of her hands. She held out her hand and I rubbed my hand across hers and then looked at my hand and said, “It’s not dirty.” She wanted to know how I knew that was the way she was feeling. I told her that the way she pulled away from me as we were going through the door of the office seemed to indicate to me that she felt dirty and did not want me to touch her because I would get dirty. From then on she felt very much more comfortable and worked very diligently to begin to get her life into a more reasonable focus and purpose.

Oftentimes it is more important to give the young person a chance to feel wanted or liked than it is to say the right thing. If he/she had indicated an interest in something in some previous session and the doctor remembers that, the message to the person is “you count.”

Perhaps it would be important as a last theme in this discussion to see if we can identify some of the differences that truly are there between the male and female. Perhaps this would make it easier for us to identify why incest is considered almost exclusively a female problem with the male being the criminal, whereas we actually know there are male victims and both male and female perpetrators. Incidentally, there is also female to female incest.

The female in learning to be ready for heterosexual intercourse has to prepare herself for having her body entered into. There may be fantasies of great pain, bleeding, serious injury. Once the woman is past this part of her development she, hopefully, progresses beyond the feeling that her genitals are for the passive reception of some gigantic male organ.

For the male, the early education includes the recognition that he is going to have to be able to make that thing stand up if he is going to be able to function sexually. Because he is going to be squirming something out, there is always a possibility the pump will run dry and nothing will squirt out. Thus, during his developmental years there is a constant question of whether it is going to actually function right. As a result of this, in some men, there develops a sense of dislike for females. This dislike being mixed with fear because if he ever fails sexually, the female he is with will know and she has the advantage that if she fails she can fake it.

Such thoughts leave us recognizing that beneath incest there are many potential causes or reasons. A man can become sexually involved with a little girl or what he idealizes as the reason, that he will teach her to be the world’s best lover; or he will become involved with a little girl because it is safe for him to have sexual activity with a little girl since she cannot judge him a failure because she does not know what a failure would be; or he can punish a little girl for being a representative of that female gender, and in the process he is screwing them all. And the woman can approach little boys for very similar reasons.

SUMMARY:

As you try to work with incest cases, leave your mind open to the idea that this new case may be different from the ones you have seen before. In treatment or counseling be gentle, strong, and as far as possible, nonjudgmental so that you may convey to the child or the victim that someone fondling her genitals or his genitals does not mean that he or she is nasty. The physician, having made his evaluation, may decide to refer the child and/or family to some other counsellor or therapist. Even such a referral must be done in a kind and friendly way.

REFERENCES


Letters in Response to Previous Articles:


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John F. Barlow, M.D., President
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Having recently attended the interim meeting of the AMA, I continue to be impressed by the dedication and work that is put forth. I can assure you that it is work and not fun and games, as many of you who have been there can attest to. It is sad to see, that of all the issues and problems dealt with, the only press coverage was on the issue of AIDS, and ban on cigarette advertising. As always after these meetings I am more convinced how important it is to be a member of this organization. It goes without saying we should continue membership and work activity in the South Dakota State Medical Association.

I would again urge you, if you have not done so, to sign and return the participation agreement for DakotaCare. The physicians that participate will be one of the best selling features.

To close, I would urge everyone to be interested and involved in working for the passage of our legislative package.

R. G. Gere, M.D., President
South Dakota State Medical Association
PRO DRAFT SCOPE OF WORK

With the release of the draft scope of work for Peer Review Organizations, the Health Care Financing Administration (HCFA) is indicating a change in program goals to emphasize quality of care and the elimination of premature discharges. The increased interest in quality of care is in response to mounting public criticism that Medicare beneficiaries are being abruptly and prematurely discharged. Premature discharges, according to the draft scope of work, are those which occur before the patient is medically stable or that are not consistent with the patient’s need for continued acute inpatient care. HCFA expects PROs to review readmissions within 15 days of discharge and deny all claims for inappropriate or unnecessary readmissions.

PROs will also be required to apply generic quality of care screens to every record reviewed to determine the adequacy of discharge planning and medical stability of patient at discharge. These screens may be used to evaluate nosocomial infections, unscheduled returns to operating room, trauma (such as fractures) incurred during hospitalization, one and two day stays, etc.

PROs will be permitted to intensify review activities on hospitals with utilization problems while reducing the amount of review in hospitals with good performance patterns. PROs will also be responsible for disseminating educational material to Medicare beneficiaries informing them about the Medicare program.

If past history is any indication, the current draft scope of work will probably be changed before it is released in final form. We will keep you abreast of these changes as they occur.
As pressures on physicians increase, so do pressures on the spouse and family. Auxilian's are realizing this dilemma and are encouraging programs which increase awareness and support of problems arising from alcohol and drug impairment and malpractice litigation. To assist members the following information is available from the AMA Auxiliary.

— "The Family of the Impaired Physician" offers information on support groups for spouses and families of impaired physicians. For members single copies are free.

— The new "What Every Physician's Spouse Should Know . . . Professional Liability" gives an overview of this problem; addresses personal impact and questions of liability; discusses court proceedings; and gives coping tips. The booklet is $3 for members and $5 for non-members.

— The third booklet "Professional Liability in the 80's: What Medical Auxiliaries Can Do" is a how-to manual. It includes information on developing: educational programs, educational booklets, and support groups for physicians' spouses and families. One copy is available to each district and state auxiliary.

South Dakota's own Ila Lushbough from Brook-
Council Meeting Highlights

The Council of the South Dakota State Medical Association met on Friday, November 22, 1985, in Sioux Falls, South Dakota. Following are items of business transacted at this meeting.

1. RESOLUTION ON PHYSICIANS AS PRIMARY PROVIDERS OF MEDICAL CARE. The Long Range Planning Committee proposed this resolution and it was adopted by the Council:

   Whereas, the Doctor of Medicine has been fully trained in evaluating the people he serves and no other allied health service or dispenser has been more fully trained,

   Therefore be it resolved, that in the best interest of quality care and cost effectiveness, all medical services be directed by a Doctor of Medicine.

2. 1986 LEGISLATIVE PROGRAM. The Council approved a legislative program for 1986 with primary emphasis on the passage of four professional liability bills including:

   a) mandatory offset on collateral sources
   b) mandatory periodic payments or structured settlements
   c) $500,000 cap on all damages (or as low a cap as the legislature will accept)
   d) elimination of punitive damage awards

3. HONORARY LIFE MEMBERSHIP. Dr. Hubert Werthmann, Pierre, was elected to honorary life membership in the State Association.

4. DAKOTACARE. The State Association’s HMO, Dakotacare, has not yet received final approval from the Department of Health and the State Insurance office; however, plans are progressing. Physician participation agreements have been sent out and marketing proposals are being finalized.

5. DOCTOR OF THE DAY PROGRAM. During the 1986 legislative session, the State Medical Association will provide a physician in the capitol to treat the legislator’s minor illnesses. Not only will this benefit the legislators but also it provides an opportunity for individual physicians to meet and become acquainted with our state legislators and the legislative process.

6. SPRING COUNCIL MEETING. The spring Council meeting will be held on Friday, April 18, at the Town House Motel, Sioux Falls.
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The Indian Health Service: Is There a Better Way?

Ray Rudolph, MS IV*

ABSTRACT:
The history and evolution of the provision of health care for American Indians is briefly traced. Problems in the delivery of care, particularly on South Dakota reservations are outlined. How these will be addressed in an era of rapid change in delivery of care systems, and federal budget limitations is problematic. The author concedes the weaknesses of the present Indian Health Service; but feels many of these are results of culture, isolation, poverty, and tradition. Input, consent, and support of the native American is necessary for any new or different approach.

(Table I) Such regulations, laws, and policies seem antiquated. Do Indian people need such services today? Are not Native Americans being assimilated into the melting pot of America?

Tobbeh, of the Indian Health Service, Alouquerque, New Mexico, stated in 1982 that Indian people as a whole "... have the highest infant mortality rate, the highest rate of unemployment, the lowest level of educational achievement, the lowest per capita income, the poorest housing and transportation, and the highest incidence of crippling disease."*8

According to the 1980 census, some 45,000 people identified themselves as Indian in South Dakota; 33,000 were located in Reservation areas. Forty-six percent of South Dakota Indians had incomes below the poverty level. The overall population density for South Dakota in 1980 was 9.1 people per square mile; on the Pine Ridge, Cheyenne River, and Rosebud Reservations, it was 2.8 per square mile. There are twice as many deaths from diabetes among South Dakota Indians as non-Indian, eight times the deaths from cirrhosis, and ten times as many accidental or violent deaths. Infant mortality (1981-1983) was, in South Dakota, 23.9 thousand for Indians, vs. 8.7 thousand for non-Indian. The author witnessed a job survey on a central South Dakota reservation that revealed an unemployment rate of more than 80 percent.

*Student, USD School of Medicine, Sioux Falls, SD. Mr. Rudolph served as a medical corpsman in Viet-Nam, as an emergency room nurse, and as a physician assistant at Lower Brule for several years before entering medical school.
High school drop out rates are 30 percent; 8 eighteen percent of Native Americans have incomes below the national poverty level; 3 in 1974 maternal mortality was the fourth most common cause of death in Navajo women. 10 Sixty-four percent of families on the Navajo reservation use an outhouse. 10 Yet, the Indian Health Service is the only source of health care available to most Native Americans.

Is there a better way to provide health care? Proposals have included private practice, augmented by some type of insurance plan, 9, 11, 12, 13, 19 Health Maintenance Organizations 15 or Independent Practice Associations. 15 A major fault with all of these is the limited amount of health care provided. The classic IHS service unit serves three thousand to eight thousand people, of whom as few as four hundred live in any one locale; the remainder are spread over many square miles. 13 There may be a small hospital with perhaps fifty beds, or less, and an out-patient clinic with medical and administrative support. 13 These are the superficial, most visible services needed and provided by the Indian Health Service. Not included are ambulance services, EMT personnel, public health nurses for school and community programs, optometrists, speech therapists, and otorhinolaryngologists to treat problems found by screening.

In the areas of Preventive Medicine and Public Health, Community Health representatives as go-

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### Table I

**History of Health Care for Native Americans**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 1832</td>
<td>Army medical staff from forts and missionaries</td>
</tr>
<tr>
<td>1832</td>
<td>Congress authorized smallpox vaccination by Secretary of War</td>
</tr>
<tr>
<td>1849</td>
<td>Department of Interior established and Bureau of Indian Affairs from military to civilian</td>
</tr>
<tr>
<td>1868</td>
<td>Treaty that provides physicians for reservations in South Dakota</td>
</tr>
<tr>
<td>1873</td>
<td>Attempts to furnish organized medical facilities</td>
</tr>
<tr>
<td>1874</td>
<td>About half of Indian agencies have physicians</td>
</tr>
<tr>
<td>1878</td>
<td>Physicians on Indian reservations required to be graduates of medical colleges</td>
</tr>
<tr>
<td>1880-1890</td>
<td>Many Indian hospitals built</td>
</tr>
<tr>
<td>1909 and 1912</td>
<td>Money allotted for treatment of trachoma and tuberculosis devastating Indian people</td>
</tr>
<tr>
<td>1921</td>
<td>Bureau of Indian Affairs funding for Indian health separated</td>
</tr>
<tr>
<td>1924</td>
<td>Division of Health established in Office of Indian Affairs</td>
</tr>
<tr>
<td>1930's</td>
<td>Many Indian hospitals closed due to lack of funding</td>
</tr>
<tr>
<td>August 5, 1954</td>
<td>All care transferred to Surgeon General of the United States Public Health Service, Indian Health Service, Secretary of Health, Education, and Welfare (now Health and Human Services)</td>
</tr>
<tr>
<td>January 4, 1975</td>
<td>Indian Self-determination and Education Assistance Act Public Law 98-638</td>
</tr>
<tr>
<td>September 12, 1984</td>
<td>Indian Health Care Improvement Act — to upgrade the standard of health on reservations. Passed Congress, suffered Presidential veto</td>
</tr>
</tbody>
</table>

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betweeness for Indian Health Service and patients at home are necessary, health educators for special school programs, medical advisors for child protection teams, and special education review committees.

Environmental engineers to assure water quality, proper refuse disposal, and public kitchen inspection; mental health group referral facilities; dental services; pharmacists; maternal and child health; alcoholism education and its prevention and treatment are lacking. 5, 10, 13, 14, 16, 17 As in many small towns, there is little funding or expertise to provide these services within tribal governments. What insurance company, Health Maintenance Organization, or other organization is prepared to provide them in this setting?

A case can be made for the continuation of Indian Health Service to provide care to Native Americans. Problems include:

1. Physician to population ratio nationwide is 1/476, on the Navajo Reservation it is 1/316; 15 in South Dakota the statewide ratio is 1/700 and on the reservations — 1/1200.

2. Difficulties in “access”; long waiting periods in Indian Health Service clinics, and long distances with poor transportation. “Access” is critical. Ideally, primary care should be available within thirty minutes (by federal criteria). 1, 10, 17, 18 In South Dakota about 85 percent of people are within 50 miles of such care. On the reservations, weather and road conditions often turn access time into hours.

There are problems with continuity of care from rapid provider turnover. 18 The Consortium for Handicapped Indian Children described the delivery system as “a chair with ten legs and no seat.” 18 A common complaint is lack of choice of provider, and the feeling that anything that costs must be better than what is available, free. 10

Most Native Americans view Indian Health Services as a right provided by the Treaty of 1868 14 and other treaties, and legislation. Through Public Law 93-638 of January, 1975 (the Indian Self-determination and Education Assistance Act) 6 tribes have the right to receive cash payments to assume responsibility for providing health care. Few tribes have availed themselves of this opportunity, and most remain dependent upon Indian Health Service.

As health care cost rises, there is outcry to contain costs. Djukanovic and Mach in 1975 outlined ten characteristics of developing countries; each of these may be documented on South Dakota reservations, and are suffered daily by Indian people; 1) economic stagnation, 2) cultural patterns unfavorable to de-
development, 3) agricultural underdevelopment with few other employment opportunities, 4) isolation caused by distance and poor communication, 5) unfavorable environment predisposing inhabitants to communicable diseases and malnutrition, 6) poor quality of life characterized by resource scarcities, 7) poor educational opportunities, 8) social injustices, 9) lack of influence in national decision making, and 10) inadequate health facilities and lack of sanitation. 9

In conclusion, I suggest no change at this time in the Indian Health Service delivery system, other than more adequate funding. There may be better systems available, or soon to be available, but before major changes, there must be great caution. Reservation health care is inextricably inter-woven with reservation life, poverty, unemployment, pride, and tradition. To change only one facet of this society is fruitless. We cannot “do things” to or for Native Americans, without their input, consent, and support. 8, 19, 20, 21, 22

REFERENCES

March


April

The Computer Revolution in Nuclear Medicine, Hyatt Regency, Milwaukee, WI, Apr. 3-5. Fee: $150. 18 hrs. AMA Category I credit. Contact: Deborah Churan, Ex. Dir., Central Chapter, SNM, Inc., 134 Lincoln Pkwy., Crystal Lake, IL 60014. Phone: (815)459-6884.


Transurethral Ureteroscopy: A Seminar & Workshop, UC San Diego Sch. of Med., San Diego, CA, Apr. 5-6. Fee: $350. 13.5 hrs. AMA Category I credit. Contact: CME, M-017, UC San Diego Sch. of Med., La Jolla, CA 92093. Phone: (619)452-3940.


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The Post-Polio Syndrome

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USD School of Medicine
The History and Physical —
What Do We Teach

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The Post-Polio Syndrome

Jessie K. M. Easton, M.D.*

ABSTRACT

Approximately 22% of poliomyelitis survivors develop symptoms 20 to 30 years after their acute attack. The problems are variable with increased weakness, loss of endurance and pain seen most frequently. No definite etiology has been established, though aging of previously compromised neurons seems to play a part. Management is symptomatic after other possible causes have been treated. Weight loss, correction of contractures, provision of braces or other aids, carefully graded exercises and pain management can help patients remain functional. The symptoms usually subside after a year or two with patients adjusting to a lower level of function and a less strenuous lifestyle.

Recent articles appearing in the popular press have alarmed the post polio population with reports of progressively increasing weakness and disability as a late complication of poliomyelitis. Meetings and symposia have been held by medical and lay people and more information is slowly becoming available.¹

Increasing disability, occurring approximately thirty years after an acute attack of poliomyelitis, has been called ‘‘Post-Polio Syndrome.’’ It includes a variety of symptoms and signs, leading to a variety of symptoms and signs, leading to a variety of other names, including ‘‘Post-Polio Progressive Muscular Atrophy’’ and ‘‘Post-Polio Pain Syndrome.’’ Patients complain of pain and weakness, usually associated with exertion and mostly related to the muscles known to be affected by poliomyelitis. There are other pains that occur at night, and some that are related to temperature changes. Muscles twitch at night and at rest, and cramps occur, more than usual. Previously strong muscles lose their ability to do sustained work or become weak. Fatigue occurs with less effort than usual and limits work capacity. The overall effect for the patients is an increase in their disability. This leads to changes in lifestyle, changes in overall ability to function, particularly in work and social settings, and psychological distress secondary to the need to adjust to a different level of ability.

Not all people who have had poliomyelitis suffer from these late effects. A survey of patients treated at the Mayo Clinic from 1935 to 1955 showed that approximately 22% had developed new problems at the time of the survey.² There are 200,000 to 250,000³ survivors with paralytic polio in the United States. The expected total numbers of affected people in South Dakota would be about 150. Occurrence is more frequent in patients who were on ventilators, were severely involved or took a long time to reach maximum function.

ETIOLOGY

The cause of the syndrome is not definitely established. Physiological mechanisms can be postulated based on what is known of the damage and recovery in the acute attack. These include: ‘‘(1) An immunologic disorder; (2) A compromise of remaining motor neurons in the spinal cord by scarring or from an alteration in the supporting structures of the cord which help maintain normal neuronal integrity; (3) A metabolic ‘‘fatigue’’ dysfunction of remaining motor neurons which originally may have been either totally spared or partially damaged, but have been overworked to compensate for neurons that died; (4) A loss of motor neurons through the normal aging process which is clinically more apparent simply because each remaining neuron innervates a larger number of motor fibers; (5) A transmission abnormality at the neuromuscular junction possibly associated with altered function of the motor neuron, an abnormality of terminal axon sprouts, a dysfunction of transmitter substance or an abnormality of the motor end plates; and (6) abnormalities of the muscle fibers.’’¹

It has been suggested, that the weakness and pain may represent a reinfection with the polio virus that has lain dormant for thirty years, or a progressive
infection with a (possibly altered) virus. No evidence has been found to prove this theory, so far.

For most post-polio patients who are symptomatic, the problems are acute but do tend to stabilize after a period of months or one to two years —

By definition, the viruses associated with acute anterior poliomyelitis damage the grey matter of the nervous system, particularly that of the spinal cord. The grey matter usually thought of is the anterior horn cell, or motor neuron, which is rather randomly affected with some cells recovering, some functioning less effectively, some not damaged at all, and some dying. Subsequent loss of muscle function depends upon the relative numbers of unaffected or recovered or marginally functioning motor neurons left, and upon the degree to which less affected neurons are able to include “orphaned” muscle fibers in their territory by sprouting to increase the number of terminal fibers each one supplies. Other cells are also affected, including the Renshaw cells and the sympathetic motor cells, with less obvious results in terms of function. After the acute attack, physical function improves over a period of up to two years as remaining muscles hypertrophy, new sprouts form on motor nerves, and patients learn to use their remaining muscles to perform tasks of daily living and work. Over time, patients who initially required ventilators gain strength to do without them for all or part of the day. Wheelchair-bound patients become able to walk, and some are able to discard their braces. All of this requires a lot of effort on the part of the patients, who are naturally very distressed with deterioration of the level of function they thought would be theirs for life.

The problem has come to physicians’ attention as post-polio patients have sought help in dealing with their symptoms. A recent issue of the journal, Orthopedics was devoted to the subject, with articles by some of the people most interested and involved in studying the phenomenon.

**CLINICAL FEATURES**

A very few patients do have progressive muscular atrophy. This is similar to amyotrophic lateral sclerosis but is very slow to progress and has not been associated with upper motor neuron dysfunction. It occurs in polio patients with approximately the same frequency as amyotrophic lateral sclerosis in the general population and may be a separate entity not directly related to the initial disease.

For most post-polio patients who are symptomatic, the problems are acute but do tend to stabilize after a period of months or one to two years, usually with a lower level of function or a new adaptation to disability.

Weakness may be of three types: Loss of absolute strength, loss of endurance for effort at a single session, and loss of strength after exertion with recovery after a period of rest. The explanation for these manifestations is related to the stress of motor neurons that have recovered from the acute attack with impaired function or a greater than normal workload, and to the “normal” effects of aging and work (or overwork) on the muscle.

After polio, the recovered muscle may be producing a given amount of force by simultaneous contraction of most of its motor units, where a normal muscle may use thirty percent and sustain the contraction by alternating use of the other seventy percent. As long as the work done does not exceed the muscle’s ability to recover, both normal and affected muscles maintain the same apparent strength. If the aging motor units lose ten percent of their function, the result is a ten percent (or more) loss in capacity for the affected muscle, and a scarcely noticeable drop in endurance for the normal one.

A normal muscle forced to work beyond its capacity can become temporarily weakened, or even damaged, as in the condition called “shin splint” where the anterior compartment muscles in the leg become edematous and unable to function after a prolonged period of running, usually without adequate training.

The athlete may recover from his shin splint after a period of rest, providing the edema has not compromised circulation and caused necrosis of muscle. The post-polio patient may also recover after a period of rest. Some patients find that their muscles, which used to be able to carry out a day’s routine or go shopping or to work every day without undue fatigue, now are able to do this amount of effort only every other day, or once a week, and fatigue prevents them from producing that amount of effort unless the required amount of rest is taken. A respirator patient may need ventilation all day as well as at night. This is not just a sensation of tiredness, but an actual inability of the muscle to produce tension.

Herbison has suggested a circulatory element in this fatigue. As the muscle fibers hypertrophied after the acute attack, the numbers of capillaries did not increase proportionately, so that there is a relative ischemia and the blood supply to the post-polio muscle is not adequate to sustain prolonged repetitive effort. If this ischemia is combined with a loss of
motor units with aging, there will be a loss of strength and endurance.

Some of the decrease in function is due to other factors usually associated with aging but not necessarily inevitable. A young person with polio may maintain a general activity level and food intake such that weight remains constant, or appropriate. With aging, the activity level may change without lessening the food intake, resulting in an increased load for weakened muscles. Decreased activity may also result in failure to maintain range of motion in critical weigh-bearing joints so that muscles are no longer able to function effectively or have to work harder to carry the load; for example, loss of full extension at the hip and knee may overload the quadriceps and hip extensors, lessening the endurance or actual ability for walking or standing. Prolonged sitting may increase scoliosis, with asymmetry of stance and inability to balance.

Some patients have complained of less function in extremes of heat or cold, and Bruno demonstrated decreased performance of hand activities in post-polio patients in a lowered ambient temperature. Nerve conduction velocity is slowed in colder conditions, and this may account for some of the loss of function. However, the incoordination exceeds that seen in normal subjects, and some other explanation is needed. There may be a factor of sympathetic dysfunction involved, since the response to cold is not normal in some post-polio patients, with a failure of the skin capillaries to contract, so there is a greater sensation of cold. There may be an element of ischemia in the deeper tissues, as blood continues to flow to the skin during exertion instead of being shunted to the muscle. The incoordination may also be partly due to less efficient sensation in cold skin.

Some of the decrease in function is due to other factors usually associated with aging but not necessarily inevitable.

Pain is the most prominent symptom in some patients, and may be the hardest to deal with. Its causes vary. Some pain is related to stress on connective tissue about joints that have decreased support from muscles, or have abnormal stress patterns due to asymmetries of muscle pull. Some is related to osteoarthritic changes in joints that have had years of abnormal stress. Some seems to originate in muscle, occurring immediately after exercise or hours later. This may be ischemic, or related to post-exercise edema, or due to metabolites that are not cleared adequately after exercise, with possible inadequate capillary circulation and abnormal sympathetic function. Some is similar to the normal stiffness after over-exertion that is seen in week-end athletes, except that for the polio patient who has been accustomed to a certain amount of exertion, the pain and stiffness may occur after this usual exercise and be a limiting factor in how much can be done in a day or a week.

So far, it has not been possible to associate the occurrence of post-polio symptoms with a particular strain of viral infection.

Physical examination of the patient complaining of increased weakness or pain may not show much abnormality, particularly if the patient is being seen for the first time and there are no old records for comparison. The patient’s present condition should be documented for purposes of follow-up, including joint range of motion (with notes about deformities such as scoliosis and chest asymmetry) and manual muscle testing. Results of testing may not be compatible with the patient’s reported past activity level, and this can be taken as presumptive evidence of loss of strength. Joint pain and tenderness, swelling and redness may indicate an arthritic condition. Strength may be good on a single test, and repetitive exercise may be needed to elicit loss of endurance. Observation of function may be helpful; walking, dressing, getting up from a chair may show diminished strength. Other treatable musculoskeletal or medical conditions that may be associated with weakness should be looked for, such as exophthalmos, jaundice, cyanosis, arthritis of inflammatory or degenerative type, or neuropathies.

Laboratory tests are done mainly for exclusion of other disease processes. Pulmonary function tests may be useful in the patient who has a history of ventilator treatment in the acute stage of the polio, or who appears to be short of breath as part of fatigue complaints. Electrodiagnostic studies are helpful when positive, and have shown changes of new denervation or root irritation in a few cases. Nerve conduction is usually normal, with electromyography showing only old denervation/reinnervation patterns.

In a few cases, the Functional Capacities Assessment has been administered to patients complaining of pain and loss of endurance who have had no physical or laboratory abnormalities and who had relatively complete recovery after the acute attack. This has shown lowered capacity for repetitive work and has been useful in documenting real ability for establishing “disability” for pension purposes.

So far, it has not been possible to associate the occurrence of post-polio symptoms with a particular strain of viral infection. At the time most of the people presently affected were experiencing their acute illness, accurate identification of the viral cause.
was not possible. It is possible that the post-polio syndrome is really a group of problems related to distant infection with viruses that produced an illness clinically like poliomyelitis. It should be remembered that other viruses may be associated with muscle weakness; for example, some of the coxsackie viruses, as well as herpes zoster, and even after the present group of patients has dealt with their syndromes and adapted to their new status of disability, there still may be an occasional similar case occurring years after some other virus infection.

MANAGEMENT

Management is symptomatic, and is directed toward relief of discomfort and improvement of function to an optimum level. Where weight is a problem, dieting is advisable. In calculating caloric intake, it should be noted that polio patients have less muscle to burn up the calories or to be part of body weight, and so height alone is a poor indicator of ideal body weight. Another caution in dieting is the loss of muscle tissue associated with some rapid weight loss schemes, and the polio patient will need to have a program of gradual weight loss that does not threaten what muscle is present and functioning. Fad-type diets may lead to increased weakness.

Where contractures limit function, they need to be stretched out. This can be done by a physical therapist, or by the patient at home, with a therapist supervising at intervals to make sure it is effective. Some contractures are resistant to passive stretching, and surgery may be needed to improve the range of motion, with the caution that the patient may have been relying on part of the contracture for stability and total correction may not be advisable. A careful study of the patient’s kinesiologic function must precede any decisions about surgery. Also, while recovering from any surgery (or any illness, for that matter) it is important to maintain strength and mobility in uninvolved parts of the body. Post-operative or post-stretch functional re-education and ongoing muscle stretch or support may be required to restore and maintain function.

Osteoarthritic joints should be treated as other osteoarthritis, with improvement of mechanics where possible, avoidance of overuse, and support where needed. Surgical management such as joint replacement may not be as applicable or as successful in the post-polio patient, because the muscles may not be adequate to operate and stabilize an artificial joint. Physical therapy may help to reduce discomfort, and bracing of unstable joints or the use of a cane or crutches may be helpful in maintaining walking. Hand function may be improved by im-

mobilizing/stabilizing an unstable thumb or wrist, surgically or with orthotics.

Where pain is related to disturbed mechanical function, changing the line of weight-bearing or the angle of pull may relieve discomfort. As an example, a desk worker who consistently leans to the left as he works with his useful right arm, finds the tilt produces neck symptoms as he tries to hold his head upright to read. Supporting his trunk in an upright position with positioning of the work for the right hand, may help his function, with the addition of physical therapy to relieve the pain in his neck. A shoe that supports a weak ankle may correct weight-bearing through an equally weak knee with relief of knee pain and more endurance for walking. Again, careful analysis of kinesiologic function can often produce a relatively simple solution to the pain problem.

The kind of pain that is described as burning, deep in the muscle and bone, and not directly related to any specific activity, is the hardest to deal with. Some is relieved by heat, either locally or as a hot bath. Aspirin helps some, as do the non-steroidal anti-inflammatory drugs, though there is no evidence for an inflammatory cause of the pain. Antihistamines have been successful in some instances. Valium and other muscle relaxants have also helped, but not consistently. Some patients have had transient relief from a variety of drugs, and changing from one to another over time will sometimes allow the patient to deal with the pain. Narcotics are to be avoided because of the long-term nature of the problem, which may take two or three years to settle down.

<table>
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<tr>
<th>Where pain is related to disturbed mechanical function, changing the line of weight-bearing or the angle of pull may relieve discomfort.</th>
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<tr>
<td>There is often an element of depression along with the pain and fatigue. This responds fairly well to anti-depressant medication, and does go away with time.</td>
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<td>Muscle cramps often occur at night, and may be due to the same causes as in non-polio patients. Keeping warm may help, as may a hot bath at night. Electric mattress pads can provide gentle warmth that helps to keep muscles relaxed. Cramps may be related to positioning in bed, or to nerve root irritation associated with skeletal abnormalities. “Normal” causes need to be looked for and treated, such as low serum calcium.</td>
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<td>Fasciculations may occur in affected muscles, and while usually not painful, they may be bothersome. They will stop in time, and may become less if</td>
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overuse and fatigue can be avoided and the deterioration of motor neurons slows.

Where post-exercise edema and stiffness is a factor in pain, a technique called static stretching, used in athletics for sore muscles, may help relieve the discomfort. By preventing further shortening of the soft tissues, stretch may help to maintain or improve function.10

Exercise therapy can help if the loss of function is related to disuse. However, heavy resistance exercise is contraindicated for these weak muscles. The fatigue involved may lead to greater weakness rather than increased strength.11 Very gentle, low resistance, low repetition exercise for weak muscles may improve strength enough to regain lost function. Richard Owen in Minneapolis has had patients do this, checking the strength at intervals and stopping the exercise if there is a decrease, slowly adding resistance if there is an increase in strength. 12

Occasionally, the fatigue is related to general deconditioning. In these cases a carefully graded program of aerobic-type exercises can help restore fitness. Swimming can also be a good exercise, but again it is important to avoid overusing weak muscles. Where respiratory muscles are involved, it may be helpful to check the mobility of the ribs and thoracic spine, and do a course of gentle stretching for them if needed.

Check for other causes of the symptoms before making a diagnosis of post-polio syndrome.

Where muscle function has indeed deteriorated, or joints have become unstable, bracing may provide support and allow renewed activity. The flail ankle may be tolerated until the knee becomes painful, when a brace to stabilize the ankle may allow further walking. Corsets may relieve back pain and increase trunk stability to allow continued sitting or walking. Canes or crutches may be helpful in redistributing the stress of movement, or providing help with balance. Patients who have in the past fought through months of therapy to be able to do without their braces may have an emotional reaction to going back to using aids. If the aids help function and are well chosen for the least conspicuous, most functional device, acceptance will come.

The generalized fatigue may be related to fatigue of the respiratory muscles and mild anoxia or buildup of carbon dioxide. Breathing exercises, support for the scoliotic spine, and even assistance with a mechanical respirator may be necessary. Most of the patients can swallow, so a tracheostomy is not needed, and ventilation can be done using a mouth-held positive pressure apparatus or a well-fitting mask, or a negative pressure plastic tent or chest cuirasse, to allow time for the respiratory muscles to rest. Teaching "frog breathing" may help. Oxygen is only indicated if other respiratory disease has diminished lung diffusing capacity, and then care must be taken to avoid carbon dioxide accumulation. Lightweight portable breathing apparatus with rechargeable batteries for power can be used to help the patients maintain activities in and outside the home and even to travel.

the polio survivor may have to alter his or her lifestyle.

Depending on the severity of the disability, the extent of new problems and the degree to which they are amenable to management, the polio survivor may have to alter his or her lifestyle. This may require re-ordering of priorities for using available time and energy. Social life may be curtailed to allow work to continue full-time. Full-time work may need to be part-time. It may be necessary to hire household help, or to obtain work-saving appliances. Work or play may require altered techniques, such as the use of a golf cart to allow continued participation in the game, or an electric wheelchair instead of manual, or use of a chair instead of walking, or an electric mixer instead of manual stirring for baking. Convenience foods may allow the homemaker to continue making a family's meals. These changes may be resisted by the patient at first, but once begun, are usually used enthusiastically, with wonder why they didn't do it long ago, since they feel so much better not being tired all the time. Where the patient is a work-all-day type, it may be necessary to insist on rest time, or to limit effort to short sessions to avoid excess fatigue and increased weakness.

It is important to check for other causes of the symptoms before making a diagnosis of post-polio syndrome. Neuropathies may be associated with similar complaints. Weak back muscles may contribute to a protruding intervertebral disc, and increased leg weakness may be due to the disc and not to the polio.

Metabolic or inflammatory diseases may cause fatigue, depression and muscle weakness and pain. Thyroid disease, diabetes mellitus, renal failure, and the whole spectrum of collagen-vascular and rheumatoid diseases may develop in the patient who happens to have had polio in the past.

In summary, the post-polio syndrome is real. Its effects vary from one person to another, and usually are related to overuse and fatigue of muscles affected during the acute attack, or muscles not known to be affected that are weakening. The cause is probably related to aging effects on the altered nerv-
ous system, and not to a recrudescence of the infection virus or to a progressive slow infection with the virus. Management is symptomatic, treating those aspects that can be changed and helping the patient to adjust to a change in lifestyle if necessary.

Post-polio patients in the Sioux Falls area have formed a support group with over 70 members and a mailing list of 300 plus. This group meets at intervals to share information and provide mutual help. They are also active in providing information to professionals involved in their care. The address is: c/o Kim Husby, Box 19, RR 4, Sioux Falls, S. D. 57101.

In addition to the Orthopedics issue, there are two books available that provide information about the syndrome. These are Handbook on the Late Effects of Poliomyelitis for physicians and Survivors edited by Gini Laurie, F. M. Maynard, M.D., D. A. Fischer, M.D., and J. Raymond, published by Gazette International Networking Institute, 4502 Maryland Ave., St. Louis, MO 63108, and Late Effects of Poliomyelitis edited by L. S. Halstead, M.D. and D. O. Wiechers, M.D., published by Symposia Foundation, PO Box 611857, Miami, FL 33161.

REFERENCES
10. ibid, pp. 466, 480.

South Dakota Society Of Pathologists

Officers for 1985-86
John F. Barlow, M.D., President
Tom C. Johnson, M.D., Vice President
Jerry L. Simmons, M.D., Secretary-Treasurer
One of the many interesting and pleasant things about this office is the visitation of each district and this month I would like to reflect on this.

As you could imagine there are many different formats depending on number of doctors, geographic area, types of practice and so forth. True, some are more active than others but, nevertheless the end results are basically the same. As our organization is set up, the districts are the grass roots and this is where it all begins. Our PR starts there, our contact with state and national legislators start there and many other things. Speaking of legislators, many of the districts invite their own to a meeting prior to the session and I believe this very beneficial. I think it helps to have them be able to attach a face to a name if they are contacted at some future date and perhaps remember a conversation or idea presented at that time.

About this time the districts are selecting delegates to the annual meeting and some counselors. I would hope that members who have a real interest would be selected. We need people who will speak up and contribute. They should truly represent the desires and needs of their district. If change is desired in the policies, direction and the officers of the SDSMA, it all starts at the district level.

As more changes occur in medicine, I feel it is more important than ever to have a strong organization, starting at the district level and continuing on to the state and national level. In this way we can remain cohesive and maintain some control.

R. G. Gere, M.D., President
South Dakota State Medical Association
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Introduction to Clinical Medicine: A Decade of Experience

Loren H. Amundson, M.D.*

ABSTRACT
This article reviews the development and teaching of the course "Introduction to Clinical Medicine (ICM)" at the University of South Dakota School of Medicine, and its evolution over ten years. ICM has been discussed, and cussed, by faculty and students throughout the period. This is not unique to South Dakota, as the author draws upon the literature for comparison and perspective. How best to assist students to bridge from the mass of didactic classroom learning to the reality of dealing with people as patients in the clinic or hospital bed is an ongoing challenge for all who teach.

The decade 1974-84 saw a traditional basic science two year medical school transformed to a degree granting institution; the first M.D. degree from the University of South Dakota School of Medicine (USDMS,) was granted in May 1977. An Introduction to Clinical Medicine (ICM) course was developed by interdisciplinary committee study and Curriculum Committee sanction. This paper reviews the nature and content of this course, with a review of the literature for comparison and perspective.

ICM provides the first exposure to clinical medicine at the University of South Dakota School of Medicine, and is interdisciplinary, with emphasis upon social, behavioral, preventive, and community aspects. The practicing physician is presented as the principal role model.

The Goals are:
1. To introduce clinical issues by integrating basic scientists, clinicians, and other health care personnel into the course.
2. To introduce concepts of behavioral science related to the clinical sciences and the health of individuals, families, and communities.
3. To teach the student to perform a comprehensive health screening examination, including interviewing, a medical history, physical diagnosis techniques and performance of a complete physical examination, with write-up,

and oral presentation.

ICM has three sections: Clinical Issues, Behavioral Science, and Physical diagnosis, each coordinated by a faculty member. This longitudinal course extends through the first two years of medical school. Over 125 faculty members — full-time, part-time and volunteer clinical faculty, and other health care professionals are involved.

The course is conducted in several clinical teaching sites, utilizing three clinical campuses, a number of physician offices and community hospitals in other affiliated communities.

Ongoing evaluation is accomplished through input from students and faculty. Grading has included attendance, performance evaluation (skills), and cognitive examination. A final Pass/Fail grade is received by each student upon completion of the course.

Table I gives a composite outline for this course, since its inception. The academic years 1976-77 and 1977-78 may be considered transition years, the result of an in-depth study being reflected since that time. Curricular content has changed with school and course administration and policy, grant incentives, and national health strategies, as well as availability of faculty and fiscal resources. Some comparison of this curriculum with the literature put the course into perspective.

CLINICAL ISSUES
It is important for physicians to be knowledgeable
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in CPR, including basic life support, yet such training is rarely offered to basic science level medical students. In schools where such preclinical level programs have been conducted, there are concerns regarding retention of CPR skills by students. Poor retention by students when retested two to three weeks after certification, and one and two years later has been reported. It was suggested that one year may be too long a period of certification for preclinical students who are not regularly performing CPR. Life support skills have been included in our ICM curriculum for the past seven years, with all students having CPR certification in basic life support. Recertification is required at the beginning second year level. USD students obtain additional CPR skills during the third year, Internal Medicine clerkship. An ACLS course is offered as a senior elective by the Department of Internal Medicine.

Biostatistics and epidemiology, though not popular courses, may be helpful to prepare students for their future education. It has been suggested that background knowledge of biostatistics and epidemiology is critical to future understanding of medical literature. Because of concern for critical review of the medical literature, new courses have entered medical school curricula to provide background for continuing medical education. In a study comparing skills, attitudes, confidence and behavior in literature reading, comparing first year versus fourth year medical students, progress through medical school did not increase perceived competence, or provide more objective knowledge or skills necessary for critical review of the literature.

Federal health mandates includes alcohol abuse and alcoholism awareness and prevention, as important activities in America during the 1980s. Medical schools have responded by developing and introducing such curricular offerings. Alcoholism and drug abuse practicums at USDMS were developed in concert with a career teaching program supported by a joint effort of the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism.

In addition a drug abuse component is a part of the one month, required sophomore preceptorship; further teaching has been introduced in the new, Family Medicine Junior Clerkship. Residential facility experiences have been an elective offering for senior students since 1976.

A national push toward geriatric awareness and care has developed. Extensive guidelines for preparation of undergraduate medical students for geriatric care have been published by the Association of American Medical Colleges. Geriatrics has been a part of our ICM curriculum through the decade. A one-day introductory seminar is presented to freshman students; geriatric topics occur in preventive medicine, growth and development, and psychopathology during the preclinical years, and throughout the clinical clerkships and electives. A four week senior geriatrics elective has been offered by the Department of Family Medicine.

Preclinical and office-based preceptorships and clerkships are offered throughout the nation’s medical schools to introduce students to primary physicians and “primary care” through community programs. Such programs have become an important part of the curriculum in several “community-based medical schools.” Many of these programs have an additional objective of recruitment of medical students into this specialty training. ICM at USDMS offers an introductory freshman preceptorship experience, one-half day in a practicing physician’s office three times during the first year. The second year ends with a four-week sophomore preceptorship (SPCP), an on-site, live-in experience prior to beginning of clinical curriculum. This has been a part of the USDMS curriculum since 1947.

**BEHAVIORAL SCIENCE**

Many schools conduct introductory courses on “Becoming a Physician.” Content of these courses varies; most include dealing with dehumanization during medical education, loneliness, honor codes, patient rights, adjusting to medical school, the impaired student/physician; all seem to include elements of stress awareness and prevention. Most include a small group process; many offer small group support programs for students, some have a “buddy system,” others a Big-Little/Brother-Sister format. However conducted, stress identification and reduction is an important underlying objective. At USDMS, “Becoming a Physician” is given in the first semester a small group format, taught by a psychiatrist or psychologist from the Department of Psychiatry, along with a family practice faculty member and residents from the affiliated family practice residency program. This format introduces students to the issues, however it lacks a follow-up process to insure that issues discussed are dealt with on an individual basis.

Most behavioral science components in an Introduction to Clinical Medicine course include human growth and development and psychopathology. Many deal with human sexuality, rape and violence, and most have introductory programs on death and dying. Others use cancer as a topic, and oncology practice as model for presentation. These are useful for introducing chronic disease in the curriculum, and can key on other elements of Health Care Delivery. Most are a part of our curriculum (Table I).
PHYSICAL DIAGNOSIS

Basic Interviewing is an introductory course in Physical Diagnosis at most schools. Most use videotapes to teach interpersonal skills.19 One-on-one videotaping of student-patient interactions, reviewed later and processed one-on-one or in a small group with an instructor, seems to provide meaningful use of time and resources. Some programs utilize patient-instructors to evaluate interviewing skills by playing multiple roles as patient, teacher, and evaluator.20 Such programs utilize “live teaching models” are an effective mechanism for teaching and evaluating interview skills; and for standardized evaluation, allowing students to be compared with their peers.

The literature stresses live teaching models, especially in sensitive areas as pelvic examination skills.21, 22, 23 Various studies conclude that learning experiences for students are improved by the use of skilled physician role-model examiners and properly trained gynecology teaching associates. Likewise, specific skills must be acquired in genital examination of male patients, more of a problem now that 25% of the medical school classes are women.22 Students may be reluctant to conduct physical examinations on each other, even within the same sex. Our program utilized both models, and peer examinations.

Studies of medical student perceptions of Physical Diagnosis indicate students do understand and relate the medical history and physical examination to diagnosis.24 The Physical Diagnosis portion of ICM at USDMS includes both basic and advanced interviewing, the medical history, and introductory sessions on Physical Diagnosis followed by practical sessions, including cardiovascular physical diagnosis and pelvic examinations. Students are paired in teams, with instructors, to practice basic physical examination skills on each other. This is followed by a series of patient examinations, with write-up and oral presentation to the instructor. The culmination of this sequence is an observed complete history and physical examination by each student. Each student is again observed for physical examination skills, and critiqued on oral presentation, on a weekly basis during the final sophomore year preceptorship.

DISCUSSION

Teachers become over-occupied with presenting the current sphere of knowledge in their discipline.25 Students have an over-abundance of material to digest and memorize, without the skills to identify what is critical for future use, what is important but not essential, and what is merely information. Student requests to “give me the facts only” lead to habits of analytical rather than independent learning.26 The student quest for detailed handouts and review test questions speaks to student concerns for examinations. One study has shown improved student performance on examination when utilizing outlines and handouts, in addition to note taking in class.27

An introductory course such as ICM, with teachers from basic and clinical sciences plus others, teaching a course which some consider “soft material,” even to the extent of being a “non-course,”28 make standardization, continuity, and evaluation a challenge.

Experience at USDMS with ICM is similar to that reported in the literature. Plans for the future include written goals and objectives, in addition to outlines and references, for each component of the curriculum. Ongoing faculty development seem necessary, acknowledging the diversity of faculty teaching a multifaceted, interdisciplinary course. A letter grading system, replacing Pass/Fail, is being instituted, to create parity of the ICM with other basic science courses.

Through ICM we hope to create a setting and atmosphere where students are exposed to concepts which will help them bridge the gap to clinical medicine, while they acquire the basic knowledge essential for their medical careers.

REFERENCES

Orthopedic Surgeon


Contact:
J. Dwight Gray, Administrator
Floyd Valley Hospital
Le Mars, IA
Phone: (712) 546-7871

The Ninth Annual Black Hills Seminar

The Ninth Annual Black Hills Seminar on Advances in Clinical Pediatrics — June 18, 19 and 20, 1986, at Sylvan Lake Resort, Custer, South Dakota, sponsored by the Department of Pediatrics and Adolescent Medicine, University of South Dakota School of Medicine. Guest faculty include: Drs. James Corrigan, Jerome Klein, George Little and Lynn Taussig. For complete conference information, contact:
Lawrence R. Wellman, M.D.
Program Coordinator
USD School of Medicine
1100 S. Euclid, P.O. Box 5039
Sioux Falls, SD 57117-5039
605-533-7178

D.C., January 20, 1983.


13. Amundson LH, Hancock BW: The rural family medicine Clerkship (RFMC) at the university of South Dakota School of Medicine: A Six Year Review. SDJM. 36:5-11, 1983.


UNNECESSARY READMISSIONS

In the response to charges that Medicare patients are being prematurely discharged, the Health Care Financing Administration has instructed PROs to deny unnecessary readmissions resulting from a premature discharge or where the services provided could have been rendered during the previous admission. A premature discharge occurs when a patient is discharged even though he should have remained in the hospital for further testing or treatment, or was not medically stable at the time of discharge.

PROs are also responsible for determining if the services provided during a readmission could reasonably have been provided during the initial admission, thereby rendering the second admission unnecessary. Physician advisors will be looking for clear documentation as to why the readmission is necessary.

Denials, because of premature discharge or readmission for services which could be provided during the initial admission, are not covered by waiver of liability. The hospital does not get paid for these denials.
During April, which is Child Abuse Prevention Month, the AMA Auxiliary would like to encourage everyone to become actively involved in promoting awareness of the problem of child abuse. As auxiliaries we have a unique place in our hearts and a definite obligation toward children. Reports of physical, emotional and sexual child abuse are on the increase.

The AMA Auxiliary is working in conjunction with the National Committee for Prevention of Child Abuse (NCPCA) to dispense materials about child abuse. The distribution of these materials are part of the NCPCA’s grant from the National Committee on Child Abuse and Neglect (NCCAN). Three new child abuse prevention publications from them are: “You’re Not Alone” for children of alcoholics; “Talking about Child Sexual Abuse” which assists parents in discussing this sensitive subject; and “My Brother Got Here Early” for both parents and children dealing with the stresses of having a premature baby in the family. The AMA Auxiliary’s own packet entitled “Child Abuse Prevention” contains background information on this subject.

If you can use these materials in your practice or place in your office please contact our Health Projects Chair, Judy Thompson (Mrs. George) 1200 Crestview Dr., Watertown, SD 57201, phone 882-2062.

Child abuse is everyone’s problem as it touches us all in one way or another. Research indicates that many abused children become abusive parents and this vicious cycle continues. Auxiliaries intend to take positive steps to help prevent child abuse before it occurs.

Shirley Ryan, President
South Dakota State Medical Association Auxiliary

PHYSICIANS!


Call:
National Emergency Services
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800-356-5225 (Calif. only)
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Sioux Falls, SD 57105

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Bartron Clinic
320 Seventh Ave., SE
Watertown, SD 57201

David F. Cruz, M.D. FP
Corsica Medical Clinic
P. O. Box 68
Corsica, SD 57328

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Aberdeen, SD 57401

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Estelline Community Hosp.
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Estelline, SD 57234

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Bartron Clinic
320 Seventh Ave., SE
Watertown, SD 57201

Randolph Heisinger, M.D. PD
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Aberdeen, SD 57401

Carl J. Johnson, M.D. PH
Dept. of Health
Pierre, SD 57501

John B. Marshall, M.D. I/GE
Rapid City Medical Center
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Rapid City, SD 57709

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Yankton, SD 57078

Robert Nixon, M.D Oph
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Rapid City, SD 57701

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Alan Stalheim, M.D. GS
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Huron, SD 57350

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Sioux Falls, SD 57105

Kevin Weidman, M.D. OrS
1301 S. 9th Ave., #700
Sioux Falls, SD 57105

Mark C. Werpy, M.D. FP
Medical Associates Clinics
P. O. Box 758
Pierre, SD 57501

David G. Wolff, M.D. FP
P. O. Box 220
Bowdle, SD 57428

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Yankton, SD 57078

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Reuben Bareis, M.D., F.A.C.P.
P.O. Box 3115
Rapid City, South Dakota 57702
Phone: (605) 343-8700
**This Is Your Medical Association—**

USD School of Medicine gave awards to Dr. Courtney Anderson of Sioux Falls and Dr. Robert Hayes of Wall for recognition of contributions made by outstanding faculty. Dr. Hayes was also given a faculty recognition award for his eminent service to the faculty and students at the USD School of Medicine. He was instrumental in the development of a four year medical school in South Dakota and helped guide it through its early years of development.

* * * *

At the meeting of the South Dakota Perinatal Association Conference recently held in Sioux Falls, Governor William Janklow presented a recognition award to Dr. Robert VanDemark for outstanding contribution to handicapped children.

* * * *

John R. Bedingfield, Jr., M.D. of Rapid City and Yeshwant G. Phadke, M.D. of Chamberlain were recently initiated into Fellowship of the American College of Surgeons.

* * * *

T. R. Jacobson, M.D., Hot Springs, was recognized for 30 years of continued membership in the American Academy of Family Physicians. Long-term members of the AAFP were honored at opening ceremonies of the Academy’s 37th annual convention in California.

* * * *

David Bartnick, M.D., Milbank; Jason Ostby, M.D., Watertown; and Richard Plummer, M.D., Sioux Falls, have recently been named Fellows of the American Academy of Family Physicians.

* * * *

Theodore Hohm, M.D., of Huron, retired from active practice after 39 years of service. Tschetter Hohm Clinic honored him with an open house.

* * * *

Jon O. Flom, M.D., Yankton, was elected chairman of the American Academy of Pediatrics’ South Dakota Chapter.

* * * *

Drs. Mark C. Werpy, Pierre; Steven Vosler, Spearfish; and Harold J. Fletcher, Vermillion have been recertified as diplomates of the American Board of Family Practice.

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**HEAD AND ASSOCIATE HEAD OF CLINICAL MEDICINE**

**STUDENT HEALTH SERVICE READVERTISED**

SDSU invites applications for Head and Associate Head of Clinical Medicine for two anticipated openings June, 1986. Licensed GP, FP or Internists, successful experience with young adult clientele and eligibility for SD licensure required. Submit resume and 3 recent letters of recommendation to Don Smith, Administrator of Student Health, 202 West Hall, Box 510, South Dakota State University, Brookings, South Dakota 57007 (605-688-4157). Deadline is April 1, 1986 or until position is filled. South Dakota State University is an AA/EEO Employer (Female/Male).

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**Physicians Needed**

General Surgeon, OB/Gyn and Internist, to join seven doctor family practice clinic in Cloquet, MN, a community of 12,000 (30,000 service area), located 20 minutes from Duluth-Superior. Clinic facility is located one block from modern, well equipped 77-bed hospital. Cloquet enjoys a stable economy (forest products). Additionally, our community is noted for its excellent school system. First year salary guarantee, paid malpractice, health and disability insurance, vacation and study time.

Contact: John Turonie, Administrator
Raiter Clinic, LTD
417 Skyline Boulevard
Cloquet, MN 55720
Phone: (218) 879-1271
Future Meetings

April


Impairment and Well-Being of Health Professionals: A Family Affair, Hilton Hotel, Chicago, IL, Apr. 10-13. 24 hrs. AMA Category I credit. Contact: AMA, 535 N. Dearborn St., Chicago, IL 60610. Phone: (312) 645-5061.

Symposium on Acquired Immune Deficiency Syndrome, Creighton Univ., Omaha, NE, Apr. 16. Contact: Hattie DeLapp, CME, Creighton Univ. School of Med., Omaha, NE 68178. Phone: (800) 228-7212, ext. 2250.


May

Innovations in Allergy and Immunology, Holiday Inn, St. Paul, MN, May 10. Fee: $95. Contact: CME, Box 202 Mayo Mem. Bldg., 420 Delaware St., SE, Minneapolis, MN 55455. Phone: (612) 373-8012.


June

Options in Cardiovascular Medicine, Radisson Univ. Hotel, Minneapolis, MN, June 4. Fee: $25. Contact: CME, Box 202 Mayo Mem. Bldg., 420 Delaware St., SE, Minneapolis, MN 55455. Phone: (612) 373-8012.


Maurice Grier Symposium (OB/GYN), Marriott Hotel, Omaha, NE, June 7. Contact: Hattie DeLapp, CME, Creighton Univ. School of Med., Omaha, NE 68178. Phone: (800) 228-7212, ext. 2250.


The Ninth Annual Black Hills Seminar on Advances in Clinical Pediatrics, Sylvan Lake Resort, Custer, SD, June 18-20. Contact: Lawrence Wellman, M.D., USD School of Med., Box 5039, Sioux Falls, SD 57117-5039. Phone: (605) 336-7178.


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To protect your patients, as well as their quality of life, add Isoptin instead of a beta blocker.

First, Isoptin not only reduces myocardial oxygen demand by reducing peripheral resistance, but also increases coronary perfusion by preventing coronary vasospasm and dilating coronary arteries — both normal and stenotic. These are antianginal actions that no beta blocker can provide.

Second, Isoptin spares patients the beta-blocker side effects that may compromise the quality of life.

With Isoptin, fatigue, bradycardia and mental depression are rare. Unlike beta blockers, Isoptin can safely be given to patients with asthma, COPD, diabetes or peripheral vascular disease. Serious adverse reactions with Isoptin are rare at recommended doses; the single most common side effect is constipation (6.3%).

Cardiovascular contraindications to the use of Isoptin are similar to those of beta blockers: severe left ventricular dysfunction, hypotension (systolic pressure <90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no artificial pacemaker is present) and second- or third-degree AV block.

So, the next time a nitrate is not enough, add Isoptin... for more comprehensive antianginal protection without side effects which may cramp an active life style.

ISOPTIN. Added antianginal protection without beta-blocker side effects.
Contraindications: Severe left ventricular dysfunction (see Warnings), hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker), 2nd- or 3rd-degree AV block. Warnings: ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction < 30% or moderate to severe symptoms of cardiac failure) and in patients with any degree of ventricular dysfunction if they are receiving a beta blocker. (See Precautions.) Patients with mild ventricular dysfunction should, if possible, be controlled with optimal doses of digoxin and/or diuretics before ISOPTIN is used. (Note interactions with digoxin under Precautions.) ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild and controlled by decrease in ISOPTIN dose). Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment; however, four cases of hepatocellular injury by verapamil have been proven by challenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g., W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitals). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's effect on AV conduction and the SA node, 1st AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1st or 2nd AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (HHS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2nd AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects resulted from dose reduction and only rarely was verapamil discontinued. Precautions: ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patient should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in cats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. Adverse Reactions: Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. (See Warnings.) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: rash, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, macules, spotty menstruation. How Supplied: ISOPTIN (verapamil HCl) is supplied in scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984. 2385

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Multiple Personality

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Hydrochlorothiazide: Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. In patients with impaired renal function, the cumulative effect of the drug may be accentuated, and the dosage should be reduced.

Thiazides may add to or potentiate the action of other antihypertensive drugs. Potassium-sparing diuretics (eg, amiloride, triamterene), beta blockers, angiotensin-converting enzyme (ACE) inhibitors, and calcium channel blockers may also potentiate the hypotensive effect. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

If you are pregnant, nursing, or planning to become pregnant, consult your doctor before using this medication. If you are allergic to this drug, consult your doctor before using it. Before using this medication, consult your doctor if you have diabetes, liver, kidney, or gallbladder disease, or if you have a history of heart attack or stroke.

References:
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As you are probably aware, SDFMC has contracted with the Health Care Financing Administration to be the Peer Review Organization (PRO) for South Dakota in order to retain local control of this federally mandated function. As the PRO, we have the following responsibilities pertaining to inpatient hospital services and quality of care received by Medicare and Medicaid recipients.

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—Determine the completeness, adequacy, and quality of hospital care provided.

—Determine the medical necessity, reasonableness, and the appropriateness of hospital admissions and discharges, and additional payment sought for outlier cases.

—Determine whether the services provided on an inpatient basis could, consistent with the provision of appropriate medical care, be effectively furnished on an outpatient basis.

—Determine whether a physician has misrepresented admission or discharge information, or has taken an action that results in the unnecessary admission or multiple admissions of an individual.

—Determine the validity of diagnostic and procedural information supplied by the provider.

These are the primary functions of SDFMC which will result in the assurance of appropriate utilization and quality of care for your patients. Through the physicians’ continuing cooperation with this program, we can continue to benefit our patients and keep the review of physician services in the hands of those most qualified to perform this function — SOUTH DAKOTA PHYSICIANS.
Multiple Personality

Roy C. Knowles, M.D.*
Norman Haan, MSSA, CSW†
Camilla “Saby” Rimlinger, MS‡

ABSTRACT

Multiple personality fits uneasily into the framework of modern psychotherapy. It remains as if surrounded with a halo of the occult. In this article we will review some of the literature including the early history of this condition and we will present brief excerpts from two cases out of a total of seven seen at the Southeastern Mental Health Center in Sioux Falls, South Dakota.

In 1944 it was reported that only 76 cases of multiple personality appeared in the literature during 127 years since the case of Mary Reynolds in 1817. Then there appeared to have been a marked slow down in the diagnosis of multiple personality with the original upsurge in interest in schizophrenic disorders. Then between 1970 and 1981 there were reported a total of 79 cases. Up to that point the ratio of female to male was considered to be 8 to 1.

Now, there appears to be a burgeoning interest in the subject of multiple personality and several therapists are reporting their own treatment of 70 or more cases, Richard Kluit, M.D., Frank Putnam, M.D., Eugene Bliss, M.D., to name but three.

Another change is the mounting belief that multiple personalities appears in males more than was previously believed and the ratio of female to male is probably no longer 8 to 1. Much study will have to be done yet, but it appears that a male personality of an acting out aggressive type may very well end up in prison for a crime and never be recognized as a multiple.

The case of multiple personality most often cited in the literature as being not only the first in the United States but the first to become known in the world is that of Mary Reynolds. She experienced this strange condition at the age of twenty-six in the spring of 1911 when she awoke, after a prolonged sleep, like a newborn babe, without language or any apparent memory. This state alternated frequently with her original personality, but mutual amnesia continued to exist between her two states. Her second personality was taught and it learned very quickly, but it never recovered the knowledge of her original self. During a dream her second personality suddenly recalled her former extensive knowledge of the Bible, but this reacquired knowledge did not spread to other areas of her original personality.

Benjamin Rush, in his physiology lectures, described three earlier cases of dissociation, but they were not published. Two of these appear to be traditional examples of multiple personality. One of these was described by Rush in his teaching notes, “Sometimes everything is forgotten in the interval of a paroxysm, but recollected in succeeding paroxysms. I once attended the daughter of a British officer who had been educated in the habits of gay life, who was married to a Methodist minister. In her paroxysms of madness, she resumed her gay habits, spoke French, and ridiculed the tenants and practices of the sect to which she belonged. In the intervals of her fits, she renounced her gay habits, became zealously devoted to the religious principles and ceremonies of the Methodists, and forgot everything she did and said during the fits of her insanity.” In his personal notes, of his lectures on physiology to the Medical Students at the University of Pennsylvania, Rush commented on the continuity between spells of somnambulism and the awakened somnambulist inability to recall what had transpired. He admitted that it appeared as if there were “two minds,” but believed the phenomenon occurred because of excessive motions in different parts of the brain. Because memory depended on motions being renewed in the identical portion of
the brain and with the same amount of energy he postulated that the behavior seen in somnambulists and in persons with two minds was not recalled, because not enough force was present to bring the memories into consciousness. We will return to this thought a little later in the article.

Of the phenomena which pre-Freudian abnormal psychology had brought to light, multiple personality and its kindred states were perhaps the most bizarre and theoretically provocative; this syndrome differed from the usual run of hysterics popular at the time in that rather than taking form in fragmentary paralyses anesthesias and the like, the stigmata of the multiple personality appeared to be organized into separate groups claiming independent self-identity. And whereas the hysterias could be attributed to a disintegration of higher organization, multiple personalities were relatively functional with each personality being more or less capable of the task demanded in everyday life. The major theoretical problem arose when one of the personalities in question claimed no knowledge of the existence of the others nor any memory of what they did when in control of their shared physical body.

Morton Prince coined the term co-consciousness because it was believed that one “consciousness” could be aware of the thoughts, feelings, and memories of others without others necessarily being aware of it. In other words, one of the personalities could seem to know something of what others were doing and feeling, but that co-consciousness was not the primary personality.

To psychic investigators of the late 1800’s, the similarity between possession and multiple personality and spirit mediumship obviously required a theory. Since multiple personality was generally classed with the hysterias, the most reasonable choice by the standard of the day was to view hysterics — who by definition have a tendency to dissociation — as incipient mediums, or at least as having subliminals open to kindred influences. It was only a short step from this position to the belief that many psychiatric disorders are related to spirit influences.24

ETIOLOGY

During childhood, multiple personalities experience a very high frequency of trauma, neglect, or parental abuse. The abuse may take many forms including verbal abuse, beatings, cutting, burning with cigarettes, locking in closets, rape and sodomy. A code of secrecy is strictly enforced with the threat of further punishment if the child tattles on the offending parent or relative. The beginning introduction of other personalities usually seems to start about age 5-7 at which time children frequently have imaginary playmates, but these become substitutes to allow them to escape from pain.

Splitting is one of the early defense mechanisms used by children to correct for deficiencies in their lives. A lonely little girl will develop an imaginary friend who really is a part of herself or an offshoot of herself. She can play with this friend to fill in lonely periods and this little friend is very real to her and very dear to her. In the case of a boy or girl under intolerable stress or pain, the same mechanism can be used to develop a person who sustains that injury or pain and then the real personality can lay the pain aside as if it never occurred. Some patients seem to describe imaginary companions even in infancy. It certainly is a common phenomenon by age 5-7, but it is possible when there is severe abuse that infants can use this technique or this defense.4, 9, 11, 20, 25, 33, 35, 37

Self hypnosis or auto hypnosis is used by a number of therapists as a term to express the mechanism used by the child and later by the multiple. The young child slips into a hypnotic trance as she/he plays with an imaginary playmate who now becomes very real and very fulfilling as a friend. The child who is subjected to severe abuse uses the same technique to slip into a trance and thus become another personality who sustains the pain without the original personality having to consciously sustain the pain. The multiple personality patient who has undergone many severe punishments and abuses and threats, slips into a trance and becomes a partial or other personality in order to meet the circumstances of the moment or in order to fill a need of the moment. It is upon this basis that some therapists use hypnosis in order to treat the multiple personality.6

DIAGNOSTIC CONSIDERATIONS

The childhood of most multiple personality patients was characterized by severe family discord or instability or by obvious psychopathology in one or both parents. Virtually all of these patients experienced severe psychic or physical abuse and/or sexual trauma during early childhood. Also, these patients tend to come from childhood environments characterized by pronounced authoritarian, religious, or perfectionistic standards. The presence of one or more alter personalities, each presumably possessing different sets of values and behaviors from one another and from the “primary” personality and each claiming varying degrees of amnesia or disinterest in one another. In addition, the personalities may differ from one another in terms of age, sex, or sexual orientation. Headaches, hysterical conversion symptoms, drug abuse, suicide at-
Amnesia must be present to diagnose multiple personality. The amnesia may be labeled black outs, blank spells, or fainting spells by the patient. Time lost varies from minutes to years, but generally it is a few hours to a few days. To lose time or to realize that one behaves very differently during these memory lapses can be quite frightening, so amnesia may not be reported initially. Amnesia is present initially in the original personality. As one gets to know secondary or alter personalities it may be found that they have varying awareness of one another.

One particular type of awareness is the phenomenon of co-consciousness which is present if the personality is aware of the thoughts, feelings, and actions of another personality who is "out" and functioning. Another type of awareness is "memory trace." The memory trace is a personality with a complete memory and a total awareness of all the alternate personalities. Since this personality has an uninterrupted memory, it is often helpful in psychotherapy. It has also been called "inner self helper."

During the amnestic episodes, the individual thinks, feels, and behaves in a manner quite different from the original depleted personality. The original personality is usually a shy, introverted, bland personality who is unable to deal with storing affects such as anger or sexual passion. The secondary or alter personalities have markedly different characteristics and in the case of dual personality may be exactly the opposite of the primary personality.

The number of personalities may vary, but as one gets up into the larger numbers such as twenty to fifty, many personalities are short lived and incomplete or fragmentary.

Briefly then:
A. Amnestic episodes must be present. These may not be reported until well into treatment for some other complaint.
B. More female than male multiple personalities.
C. Gender identity or sexual orientation in multiple personalities may differ (only one case of male multiple personality with a secondary female personality had been reported by October 19, 1980 — see case report).
D. The ages of personalities may differ from the individual's true age.
E. Physical symptoms are extremely common (headache may signal increasing tension and the transition from one personality to another).
F. Physical characteristic which deserves special attention is handwriting. One personality will write while another prints, some will go from left to right handed.
G. Frequently reported: drug abuse, multiple stormy marriages, suicide attempts (one personality may attempt to take control by trying to kill another personality only to be rescued by a third personality).
H. Religion plays an important role in the lives of some patients. Usually one personality identifies strongly with fundamentalistic religious orientation of parents or grandparents.
I. Multiple personality distorts reality in a variety of ways. There may be brief psychotic episodes or hysterical psychosis.
J. Auditory hallucinations also occur. In most instances, the auditory hallucinations come from inside the head.

DIFFERENTIAL DIAGNOSIS*

A. Psychotic states are perhaps the most difficult to differentiate since multiple personalities may become psychotic and dissociation can occur in psychotic states particularly schizophrenia.
B. Cases of psychogenic amnesia: somnambulism and depersonalization — amnesia or decreased awareness is present. However, the individual does not manifest alternate personalities.
C. Fugue states may be difficult to differentiate because on occasion the individual may assume a new name since he has forgotten his/her whole identity, however, there are not alternating states.
D. Mediumships may have some similarities with multiple personalities. However, the state is generally not pathological and is performed before an audience at specific times.
E. Cases of possession or bewitchment may be similar to multiple personality (in bewitchment, a person believes that another person has cast a spell over him; while in possession, a person believes that an outside force has entered his mind or body and is directing his behavior). A theme of being controlled or inhabited by an alien force is present, however, and this is not generally present in multiple personality. Although other identities may be present in possession states, they do not generally alternate back and forth with any frequency.
F. Automatic writers are not multiple personalities, although occasionally during experiments with automatic writing a multiple personality is accidentally discovered.
G. Certain hypnotic states may be difficult to differentiate from a multiple personality. Usually, however, the personalities developed under hypnosis do not alternate except when under hypnosis.
H. Another phenomenon which may be dissocia-
tive in nature has been reported in a transvestite and in similarly difficult transsexuals. All of these cases were males. In each case, a masculine alternated with a feminine state. No mention was made of amnesia in the reported cases.

I. Organic states which must be differentiated from multiple personality include psychomotor epilepsy and drug or alcohol disorders. Although amnesia is usually present in these states, alternating personalities which name themselves are absent.

J. Simulation must be considered. In simulation, usually the other personality changes are not consistent and they’re usually not the characteristic family history.

K. Differential diagnosis must also include temporal lobe epilepsy. It has been suggested that epileptic focus in the temporal lobe produces new, fortuitous connections between sensory association cortices and limbic areas representing drives and effects. The clinical result is a nascent deepening of affective response to a wide variety of stimuli. If, as is generally accepted on a psychodynamic level, dissociation is a defensive maneuver to disavow affects threatening to the ego, it follows that a condition like temporal lobe epilepsy, which produces altered and usually strong affective associations, would predispose to the use of this defense. Activation of the right temporal lobe in epileptic patients has been specifically associated with ego-alien experiences; these may enhance the likelihood of dissociation.

Returning now to the idea accredited to Benjamin Rush: “that because memory depends on motions being renewed in the identical portion of the brain and with the same amount of energy the behavior seen in somnambulism and in persons with two minds is not recalled because not enough force is present to bring the memories into consciousness.” Let us turn to the new studies of brain scans called P.E.T. or Positron-Emission Tomography. Two researchers, Dr. Frank Putnam and Dr. Monte Buchsbaum of the National Institutes of Health, have found that brain scans of multiple personalities differ dramatically from those of professional actors pretending to have alternate personalities. The colors in the scans of multiples show that they can significantly alter their brain activity and that different personalities rely on different parts of the brain. Normal people acting alternate personalities could not change their brain waves much at all. (Memory depends on motions being renewed in the identical portion of the brain and with the same amount of energy. — Rush)

TREATMENT

1. The therapist must limit his curiosity and techniques to what is most conducive to the goal of personality integration; if the therapist is merely an investigator, he risks worsening of the patient’s dissociative tendencies.

2. Help each sub-personality to understand itself as a more or less associated side of the real person.

3. The names that the several personalities have given themselves are to be used only as labels, not as acceptance of their individual rights to irresponsible autonomy.

4. Listen to each personality with equal empathy and concern.

5. Encourage each person to accept, understand, and feel for each other personality, to realize that each is incomplete so long as it is separated from the rest of the individual, and to unite with the others in common interests. The prime common interest is to learn, grow, and live best as a complete person.

6. Remember that the person has been so severely dissociated and worn down that the most gentle, supportive therapy is needed. The therapist must recognize the subject’s agony in the face of integrating, for example, a responsible frigid self with an irresponsible sensual self.

7. Study the life situation of the individual to determine what ongoing influences (such as spouse) are harmful or helpful and to consider possible ways to modify or utilize these outside forces by therapy or other intervention. If therapy of the spouse is indicated, it should, if possible, be undertaken by another therapist in a team-work situation.

8. Avoid dramatizing the patient’s amnesia; assure the patient that she/he will remember the past when she/he is able, perhaps in a dream.

9. When used cautiously, videotape can be a helpful tool when demonstrating to the patient that all of the different personalities exist within her/him and are not physically distinct.

10. Having individual personalities write notes can also be helpful to introduce different personalities to each other and primarily to the main personality.

11. Hypnosis is an extremely useful method of treating multiple personalities, but it must be done with caution and only by a highly competent hypnotherapist. Undisciplined hypnotic intervention can create additional sub-personalities, increased fugue states, and decrease integration of the total individual.

12. Avoid electroconvulsive therapy as it usually results in repression of certain personalities and
increases amnesia, setting back the goal of integration.

13. Some therapists employ group therapy to encourage one personality to become cognisant of another, but others argue that in their experience group has not been effective.

14. And then we may decide in collaboration with the patient that complete integration is not necessary or desirable. As one patient indicated to her therapist, "There's always a drop in creativity and energy when you fuse. I'm too productive to stop doing what I am doing, I'd rather keep two or three personalities." And Psychiatrist David Caul, has indicated, "It seems to me that after treatment, you want to end up with a functional unit, be it a corporation, a partnership or a one-owner business." 122

The following are brief summaries of two cases out of a total of seven cases of multiple personality treated at the Southeastern Mental Health Center in Sioux Falls during the past five years. Three of the seven are males and two of the males have so far identified female sub-personalities.

CASE I
Female, thirty-one years of age, appeared for treatment at the Southeastern Mental Health Center because of "alcoholic blackouts." July 1980
Ten years before she was in the McKennan Mental Health Unit and received shock treatment as a "schizophrenic." She was actually in the hospital three times.
During her beginning therapy at the Mental Health Center because she seemed to withdraw into an almost uncommunicative state, videotape was employed and documented some kind of dissociative state. The actual diagnosis of multiple personality was made four months after intake.
Early History: Included repeated traumata in the form of beatings; her hand was put in the gas stove flame; she was blindfolded in a pen with a bull; she was locked in a closet; she was put on the roof in the dead of winter to take off snow, and the ladder was removed. The impression was that the father who treated her thusly was not acting as a father, but was deliberately torturing her.
Thirteen sub-personalities have been identified. As of this writing, all are fused or integrated. Patricia is the core, or primary personality. Pat A, Pat B, Pat C, Pat D appear to be partial or incomplete sub-personalities and fused relatively easily. J.D. — a teenage, female, juvenile delinquent, Patty — a six year old, Trish (feminine/motherly), "Angry" Pat, new Patricia (feminine), Trace (angry), Dave — a sensible male, and Ken — an angry violent male, "new" Pat.

As indicated in the diagnostic procedure, videotape was employed. It continued to be employed from time to time through the early years of the treatment, and was used as the treatment technique in order to introduce one personality to another. Writing of notes was also used with a notebook left available in the home for various personalities to write in, and gradually to come to communicate with each other in. Whenever it was considered to be helpful, the therapist would request the entry of another personality in order to understand some event that had occurred. The sub-personalities were so distinctive that the therapist could receive a telephone call from the patient and immediately identify which of the sub-personalities was calling.

After approximately two and a half years, the integration process had very well completed. She and her two children moved out of state. They returned after approximately a month to live with the patient's father. At that time, Patricia was worried about how one of her daughters was functioning. One month after returning to Sioux Falls, patient was mugged and almost killed. She called her therapist and was taken to an emergency room. Following that, a "new" Patricia split off briefly, and J.D. (the acting out teenager) reappeared. They quickly reintegrated. Approximately four months later, Patricia's mother became seriously ill, and Pat (the "angry" one) went into the hospital for one night because of her very disturbed behavior. The six year old Patty reappeared. There was a quick merging. Trace, the more bitchy personality, also reappeared but then merged, and for a short time a new, more feminine Patricia appeared and then quickly merged.

The therapist of this patient had begun to be very much preoccupied with additional responsibilities so that she actually found it necessary to share her time with Patricia and with another multiple personality patient. It was at this time that Trace (the bitchy personality) re-emerged and that for the first time, two male personalities emerged. They were labeled, Dave, who was the sensible one, and Ken, who was the angry one. They merged — we are now just over three years into treatment. There followed a period of about six months when things remained steady and there were no dissociations. In two months, there followed two traumatic episodes. Patricia's mother died, and shortly thereafter, Patricia entered her brother's apartment and found him dead. Patricia withdrew completely for a while leaving a "new" Pat in place. This new personality stayed in charge for close to a year. She handled the death of the mother, the death of the brother, met a boyfriend, got pregnant, and got married. The core personality, Patricia, began to reappear at intervals and ultimately threw the new husband out. She integrated and has remained integrated since, a total of six months. During that time, she has continued in weekly therapy session. She has been trying to work out the relationship with the husband she threw out. She seems to enjoy her new baby girl. To be noted also, is that she held the same job for two years.

Patricia, during this five and a half year period, would enter the hospital when her feelings were out of control. She would assume one of the other per-
sonalities, and in this state, she had long periods of hallucinations. She named these periods as "the stories." During these stories, she relived the tortures of her childhood, feeling all the pain. Gradually, as she came to be acquainted with the alter personality, Patricia the core personality, remembered the tortures and experienced the pain herself.

CASE II

Male, age thirty, came to the Mental Health Center with marital problems, financial problems, and concerns about his own sexual orientation. Five weeks after his therapist began working with him, he began to discuss a loss of time and confusion. The first alter personality was a fifteen year old boy who kept going to a place where there had been happy times.

Early history revealed that this man had been very sickly as an infant. There was rejection and abuse by the father. There was love from the mother, but also expectations of perfection. He was beaten up by a neighbor girl's father for playing "doctor." He was sexually molested at age seven. He was caught masturbating by a nun at school and was treated abusively.

During the first two years of therapy, he worked cooperatively and his wife was very supportive. As his various personalities felt comfortable to reveal themselves, and as they gained empathy from his therapist and his wife the core personality was also more accepting of the alter personalities. There were seven subpersonalities identified and they blended or integrated with the core personality.

Gradually the next two years, there were identified other subpersonalities or alter personalities bringing the total to twenty-two with the possibility of three others which were never fully identified. Of the twenty-two, three were female, nineteen were males with the oldest being age 55 and the youngest approximately age seven. In some of the males, there were homosexual interests and behaviors which the core personality and his wife had a great deal of difficulty accepting. The unaccepted personalities were angry and rebellious. When they were "out," conflict at home was so severe that it finally led to separation and divorce. The unaccepted personalities have not merged with the core personality to any degree, but the patient, the core personality, feels that he has some control so that he can "block out" or "allow out" the troublesome alter personalities at his own chosen times. Actually, his control is not as good as he feels, and at times he has found himself in some dangerous situations.

This patient cannot understand or accept the divorce and he is bitter. He does not have the awareness that his wife has had in coping with unaccepted personalities who were angry and hostile toward her.

The core personality has acquired and maintained a job with prestige and good income. The job involves a lot of travel which seems to allow for greater ease and flexibility of switching personalities. It may even precipitate more switching.

There also arose, during therapy, the thinking that the core personality may have a conditioned way of responding to a threat or conflict which results in automatic creation of a new "fragment" personality to deal with the threat or conflict. The core personality is then free to continue to relate only to good and pleasant experiences. The more conflict in the marriage, resulted in more angry "fragment" personalities. The traveling job, the separation and divorce have resulted in his not being involved in therapy. The therapist sees him about once every three to four weeks, during which times he claims to be the core personality and in control although there are signs of problems. (Just as this article was being brought to a finish, the eleven year old son of this patient sought an appointment for himself and claimed periods of confusion, lost time or blank spells.)

DISCUSSION

The attempt of this article to give a historical perception of the personality disorder called multiple personality disorder and to give features of etiology and diagnostic criteria, differential diagnosis, and treatment approaches leaves us with a recognition that this is an unfinished business. Many psychiatrists and psychologists will not acknowledge the condition and still place it among the schizophrenias. Treatment is a long process and an exhausting process. The effect upon others and especially upon children is as yet an unstudied factor. One of the woman patients seen at the Mental Health Center in Sioux Falls had an alter personality who not infrequently was "out" and occupying the family home. While "out," during five years, that alter personality never knew that she had a son. For five years, this boy lived in a situation in which at times the woman he was living with was his mother and at other times she was some other woman who reacted entirely differently toward him. As we can see, the study of this condition, multiple personality, is not finished.

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The fact that we have an IPA-HMO ready to go puts us way ahead of the game. This was evident at the last National Leadership Conference. Several speakers pointed out that the only way to preserve, as closely as possible, our present method of patient care and reimbursement is with an Independent Practice Association. Larger groups of physicians are forming them, i.e. university groups, or county medical societies. We are fortunate to be a small enough organization that we can make it statewide. Georgia State Medical Association’s plan, which preceded ours, is doing well.

I would urge any of you who have not signed a participating agreement do so. Don’t adopt a “wait and see how it goes” attitude. As I have stated at the district meetings, the physicians will be one of the better selling points: Let’s get together and get it off the ground successfully.

R. G. Gere, M.D., President
South Dakota State Medical Association

R. G. Gere, M.D.
Carroll J. Clark, M.D., a Watertown physician since 1950, has retired. A reception was held in his honor. Dr. Clark was the first doctor of internal medicine in Watertown. He was named Outstanding Internist of the Year in South Dakota in 1983 and one of the original founders and past president of the State Society of Internal Medicine organized in 1951.

* * * *

A large crowd was in attendance in Rosholt as Dr. Joseph Kass marked his 25th year of medical practice in that community with an open house.

* * * *

Drs. Kevin Bjordahl, Webster and David Wolff, Bowdle, have been named diplomates of the American Board of Family Practice.

* * * *

At the regional meeting of the South Dakota Chapter of the American College of Physicians held in conjunction with the South Dakota Society of Internal Medicine at Pierre, Warren Jones, M.D., F.A.C.P., Sioux Falls, received the Internist of the Year Award. Dr. Jones has practiced internal medicine in Sioux Falls, since 1951. He has been very active in medical education in South Dakota; the South Dakota State Medical Association; American Medical Association; American College of Physicians; and South Dakota Society of Internal Medicine.

* * * *

Robert J. Ogborn, M.D., Sioux Falls, died recently at the age of 70. Dr. Ogborn was born January 10, 1916 in Sioux Falls. He graduated from Washington High School in Sioux Falls, from the University of South Dakota and University of Cincinnati medical schools. He served in the Pacific during World War II. He was a board certified internist, former chief of staff at Sioux Valley Hospital and past chief of the medical section at McKennan Hospital.

Survivors include his wife, Kathryn; three sons: Murray and Michael, both of Denver, Colo.; and Mark, Palo Alto, Calif.; a daughter, Mrs. Larry (Mary) Anderson, Menlo Park, Calif.; eight grandchildren; and a sister, Dorothy Sattler, Palo Alto, Calif.

Dr. Sanjeevi Giridhar was named medical director for Northeastern Mental Health Center, Aberdeen. He served as staff psychiatrist at Beth Israel medical Center and the Human Services Center, Yankton. He is an assistant clinical professor of psychiatry with the USD School of Medicine.

* * * *

Dr. L. L. Massa, Sturgis, was honored by the Faith Clinic Board. Since the beginning of the Faith Clinic history, Dr. Massa has been directly involved. He saw a need for a satellite clinic and set about to provide some type of health care for places like Faith and Bison. Dr. Massa and Dr. Robert Hayes, Wall, were instrumental in getting a physicians assistant bill passed through the South Dakota legislature in 1973.

Dr. Massa began general practice in Sturgis in 1937 and has spent most of his medical career providing health care to patients in the greater Meade County area through the Sturgis Community Hospital and the Massa-Berry Clinic both located in Sturgis.

* * * *

Robert H. Quinn, M.D., Vice President and Dean of the University of South Dakota School of Medicine since 1982 and professor of surgery, has been selected as the distinguished graduate of Creighton University School of Medicine. He received the 1985 Creighton University Alumni Merit Award at the School of Medicine’s annual alumni reunion dinner in Omaha, Nebraska.

Dr. Quinn, a general surgeon from Sioux Falls, has been associated with the USD School of Medicine as chairman of the Department of Surgery, Associate Dean for Continuing Medical Education and Graduate Medical Education. He conducted his most recent research in the areas of benign diseases of the esophagus and breast cancer.

He has been honored by the Disabled American Veterans 1983 Award for Outstanding and Unselfish Service to the Disabled American Veterans; the 1983 C. B. Alford Award for Outstanding Service in Public Health; and numerous awards from the State Medical Association and the American Medical Association.

* * * *

St. Ann’s Hospital, in Watertown, has elected Dr. Ken Engelhart as Chairman of the Board of Directors.
David L. Hoversten, M.D. was inducted as a fellow of the American Academy of Orthopaedic Surgeons during ceremonies at the group’s 53rd annual meeting in New Orleans, La.

* * * *

William W. Quick, M.D., endocrinologist in private practice in Yankton, has been elected president of the American Association of Diabetes Educators. He was installed during AADE’s annual meeting in Phoenix, Ariz. He has been on AADE’s Board of Directors since 1979. He has served as treasurer, vice president, the program evaluation and budget/finance committee chairman and AADE’s South Dakota’s Legislative subcommittee chair.

* * * *

Carl Nagel, M.D., has recently joined the staff at Custer Community Hospital as general surgeon. Dr. Nagel, a San Francisco native, received his medical degree from Stanford University in California. He completed his internship at Johns Hopkins University Medical Center, Baltimore, Md. and his surgical residency at the Vanderbilt University Hospital, Nashville, Tenn. and the University of Oklahoma Medical Center, Oklahoma City. He has been certified in both general and thoracic surgery.

* * * *

James E. Ryan, M.D., Sioux Falls, has been selected as a reviewer for the Primary Care Reporter, a national health magazine for physicians. Dr. Ryan is a professor and chairman of the Department of Family Medicine at USD School of Medicine. As a reviewer, Dr. Ryan will be covering the broad spectrum of family medicine and commenting on the clinical usefulness of various research articles written by health professionals.

* * * *

Loyd R. Wagner, M.D., Sioux Falls, recently took office as secretary-treasurer of the College of American Pathologists for a 3 year term. Dr. Wagner has served the CAP as a member of the Board of Governors, vice speaker and sergeant-at-arms in the CAP House of Delegates. He has also served on numerous CAP committees, commissions and councils.

* * * *

Drs. Clifford F. Binder, of Chamberlain, and E. F. Kalda, of Platte, have completed continuing education requirements to retain active membership in the American Academy of Family Physicians.

Dr. Mohammed Javed has begun his general practice at the Eureka Medical Clinic in Eureka. Originally from Pakistan, Dr. Javed received his medical degree from Dow Medical College in Karachi in 1980. He completed a one year internal medicine residency at the Northwest Hospital in Chicago. Dr. Javed is married and they have one son.

* * * *

The American Academy of Physician Assistants has awarded the South Dakota Chapter its Public Award for 1985. The award is designed to honor AAPA Chapters for their activities in educating the public about health and the role physician assistants play in the health care team.

* * * *

Dr. Edward T. Zawada, Jr., associate professor of medicine and head of the nephrology and hypertension section, USD School of Medicine, Sioux Falls, is co-editor of a newly released textbook entitled, “Geriatric Nephrology and Urology.” Dr. Zawada co-edited the 550 page volume with Dominic A. Sica, M.D., assistant professor of medicine, Medical College of Virginia.

* * * *

Loren H. Amundson, M.D., Sioux Falls, has been appointed to the Residency Review Committee for Family Practice by the American Academy of Family Physicians for a three year term. He has been a faculty member of USD School of Medicine since 1972 and a professor of family medicine since 1976. He was founding chairman of the Department of Community and Family Medicine from 1974 to 1979. Dr. Amundson is now the director of the Alumni Foundation and on the Board of Directors for the Alumni Association and Family Practice Center.

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Informed Consent — Standard of Care

The South Dakota Supreme Court has recently examined the scope of the duty of a physician to disclose the potential risks of a course of treatment to a patient, so that the patient may make an informed decision as to whether that course of treatment should be followed. The precise issue decided by the court was whether, in the absence of expert testimony by the plaintiff, an informed consent claim should have been submitted to the jury.

The court discussed the two theories prevailing in the country concerning the need for expert testimony — the “professional rule” and the “patient-oriented standard.” Under the so-called professional rule, the plaintiff must prove by a preponderance of the expert medical testimony that a reasonable medical practitioner would have made a disclosure under the circumstances. Under this view, a physician can be found to have breached his duty to disclose only upon a showing that his conduct fell below the standard deemed acceptable by his peers in the medical profession.

Under the patient-oriented standard, the jury can find that a physician acted unreasonably under the circumstances in failing to disclose material information to his patient despite expert medical testimony to the contrary, upon the theory that the appropriate standard should be broader than that which is decided by physicians to be applicable to themselves. The court’s reason that the right to be informed is a fundamental right personal to the patient and should not be subject to restriction by medical practices that may be at odds with the patient’s informational needs. The South Dakota Supreme Court adopted the patient-oriented standard which measures the performance of a physician’s duty to disclose by conduct reasonable under the circumstances.

The court then went on to discuss what conduct is reasonable under the circumstances:

...[W]e deem a reasonable disclosure to be one which apprises the patient of all known material or significant risks inherent in a prescribed medical procedure, as well as the availability of any reasonable alternative treatment or procedures. Additionally, material risks incident to abstention from treatment should also be disclosed. A risk is generally defined as material when a reasonable person, in what the physician knows or should know to be the patient’s position, would be likely to attach significance to the risk or risks in deciding whether to submit to the proposed medical treatment or procedure. Materiality, therefore, is the cornerstone upon which the physician’s duty to disclose is based.

Our decision today should not be construed as obviating the need for expert medical testimony in all informed consent cases. The risks associated with a particular method of treatment, the frequency or probability of their occurrence, alternatives to treatment, risks accompanying such alternatives, and the consequences of remaining untreated, are examples of where expert medical evidence would generally be necessary to edify a lay jury.

Inasmuch as there is no duty to disclose unless the physician knew or should have known the risk to be disclosed, expert testimony will ordinarily be necessary to establish this predicate to liability for non-disclosure. “What the physician should know involves professional expertise and can ordinarily be proved only through the testimony of experts.”

Also, our holding does not mandate that a physician chart in exacting detail for the patient each proposed medical procedure. A physician need not discuss extremely remote risks; risks already known to the patient or “those of which persons of average sophistication are aware.” Furthermore, a physician must also be permitted to exercise some discretion where full disclosure would be detrimental to the patient’s well-being, as “patients occasionally become so ill or emotionally distraught on disclosure as to foreclose a rational decision, or complicate or hinder the treatment, or perhaps even pose psychological damage to the patient.” In these exceptional situations a physician retains a qualified privilege to withhold information from the patient. Also, a physician is not required to obtain the patient’s consent in an emergency situation where the patient is in immediate danger. Finally, we take note of what is axiomatic to the law of negligence. Establishing a breach of the physician’s duty to disclose is only a predicate to the imposition of liability. Plaintiff must also demonstrate that the undisclosed risk manifested itself, causing the complained of injury, and, secondly, that had the risk been disclosed plaintiff would have refused treatment. Whether plaintiff would have refused treatment is resolved by applying a reasonably prudent person standard. The applicable test is whether a reasonable person in the patient’s position would not have agreed to the proposed treatment if adequately apprised beforehand of the material risk which resulted in injury. Weldon v. Madison, S.D.Sup. Ct. Ops. 14387 & 14444, Opinion filed September 6, 1985; citations omitted.

The precise technical point decided by the court was merely that in all cases expert medical testimony is not necessary to prove a medical malpractice action based upon a lack of informed consent. However, the court discussed in some detail its view of the obligation of a physician to reasonably inform his or her patient of the risks of any medical procedure. For this reason, we felt that this discussion would be of interest to physicians practicing in South Dakota.

David A. Gerdes, Attorney at Law
General Counsel, SDSMA
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‘Farmer, Doctor Face Changes’

Jerald R. Schenken

The writer is an Omaha pathologist, president-elect of the Metropolitan Omaha Medical Society and vice president for government affairs of the Greater Omaha Chamber of Commerce.

Implicit in the American view of man and life is the fundamental character — the state of mind — of most of the people. This was never more clearly demonstrated than in the American movement to the West and the development of the family farm.

Now, after almost two centuries of being the agricultural promised land, the family farm is under assault. Increased worldwide agricultural production, failing commodity prices, rising production costs, land priced at speculative levels and high interest rates are all threatening the economic, and thus the social, survival of the family farm. This is even more tragic when we consider that these influences are external and, by and large, beyond the control of the family farmers themselves.

In most public discussions, the family farm is usually described in geographic or familial terms: One family on a relatively small plot of land. But is this really the essence of these important rural institutions? The family farm in reality is a state of mind that permeates the Midwest and much of rural America.

Farmers are individualists; they resist collective control and operate their farms as small businesses, being primarily responsible to themselves and their God.

They are entrepreneurs in the sense that they are constantly innovating, developing and experimenting. They are self-starters; the sun comes up and so do they. No time cards are punched, but the animals are fed and the fields are plowed. They are self-disciplined, working without company personnel or policy manuals, union rules, job descriptions or supervisors.

They understand clearly that with freedom comes responsibility, and they have consistently lived up to that responsibility. They are versatile in that they take both opportunity and adversity in stride. They have a very professional approach to their job; they enjoy being self-employed, but they respect the obligations of self-employment.

Notice how closely the spirit of the family farmer parallels that of the family physician. Family physicians are also self-disciplined individuals, self-starters with personal and professional commitments to their patients. They cherish the freedom to practice medicine as they see best, keeping in mind that their prime responsibility is to the needs of their patients, to whom they owe their undivided professional loyalty. The family physician is always there whether it be for a fever, a stomach ache, a broken leg or a worried parent or spouse. The patient comes first.

Unfortunately, times are changing, and the ability of the individual farmer to own and operate his own family farm and the ability of the individual physician to have his own medical practice seem to be diminishing.

As with most changes, some may seem to be beneficial to the health and well-being of the public. Mechanization, automation, genetic engineering, advances in animal husbandry, improvement in transportation and domestic and foreign competition have led to a situation in which Americans are now paying less of their disposable income for food than any of the other industrialized Western nations.

Likewise, biomedical advances (many of which are quite expensive) such as organ transplantation, advances in medical genetics, CAT scanners and physician specialization, etc., have contributed to the improvement of the general health and well-being of our people. By all of our current objective measurements, our population’s health has never been better.

Unfortunately, however, these changes in both agriculture and medicine make it increasingly more difficult for the farmer or the physician to operate as individuals.

But change is coming. If it benefits the patient and the public, it must be encouraged. Even with change, however, the state of mind of the family farmer and the state of mind of the family physician will survive.

Whichever system ultimately evolves, the individual, a self-disciplined self-starter who is freedom-loving, loyal to his charges and has personal and professional commitments to self, family, profession and country will flourish. This is the real spirit of America. In this way, the great American dream will continue to come true.

Reprinted from the Omaha World Herald, Omaha, Neb., Wednesday, January 8, 1986 edition.
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It is a pleasure to share with you some examples of the efforts of our District Medical Auxiliaries in creating a more positive image of physicians and the medical community. This goal originated as a result of my expectations that our actions would say "medicine cares" and we could counter adverse publicity and negative feeling. In the past few months surveys have shown that physician's public image has altered and this variance may reflect our efforts.

District I (Aberdeen area) provides continuing assistance in the Red Cross sponsored City Health Fair where nursing duties along with other services are performed. Arm bands distinguished the members, letting the community know that District I is interested and involved in their health.

Concentrating their efforts on projects that do not cost large amounts of money but invest TIME, District II (Watertown area) benefited their community by becoming more involved with elderly citizens and the new 24 Hour Crisis Shelter in Watertown.

Prenatal classes and health classes at various high schools are shown the movie "Born Drunk." District III (Brookings-Madison area) purchased this movie to address the Fetal Alcohol problem. A health professional is present at each showing of the movie to answer questions.

A deserving recipient is presented a nursing scholarship at the District V (Huron-Miller) annual Nursing School Tea.

Upon learning that there were children in the Mitchell area who were without warm winter boots, District VI bought and delivered boots to the various schools who then distributed these much needed and wanted items.

District VII (Sioux Falls area) felt their coalition with the Medical Society and United Way provided the potential for good public relations and the promotion of the medical community as "caring" individuals. The event was attended by 1,500 people and was featured as the cover story of FACETS (the national American Medical Association Auxiliary magazine).

In conjunction with Doctors Day, a physician was featured in a local publication in District VIII (Yankton-Vermillion area). This article portrayed a typical day, the family life and underscored the numerous community activities involving the physician.

The focus of District IX (Black Hills area) this year has been on caring and supporting each other and the medical community. Along with the Rapid City Regional Hospital and other health related organizations in the community they helped sponsor a Fun-Run-Walk-Roll.

District IV (Pierre area), District XII (Whetstone Valley) and the MALs (Members at large) are involved in projects sponsored by a number of diverse volunteer organizations.

We auxiliaries have national, state and local accomplishments that we can be proud of and our successes have had a positive impact on our communities, at the same time helping create a more "positive image of physicians and the medical community!"

Shirley Ryan, President
South Dakota State Medical Association Auxiliary

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Letters To The Editor

RE: Indian Health Service, Is There a Better Way?
Ray Rudolph, MS IV
Volume 39/No. 2, February 1986
Page 17-19

I have read with great interest the article concerning the Indian Health Service.
I have had the unhappy personal experience of having to deal with the bureaucracy that is connected to the Indian Health Service.
This has taken place in a variety of ways and I have come to the very distasteful conclusion that there is no interest, whatsoever by part of this particular system, to improve quality or reduce cost. My experience has included an offer to provide free (I repeat free) consulting services to Indian Health Service Clinics and that letter never even received the courtesy of response. In addition to this, I have offered to start a satellite clinic in an Indian Health Hospital and the administrator of that hospital clearly responded to me that he wishes to continue the present system, which includes sending patients at considerable distance for specialist services for which they would pay and he does not wish to have a consultant coming at his own expense to the community to utilize the resources readily available within that Indian Health care system. Last, but not least, I have several Indian patients who, in my judgement, would benefit from elective surgery who have now for several months been waiting for approval of their operation by the appropriate bureaucrats and I strongly suspect that this authorization will never be forthcoming. Regrettably, a number of those will probably end up with an acute situation which will make their care more risky and their outcome less predictable. In order to offset the need for those authorizations, I have filled a rather cumbersome application for a contract with the Indian Health Service. This application has been submitted several months ago and there has been no response as yet from the Aberdeen office.
In view of this very distasteful personal experience, I would like to suggest that the conclusion of the article of Mr. Rudolph, should include a thorough reevaluation of the performance of the bureaucrats that serve the system. The need is acute and the supply is being disregarded and, in some cases, offended. Surely, it should not be too difficult to provide a better way to handle communication with physicians who are willing and able to help with this need.

Sandro Visani, M.D., FACS
Mitchell, SD

South Dakota Society Of Pathologists

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Marked 1st or progressive 2nd or 3rd AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (HHS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2nd AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse reactions responded well to dose reduction and only rarely was verapamil discontinued. Precautions: ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. 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One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. Adverse Reactions: Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR <50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported (See Warnings.) 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The History and Physical — What Do We Teach?

Robert C. Talley, M.D.*

ABSTRACT

Methods of teaching history-taking and physical diagnosis are much debated in most medical schools, including The University of South Dakota. A common complaint of clinical faculty is that students (and residents) “can’t do a decent history and physical.” The author reviews some interesting studies on how practicing physicians derive patient information, and the process by which they arrive at tentative diagnosis. These have importance for all clinicians who interact with students, hear their presentations or review their patient workups. What do we teach?

Some years ago a review of the instruction of the History and Physical Examination at the University of South Dakota School of Medicine was undertaken because of complaints that students could not do an adequate history or physical exam. This review uncovered there was no true instruction in medical history taking. What was called “medical history taking” was an excellent course in general interviewing skills, by the Department of Psychiatry. This course taught the use and interpretation of body language, eye contact, how to reflect data, and how to formulate “open” questions.

The solution was a series of lectures (what else in a medical school?) on the content of the history and physical. Texts such as DeGowan and DeGowan, Bates, Harrison, Cecil and Stein’s all state that the ability to take a history is the most important aspect of becoming a physician; yet the proportion of such texts dedicated to this aspect of becoming a physician does not seem to support the allegation of “most important.” Less than five percent of any of the texts discuss the medical history. However, armed with this data, a 40 minute lecture on the History of Present Illness, including one page of notes was given. The students’ ability to obtain a medical history did not improve. The two hour review of systems continued to be the mainstay of history taking. Patients consistently were reported to be “poor historians.” Students made glaring omissions, such as no pulmonary data for a patient who presented with pulmonary disease. There had to be a reassessment of what we were teaching!

The goals of the history and physical may be easily stated: 1) to relieve the patient’s distress, and 2) to satisfy the patient. To teach how to achieve these goals, students and faculty must understand how physicians solve clinical problems; the process of taking a history. A number of authors have studied this, and while some suggest that we use multiple methods of problem solving,¹ there seems to be one dominant method that experienced physicians use to solve clinical problems. Indeed, this appears to be the prime method that humans use to solve problems in any area. Three authors have pioneered work in the medical field: 1) J. P. Kassirer, Tufts University, 2) A. S. Elstein, Michigan State, and 3) H. S. Barrows, McMasters University. Dr. Kassirer studied experienced clinicians taking a history of the present illness. He acted as the patient; the physicians he evaluated were four nephrologists, one cardiologist, and one gastroenterologist. The problems, as in real life presented many clues, and there were a number of diagnostic options. Kassirer found: 1. The physician generated one or more hypotheses very early; minutes into the interview. These hypotheses varied from as general as organ system involved, to a very specific diagnosis. 2. The number of active hypotheses kept in the physician’s mind were small; four to eleven. 3. The

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history was directed to prove the hypothesis; i.e., in each case the physician directly sought data to substantiate his/her hypothesis.

Elstein analyzed the problem solving behavior of physicians challenged with simulated patients; he used trained people acting as the patients. The interviews were viewed, as well as movies of the encounter. Immediately after the encounter the physician viewed the movies with the investigator; the investigator formulated questions about the physician’s thoughts at specific times throughout the interview. Dr. Elstein’s findings were similar to those of Dr. Kassirer; diagnostic problems are solved through a process of hypothesis generation and verification. Hypotheses were constantly generated early in the workup, when only a limited data base had been obtained. The hypothesis served to transfer an open medical problem, “what is the patient’s illness,” into a set of closed problems which are easier to solve. The workup consisted part by each hypothesis. Diagnostic decisions were made by selecting an hypothesis with the most clues and the hypothesis with the maximum difference of positive/negative clues.

To teach how to achieve these goals, students and faculty must understand how physicians solve clinical problems; the process of taking a history.

Dr. Elstein found that a purely inductive method of gathering data until a solution spontaneously emerged was never employed. The number of hypotheses generated rarely exceeded five. Thirty-five percent of the hypotheses were generated in the initial 30 second view of the patient, 8% before the physician ever saw the patient (from nurses information sheet), 53% on basis of the presenting complaint, and the other 4% after the patient had presented several complaints. To quote from a synopsis of Dr. Elstein’s work on the point of an hypotheses being generated early, “As experienced clinicians know (although most of our clinical teaching has not yet acknowledged), problem solving begins with the formulation of tentative hypotheses which serve to guide further inquiry. In direct contrast to our conventional instructional strategy of urging students to defer all hypotheses until history taking and the physical examination have been concluded, competent physicians generate hypotheses in the earliest moments of their encounters with patients. Indeed, they never use the problem oriented approach.” On the point of the number of hypotheses being limited in number, “from problem solving research in other fields, clinicians are found to have distinctly limited capacity for simultaneously considered multiple hypotheses, regardless of the complexity of the problem. Rarely does the number exceed five, and virtually never will one individual be entertaining more than seven.

Given that further investigation of a patient’s problem often will be limited to those hypotheses that service the revision process taking place during the initial inquiries, it is important to understand that any of three things may go wrong as a consequence of the mind’s apparent need for parsimony: 1. hypotheses may be retained that are excessively general, “abdominal infection” rather than “mesenteric adenitis,” as a way of embracing inconsistent findings; 2. selective findings may be disregarded to avoid having to generate new hypotheses, even if they could account for findings more effectively than the currently held hypothesis; and 3. some findings may be assigned exaggerated importance, to justify existing hypotheses. Both processes and their risks need to be understood for effective instruction and evaluation in clinical problem solving.” Dr. Elstein noted that the most common interpretive error was over-interpretation. The tendency to simplify was met by forcing new information into the existing hypothesis rather than making a new hypothesis. This error deserves attention in teaching.

Dr. Barrows studied practicing physicians and medical students at various levels of training. The physicians were drawn at random from the community, and were from family medicine and internal medicine. These physicians and students “worked up” a simulated patient — a person who had been trained to simulate a clinical problem. They were asked to do the workup in their usual manner. The workup was video taped, and immediately following the interview, the physician reviewed the video tape with one of the investigators to recall what had happened. The data for the report was drawn from 125 encounters of four separate problems. The conclusions of the study were similar to those of Dr.

The history was directed to prove the hypothesis; i.e., in each case the physician directly sought data to substantiate his/her hypothesis.

Elstein and Dr. Kassiner: 1. The interview was characterized by the formation of diagnostic hypotheses, about six in number, and this formulation occurred quite early in the encounter. 2. These hypotheses served a primary role in the subsequent search for information to support the hypothesis. 3. This process of clinical encounter remained constant over all educational levels, — students, residents, and attending physicians. The content of the hypothesis did vary with educational level. 4. The outcome of
the interview; what went forward in investigation and management, was also not related to the educational level. 5. Both the process and subsequent outcome of the patient encounter were unrelated to physician specialty.

This process of clinical encounter remained constant over all educational levels — students, residents and attending physicians.

How can we use this information? What do we need to teach students? It appears we don’t need to teach the process of problem solving. These several authors clearly felt that students possess the knowledge of problem solving. Dr. Elstein felt that knowledge of content was much more critical than mastery of any generic problem solving process. Dr. Barrows felt students already know how to problem-solve, and that particular skill is not a necessary educational item in medical schools. On the other hand he stated, “Clinicians when actively testing hypotheses, sought information which strongly confirmed hypotheses, and in routine modes of inquiry gathered primarily non-contributory data. By contrast the data gathered by students by active and passive search were equally contributory, suggesting inability of the students to determine critical information, to tests hypotheses, and/or inability to elicit this information.”

Therefore, we need to teach: 1. better hypothesis generation, 2. more effective questioning, and 3. a method to practice medicine, i.e., the model physicians should use. We must provide students with multiple opportunities to practice learning these skills. We need to understand the common problems and errors students make in learning to do a medical history to help, guide and correct them.

To teach better hypothesis generation, we must outline to students what they need to know about illness. This includes: 1. The natural history of illness, 2. common illnesses, and 3. the presenting signs and symptoms of illnesses. These may be learned signs and symptoms of illnesses. They may be learned from textbooks, but are best learned by interaction with patients. Students must be stimulated to learn the presenting signs and symptoms of the illness of every patient with whom they interact. Even though the patient may be returning for the twelfth time with congestive heart failure, what were the initial presenting signs and symptoms? The student’s history can help his/her future hypothesis generation by carefully outlining the natural history of the individual patient’s illness. In a patient with a four year history of congestive heart failure the student should learn each step of the progression of the disease from its presentation to the current time.

As instructors, we must require students to obtain this information during any and all encounters with patients. Common illnesses can be taught by instructors who are careful not to reward students for esoteric diagnoses, but stress diagnoses which are common in terms of the patient, and the location. The information experience is basic to competence. The student needs a broad experience with problems in order to determine what information is pertinent, what clinical findings are significant, and how these findings relate to his/her hypothesis and conclusions.

Dr. Hillard Jason noted that the clinician must have knowledge of: “1) The relation of findings to conditions (for the problem at hand), 2) the relative frequencies of different possible conditions (their population base rates), and 3) the particular characteristics of these conditions which carries severe risk, even if their rate of occurrence is low.” He felt that the capacity to have this information and to use it when needed was the outcome of repetitive practice. He felt the implications for education were clear, information is important, but far from sufficient, and repetitive practice in the application of information is mandatory for student training. Students need to actually see lists of hypotheses, as listed in Dr. Barrows’ studies. For the patient who had multiple sclerosis, the physician’s hypotheses were: hysteria, multiple sclerosis, cord lesion, trauma, neurological problems, transverse myelitis; under the problem of pericarditis the hypotheses were pericarditis, myocardial infarction, ischemic heart disease, upper GI problem, dissecting aneurysm, pulmonary disorder. To generate better hypotheses, the student needs to learn to ask effective questions. These should be open rather than closed questions. This may be confusing to the student. For example, “you don’t have chest pain do you?” is hardly an open-ended question, and would better be phrased: “tell me about any chest discomfort you might have.”

It should be good news to students that the diagnostic interview is therapeutic.

Perhaps the technique of patient presentations by students should be changed to follow that suggested by Dr. Kassirer in the New England Journal of Medicine, October 1983. The attending physician stops the presenter at any point, perhaps very early in the presentation, and asks other students, what hypotheses they have generated and given certain hypotheses, what would be the next series of questions to ask the patient (teaching how to ask better and more effective questions). The student must be taught a model within which he/she is to work. Dr.
Engle suggestsa hierarchy of systems from atoms-cells-tissues, to person-to-person-family, to society through universe and biosphere. Each system has distinctive qualities and relationships, yet each is a component of higher systems. While the physician interacts initially at the person level, he/she identifies the systems of which the patient is a part by historical identification such as sex, age, occupation, marital, and so gains insight into how to treat the patients’ illness. Dr. Engle stresses the concept that physicians treat illnesses (environmental and social events) and not diseases (biological events) as distinguished by Dr. Barondes. Students do not know this model. In their view “psychosocial” means a “psychologically produced” disease. They have little understanding of the use of social data to understand the patient, and to better treat his/her illness. A proper listing of psychosocial skills needed to obtain a medical history is important to inform the student of what he/she should be practicing. Such a list can be found in the American Board of Internal Medicine “Competence in History Taking List” published in the Annals of Internal Medicine. The therapeutic aspects of the history and physical become clear to the student, using Dr. Engle’s model.

As instructors we need to stress to the student the therapeutic aspects of the history and physical. Perhaps we can underline this by having the student review articles which show how patient compliance depends upon the initial interaction of the patient and physician. This again stresses the need to provide students with multiple opportunities to practice learning their skills, and the proven method of evaluating and teaching by instructor observation of the interaction, with prompt feedback to the student.

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**we need to teach: 1. better hypothesis generation, 2. more effective questioning, and 3. a method to practice medicine**

Two articles have outlined common problems and common errors of students learning to do a history. Werner presented the ideas of Dr. L. L. Stephens, and indicated five areas where the students have problems which instructors should meet head on, to help the student express and resolve. 1) The first area is mortality. The student suddenly realizes he/she can die, and needs help in understanding this reaction to illness and death. 2) Over-identification with the patient. If the student over-identifies, he/she tends to dehumanize the patient so that the patient is “not like me”; therefore, less threatening to the student. 3) The encounter with responsibility. Students have a “Dr. Kildare” image; what a physician does affects life and death for four or five patients a day. When students have competent physicians generate hypotheses in the earliest moments of their encounters with patients.

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this image, they seek the safety of the student’s role. “I am just a student and have no responsibility toward this patient”; a poor teaching environment is produced. 4) The student, once having encountered a patient’s conscious must also consider his/her own unconscious motivations. 5) Once the student actually recognizes the importance of psychosocial factors he/she may find them so confusing and overwhelming as to deny their importance, and not struggle with the necessity of learning of such factors.

**Conclusion:**

Dr. Platt pointed out common errors by resident physicians in interacting with patients. The first was low therapeutic content of the interview. Many students were unaware of the therapeutic opportunities that are present during interaction with the patient. He noted it should be good news to students that the diagnostic interview is therapeutic, and that this therapeutic process implies a sensitive and helpful approach to the patient’s response to illness, hospitalization, and treatment. A second error was a flawed data base. The interview was too long, whereby the physician concentrated on the review of systems but learned little of the patient’s life concerns, or his/her way of dealing with illness. Dr. Platt suggested the following time schedule:

A. Introduction — 1 minute.
B. Understanding of the patient’s life, habits and interests — 5 minutes.
C. Definition of the chief complaint and development of the present illness — 15 minutes.
D. Definition of other problems, i.e., “what other problems are you having?” — 5 minutes.
E. Major past medical events, health hazards, family definition including illness — 8 minutes.
F. Review of systems, short, because of the “emptying procedures” above — 3 minutes.

The third error noted by Platt was the failure to generate an hypothesis. The interviewer was not thinking what is wrong with this patient? How can I make this interview better? A fourth problem was failure to determine primary data and to accept secondary and tertiary data. The student needs to know he/she is after primary data — how the patient feels, and thinks; not secondary or tertiary data — what other physicians have called the illness. The final
problem was a too controlled style; the patient was never able to express his/her own feelings without interruption by the physician.

REFERENCES

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Nuclear Medicine, Radisson Univ. Hotel, Minneapolis, Minn., July 24-25. Fee: $175. Contact: U. of Minn., CME, Box 202 Mayo Mem. Bldg., 420 Delaware St., SE, Minneapolis, MN 55455. Phone: (612)373-8012.

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Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic insufficiency, hypokalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hypokalemia is more likely to occur in the elderly. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodic serum K+ levels should be determined. Hypokalemia develops, substitute a thiazide alone, restrict K+ intake. Associated diuretic therapy, or amphotericin B requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear in breast milk, if their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of Dyazide is about 50% of the bioavailability of the single entity. Theoretically, Dyazide is likely to be absorbed from the single entities of Dyazide (thiazide, SK&F CO.) and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hypokalemic effect of hydrochlorothiazide in combination with the dietary potassium in the dyazide capsule leads to increased serum potassium levels. However, extensive clinical experience with Dyazide suggests that these conditions have not been commonly observed in clinical practice. Do periodic serum electrolyte determinations particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or cortisone (ACTH). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias; liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving thiazide, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide, dosage adjustments may be necessary. Clinically insignificant reductions in anticoagulant's effectiveness have been reported. Thiazides have also been shown to increase the paralyzing effect of neuroleptics on muscle relaxants such as tubocurarine. Triamterene is a weak uric acid antagonist. Do periodic blood studies in children with predisposition for uric acid nephropathy. Antihypertensive effects may be enhanced in post-hypertensive patients. Use cautiously in surgical patients. Thiazide has been found in renal stones in association with the usual calcium components. Therefore, Dyazide should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on Dyazide when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with Dyazide. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered, hypokalemia and gout, digitalis intoxication (in hypokalemic), decreasing alkali reserve with possible metabolic acidosis. Dyazide interferes with fluorometric measurement of quinidine. Hypokalemia is uncommon with Dyazide, but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and Dyazide should laboratory values return to normal potassium levels. Thyroid function may occur as well as diastolic hypotension. Concurrent use with chlorthalidone may increase the risk of severe hypotension. Serum BUN levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. Dyazide should be withdrawn before conducting tests for parathyroid function. Thiazides may lead to or potentiate the action of other antihypertensive drugs.

Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth, anorexia, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics); megalocytosis, paresthesias, muscle weakness, tremor, ataxia, diplopia, nystagmus, syncope, ataxia, extinction, confusion, drowsiness, blurred vision, tinnitus, deafness, vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with the usual calcium components. Rare occurrences of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only) in Patient-Pak™ unit-of-use bottles of 100.
Otitis Media: In-Training Diagnostic Assessment

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Carolina, Puerto Rico 00630
THERE IS NO MORE WAIVER OF LIABILITY

We have recently received a copy of the Federal Register of February 21, 1986, containing final rules for determination of waiver of liability for Medicare admissions denied by the PRO. This change in regulations is very important and has serious ramifications with regard to the hospital’s reimbursement for denied cases.

Before the change in regulations, hospital reimbursement for Medicare admissions denied by the PRO was generally protected under waiver of liability. The concept of waiver of liability simply meant that the hospital was presumed not to know that the admission was medically unnecessary at the time it occurred, and that Medicare would pay the claim even though the PRO determined that the admission was medically unnecessary. Waiver applied unless PRO denied hospital admissions exceeded 2.5 percent of reviewed cases or 3 admissions (whichever is greater) during the previous quarter. Waiver calculations were based only from hospital admission determinations.

After discussion with HCFA officials (pending receipt of HCFA interpretation), it is our understanding that the new regulations essentially eliminate hospital waiver of liability for Medicare admissions after March 24, 1986. In other words, if SDFMC denies the medical necessity of a Medicare admission occurring after March 24, 1986, Medicare will not reimburse the hospital under waiver of liability, and the hospital may not bill the patient. Waiver of liability no longer exists and the hospital is liable.
C. O. B.

COORDINATION OF BENEFITS

Double payment of medical claims can cost thousands of dollars each year. With the increasing number of working couples there is a chance they are covered by each other’s group policy. Often neither health carrier is aware of the other, which results in double payment of claims.

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C.O.B., it’s one of the cost containment methods we use to hold down premiums and that benefits all of us.
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Otitis Media: In-Training Diagnostic Assessment

Loren H. Amundson, M.D.*
Wesley J. Nord, M.D.†

ABSTRACT

A research project was conducted by a family practice residency, at an affiliated community health center, to study the diagnostic assessment of otitis media by clinical level medical students, a family nurse practitioner, and first, second, and third year family practice residents. One hundred randomly selected patients ages 1-10 had an independent exam by a primary health care provider, by a teaching staff member, and had a tympanogram done. There was diagnostic concurrence by primary provider, faculty examiner and tympanogram in 55 percent of patients, representing 100% concurrence when the tympanogram was normal, but only 20% concurrence of all three when the tympanogram was abnormal. An algorithm for in-training diagnosis and follow-up of otitis media was developed as an outcome of this study.

The high incidence of middle ear problems and eustachian tube dysfunction, especially in children, is well documented. A significant number of hearing losses begin during childhood and are related to infectious diseases, otitis media being the largest single cause.¹

Otitis media was the ninth most frequent diagnosis in a recent national ambulatory study, one-half of these were new cases and one-half represented recurrent/follow-up/unresolved cases.² Diagnosis and treatment of otitis media occupies about one-third of a pediatrician’s time in office practice.³⁴ In a study of the practice of otolaryngology in the United States, 18% of diagnoses were otitis media. In studies of otitis media in family practices, one showed otitis media to be the ninth most common problem.⁵ In another more recent study of patient problems at our affiliated community health center (CHC), 8,332 patient visits were made in one year and 10,708 patient problems were recorded. Of these patient problems, acute otitis media and serous otitis media represented an incidence of 6.4% of all patient problems seen. In this study, otitis media was the fourth most common problem seen.⁷

Risk factors for otitis media are well known.⁸⁹ One-half of all infants have at least one episode of otitis media by one year of age and URI precedes the onset of 50% of cases. Otitis media in childhood is a disease with significant long-term morbidity and early diagnosis of middle ear effusion is needed to avoid learning delay and disabilities.¹⁰

Using an otoscope to visualize fluid, a retracted tympanic membrane, or a possible perforation is often times difficult in the pediatric age patient. Pneumatic otoscopy is felt to be of particular value in diagnosing the presence of fluid in the middle ear. If otoscopy is difficult to perform or if the findings on otoscopy are equivocal, tympanometry is often used.¹¹¹² The technique known as tympanometry represents an objective method of measuring middle ear function through the use of sound and changing air pressures. Tympanometry provides accurate test results, requires a minimum of cooperation from the patient, and often eliminates unnecessary costly referrals. However, tympanometry may not be an appropriate mass screening procedure due to a high false positive rate, especially in a pediatric population. While it is extraordinarily sensitive in depicting middle ear effusion, tympanometry does not show that a hearing loss exists and does not detect sensorineural impairments — these require audiometry.

METHODS

A study was undertaken to assess the ability of providers to diagnose ear problems by a protocol utilizing appropriate physical exam criteria, provider exams, faculty exams and tympanograms. The
protocol provided information relative to findings often present in purulent (acute) otitis media, acute and chronic serous otitis media, and minimum criteria for a normal tympanogram.

Objectives of the study included:

1. Assessing adequacy of ear exams by health care providers at different levels of training, including clinical level medical students, one family nurse practitioner, and first year, second year, and third year family practice residents.
2. Assessing ear problems in a pediatric population presenting with fever or ear symptoms.
3. Detecting and assessing ear problems in an asymptomatic pediatric population during health care maintenance (HCM) visits.

One hundred randomly selected patients between the ages of 1 and 10 years, presenting with fever, ear symptoms, or for health care maintenance exams were seen by a primary provider, teaching faculty member, and had a tympanogram completed. Until both provider and faculty had seen the patient separately, and the tympanogram had been completed by the nursing staff, neither provider nor faculty knew of each other’s findings and neither knew the results of the tympanogram (Figure 1). All tympanograms were later reviewed by the medical director.

<table>
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<tr>
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Data Form

RESULTS

The findings on 100 patients provide the cohort for this study. The primary providers who saw these patients and the number of cases seen by each group are shown in Table I. Also shown are the number of normal and abnormal tympanograms, by level of provider. Review of Table II shows the concurrence by providers, faculty, and tympanograms in the study. While provider and faculty had a 73% concurrence, provider and tympanogram and faculty and tympanogram concurrence were each 61%. Concordance by all three was 55%. There was 100% concurrence between the provider, faculty and tympanogram when the tympanogram was normal. However, there was only 20% concurrence by provider, faculty, and tympanogram when the tympanogram was abnormal.

Eleven patients were seen with a chief complaint of fever, 29 had ear symptoms, and 60 were seen for health care maintenance (HCM) exams. Table III shows that the concurrence by provider, faculty and tympanogram is nearly doubled in those cases presenting with fever or for health care maintenance exams when compared with those presenting with ear symptoms. In those 60 patients seen for health care maintenance exams, 20 (33%) had a history of otitis media in the problem list. While 13 (66%) of these patients had abnormal tympanograms, only 13 (33%) abnormal tympanograms were recorded in those 40 patients with no history of otitis media in the problem list.

Forty-three patients were 1 and 2 years of age, the remainder being ages 3-10 (Table III). Concordance by examination and tympanogram was essentially the same in both groups ($x^2 = .34, p = .73$), even though more normal tympanograms were recorded in the 3-10 year old age group ($x^2 = 4.11, p = .04$).

In 22 cases cerumen was mentioned as being present. One case of bullous myringitis was described, and one ear canal foreign body was seen.

DISCUSSION

The level of concurrence between provider and faculty was favorable for all levels of trainees involved, existing at the 77% level with M.D. trainees and 65% with pre-M.D. trainees and family nurse practitioner. Provider and faculty exam findings concur with the tympanogram in 61% of cases, similar to previous studies. Concordance by provider, faculty and tympanogram was shown in nearly two-thirds of cases presenting with fever and for health care maintenance exams, compared with only one-third of cases presenting with ear symptoms. Though there are concerns regarding the reliability of diagnosis of otitis media in younger children, compared with those more mature, and some concern for validity of tympanometry in younger children, this study shows that in those patients less than 3
years of age there was concurrence of examination with the tympanogram in two-thirds of cases even though in this age group two-thirds of the tympanograms were abnormal.

This study has led to the development of a suggested in-training algorithm for diagnosis and follow-up of otitis media (Figure 2). The results would indicate that in a teaching situation tympanometry may be helpful in determining which patients seen by medical students or residents also need to be seen by a faculty physician. Since there was 100% agreement between provider, faculty and tympanogram when the tympanogram was normal, there is little point in having patients with a normal tympanogram routinely seen by a faculty physician unless the provider who initially sees the patient feels the exam is abnormal. Similarly, when the tympanogram is abnormal and there is an obvious abnormality on exam, the additional yield from faculty consultation is likely to be low. It would seem most beneficial for faculty to see those patients in which there is a discrepancy between tympanogram and provider trainee exam.

While at this point the long term benefits of tympanometry as a screening and diagnostic tool are not known, it is felt that patient examination with otoscopy, tympanometry and audiometry are all important in the care and follow-up of otitis media and the subsequent prevention of hearing loss, learning delay and disability.

MAY 1986
REFERENCES

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PEDIATRIC USE: Safety and effectiveness in children have not been established.

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Propranolol hydrochloride (INDERAL® LA): Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

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In patients with WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported that during discontinuation of propranolol therapy, a new or increased frequency of paroxysms of atrioventricular blocks may occur. A paradoxical effect of the drug may develop.

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PRECAUTIONS

Propranolol hydrochloride (INDERAL® LA): GENERAL. Propranolol should be used with caution in patients with impaired hepatic or renal function. Propranolol is not indicated for the treatment of hypertension in patients with a history of angina pectoris or MI.

Beta-blocker replacement may cause rebound hypertension in patients with a history of angina pectoris. Beta-blocker discontinuation may cause myocardial ischemia in these patients. When discontinuation of the drug is necessary, patients should be advised to take a metabolically active drug (eg, metoprolol, acebutolol, timolol) or an oral beta-2 agonist such as terbutaline or metaproterenol.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs, such as reserpine should be closely observed if propranolol is administered. The added catecholamine-blocking action of propranolol may block the rebound rise in plasma catecholamines that may occur in hypotensive, marked Bradycardia, vertigo, syncope, attacks, or orthostatic hypotension. Catecholamine-depleting medications (eg, guanethidine, monoamine oxidase inhibitors) should be used with caution in patients on propranolol. Patients on propranolol should be evaluated for both autonomic and adrenergic function before and during therapy with possible catecholamine-depleting agents.

DIABETES MELLITUS: Patients with diabetes mellitus should be observed for symptoms of hypoglycemia, especially during the early phase of therapy. Severe reactions may occur in patients with a history of allergy to a propyl piperazine derivative, including angioedema.

PREPARATION FOR SURGERY: Propranolol is associated with a decrease in plasma renin activity. If surgery is planned, propranolol should be withdrawn at least 2 weeks before the operation to allow recovery of plasma renin activity. Should an emergency occur, an alternative beta-blocker (eg, metoprolol) or a short-acting beta-blocker (eg, esmolol) may be substituted.

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This year is fast coming to an end and I guess I have run out of things to rant and rave about. I feel it has been a very eventful year with the formation and implementation of Dakotacare and a quite successful legislative session.

I would again thank all of you for allowing me the privilege of representing the South Dakota State Medical Association as president. It is an honor I shall always cherish.

As always, a special thanks to Bob Johnson and his very able staff. Without them the year would have been chaotic.

Along this line, I would thank my associates who made it possible for me to be gone when needed. They covered the practice well without complaint.

If there is one thing I would like to stress, it is the need for physicians to remain a very cohesive group. It is the only way we will remain a strong force in the direction medical care will take. Let us not allow ourselves to be fragmented and ineffective.

My best wishes to Bill Rossing for the coming year. I am sure he is looking forward to it eagerly.

Again, thanks for a memorable year.

R. G. Gere, M.D., President
South Dakota State Medical Association
The 1986 legislature has concluded its business and overall the session was positive for medicine. More issues were won than were lost. The professional liability tort reform package, endorsed by the Medical Association and introduced by Governor Janklow, received considerable attention and discussion. Three of the four significant elements of the package passed. Medicine’s legislative successes were due in large measure to SoDaPAC’s continued participation in the political process and the resultant increased political awareness that such involvement creates for SoDaPAC members and medicine.

In 1985 there was a 24% increase in SoDaPAC membership over 1984 for a total of 188 members. For 1986 your SoDaPAC Board has set a membership goal of 25% of the potential physician and spouse members in each district. By achieving this goal there would be more than 400 members, double that of 1985. Can you imagine the interest and enthusiasm such a group could generate politically?

On March 6 the SoDaPAC Board made the decision to become involved in certain primary election campaigns. Following sub-committee and Board discussion concerning the candidates for each office, the Board voted to support Governor William Janklow for U.S. Senate, Don Frankenfeld of Rapid City for U.S. Congress, and George Mickelson of Brookings for Governor.

Following the primary election, the successful republican and democratic candidates for each of these three offices will be invited to a SoDaPAC luncheon to be held during the SDSMA Annual Meeting in Rapid City on June 6. Tickets for the event are $10 each and you are all invited to attend. Take the opportunity to meet and visit with the candidates.

This election year is important to everyone involved with medicine, whether as physicians, their spouses, families, staff or friends. All 105 state legislative seats are up for election with over 10% of the incumbents not seeking re-election. There will be a new Governor and U.S. Congressman with the possibility of a new U.S. Senator.

The people you help to elect in 1986 will be making legislative decisions for a minimum of two years and up to six years. It is critical that medicine take an active role in working to elect legislators that have a favorable attitude towards your profession.

When you are asked to contribute to SoDaPAC remember what organized medicine’s participation has meant in the past and think about what it will mean for you in the future.

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SOUTH DAKOTA POLITICAL ACTION COMMITTEE
Dakotacare
Robert E. Van Demark, Sr., M.D., Editor

The Twin Cities are recognized the world over as the HMO Center of the United States. At the last count available to us they had 13 HMOs, one with 32 branch offices; one has a branch as far away as “Bismarck, S.D.” The HMO market penetration there has risen from 2.3 percent in 1973 to 32 percent in 1983. Paul Ellwood has predicted that by 1990 or 1991 their HMOs will have penetrated 40 percent of the market. Unfortunately, HMOs, non-profit or for-profit, are often thinly disguised schemes to make money for their managers, investors and founders.

The recent formation of a common corporation by the Mayo Clinic and its associated hospitals, is representative of the efforts of dedicated physicians, business managers and hospital administrators over their increasing problems and concerns. The adage, united we stand, divided we fall, still has clinical applications in this rapidly changing modern era.

Minnesota Blue Shield and Blue Cross have successfully responded to HMO market pressures, by becoming more aggressive, innovative and price competitive. In January 1985, they offered the Aware Gold Program (a giant PPO), which pays first dollar coverage of office visits in doctor’s offices at rates competitive with HMOs. It is advertised as “a money-saving breakthrough in health care coverage.” South Dakota Blue Shield and its affiliated Blue Cross are currently formulating an Aware Gold Program similar to Minnesota.

The South Dakota State Medical Association has promptly responded to the “McDonaldization” of human services with a formation of Dakotacare, especially prepared for this rural state. Its purpose is to maintain the high quality system of health care, to compete financially with all other systems, controlling health care costs and not disrupting the patient-physician relationships or inter-physician relationships. This is in marked contrast to the closed HMO panel systems with no freedom of choice of physicians or hospitals. Dakotacare will be made available to several hundred of the state’s larger and medium sized employers as an alternative to health insurance for their employees. The basic package covers medical, surgical, hospital, maternity, mental health, home health services and will include other services such as ambulances and medical equipment.

At present more than 500 members of the South Dakota Medical Association have declared their intentions to affiliate with Dakotacare. With support of three-fourths of the State’s physicians the plan will be extremely competitive and will certainly discourage the penetration of out-of-state HMOs into this area. In this era of depressed farm economy, funnelling off South Dakota revenues will help no one here.

Dakotacare offers an attractive locally-directed plan to the patients and the hospitals and especially to the independent physicians, the backbone of South Dakota’s medical profession. We urge all our readers to become completely familiar with the details of this plan and its finances in order that their patients may become properly informed.

REFERENCE

Telling testimony

Excerpts from testimony before the Senate Committee on Labor, Business, Veterans Affairs & Insurance, Green Bay, Wisconsin, November 13, 1985 regarding medical liability and SB 328, by Darold A. Treffert, MD, Fond du Lac, Chairman of the State Medical Society’s Board of Directors.

Reprint from Wisconsin Medical Journal, December 1985: Volume 84.

There is a serious crisis in medical liability in Wisconsin. It is a crisis of insurance affordability for physicians and patients, and it is rapidly also becoming a crisis of availability of care for some patients in some areas of the state.

The problem is not limited to medical care. The application of the tort system to professional liability is generating a crisis in insurance availability and affordability for engineers, architects, nurse midwives, municipal units of government, and even attorneys themselves. The depth and breadth of this problem is serious — so serious that a special session of the Legislature had to be held to attempt to resolve the problem for the dispensers of alcoholic beverages. The solution was the elimination of that liability exposure.

The crisis in medical liability coverage is reflected over and over in a whole host of areas where the threat of a lawsuit and attendant liability threats continuation and availability of a variety of necessary activities and endeavors. For example, why should companies continue to produce vaccines when
lawsuits for product liability cost those companies 200 times the profits from those vaccines?

There is something dreadfully wrong with a system that ultimately sees less than 30 cents of each dollar awarded to the victim while the majority of that dollar goes to the legal system and insurance system supported by the vast medical liability industry.

We are not opposed to compensating victims for true medical negligence. We are opposed to a system that rewards the advocates in the industry more than it awards the victims.

Medical negligence does occur. In some instances this is by incompetent medical practitioners. Medicine continually strives to improve the practice patterns of physicians and to discipline physicians who fail to meet high ethical and clinical standards. The peer review and discipline provisions of Senate Bill 328 — the “so-called medical liability bill” — and the 1985 biennial budget bill provisions are important steps toward improving that system.

However, eliminating the few physicians with multiple awards or settlements is not the only solution. A much broader and more complex problem is the public expectation that there should be protection not only against malpractice but also what might be called “maloccurrence.”

In the minds of the public, and in the minds of juries, tragic and untoward maloccurrences become confused with malpractice. Malpractice awards have often come not to represent simply negligence, but rather a system of compensation for persons visited by some untoward outcome unavoidable and unanticipated.

If malpractice has come to mean something other than negligence, and if claims equate to compensation, as Attorney Melvin Belli has stated for example, then a major restructuring of the tort system is necessary to avoid chaos and bankruptcy of any medical liability plan.

The medical malpractice crisis is the tip of the “let’s sue” mentality that threatens to sink all of society’s activities — charitable, professional and business — in a paralyzing sea of inactivity under threat of suit or actual bankruptcy under cost of suit.

SB 328 is the first step on the road to reform and the Society commends Senator Jerome Van Sistine and the Legislative Council Special Committee for the development of this proposal.
Unexpectedly a friend whom I had not seen for about 20 years contacted me. We spent one afternoon reminiscing and catching up on each other’s lives and activities. It was such a delight to see her, touch her, renew our friendship. For the next few days I felt a special glow, not only in the knowledge of what a fine person she is but with the perception that I’ve been especially fortunate in knowing so many admirable people.

My Auxiliary presidency has compounded this phenomenon. It has brought me in contact with people whom I would not have had the opportunity to have met, become acquainted with or enjoyed otherwise. These friendships brought me unique joy, satisfaction and made light the effort that goes with this position.

Volunteering, I’ve found, is also a form of continuing education. Medicine is in a time of transition and changes are rapid and complex. It has been stimulating to have been enlightened about these changes and how they may affect my friends, myself and medicine in general.

These past few months I’ve tried to enlighten you about our Medical Auxiliary’s function, projects and ideals. Auxiliary is a part time volunteer pursuit, it is not necessary to dedicate your whole being. We each have something important to contribute and are part of the whole picture. In return each receives something pertinent to them. For me these advantages were unexpected while the benefits were desirable, diverse and liberal.

Do encourage your spouse to join us if they have not done so already. We NEED their talent and YOU need them to be knowledgeable, concerned and committed to your profession’s goal and problems.

Shirley Ryan, President
South Dakota State Medical Association Auxiliary

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Annual Meeting
Employee Health Immunization Program 
For Rubella at the South Dakota Human Services Center

David A. Smith, M.D.*
David W. Bean, M.D.†
Marcile Pederson, RN BSN‡
Sharon Steenhoven, LPN§

ABSTRACT:

In keeping with Center for Disease Control guidelines, an employee health program for rubella immunization was begun on July 1, 1984, and the results of this initial year are reported. The immune status of 733 employees was ascer-

tained, and of these, 31 (4.2%) were found to be susceptible to rubella. All susceptibles with continued employment at SDHSC were immunized. Rationale for and details of this program are discussed.

The prevention of congenital rubella syndrome is the major goal of a national strategy of rubella immunization. Some 80% of newborns who are infected by rubella virus through maternal infection in the first trimester will show congenital rubella syndrome.

In the past 2 decades, emphasis has shifted from immunization of children to the immunization of susceptible women of child bearing age and finally to immunization of all adults regardless of age or sex.

In 1969, when rubella vaccine became available, some 56,000 cases of rubella were reported in the U.S.A. By 1983, there were less than 1,000 cases, and the age distribution of cases had shifted greatly towards adults such that around 70% of reported cases occurred in individuals 15 years of age or older. As emphasis has moved to immunization of adults, there has been a modest decrease in the ratio of adult rubella cases to the total. Still an estimated 10-15% of young adults have no immunity to rubella virus.

The Center for Disease Control Guidelines for Infection Control in Hospital Personnel recommends immunization of hospital workers regardless of sex or age who may come in contact with patients with rubella or pregnant patients. To respond to this guideline, the South Dakota Human Services Center instituted a plan to verify the immune status or immunize all employees. During the period July 1, 1984, to June 31, 1985, 684 employees were screened with a rubella titer while 49 employees produced evidence of a positive immune status from prior medical records. Of these, 31 employees were found susceptible to rubella (Table I). Subsequent

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<td><strong>RUBELLA STATUS OF SDHSC EMPLOYEES</strong></td>
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<td>Rubella Status</td>
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<tr>
<td><em>Past exposure</em></td>
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<td>No past exposure</td>
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<td>*Includes 3 males and 46 females with prior documentation of past exposure.</td>
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immunization was achieved with 100% compliance in those individuals who continued employment at SDHSC. The need for immunization was communicated by our infection control nurse to the employees' supervisor and then to the employee. This system of notification was felt to convey to the employee the important and mandatory nature of the request for their compliance with the program.
Although no reported cases of congenital rubella syndrome have occurred with accidental rubella immunization of pregnant women, there exists a theoretical risk, and this live attenuated virus immunization is contraindicated in pregnancy. Premenopausal females were urine tested for pregnancy and questioned regarding possible pregnancy prior to immunization. Two seronegative women were found to be pregnant and their immunizations were deferred and accomplished later after delivery.

We found 4.2% of our employees to be seronegative for rubella which contrasts favorably with the national estimate that 10-15% of adults are susceptible. It is unclear whether South Dakota Human Services Center employees differ greatly as a group from other South Dakota hospital employees or from the general population. It is more cost effective to simply immunize all adult employees within a health care institution without prior rubella testing but with this low percentage of susceptibility, it is not much more costly to test first and immunize only those individuals who are seronegative. This latter tactic seemed more acceptable to our employees, however, necessitated strong measures to insure compliance.

At the end of this initial program, during which all current employees were brought up to the new standard, a longitudinal program to continue to screen and immunize susceptible new employees was begun.

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Epidemiological studies and large-scale prevention trials have indicated that as with blood pressure, serum cholesterol levels are proportionately related to CHD risk.

Specifically, "...for every 10 mmHg rise in pressure, there appears to be about a 30\% rise in cardiovascular risk."\(^4\) "...for every one percent you go up the American cholesterol scale, your subsequent rate of heart attack rises two to three percent."\(^5\)

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While Wytensin is not a cholesterol-lowering agent and is not indicated for the treatment of hyperlipidemia, in controlled clinical trials\(^6\) it caused a slight, sustained decrease in total cholesterol without reducing the HDL fraction or altering serum triglycerides.

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Brief Summary

Before prescribing, consult the complete package circular.

Indications and Usage: Treatment of hypertension, alone or in combination with a cholesterollowering drug.

Contraindications: Known sensitivity to the drug.

Precautions: 1. Patients with hypertension should be carefully observed during the early stages of therapy, especially when the dosage is rapidly increased.

2. Patients with a history of angina pectoris or myocardial infarction should be observed closely.

3. Patients with a history of cerebral vascular disease should be observed carefully.

4. Patients with a history of renal failure should be observed closely.

5. Patients with a history of liver damage should be observed closely.

6. Patients with a history of alcoholism should be observed closely.

7. Patients with a history of diabetes should be observed closely.

8. Patients with a history of obesity should be observed closely.

9. Patients with a history of gout should be observed closely.

10. Patients with a history of peptic ulcer should be observed closely.

11. Patients with a history of gastrointestinal bleeding should be observed closely.

12. Patients with a history of severe liver disease should be observed closely.

13. Patients with a history of severe renal disease should be observed closely.

14. Patients with a history of severe cardiac disease should be observed closely.

15. Patients with a history of severe pulmonary disease should be observed closely.

16. Patients with a history of severe endocrine disease should be observed closely.

17. Patients with a history of severe psychiatric illness should be observed closely.

18. Patients with a history of severe drug allergy should be observed closely.

19. Patients with a history of severe autoimmune disease should be observed closely.

20. Patients with a history of severe immune deficiency should be observed closely.

DRUG/LAB TEST INTERACTIONS: None known.

administration:

The dosage is based on the severity of hypertension, the age and weight of the patient, and the presence of other conditions that may affect the response to the drug.

The dosage is usually increased gradually, beginning with a small dose and increasing the dose every 1-2 weeks, until the desired effect is obtained.

The dosage should be reduced gradually, beginning with a small dose and decreasing the dose every 1-2 weeks, until the desired effect is obtained.

The dosage should be discontinued abruptly, beginning with a small dose and discontinuing the dose every 1-2 weeks, until the desired effect is obtained.

The dosage should be increased abruptly, beginning with a small dose and increasing the dose every 1-2 weeks, until the desired effect is obtained.

The dosage should be decreased abruptly, beginning with a small dose and decreasing the dose every 1-2 weeks, until the desired effect is obtained.

The dosage should be maintained at a constant level, beginning with a small dose and maintaining the dose at a constant level until the desired effect is obtained.

The dosage should be adjusted to individual needs, beginning with a small dose and adjusting the dose to individual needs.

The dosage should be discontinued immediately, beginning with a small dose and discontinuing the dose immediately.

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The dosage should be discontinued immediately, beginning with a small dose and discontinuing the dose immediately.

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Management of Major Depression For Primary Physicians

Walter Turke, M.D.*

ABSTRACT

This article outlines the current diagnostic criteria for Major (Clinical) Depression, the most common major psychiatric disorder that presents for the first time after age 35. The differential from depression secondary to a related but unrecognized illness — such as hypothyroidism, depression is a syndrome characterized by a persistent, severe disturbance of mood, with neurovegetative symptoms and with or without psychosis. The Diagnostic and Statistical Manual of Mental Disorders (DSM-III) of the American Psychiatric Association offers the following diagnostic criteria for major (clinical) depression:

1. A dysphoric (depressed, blue, sad, irritable, hopeless) mood or loss of interest in most daily activities. This dysphoria does not show shifts from one mood to another. The mood disturbance is persistent and prominent.

2. At least four of the following symptoms present daily, or for at least two weeks: a) decreased appetite and weight loss, or increased appetite and weight gain; b) insomnia or hypersomnia; c) psychomotor agitation or retardation; d) a loss of interest or pleasure, decreased libido; e) loss of energy and fatigue; f) feelings of worthlessness, self-reproach, or excessive or inappropriate guilt (may reach delusional proportions); g) subjective complaints, or objective evidence of decreased ability to think or concentrate; memory difficulties or indecisiveness without loosened associations or incoherence; h) recurrent thoughts of death, suicidal ideation, wishes to be dead or a history of attempted suicide.

3. The symptom picture is not superimposed on schizophrenia, a schizophreniform disorder or a paranoid disorder.

4. This disorder is not due to any organic mental disorder or uncomplicated bereavement.

As one of three major depressive episodes turn out to be secondary to a known or related illness, it is mandatory that a thorough physical examination be conducted prior to making a diagnosis of depression. Laboratory studies at minimum include complete blood count, urine analysis, serum test for syphilis, blood glucose, NA, K, CL, CO2, CA, PO4, creatinine, BUN, alkaline phosphatase, SGOT, bilirubin — T/D and thyroxin (T4).

Recent research has shown that the TRH test is the most useful test in identifying cases of incipient hypothyroidism which may be responsible for psychiatric symptoms. Thyroid auto-antibodies may also be screened by analyzing serum for anti-M or anti-T antibodies by available immunologic techniques.

Forty percent of U.S. men have alcohol problems which may lead to secondary depression worthy of being called an affective disorder. With the prevalence of the abuse of prescribed and illicit drugs, a comprehensive drug abuse evaluation is indicated. Such an evaluation should include antibody-based tests for opiates (morphine equivalents), barbituates, alcohol, amphetamine, benzodiazepines, phencyclidine (PCP), cocaine, cannabinoid (marijuana and THC) and methaqualone. Simultane-
ously, urine specific gravity should be measured to insure that the sample has not been diluted with tap water.  

It is important to rule out other organic causes of depression, as other drugs the patient may be taking, i.e. Reserpine, Antabuse, Propanolol, Barbituates, Digitalis, Steroids and Oral contraceptives.  

It is mandatory that a thorough physical examination be conducted prior to making a diagnosis of depression.  

Following evaluation of medical functioning and involved medications, it is important to address the patient’s total life situation including social, monetary, living arrangements and familial conflicts.  

It is helpful to remember that any major psychiatric disorder that presents for the first time in a person after the age of 35 is likely to be a depression.  

Many depressed patients have a disturbance in the hypothalamic/pituitary/adrenocortical axis as evidenced by elevated serum cortisol levels and poor regulation of adrenocorticotropic (ACTH) production. The dexamethazone suppression test has a high degree of specificity in that approximately 90% of patients who have abnormal (positive) DST’s have endogenous depression which responds well to tricyclic anti-depressants.  

The pharmacologic therapy of endogenous depression involves primarily the tricyclic anti-depressant drugs. Patients with endogenous depression have low CNS levels of serotonin and norepinephrine. The tricyclic anti-depressants increase the concentration of the former neurotransmitters at synapse in the central nervous system by blocking their reuptake by pre-synaptic neurons. The biological properties of all tricyclics are basically the same. One should choose a drug based on the side effect profile. My preference is not to use Amitriptyline because of possible anti-cholinergic side effects which include dry mouth, urinary retention, constipation, tachycardia, blurred vision, impotence, and toxic psychosis; cardiovascular side effects may include orthostatic hypotension, hypertension, electrocardiographic abnormalities, conduction defect accentuation, and congestive heart failure. The triazole anti-depressant Trazodone has a high level of safety in an overdose, coupled with a very low anti-cholinergic profile. However, sedation and priapism can be problems.  

I prefer Nortriptyline because it has a relatively low level of anti-cholinergic side effects and the best data on blood levels with a well defined therapeutic window of 50-150 ng/ml. With this drug, a defined trial of 21 consecutive days at therapeutic blood levels can bring a response rate from 50 to 90 percent. With outpatients, it is my preference to begin with 25 mg at bedtime and gradually work up to 75-100 mg a day, which usually produces blood levels within the therapeutic window. Although many patients can tolerate one dose at bedtime, others require divided doses. Once a steady state has developed, usually one week, one may do a Nortriptyline level by drawing blood 10-14 hours after the last dose. Studies demonstrate that the drug should be continued for 4-6 months, then it can be gradually withdrawn at a rate of 25 mg a month. If symptoms develop, increase the dosage again for 4-6 weeks and then gradually cut down again. It is in practice to deal with insomnia by having the patient rise each morning at the same time, and not to allow naps during the day. Sleep should not be forced, when the patient retires at the same time each evening and is unable to sleep, reading or listening to music can be utilized until the patient falls asleep. Administration of the amino acid L-tryptophan can be utilized to induce sleep, as it is a serotonin precursor and not only provides sedation, but may help correct the neurotransmitter deficiency in the central nervous system common in depressives.  

It is important to rule out other organic causes of depression, as other drugs the patient may be taking,  

It must be remembered that the lethal dose of the tricyclic anti-depressants is relatively low, ten times the total daily dose. The following are associated with increased risk of suicide: significant weight loss, a feeling of complete failure in obligation to loved ones, history of past suicidal attempt, family history of suicide, hearing the voice of a deceased loved one calling, lethal suicidal plan or fantasy, history of alcoholism, and elderly single males.  

Electroconvulsive therapy is a highly efficacious and specific treatment for psychotic depression that does not respond to the tricyclic anti-depressants. Consideration for its use should be given if the suicidal risk is great, or if the patient is unable to tolerate the side effects of anti-depressants. Elderly patients with heart problems may be more safely treated with electroconvulsive therapy than with tricyclic anti-depressants.  

Outpatients with depression should follow a balanced schedule of exercises, sleep and recreation. Large muscle exercise such as swimming and walking, may help relieve tension and underlying hostile feelings. The guilt present in depression may be helped by doing menial, dirty tasks — such as cleaning kitchen floors, toilets, the garage or basement.  

SOUTH DAKOTA
Weeding and digging in a garden may be helpful. Active friendliness may make the patient worse by robbing him/her of anger and lead to feelings of more guilt because the active friendliness is felt not to be deserved. Expression of anger from the patient should be accepted without judgement or condemnation. Uncovering psychotherapy is contraindicated because it may make the patient more depressed. Psychotherapy should be supportive, the doctor understands the intensity of the emotional pain, but it will end. If the patient has a psychotic delusional system and is paranoid and agitated, as well as depressed, Thorazine or Mellaril may be needed.

It may be helpful to mention other types of depression briefly for differential diagnosis: 1) Dys-thymic disorder (neurotic depression). This usually runs a chronic course and the treatment of choice is expressive relationship psychotherapy; 2) Bipolar disorder (manic depressive illness). These patients have had a previous episode of mania or depression; between the cycles they function normally. There is usually a positive family history for the disorder. The treatment of choice is Lithium carbonate. 3) Atypical depression. Symptoms are the converse of endogenous depression, there is preservation of summatory pleasure, i.e. weight gain. There is difficulty falling asleep in contrast to endogenous depression which has primarily a terminal sleep disturbance. There is reversal of the usual diurnal variation of mood; these patients feel worse in the evening whereas patients with endogenous depression feels worse in the morning and improve as the day goes on. The atypical depressive patient retains reactivity to the environment, and rather than sleep difficulty, may have hypersomnolence. The atypical depression also has considerable anxiety, including panic states. There are basically three types of atypical depression, although not listed in the APA DSM III, they are in the British literature: a) British V type — in these, vegetative signs are reversed in that patients sleep and eat more and are worse at night; b) British A type have anxiety and somatization; c) histeroid dysphoria — these patients have tearful tendencies, whining behavior and self-pity.

Active friendliness may make the patient worse by robbing him/her of anger and lead to feelings of more guilt

They act out considerably with use of alcohol and drugs, and may have phobic anxiety. Tricyclic antidepressants are usually ineffective and electroconvulsive therapy can make such patients worse. However, they are responsive to MAO inhibitors. Phenelzine appears to be the drug of choice. It is important that food restrictions must be followed to avoid hypertensive crisis. Platelet MAO level should be determined before the drug is started, the therapeutic benefit will probably be achieved at 80% MAO inhibition; 4) Pseudodementia — a functional psychiatric disorder due to a depression. The differential from true dementia is most difficult, the onset of senile dementia is usually insidious or has an indeterminate onset, whereas pseudodementia has a relatively rapid onset. In senile dementia the symptoms are usually of longer duration while the symptom duration in pseudodementia is usually short. Mood and behavior in senile dementia are variable, but in pseudodementia the person remains consistently depressed. Effective treatment for depression restores cognitive function.

REFERENCES

The PHYSICIAN REHABILITATION PROGRAM of the South Dakota State Medical Association
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Kevin D. Whittle, M.D. has been named a Diplomate of the American Board of Internal Medicine after passing the certifying examination.

* * *

Dr. E. H. Collins, Gettysburg, was named Gettysburg’s Citizen of the Year. Dr. Collins has practiced family medicine there for 51 years. He put much time and effort in getting a hospital and also a nursing home built in Gettysburg. He has also actively participated in many other civic projects and organizations.

* * *

Newly named director of emergency services at the Methodist Hospital, Mitchell, is Dr. Edward G. “Ted” Foxley. Dr. Foxley, a native of Salt Lake City, Utah, received his medical degree from the University of Oregon, Portland; completed an internship in Tucson, Ariz.; and completed two internal medicine residencies in Fresno, Calif., from 1968-70 and 1966-67. He also completed a one year dermatology residency in Minneapolis, Minn. in 1967. He came to South Dakota from Evanston, Wyoming.

* * *

Dr. Bill Church, Sioux Falls, was elected president of the Association of American Physicians and Surgeons at their recent annual meeting in Hawaii. Dr. Church, a native of Iowa, has practiced as a neurological surgeon in Sioux Falls for almost 30 years and has been an active member of AAPS since 1965. He has been a member of the Board of Directors of AAPS for about 10 years, and secretary of the organization for 7 years. He has chaired the AAPS’s political action committee for the past several years.

* * *

Spearfish now has a permanent general surgeon, he is Dr. Steven Giuseffi. Dr. Giuseffi, a native of Ohio, received his medical degree from the University of Cincinnati. He completed a surgical residency at the Medical College of Wisconsin in Milwaukee; and another surgical residency at Marshfield Clinic in Marshfield, Wisc.

Dr. Giuseffi and his wife Kristen, a Watertown native, have 2 sons.

The Community Medical Clinic of Elk Point has a new staff member, Dr. Janice Galli, family practice physician. Dr. Galli, a native of Washington, D.C., received her osteopathic degree from the College of Osteopathic Medicine, Des Moines, Iowa and completed an internship at Des Moines General Osteopathic Hospital.

Dr. Galli and her husband, James, who is a professor at Morningside College in Sioux City, have one daughter.

* * *

St. Joseph Hospital, Mitchell, has elected Dr. Sandro Visani to serve as president for 1986. Dr. Lucio Margallo, II will serve as vice president and Dr. Ronald Hansing as secretary.

* * *

Steven E. Krause, M.D., Yankton, recently passed a two day comprehensive certifying examination conducted by the American Board of Dermatology. He is now a Diplomate of that Board.

* * *

The Yankton Medical Clinic announces the association of a new physician, Dr. John Frank, a specialist in internal medicine. Dr. Frank, a native of Yankton, received his medical degree from the USD School of Medicine and completed a one year internal medicine residency at the Sacred Heart Hospital in Yankton.

For the past year, Dr. Frank, his wife, Peggy and their two children have been in Hot Springs where Dr. Frank worked at the VA Hospital.

(continue next page)
Dr. William R. Berryman has joined the Bartron Clinic in Watertown. Dr. Berryman, board certified by the American Board of Internal Medicine, received his medical degree from the University of Oregon Medical School in 1974. He completed his internship from the University of California in 1975 and an internal medicine residency from the University of Oregon in 1979. Dr. Berryman came to South Dakota from Sidney, Montana, where he had practiced general internal medicine and cardiology for seven years.

He and his wife, Karen have two children.

***

Thomas Delaney, M.D., internal medicine, has joined the St. Joseph Hospital medical staff, in Mitchell. Dr. Delaney, a native of Mitchell, received his medical degree from St. George's Medical School; his internship at the University of Tennessee, Nashville; and his internal medicine residency in Sioux Falls. Dr. Delaney is board eligible in internal medicine.

He and his daughter, Marcy, reside in Mitchell.

***

Willis F. Stanage, M.D., Yankton, has received the Yankton Sertoma Club’s Service to Mankind Award for 1986. Dr. Stanage, a native of South Dakota, began his pediatric practice in Yankton in 1954. He has been very active in the medical field and in the community. He is professor and chairman of USD Department of Pediatrics and Adolescent Medicine. He has served on a number of committees and boards in Yankton. The main reason for receiving the award is because of his work with the Lewis and Clark Playhouse and the Yankton Historical Society for the past 25 years. He has been president of both groups.

***

Glen Heidepriem, M.D., Rapid City, recently died at the age of 69. He was born in 1916, in Custer. He received his M.D. degree from Creighton University School of Medicine in 1942; and did an internship at Queen of Angels Hospital in Los Angeles, Ca. He served in World War II. He began his practice in Deadwood in 1946. He was a longtime member of the South Dakota State Medical Association and an honorary member at the time of his death.

He is survived by his wife, Evelyn.

Longtime Milbank physician, Dr. David A. Gregory, 98, Glasgow, Mont. died recently. He was born June 26, 1887 in Nashville, Tenn. He was in the 3rd Horse Cavalry in 1905. He graduated from Vanderbilt Medical School in 1916 and interned in the Hard Medical School, Okla. Dr. Gregory served as a doctor in France in the America Expeditionary Force from 1917-1919. He served in the U.S. Navy as Chief Hospital Steward in the Philippine Islands. He also served in that position in China and Manchuria.

He practiced medicine in Macon, Ga., Sioux Falls and Miller before moving to Milbank in 1930, where he was one of the founders of the Milbank Medical Clinic in 1956. He was a member of the AMA and South Dakota State Medical Association, from which he received a 50-year pin and also served as state president of the association in 1951. He was also very active in the Milbank Masonic Lodge.

Dr. Gregory is survived by one son, Dr. David Gregory of Glasgow; five grandchildren; and seven great-grandchildren.

Roland F. Hubner, M.D., Yankton, died recently at the age of 75. He was born in Avon, April 10, 1910. He graduated from the University of South Dakota in 1931 and received his M.D. degree from the University of Nebraska in 1933. He interned at Ancker General Hospital in St. Paul, Minn. He practiced in Tripp and Scotland from 1935 to 1939. He served in the Air Force Medical Corps during World War II. He returned to Yankton in 1945 and was one of the founders of the Yankton Medical Clinic. He retired from practice in 1972.

Dr. Hubner was a member of the Yankton District Medical Society, South Dakota State Medical Association, International College of Surgeons and many Civic organizations. He was appointed to the South Dakota Board of Regents in 1960 and served for six years, three years as chairman of the board.

He is survived by his wife, LaVerne; a daughter, Mrs. Deiter (Sandy) Haase, Peoria, Ill.; one son, Jay, Yankton; and four grandsons.
AMA Physicians’ Recognition Award Recipients — 1985

The following members of the South Dakota State Medical Association have earned the AMA Physicians’ Recognition Award during the year 1985. Congratulations!

Amundson, Loren H. SiouxFalls
Anderson, A. Byford Deadwood
Argabrite, John W. Watertown
Berg, Tony L. Winner
Binder, Clifford F. Chamberlain
Birkencamp, Ray T. Mitchell
Bjorahl, Kevin L. Webster
Boddicker, Marc E. Rapid City
Borth, Dean W. Pierre
Brechtelsbauer, David A. SiouxFalls
Broadhurst, Kennon E. Aberdeen
Carlson, Walter O. SiouxFalls
Collins, James D. Mobridge
Dean, Roscoe E. Wessington Spgs.
Finney, Lawrence W. SiouxFalls
Flohr, Charles E. Mitchell
Flora, George C. SiouxFalls
Fuller, William C. Mitchell
Gaede, James E. SiouxFalls
Gregg, John B. Watertown
Guddal, W. Nicol Sturgis
Ham, Joseph N. DellRapids
Harms, Robert W. Gregory
Hogrefe, Louis H. Wagner
Janusz, Albin J. Aberdeen

Jaqua, Richard A. SiouxFalls
Johnson, Dennis L. SiouxFalls
Johnson, Robert K. RapidCity
Jones, John B. Chamberlain
Jones, Warren L. SiouxFalls
Kemp, Earl D. SiouxFalls
Kennelly, Daniel J. Watertown
Knowles, Roy C. RapidCity
Likness, Clark W. Watertown
Munson, H. Benjamin RapidCity
Nelson, Parry S. Watertown
Nielsen, James L. DellRapids
Nord, Allen E. RapidCity
Pekas, Michael W. SiouxFalls
Pullen, Myrick W. Yankton
Quale, James L. SiouxFalls
Rossing, David R. SiouxFalls
Rossing, William O. Madison
Sample, Richard G. SiouxFalls
Schultz, Richard D. RapidCity
Sejvar, Joseph P. SiouxFalls
Simmons, Jerry L. Yankton
Smith, David A. SiouxFalls
Soye, Andrew L. SiouxFalls
Stevens, Dennis C. SiouxFalls
Tobin, Gregg M. Winner
Turke, Walter SiouxFalls
Van Demark, Robert E., Sr. SiouxFalls
Wake, Richard A. Brookings
Williams, H. Stephen Mitchell
Wolff, David G. Bowdle
Wyatt, George W. SiouxFalls

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The Ninth Annual Black Hills Seminar on Advances in Clinical Pediatrics, Sylvan Lake Resort, Custer, SD, June 18-20. Contact: Lawrence Wellman, M.D., USD School of Med., Box 5039, Sioux Falls, SD 57117-5039. Phone: (605) 336-7178.

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August
Postgraduate Institute for Emergency and Primary Care Physicians, Symposia II, UC San Diego Campus, San Diego, CA, Aug. 18-22. Fee: $450. 32 hrs. (max.) CME credit. Contact: Susan Johnson, Off. of CME, UC San Diego Scl. of Med., M-017, La Jolla, CA 92093. Phone: (619)452-3940.


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Cardiovascular contraindications to the use of Isoptin are similar to those of beta blockers: severe left ventricular dysfunction, hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no artificial pacemaker is present) and second- or third-degree AV block.

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Contraindications: Severe left ventricular dysfunction (see Warnings), hypertension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker), 2nd- or 3rd-degree AV block. Warnings: ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction < 30% or moderate to severe symptoms of cardiac failure) and in patients with any degree of ventricular dysfunction if they are receiving a beta blocker. (See Precautions.) Patients with milder ventricular dysfunction should, if possible, be controlled with optimum doses of digitalis and/or diuretics before ISOPTIN is used. (Note interactions with digoxin under Precautions.) ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild and controlled by decrease in ISOPTIN dose). Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment; however, four cases of hepatocellular injury by verapamil have been proven by re-challenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g. W-P-W or LGL syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's conduction effect on AV conduction and the SA node, AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1st or progressive 2nd or 3rd AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (IHSS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2nd AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. Precautions: ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced if ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Discontinuation should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. Adverse Reactions: Hypotension (2.0%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.5%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. (See Warnings.) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claustrophobia, hair loss, macula, spotting/bloody menstruation. How Supplied: ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984. 2385

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Dietary Megaloblastic Anemia In an Infant

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Precautions:
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Adverse Reactions: (percentage of patients)
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• Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, erythema multiforme, serum sickness-like reactions): 1.5%, usually subside within a few days after cessation of therapy. These reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
• Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
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SDFMC SUBMITS RENEWAL PROPOSAL

SDFMC has submitted a proposal to continue as the Peer Review Organization for South Dakota. This begins a process of negotiations with the Health Care Financing Administration pertaining to the scope of work required associated with the funds available. Our proposal was submitted May 9 for a contract renewal of October 1.

At the same time that HCFA is evaluating our proposal, they will be finalizing their evaluation of our current activities. We have also recently responded with clarifications to the findings of the Super Pro regarding their review of a random sample of previously reviewed Foundation cases.

If our proposal to continue as the PRO is rejected by HCFA, the contract will be open to competitive bids from other organizations desiring to be the South Dakota PRO. We will try to keep everyone updated as to the progress of the negotiation process.

We believe that the physician community of South Dakota is strongly committed to retaining peer review as a local function, and have submitted our proposal to HCFA to meet that challenge.
Dietary Megaloblastic Anemia In an Infant

M. D. Hanna, M.D.*
S. A. Vogelgesang, B.S.†
N. L. Carroll, M.D.‡
K. K. Murphy, M.D.§

ABSTRACT
Dietary deficiency of folate is rare in infancy and childhood. A seven month old child was maintained on goat’s milk without vitamin or iron supplementation for six months prior to his hospital admission. The child developed severe megaloblastic anemia, pancytopenia and high output cardiac failure as a result of his exclusive consumption of goat’s milk. He was treated with a transfusion of 10 cc/kg of packed red blood cells and 1 mg/day of oral folic acid. Within four weeks he had normal hematologic studies. There is little evidence to support the use of goat’s milk for infant nutrition, however, if parents decide to feed their babies goat’s milk, several guidelines should be followed to minimize risk.

Key words: megaloblastic anemia, infancy and childhood, folic acid deficiency, goat milk

INTRODUCTION
Megaloblastic anemia is rare in infancy and childhood but can occur secondary to malabsorption, chronic hemolytic anemia or chemotherapy for malignant disease. Dietary deficiency of folate is uncommon because of its widespread presence in many foods although it is seen in populations where malnutrition is prevalent. We report a case of dietary folate deficiency causing severe megaloblastic anemia and pancytopenia in an infant fed goat’s milk exclusively for six months.

CASE REPORT
This seven month old white male presented to his local physician for recurrent cough and wheezing. Physical examination revealed acute bilateral otitis media and a chest x-ray showed mild cardiomegaly. He was started on cefaclor and metaproterenol. Over the ensuing days he became febrile, lethargic and refused to feed. His mother noted weight loss and markedly increased pulse but no wheezing, retractions or respiratory distress. The child had had episodes of acute otitis media and upper respiratory infections in the past.

He was the product of a term, uncomplicated pregnancy, labor and delivery. He was breast-fed for the first six weeks, then was switched to goat’s milk because his parents received a free supply. He was then maintained on the goat’s milk without vitamin or iron supplementation.

Physical exam upon hospital admission revealed a pale, fussy, listless seven month old white male. His pulse was 195 beats per minute, blood pressure was 100/55 mm Hg and respirations were 60 per minute. His temperature (rectal) was 39.1 degrees centigrade. Bilateral otitis media was present. Lungs were clear. Cardiac exam showed a grade II/VI systolic ejection murmur heard loudest at the upper left sternal border as well as a quiet apical gallop. There was no hepatosplenomegaly. The rest of the exam was unremarkable.

LABORATORY
Hemoglobin 5.2 g/dl; Hematocrit 15.6%; white cell count 5400/mm3; red cell count 1.88 x 10¹²/ mm³; platelets 87 x 10⁹/mm³; mean corpuscular volume 83 fl (normal 70-86 fl); mean corpuscular hemoglobin 27.7 pg (normal 23-31 pg); mean corpuscular hemoglobin concentration 33.3 g/dl (nor-
normal 30-36 g/dl); reticulocytes 0.8%; differential: segmented neutrophils 8%; lymphocytes 88%, eosinophils 3%, monocytes 1%, 3 nucleated red blood cells per 100 leukocytes.

Peripheral blood smear showed marked poikilocytosis with ovalocytes, spherocytes, schistocytes, and tear drops. A few hypersegmented polymorphonuclear leukocytes were also identified (Figures 1 and 2). Vitamin B₁₂ 293 pg/ml (normal 200-1100 pg/ml); serum folic acid 0.9 ng/ml (normal 2.6-17.5 ng/ml); serum iron 131 ug/dl (normal 50-140 ug/dl); total iron binding capacity 341 ug/dl (normal 290-400 ug/dl); transferrin saturation 38% (normal 20-35). Other laboratory data included normal lactate dehydrogenase, normal coagulation studies and normal liver enzymes.

Pulmonary congestion and mild cardiomegaly were seen on chest radiograph. Electrocardiogram showed atrial tachycardia and mild left ventricular hypertrophy.

**HOSPITAL COURSE**

The child was treated with a transfusion of 10cc/kg of packed red blood cells as well as amoxicillin with clavulanate potassium for the acute otitis media. He was given one intramuscular dose of vitamin B₁₂ and 1 mg/day of daily oral folic acid was begun. The goat’s milk was discontinued and he was placed on soy formula. In four weeks his physical exam was unremarkable and he had normal hematologic studies with a normal peripheral blood smear. Complete blood count values were: white blood cell count of 8500 with 36% segmented neutrophils, 2% bands, 36% lymphocytes, 1% monocytes, 4% eosinophils and 1% basophils. Hemoglobin was 10.7 gm/dl, hematocrit was 33% and a platelet count of 475,000.

**DISCUSSION**

Goat’s milk has been used in infant nutrition for many reasons. The use of goat’s milk in infant nutrition has reached epidemic proportions in areas such as the Mediterranean basin where goats are abundant. In this country and others, goat’s milk is used in infant nutrition because of parental dietary and religious beliefs and, perhaps the most common reason, a perceived allergy to cow’s milk with or without atopic eczema. The latter is an inappropriate indication since it has been estimated that only 1 to 2% of infants have true cow’s milk allergy and of those 50-60% will also react to goat’s milk.

The nutritional composition of goat’s milk is similar to cow’s milk with a higher soluble load than human milk. Goat’s milk, however, is notably deficient in iron, polyunsaturated fatty acids, vitamin C and folate. It is probably deficient in vitamin B₁₂ as well. The daily folate requirement for infants is reported to be 0.02-0.05 mg. Goat’s milk contains less than 6 μg/l.

Folic acid was first isolated in pure form from spinach by Mitchell in 1941. Although it is manufactured by plants and certain bacteria, animal cells cannot produce it and it is an essential dietary requirement. The average American adult diet contains 0.2 to 0.5 mg/day which is about two to three times the USDA Recommended Daily Allowance. Infants, on the other hand, require 0.02 to 0.05 mg/day which on a weight basis is about ten times the adult requirement, probably due to their rapid growth. Nutritional deficiency of folate most commonly occurs in the first year of life and is the most common cause of megaloblastic anemia in infancy. Premature infants are at higher risk, presumably due to decreased folate stores.

Folate functions as a “one-carbon-carrier” for a number of metabolic pathways. Of these, perhaps the most important is the production of thymidylate...
by the enzyme thymidylate synthetase. This enzyme requires tetrahydrofolate and is an essential initial step in DNA synthesis. Integral to DNA synthesis, folate deficiency has its greatest effect on rapidly reproducing cells. The best documented effects are seen in the bone marrow but structural and functional alterations can also be seen in the small intestinal mucosa. The normal maturation of erythrocyte precursors in the bone marrow is interrupted when nucleic acid synthesis is abnormal. This leads to megaloblastic alterations; macrocytosis with normochromia usually accompanied by varying levels of granulocytopenia and thrombocytopenia as they share common precursors.

Characteristics of megaloblastic anemia were seen in this case: increased incidence of infections, lethargy, lack of hepatosplenomegaly, low serum folate, low hemoglobin and increased MCV with a normal MCHC. Hypersegmented polymorphonuclear leukocytes, granulocytopenia, thrombocytopenia and ovalocytosis are also seen. Megaloblastic anemia can be associated with an increased LDH which is released from destroyed erythrocytes because of ineffective erythropoiesis. However, LDH was normal in this case. Anemia due to dietary deficiency is seldom due to the lack of a single nutrient.

Goat’s milk is deficient in folate but is also low in iron and vitamin B₁₂. These deficiencies, if present, can be combined and masked by the characteristics of the more severe deficiency. Iron studies and vitamin B₁₂ levels were normal in this case. High output cardiac failure secondary to anemia can develop. Cardiac failure was present in this case as evidenced by tachycardia, heart murmur and cardiomegaly on chest x-ray.

Little evidence has appeared in the literature to support the claims made for using goat’s milk in allergic infants and children. Archer and MacDonald further state that the use of goat’s milk in the management of atopic eczema is not indicated. If parents decide to feed their babies goat milk despite the lack of medical and nutritional evidence of benefit, Taitz and Armitage propose several guidelines. First, raw goat’s milk should be pasteurized or boiled (boiling goat milk may inactivate the folate binding proteins that aid absorption making even less folate available). Animals should have been tested for tuberculosis and brucellosis. Second, goat’s milk should be diluted to three-quarter strength because of its high solute load. Some form of carbohydrate should be added because dilution decreases its energy content. Third, supplemental folic acid, vitamins B₁₂, A, C and D should be given. Finally, any goat milk product should have a specified shelf life. We would add that if a child develops anemia while on goat’s milk, evaluation should include serum vitamin B₁₂ levels and iron studies in addition to serum folate levels. These guidelines are sound and should serve to avoid the hazards of using goat’s milk for infant nutrition.

The use of goat’s milk in infant nutrition occurs for many reasons, the most common of which is in the management of perceived cow’s milk allergy. The exclusive use of unsupplemented goat’s milk can lead to megaloblastic anemia as we have reported. Parents and physicians need to be aware that there are few, if any, indications for using goat’s milk in infant nutrition.

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DIABETES: The safety of propranolol in patients with diabetes mellitus who have been treated by insulin or oral hypoglycemic agents has not been established. Cases of hyperglycemia and ketosis have been reported in diabetic patients receiving propranolol. Carbohydrate tolerance has been impaired and there was an increase in diabetic patients by propranolol. Discontinuation of propranolol may be followed by an exacerbation of hyperglycemia, including ketoacidosis, in diabetic patients. Propranolol should be used with caution in such patients and should be used only when clearly indicated.

**INTERACTIONS**

Propranolol may produce an additive fall in blood pressure when given with other antihypertensive agents, digitalis, or sedative agents. In general, if either blood pressure or pulse response to propranolol decreases significantly, the dose of the other agent should be reduced, if possible. When propranolol is discontinued, beta blockers should be continued for at least 2 weeks to prevent possible withdrawal symptoms. Hyperglycemia may occur in diabetic patients who discontinue propranolol suddenly.

**PREGNANCY**

Pregnancy Category C. Propranolol and hydrochlorothiazide are known to be embryotoxic in animal studies at doses of about 10 times greater than the maximum recommended human dose. There are no adequate and well-controlled studies in pregnant women. Propranolol should be used during pregnancy only if the potential benefit justify the potential risk to the fetus.
Council Meeting Highlights

The Council of the South Dakota State Medical Association met on Friday, April 18, 1986, in Sioux Falls, South Dakota. Following are items of business transacted at this meeting.

1. DUES INCREASE. A resolution was approved for submission to the House of Delegates recommending a $50 dues increase effective January 1987. The last dues increase was in 1978, and this would bring the total State Association dues for full, active members to $350 annually and for government employees to $175.

2. HONORARY LIFE MEMBERSHIP. A bylaw amendment was approved for submission to the House of Delegates changing the criteria required for honorary life membership. This amendment requires that candidates 1) must have been members for a continuous term of ten years; 2) are not engaged in the active practice of medicine; 3) have been made an honorary or life member of their component society, and 4) have been elected a life member of the Association by a majority vote of the House of Delegates or the Council. As amended, this bylaw no longer has an age requirement.

3. ELECTION OF HONORARY LIFE MEMBERS. The following physicians were elected to honorary life member status in the State Association: Dorence Ensberg, M.D., Sioux Falls; T. R. Anderson, M.D., Sioux Falls; Douglas Cameron, M.D., Rapid City; Raymond Boyce, M.D., Rapid City; Clayton Behrens, M.D., Rapid City; and William Delaney, M.D., Mitchell.

4. ENDOWMENT BOARD OF DIRECTORS. The Council reappointed the following to serve a one year term on the South Dakota Medical School Endowment Board of Directors: Joseph Hamm, M.D., Warren Jones, M.D., Gerald Tracy, M.D., Bruce Lushbough, M.D., T. H. Sattler, M.D., Robert Giebink, M.D. and Bruce Allen, M.D.

5. AMA COMMITTEE APPOINTMENTS. There are several openings on AMA committees, and if anyone is interested, please submit your name to the Executive Office. Nominations must be submitted to the AMA by July 1. Nominees must be AMA members, and must have knowledge of and interest in the work of the particular committee. Openings are available on the following: 1) Continuing Medical Education Advisory Committee, 2) Review Committee of the Accreditation Council for Continuing Medical Education, 3) Residency Review Committees (individual disciplines), 4) Medical Specialty Boards (individual disciplines).

South Dakota Society Of Pathologists

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Jerry L. Simmons, M.D., Secretary-Treasurer
About Our New President

WILLIAM O. ROSSING, M.D. was born in Bagley, Minnesota, June 6, 1934. He is the son of a Lutheran pastor and has two brothers and one sister. He spent his pre-school years in Lily, SD and Duluth, Minn. and the remainder of grade school and high school in Garretson, SD. He received his B.A. degree in 1956 at Augustana College in Sioux Falls; B.S. degree at the University of South Dakota in 1957; and his M.D. at Northwestern University in 1959. His internship and residency in internal medicine were completed at U.S. Army Brooke General Hospital, Fort Sam Houston, Texas from 1959-1963.

From 1963-1966, Dr. Rossing practiced in the Army Medical Service as assistant chief and chief of the Department of Medicine at USAH in Nurnberg, Germany. He came to Sioux Falls in 1966 and has practiced internal medicine ever since, as part of a 5-man group. He is affiliated with Sioux Valley Hospital and McKennan Hospital and is a consulting staff member for the Dell Rapids', Flan-dreau’s, Canton’s and Mitchell Methodist hospitals. He is clinical associate professor of medicine for the University of South Dakota School of Medicine.

The professional societies that Dr. Rossing is associated with are as follows: Phi Rho Sigma Medical Fraternity; AOA; Seventh District Medical Society; SDSMA; AMA; American College of Physicians, Fellow; American Society of Internal Medicine; and American Board of Internal Medicine, certified and re-certified twice.

He has served as president of the Seventh District Medical Society; South Dakota Society of Internal Medicine; Sioux Valley Hospital Staff; Augustana College Alumni Association; and Our Savior’s Lutheran Church congregation. He is currently serving as board member and secretary of Sioux Valley Hospital Board of Directors. He has also been a board member of the Minnehaha County Visiting Nurses Association; South Dakota Symphony; and Senior Companions Advisory Board.

Dr. Rossing’s wife, Ihlene, is a native of Canton, SD and a graduate of Sioux Valley Hospital School of Nursing. They have three daughters and one son. Karen has two children and lives in Eden Prairie, Minn.; Rebecca has one child and lives in Alexandria, VA; Bill graduated from Augustana College this spring and will enter USD Medical School this fall; and Signe graduated from Washington High School this spring and will enter USD this fall.

Gardening is Dr. Rossing’s primary hobby. Now with his family shrinking he is turning to tennis and golf, the latter which Bob Johnson is trying to teach him — Winston Odland is teaching him cards. Dr. Rossing says he already knows how to do the other vices.

Hunting and fishing are primary interests and he particularly enjoys pulling weeds and re-arranging wood piles at their small family cabin in the Swan River Valley of N.W. Montana. He also enjoys listening to light popular music, particularly of the 40’s and 50’s or classical selections; playing the piano; or reading in the general realm of World War II or the western settlement of the United States.

---

Physicians Needed

General Surgeon, OB/Gyn and Internist, to join seven doctor family practice clinic in Cloquet, MN, a community of 12,000 (30,000 service area), located 20 minutes from Duluth-Superior. Clinic facility is located one block from modern, well equipped 77-bed hospital. Cloquet enjoys a stable economy (forest products). Additionally, our community is noted for its excellent school system. First year salary guarantee, paid malpractice, health and disability insurance, vacation and study time.

Contact: John Turonie, Administrator
Raiter Clinic, LTD
417 Skyline Boulevard
Cloquet, MN 55720
Phone: (218) 879-1271
Another annual meeting has been completed, the torch has been passed and now we embark on another year as an association, presenting ourselves to the public as the state representative of organized medicine. At the time of this writing, I cannot speculate on what goals or objectives the House of Delegates will lay out for its membership and leadership for the immediate future. As one who has spent a number of years participating in the discussions of the Council, I could anticipate the following, and would seek during this term of office to focus our efforts in these areas:

1. **Consolidation of the progress made in the legislative arena toward tort reform as reflected in our professional liability package:**

Skepticism exists on the part of our legal colleagues as to the constitutionality of the new statutes, and they will in all probability face a challenge before the State Supreme Court. Similar action in other states and the results of their judicial processes would seem to establish a favorable precedent for the new legislation.

2. **Quality control and internal peer review:**

As a number of you recall, Governor Janklow's trade-off for active support of our legislative package in professional liability was a commitment on our part as an association to work actively to "police our own ranks," and to take whatever measures needed to ensure that quality care is delivered by the profession to the residents of this state. To the casual bystander, and even to the professional who has not been enmeshed in the web of peer review, this would seem a simple and forthright task implicit in the receipt of an M.D. degree. Others, however, will recognize the treacherous legal waters which need to be successfully traversed in the course of fulfilling this charge. Dialogue with our Board of Medical Examiners and the Council will be necessary to set an appropriate course of action.

3. **Dakotacare:**

Those of us intimately involved in the conceptualization of an HMO-IPA for South Dakota have tended to perceive it as an expedient project to be launched while we are briefly presented with a "... window of opportunity" within the current maelstrom of activity dealing with the development of alternative health care delivery systems. It is primarily an effort to permit continued physician participation in the decision-making process relative to the delivery of health care, linked with the control of the process of quality assessment and utilization of services. Insurance is a risky business and there are some who would say that this type of exposure is not part of our expertise. By the same token, some of the fundamental criteria by which such a plan survives depend on the exercise of internal controls and judgement calls for which the SDSMA, SD Foundation for Health Care, and our state PRO have all the necessary tools. The success of this effort will depend very heavily on the cooperation and patient understanding of each participating physician as we work in an increasingly competitive environment.

4. **USD School of Medicine:**

By the time this is in print, the LCME will have returned for its much-discussed inspection, completed its task and all will be awaiting the results of the review. The SDSMA has always been a strong advocate of the medical school, and despite the varying agendas for the number and structure of related residency programs, one can identify a strong foundation of support for the 4-year program itself. As we move through the coming year, I suspect there will be ample opportunity...as reasonable people, striving for reasonable solutions, to demonstrate our solidarity and commitment to the area of medical education.

These are but a few of the high-spots on our agenda for the year. I look forward to visiting with you all in your district meetings throughout the year where we can chat less formally about your concerns as you see them evolving on the firing line. Perhaps you might even want to bend an ear about a dues increase!...

_Signed_  
W. O. Rossing, M.D., President  
South Dakota State Medical Association
17th ANNUAL
BLACK HILLS SUMMER SEMINAR
ON DERMATOLOGY, ALLERGY/IMMUNOLOGY AND
DISEASE PREVENTION/HEALTH PROMOTION
AUGUST 7, 8, 9, 1986

Howard Johnson Motor Lodge, Rapid City, South Dakota
Hosted by the South Dakota Academy of Family Physicians

This program has been reviewed and is acceptable for 16 prescribed hours by the American Academy of Family Physicians and 16 hours Category 1 AMA Physician Recognition Award.

<table>
<thead>
<tr>
<th>Time</th>
<th>Events</th>
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<tbody>
<tr>
<td>2:00 p.m.</td>
<td>SDAFP Board of Directors Meeting</td>
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<tr>
<td>6:30-7:00 a.m.</td>
<td>Registration</td>
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<td>7:00-7:10 a.m.</td>
<td>Complimentary continental breakfast</td>
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<td>7:10-7:50 a.m.</td>
<td>Diagnostic Techniques</td>
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<td>7:55-8:35 a.m.</td>
<td>Panel — three speakers</td>
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<td>8:40-9:00 a.m.</td>
<td>Coffee, consultation, conversation</td>
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<td>9:05-9:45 a.m.</td>
<td>Therapeutic Agents</td>
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<tr>
<td>9:50-10:30 a.m.</td>
<td>Panel — three speakers</td>
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<td>10:35-12:00 noon</td>
<td>Practical Office Allergy — II</td>
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<tr>
<td>11:15-12:15 p.m.</td>
<td>Testing, Diagnosis, Therapy</td>
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<tr>
<td>12:30-2:00 p.m.</td>
<td>Buffet Luncheon for Registrants</td>
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<td>2:30-4:00 p.m.</td>
<td>SDAFP Legislative Committee</td>
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<td>4:00-5:30 p.m.</td>
<td>SDAFP Education Committee</td>
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<td>6:30-7:00 a.m.</td>
<td>Registration</td>
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<tr>
<td>7:10-7:50 a.m.</td>
<td>Reactive Airway Disease — Children</td>
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<tr>
<td>7:55-8:35 a.m.</td>
<td>Reactive Airway Disease — Adults</td>
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<td>8:40-9:20 a.m.</td>
<td>Food Allergy</td>
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<td>9:25-9:45 a.m.</td>
<td>Coffee, consultation, conversation</td>
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<tr>
<td>9:50-10:30 a.m.</td>
<td>Practical Office Allergy — I</td>
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<tr>
<td>10:35-11:15 a.m.</td>
<td>Quackery in Allergy</td>
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<tr>
<td>11:20-12:00 noon</td>
<td>Testing, Diagnosis, Therapy</td>
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<tr>
<td>12:15-1:15 p.m.</td>
<td>Buffet Luncheon for Registrants</td>
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<td>1:30 p.m.</td>
<td>SDAFP Annual Meeting</td>
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<td>8:00-9:00 p.m.</td>
<td>Special Session — The Usefulness of Spiritual Awareness in Reducing</td>
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<td>Stress and Aiding Well-Being</td>
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<td></td>
<td>Earl D. Kemp, M.D.</td>
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<td>David A. Brechtelsbauer, M.D.</td>
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<tr>
<td>6:30-7:00 a.m.</td>
<td>Registration</td>
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<tr>
<td>7:10-8:10 a.m.</td>
<td>A Practical Smoking Cessation Program</td>
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<td>for the Family Physician's Office</td>
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<td>Earl D. Kemp, M.D.</td>
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<td>Practical Nutritional Advice for Pregnant and Lactating Patients</td>
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<td>David A. Brechtelsbauer, M.D.</td>
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<td>Cathy C. Brechtelsbauer, M.A.</td>
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<td>Prevention of Psychosomatic Disorders</td>
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<td>Thomas J. Grau, M.D.</td>
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<td>Michael V. Bloom, Ph.D.</td>
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<td></td>
<td>Workshops repeated</td>
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<tr>
<td>8:30-9:30 a.m.</td>
<td>Coffee, consultation, conversation</td>
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<tr>
<td>9:35-9:55 a.m.</td>
<td>Health Care Maintenance for Adult Patients</td>
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<td>10:00-11:00 a.m.</td>
<td>Earl D. Kemp, M.D.</td>
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<td>Thomas J. Grau, M.D.</td>
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<td>Patient Education in the Family Physician's Office</td>
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<td>H. Bruce Vogt, M.D.</td>
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<td></td>
<td>Claudia J. Kapp, R.N.</td>
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<td></td>
<td>Practical Exercise Programs in Rural Areas</td>
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<td></td>
<td>David A. Brechtelsbauer, M.D.</td>
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<tr>
<td>11:20-12:20 p.m.</td>
<td>Workshops repeated</td>
</tr>
<tr>
<td>12:30 p.m.</td>
<td>SEMINAR CLOSES</td>
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</tbody>
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MAKE PLANS TO ATTEND NOW, WRITE:
BLACK HILLS SUMMER SEMINAR
3001 S. Holly
Sioux Falls, SD 57105
In past decades summer was a time to slow down, relax with family and friends at the lake, or just lazily dream away the hours basking in the sunshine. In past decades the world around us was more predictable and we felt relatively safe and protected, and uninvolved.

This summer of 1986 as I take office as president of the SDSMA Auxiliary, I am deeply concerned about the rapid changes taking place in our shrinking world. I am concerned about the discontent, the unrest, the poverty, the homeless, the national debt, the ethical and moral dilemmas, and the pervasive ignorance of supposedly enlightened people.

As doctors, future doctors, and doctors’ spouses, we must question our priorities and become personally involved at all levels. We must remind ourselves that each of us do, and can, make a difference with our unique talents and opportunities.

We are perceived as leaders in our respective communities. In what direction are we leading? Are we conscientious about not only becoming enlightened voters, but actively supporting our chosen candidates? Are we studying the issues, and arriving at well thought-out conclusions, rather than following the herd instinct? When our president orders the bombing of a country in order to discourage terrorism do we applaud automatically, or do we seek to eradicate the cause of the discontent and frustration of a people without a home, i.e. the Palestinian? How informed are we of the apartheid debate in South Africa or the Nicaraguan conflict? How much do we care about the plight of the American farmer or the Morrell workers, and so on?

Do enjoy your summer, but when you’re basking in the sunshine, read from different unbiased sources. Form your own well thought-out opinions. Do make time in your schedules for relaxing at the lake with family or friends, and share your newfound knowledge in order to help others become more enlightened and concerned.

Next month we will continue this rhetoric with specific concerns in medicine and what we can do to help.

Annette Shousha, President
South Dakota State Medical Association Auxiliary
The PHYSICIAN
REHABILITATION
PROGRAM of the South
Dakota State Medical
Association
608 West Ave., N.
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(605) 336-1965

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It Shouldn’t
Even Be a
Contest

You want what’s best for your patients—not
what’s cheapest. Yet today’s physicians are
wrestling with a troubling array of cost-contain-
ment initiatives: fee freezes, arbitrary caps on
Medicare reimbursement, even restrictions on
access to care. The stakes are high — life or death.
The AMA is in favor of cost-effectiveness, but
not at the expense of quality care — or physicians’
freedom to provide it. So we’re acting, not
reacting — by delivering cost-containment infor-
mation through publications, workshops and
annual meetings; by forming the Cost Effective-
ness Network and the National Commission on
the Cost of Medical Care; and by launching
projects like the Health Policy Agenda for the
American People. In Washington, D.C., and
in court, we’re fighting government-imposed
fee freezes and other attempts to limit health
care choices.

This is one fight you and your patients can’t
afford to lose. Give the profession the leverage it
needs to win. Join the AMA.

For information, call collect (312) 645-4783.
The American Medical Association
535 North Dearborn Chicago, Illinois 60610
The University of South Dakota School of Medicine announced that Dr. Thomas White, ophthalmologist in Sioux Falls and Assistant Clinical Professor of Ophthalmology at the University of S.D., has developed a new eye pump implant for treating severe cases of glaucoma which are resistant to other types of surgery or medication.

The report on the first six month to two year follow-up of ten patients will be given by Dr. White to the International Congress of Ophthalmology in Rome, Italy in May 1986.

Dr. White was granted a U.S. patent on the pump in November 1985 and European Common Market patents were granted in March 1986. It is marketed under the trademark Pumpshunt.

***


***

Dr. Roscoe Dean, Wessington Springs, an old friend of many Indian people, has compiled research on the historical roots of the Hunkpate Band of Indians for many years. He gave a lecture recently on "The Hunkpate: A Noble People" at the Fort Thompson Tribal Hall. Afterwards the Crow Creek Sioux Tribe honored him with a special cake and dance.

He also gave this lecture at the Eighteenth Annual Dakota History Conference held in Madison at the Dakota State College.

***

Judson Reaney, M.D., Yankton, recently presented a program in Yankton on the use of relaxation and mental imagery in modern medicine. Dr. Reaney has lectured nationally and internationally on the use of hypnosis and mental imagery in children and has written articles and a book chapter on the subject.

***

Dr. R. I. Porter, Yankton, has been recertified as a diplomate of the American Board of Family Practice by passing a recertification exam offered by the board.

***

Dong S. Cho, M.D., a board certified psychiatrist, has accepted the position of medical director of the Rehabilitation Center for McKennan Hospital, Sioux Falls. Dr. Cho is a native of Seoul, Korea and received his medical degree from the Yonsei University Medical School in Seoul.

He completed an internship in Seoul and in Evergreen, Ill. He completed a residency, obtained a Fellow, and was an instructor at the Northwestern University Hospital in Chicago. He was an associate medical director at the Roger C. Peace Institute of Rehabilitation Medicine in Greenville, S.C., and was Director Residency Training at Mount Sinai Hospital in Chicago.

***

Steven E. Krause, M.D., Yankton, has recently become board certified in dermatology by passing a two day comprehensive certifying exam conducted by the American Board of Dermatology. He is now a Diplomate of the Board.

(continue on next page)
The following physicians have recently completed education requirements to retain active membership in the American Academy of Family Physicians: Drs. Lambert W. Holland, Chamberlain; Curtis Wait, Brookings; Mark E. Belyea, Huron; Theodore A. Angelos, Canton; and Robert Bell, De-Smet.

* * * *

Dr. Paul Boom, Jr., recently began his radiology practice in Pierre. Dr. Boom was born in Iowa and came to South Dakota from Paducah, Kentucky. He received his B.S. degree from the University of South Dakota and his M.D. degree from Emory University School of Medicine, Atlanta, Georgia. He completed his internship and a radiology residency at St. Luke’s Hospital in Denver. He served two years in the Navy.

Dr. Boom and his wife, Linda, have two sons.

* * * *

One of the recipients of the Jefferson Award for outstanding public service is Dr. George J. Mangulis of Philip. He has been the only physician in Philip for 30 years. He also supervises medical clinics in Midland, Wall, Faith, Murdo and White River.

Dr. Arthur A. Lampert, Jr., of Madison has announced his retirement from medical practice. He has practiced in Madison for the past 15 years. The Lamperts have plans to move to the Black Hills area in the future.

* * * *

Dr. Helen Soule is moving to Lemmon from Elgin, N.D. Dr. Soule is board certified in internal medicine. She was raised in Portland, Maine. She received her M.D. degree from Tufts University, Boston, Mass. She completed an internal medicine internship and residency at Medical College of Virginia.

Dr. Soule and her husband, Russell, have two children.

Correction:
The correct spelling of one of the author’s name of the article “Multiple Personality,” which was published in the April, 1986 issue of this journal is Norma Haan, MSSA, CSW not Norman.
Thank you for your loyal support

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On nitrates, but angina still strikes...
After a nitrate, add ISOPTIN®
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To protect your patients, as well as their quality of life, add Isoptin instead of a beta blocker.

First, Isoptin not only reduces myocardial oxygen demand by reducing peripheral resistance, but also increases coronary perfusion by preventing coronary vasospasm and dilating coronary arteries — both normal and stenotic. These are antianginal actions that no beta blocker can provide.

Second, Isoptin spares patients the beta-blocker side effects that may compromise the quality of life.

With Isoptin, fatigue, bradycardia and mental depression are rare. Unlike beta blockers, Isoptin can safely be given to patients with asthma, COPD, diabetes or peripheral vascular disease. Serious adverse reactions with Isoptin are rare at recommended doses; the single most common side effect is constipation (6.3%).

Cardiovascular contraindications to the use of Isoptin are similar to those of beta blockers: severe left ventricular dysfunction, hypotension (systolic pressure <90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no artificial pacemaker is present) and second- or third-degree AV block.

So, the next time a nitrate is not enough, add Isoptin... for more comprehensive antianginal protection without side effects which may cramp an active life style.

ISOPTIN. Added antianginal protection without beta-blocker side effects.

Please see brief summary on following page.
Contraindications: Severe left ventricular dysfunction (see Warnings), hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker), 2nd- or 3rd-degree AV block. Warnings: ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction < 30% or moderate to severe symptoms of cardiac failure) and in patients with any degree of ventricular dysfunction if they are receiving a beta blocker. (See Precautions.) Patients with milder ventricular dysfunction should, if possible, be controlled with optimum doses of digitals and/or diuretics before ISOPTIN is used. (Note interactions with digoxin under Precautions.) ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild and controlled by decrease in ISOPTIN dose). Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment; however, four cases of hepatocellular injury by verapamil have been proven by rechallenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g., W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitals). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil’s effect on AV conduction and the SA node, 1° AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1° or progressive 2° or 3° AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (HHS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of severe adverse effects were seen in this group of patients including sinus bradycardia, 2° AV block, sinus arrest, pulmonary edema and/or severe hypertension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. Precautions: ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the QT interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitals toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use.

Adverse Reactions: Hypotension (2.3%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), eleavlations of liver enzymes have been reported. (See Warnings.) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: cholestasis, hepatitis, gynecomastia, psychotic symptoms, confusion, pancreatitis, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claustrophobia, hair loss, maculopapular rash. How Supplied: ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80°" or "ISOPTIN 120°" on one side and with "KNOLL" on the reverse side. Revised August, 1984. 2385

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2406
Grow Old Along With Me!

Roy C. Knowles, M.D.*

ABSTRACT
The following article is split into two parts. The first part was a presentation to the Seventh District Medical Society in 1959, when the author was a member of the Governor's Committee on Aging prior to attendance at the White House Conference on Aging. The second part is an attempt to update approximately a quarter century to 1985.

"The sixth age shifts into the lean and slippered pantaloon, with spectacles on nose and pouch on side, his youthful hose well saved, a world too wide for his shrunk shank; and his big manly voice, turning again toward childish treble, pipes and whistles in his sound. Last scene of all, that ends this strange eventful history is second childishness and mere oblivion, sans teeth, sans eyes, sans taste, sans everything." — As You Like It, Act Two, Scene Seven, William Shakespeare.

It has been said that any physician who would declare himself a specialist in geriatrics would starve. This is because it is difficult for anyone to accept that he is old. Thus most of the patients who are 65 and over would continue to go to the physician who treats the young and vigorous. Not only is the patient afflicted by his own desires for a more permanent hold on youth and life, but also the physician is so afflicted. It appears that because people are frightened of old age, particularly as a prospect for themselves, they ignore the problems of old age.

There is the additional problem in this country that the United States is still relatively young. Our whole history is based on the vigor, force and productiveness of youth. Our whole economy is based on the concept that only the young and strong can produce enough to justify their existence. Because it has been accepted that only the youth should be in the driver’s seat, the aged in this country have been fairly easily pushed aside.

Societies and civilizations past and present have accepted the problem of the senile in a variety of ways. We all know the veneration of the elderly by the Chinese. We also know the dangers which are attached to veneration and adherence to those things which are old to the exclusion of those things which are new. At the other pole of attitude toward the elderly is that of the eskimo who expects his old folks to go for a long walk in a snow storm and become lost; or the Hottentot who builds a small hut for his elderly parent, places therein a small quantity of food and then moves on. In the United States we merely ignore the old people.

While we are ignoring old folks medical science continues its battle against death and continues to prolong life so that the absolute number, as well as the relative number, of elderly people increases steadily. More and more we find it necessary to work hard at the job of ignoring the problem of the aged. The aged are becoming so numerous and of such an economic burden that it is very difficult to continue to ignore. Then too, our Judao-Christian tradition causes us to feel guilty as much for acts committed as for acts omitted. Thus we find ourselves in the position of being forced to recognize there is a problem and forced to try to do something about it.

Just how much of a problem is that of the growing aged population? Fortunately for this study, South
Dakota is almost exactly representative of the average American population so far as age is concerned. In 1950 the percentage of people older than 65 in the whole United States was 8.4. In South Dakota the figure was 8.5. Using these figures one quickly comes to recognize that in South Dakota there are approximately 54,000 men and women of 65 and over. According to statistics from the United States Bureau of Vital Statistics these figures should change from 54,000 in the state to 64,000; by 1960. Thus we are forced by sheer numbers alone to admit that the aged population presents to us a problem.

How can we best define this problem? For our purposes let us restrict our defining boundaries to the philosophical, economic and medical ones. Let us at the same time add yet a different kind of definition, that of old age itself. For purposes of this paper, as is usually accepted in medical papers, old age is defined as beginning at age 65. We would also distinguish between old age and senility. For our purposes, senility has the additional characteristic that the mental processes of the individual have obviously deteriorated to a degree which renders him less capable of functioning than is normal.

Our social conscience forces those of us who are yet young to recognize an obligation to a large segment of our population who are forced to suffer because of our attitudes toward age. We cannot continue to ignore the problem of the aged and thus we must develop some kind of social philosophy concerning them. There appear to be three roads for us to take. The lowest road is that of exterminating the aged. A road which is not much higher than the first is that of relegating the aged to a life of slow disintegration in years of uselessness and degradation. The third and highest road appears to be that of providing the aged with that which is justly their own. They should be honored for that which they have been able to produce. They should be given the opportunity to offer their society the benefits of their long years of experience. They should be given the opportunity of rehabilitation to a point of ultimate usefulness if infirmities have come with their age. And when infirmities do completely overtake them, they should be granted the right to a dignified existence and a right to a graceful preparation for death. We who are young owe these things not only to those who are already old, but we owe them also to ourselves when it is our time to become old.

Economically, we find an ever-growing problem concerning the aged. Considering the fact that the young and healthy and vigorous must already support by their labors the very young and unproductive. Considering that they too must help support many other peoples than those of the United States, one can quickly recognize what the burden of having one-tenth of the population beyond working age can mean. It must prove expensive to South Dakota to have one-twelfth to one-tenth of the population nonproductive. It must prove expensive to South Dakota to support 54,000 to 65,000 elderly nonproductive people. It is probably true psychologically that we can train people to accept that with old age they will sit back and live out their years on pensions.

Our social conscience forces those of us who are yet young to recognize an obligation to a large segment of our population who are forced to suffer because of our attitudes toward age.

Our present population has not yet fully accepted this as the ultimate goal of their lives. But suppose they should. We can add to this discussion of definitions yet another boundary, that of the political one. Imagine the political strength of one-tenth of the total population if they were to vote for ever-increasing old age benefits. Imagine the political potential of an even larger portion of the electorate if we were to so train our people as to expect old age benefits. Many who are now in their sixties could be expected to join with the group already 65 and vote themselves into a state of terminal luxury. Suppose we merely accept there will be a continuation of the old American approach to life that a man should earn his own salt. Suppose we accept therefore that elderly people will not attempt to vote themselves into grander and grander Townsend Plans. This still leaves us with the overwhelming job of providing economically for a group of people equal to one-tenth of the population.

We find that we have the possibility of a whole new industry, that of the care of the aged. Is it possible for business to consider using the knowledge and skill of the aged to run this business of caring for the aged? Thus the infirm and incapacitated among the aged could be cared for by those who are not infirm or incapacitated. This of course would not take up the whole slack but would provide at least one source of continued occupation for the elderly person. Beyond this we must consider more and more education to the populace as a whole to help them see the futility and foolishness of relegating the aged to an unproductive seat simply because they have reached the age of 65. It is well known that people do not age equally chronologically. It is also well known that mental capacities of many people do not diminish in proportion to age. Thus the working person may be as acute and keen at 70 as he was at 50. His skill and experience added to his keenness should logically force us to accept his continuation as a worker.
The medical aspects of this problem of the aged are complex but they are not impossibly complex. Starting from the acute general hospital let us attempt to put together what might be an ideal chain of facilities for caring for the aged.

In the aged population as well as in the youthful there are acute medical problems. These should of course be taken care of in the acute care hospital with all of it's medical and laboratory facilities. The acute problems in the aged need not necessarily take more time nor more hospital bed space than similar problems among the youthful. In our particular civilization age appears to be synonomous with ever increasing percentages of chronic illness; this kind of complementation of chronic illness and old age may be but an artifact. Few pathologists have ever described an autopsy in which a person has died simply of old age. It is to be assumed that people can die of old age but so far there is some intercurrent infection or accident which causes the demise.

Some people working in this field estimate that man may someday live to be 110, 120 or even 150. (The intriguing idea is that some day it may be possible for people to "merely fade away" instead of die of some disease.) Whether the parenthetical statement has any merit or not does not change the present fact that chronic disease is more prevalent among the aged. It is therefore imperative that acute hospitals have connected with them and under their supervision a ward, wards or a separate hospital building for the chronic. The economic feasibility of this plan has been proven by several hospitals, notably Montefiore and the Springfield Massachusetts General.

They should be given the opportunity to offer their society the benefits of their long years of experience.

Such a plan permits the use of the acute beds for acute problems. The chronic patients, both old and young, can be taken care of in the near vicinity of a hospital thus having available to them all of the medical care necessary. Nursing services and other attendant services can be more inexpensively provided than if the chronic patient is crowded among the acute beds in the hospital. With the chronic patients thus housed together it is possible for social work, occupational therapy and physiotherapy as well as recreation therapy to be provided to the chronic patient in economical doses leading ultimately to rehabilitation in an acceptable percentage of cases.

According to governmental statistics it is suggested that general hospital acute beds be provided for in a community in a ratio of four beds per thousand population. This would allow for approximately 280 acute beds in Sioux Falls for Minnehaha County. Chronic beds are to be provided at the rate of two per one thousand population. This would equal approximately 140 chronic beds for Minnehaha County. The total of these two makes it imperative that Sioux Falls have it's present population, not allowing for increased population, a total of 420 beds. If it is estimated that Sioux Falls draws from a population surrounding Minnehaha County sufficient to make a total drawing population of 100,000 the total required beds for this area would be 600. This does not allow for future population increases.

We find that we have the possibility of a whole new industry, that of the care of the aged.

Beyond the chronic unit or ward there are still other services which still remain under the care of the hospital in the ideal situation. Slowly hospitals are taking upon themselves the task of providing home care for patients not needing hospital beds. This home care can be provided in the home of the patient, in a foster home or in a nursing home. The hospitals count these beds as part of their total patient population. They provide coverage to these patients through the Social Service Department of the hospital. The most important and most successful example of this kind of service to people is that of Montefiore.

The next step in provision of care for the aged is that of caring for the senile or otherwise demented elderly person. This care is best provided in a psychiatric hospital on a state level. In my opinion, for a state the size of South Dakota one such hospital is sufficient. There is no need for other such facilities and the additional expense of running more than one facility is difficult to defend. In certain larger states the provision of more than one facility is defensible for either of two reasons. One reason is that the total population of the state makes it impossible for one such institution to provide care for all such patients without becoming unwieldy in size. The other defensible reason is that small units for the care of psychotic elderly patients may be provided in a general psychiatric facility attached to a general hospital used for teaching and training purposes, that is, so to speak, connected with a medical school or large training hospital. There is no excuse for this state or any other state to continue the many times proven fallacy of splitting state institutions into small portions and scattering them here and there among the state communities for political reasons.

Human beings are not cattle, pigs or corn. Their
misfortunes and ill health are not political footballs to be passed from geographical position to geographical position in order to gain some political advantage. The care of the aged and senile and the sick is truly an economic problem but it is first and foremost a humanitarian problem which calls for our very best efforts in finding an answer. A rural state of small population like South Dakota must face certain of it’s problems with humility and wisdom. The wisdom must show itself economically. It must also show itself in the choice of staff and other personnel entrusted with the care of the sick, the aged and the handicapped. The humility must show itself in the simple recognition that professional staff can be obtained to work only in a community of large enough size to be culturally and educationally stimulating. It is therefore imperative that South Dakota not spread the care of it’s senile all over the state.

These elderly people are permitted to live in insecurity surrounded by hostility. They themselves are hostile because they feel they have been shelved when they could continue to be useful. The young people upon whom they must live as parasites feel hostile toward them because of their constant sapping of the family economic and emotional strength. These elderly people become moody, depressed, irritable and unbending. Unfortunately this accumulation of personality and behavior traits has come to be considered synonomous with old age. Many psychologist and psychiatrists feel that the ugly picture of old age thus painted is far from true. The elderly who are able to live in an environment which wants them and in which they can feel useful are not inflexible, irritable, depressed and cantankerous.

The care of the aged and senile and the sick is truly an economic problem but it is first and foremost a humanitarian problem which calls for our very best efforts in finding an answer.

I am sure that all among you know among your acquaintences elderly people who have grown old very gracefully indeed. These people are among those who have continued to find themselves useful in the world and not a burden to themselves or to other people. Thus in a rather negative way we have pointed out a philosophical approach to the work of handling the elderly. The job ahead of us is to provide them with an environment in which they are wanted, in which they can continue to grow and produce, in which they can be economically secure and an environment in which they can develop and be developed for a fuller life and a more graceful preparation for death.

By the extension of the social service department of one of the existing agencies in this community a certain percentage of these patients can be helped to a more mature and fruitful life in their own homes or in foster homes or in the present nursing homes. However, particularly in the latter situation the economic reason for which most nursing homes are started would probably work a handicap on any kind of social activity or social work activity which might add additional expense to the maintenance and care of the patient. Instead of or in addition to the foregoing suggestion, it is suggested that there be provided in Sioux Falls a small colony or home for the aged. This would be a colony from 35 to 150 or more persons run as no nursing home facility or old age home is run in the state.

The job ahead of us is to provide them with an environment in which they are wanted, in which they can continue to grow and produce, in which they can be economically secure and an environment in which they can develop.

At the present time nursing homes and homes for the aged are run as custodial institutions only. The private nursing homes have as their chief reason for existence the provision of an income for the person or agency running the home. The parochial homes for the aged do have the very important additional facility of a religious environment. The little colony proposed herein according as monies are available for staff would provide rehabilitation and training, employment, opportunities for religious living and recreation. The administration of such a colony would undertake through education of the surrounding community to provide economic opportunities for the persons dwelling in the colony.

There are very few such nursing homes or villages or facilities in the United States. This presenter knows of one such personally. Such colonies are economically justified in the same way that schools for the blind and the deaf and the physically handicapped are justified. Any person who can be rehabilitated to partially or completely support himself economically is less of a drain on the community financially. It costs little to rehabilitate as compared with the cost of custodial care.

This colony which has been thus suggested would be intimately connected with the local general hospital set up as described above. For example it is suggested that, when possible, McKennan or Sioux Valley hospital provide a psychiatric unit of at least 20 beds, preferably 30 with 20 closed ward beds. The same hospital should, if possible, provide a unit for chronic patients. The overall environmental management of the chronic section and psychiatric
section could be run by the same personnel. Thus it would be possible to utilize occupational therapists, physical therapists, recreation therapists, music therapists, nurses, attendants and rehabilitation personnel in both units as well as in home care units. The colony for the aged could make use of this same hospital facility because it is easily recognized that, from time to time, an aging person may become confused but not sufficiently deranged mentally to necessitate institutional care. A short period of treatment in the psychiatric unit, with perhaps a later transfer to the chronic unit, would make it possible for him then to be returned to the colony to continue the process toward rehabilitation and independence.

Tied together thus it is easy to see why this topic is of paramount importance to the medical profession. First of all the problem of the aged and the senile is a medical humanitarian problem. It is also an economic and political problem which bears sharply on each of us, both as we are approaching old age and as we enter it. Because of the medical aspects of this problem, it is to be preferred that the medical profession be one of the leaders in providing the necessary care of the aged and senile. This should not be entirely a function of lay people. The medical profession, if it does not actively take part in the formulating of plans for this portion of the population, must at least offer itself as authoritative consultative resource. It is further suggested that, if this medical society accept the foregoing, it give permission to have this thinking passed on to the state research council as a studied and important suggestion to be considered in the presently ongoing survey. (I can warn you at the present time that the direction of the survey is toward providing, for the aged of this state, facilities which will, from the day of their opening, be twenty years behind time; facilities which will make it possible for us to do as we can at some state facilities — look at the buildings, say “What beautiful buildings and grounds,” and then shamefacedly turn away because we dare not look at inside of those buildings. We dare not accept as our own the inhumanity expressed by the custodial attitude.

And now a quick leap to 1985.

How do I know my youth is all spent?
Well, my get up and go has got up and went.
But in spite of it all, I’m able to grin
When I think of the places my get up has been.

Anonymous

January 1985, the percentage of people age 65 and over has increased significantly. In 1950, it was reported that people 65 years and older in South Dakota represented 8.5% of the population or around 54,000. By 1960, it was reported at approximately 11% of the population for a total of 71,000. In 1980, it was reported at 13% of the population or 91,000.

Of interest, and perhaps even greater interest, is that the numbers of people 85 and over in South Dakota has been reported at 10,427 with twice as many females as males.

Of some importance to South Dakota physicians is the apparent fact that Minnehaha County fits exactly into the pattern of the total United States. In 1960, nine percent of the population were 65 years of age and older in the United States and also in Minnehaha County. In 1980, the percentage of people age 65 and older in the United States was 11% and in Minnehaha County it was also 11%. The percentages are two points higher in the whole state of South Dakota, which means that in the more rural or smaller areas, the population of the elderly is higher. Of interest, and perhaps an even greater interest, is that the numbers of people 85 and over in South Dakota has been reported at 10,427 with twice as many females as males.

Suffice it to say that a physician must join with others to find a solution or solutions to a problem which is a problem to our total country, not just to physicians.

What changes have come about in the last 25 years? We as a nation are very much more aware of the increasing numbers of elderly. The struggles over Social Security, whether it should be put on hold or increased or decreased, have intensified our concerns about political, economic and social answers which must be found. The fact of a very much smaller portion of the population working and contributing to Social Security — contributing to the support of the present group of elderly rather than contributing to their own security as they ultimately reach 65; the recognition of a baby boom which ultimately will of course bring about still other problems and require other solutions — all of these now obfuscate the possible best prescription for our present group of elderly people.

Can we return some of the elderly to productive economic life? Does the level of unemployment make that a solution which cannot be considered? There is much to be considered and many solutions to be sought.
When we consider the medical profession and its role, what can we see happening? There is of course a developing interest in geriatrics as a specialty. Some of the nursing homes are developing extension of their programs to allow for services and living arrangements which permit their clients much more autonomy and much more participation in the community activities. The concept of the use of the State Hospital as proposed by this author earlier is moribund. Physicians are attempting to conceptualize and put into operation multi-level programs in cooperation with hospitals, nursing homes, and other service and volunteer agencies so that the elderly can be served or should I say so that the elderly can be given the opportunity to function autonomously and productively to the best of their ability. At one extreme of this multi level concept, will be acute care and chronic care hospital, and at the other end services for the senile, the psychotic, the weak, the lame, the diseased.

We are not at a point of final decision, final planning, or even final conceptualization of what is best. Suffice it to say that a physician must join with others to find a solution or solutions to a problem which is a problem to our total country, not just to physicians.

"No man is an island, entire of itself; every man is a piece of the continent, a part of the main; if a clod be washed away by the sea, Europe is the less, as well as if a promontory were, as well as if a manor of thy friends or of thine own were; any man's death diminishes me, because I am involved in mankind; therefore never send to know for whom the bell tolls; it tolls for thee." - poem by John Donne

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AMA Physicians’ Recognition Award Recipients

Congratulations to the members of the South Dakota State Medical Association who have earned the AMA Physicians’ Recognition Award in the first three months of 1986.

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Raymond G. Nemer
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Dennis D. Knutson
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Future Meetings

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Calcium Antagonist and Arrhythmias, Marriott Hotel, Omaha, NE, June 28. Contact: Maureen McGinley, Div. of CME, Creighton Univ., California at 24th St., Omaha, NE 68178. Phone: 800-228-7212, ext. 2550.

July


August

Medical Malpractice, Yankton Inn, Yankton, SD, Aug. 15. Fee: $35. Contact: South Dakota Nurses Assoc., 1505 S. Minnesota Ave., Sioux Falls, SD 57105. Phone: 605-338-1401.


Family Medicine Update, The Lodge, Okoboji, IA, Aug. 29-30. 10 hrs. AMA Category I credit. Contact: Maureen McGinley, Div. of CME, Creighton Univ., California at 24th St., Omaha, NE 68178. Phone: 800-228-7212, ext. 2550.

September

Fine Needle Aspiration Biopsy, Holiday Inn Central, Omaha, NE, Sept. 6. Fee: $75.00. 3 hrs. AMA Category I credit. Contact: Maureen McGinley, Div. of CME, Creighton Univ., California at 24th St., Omaha, NE 68178. Phone: 800-228-7212, ext. 2550.


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Antihypertensive therapy that does not increase cholesterol

Antihypertensive therapy
that does not increase cholesterol

Brief Summary
Before prescribing, consult the complete package insert. This indication and dosage are for treatment of hypertension, alone or in combination with a diuretic diuretic.

Contraindications: Known sensitivity to the drug.

Precautions: 1. Solution: Causes sedation or drowsiness in large volume of patients. When used with centrally active depressants, e.g., phenothiazines, barbiturates and benzodiazepines, consider potential for additive sedative effects. 2. Patients with visual impairment—like other antihypertensive agents, it is also frequently prescribed in severe coronary insufficiency, recent myocardial infarction, cerebral vascular disease, or severe hepatic or renal failure. 3. Serum: Sudden cessation of therapy with central alpha agonists like Wytensin® may rarely result in "overshoot" hypertension and more commonly produces increase in serum cholesterol and subjective symptoms.

Information for Patients: Advise patients on Wytensin® to exercise caution when operating dangerous machinery or motor vehicles until it is determined that they will not become drowsy or drowsy. Warn patients that intolerance for alcohol and other CNS depressants may be increased. Advise patients not to discontinue therapy abruptly.

Laboratory Tests: In clinical trials, no clinically significant laboratory abnormalities were identified during acute or chronic therapy. Tests included CBC, urinalysis, electrolytes, AST, ALT, alkaline phosphatase, and alkaline phosphatase. Decreased liver enzymes was observed, but no clinical evidence of hepatic disease.

Drug Interactions: Wytensin® was not demonstrated to cause drug interactions when given with other drugs, e.g., digitalis, diuretics, antihypertensives, anticoagulants, antiinflammatory agents, or oral contraceptives. However, potential for increased sedation when given concurrently with CNS depressants should be noted.

Drug/Lab Test Interactions: No lab test abnormalities were identified with Wytensin use.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of carcinogenic potential or teratogenicity was seen in a two-year study with Wytensin® up to 5 mg/kg/day. In the test for carcinogenicity mutagenicity (Ames) test system, Wytensin® at 200-500 mg/kg per day or at 30-50 mg/kg in suspension was given resulted in an increase in number of revertants in one (T. 1537) of the Salmonella mutagens used with or without inclusion of rat liver microsomes. No mutagenic activity was seen at doses up to those which inhibited growth in the rat liver microsomes, N-(2-nitro-4-triazolyl)-N,N,N-trimethylcarbamoyl, or in Chinese hamster ovary cells at doses up to those lethal to the cells in culture. In studies of teratogenicity, Salmo salar ovum vivum analyzed, Wytensin produced no activity in an assay measuring induction of reparative DNA damage. Reproductive studies showed a decreased pregnancy rate at mating 50 mg/kg and above but not at 10 mg/kg. Sperm abnormalities of fertility of treated males (36 mg/kg) may have been affected, as suggested by decreased pregnancy rate of mates, even though females received drug only during last third of pregnancy.

Fertility: Pregnancy Category C. WYTENSIN® MAY HAVE ADVERSE EFFECTS ON FETUS WHEN ADMINISTERED TO PREGNANT WOMEN. A teratogenic study in mice indicated possible increase in minor abnormalities when Wytensin was given orally at doses 3 or 6 times maximum recommended human dose of 1.8 mg/kg. These abnormalities, principally cleft palate and ventral, were not noted in similar studies in rats and rabbits. However, increased fetal loss has been observed after Wytensin given to pregnant rabbits (3 mg/kg) and rodents (20 mg/kg). Reproductive studies in mice have shown slight decrease in birth defects, decreased litter survival rate, and decreased pup body weight and size of dose at 4.8 and 9.6 mg/kg. There are no adequate, well-controlled studies in pregnant women. Women should be advised against pregnancy only if potential benefit justifies potential risk to fetus.

Nursing Mothers: Because no information is available on Wytensin excretion in human milk, it is not cleared for nursing mothers.

Pediatric Use: Safety and effectiveness in children less than 12 years of age have not been demonstrated. Use in this age group cannot be recommended.

Adverse Reactions: Incidence of adverse effects was accelerated from controlled clinical studies in U.S. and based on data from 879 patients on Wytensin for up to 3 years. There is some evidence that effects are dose related. Following table shows incidence of adverse effects in at least 1% of patients in studies comparing Wytensin to placebo, starting dose of 8 mg bid.

<table>
<thead>
<tr>
<th>Adverse Effect</th>
<th>Wytensin (%)</th>
<th>Placebo (%)</th>
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</thead>
<tbody>
<tr>
<td>Dry mouth</td>
<td>28</td>
<td>26</td>
</tr>
<tr>
<td>Dizziness</td>
<td>39</td>
<td>23</td>
</tr>
<tr>
<td>Weakness</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Headache</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

In clinical trials, 8% of patients, incidence of dry mouth was slightly higher (19%) and dizziness was slightly lower (12%) but incidence of drug related adverse effects was similar to placebo-controlled trials. Although these adverse effects were noted, their occurrence in decompensation of treatment about 15% of the time. The most frequent incidence using an initial dose of 8 mg for 25 patients. Incidence of dry mouth or dizziness was lower, about 20%. Other adverse effects reported during clinical trials was not clearly distinguishable from placebo effects occurring with frequency of 5% or less. Cardiovascular—dizziness, faintness, chest pain, palpitations, tachycardia, tremor, blurring of vision, vasodilatation, hypertension, hypotension, syncope. Gastrointestinal—nausea, vomiting, diarrhea, constipation, abdominal discomfort, Cerebral—headache, dizziness, confusion, faintness, drowsiness, euphoria, depression, drowsiness. CNS—hyperactivity, difficulties of concentration, depression, irritability, mental clouding, somnolence. Ophthalmic—injection, eye irritation, dry eyes. Other—increased desire for food, tremors, edema.

Drug Abuse and Dependence: No dependence or abuse has been reported.

Overdose: Acute ingestion caused by parenteral, subcutaneous, intramuscular, intranasal, intravenous, oral, rectal, or transdermal routes of administration. Ineffective clearance of the drug is being eliminated until patient is no longer symptomatic. Vital signs and fluid balance should be carefully monitored. adequate urine should be maintained, if indicated, assisted respiratory maintained. No data are available on Wytensin drug interaction.

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Infectious Diarrhea: An Update

Anthony G. Salem, MD*

ABSTRACT

Infectious diarrheal syndromes have diverse etiologies and are frequently self-limiting. An identifiable agent can be demonstrated in 60% to 80% of patients but the treatment is often with oral rehydration fluids only. A rational approach to the work-up and management of diarrheal syndromes is presented. Future research in the area of diarrheal diseases is discussed.

INTRODUCTION:

Infectious diarrheal syndromes may be acute or chronic and are some of the most common problems encountered by primary care physicians. In the U.S., they cause significant morbidity in children, but rarely cause death in any patient. In Third World countries, acute diarrheal syndromes cause significant morbidity and mortality, particularly in children. Accurate statistics are not available for diarrheal diseases and those that are, tend to focus on outbreaks rather than on individual cases. It is of interest that the CDC does not publish diarrheal statistics in its Morbidity and Morality Weekly Report.

Infectious diarrhea is caused by a heterogeneous group of infectious agents including viruses, bacteria, fungi, protozoa, and helminths (Table I).

With specialized diagnostic techniques, we can now identify the etiologic agent in about 60% to 80% of patients, but the diagnostic yield in the standard clinical laboratory is considerably lower. Stool cultures are considered to be one of the most costly and ineffective microbiologic test that we use. A positive stool culture is estimated to cost between $900 and $1200 each. Due to the urgency of the situation, we must often treat first and diagnose later. This is self-defeating since acute diarrheal syndromes are often over before an etiologic diagnosis can be made. Also, appropriate therapy is frequently symptomatic regardless of the etiology of the diarrhea.

Despite the above admonitions, we should attempt to establish the etiologic agent in infectious diarrhea in the following circumstances:

1. Severity of the illness. A dehydrated, febrile patient with abdominal pain and bloody diarrhea is in need of a work-up whereas a well hydrated patient with a couple of loose stools is not.

2. Chronicity of the illness. This is also a judgment call. The physician must decide when a minor acute infectious diarrhea becomes a chronic, troublesome diarrhea worthy of investigation. Some authorities suggest that, unless otherwise indicated, most episodes of diarrhea should not be investigated during the first 48 to 72 hours.

3. Risk factors. Patients with certain "risk factors" such as fever, blood in the stool, significant abdominal pain, weight loss, male homosexuality etc., will usually warrant an early work-up of their diarrhea.

4. Index case findings. In the event of an outbreak of diarrhea, we need to know the etiology of the disease in the index cases so that we can treat subsequent cases without an extensive work-up. This is often the situation in day care centers, mental institutions, and other "common source" outbreaks.

5. Research studies. Formal research studies are usually worthwhile but informal studies are often ill-conceived, fragmented, and should be avoided.

6. Epidemiologic Studies. Epidemiologic studies are usually carried out by public health agencies and are an important way to increase knowledge about infectious diarrheal agents.

7. Teaching purposes. If a work-up is done for teaching purposes, the procedures or tests should be safe, simple, inexpensive, and should have definite teaching value.

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DEFINITION OF DIARRHEA

Although there are various definitions, diarrhea should be defined in terms of what is abnormal for the individual. For example, normal bowel function may consist of three stools per day for one person, but only two per week for another person. In this context, diarrhea is defined as an "increase in the frequency, the water content, or the volume of stools for an individual."^4

Dysentery is a specific type of diarrhea and refers to the frequent passage of bloody, mucoid stools, and has come to be synonymous with shigellosis.

PATHOPHYSIOLOGY OF DIARRHEA

The pathophysiology of infectious diarrhea may be divided in two basic categories — secretory and inflammatory. Inflammatory diarrhea can be further subdivided in three subtypes — cytotoxic, invasive and penetrating. It should be pointed out that the designation of secretory and inflammatory is some-what arbitrary and some organisms fall in both categories and some fall in neither (Figure 1).^4, 6, 7

Secretory diarrhea causes movement of fluid into the gut lumen without disrupting or injuring the intestinal mucosa. The outward movement of fluid is usually in the proximal small bowel with little or any loss of fluid from the colon mucosa. The resultant clinical syndrome is watery diarrhea without fecal leukocytes. The prototype organisms are vibrios and enteropathogenic E. coli (EPEC).^6, 7

V. cholerae colonizes and eventually adheres to the lumen of the small bowel but does not invade or damage the mucosa. The organism produces an enterotoxin which is composed of two moieties, a binding (B) moiety and an activating (A) moiety. The A moiety is actually divided into an A-1 and an A-2 subunit. The A-2 subunit probably serves to bind the A moiety to the B (binding) moiety and the A-1 subunit is the active part of the A moiety.

The B subunit of the enterotoxin binds to a GM-1 monosialoganglioside molecule (GM-1 ganglioside) in the wall of the small intestine. The binding occurs rapidly and is irreversible within minutes. There are about one million potential binding sites in the gut lumen, but occupation of only 5,000 binding sites are required for maximum effect. Once the toxin is bound to the GM-1 ganglioside, the A-1 moiety subunit migrates through the epithelial cell and stimulates adenylate cyclase (cyclic AMP) by catalysing NAD (nicotinamide adenine dinucleotide) to GTP (guanosine triphosphate).

The increase in adenylate cyclase causes increased sodium-dependent chloride secretion into the lumen and a decrease in sodium and chloride absorption across the brush border. The effect is that sodium chloride is secreted by crypt cells and not absorbed by villous cells and there is a net movement of fluid into the gut lumen.7

In adults, the resultant diarrhea is virtually isotonie with plasma and the volume may reach one liter per hour. The osmolality of the stool is almost entirely measured electrolyte. In small children, the measured osmolality consists of electrolyte and organic acid.

The pathogenesis of inflammatory diarrhea is not as well understood as that of secretory diarrhea and it is probably multifactorial in origin. It is related to such things as increased secretion from the bowel wall, altered intestinal motility, and disruption of the mucosal wall leading to a decrease in disaccharidase. Loss of disaccharidase leads to malabsorption and diarrhea. Other possible mechanisms include penetration of the bowel without destruction of mucosa and cytotoxic enterotoxins both of which somehow facilitate the production of diarrhea.

Many inflammatory diarrhea organisms also pro-
DIARRHEA DIAGNOSIS

It is impractical to work up all patients with acute diarrhea and, in fact, most people do not seek medical attention for sporadic, short-lived episodes of diarrhea. For those patients who do seek medical attention, we frequently treat symptomatically with oral rehydration solutions, but there are clues from the history and physical which may suggest a specific etiology. I would like to present an overview of the tests available and then offer a brief, practical approach to the individual patient.

History:
Fever, bloody diarrhea, and tenesmus suggest a bacterial etiology; abdominal pain suggests Y. enterocolitica; travel outside the United States suggests traveler’s diarrhea; seafood ingestion suggests Vibrios; antibiotic usage suggests pseudomembranous colitis; outbreaks suggests a bacterial etiology;

and male homosexuality suggests various etiologies as listed in Table II.

Physical Examination:
The physical examination is less helpful than the history, but one can assess the degree of dehydration which is particularly important in children or severely ill adults. Abdominal tenderness may suggest an intraabdominal event such as appendicitis, ischemic colitis, perforated viscus, etc. Y. enterocolitica can mimic appendicitis, mesenteric adenitis or an inflammatory enteritis.

Once the basic history and physical have been performed, one must decide whether to treat with oral rehydration solutions alone or to investigate further. Based upon clinical impression, one should be selective in choosing which laboratory studies to do. A routine CBC, electrolytes, BUN and creatinine is often done but are not necessarily indicated.

Stool Specimen:
The first laboratory test should be an examination of a fresh stool specimen looking for gross appearance, mucus, and blood. This should be followed by a gram stain and either a wet saline preparation or a methylene blue stain.

Gram Stain:
A gram stain may reveal S. aureus, Campylobacter or Candida. It may also show fecal leukocytes, but this is not so reliable as a wet saline or methylene blue preparation.

Wet Saline or Methylene Blue Preparation for Fecal Leukocytes:
Fecal leukocytes have probably been overrated as a diagnostic tool but the presence of fecal leukocytes suggests an inflammatory diarrhea such as Salmonella, Shigella, or Campylobacter. Unfortu-
nately, it is not particularly sensitive or specific for these organisms and may be seen with other organisms including viral diarrheas (rotavirus). To look for fecal leukocytes, place a small fleck of mucus or stool (which, if obtained from formed stool, should be taken from the outside rather than the center of the specimen) on a glass slide. Mix the stool with a saline solution or Loeffler’s methylene blue stain. Place a cover slip on the slide and if methylene blue is used, allow it to set for 2-3 minutes so that good nuclear staining can occur. The slide should then be reviewed microscopically. If fecal leukocytes are seen, obtain cultures for Salmonella, Shigella, and Campylobacter.8

Culture of Stools:

Traditionally, stool cultures were done for Salmonella and Shigella only, but recent data suggest a need to culture for Campylobacter and perhaps A. hydrophilia and Y. enterocolitica. In the Gulf Coast states, we should also culture for Vibrios. Viral cultures are not recommended.

Rectal Swabs:

Rectal swabs usually do not provide enough stool for examination but are used in children as a matter of convenience. Rectal swabs may be negative for fecal leukocytes even though the stool specimen from the same patient is positive. Rectal swabs may be worthwhile for patients with the “gay bowel” syndrome and may be positive for C. trachomatis, herpes simplex, T. pallidum or N. gonorrhoeae, particularly if samples are obtained from mucosal lesions.

Stool for Ova and Parasites:

Stool for ova and parasites should be delivered fresh to the laboratory. If this is not possible, then the specimen should be placed in polyvinyl alcohol (PVA) or other fixative solution and delivered to the laboratory as soon as possible. When PVA is used, the quantity of the stool should be less than the quantity of the PVA solution.

Microscopic techniques include: 1. Eosin-saline preparation; 2. wet saline preparation; 3. iodine preparation; 4. formalin-ethyl acetate (Ritchie) concentration technique; 5. trichome staining; 6. iron-hematoxilin staining; 7. zinc sulfate centrifugal flotation technique; 8. acid-ether centrifugal sedimentation technique; 9. Baermann funnel gauze test (strongyloides); 10. auramine/acid fast study; 11. sucrose flotation test; and 12. carbol fucin test. The last three are particularly useful for Cryptosporidium. It might be wise to contact the parasitology lab if you have a special request or if you are looking for unusual organisms.

Duodenal Aspirate:

This is usually reserved for evaluation of persistent diarrhea and may be helpful in diagnosing G. lamblia, S. stercoralis and Cryptosporidium. Duodenal fluid may be obtained through fluoroscopic directed NG tubes, upper GI endoscopy, or by the “string test,” a commercially available test which consist of a nylon string attached to a small weighted rubber bag inside a gelatin capsule. The free end of the string protrudes from the capsule and can be held while the capsule is swallowed. Once in the stomach, the gelatin capsule dissolves and releases the rubber bag which migrates into the duodenum and jejunum. The rubber bag detaches from the string and passes in the stool. The string can then be withdrawn through the mouth and the bile-stained mucus can be scraped from the string and examined for G. lamblia.

Electron Microscopy of the Stool:

This is reserved for the diagnosis of rotavirus and other less common viral infections. Clinically it can be used for rapid identification of viral diarrhea in hospitalized patients with subsequent cohorting to reduce the spread of the disease within the hospital.

Immune Electron Microscopy (IEM):

This is a research method to detect Norwalk-like viruses and rotaviruses. The patient’s serum is mixed with known viruses and, if the appropriate antibodies are present in the serum, they will aggregate the viruses. The viruses can then be tagged with fluorescent antibodies and can be seen by electron microscopy.

Serologic Techniques:

Various serologic techniques have been developed, but are not routinely used clinically with the exception of several serologic test for E. histolytica. These tests are mainly used as an adjunct in the diagnosis of extra intestinal amebiasis.

Rapid Diagnostic Techniques:

Numerous rapid diagnostic techniques are under investigation but only two, ELISA and latex agglutination for rotavirus, are commercially available for routine use in the clinical laboratory. Both tests detect antigen in the stool.

Cytopathic Changes on Cell Culture:

This is especially useful to detect C. difficile toxin in patients with antibiotic-associated colitis.

Blood Cultures:

Blood cultures should be obtained from patients who are acutely ill and in whom the physician sus-
pects bacteremia. It is particularly important to obtain blood cultures from a febrile immunocompromised host with diarrhea.

Upper GI with Small Bowel Follow Through:

Radiographic studies of the stomach and small bowel are usually employed in the evaluation of chronic diarrhea, and are probably more helpful in the evaluation of patients with noninfectious diarrhea. Small bowel radiographs may have nondiagnostic abnormalities in intestinal amebiasis, tuberculosis, and S. stercoralis infections.  

Procto/Colonoscopy:

Proctoscopic examination is frequently used for the evaluation of diarrheal syndromes and may be employed to gather stool specimens when an infection is suspected. It is often abnormal in infectious diarrheal syndromes but is usually nonspecific and nondiagnostic. Antibiotic-associated colitis is quite characteristic and consist of pseudomembranes on an erythematous base. Ulcerative colitis and Crohn’s disease may be confused with proctoscopic findings caused by Shigella, E. histolytica, C. jejuni, Y. enterocolitica, and infectious proctocolitis seen in homosexual men. Colonoscopy is similar to proctoscopy but is usually reserved for evaluation of patients with chronic diarrhea or an unusual clinical course thought to be secondary to infectious diarrhea.

Barium Enema:

This is most helpful in the evaluation of noninfectious diarrheal diseases but may reveal nondiagnostic abnormalities in intestinal amebiasis, tuberculosis, histoplasmosis, and Campylobacter infections. Colonoscopy is similar to proctoscopy but is usually reserved for evaluation of patients with chronic diarrhea or an unusual clinical course thought to be secondary to infectious diarrhea.

Biopsy of Small Bowel or Colon:

Biopsies may reveal such things as ulcerative colitis and Crohn’s disease but may also be helpful in evaluating patients with giardiasis, amebiasis, histoplasmosis, S. stercoralis infections and antibiotic-associated colitis.

Measurement of Gastrointestinal Hormones:

A patient with secretory diarrhea may actually have a noninfectious cause of the diarrhea. The pancreas may secrete vasoactive intestinal peptides (VIP) or VIP-like substances which causes secretory diarrhea. Medullary carcinoma of the thyroid may produce calcitonin and prostaglandins which influence cyclic AMP and caluse secretory diarrhea. Zollinger-Ellison Syndrome, basophilic leukemia, and systemic mastocytosis also cause secretory diarrhea. Gastrin may be elevated in Zollinger-Ellison Syndrome, while histamine may be elevated in basophilic leukemia and systemic mastocytosis.

PRACTICAL WORK-UP OF INFECTIOUS DIARRHEA

Since it is impractical and expensive to work-up every patient who presents with diarrhea, a few simple rules should guide our selection of tests and our management of patients.

If the patient has a history of fever, bloody diarrhea, tenesmus, significant abdominal pain, weight loss, seafood ingestion, recent antibiotic use, male homosexuality, or persistent diarrhea for over 72 hours, they should have further evaluation. First obtain a stool sample for examination of gross appearance, mucus, and blood. Next perform a wet saline or methylene blue test looking for fecal leukocytes. If fecal leukocytes are present, then culture for Salmonella, Shigella, and Campylobacter. If no fecal leukocytes are present, then examine the stool for ova and parasites. If you have already done a wet saline preparation, you should review the slide for trophozoites. Next add a drop of iodine and review the slide a third time for cysts. Special studies for ova and parasites should also be done as indicated.

If the stool is negative for mucus, blood, fecal leukocytes, ova, and parasites, you can usually treat acute diarrheal syndromes with oral rehydration fluids only. If stool cultures are positive for Shigella or Campylobacter, consider treating with trimethoprim-sulfamethoxazole and erythromycin respectively. Salmonella typhi requires chloramphenicol, while other Salmonellae usually do not require antibiotics.

Of course, there are numerous special considerations which may require further work-up and treatment. Examples are as follows:

1. Persistent abdominal pain — consider Y. enterocolitica.
2. Chronic diarrhea with weight loss — consider G. lamblia and E. histolytica.
3. Recent antibiotic use — consider C. difficile toxin assay and proctoscopy.
5. Male homosexuality — consider organisms listed in table II.

When Guerrant, Shields, et al instituted an algorithm in their hospital for the initial work-up and management of diarrheal syndromes based on the
above recommendations, they were able to increase their number of positive stool cultures from 1.5% to 8.7% and to reduce their cost of positive stool cultures from $1200 to $264 per positive culture.a

TREATMENT OF INFECTIOUS DIARRHEAL SYNDROMES

Fluid and Electrolyte Replacement:

Since dehydration is one of the most common problems associated with infectious diarrhea, fluid and electrolyte replacement is the mainstay of therapy.

If the patient is moderately ill or young, discontinue all foods for at least 12 hours and give only liquids. Water, juices, carbonated beverages, gatorade, soups, etc., are usually adequate. For moderately severe diarrhea, an oral glucose preparation can be made as follows:

Glucose 20 grams/liter or sucrose 40 grams/liter
Sodium chloride 3.5 grams/liter
Sodium bicarbonate 2.5 grams/liter
Potassium chloride 1.5 grams/liter

Another useful preparation is pedi-lyte®. This is an over-the-counter preparation that contains sodium, potassium, chloride, bicarbonate, and glucose and must be mixed with water or other liquids before use. It is very important that glucose be included in oral replacement solutions since intestinal absorption of sodium is enhanced by transport of glucose across the intestinal mucosa.

Severe dehydration should be treated with either lactated Ringer’s solution with 10 mEq KCl/liter, or 5% Dextrose and normal saline plus 10 to 15 mEq/liter of KCl and 25 to 50 mEq/liter of bicarbonate.15,16

Antidiarrheal Agents:

Antidiarrheal agents are often used, but not always indicated for infectious diarrhea. They may be divided into five categories.

1. Absorbents — The time honored, Kaopectate®, is a combination of kaolin, a clay, and pectin, a purified carbohydrate derived from apples and citrus fruits. Kaopectate® supposedly adsorbs toxins and bacteria, but probably has no effect on the course of the diarrhea even though it has been shown to improve the form of the stool and may allow some voluntary stooling.17

Aluminum Hydroxide, another absorbent, has effects similar to Kaopectate, but probably does not affect the course of the illness either.17

2. Antisecretory Agents — Most acute infectious diarrheal diseases have an element of hypersecretion from the intestinal wall regardless of the underlying etiology. Prostaglandin inhibitors such as aspirin, indomethacin, and bismuth subsalicylate may have a salutory effect on intestinal secretion. Bismuth subsalicylate, better known as Pepto-Bismol, decreases stooling in traveler’s diarrhea caused by E. coli, Shigella or of unknown etiology. When diarrhea starts, take 30 ml’s of Pepto-Bismol every 30 minutes for eight doses (one eight ounce bottle). Since Pepto-Bismol contains salicylate, it can cause salicylate toxicity in children or in adults who are taking aspirin for other diseases.17

Pepto-Bismol is also used prophylactically for traveler’s diarrhea with good results. The recommended dose is 60 ml’s four times a day or one eight ounce bottle per day. A recent study comparing Pepto-Bismol liquid with Pepto-Bismol tablets found that both preparations reduced the incidence of traveler’s diarrhea but the liquid preparation was more effective, presumably because of the increased amount of bismuth subsalicylate in the liquid preparation. The mechanism of action of prophylactic Pepto-Bismol is not known.17

Chlorpromazine has also been shown to decrease fluid loss in cholera, but it is not recommended for general use.17

3. Antiperistaltic agents — Opiate and opiate-like drugs have long been used as antidiarrheal agents, presumably because of their antiperistaltic activity. Common drugs include codeine, paragoric, loperamide (Immodium), and diphenoxylate (Lomotil).

Since diarrhea is one way of ridding the body of toxins, use of antiperistaltic agents may actually have an adverse effect on the patient’s clinical course. One study by DuPont and Hornick suggested that Lomotil actually prolonged diarrhea and decreased the efficacy of antibiotics in patients with shigellosis.18 This dileterious effect has also been seen in patients with Campylobacter, antibiotic-associated colitis and inflammatory bowel disease. It is also conceivable that these drugs promote the development of antibiotic-associated colitis in patients receiving antibiotics. Antiperistaltic agents should be reserved for nonfebrile patients with mild diarrhea, especially if they have significant abdominal cramps. They should not be used for patients with fever, dysentery or antibiotic-associated colitis.17

4. Lactobacillus — This agent is composed of dried, but viable, lactic acid producing bacteria which can change the pH of the stool. It probably has little, if any, effect on the course of the diarrhea and is not recommended for treatment of infectious diarrhea.17

5. Anticoloniergic Agents — These are often used, but have minimal if any effect on infectious diarrhea and are not recommended treatment.17
Antimicrobial Treatment:

Antimicrobial treatment of infectious diarrhea is frequently not indicated and must be individualized for both the patient and the disease. Specific antimicrobial therapy will be discussed in a future issue of the *South Dakota Journal of Medicine*.

**A DECADE OF DIARRHEA**

There have been several advances in the understanding of infectious diarrhea during the past 10-15 years. We have learned much about etiologic infectious agents such as EPEC, C. jejuni, viruses, Cryptosporidium, Y. enterocolitica, and A. hydrophila.

We have a better understanding of the pathophysiology of diarrhea, particularly secretory diarrhea. Advances have also been made in understanding inflammatory diarrhea but there is still much to be learned.

Newer diagnostic tests such as electron microscopy and serologic testing have been introduced into clinical medicine, others such as immune electron microscopy, animal bioassay testing, genetic probe assays, and hybridization assays have been introduced as research tools.  

**FUTURE APPROACHES TO DIARRHEA**

Much of the future work in diarrheal research will probably be in the area of immunology and treatment of various diarrheal diseases.

**Bacteriophage:**

These are viruses that invade and destroy bacteria. Some bacteriophages are selective for EPEC and when fed to calves, piglets and lambs have shown protection against potentially lethal EPEC. The concept of bacteriophage use has considerable appeal for widespread eradication/treatment of infectious diarrheas caused by bacteria. The fact that bacteriophages may be transmitted from person to person can only enhance their usefulness in preventing bacterial diarrhea.  

**Antidiarrheal Agents:**

Efforts are underway to develop new and novel antisecretory agents to treat diarrhea. Some promising compounds are the following:

**Berberine** — This is a plant alkaloid which has been used for 3,000 years in China and India. When given to patients with cholera, it appears to have a bacteria-cidal effect on the organism and also inhibits the toxins effect on the intestinal mucosa cell with a subsequent decrease in fluid loss.  

**Alpha-Andrenergic Agonists** — Alpha-andrenergic agonists have been shown to increase sodium chloride absorption in the rabbit ilium, but cardiovascular side effects have limited its use. A weak alpha-andrenergic agonist, lidamidine, has been shown to be an effective antidiarrheal agent and may be released in the U.S. in the near future.  

**Enkephalins** — Enkephalins are endogenous gastrointestinal opiate-like, penta-peptides which may promote sodium and water resorption in the gut. An enkephalin analogue BW-942C (Burrough's-Wellcome Company) is undergoing clinical studies as an antidiarrheal agent and may be available in the U.S. soon.

**Super Oral Rehydration Solutions:**

Oral rehydration solutions for moderately severe diarrhea should contain sodium and glucose since glucose accelerates the absorption of sodium and water across the intestinal mucosa. Unfortunately, the standard oral rehydration solution as described above does not reduce the volume of diarrheal stools in children under 5 years of age and may increase stool volume by 15-20% in adults with cholera.  

"Super" rehydration solution are now being tested and one solution which contains glycine and glucose has been effective in decreasing the amount of oral fluid needed and in decreasing both the duration and volume of diarrhea. Another promising oral rehydration solution utilizes precooked rice powder. When hydrolized, the rice powder yields glucose, aminoacids, and small peptides. Preliminary tests have been very promising and the product has the added benefit of being readily available and inexpensive.  

**Passive Immunity:**

Both human and animal studies have demonstrated that immunoglobulins in the GI tract can prevent or treat various infectious diarrheal syndromes. A novel approach would be to utilize whey protein from cattle immunized against several enteropathogens. Whey has a high immunoglobulin content and is usually discarded during the manufacture of cheese. Whey could be incorporated into formula for use in infants in high risk situations such as nurseries, day care centers, hospitals, and it might also be effective in the prevention of traveler's diarrhea.

**Vaccine:**

Genetic engineering will hopefully bring about new and better vaccines for enteropathogens. Promising vaccines have already been made for cholera, EPEC, typhoid, shigellosis and rotavirus.  

**SUMMARY**

In summary, infectious diarrhea is caused by diverse etiological agents. It causes considerable mor-
bidity, but minimal mortality in the United States. The work-up of infectious diarrhea can be costly and unrewarding. Treatment is commonly with oral rehydration only. There have been many scientific advances during the past 10-15 years, but few clinical advances. Future research in the prevention and treatment of infectious diarrhea should be rewarding.

REFERENCES

"1986 is the year for the states to take action if it is not done by that time Congress will move on it in 1987. ..." So stated Dr. James Sammons in a speech presented in Sioux Falls two months ago, as he lashed out against the current trends in the national judicial system with regard to professional and product liability issues. The perception that there is crisis in our civil justice system in tort actions seems to be quite pervasive. Groups in opposing camps support their points of view with studies and statistics, anecdotal reports, and perhaps even a small amount of gut feeling generated by a perceived assault on the respective professions' credibility. Commented U. S. Attorney General Benjamin Civiletti at a historic gathering of experts in civil justice from around the nation ... dealing with this issue, ... "If you are in a jurisdiction where 75 cents on the dollar of liability premiums go to compensate injured plaintiffs, where trials can take place within six months to a year of filing, where the law is stable enough to provide a predictable outcome given a particular factual situation, you are in a good jurisdiction. Don't change a thing. Otherwise, the tort law needs reform."

Some over 30 legislatures are now dealing with the question of tort reform. Our own State of South Dakota with the assistance and support of Governor Janklow, has seen fit to attempt to provide some relief to its medical profession by approving most of the components of a comprehensive package of tort reform presented by SDSMA last winter. We recognize that the durability of this legislative action will undoubtedly require a test before the State Supreme Court as has been the case in other states progressing to this level. The question most often raised by the individual physician, however, is to what extent the new laws will influence the insurance companies as they set their rates for physician subscribers.

Several weeks ago, I had the privilege ... along with a select number of other South Dakota physicians ... to sit down in a frank and wide-ranging discussion of this problem with an executive from the St. Paul Companies directly in charge of rate setting for professional liability throughout the nation. We explored in depth the concerns of both the medical community and the corporate responsibilities of the company in the area of policy costs and company profitability ... the disposition of premium dollars and the acquisition of investment income ... the assessment of frequency and severity of awards versus assignment of reserves to cover future claims. As you can imagine, this was a most interesting and thought-provoking interchange ... and as you might also expect there was a mix of both good news and bad news on which to cogitate. Let me enumerate some of the key points.

1. St. Paul is not about to try to police the quality of medicine practiced anywhere by selective restriction of insurability. A physician will be insured based on their past experience with the individual's claims record; not on peer review reports suggesting the potential for future difficulty.

2. St. Paul does not wish to expand its portfolio of professional liability at this time and will not write a policy for new physicians, unless they are entering a group that is already established with the company.

3. 98 cents of each premium dollar is geared to payment of losses. Investment income is calculated into the premium dollars paid, and this fact linked with the drop in interest rates nationally, plays a significant role in the need to project a 17% rate increase in South Dakota for the coming year.

4. Frequency and severity of claims/awards in South Dakota has dropped below the national average over the past two years following a disastrous rise in 1982.

5. Our newly passed legislative package may help our rate structure in years to come, but will do nothing in the immediate future to lower premium costs, since rate setting reflects past and current tort activity rather than futuristic projections of potential improvement. It was pointed out, however, that physicians might feel comfortable insuring for lower limits (e.g. $1,000,000) should the cap on total liability remain in place.

For what solace one might glean from such disclosures, let me close with the final note that our less fortunate neighboring states will face upward rate adjustments of 27%-54% in 1986-1987.

William O. Rossing, M.D., President South Dakota State Medical Association
THE SOUTH DAKOTA MEDICAL SCHOOL ENDOWMENT ASSOCIATION NEEDS CONTRIBUTIONS*

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Auxiliary News

In June, the State Medical Association and Auxiliary held its annual meeting in Rapid City. Congratulations to Executive Director Bob Johnson for passing his milestone of serving twenty years as director. Thanks, also, to Shirley Ryan for completing her year of service to the auxiliary as its very capable president.

My husband, Alfred, and I have also passed a milestone. We, along with Bob, have attended twenty state meetings. We moved to South Dakota in the fall of 1964, and, since that time, have witnessed an enormous change in the world of medicine. We have moved from independence, freedom, and respect to bureaucracy controls, and liability.

DakotaCare, HMO’s, PPO’s, SoDaPac, Quality Care, Peer Review, Marketing, Participating or non-participating, Third-party payors, etc. are samplings of the New Terminology. More and more, these topics seem to dominate the conversations when groups of doctors join together as one body.

Fortunately, the agenda carried a continuity from the past along with a focus to the future. The distinguished speakers and guests shared their particular expertise and inspiration. Upgrading medical knowledge continues to be the primary objective as it was twenty years ago. Laughter, man’s best medicine, was in bountiful supply as excellent entertainment was, again, included in the program. Thank you, Bob!

The focus to the future was noticeable as the agenda included meetings of the South Dakota Foundation for Medical Care, SoDaPac, and DakotaCare.

The South Dakota Foundation for Medical Care is the contracted body of physicians who are responsible for HCFA for quality care for medicare patients. This is called Peer Review.

SoDaPac is the South Dakota branch of the American Medical Political Action Committee. Its membership includes physicians and spouses, and its purpose is to influence the election of individuals favorable to independence in medicine.

DakotaCare is the newest of the New Terminology. It is South Dakota physicians’ answer to the onslaught and infiltration of HMO’s to our state. Much credit goes to Bob Johnson who spearheaded its planning and implementation. Its success is contingent on the participation and cooperation of all our physicians.

Yes, the world of medicine is indeed changing as is evident in our State Medical Association’s Annual Meeting. How we react to this change will determine the future of medicine in South Dakota. Each of us must meet the challenge by being involved and informed. We can join SoDaPac, DakotaCare, and AMA, and by attending the SDSMA’s annual meetings for the next twenty years.

Annette Shousha, President
South Dakota State Medical Association Auxiliary

The PHYSICIAN REHABILITATION PROGRAM of the South Dakota State Medical Association
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Designed to help physicians addicted to alcohol and/or other drugs as well as those with emotional and psychiatric disorders.

All referrals and information remains confidential.
Dr. Reid Holkesvik, Aberdeen, completed continuing education requirements to retain active membership in the American Academy of Family Physicians.

* * * *

The University of South Dakota School of Medicine announced that Dr. Michael McMillin, professor of Internal Medicine, and his wife, Joan McMillin, Sioux Falls, have received the 1986 Thomas H. Brown Distinguished Service Medal from Lodge #5 of the Minnehaha County Masons.

Dr. McMillin was recognized for on-going work with the pituitary system of children to aid in normal growth and his work in tracking down the source of thyroiditis, leading to improvements in the meat packing industry.

Joan McMillin received the medal for her work in building the Sioux Falls United Cerebral Palsy program, the Visiting Nurse Association and her work with the Calvary Cathedral.

James R. Alexander, M.D., 50, of Aberdeen, died recently. Dr. Alexander was born June 30, 1935, in Hays Center, Neb. He grew up and attended school there. He went on to school at Hastings College at Hastings, Neb. and received his bachelor’s degree. He then entered the University of Nebraska Medical School and received his medical degree in 1960. He did his residency in Ogden, Utah and then set up a general practice in Moab, Utah until 1968, when he moved to Torrington, Wyo.

After his marriage to Virginia Werger, they moved to Aurora, Colo., where he studied radiology for three years. In May 1982, they moved to Aberdeen.

Dr. Alexander was a member of St. Mark’s Episcopal Church; a member of Yeldez Shrine and the Elk’s Lodge. He was also a member of S.D. Medical Assoc. and the AMA.

Survivors include his wife, Virginia, Aberdeen; his mother, Marion Alexander, Hays Center; two sons, David, Bozeman, Mont.; and Greg Werger, Glendale, Mont.; six daughters, Ginger Humphrey, Cheyenne, Wyo.; Gaylene Howey, Colton; Gina Hawk, Stockton, Calif.; Gloria Welfl, Worland, Wyo.; Darcy Blasko, Aberdeen; and Dari Alexander, San Jose, Calif.

Lawrence Fenton, M.D., Sioux Falls, professor of Pediatrics and Adolescent Medicine at USD School of Medicine, presented testimony before the House Select Committee on Children, Youth and Families. The Congressional hearing was entitled “Placing Infants at Risk: Parental Addiction and Disease,” and concentrated on high risk infants.

* * * *

Dr. Edward T. Zawada, Sioux Falls, was presented the USD School of Medicine’s award for outstanding teaching. This award was presented by the 1986 graduating class at a luncheon for students and faculty.

Dr. Zawada, associate professor of internal medicine, was given the Antion Hyden Distinguished Professor Award. The award acknowledges the professor who most inspired and assisted the students through the clinical years.

* * * *

G. Robert Bell, M.D., DeSmet, received the Distinguished Alumni Award from the University of South Dakota School of Medicine at its commencement exercises in Vermillion. The award was started last year. He graduated from USD in 1951 and since that time has helped train 40 medical students through clerkships and preceptorships.

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YOUR CONTRIBUTION IS NEEDED TO THE SOUTH DAKOTA MEDICAL SCHOOL ENDOWMENT FUND
Dakota Surgical, Ltd., Sioux Falls, announces a new physician, Dr. Bruce C. Hubert. Dr. Hubert is a specialist in general and peripheral vascular surgery. He received his B.A. degree from Hamline University and his M.D. degree from the University of Minnesota. He completed his surgical and vascular training at the Marshfield Clinic.

Dr. Hubert and his wife, Beverly, have two daughters.

* * * *

Frederick L. Harris, M.D., Sioux Falls, has been appointed Chief of the Vascular Lab at the VA Hospital in Sioux Falls. Dr. Harris specializes in general and peripheral vascular surgery. Dr. Harris is an associate professor at the University of South Dakota and is a diplomate of the American Board of Surgery.

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Summary of June 1986 Annual Meeting

The Foundation’s annual meeting of the corporate body was held June 6, 1986 in Rapid City. Among the activities was the election or appointment of four new members to the Board of Directors. Craig Hansen, M.D. of Rapid City was elected to fill the vacancy left by Thomas Krafka, M.D. who had served the maximum two terms. Robert Suurmeyer, M.D. and Winston Odland, M.D. both of Aberdeen, and Robert Kroese, Administrator of the Madison Community Hospital in Madison, were appointed by the Board to replace three vacant but unexpired terms resulting from resignations of Board members.

One of the topics discussed at the annual meeting was the recent evaluation report by Systemetrics, the “Super PRO,” whose job is to evaluate PRO performance. Systemetrics evaluated a random sample of nearly 400 cases previously reviewed by SDFMC. One of their major findings was that they determined that in 18.0 percent of the cases, SDFMC certified admissions that Systemetrics physician reviewers would have denied based upon the documentation in the medical record. As a local peer review organization, the Foundation and its peer reviewer have the opportunity to discuss potential denials with the attending physician, which may reveal reasons for certification not apparent in the medical record. The determination made by Systemetrics is reflective of an outside organization unfamiliar with local patterns of practice in the State.

To date, we have not yet received word from the Health Care Financing Administration about the acceptance of our official evaluation and/or renewal of our PRO contract. We will notify you as we receive news.
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Cardiovascular contraindications to the use of Isoptin are similar to those of beta blockers: severe left ventricular dysfunction, hypotension (systolic pressure <90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no artificial pacemaker is present) and second- or third-degree AV block.

So, the next time a nitrate is not enough, add Isoptin...for more comprehensive antianginal protection without side effects which may cramp an active life style.

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Please see brief summary on following page.
Contraindications: Severe left ventricular dysfunction (see Warnings), hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker), 2nd- or 3rd-degree AV block. Warnings: ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction < 30%) or moderate to severe symptoms of cardiac failure) and in patients with any degree of ventricular dysfunction if they are receiving a beta blocker. (See Precautions.) Patients with milder ventricular dysfunction should, if possible, be controlled with optimum doses of digitalis and/or diuretics before ISOPTIN is used. (Note interactions with digoxin under Precautions.) ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild and controlled by decrease in ISOPTIN dose). Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment; however, four cases of hepato cellular injury by verapamil have been proven by rechallenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g., W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the abberant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's effect on AV conduction and the SA node, 1st AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1st or progressive 2nd or 3rd AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (HHS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2nd AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. Precautions: ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with A.V. conduction abnormalities and depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digoxin toxicity. The digoxin dose should be reduced if ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. Adverse Reactions: Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. (See Warnings.) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, maculopathy, photophobia, menopause. How Supplied: ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with “ISOPTIN 80” or “ISOPTIN 120” on one side and with “KNOLL” on the reverse side. Revised August, 1984. 2385

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The Management of TIAs in 1986

Jerome W. Freeman, M.D., F.A.C.P.*

ABSTRACT

This article offers an overview of treatment options for transient ischemic attacks (TIAs). The relevant facts and controversies in this area are discussed. A pragmatic management plan for the patient with a TIA is suggested.

In 1986 it remains imprudent to be overly dogmatic about the optimal treatment of transient ischemic attacks (TIAs) and the prevention of stroke. One can uncover a bewildering array of statistics from a multitude of reports on the subject. Nonetheless, there remains a paucity of well controlled studies that clearly illuminate which type of therapeutic intervention is most appropriate in a given patient with TIAs.1

While this circumstance is frustrating, it does not mandate therapeutic nihilism. Rather, the physician must make clinical judgments on the best information currently available. Moreover, the physician must be very circumspect in weighing the proposed benefits and risks for a given patient when deciding on a therapy.

Under the cover of these disclaimers, I would like to outline what I consider the best current information on TIA management. Specifically, I would like to briefly address the pathophysiology, natural history, diagnosis and treatment of TIAs caused by extracranial vascular disease in the carotid arteries. It should be noted that the patient’s history is of great initial importance in helping to distinguish carotid ischemia from ischemia in the vertebral basilar (V-B) system. This clinical distinction is important, because TIAs in the V-B system are not generally amenable to surgical intervention, making medical treatment the only option. In focusing on carotid system pathology, this article will contrast surgical versus medical management options.

PATHOPHYSIOLOGY AND NATURAL HISTORY:

In the carotid system, atherosclerosis most frequently develops at the bifurcation of the common carotid artery and at the origins of the internal and external carotid arteries. In the past, it was postulated that the resultant vascular narrowing, per se, was the cause of reduced blood flow and cerebral ischemic symptoms. It is now recognized that much more commonly symptoms ensue from debris in ulcers within atherosclerotic plaques. These emboli can consist of masses of platelets and fibrin, cholesterol or calcified connective tissue debris.2 While such ulcers may infrequently occur without significant focal stenosis, it is much more common for ulcerated lesions to be seen with major plaque formation and significant vascular narrowing.3, 4, 5 Approximately 75% of TIAs occur in the carotid circulation.6 Of these patients, it has been estimated that 50% will show a tight carotid stenosis or occlusion.7 Thus many patients with TIAs have a surgically accessible lesion.8

Approximately 75% of TIAs occur in the carotid circulation

When it occurs, the TIA is an extremely helpful sign that the patient is at risk for stroke. Estimates vary as to the number of strokes that are preceded by TIAs. However, when strokes resulting from such entities as cardiac emboli, lacunar infarcts and hemorrhages are excluded, it appears that 50% of cerebral infarcts may be heralded by TIAs.1, 3, 7 Thus in a significant number of patients, there exist premonitory warning signs. The recognition of these clinical signs can be used to institute measures to try to prevent stroke. Stroke is most likely to occur in the first two months after a TIA.9 The actual risk of developing a stroke after a TIA has been variably estimated. Whisnant10 reported that 36% of patients with one or more untreated TIAs go on to have a cerebral infarct. One half of these occurred in the first year. Barnett1 found non-treated patients with TIAs to have a 6-7% risk of stroke per year. Fields et al11 point out that it is no longer possible to collect
natural history data on untreated patients with TIAs, as virtually all such patients receive some form of medical or surgical treatment.

**DIAGNOSTIC TESTING OPTIONS:**

After a clinical diagnosis of carotid TIA is made, the principal decision becomes whether to treat the patient surgically or medically. If the patient is a potential surgical candidate, most clinicians will search for carotid stenosis. While this can be done in a variety of ways, the three most widely employed tests are the doppler-ultrasound (duplex scan), venous digital subtraction angiography (DSA) and arterial angiography. Doppler studies have the appeal of being entirely noninvasive. In good laboratories this is an excellent screening test for moderate and severe stenosis.\(^4\)\(^\text{12}\) This test becomes particularly useful in light of the abovementioned fact that most clinically significant emboli from ulcerated plaques occur in the context of appreciable stenosis. Venous DSAs are limited by the fact that relatively large amounts of contrast are needed (with potential renal toxicity) and there remains a significant number of studies which fail to provide diagnostic information.\(^13\) Arterial angiography remains the most specific test for assessing vascular occlusive disease, but it does have a significant risk of morbidity. Mani et al\(^14\) found an overall complication rate of 1.4%, but the risk of permanent impairment to be only 0.1%. However Faught et al\(^15\) suggest that the risk of permanent cerebral complications may be much higher, citing the figure of 5.2%.

**TREATMENT CONSIDERATIONS:**

Medical management generally takes the form of either anticoagulation with warfarin or the use of antiplatelet agents. Although warfarin has been employed in TIAs for many years, its degree of efficacy has never been unequivocally established. There is suggestive evidence that it decreases the risk of stroke.\(^1\)\(^\text{3}\)\(^\text{9}\)\(^\text{16}\)\(^\text{17}\)

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After a clinical diagnosis of carotid TIA is made, the principal decision becomes whether to treat the patient surgically or medically.

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A number of recent studies have focused on the effectiveness of aspirin. Indeed, there have been eight randomized trials considering either aspirin alone or aspirin with another antiplatelet agent.\(^3\) These reports tend to show that aspirin decreases the risk of stroke in patients with TIAs. While one cooperative study showed the benefit of aspirin restricted to males,\(^18\) other series have not confirmed this tendency toward gender disparity. In one analysis, aspirin reduced the risk of stroke over three years from 18 to 11%.\(^19\) There is also a suggestion that the strokes that do occur in patients being treated with aspirin are less severe than those occurring in patients not on aspirin.\(^20\) In a recent randomized study which contrasted aspirin with anticoagulation, no significant difference in the incidence of cerebral infarction was seen.\(^21\)

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Adding dipyridamole to an aspirin regimen does not seem to provide additional protection against stroke.

Despite its widespread use, there is insufficient evidence to prove that dipyridamole effectively prevents stroke in patients with TIAs.\(^2\)\(^\text{9}\)\(^\text{19}\)\(^\text{20}\) This fact has just been reinforced by the American-Canadian Cooperative study group which compared aspirin and aspirin plus dipyridamole in patients with a recent TIA. No significant difference between the two treatment groups was seen.\(^22\) Therefore, adding dipyridamole to an aspirin regimen does not seem to provide additional protection against stroke.

The studies on carotid endarterectomy also suffer from lack of unanimity and conclusiveness. As pointed out by Kistler et al,\(^3\) the value of endarterectomy "is yet to be confirmed by a well designed, controlled, randomized clinical trial." The lack of conclusive evidence that carotid endarterectomy is beneficial is also forcefully argued by Warlow.\(^23\) There is even uncertainty and debate as to what degree of carotid stenosis warrants surgical intervention.\(^9\)\(^\text{23}\) However, the figure of approximately 50% diameter reduction is often cited as defining the minimal level of stenosis constituting a surgical lesion.\(^2\)\(^\text{24}\) These objections and uncertainties notwithstanding, some fairly good studies suggest that carotid surgery reduces TIA symptoms and may lower the risk of subsequent stroke.\(^2\)\(^\text{9}\)\(^\text{24}\)

In considering surgical intervention, it is clear that the potential efficacy of the treatment must be balanced against the surgical risks. Estimates of perioperative stroke-plus-death rate for carotid endarterectomy have varied considerably, ranging from 0 to 21%. However, recent studies have often cited a complication rate in the 2 to 5% range.\(^25\) Some authorities suggest that the combined risk of angiography, plus perioperative mortality and stroke morbidity, should be less than 3% for endarterectomy to be considered an efficacious treatment.\(^3\)\(^\text{17}\)\(^\text{25}\) The series by Whisnant et al\(^26\) demonstrates impressive statistics in this range. Stroke occurred in 3% of patients during surgery or the first post operative month. Thereafter, ischemic stroke occurred at a rate of 2% per year. Certainly this represents a significant statistical improvement.
over the aforementioned 6-7% expected rate of infarct for this group of patients. While none of the patients in the Whisnant series initially received antiplatelet agents, some patients with subsequent TIAs did receive them. In this regard, it should be noted that it is now common practice to maintain all post endarterectomy patients on antiplatelet agents. Conceivably this could decrease post surgical stroke and TIA incidence even further. Indeed, when considering medical or surgical treatment, it is probably more appropriate to characterize the latter as the surgery plus medical treatment option.

**PRACTICAL APPLICATIONS:**

While the analysis of these varying statistics does not yield definitive therapeutic answers for the individual patient, one can derive some pragmatic guideposts to assist in management approach to TIAs. First of all, TIAs of recent onset should be viewed as a medical emergency, since a high rate of cerebral infarct occurs in the first two months after the initial onset of TIAs. Because of this fact, I concur with the recommendation of Sandok et al that a patient with the new onset of TIAs be hospitalized and placed on heparin while a medical and vascular evaluation is undertaken. Clearly, there must exist no contraindication to heparin, and prior to instituting anticoagulation a computerized axial tomography (CAT) scan of the head should be obtained to exclude the nonischemic causes of transient neurologic deficits. Heparin is then continued during the initial hospital evaluation while a decision is being reached whether to treat the patient with surgery or with medical management. Unfortunately even this time honored practice is not without controversy. It must be candidly acknowledged that no proof exists for the efficacy of heparin in this setting. This was emphasized recently in a non-randomized study of heparin which suggested that it does not prevent TIA and stroke. Despite this, noted that on the basis of the studies cited above, a reasonable alternative to the institution of heparin would be to simply start aspirin. Especially if a CAT scan is not immediately available, the aspirin option should be implemented. It is simply not safe to employ heparin for TIAs without using the CAT scan to exclude such entities as subdural hematoma, intracranial hemorrhage and tumor.

**TIAs of recent onset should be viewed as a medical emergency, since a high rate of cerebral infarct occurs in the first two months after the initial onset of TIAs.**

In the initial phase of TIA investigation, I find carotid doppler studies very helpful. As noted earlier, the majority of symptomatic ulcerated lesions seem to be associated with a significant vascular stenosis, and the doppler is an accurate way to screen for such lesions. If the patient is an acceptable surgical candidate and is amenable to prospective surgery, a decision can then be made whether to proceed with a DSA or arterial angiography. In my experience, the DSA frequently affords good images of the extracranial vessels in patients with significantly abnormal doppler studies. If the doppler and DSA concur that a high grade lesion exists, one can proceed to surgery on this basis. If, on the other hand, the doppler does not suggest significant stenotic disease, I generally favor proceeding to arteriography to define whether a significant stenosis does indeed exist, or whether a small ulcerated lesion is present. This approach has proven clinically effective, and obviates the need for arterial angiography, with its attendant risks, for many patients.

**The majority of symptomatic ulcerated lesions seem to be associated with a significant vascular stenosis, and the doppler is an accurate way to screen for such lesions.**

For the patient in whom no surgically remedial lesion is found or who is not a good surgical candidate, the therapeutic options are reduced to warfarin or antplatelet agents. For initial medical management, aspirin is employed alone or in combination with dipyridamole. The latter combination has been used especially in women, because of the early aspirin study which suggested that aspirin alone might not be efficacious in women. As noted earlier, however, subsequent aspirin studies have not demonstrated this gender disparity. Moreover, as the studies mentioned earlier in the text suggest, there is not good clinical data to show the effectiveness of dipyridamole. Thus, I would suggest that the use

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**The combined risk of angiography, plus perioperative mortality and stroke morbidity, should be less than 3% for endarterectomy to be considered an efficacious treatment.**

I concur, for the present, with Sandok’s view of TIAs: “We consider such patients to be at high risk for imminent stroke, and we have found that heparin is a safe form of prophylaxis in this situation.” However, since bleeding complications clearly can occur even with short term use of heparin and since its efficacy is not unequivocally established, it probably should be avoided in patients with any relative contraindications to anticoagulation. It must also be
of dipyridamole may well be superfluous in both men and women. In opting to treat with aspirin, some reflection on the optimal dose is warranted. Currently, one often sees dosages ranging from one to six tablets a day, despite the good theoretical reasons for using small amounts of aspirin for stroke prophylaxis (i.e. 325 mg/day or less). Also there is certainly less risk of gastrointestinal side effects with a very small dose of aspirin. If TIAs continue despite aspirin or aspirin plus dipyridamole, warfarin is usually added to the regimen.

**CONCLUSION:**

Much art remains joined to the science of treating TIAs in the effort to prevent stroke. A review of the literature, with its inconsistencies and conflicting results, is indeed sobering. One is reminded of Oscar Wilde’s observation that “The truth is rarely pure, and never simple.” At this juncture, there would seem to be no way for the practitioner to avoid ambiguity and uncertainty in the quest for optimal treatment of patients with TIAs. That practitioner is often left with the unsettling feeling that the treatment modalities that are cherished today may be challenged in the not too distant future. For the present, it appears that the first line treatment for patients with TIAs should be carotid endarterectomy, but only if they have symptoms clearly referable to the carotid circulation, a stenosis causing at least a 50% diameter reduction of the carotid and are good surgical candidates. Rarely, endarterectomy may also be indicated for the ulcerated plaque which occurs without concomitant stenosis. Carotid endarterectomies should be performed only at centers which can demonstrate appropriately low morbidity and mortality figures (in the 3-4% range, including preoperative angiography). In terms of medical treatment, low dose aspirin seems to hold the most promise.

**REFERENCES**

RISK MANAGEMENT FOR PHYSICIANS

Breach of Physician-Patient Confidentiality

The physician-patient privilege should never be taken lightly. Most physicians do not. Those who do so at the risk of their pocketbook, according to several recent court cases.

A District of Columbia court approved a personal injury suit against a physician for breach of physician-patient confidentiality where a plastic surgeon used “before” and “after” pictures of the plaintiff’s face in a television program and in a department store presentation regarding “creams versus plastic surgery.” The court went on to hold that the facts of the case also supported a finding of invasion of privacy against the plaintiff because of the publicity of private facts. A Massachusetts court has also approved the breach of the physician-patient privilege as the basis for a personal injury action, absent the patient’s consent or a serious danger to the patient or others. A physician in Oregon was successfully sued on the same theory when he disclosed the identity of the mother to a daughter given up for adoption. That court observed that a physician’s duty to keep medical and related information about a patient in confidence was beyond question.

Hospitals are not immune from this proposition. In a medical malpractice action primarily based upon negligence, a North Carolina court also found that an unauthorized disclosure of a patient’s confidences could constitute medical malpractice, in an action against the Cumberland County Hospital.

All of this means that physicians and hospitals should be extraordinarily careful when it comes to disclosing confidential patient information to third persons. The best and most prudent practice is to always require a written waiver of the privilege from the patient before making any disclosure. While it may be an extreme example, the mere fact that a particular physician is treating a patient could under certain circumstances be termed a matter of confidence. Physicians and hospitals should have set procedures for the disclosure of confidential patient information by their medical records staff.

South Dakota Society Of Pathologists

Officers for 1985-86

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Tom C. Johnson, M.D., Vice President
Jerry L. Simmons, M.D., Secretary-Treasurer
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PLEASE NOTE: The minimum amount of any withdrawal is Five Hundred Dollars.
## New SDSMA Members

### NEW MEMBERS

<table>
<thead>
<tr>
<th>Name</th>
<th>M.D.</th>
<th>Address</th>
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<tbody>
<tr>
<td>Dale R. Anderson</td>
<td></td>
<td>P.O. Box 2623, Rapid City, SD</td>
</tr>
<tr>
<td>Wayne J. Anderson</td>
<td></td>
<td>71 Charles St., Deadwood, SD</td>
</tr>
<tr>
<td>Paul Boom, Jr.</td>
<td></td>
<td>214 Nelton Dr., Pierre, SD</td>
</tr>
<tr>
<td>Robert J. George</td>
<td></td>
<td>1201 S. Euclid Ave., #306, Sioux Falls, SD</td>
</tr>
<tr>
<td>John R. Hastings</td>
<td></td>
<td>305 S. State St., Aberdeen, SD</td>
</tr>
<tr>
<td>Frank E. Jones</td>
<td></td>
<td>VAMC 2501 W. 22nd St., Sioux Falls, SD</td>
</tr>
<tr>
<td>Edward L. Seljeskog</td>
<td></td>
<td>420 Delaware St., SE, Minneapolis, MN</td>
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<tr>
<td>Gary Van Ert</td>
<td></td>
<td>112 W. 16th St., Chamberlain, SD</td>
</tr>
<tr>
<td>Curt Wischmeier</td>
<td></td>
<td>503 Professional Arts Bldg., Aberdeen, SD</td>
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### NEW ASSOCIATE MEMBERS

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<tr>
<td>Shawn Culey</td>
<td></td>
<td>530 Elm, #3, Vermillion, SD</td>
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<tr>
<td>Richard Kaplan</td>
<td></td>
<td>3401 W. Turkey Lane, Phoenix, AZ</td>
</tr>
<tr>
<td>Steven Peterson</td>
<td></td>
<td>Family Practice Center 2300 S. Dakota Ave., Sioux Falls, SD</td>
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<tr>
<td>Guy Kovacevich</td>
<td></td>
<td>232 Federal Ave., Rapid City, SD</td>
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### AMA Physicians’ Recognition Award Recipients

Congratulations to the members of the South Dakota State Medical Association who have earned the AMA Physicians’ Recognition Award in April and May 1986.

#### April

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<tr>
<th>Name</th>
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<td>Edmund M. Belyea</td>
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<td>Eugene O. Hoxtell</td>
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<td>Samuel W. Huot</td>
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<td>Martin F. Peteret</td>
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<td>Wesley D. Putnam</td>
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<td>John G. Slingsby</td>
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<td>Charles L. Swanson</td>
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<td>Curtis H. Wait</td>
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<td>George H. Hassard</td>
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<td>David M. Patterson</td>
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<td>Bradley B. Randall</td>
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<td>Donald R. Robinson</td>
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<td>Anthony J. Silvagni</td>
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<td>Parkston</td>
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<td>Mary T. Slattery</td>
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<td>Lloyd E. Solberg</td>
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JULY 1986
August

Prospering in Today's Competitive Medical Market, Spearfish, SD, Aug. 1-3. Fee: $300. 15 hrs. AMA Category I & AAFP credit. Contact: Robert Flaherty, M.D., Flaherty, Reilly & Brock, Prof. Services Marketing, Box 5141, Bozeman, MT 59717. Phone: (406) 586-1157.

Family Medicine Update, The Lodge, Okoboji, Iowa, Aug. 29-30. 10 hrs. AMA Category I credit. Contact: Maureen McGinley, CME, Creighton Univ., Omaha, NE 68178. Phone: 800-228-7212, ext. 2550.

September

Fine Needle Aspiration Biopsy, Holiday Inn Central, Omaha, NE, Sept. 6. Fee: $75. 3 hrs. AMA Category I credit. Contact: Maureen McGinley, CME, Creighton Univ., Omaha, NE 68178. Phone: 800-228-7212, ext. 2550.

Doppler and 2-D Echocardiography, Washington, DC, Sept. 7-13. 40 hrs. AMA Category I credit. Contact: Lisa Krehbiel, Institut. for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, CA 92677. Phone: (714) 495-4499.


Cardiology/Rheumatology Update, Ireland Study/Tour, Sept. 18-30. Fee: $400. 36 hrs. AMA Category I credit. Contact: Maureen McGinley, CME, Creighton Univ., Omaha, NE 68178. Phone: 800-228-7212, ext. 2550.

A Day With the Perinatologists, Marriott Hotel, Omaha, NE, Sept. 20. Contact: Maureen McGinley, CME, Creighton Univ., Omaha, NE 68178. Phone: 800-228-7212, ext. 2550.


October


Clinical Problem Solving in Pediatric Nuclear Medicine, Westin O’Hare, Rosemont, IL, Oct. 11-12. Fee: $100. 10½ hrs. CME Category I credit. Contact: Deborah Churan, Exec. Dir., Central Chapt., SNM, Inc., 134 Lincoln Pkwy., Crystal Lake, IL 60014. Phone: (815) 459-6884.

Omaha Mid-West Clinical Society, Red Lion Inn, Omaha, NE, Oct. 27-29. Fee: $160. 23 hrs. AMA Category I credit. Contact: Maureen McGinley, Div. of CME, Creighton Univ., Omaha, NE 68178. Phone: 800-228-7212, ext. 2550.


Transactions of the South Dakota State Medical Association
105th Annual Meeting
June 5, 6, 7, 8, 1986
EDUCATION TAKES MONEY—Lots and Lots of Money—

The primary purpose of the South Dakota Medical School Endowment Association is to make low interest (6%) loans to medical students who are attending the University of South Dakota School of Medicine.

WE NEED YOUR HELP

All contributions* are used to provide loans to South Dakota’s medical students.

Please send your contributions to:
South Dakota Medical School Endowment Association
608 West Avenue, North
Sioux Falls, SD 57104

* Tax deductible
CONTROL ACID RAIN

with once-a-night h.s. therapy for active duodenal ulcers
Now, one tablet at bedtime

Controls nocturnal acid to relieve pain and heal duodenal ulcers

Heals active duodenal ulcers after 4 weeks in most patients*1

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<tr>
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<th>Dosage</th>
<th>Healing Rate</th>
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<tr>
<td>ZANTAC 300 mg h.s.</td>
<td>270/320</td>
<td>84%</td>
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<tr>
<td>ZANTAC 150 mg b.i.d.</td>
<td>292/345</td>
<td>85%</td>
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In well-controlled, double-blind, multicenter trials, ZANTAC 300 mg h.s. healed active duodenal ulcers in 84% of patients after 4 weeks. After 8 weeks, healing rates may be higher with ZANTAC 150 mg b.i.d. (92%) than with ZANTAC 300 mg h.s. (87%).

Relieves pain and other symptoms as effectively as ZANTAC 150 mg b.i.d.*1
Once-daily dosing may enhance compliance in patients for whom dosing convenience is important

Side-effects profile comparable to ZANTAC 150 mg b.i.d.\textsuperscript{1-3}

Headache—sometimes severe—has been reported. Rare effects on the CNS, cardiovascular, GI, hepatic, and integumental systems have been observed, as well as rare cases of hypersensitivity reactions. See ADVERSE REACTIONS section of Brief Summary of Product Information before prescribing.

No significant interference with the hepatic cytochrome P-450 enzyme system at recommended doses

ZANTAC 300 mg h.s. had no significant drug interactions with theophylline or warfarin. The bioavailability of certain medications whose absorption is dependent on a low gastric pH may be altered when ZANTAC or other medications which decrease gastric acidity are administered.

*It is not known exactly how much acid inhibition is needed to heal ulcers.*
IN ACTIVE DUODENAL ULCERS

Once-a-night h.s. therapy controls acid rain

Zantac® 300
ranitidine HCl/Glaxo 300 mg tablets

BRIEF SUMMARY OF PRODUCT INFORMATION

INDICATIONS AND USAGE: ZANTAC® is indicated for:
1. Short-term treatment of active duodenal ulcer. Most patients heal within four weeks. Studies available to date have not assessed the safety of ranitidine in uncomplicated duodenal ulcer for periods of more than eight weeks.
2. Maintenance therapy for duodenal ulcer patients at reduced dosage after healing of acute ulcers. No placebo-controlled comparative studies have been carried out for periods of longer than one year.
3. The treatment of pathological hypersecretory conditions (e.g., Zöllinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of active, benign gastric ulcer. Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated. Studies available to date have not assessed the safety of ranitidine in uncomplicated, benign gastric ulcer for periods of more than six weeks.
5. Treatment of gastroesophageal reflux disease. Symptomatic relief commonly occurs within one to two weeks after starting therapy. Therapy for longer than six weeks has not been studied.

In active duodenal ulcer, active, benign gastric ulcer; hypersecretory states; and GERD, concurrent antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: ZANTAC® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: General: 1. Symptomatic response to ZANTAC® therapy does not preclude the presence of gastric malignancy.
2. Since ZANTAC® is excrated primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see DOSAGE AND ADMINISTRATION). Caution should be observed in patients with hepatic dysfunction since ZANTAC® is metabolized in the liver.

Laboratory Tests: False-positive tests for urine protein with Multistix® may occur during ZANTAC® therapy, and therefore testing with sulfosalicylic acid is recommended.

Drug Interactions: Although ZANTAC® has been reported to bind weakly to cytochrome P-450 in vitro, recommended doses of the drug do not inhibit the action of the cytochrome P-450-linked oxidase enzymes in the liver. However, there have been isolated reports of drug interactions which suggest that ZANTAC® may affect the biavailability of certain drugs by some mechanism as yet unidentified (e.g., a pH-dependent effect on absorption or a change in volume of distribution).

Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no indication of tumorigenic or carcinogenic effects in life span studies in mice and rats at doses up to 2,000 mg/kg/day.

Ranitidine was not mutagenic in standard bacterial tests (Salmonella, E. coli) for mutagenicity at concentrations up to the maximum recommended for these assays.

Pregnancy: Teratogenic Effects: Pregnancy Category B: Reproduction studies have been performed in rats and rabbits at doses up to 160 times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ZANTAC®. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used in pregnant women only if clearly needed.

Nursing Mothers: ZANTAC® is secreted in human milk. Caution should be exercised when ZANTAC® is administered to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Use in Elderly Patients: Ulcer healing rates in elderly patients (65 to 82 years of age) were no different from those in younger age groups. The incidence rates for adverse events and laboratory abnormalities were not increased in the elderly.

ADVERSE REACTIONS: The following have been reported as events in clinical trials or in the routine management of patients treated with oral ZANTAC®. The relationship to ZANTAC therapy has been unclear in many cases. Headache, sometimes severe, seems to be related to ZANTAC administration.

Central Nervous System: Rarely, malaise, dizziness, somnolence, insomnia, and vertigo. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients.

Cardiovascular: Rare reports of tachycardia, bradycardia, and peripheral vasodilation.

Gastrointestinal: Constipation, diarrhea, nausea/vomiting, and abdominal discomfort/pain.

Hepatic: SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg iv id for seven days, and in 4 of 24 subjects receiving 50 mg iv id for five days. With oral administration there have been occasional reports of reversible hepatitis, hepatic/pulmonary or hepatic-canicular or mixed, with or without jaundice.

Musculoskeletal: Rare reports of arthralgias.

Hematologic: Rare reports of reversible leukopenia, granulocytopenia, thrombocytopenia, and pancytopenia.

Endocrine: Controlled studies in animals and man have shown no stimulation of pituitary hormone by ZANTAC and no antidiuretic and cimetidine-induced gynecomastia and impotence in hyposomatric patients have resolved when ZANTAC has been substituted. However, occasional cases of gynecomastia and impotence, and loss of libido have been reported in male patients receiving ZANTAC, but the incidence did not differ from that in the placebo group.

Integumental: Rash, including cases of erythema multiforme, and occasionally alopecia.

Other: Rare cases of hypersensitivity reactions (e.g., bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

OVERDOSAGE: There is no experience to date with deliberate over dosage of ranitidine. In the event of an overdose, supportive and symptomatic therapy should be administered.

In studies in dogs receiving doses of ZANTAC® in excess of 225 mg/kg/day there have been muscular tremors, vomiting, and rapid respiratory failure. Single oral doses of 1,000 mg/kg in mice and rats were not lethal. Intravenous LD50 values in rats and mouse were 83 and 77 mg/kg, respectively.

DOSAGE AND ADMINISTRATION: Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with ZANTAC®, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

NOW SUPPLIED: ZANTAC® 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with “ZANTAC® 150” on one side and “Glaxo” on the other. They are available in bottles of 60 tablets (NDC 0173-0344-42) and unit-dose packs of 100 tablets (NDC 0173-0344-47).

ZANTAC® 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with “ZANTAC® 300” on one side and “Glaxo” on the other. They are available in bottles of 30 (NDC 0173-0393-40) and unit-dose packs of 100 tablets (NDC 0173-0393-47).

Store between 15° and 30°C (59° and 86°F) in a dry place. Protect from light. Replace cap securely after each opening.

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June 1986

ZAN309
Printed in U.S.A.

Glaxo Inc.
Research Triangle Park, NC 27709

©1986, Glaxo Inc.
A Patient With Known Unilateral Renal Cysts Who Developed Epigastric Pain, Nausea and Vomiting

A Model of Adjustment in Bereavement: A Normal Process
President's Page

A national meeting of the AMA, A-86, as it is referred to in the formal recordings of the parlia-
mentary transactions to distinguish this meeting from the interim gathering held 6 months later each De-

cember. Let me share with you the perceptions of a first-timer to one of these meetings, taking you in a meandering fashion through the 6 days of activities of the Chicago meeting held in June.

June 14, 1986: Beautiful day for a flight . . .

steam humd in SD but the lake breeze is keeping the temp down in the Windy City . . . nice room, but hardly seems worth the $125/night they get for these convention events. Things seem to be in full swing with the medical school section, AMA auxiliary, and some specialty groups already conducting their business. I hear the House of Delegates is going to come out with some sort of statement on manpower supply . . . other state delegations seem interested in talking to those of us from SD about the AMN news article over the OB-GYN flap in Sioux Falls.

June 15, 1986: What am I doing getting up at 0530 to make a delegate caucus of the North Central group at 0700? I'm quickly learning that a lot of spade work on issues and candidates for office needs to be done by our geo-political group . . . interviewing candidates and popping unanswerable questions brings back an uneasy recollection of oral board exams . . . guess what I'm thinking! These guys are no slouches . . . seem to think on their feet very well . . . student representative was very polished . . . wonder how he surfaced out of his group when first elected to the Board. Out to dinner with our delegation. Ihlene seems to be adapting to the role of "mother hen" to this gang quite well!

June 16, 1986: Up early again. North Central meets to caucus about issues, candidates, and prepare for reference committees which occupy the whole day's agenda. Gerry has assigned me to Committee A, looks like an interesting set of resolutions and board reports to digest. AMA is launching a new effort to re-structure the Medicare system and correct the fiscal crisis due in or around the early 1990s. News says it is hot in SD . . . comfortable here today again. Fantastic noon lunch for all the delegates put on by the New York delegation . . . brats & beer, bands and flags . . . theme of an old summer picnic. The maze of hospitality rooms and peripheral entertainment for the participants is something else! Everybody seems to be pushing someone for something . . . buttons, stickers . . . not unlike a national political convention although I've never seen one of those before either.

June 17, 1986: These early morning breakfasts are getting to me . . . I just tried to sweat off a few pounds from the Rapid City meeting and all of those hors d'oeuvres before coming out here! House of Delegates re-opened today . . . Gerry and Bruce had me covering their seat on the floor for a few hours. Interesting, very democratic organization, lots of speaking from just about anybody, anywhere, and any age. I'm impressed with the exposure the younger physicians are getting. The Board of Trustee's is perched up in front on the stage, or at least their representatives, shucks, the Vice Chairman looks like a recent graduate from a Boy Scout camp, as Eric would say!! Seems like the race between Hotchkiss and Broadaway is tight for the president-elect's spot . . . wonder which way Gerry & Bruce will decide to go. Maybe another test of Virginia and Florida's hospitality rooms tonight will help crystallize a decision!

June 18, 1986: The big day is here! All the election hype peaks out. Hotchkiss beats Broadaway, and some of the lesser races require run-offs. The North Central candidate does well. This evening I climbed into my tux and had the great experience of representing the SDSMA with the other 49 state presidents on the stage with the incoming president, Dr. Coury from Michigan, for his inauguration ceremony . . . lots of dignitaries and figures from medicine of by-gone years . . . Dr. Annis . . . I remember his TV media blitz on the Medicare program when I was in residency. Dr. Budd . . . aged but spry . . . what a nifty piano-player when he visited us in Aberdeen 10 years ago. Not even he could get Tracy to quit smoking!

June 19, 1986: I hope that construction on the beltway doesn't make us miss our plane . . . I'm ready to get home! What an experience, what a fascinating event this has been. Lots of innovative ideas seem to be surfacing, and lots of youthful input, even a new section formed on Younger Physicians (under 40). I wish everyone of our members could have this experience, at least once!

William O. Rossing, M.D., President
South Dakota State Medical Association
Transactions Of The
South Dakota State Medical Association
105th Annual Meeting
June 5, 6, 7, 8, 1986

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(1987)

President-Elect
Robert Ferrell, M.D. .................... Rapid City
(1987)

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Bruce Lushbough, M.D. ............... Brookings
AMA Alternate Delegate (1988)
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Michael Pekas, M.D. .................... Sioux Falls
Speaker of the House of Delegates
J. A. Eckrich, Jr., M.D. ............... Aberdeen
Councilor at Large
Richard Gere, M.D. ..................... Mitchell

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James Larson, M.D. ................... Watertown
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Third District (Brookings-Madison)
Curtis Wait, M.D. ...................... Brookings
Fourth District (Pierre)
R. C. Jahraus, M.D. .................... Pierre
(1989)

Fifth District (Huron)
David Buchanan, M.D. ............... Huron
Sixth District (Mitchell)
C. D. Monson, M.D. .................... Parkston
Seventh District (Sioux Falls)
Michael Pekas, M.D. ................... Sioux Falls
Karl Wegner, M.D. ..................... Sioux Falls
Richard Tschetter, M.D. .............. Sioux Falls
Guy Tam, M.D. ......................... Sioux Falls
Lowell Hyland, M.D. .................. Sioux Falls
James Reynolds, M.D. ............... Sioux Falls
Eighth District (Yankton)
Richard Porter, M.D. .................. Yankton
Jay Hubner, M.D. ..................... Yankton
(1989)

Ninth District (Rapid City)
Ed James, M.D. ......................... Rapid City
(1987)

Thomas Krafka, M.D. .............. Rapid City
(1988)
James Jackson, M.D. ................. Rapid City
(1989)
N. R. Whitney, M.D. ................. Rapid City
Tenth District (Rosebud)
Louis Hogrefe, M.D. ................. Gregory

Eleventh District (Northwest)
James Wunder, M.D. .................. Mobridge
Twelfth District (Whetstone Valley)
Visvaldis Janavs, M.D. .............. Rosholt
Student Representative

ALTERNATE COUNCILORS

First District (Aberdeen)
Juan Chavier, M.D. ................... Aberdeen
(1989)

Second District (Watertown)
G. R. Bartron, M.D. ................. Watertown
Third District (Brookings-Madison)
(1987)

Fourth District (Pierre)
M. R. Cosand, M.D. ................... Pierre
Fifth District (Huron)
G. Robert Bell, M.D. ................ DeSmet
Sixth District (Mitchell)
(1987)

Seventh District (Sioux Falls)
Dennis Johnson, M.D. ............... Sioux Falls
K. Gene Koob, M.D. .................. Sioux Falls
Daniel Kennelly, M.D. ............... Sioux Falls
D. G. Ortmeier, M.D. ............... Sioux Falls
Lawrence Finney, M.D. ............. Sioux Falls
Rodney Parry, M.D. ................. Sioux Falls
Eighth District (Yankton)
John Sternquist, M.D. ............... Yankton
Duane Reaney, M.D. ............... Yankton
Ninth District (Rapid City)
J. Geoffrey Slingsby, M.D. ........ Rapid City
Richard Renka, M.D. ............... Rapid City
Robert Allen, M.D. ................. Rapid City
A. Byford Anderson, M.D. ........ Deadwood
Tenth District (Rosebud)
R. G. Nemer, M.D. ................... Gregory
Eleventh District (Northwest)
L. M. Linde, M.D. ................... Mobridge
Twelfth District (Whetstone Valley)
Lawrence Nelson, M.D. ............. Webster
Student Representative

1986-1987 COMMISSIONS

COMMISSION ON LEGISLATION AND GOVERNMENTAL RELATIONS
Ronold Tesch, M.D. (1987) Brookings, Chairman
Stephan Schroeder, M.D. (1987) Miller
Raymond Burnett, M.D. (1987) Rapid City
David Rossing, M.D. (1985) Sioux Falls
Thomas Olson, M.D. (1989) Vermillion
John Gray, M.D. (1989) Sioux Falls
Phillip Hoffsten, M.D. (1986) Pierre
Peggy Huber, Auxiliary
Duane Buholtz, Clinic Manager

COMMISSION ON INTERNAL AFFAIRS, COMMUNICATIONS AND LIAISON
Dennis Cavanaugh, M.D. (1987) Huron
Calvin Andersen, M.D. (1987) Aberdeen
Dennis Stevens, M.D. (1988) Sioux Falls
Allan Hartzell, M.D. (1988) Sioux Falls
Richard Holm, M.D. (1989) Brookings
Milton Mutch, M.D. (1989) Sioux Falls
Dean Borth, M.D. (1989) Pierre
R. E. Van Demark, Sr., M.D. (1989) Sioux Falls

COMMISSION ON MEDICAL SERVICE
Jerome Freeman, M.D. (1987) Sioux Falls, Chairman
Jeffrey Hagen, M.D. (1987) Sioux Falls
Michael Ferrell, M.D. (1987) Sioux Falls
Tom Huber, M.D. (1987) Pierre
David Sandvik, M.D. (1989) Rapid City
Thomas Gaeckle, M.D. (1989) Sioux Falls

COMMISSION ON SCIENTIFIC MEDICINE
Robert Raszkowski, M.D. (1988) Sioux Falls, Chairman
Loren Amundson, M.D. (1987) Sioux Falls
Thomas Burkhart, M.D. (1987) Sioux Falls
Julie Stevens, M.D. (1987) Yankton
V. V. Volin, M.D. (1988) Sioux Falls
David Elson, M.D. (1989) Sioux Falls
Marc Boddicker, M.D. (1989) Rapid City
Lewis Ofstein, M.D. (1989) Sioux Falls
Wm. Tschetter, M.D. (1989) Rapid City
Patrick King, M.D. (1989) Yankton

PROFESSIONAL LIABILITY COMMISSION
Frank Alvine, M.D. (1988) Sioux Falls, Chairman
John Sternequist, M.D. (1987) Yankton
Dale Berkebile, M.D. (1987) Rapid City

CREDENTIALS COMMISSION
AND EXECUTIVE COMMISSION
W. O. Rossing, M.D., Sioux Falls
Robert Ferrell, M.D., Rapid City
Frank Messner, M.D., Yankton
M. George Thompson, D.O., Watertown
Bruce Lushbough, M.D., Brookings
Durward Lang, M.D., Sioux Falls
J. A. Eckrich, Jr., M.D., Aberdeen
Michael Pekas, M.D., Sioux Falls
Richard Gere, M.D., Mitchell

GRIEVANCE COMMISSION
Bruce Lushbough, M.D. (1987) Brookings, Chairman
Durward Lang, M.D. (1988) Sioux Falls
Joseph Hamm, M.D. (1989) Rapid City
Howard Saylor, Jr., M.D. (1990) Huron

LONG RANGE PLANNING COMMITTEE
David Smith, M.D. (1989) Yankton, Chairman
Gerald Loos, M.D. (1988) Sioux Falls
Carol Zieleike, M.D. (1987) Rapid City
David Potas, M.D. (1989) Yankton

ARCHIVES AND HISTORY COMMISSION
David Buchanan, M.D. (1989) Huron, Chairman
Virginia Tracy (1989) Auxiliary

LIAISON COMMITTEE
Richard Belatti, M.D. (1987) Sioux Falls, Chairman
James Jackson, M.D. (1987) Rapid City
Jerome Freeman, M.D. (1987) Sioux Falls
Jay Hubner, M.D. (1987) Yankton

S.D. HUMAN SERVICES CENTER
MEDICAL ADVISORY COMMITTEE
Thomas Willcockson, M.D. (1987) Yankton
Loyd Wagner, M.D. (1987) Sioux Falls
Kenneth Halverson, M.D. (1987) Yankton

CRIPPLED CHILDREN’S HOSPITAL
ADVISORY BOARD
Gerald Loos, M.D. (1987) Sioux Falls
Dan MacRandell, M.D. (1987) Sioux Falls
Terry Lang, M.D. (1987) Sioux Falls

EXECUTIVE COMMITTEE OF THE
MEDICAL SCHOOL

MEDICAL CLAIMS REVIEW COMMITTEE
FOR BLUE SHIELD OF NORTH DAKOTA

MEDICAL-LEGAL COMMITTEE
Daniel Kennelly, M.D. (1987) Sioux Falls
Marion Cosand, M.D. (1987) Pierre
Duane Reaney, M.D. (1987) Yankton
REPORT OF THE BUDGET AND AUDIT COMMITTEE

Thursday, June 5, 1986
Badlands Rm. Rapid City, South Dakota

The meeting was called to order at 8:30 a.m. by Richard Gere, M.D., president of the South Dakota State Medical Association in the absence of Clark Likness, M.D., Chairman of the Committee. Present for roll call were Drs. Gere, W. O. Rossing, M. George Thompson, Robert Ferrell, Frank Messner, Howard Saylor, G. H. Steele, J. A. Eckrich, Jr., James Larson, Curtis Wait, R. Kurt Jahraus, David Buchanan, C. D. Monson, Richard Tschetter, Guy Tam, Lowell Hyland, James Reynolds, D. G. Ortmie, Richard Porter, Jay Hubner, Ed James, James Jackson, Thomas Kralka, N. R. Whitney, Louis Hogrefe, James Wunder, V. Janavs, Jay Bachmayer and Robert Raszkowski. Also present were Drs. Robert Thompson, Joseph Hamm and Karl Wegner.

Dr. Gere moved to accept the minutes of the previous meeting as printed and distributed. The motion was seconded and carried.

I. UPDATE ON MEDICAL SCHOOL — Dr. Quinn spoke to the Council on the status of the medical school and the residency programs and referred to the attached document entitled "Mission." Dr. Tracy moved that the Association commend Dr. Quinn on his tremendous job done as Dean of the Medical School. The motion was seconded and carried.

II. APPOINTMENT OF SODAPAC BOARD OF DIRECTORS — Dr. Saylor moved that the Association appoint Marlys Porter, Marie Hovland, N. R. Whitney, M.D., Richard Porter, M.D., Les Kinstad, William Taylor, M.D., Mary Ann Harris, Raymond Nemer, M.D., James Wunder, M.D., and Stephen Schroeder, M.D., for three year terms on the SODAPAC Board, and that Mary Cosand, Peg Wunder and Jacalyn Slingsby be appointed to the SODAPAC Board for one year terms. The motion was seconded and carried.

III. RESOLUTION FROM NEW MEXICO MEDICAL SOCIETY — Dr. Johnson reviewed the resolution from the New Mexico Medical Society which calls for annual physical examinations, including pelvic examinations and Pap tests, for all women and continuing for life. Dr. Thompson moved that the Council refer this resolution to the Commission on Scientific Medicine for further study. The motion was seconded and carried.

IV. DR. MUTH — DISCUSSION ON MEDICAL SCHOOL — Dr. Milton Mutch appeared before the Council and reviewed the USD’s Obstetrics-Gynecology residency program and the issues that he felt needed to be addressed. There was a question and answer period followed by general discussion of the medical school and residency programs by the Council members. Dr. Karl Wegner briefly addressed the Council on this subject. Dr. Jackson moved that the State Medical Association continue to take the medical school and its residency programs under advisement and act as the circumstances dictate. The motion was seconded and carried. After further discussion, Dr. Hogrefe moved that the Liaison Committee be reactivated with emphasis on liaison between the State Medical Association and the USD School of Medicine and report back to the Council. The motion was seconded and carried.

There being no further business, the meeting adjourned at 11:30 a.m.

MISSION

The obligation of the administration and faculty of the School of Medicine is to provide, within limits of its resources, the best possible education to prepare students for careers in medicine. This education does not end with the M.D. degree. The faculty and administration are also responsible for graduate medical education; residency training programs in the primary clinical areas.

Some have commented that the mission of the School of Medicine has been changed from the intent of the 1974 legislation, as which stated "with an emphasis on Family Practice." The first Bulletin of the School in 1975 stated under Purpose: "The purpose of the School of Medicine is to provide a firm foundation in the basic medical sciences and to correlate these disciplines with clinical teaching and practical medical experience." The current (1985-1987) Bulletin states as Mission: "In order to provide optimal health care to the people of South Dakota the University of South Dakota School of Medicine has as its core mission the provision of an opportunity for its students to obtain a broadly based medical education with an emphasis on primary care."

It has been said that there is an attempt to change the direction of the School toward a more traditional medical school with all full-time faculty. The numbers, again from the School Bulletin, are shown below:

<table>
<thead>
<tr>
<th>Full-Time Faculty:</th>
<th>1975</th>
<th>1980</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Family Med.</td>
<td>01</td>
<td>03</td>
<td>14</td>
</tr>
<tr>
<td>b. Internal Med.</td>
<td>02</td>
<td>14*</td>
<td>14*</td>
</tr>
<tr>
<td>c. Ob/Gyn</td>
<td>01</td>
<td>07</td>
<td>10</td>
</tr>
<tr>
<td>d. Peds</td>
<td>05</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>e. Psychiatry</td>
<td>05</td>
<td>13*</td>
<td>14*</td>
</tr>
<tr>
<td>f. Surgery</td>
<td>03</td>
<td>04*</td>
<td>04*</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
<td>53</td>
<td>66</td>
</tr>
</tbody>
</table>
Clinical Faculty:

<table>
<thead>
<tr>
<th>1975</th>
<th>1980</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Family Med.</td>
<td>13</td>
<td>115</td>
</tr>
<tr>
<td>b. Internal Med.</td>
<td>26</td>
<td>71</td>
</tr>
<tr>
<td>c. Ob/Gyn</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>d. Peds</td>
<td>12</td>
<td>31</td>
</tr>
<tr>
<td>e. Psychiatry</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>f. Surgery</td>
<td>22</td>
<td>47</td>
</tr>
<tr>
<td>Total</td>
<td>103</td>
<td>303</td>
</tr>
</tbody>
</table>

Ratio FT Faculty/ Clinical Faculty: 0.16 0.17 0.17

*Significant numbers of these individuals are full-time or near full-time staff of the three VA hospitals in the state, and the Human Services Center.

There was one full-time person for each six clinical faculty in 1975, it remains so in 1985. The largest area of growth has been Family Medicine, both in clinical and full-time faculty.

In the Liaison Committee on Medical Education (LCME) 1985 standards there is the comment “— Undergraduate medical education usually requires the conduct of simultaneous and mutually supportive programs of graduate medical education —.”

In 1975 there were residencies in Family Practice (1973), Internal Medicine (1974), Ob/Gyn (1956), Surgery (1952), and Pathology (1963). Internal Medicine, Ob/Gyn, and Surgery were housed at Sacred Heart Hospital in Yankton; Family Practice and Pathology in Sioux Falls.

Yankton physicians had for many years participated in the teaching at Vermillion prior to the beginning of the four year program. That commitment, and the presence of ongoing residencies in three of the major clinical disciplines certainly were strong positives in the original provisional accreditation by the LCME in 1975.

In 1986 there are residencies in Family Practice (from 12 graduating per year to 8 graduating per year), Internal Medicine (from 7-8 graduating per year to 6 graduating per year), Ob/Gyn (graduating 2 per year), and Pathology (graduating 1 per year). A Psychiatry residency has been planned and submitted to the ACGME for approval. The Surgery residency, which lost its accreditation in 1986, has been put on hold until planning and resources make full accreditation possible.

“The concept of a community based medical school without walls has matured to a reality involving the entire state. It is achieving the goals of improving health care for South Dakota citizens by providing a program of medical education for young people which meets all criteria for quality.

The School has not changed its direction but continues to stress primary care, specifically Family Medicine. The largest growth in faculty and the strongest residencies are in Internal Medicine and Family Medicine. Family Medicine’s curricular input has been steadily increased since 1975 until it is involved in all four years of teaching, and all state monies for residencies go to Family Medicine.

SECOND COUNCIL MEETING MINUTES

Sunday Jefferson, Roosevelt Rooms
June 8, 1986 Howard Johnson
10:30 a.m. Rapid City, South Dakota

The meeting was called to order by Dr. Michael Pekas, Chairman of the Council. Those present for roll call were Drs. William Rossing, Robert Ferrell, Frank Messner, Bruce Lushbough, Durward Lang, Michael Pekas, Jerome Eckrish, Richard Gere, Jay Bachmayer, Curtis Wait, R. Curt Jahraus, David Buchanan, C. D. Monson, Karl Wegner, Guy Tam, James Reynolds, Richard Porter, Jay Hubner, Tom Krafka, James Jackson, N. R. Whitney, Richard Renka, Louis Hogrefe, James Wunder, Frank Alvine, and Robert Raszkowski. Also present was Dr. Jerald Schenken, member of the AMA Board of Trustees.

Dr. Lushbough moved to dispense with the reading of the minutes of the previous meeting inasmuch as they will be published. The motion was seconded and carried.

I. COMMENTS BY DR. JERALD SCHENKEN — Dr.
CNA's group medical malpractice program...good for the long term.

Is your group medical malpractice insurer financially sound? At CNA Insurance, our financial stability ranks among the highest in the industry. Making our group malpractice protection good now...and for the long term.

Our medical malpractice program is backed by Continental Casualty Company—one of the CNA Insurance Companies that has earned an A+ rating for financial strength from A. M. Best & Co., an independent rating service. We're also rated AAA by Standard & Poor's for our ability to pay claims. With our financial stability, we can support our commitment to one of the leading medical malpractice programs.

As a leader, we've come to specialize in protection for multi-specialty group practices of five or more physicians. This protection includes coverages tailored for your group practice, as well as for individual physicians within your group.

For group malpractice protection that's financially stable and good for the long term, contact your local CNA agent, or
CNA Insurance Companies
Professional Liability Division
CNA Plaza
Chicago, IL 60685
(312) 822-2229

The MGMA/AGPA endorsed Medical Group Practice Program is underwritten by Continental Casualty Company, one of the CNA Insurance Companies.
MINUTES OF THE
FIRST HOUSE OF DELEGATES MEETING

8:30 a.m. Lincoln, Jefferson, Roosevelt Friday, June 6, 1986 Howard Johnson Rapid City, South Dakota


Dr. Gere moved that the reports of the President, President-Elect, Vice President, Secretary-Treasurer, Chairman of the Council, Delegate and Alternate Delegate to the AMA, Speaker of the House, Councilor at Large, Executive Secretary and Councilors not be read and referred to the appropriate reference committee. The motion was seconded and carried.

Dr. Messner called for the introduction of resolutions from the district societies which have not been published in the handbook. Dr. Yecha read Resolution #3 regarding a pilot project to demonstrate cost effectiveness and quality care of Physician Extenders in long term care facilities in a rural state. The resolution was referred to Reference Committee #2, Reference Committee on Reports of Commissions on Medical Service, Legislation and Governmental Relations.

RESOLUTION #3

TO: House of Delegates
SDSMA

FROM: District #11

SUBJECT: Pilot project to demonstrate cost effectiveness and quality care of Physician Extenders (P.A.'s and N.P.'s) in long term care facilities in a rural state.
WHEREAS, the quality of care and cost effectiveness of Physician Extenders has been proven in the clinic and hospital setting, and

WHEREAS, a demonstration project evaluating this concept has been on-going for several years for the urban areas, and

WHEREAS, this demonstration project would not infringe on any physician’s practice, whether employing a Physician Extender or not, and

WHEREAS, no legislative changes would be required to facilitate the project, and

WHEREAS, this project is endorsed by the Nursing Home industry, S.D. Department of Health and S.D. Department of Social Services.

BE IT RESOLVED, that the SDSMA lend its support to this demonstration project and participate in its formulation with a physician representative.

Resolution amended at Second House of Delegates meeting. See Report of Reference Committee on Reports of the Commission on Medical Service and the Commission on Legislation and Governmental Relations.

Dr. Messner called for the introduction of resolutions from individual delegates. Dr. Dennis Johnson read Resolution #4 regarding ethical responsibilities of hospitals and attending physicians in the identification of organ/tissue donors. The resolution was referred to Reference Committee #4, Reference Committee on Reports of Special Committees and Miscellaneous Business.

RESOLUTION #4

TO: House of Delegates
FROM: Member Seventh District Medical Society
SUBJECT: Ethical responsibilities of hospitals and attending physicians in the identification of organ/tissue donors

WHEREAS, transplantation of organs and tissues is now routine and successful therapy for treatment of a number of diseases, and

WHEREAS, in order for the maximum number of South Dakota citizens to be helped, an adequate supply of donor organs/tissues must be available, and

WHEREAS, the hospital and attending physician are both crucial links in organ/tissue procurement, and

WHEREAS, surveys of families of deceased individuals who have donated organ/tissue indicate that the donation usually is viewed as a positive outcome of an otherwise tragic situation, and

WHEREAS, the membership of this organization feels that efforts to legislate medical-ethical responsibilities are both inappropriate and unnecessary, therefore be it

RESOLVED, that the South Dakota State Medical Association take steps to encourage hospitals to adopt standard procedures for identification and referral of potential organ/tissue donors, and be it further

RESOLVED, that the South Dakota State Medical Association formulate and disseminate guidelines regarding an attending physician’s ethical responsibilities to provide families of deceased individuals with the opportunity to consent or not to consent to organ/tissue donation.

At the Second House of Delegates meeting the resolution was referred to the Commission on Scientific Medicine and the Medical-Legal Committee for study. See Report of Reference Committee on Reports of Special Committees and Miscellaneous Business.

Dr. Messner referred Resolution #1 regarding a dues increase to Reference Committee #3, Reference Committee on Reports of Commissions on Scientific Medicine; Internal Affairs, Communications and Liaison; and Professional Liability.

RESOLUTION #1

TO: House of Delegates
FROM: South Dakota State Medical Association
SUBJECT: Dues Increase

WHEREAS, dues for the State Medical Association have remained the same since 1978 and,

WHEREAS, expenses for the operation of the State Medical Association have increased and projected reserves have decreased,

BE IT RESOLVED, that the House of Delegates of the South Dakota State Medical Association approve a dues increase of $50 to be effective January 1, 1987.

Resolution was adopted at Second House of Delegates meeting.

Dr. Messner referred Resolution #2 regarding physician reimbursement for conducting medicaid disability determination examinations to Reference Committee #4, Reference Committee on Reports of Special Committees and Miscellaneous Business.

RESOLUTION #2

TO: House of Delegates
FROM: Second District Medical Society
SUBJECT: Physician reimbursement for conducting medicaid disability determination examinations

WHEREAS, Second District Medical Society physicians have always provided quality medical care irrespective of the patients’ ability to pay, and

WHEREAS, physician reimbursement levels for federal and state entitlement programs have been frozen or reduced, and

WHEREAS, expenses for medical equipment, supplies, office staff, insurance and utilities have continued to increase,

BE IT RESOLVED, that the Second District Medical Society recommends that the South Dakota State Medical Association formally notify the Secretary, South Dakota Department of Social Services of our displeasure with the unfair and inappropriately low level of reimbursement for disability determination examinations and request a meeting with appropriate officials to discuss an adequate adjustment in said levels.

Resolution was amended at Second House of Delegates meeting. See the Report of the Reference Committee on Reports of Special Committees and Miscellaneous Business.

Dr. Messner referred Bylaw Revision #1 regarding requirements for honorary life membership to Reference Committee #3, Reference Committee on Reports of Commissions on Sci-
entific Medicine; Internal Affairs, Communications and Liaison; and Professional Liability.

BYLAWS REVISION #1

TO: House of Delegates
South Dakota State Medical Association

FROM: Council

SUBJECT: Bylaws revision regarding honorary membership

ARTICLE III Membership
Section 2. Categories

b: LIFE MEMBERS are those who meet all of the following requirements:
(1) have been members for a continuous term of ten years;
(2) are not engaged in the active practice of medicine;
(3) have been made an honorary or life member of their component society;
(4) have been elected a life member of this Association by a majority vote of its House of Delegates or of the Council between annual meetings (((()))) ; and one of the following requirements--
(1) are over-age 65;
(2) are incapacitated for work because of illness and immobility.

Life members may participate in the scientific assembly and receive the Journal of the Association, but shall not be required to pay membership dues, and each life or honorary member shall continue his relationship with his component society.

((( ())) = additions ------- = deletions

Bylaw revision adopted at Second House of Delegates meeting.

Dr. Messner made several announcements concerning the annual meeting schedule.

The meeting adjourned at 9:00 a.m.

MINUTES OF THE SECOND HOUSE OF DELEGATES MEETING
9:30 a.m. Washington Room Sunday Howard Johnson Rapid City, SD June 8, 1986


A quorum was present and the meeting was declared competent to proceed.

Dr. Messner introduced Dr. Jerald R. Schenken, member of the AMA Board of Trustees. Dr. Schenken reviewed what the AMA is doing for the physicians. He indicated the difference in the United States compared to the other western allied countries is the absolute commitment to the rights of the individual, quality of medical care, dignity of each person, and freedom for the doctor and the patient. A brief question and answer period followed.

Dr. Robert Allen read the report of the Reference Committee on Credentials, Resolutions and Memorials and Reports of Officers and Councilors.

REPORT OF THE REFERENCE COMMITTEE ON CREDENTIALS, RESOLUTIONS AND MEMORIALS AND REPORTS OF OFFICERS AND COUNCILORS


OFFICERS
President-Elect Robert Ferrell, M.D.
Vice President Frank Messner, M.D.
AMA Delegate Bruce Lushbough, M.D.
AMA Alternate Delegate Durward Lang, M.D.
Speaker of the House J. A. Eckrich, Jr., M.D.

COUNCILORS — 3 year terms

James Reynolds, M.D.
N. R. Whitney, M.D.
Jay Bachmayer, M.D.
James Larson, M.D.
R. Curtis Jahraus, M.D.
Richard Tschetter, M.D.
Karl Wegner, M.D.
Jay Hubner, M.D.
James Jackson, M.D.

COUNCILORS — 2 year terms

James Reynolds, M.D.
N. R. Whitney, M.D.

ALTERNATE COUNCILORS — 3 year terms

G. Robert Bartron, M.D.
M. R. Cosand, M.D.
K. Gene Koob, M.D.
Daniel J. Kennelly, M.D.

ALTERNATE COUNCILORS — 2 year terms

Rodney Parry, M.D.

Black Hills District #9
A. Byford Anderson, M.D.

ANNUAL MEETING SITE
1987 — Sioux Falls, SD, June 4, 5, 6, 7, 1987
1988 — Rapid City, SD, June 2, 3, 4, 5, 1988
1989 — Sioux Falls, SD, June 8, 9, 10, 11, 1989

Respectfully submitted,
NOMINATING COMMITTEE
Richard Porter, M.D., Chairman
Warren Redmond, M.D.
Parry Nelson, M.D.

COUNCILORS
Curtis Wait, M.D.
R. Curtis Jahraus, M.D.
David Buchanan, M.D.

Ernest Schabauer, M.D.

Bruce Vogt, M.D.

James Jackson, M.D.

Louis Hogrefe, M.D.

James Wunder, M.D.

Visvaldis Janavs, M.D.

Dr. Messner called for nominations from the floor. Dr. Gere moved to elect the officers, councilors and alternate councilors as submitted and to accept the report of the Nominating Committee. The motion was seconded and carried.

Dr. Messner introduced Dr. Jerald Schenken, member of the AMA Board of Trustees. Dr. Schenken reviewed what the AMA is doing for the physicians. He indicated the difference in the United States compared to the other western allied countries is the absolute commitment to the rights of the individual, quality of medical care, dignity of each person, and freedom for the doctor and the patient. A brief question and answer period followed.

Dr. Robert Allen read the report of the Reference Committee on Credentials, Resolutions and Memorials and Reports of Officers and Councilors.
WHEREAS, the Black Hills District Medical Society, the Black Hills District Auxiliary, the Watertown District Auxiliary, the Pierre District Auxiliary and the Whetstone Valley District Auxiliary members have been so thorough in making arrangements for the success of the combined meeting of our Annual Meeting.

BE IT RESOLVED, that the South Dakota State Medical Association extend its thanks and appreciation to the local physicians in the Black Hills District Medical Society and the members of the Black Hills District Auxiliary, the Watertown District Auxiliary, the Pierre District Auxiliary and the Whetstone Valley District Auxiliary.

WHEREAS, the management of the Howard Johnson Motor Lodge has been so cooperative in providing facilities for the success of the Annual Meeting of the South Dakota State Medical Association.

BE IT RESOLVED, that the South Dakota State Medical Association extend its thanks and appreciation to the Howard Johnson Motor Lodge.

WHEREAS, the Rapid City Journal, KOTA TV and radio, KIMM radio, KSQY radio and KKLS radio have been most cooperative in presenting the public news of the annual meeting of the South Dakota State Medical Association.

BE IT RESOLVED, that the South Dakota State Medical Association extend its thanks to the Rapid City Journal, KOTA TV and radio, KIMM radio, KSQY radio and KKLS radio.

WHEREAS, the Arrowhead Country Club has been most cooperative in providing facilities for the golf tournament and Thursday evening party and the Auxiliary luncheon on Saturday.

BE IT RESOLVED, that the South Dakota State Medical Association extend its thanks and appreciation to the Arrowhead Country Club.

WHEREAS, the Rapid City Trap Club has been most cooperative in providing facilities for the trap shoot on Thursday afternoon.

BE IT RESOLVED, that the South Dakota State Medical Association extend its thanks to the Rapid City Trap Club.

BE IT RESOLVED, that $50 be donated to the South Dakota Medical School Endowment Association in memory of the following physicians who died during the past year:

- Valdis Brakss, M.D.
- D. A. Gregory, M.D.
- Glen Heidepriem, M.D.
- R. F. Hubner, M.D.
- J. H. Lloyd, M.D.
- R. J. Ogborn, M.D.
- James Alexander, M.D.

The Committee wishes to extend its thanks and appreciation to the sponsors and their representatives for their support of the South Dakota State Medical Association's Annual Meeting. The Committee reviewed the reports of the officers and councilors and recommends they be accepted as submitted.
The Reference Committee considered Resolution #3 submitted by District #11 concerning a pilot project to demonstrate cost effectiveness and quality care of physician extenders in long term care facilities in a rural state. The Reference Committee recommends that the resolved section be amended as follows:

BE IT RESOLVED, that the South Dakota State Medical Association take an active interest in the formation of a demonstration pilot project and participate with physician representation, and

BE IT FURTHER RESOLVED, that the Council of the SDSMA refer this matter to the appropriate commission for further evaluation and action.

The Reference Committee recommended Resolution #3 be adopted with the above change.

Respectfully submitted,
REFERENCE COMMITTEE ON REPORTS OF THE COMMISSION ON MEDICAL SERVICE AND THE COMMISSION ON LEGISLATION AND GOVERNMENTAL RELATIONS
Dennis Johnson, M.D., Chairman
Tony Berg, M.D.
Richard Sample, M.D.

Dr. Monson moved to accept the report of the Reference Committee on Reports of the Commission on Medical Service and the Commission on Legislation and Governmental Relations. The motion was seconded and carried.

Dr. Guy Tam read the report of the Reference Committee on Reports of the Commission on Scientific Medicine; Internal Affairs, Communications and Liaison; and Professional Liability.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF THE COMMISSIONS ON SCIENTIFIC MEDICINE, INTERNAL AFFAIRS, COMMUNICATIONS AND LIAISON, AND PROFESSIONAL LIABILITY

The Reference Committee reviewed the report of the Commission on Scientific Medicine. The Reference Committee recommends acceptance of this report.

The Reference Committee reviewed the report of the Commission on Internal Affairs, Communications and Liaison. The Reference Committee recommends that the Doctor of the Day criteria be amended to delete the requirement that physicians serving in this capacity “feel comfortable in providing primary care.” The Reference Committee recommends that this report be accepted with this one change.

The Reference Committee reviewed the report of the Commission on Professional Liability. The Reference Committee recommends acceptance of this report.

The Reference Committee reviewed Bylaw Revision #1, concerning honorary membership requirements. The change proposed eliminates the requirements that the physician either be over 65 years of age, or is incapacitated because of illness or infirmity. The Reference Committee recommends the acceptance of this Bylaw revision.

The Reference Committee reviewed Resolution #1, which provided for a $50 dues increase, to be effective January 1, 1987. The Reference Committee recommends acceptance of Resolution #1.

Respectfully submitted,
REFERENCE COMMITTEE ON REPORTS OF THE COMMISSIONS ON SCIENTIFIC MEDICINE, INTERNAL AFFAIRS, COMMUNICATIONS AND LIAISON AND PROFESSIONAL LIABILITY
Guy Tam, M.D., Chairman
Thomas Huber, M.D.
Dale Gunderson, M.D.

Dr. Gere moved to accept the report of the Reference Committee on Reports of the Commissions on Scientific Medicine; Internal Affairs, Communications and Liaison; and Professional Liability. The motion was seconded and carried.

Dr. Jerome Freeman read the report of the Reference Committee on Reports of Special Committees and Miscellaneous Business.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF SPECIAL COMMITTEES AND MISCELLANEOUS BUSINESS

The Reference Committee has reviewed and recommends acceptance of reports from the Committee for Continuing Medical Education, the Grievance Committee, the Long Range Planning Committee, the South Dakota Political Action Committee noting that SoDaPAC received a $300 donation from the Aberdeen District Medical Society for their educational fund, the Board of Directors of the South Dakota Medical School Endowment Association, the Impaired Physicians Committee and the Medical-Legal Committee.

The Reference Committee recommends that Resolution #2 submitted by the Watertown District be amended as follows and that this amended resolution be adopted:

WHENAS, physicians in South Dakota are called upon by the Department of Social Services to conduct a comprehensive examination requiring a detailed narrative report for the purpose of disability determination, and

WHENAS, the recently instituted Medicaid reimbursement schedule is inappropriate to the physician’s costs in providing this service,

THEREFORE BE IT RESOLVED, that the Second District Medical Society recommends that the South Dakota State Medical Association formally notify the Secretary, South Dakota Department of Social Services, of our displeasure with the unfair and inappropriately low level of reimbursement for disability determination examinations and request a meeting with appropriate officials to discuss an adequate adjustment in said levels.

The Reference Committee recommends that Resolution #4 regarding organ/tissue donors be referred to the Commission on Scientific Medicine and the Medical-Legal Committee for study and that appropriate recommendations be submitted to the Council of the State Medical Association prior to the 1987 legislative session.

Respectfully submitted,
REFERENCE COMMITTEE ON REPORTS OF SPECIAL COMMITTEES AND MISCELLANEOUS BUSINESS
Jerome Freeman, M.D., Chairman
David Yeche, M.D.
Carol Zielike, M.D.

Dr. Pekas moved to accept the report of the Reference Committee on Reports of Special Committees and Miscellaneous Business. The motion was seconded and carried.

Dr. Gere presented the presidential medalion to Dr. Rossing. Dr. Messner administered the oath of office to Dr. William Rossing, the 1986-87 President. Dr. William Rossing addressed the House.

Dr. Messner introduced the new officers and councilors and recognized Dr. Gere for his outstanding service to the Association during the past year.

The meeting adjourned at 10:30 a.m.

PRESIDENTIAL OATH OF OFFICE

I SOLEMNLY SWEAR THAT I shall carry out the duties of the President of the South Dakota State Medical Association to the best of my ability. I shall strive constantly to maintain the ethics of the medical profession and to promote the public health and welfare. I shall dedicate myself and my office to improving health standards and to the task of bringing increasingly improved medical care to the people of South Dakota. I shall uphold the Constitution and Bylaws of the AMA and the South Dakota State Medical Association. I shall champion the
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cause of freedom in medical practice and freedom for all my fellow Americans.

I do solemnly swear that I will discharge the duties of this office to the best of my ability, so help me God.

REPORT OF THE PRESIDENT AND
CHAIRMAN OF THE EXECUTIVE COMMISSION

During the past year I have attended all of the meetings of the Council, Executive Commission, regional, and national meetings. On all levels the dedication to medical care is evident.

With Bob Johnson and our delegates to the AMA, I attended both the Annual and Interim meetings of the AMA. I continue to be impressed with the effort everyone puts forth. These are really working meetings. Along this same line our association with the North Central Conference continues to be very beneficial. If you haven't attended the fall meeting of the North Central Conference I recommend doing so, as it is very informative.

I was fortunate to be able to visit all of the Districts and found it very enjoyable. To renew friendships, discuss problems and exchange ideas was very worthwhile, after all the Districts are the grassroots of our organization.

For the most part I feel that the 1986 legislative session was successful. We had a very difficult legislative package to lobby. My sincere thanks to Lorin Pankratz who spearheaded our lobbying efforts.

Probably the most notable accomplishment that occurred during the year was the introduction of DAKOTACARE. We were second in the nation to start a statewide IPA-HMO. The physicians of the state are to be congratulated for their support and efforts to make it a success. Many other state medical associations are now hastening to follow our lead.

I was pleased with the way physicians of the state came forward with their support of Dean Bob Quinn and the medical school when it was needed.

The Executive Commission met with the South Dakota State Hospital Association Executive Committee as it does each year. With the changes in administering health care I am sure these meetings will continue and probably be more controversial.

I would like to thank President Shirley Ryan and the SDSMA Auxiliary for their continued and valued support. It is greatly appreciated.

Lastly, my sincere and grateful thanks to Bob Johnson and the very able, capable and willing staff of the South Dakota State Medical Association. It would be difficult, if not impossible, for us physicians to attend to the business of our organization without this outstanding group.

Respectfully submitted,
R. G. Gere, M.D.
President and Chairman
Executive Commission

The Reference Committee reviewed the report of the President and Chairman of the Executive Commission and recommended it be accepted as submitted.

REPORT OF THE PRESIDENT-ELECT

The past year has been relatively quiet for this specific office, due in large part to the efficient and attentive work of Dr. Gere as your president, and his continued good health. I have not been required to substitute for him in any specific capacity, and have not replaced him in the attendance at any scheduled functions or national meetings. I have, however, attended all meetings of the House of Delegates, Council and the Executive Commission throughout the year, and additionally have served as a member of the newly organized board of directors of the South Dakota Physicians Health Group. After a year of organizational activity and planning with the new IPA sponsored by the SDSMA, it is exciting to see tangible evidence of the project as the initial marketing of this product is launched. By virtue of my residence in Sioux Falls, I have had ample opportunity to interact with the media representatives relative to topics of joint physician-public interest.

I anticipate a busy and exciting year ahead and look forward to serving as your president during this venturesome period with the ever capable assistance of your Association staff and executive director, Mr. Johnson.

Respectfully submitted,
William O. Rossing, M.D.
President-Elect

The Reference Committee reviewed the report of the President-Elect and recommended it be accepted as submitted.

REPORT OF THE VICE PRESIDENT

The activity of the Vice President of the South Dakota State Medical Association during this past year has involved the organizational activities of the governing system of the medical association, the development of statewide health assurance organization and efforts involved in the development of and passage of elements of a legislative package to help relieve our statewide liability crisis. I have attended the meetings of the council, the Executive Commission and the Board of Directors of the above mentioned health assurance organization.

I would like to thank the association membership for allowing me to participate in this manner and sincerely hope that I have performed in an acceptable manner.

Respectfully submitted,
Robert L. Ferrell, M.D.
Vice President

The Reference Committee reviewed the report of the Vice President and recommended it be accepted as submitted.

REPORT OF THE SECRETARY-TREASURER

This has been a historic year for the State Medical Association.

We are developing DAKOTACARE which has already become the envy of other state medical associations and of considerable interest as a basis for starting their own HMO’s. Many bills in the legislature have been passed in the area of malpractice which should aid us considerably.

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For the past ten years, there has been no dues increase. Even though our treasury is strong, we must have sufficient capital to gain further inroads into resolving crises which are certain to come. A dues increase will most likely be on the agenda at the State Convention.

Your Secretary-Treasurer has attended all the numerous council and executive meetings and has hopefully represented the majority opinion in all cases. We feel that the State Medical Association is continuing to grow both as a political force and as an instrument to further take care of the medical needs of the people of South Dakota.

Respectfully submitted,  
M. G. Thompson, D.O.  
Secretary-Treasurer

The Reference Committee reviewed the report of the Secretary-Treasurer and recommended it be accepted as submitted.

REPORT OF THE CHAIRMAN OF THE COUNCIL

During the years of 1985 and 1986, the Council of the South Dakota State Medical Association met at regularly scheduled intervals. The two most important topics which were discussed and dealt with at council meetings throughout this time period were: 1) The formation of a nonprofit open panel HMO sponsored by the State Medical Association which has become known as DAKOTACARE and which has been successfully launched and seems to be doing quite well as an alternative health insurance product for the citizens of the state of South Dakota. This has been a unique venture as far as the rest of the United States is concerned and is being copied by quite a few other State Medical Societies throughout the United States in a continuing effort by medicine to both try to control health care costs and guarantee the quality of health care to their patients; 2) The second topic which occupied quite a bit of time for the Council of the State Medical Association was our attempts to deal with the malpractice insurance crisis which has faced all of us during the past several years. A medical tort reform package was put together under the direction and help of Mr. Bob Johnson and was submitted to the State Legislature for its consideration at its last legislative session. We were fairly successful in our endeavors to gain some meaningful change in tort reform in the state of South Dakota which hopefully will be reflected in the malpractice insurance premiums that we are all forced to pay.

We will continue to be faced by various outside influences from both third party insurance carriers and by both local and federal governmental bureaucratic agencies which will continue to impact the practice of medicine as regards both the quality of patient care and cost of patient care.

The commission chairmen and members of the State Medical Association who serve on commissions do a tremendous amount of work during the year and enable the Council to more efficiently face the problems that need to be dealt with at each council meeting. These individuals must be commended for their work and diligence in handling the vast amount of material which needs to be dealt with throughout the year.

The Council of the State Medical Association continues to enjoy complete support of our high quality staff at the offices of the State Medical Association headed up by Robert Johnson, our Executive Secretary. I personally wish to thank Mr. Johnson and his wonderful staff for all the hard work that they have accomplished throughout the year as the council has dealt with the many difficult problems.

Respectfully submitted,  
Michael Pekas, M.D.  
Chairman of the Council

The Reference Committee reviewed the report of the Chairman of the Council and recommended it be accepted as submitted.

REPORT OF THE AMA DELEGATE

It has been my pleasure this year to represent the South Dakota State Medical Association at the interim meeting in Chicago, Illinois, and at the annual meeting in Washington, D.C.

The meeting in Washington, D.C. was of particular importance because of the opportunity to visit with the South Dakota legislators and to present issues that confront South Dakota to them for their consideration. The issues coming before the AMA may have been reported to you in the report from the delegate and the alternate delegate from both the annual and the interim meeting. The halls of Congress continue to be the arena in which the rights of patients and the rights of physicians are being fought and the greatest tool we have in this regard is the force of a unified American Medical Association. It continues to be of grave importance for all physicians to belong to local and state medical associations and the American Medical Association.

Since our last report a year ago HMOs have not only become far more prevalent but an IPA-HMO has originated in South Dakota as one of the first State Medical Association sponsored IPA-HMOs in the United States. The great help of the South Dakota State Medical Association staff and Executive Secretary in this regard as well as at our AMA meetings, continues to be one of our strongest points.

The major issue that will continue to face each of us individually and the American Medical Association collectively is the health care delivery systems which are merging not only in our state but throughout the country.

To have some control of our destiny in the future we must continue with unified support of both local, state and American Medical Association.

It has been my privilege to serve as your delegate during the past year. It has also been a distinct pleasure to have Bruce Lushbough, M.D., the alternate delegate, at the meetings as well as the Executive Staff of the American Medical Association Staff and the other members of the South Dakota State Medical Association who have been present at both the interim and annual meetings.

If there are any questions in reference to South Dakota’s representation or the issues that are at hand at the American Medical Association level, I would be very happy to give a copy of all the minutes to the meetings to anyone or discuss any issue on an individual basis.

Respectfully submitted,  
G. E. Tracy, M.D.  
Delegate to the AMA

The Reference Committee reviewed the report of the AMA Delegate and recommended it be accepted as submitted.

REPORT OF THE AMA ALTERNATE DELEGATE

I have attended the meetings of the Council and Executive Commission held during the past year as well as the annual and interim meetings of the American Medical Association and the North Central Medical Conference.

I am finding that the changes in medicine are a greater challenge to those of us who represent physicians at the state and national levels, almost on a daily basis. We need to remain in communication with each other through our State Association in order to best serve our patients with quality medical care in the future.

Respectfully submitted,  
Bruce C. Lushbough, M.D.  
AMA Alternate Delegate

The Reference Committee reviewed the report of the AMA Alternate Delegate and recommended it be accepted as submitted.

REPORT OF THE SPEAKER OF THE HOUSE

I am looking forward to presiding at the upcoming meeting of the House of Delegates at the State Medical Convention in Rapid City.

I appreciate the help and support of the people responsible for the preparation of this meeting. I particularly wish to thank all the physicians who have agreed to participate in the reference committees and especially the chairmen of those committees.

The active participation through the reference committee system is important to the issues and both enhances and speeds the work of the House of Delegates.

As Speaker of the House I have attended the scheduled Coun-
council meetings and participated with the Executive Commission.

Respectfully submitted,
Frank D. Messner, M.D.
Speaker of the House

The Reference Committee reviewed the report of the Speaker of the House and recommended it be accepted as submitted.

REPORT OF THE COUNCILOR AT LARGE

It has been my privilege to serve the past year as Councilor at Large. I have attended all the meetings of the Council and Executive Commission and have continued to be very pleased with the officers, councilors and delegates. Your continued support of your Medical Association during these trying times will ensure the continued high standards of medical care in South Dakota.

Respectfully submitted,
Howard L. Saylor, Jr., M.D.
Councilor at Large

The Reference Committee reviewed the report of the Councilor at Large and recommended it be accepted as submitted.

REPORT OF THE EXECUTIVE SECRETARY

This past year has been one with many changes. Your House of Delegates, officers and councilors have watched changes evolve in the delivery and financing of health care and realized that the Association had to grow and change to keep pace. With this in mind they created a state-wide HMO, the Physicians Health Group. This should put our Association and you, the physicians, in on the ground floor to meet competition within South Dakota. Nationwide, many state associations are looking at establishing similar companies. Insurance companies are purchasing HMOs, hospital chains are developing their own systems and large corporations are becoming more involved in both the cost factor and delivery of health care. We are fortunate to have leadership with foresight enabling us to be one of the first to face the challenge from outside and to implement viable solutions.

Throughout the year Dr. Gere and I have visited the various district societies. It has been a pleasure visiting with so many of you, sharing our concerns for the future of medicine and hearing of all the community and health related activities in which you are involved. Your involvement is noted by the public and certainly projects a good image for organized medicine as well as individual physicians. It is particularly gratifying to see increased interest in the political process through support of individual candidates and membership in SoDaPAC and AMPAC. This, being an election year, offers an opportunity for medicine to assure that our voice will be heard, both at the state and national level, and I encourage you to continue and expand your involvement.

Each year we propose a limited legislative package to the State Legislature, and each year the number of bills affecting medicine seems to increase considerably. For the 1986 session our priority was on legislation which would alleviate professional liability problems. While we were not 100 percent successful, we did get a majority of our bills passed. Since these are explained in the report of the Council on Legislation and Governmental Relations, I will not review them in depth. We continue to see legislation from allied health professionals to expand their scope of practice and to make them an integral part of the health care delivery and reimbursement systems. This type of legislation has increased in the past three years and I believe it will continue to escalate with the use of extensive marketing techniques and continuing competition for health care dollars. Recently we have seen chiropractors apply for membership on hospital staffs. At a meeting last month in South Dakota an attorney speaking to the chiropractors projected they will have these privileges within the next five years, and I believe a concerted effort will be made in upcoming legislative sessions to change the laws to allow this.

You will notice one of our resolutions asks for a $50 dues increase effective in 1987. This recommendation from the Executive Commission and Council was made following careful consideration with the belief that your Association must remain financially sound. Recognizing that physicians are facing the same economic downturns as the public but realizing that organized medicine is being challenged more than ever, the Council unanimously voted to submit a request for the $50 dues increase to the House. This increase which will be the first in nine years would be allocated only for professional activities of the Association and not for DAKOTACARE.

The business of the Association has been handled most capably by your commissions, committees, and council. Their thoughtful consideration and concern for the medical profession has established direction to meet our Association’s goals. You have been most ably represented both state-wide and nationally by Dr. Gere; and I sincerely appreciate working and traveling with him and his lovely wife, Marge. Indeed this has been a banner year for the Association and this could not have occurred without the dedication and participation of you, the membership.

Respectfully submitted,
Robert D. Johnson
Executive Secretary

The Reference Committee reviewed the report of the Executive Secretary and recommended it be accepted as submitted. The Committee also recognized the superb and outstanding work and ability of Bob Johnson, the Executive Secretary, and his staff during this past year in conducting the business of the South Dakota State Medical Association.

OMAHA MID-WEST CLINICAL SOCIETY

54th ANNUAL POSTGRADUATE ASSEMBLY

OCTOBER 27, 28 and 29, 1986

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FOR INFORMATION CONTACT

Lorraine Seibel
Omaha Mid-West Clinical Society
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Omaha, Nebraska 68114
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REPORT OF THE FIRST DISTRICT COUNCIL

The First District Medical Society held regular monthly meetings during the 1985-1986 season. The September meeting combined the Medical Society and the Brown County Bar Association discussing "Professional Code of Ethics." In October Dr. Fred Lovrien, an endocrinologist, spoke on "Care of the Diabetic." The November meeting featured Dr. Marilyn Joseph from the University of Minnesota speaking on "Pelvic Inflammatory Disease."

A Christmas party was held at the home of Dr. Mark Harlow. Newly elected officers were:

- President: Dr. Warren Redmond
- Vice-President: Dr. Phyllis Heinemann
- Secretary-Treasurer: Dr. Robert Suurmeyer

The February speaker was Dr. Richard Gere, President of the South Dakota Medical Society, speaking on "The Medical School Funding Crisis and DAKOTACARE." In March, Dr. Peter Letendre spoke on "A Clinical Use of Transdermal Nitroglycerin." The April meeting featured Drs. Barry Welge and Robert Suurmeyer discussing "Clinical Use of 2-D Echocardiography."

The newly elected delegates are as follows:

- Delegates: Dr. Warren Redmond, Dr. Charles Welge, Dr. John Hastings
- Alternate Delegates: Dr. Alfred Shousha, Dr. Kenneth Bartholomew, Dr. Robert Suurmeyer

The newly elected councilor is as follows:

- Councilor: Dr. Jay Bachmayer
- Alternate Councilor: Dr. James Alexander

Nominated to the Nominating Committee was Dr. Warren Redmond.

Respectfully submitted,
J. A. Eckrich, Jr., M.D.
G. H. Steele, M.D.
Councilors, First District

The Reference Committee reviewed the report of the Councilors from the First District Medical Society and recommended it be accepted as submitted.

REPORT OF THE SECOND DISTRICT COUNCIL

The Second District Medical Society met on the first Tuesday of each month from September to May, 1985-1986.

Pursuant to the usual format of the Second District, issues of socioeconomic impact were the topics of the reports at each monthly meeting.

In September along with our spouses, we enjoyed a presentation from the University of South Dakota Medical School regarding the first ten years and also a presentation from the University of South Dakota Alumni Foundation.

In January we had the honor of entertaining seven of the legislators from Northeast South Dakota prior to the legislative session. Officers for the 1986-87 year were elected in December and included Dr. Douglas Traub, President; Dr. Ed Wegner as Vice-President; Dr. Gerald Tracy as Secretary/Treasurer.

In April we were honored by the President of the South Dakota State Medical Association, Dr. Richard Gere, who furnished us, along with Bob Johnson, with a legislative update.

We are looking forward in May to a report from Dave Gerdes about the malpractice situation.

Respectfully submitted,
James C. Larson, M.D.
Councilor, Second District

The Reference Committee reviewed the report of the Councilor from the Second District Medical Society and recommended it be accepted as submitted.

REPORT OF THE THIRD DISTRICT COUNCIL

The Third District has continued to have regular meetings during this year with the District holding the following meet-
spoke on the changes facing medicine and the new DAKOTACARE insurance plan.

Dr. Ted Hohm of Huron was honored on his retirement and was made an honorary member of the district society.

The election of officers took place and those officers are:

President: George Nicholas, M.D.
Vice President: Hiroo Kapur, M.D.
Secretary-Treasurer: Ted Hohm, M.D.
Censor: Robert Hohm, M.D.

The final meeting was held in Huron on March 19, 1986 and was hosted by the USD Alumni Foundation. In attendance were Dr. L. Amundson and Dr. Bruce Lushbough.

New members for this year are:

Al Stalheim, M.D. Surgeon
Steve Neu, M.D. Nephrologist

Both of these new members are practicing with the Tschetter-Hohm group in Huron. Dr. Mary Austin is now practicing in Wessington Springs and has been a guest of the district society.

We are proud of Dr. Robert Bell of De Smet, S.D. who will be residing in Vermillion in May as the Distinguished Alumnus of the Year at his 35th class reunion.

Respectfully submitted,
David Buchanan, M.D.
Councilor, Fifth District

The Reference Committee reviewed the report of the Councilor from the Fifth District Medical Society and recommended it be accepted as submitted.

REPORT OF THE SIXTH DISTRICT COUNCILOR

The Sixth District of the South Dakota State Medical Association met several times during 1985 with good attendance at each meeting.

Speakers during the year at the meetings were Dr. Elson speaking on the “South Dakota Colon-Rectal Cancer Screening Program”; Dr. Virginia Johnson speaking on “Prenatal Diagnosis of Genetic Disorders”; Drs. Visani and Bhat speaking on “Enteric Fistula”; Dr. Gere; Bob Johnson speaking on the importance of being a member of the AMA; and Drs. Hockett and Heth.

Throughout the year, once again, attention was focused on improving the rapport and cooperation among all the district’s members and keeping abreast of political issues. Another topic of importance is the HMO which if adopted will be the state’s new insurance program.

The Sixth District Society meetings also include spouses of its members and concludes with the usual social and relaxation aspect.

Respectfully submitted,
Charles D. Monson, M.D.
Councilor, Sixth District

The Reference Committee reviewed the report of the Councilor for the Sixth District Medical Society and recommended it be accepted as submitted.

REPORT OF THE SEVENTH DISTRICT COUNCILORS

President: Jerry Freeman, M.D. (Neurology)
Secretary: Bruce Vogt, M.D. (Family Practice)

Our officers continue to provide us with capable and able leadership during a very challenging time for the practice of medicine, both politically and economically. The usual meeting times for District 7 are in the months of September through May and fall on the first Tuesday of every month except for our October meeting which is usually hosted by Theodore Angelos, M.D., Family Practice, at the Canton Country Club which includes a pheasant dinner with all the trimmings, following an afternoon on the golf course. The usual program at that meeting is a town and gown session with the Medical School when mutual concerns can be discussed in an atmosphere of conciliation, fellowship and good will.

We always look forward to our traditional annual meeting by the President of the South Dakota State Medical Association and Mr. Robert Johnson, during which time subjects of topical interest to the 7th District are discussed. This year the major topic of discussion was concerned with DAKOTACARE, the State Medical Association’s open panel HMO insurance product. Many questions concerning the members of the 7th District were answered at this meeting. Mr. Robert Johnson, our executive secretary, also meets with us after the legislative session to discuss what has happened during the legislative session as it impacts medicine. He also discusses legislative plans that the Medical Association has concerning the legislative session prior to the onset of the session, usually in conjunction with our meeting with the president of the State Medical Association.

The second meeting is one in which the 7th District hosts a get-together for the members of the Sioux Falls Chamber of Commerce. This meeting has been very valuable and it has provided a bridge between the medical community and business community as a meeting in which again common concerns can be shared and potential barriers and communication between ourselves and our legislators and opens up avenues of communication that can be utilized if necessary during the legislative session.

This year the 7th District Medical Association and the 7th District Auxiliary agreed to become sponsors for the annual United Way kick-off event for Sioux Falls, South Dakota. This is something that has never been done before and received national attention from both the American Medical Association and the Auxiliary of the American Medical Association. The amount of work that the Auxiliary did in providing support for and putting on this large kick-off media event was incredible and they cannot be praised enough for what they did and how hard they worked. The general overall response from the business community and the community at large was overwhelmingly positive. It would be nice to see other district medical associations become involved in this manner in the United Way campaign. Dr. Richard Friess (Family Practice) was the chairman of this year’s United Way Campaign and deserves a lot of credit for involving the 7th District in his United Way campaign structure and for providing us with the opportunity to participate.

The 7th District membership would like to congratulate Dr. Richard Gere on an effective presidency and leadership of the State Medical Association for the past year. This has been a very busy and difficult year for the State Medical Association and Dr. Gere has demonstrated outstanding leadership during this past year during which many difficult decisions and problems had to be dealt with.

Respectfully submitted,
Michael Pekas, M.D.
John Ochsner, M.D.
Richard Tschetter, M.D.
Guy E. Tam, M.D.
Lowell Hyland, M.D.
James Reynolds, M.D.

Councillors, Seventh District

The Reference Committee reviewed the report of the Councillors from the Seventh District Medical Society and recommended it be accepted as submitted.

REPORT OF THE EIGHTH DISTRICT COUNCILOR

The District VIII Medical Society met three times during the 1985-86 year. The first meeting was held on October 23, 1985. This was called to order by the president of the District, Dr. Herb Saloum, who introduced the State Medical Association
President, Dr. Richard Gere. Dr. Gere had some very timely comments regarding the professional liability situation in South Dakota and also gave an overview of the DAKOTACARE HMO proposition which was quite informative.

Following this, Mr. Robert Johnson, the Executive Secretary of the State Medical Association, along with Dr. Gere and Mr. Dennis Duncan, an attorney representing the South Dakota State Medical Association, had a panel discussion that was indeed stimulating.

The District VIII Medical Society again met on December 11, 1985, to which the legislators from the surrounding area had been invited to attend. Legislators in attendance included Tim Johnson from Vermillion, Ronald Chicoine from Elk Point, Elmer Bietz from Tripp, Edward Van Gerpen from Avon, Loren Anderson from Yankton, George Means from Yankton, and Albert Kocer from Wagner.

The legislators were given an overview of the legislative concerns and possible solutions that the physicians from District VIII had. This was presented by Drs. John Willcockson, Duane Reaney, Frank Messner and R. I. Porter.

The Society again met on January 15, 1986. An informative slide presentation of the first 10 years of the University of South Dakota School of Medicine was shown. A question and answer period followed. New members taken into the Society at that time were Dr. John Frank, Dr. Robert Gutekunst, Dr. Louis Heck, Dr. Jo Marie Neubauer, and Dr. Sanjeevi Giridhar.

Also, election of state officers was carried out at that time.

Councilors Dr. Jay Hubner Dr. Richard Porter Alternate Councilors Dr. John Sternquist Dr. Duane Reaney

Delegates Dr. Dale Gunderson Dr. Herb Salouns Dr. Morris Radaek Dr. Kenneth Halverson

Alternate Delegates Dr. Theodore Sattler Dr. Duane Reaney Dr. David Smith Dr. Robert Foley

District offices were as follows:

President Dr. David Smith

Vice-President/ Treasurer Dr. Julie Stevens

Secretary Dr. Steve Krause

Respectfully submitted,
R. I. Porter, M.D.
J. W. Hubner, M.D.

Councilors, Eighth District

The Reference Committee reviewed the report of the Councilors from the Eighth District Medical Society and recommended it be accepted as submitted.

REPORT OF THE NINTH DISTRICT COUNCILORS

During the past twelve months the Black Hills District has met seven times, as follows:

May 9, 1985 — "Advance Discussion of DAKOTACARE Proposal," by Dr. Howard Saylor, Mr. Paul Jensen and Mr. Bob Johnson.

July 18, 1985 — Meeting with spouses at Arrowhead Country Club — no scientific program.

September 24, 1985 — Official visit by Dr. Richard Gere and Mr. Johnson to our district.

November 7, 1985 — "Teachera Space," by Dave Marquet — physical training for astronauts.

December 12, 1985 — Meeting with spouses at Arrowhead Country Club with dancing to D. D. & the Pharaohs. Appreciation to Jackie Slingsby for arrangements.

February 6, 1986 — "Pharmacology Update," by James Scherrer, Ph.D.

April 3, 1986 — "Newer Therapeutic Approaches to Cardiovascular Disease," by Oscar Carretero, M.D.

Another meeting is scheduled for May 29, 1986.

The 1985-86 Directory lists 141 active and 15 honorary members from our district. Since then, we have added 16 active members, 4 more pending, and 5 active members have moved to honorary status.

New honorary members: Clayton Behrens, M.D.

Ray Boyce, M.D.

Robert Branch, M.D.

Douglas Cameron, M.D.

Jaroslav Zanka, M.D.

With sorrow we report the deaths of two physician members: Glen Heidepriem, M.D. and George Wood, M.D.; and one Auxiliary member: Donna (Mrs. Edward) Ruud.

Officers for 1986:

President J. Geoffrey Slingsby, M.D.

Vice-President Carol Zielike, M.D.

Secretary-Treasurer N. R. Whitney, M.D.

Executive Comiumission Richard Renka, M.D.

The NINTH District Councilors, and recommended it be accepted as submitted.

Physicians Needed

General Surgeon, OB/Gyn and Internist, to join seven doctor family practice clinic in Cloquet, MN, a community of 12,000 (30,000 service area), located 20 minutes from Duluth-Superior. Clinic facility is located one block from modern, well equipped 77-bed hospital. Cloquet enjoys a stable economy (forest products). Additionally, our community is noted for its excellent school system. First year salary guarantee, paid malpractice, health and disability insurance, vacation and study time.

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REPORT OF THE TENTH DISTRICT COUNCILOR

The Rosebud District Medical Society held their annual meeting on January 14, 1986, in Gregory, South Dakota. Newly elected officers for the coming year are:

President: Melanie Webb, D.O.
Vice-President: Tony Berg, M.D.
Secretary-Treasurer: Louis Hogrefe, M.D.
Delegate: Tony Berg, M.D.
Alternate Delegate: R. G. Nemer, M.D.
Councilor: Louis H. Hogrefe, M.D.

Present for the program was Dr. Richard Gere extending his presidential visit.

The Reference Committee reviewed the report of the Councilor from the Tenth District Medical Society and recommended it be accepted as submitted.

REPORT OF THE ELEVENTH DISTRICT COUNCILOR

During the past year, six meetings of the Eleventh District Medical Society were held. At these meetings, business sessions were conducted as needed. The scientific sessions were presented by the following consultants:

1. October 17, 1985 — Adrian Holmquist, M.D., Professor of Medicine, University of Minnesota, presented a session on “Ventricular Arrhythmias.”
2. November 21, 1985 — Walter Frank, M.D., presented a topic on “New Approaches to Ischemic Heart Disease.”
3. January 13, 1986 — The annual meeting with the SDSMA president and executive secretary, South Dakota State Medical Association, was held in Mobridge discussing upcoming legislation with regard to the medical profession prior to the legislature meeting in Pierre. Discussion was also held on DAKOTACARE.
4. January 16, 1986 — Program on current concepts of cardiology was conducted by Dr. Ben Henderson.

During the March meeting in 1986, new officers for the society were elected and are as follows:

President: Ben Henderson, D.O.
Vice-President: J. D. Collins, M.D.
Secretary: L. M. Linde, M.D.
Delegate: David Yech, M.D.
Alternate Delegate: L. M. Linde, M.D.
Nominator: James Wunder, M.D.
Committee Member: James F. Wunder, M.D.

The Reference Committee reviewed the report of the Councilor from the Eleventh District Medical Society and recommended it be accepted as submitted.

REPORT OF THE TWELFTH DISTRICT COUNCILOR

During the past year there were three meetings of the Twelfth (Whetstone Valley) District Medical Society. The business sessions were conducted in addition to scientific presentations.

The March meeting was held at Webster, South Dakota. The scientific program was presented by a representative of the C. Pfizer Company.

The August meeting was in Rosholt, South Dakota. The SDSMA President, Dr. Richard Gere, and the Executive Secretary of the SDSMA, Robert Johnson, were present. Dr. Gere reported on the establishment of an HMO (IPA) in connection with the SDSMA.

The last meeting was held in November at Milbank, South Dakota. Representatives of the Ciba/Geigy Co. presented a symposium on “Stress, Cardiovascular Disease and Sudden Cardiac Death.”

Respectfully submitted,
V. Janavs, M.D.
Councilor, Twelfth District

The Reference Committee reviewed the report of the Councilor from the Twelfth District Medical Society and recommended it be accepted as submitted.

REPORT OF THE COMMISSION ON LEGISLATION AND GOVERNMENTAL RELATIONS

The Commission on Legislation and Governmental Relations met twice in 1985. It met jointly with the Commission on Professional Liability on Thursday, September 5, 1985, and again on November 13, 1985. The emphasis this year of the Commission on Legislation & Governmental Relations involved the Professional Liability Legislative Package. The Commission on Professional Liability and the Commission on Legislation & Governmental Relations recommended to the Council of the State Medical Association that the following four parts to the Professional Liability Package be introduced to the 1986 legislature:

1. Mandatory offset of collateral sources. This bill would have required payments made on behalf of a plaintiff for hospital, medical, disability income, workmen’s compensation, etc. to be subtracted from any malpractice award. This would eliminate duplicate payments and avoid windfall profits to plaintiffs.
2. Mandatory periodic payments or structured settlements. This bill would provide that all accrued special damages would be paid in a lump sum at the time of entering a judgment. (Special damages would include hospital bills, medical bills, and lost earnings). All general damages and future special damages would be paid out on the basis of periodic payments.
3. Cap on all liability damages. This legislation would place a maximum liability of $500,000 on any malpractice action.
4. Elimination of punitive damage awards. This legislation would eliminate any punitive damage legislation.

In addition to the legislative package, other legislative matters were discussed with the following recommendations:

SUPPORTED LEGISLATION

a. The Commission recommended to the Council that the South Dakota State Medical Association support the auxiliary’s efforts in the passage of legislation allowing a penalty for noncompliance of the seat belt law.
b. The Commission recommended to the Council that the South Dakota State Medical Association support legislation to be introduced by the South Dakota Hospital Association providing a patient legal recourse if the patient is harmed as a result of poor peer review procedures by an insurance company.
c. It was recommended to the Council that the South Dakota State Medical Association reaffirm its support of a bill providing for reimbursement for the medical examinations of rape victims.
d. The Commission recommended that the South Dakota State Medical Association reaffirm its support for the Coroner’s Bill defining the duties of the Coroner and establishing the office of the State Coroner under the control of the attorney general.
e. The Commission recommended to the Council that the South Dakota State Medical Association support No Smoking Legislation if it is introduced in the 1986 legislature.
f. The Commission recommended to the Council that the South Dakota State Medical Association introduce legislation allowing medical doctors in South Dakota to treat minors for birth control, drug and alcohol addiction without parental consent.
OPPOSED LEGISLATION

a. It was recommended to the Council that the South Dakota State Medical Association continue its opposition to licensure of radiologic technicians until the issue of rural coverage and education be addressed.

b. The Commission recommended to the Council that the South Dakota State Medical Association continue its present position and vigorously oppose legislation that would allow optometrists to prescribe therapeutic drugs.

c. The Commission recommended to the Council that the South Dakota State Medical Association oppose any bill that would allow independent practice status to physical therapists without physician referral.

d. The Commission recommended to the Council that the South Dakota State Medical Association oppose any legislation that would allow for independent billing by nurse anesthetists.

e. The Commission recommended to the Council that the South Dakota State Medical Association vigorously oppose legislation relating to certificate of need for major medical equipment, free standing emergency centers, and ambulatory surgical centers.

f. The Commission recommended to the Council that the South Dakota State Medical Association vigorously oppose any legislation introduced which would repeal current state rules which prohibits chiropractors from being granted hospital staff privileges.

Several other items of interest were discussed without a recommendation to the Council of the State Medical Association. These included the reimbursement of physicians for services rendered to emergency patients under the county poor relief statutes. At present South Dakota law mandates hospital bills to be paid by the county for indigent care; however, doctor bills may be paid but it is not required by law. Living will legislation was discussed with no position taken. It was recommended that no position be taken on legislation to raise the legal drinking age to 21. Finally it was recommended that no position be taken if legislation is introduced for the licensure of occupational therapists. The Secretary of Health appeared before the commission and discussed the AIDS crisis and the various federal and state legislation being passed in this area. The Commission recommended to the Council that an AIDS ad hoc committee be appointed by the Council and that the State Health Department be notified of this committee and its willingness to work together with the State Health Department in formulating legislation concerning the AIDS problem.

The status of nurse midwives was discussed. It was recommended by the Commission to the Council of the State Medical Association that this item be referred to the South Dakota State Board of Medical and Osteopathic Examiners with a recommendation that nurse midwives not be licensed unless their contracts specifically require direct on-site supervision during the delivery process.

The Council of the South Dakota State Medical Association on November 22nd accepted the recommendation of the Commission on Legislation & Governmental Relations with the following exceptions:

1. The legislation on radiologic technicians was referred to the Executive Commission for their consideration after publication of rules by HCFA are reviewed. In addition an ad hoc committee was appointed to review this legislation and make recommendations to the Executive Commission.

2. The Council accepted the recommendation of the Commission to oppose legislation relating to CON for major medical equipment, free standing emergency centers, and ambulatory surgery centers. Proposed legislation relating to CON thresholds for review of new institutional health services was supported.

3. The recommendation on the 21 year old drinking age was changed to supporting this legislation since alcohol and drug abuse is a leading problem in our society and alcohol abuse contributes to the death and injury of many of our young people.

4. The Council accepted the recommendation of the Commission on the professional liability legislative package. In addition the Council included as part of the professional liability legislative package a bill correcting the clerical error on the statute of limitations for minors bills.

Because of the extensive legislative agenda, the legislative package was prioritized by the Commission and accepted by the Council of the State Medical Association. Priority of legislation was as follows:

1. Introduction and passage of the professional liability package.

2. Opposition and defeat of legislation regarding optometrists, chiropractors, physical therapists, and certificate of need legislation.

FINAL LEGISLATIVE OUTCOME

Professional Liability Legislative Package.

1) Mandatory offset of payment of collateral sources — Killed on Senate floor, then attempted to amend it onto the statute of limitations on minor's bill. Both bills were subsequently put into a summer study.

2) Punitive damage legislation — Bill amended to read “in any claim alleging punitive exemplary damages, before any discovery relating hereto may be commenced and before such claim may be instituted to the finder of fact, the court shall conduct, after a hearing and based upon clear and convincing evidence, that there is a reasonable basis to believe that there has been willful, wanton, or malicious conduct on the part of the party claimed.” — signed by the Governor.

3) Periodic payments — signed by the Governor.

4) Cap on awards legislation — Total cap for all damages amended to $1 million — signed by the Governor.

5) Statute of limitations — bill died on House floor by being put into a summer study.

Opposed bills

1. Licensure for radiologic technologists — killed on Senate floor.

2. Legislation allowing optometrists therapeutic drug prescribing privileges — signed by the Governor in amended form.

3. Certificate of need legislation to place major medical equipment in the physician's office that exceeds $400,000 in cost under the certificate of need review — signed by the Governor.

4. Physical therapist legislation allowing practice without physician supervision — signed by the Governor.

Endorsed bills

1. Legislation creating the office of State Coroner — tabled in Senate State Affairs Committee.

2. Legislation providing for a penalty for noncompliance of child passenger restraint law — killed on Senate floor.

3. Reimbursement to rape victims — signed by the Governor.

4. Legislation raising the drinking age to 21 — killed in House Judiciary Committee.

Respectfully submitted,

James R. Reynolds, M.D.
Chairman, Commission on Legislation and Governmental Relations

The Reference Committee carefully reviewed the report of the Commission on Legislation and Governmental Relations. A discussion was held with regard to the Association's continued opposition to the bill requiring licensure of x-ray technologists. The Reference Committee endorses an outreach program for those individuals similar to that in Minnesota. The Reference Committee recommended acceptance of this report with these comments.
REPORT OF THE COMMISSION ON MEDICAL SERVICE

The Commission on Medical Service of the South Dakota State Medical Association had no pressing matters forwarded to it. The Commission Chairman handled several items of correspondence in regard to the Commission’s work. Information was sought from state clinic managers regarding the acceptance of unsigned claims and no major problem areas were identified. Several other matters were reviewed and correspondence continued with the State of South Dakota in regard to emergency disaster planning and Dr. Robert Harms was appointed to serve as the physician liaison between the Commission on Medical Service and the State Division of Emergency and Disaster Services. The Survey from the National Rural Health Care Association was answered.

Respectfully submitted,
J. D. Bachmayer, M.D., Chairman
Commission on Medical Service

The Reference Committee reviewed the report of the Commission on Medical Service and recommended acceptance of this report.

REPORT OF THE COMMISSION ON SCIENTIFIC MEDICINE

The Commission on Scientific Medicine met on Wednesday, September 25, 1985, and the evaluations of the 1985 Annual Meeting were reviewed. Following a discussion of options for the program at the 1986 Annual Meeting, the Commission forwarded to the Council two options. The options were (1) a program centered around South Dakota and national clinical issues using brief case vignettes or unique/unusual cases in South Dakota or (2) a financial planning seminar to be presented by the Tax Reduction Institute. (The latter program was subsequently selected by the Council.)

The continuing question of whether all x-rays should be taken by certified technologists was again reviewed. No final action was recommended by the Commission but it was felt that training programs leading to certification should assure a leading role in outreach education in this area. A previous proposal for a statewide tumor registry was also reviewed. The Commission felt that the concept of a statewide cancer incidence reporting system may be of value, but that issues such as funding, participation, and how data would be used, needed to be addressed before formal support of this Commission and the Council could be given.

Respectfully submitted,
Robert R. Raszkowski, M.D., Chairman
Commission on Scientific Medicine

The Reference Committee reviewed the report of the Commission on Scientific Medicine and recommended acceptance of this report.

REPORT OF THE COMMISSION ON INTERNAL AFFAIRS, COMMUNICATIONS AND LIAISON

The Commission on Internal Affairs, Communications and Liaison met twice during the past year, i.e. 1985. Dates included Thursday, March 28, 1985, with their meeting in the Embassy 3 Room at the Holiday Inn Downtown, Sioux Falls and our second meeting on Thursday, August 29, 1985, in the Crystal Room of the Ramada Inn. Both of these were regularly scheduled meetings for the Commission.

Meeting on Thursday, March 28, started with the review of the 1985-1986 budget in its proposed state. The Commission moved and accepted that this budget be presented as printed.

Second item on the agenda included disability plan for physicians. This was reviewed and following this a motion and subsequent approval that the State Medical Association would no longer ask its Presidents to endorse commercial products, not only for disability plans but for any other significant insurance plans, lease agreements, etc.

The biggest item of the day was in the public relations department for when the South Dakota Legislative “Doctor for the Day” program was discussed. Initial wheels were put into

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South Dakota Society of Pathologists

Officers for 1985-86

John F. Barlow, M.D., President
Tom C. Johnson, M.D., Vice President
Jerry L. Simmons, M.D., Secretary-Treasurer

AUGUST 1986
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Magnetic Resonance Imaging (MRI) is a safe, painless, noninvasive technique that produces vivid pictures of the body's organs without the use of radiation, dye injections, or special patient preparation.

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Located for convenient physician and patient access at 7911 West Center Road, the singular nature of the Centre's procedure means that patient attention is highly personalized regardless of his or her physician affiliation.

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- Brain
  - Demyelinating diseases, CNS evaluation, infarctions, Chiari malformations, tumors of the posterior fossa and traumatic injury.
- Spine
  - Cord tumors, degenerative disease, disc space infections
- Chest
  - Mediastinal masses and aortic aneurysms
- Musculoskeletal System
  - Aseptic necrosis of hips, staging of soft tissue and bone neoplasms
- Pelvis
  - Pelvic and prostate tumors, soft tissue evaluations.

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motion to prepare for and establish this program whereby the South Dakota State Medical Association would offer and have available on a day to day basis a physician who would render care to the legislators, families, pages, etc., during the legislative session.

Other significant items handled during the meeting included the complimentary Journal of Medicine subscriptions given to basically all of the major newspapers in the state of South Dakota. We also discussed and passed out several public service announcements which are available through the AMA. We moved to use intermittent radio spot announcements as well as to distribute them to the District Medical Societies and have them used on an intermittent basis in a timely manner as public service announcements through both radio as well as the possibility of cable TV. It was also moved that we suggest all local physicians and clinics consider having media and legislators come to their clinics and tour the physicians facilities as well as the local hospital facilities to better inform them of what is available in their communities.

It was also moved and approved that brochures and posters concerning Medicare patients, explaining Medicare benefits and the difference between participating and nonparticipating physicians be sent to all SDSMA members.

An update on professional liability was then discussed. Following that AMA publication surveys and opinions including a public relations survey was discussed. It was moved that we obtain several samples of public relation surveys that clinics could use and make these available to clinics and physicians within the Association.

The business at hand included the approval of using the South Dakota Medical Association Auxiliary Public Relations network to distribute appropriate information in relationship to our own members and public relation items that would benefit them individually as well as the State Association.

The next subsequent meeting, as listed above, was Thursday, August 29, 1985. The budget was again initially reviewed and approved at this point. Lorin Pankratz then reviewed the Public Relations Program for the South Dakota State Medical Association including again a review of public service announcements, Medicare posters, etc. The patient surveys concerning clinics were reviewed and made available to all physicians in the State Medical Association.

Collection system agencies were reviewed and again it was felt that the Commission at this point would recommend to the Council that they evaluate the Association's position on concepts of endorsing products and in essence this was referred to the Council for further evaluation.

South Dakota State Medical Association Blue Shield and Blue Cross plans were discussed along with the upcoming DAKOTACARE HMO type program.

A large part of the meeting again concerned the South Dakota State Medical Association’s Doctor of the Day program for the upcoming legislative session. The Commission recommended at this point that all physicians serving as Doctor of the Day be properly training in CPR, that they be members of the State Medical Association, that they feel comfortable in providing primary care and that they communicate with State Medical Association staff for legislative briefings as well as potential medical briefings. The Commission recommended that a log be established by which those patients being seen on a daily basis would be logged in. A patient record was created and established, in duplicate form, by which the patient could retain one copy for his personal use, i.e. giving it to his own personal physician and we as the staffing physicians could then maintain a permanent file. We then moved that the District Medical Societies be contacted and then appropriate physicians interested in this program be obtained. With that in mind the Doctor of the Day Program was established and over the next several months was put into work.

The meeting was then adjourned.

The next four months brought considerable planning and preparation for the Doctor of the Day Program. Lorin Pankratz and myself as chairman of the commission met with the physicians in all clinics. We met with the Legislative Research Council; the clinic was established; the equipment was obtained through the Health Department; and the doctors for the day and an appropriate schedule were set up. Guidelines were established for the physicians and the program was put into use. The end result was a very positive result with great acceptance by the legislative people. A brief review of the Doctor of the Day program reveals a total of 109 medical contacts were made averaging out to slightly over 3 contacts per day. Forty-four individual legislators were seen for medical reasons; 26 representatives and 18 senators. Seven legislators were seen more than one time, with multiple visits ranging from two to a maximum of eight. The remainder of the medical contacts were legislators family members, interns and pages.

The following physicians, all of whom in the past had been active members of the South Dakota State Medical Association, have passed away within the last year. They include —

Valdis Braaks, M.D., Watertown
D. A. Gregory, M.D., formerly of Milbank
Glen Heidepriem, M.D., Rapid City
R. F. Hubner, M.D., Yankton
J. H. Lloyd, M.D., formerly of Mitchell
R. J. Ogborn, M.D., Sioux Falls
George F. Wood, Jr., M.D., Rapid City

The Commission report also includes a report of the Health Career Grant Fund and its activities for 1985. Attached you will find the financial report concerning that fund.

The Commission on Internal Affairs, Communications & Liaison also deals directly with the Budget and Audit Committee and the financial report of the State Medical Association, its general fund and building fund. The Commission at its regular meetings has reviewed the budget on an ongoing basis including the general fund, building fund and Journal fund. The Budget and Audit Committee consisting of the Executive Commission and the Chairman of this Commission also met on both January 10, 1985, and January 8, 1986. The budget for the subsequent year was reviewed and after considerable

Family Practice Specialist

Marshfield Clinic Department of Family Medicine is seeking a BE/BC Family Practitioner to replace a retiring colleague. The physician joining this six member department will enjoy the support of one of the nation’s largest multi-specialty groups, share the philosophy of family oriented care with a preventive focus, and enjoy full hospital privileges but without the distractions of OB or surgical responsibilities. Marshfield Clinic offers an excellent salary plus extensive fringe benefits.

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discussion established in the proposed form as indicated with this report. There was unanimous support from the Budget Committee to prepare the budget as discussed. This, in fact, then ends the report of the Commission on Internal Affairs, Communications & Liaison of the South Dakota State Medical Association for the year 1985.

Respectfully submitted,
Clark W. Likness, M.D., Chairman
Commission on Internal Affairs,
Communications and Liaison

The Reference Committee reviewed the report of the Commission on Internal Affairs, Communications and Liaison and recommended that the Doctor of the Day criteria be amended to delete the requirement that physicians serving in this capacity “feel comfortable in providing primary care.” The Reference Committee recommended this report be accepted with this one change.

HEALTH CAREER GRANT FUND
FINANCIAL REPORT

Balance in Savings Account 3-1-85 $2,350.50
Income
Interest $596.70
Principal 1,218.53
$1,815.23
Revenue $4,165.73
Expense
Grant @ $500.00
$500.00
Balance in Savings Account 2-28-86 $3,665.73
Certificates of Deposit
#1423 1 year $8,848.18
due 2-27-87 (7.15%)
#553 6 months 18,490.37
due 7-01-86 (7%)
#1266 2.5 years 6,323.38
due 6-09-88 (6.5%)
Interest Earned on CD’s
#1423 $711.92
#553 1,329.56
#1266 290.41
$2,331.89
Assets 2-28-86
Savings Account $3,665.73
Certificates of Deposit 33,661.93
Outstanding loans 3,590.94
$40,918.60

The Reference Committee reviewed the financial report of the Health Career Grant Fund Committee and recommended its approval.

1986-1987 BUDGET
SOUTH DAKOTA JOURNAL OF MEDICINE

ITEM

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INCOME

Advertising $18,500.00 $22,500.00
Subscription 1,200.00 1,000.00
Refunds 720.00 720.00
Journal Subsidy 10,000.00 10,000.00
Miscellaneous 600.00 900.00
$31,020.00 $35,120.00

EXPENSES

Salaries $2,200.00 $2,200.00
Legal & Audit 100.00 100.00
Social Security 50.00 75.00
Telephone 125.00 125.00
Postage 1,800.00 2,000.00
Office Supp. & Print. 26,645.00 30,520.00
Travel 100.00 100.00
$31,020.00 $35,120.00

1986-1987 BUDGET
BUILDING FUND

ITEM

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INCOME

Foundation Rent $16,380.00 $18,020.00
Board of Exam. Rent 5,100.00 5,100.00
Interest Income 11,000.00 14,000.00
$32,480.00 $37,120.00

EXPENSES

Salaries $17,980.00 $19,770.00
Legal & Audit 1,500.00 2,250.00
Social Security Taxes 5,000.00 5,600.00
Utilities 4,000.00 4,000.00
Maint. & Supplies 4,000.00 4,000.00
Insurance 1,500.00 1,500.00
$32,480.00 $37,120.00

The Reference Committee recommended approval of the proposed budget for 1986-87.
REPORT OF THE COMMISSION ON PROFESSIONAL LIABILITY

The State Malpractice Insurance Commission met on two occasions; June 6th and again on September 5th, the latter a joint meeting with the Commission on Legislation and Governmental Relations. Basically, all tort reform measures were reviewed at the first meeting in an effort to glean those that felt had some impact on not only fair compensation of an injured patient but also had an impact on controlling the spiraling premiums. The package developed was basically patterned after those instituted in Nebraska and Indiana. The package that was submitted to our state legislature was formed in conjunction with the Commission on Legislation and Governmental Relations and consisted of a package of five bills.

1. Mandatory periodic payments or structured settlements
2. $500,000 cap on all damages
3. Elimination of punitive damage awards
4. Mandatory offset on collateral sources
5. Amendment of the Statute of Limitations to a uniform two years

Final passage of the above was:
1. Periodic payments — The bill was changed as originally drafted and re-entered with similar language but it is not mandatory. There are very strict guidelines and the base to start periodic payments is $100,000. The bill has a delayed implementation date of July 1987.
2. Punitive damages — This was amended to state that "In any claim alleging punitive or exemplary damages, before any discovery relating thereto may be commenced and before any such claim may be submitted to the finder of fact, the court shall find, after a hearing and based on clear and convincing evidence, that there is a reasonable basis to believe that there has been willful, wanton or malicious conduct on the part of the party claimed against."
3. Cap on awards was changed to $1,000,000 cap on all damages.
4. Collateral Source Payment — This failed. It was killed on the Senate floor and despite the Governor's efforts, could not be revived. Hopefully this can be reconsidered in the future.

Respectfully submitted,
F. G. Alvine, M.D., Chairman
Commission of Professional Liability

The Reference Committee reviewed the report of the Commission on Professional Liability and recommended acceptance of this report.

REPORT OF THE COMMITTEE FOR CONTINUING MEDICAL EDUCATION

On May 3, 1985, a reaccreditation site visit was made for McKennan Hospital in Sioux Falls. Members of the Review Team were Frank Messner, M.D., Yankton; James Larson, M.D., Watertown; and K. Gene Koob, M.D., Sioux Falls, Chairman of the Commission on Scientific Medicine at the time of the survey. Based upon this survey and subsequent input McKennan Hospital was reaccredited to continue to provide CME activities for AMA Category I credit.

Members of the Association should note that there has recently been a change in the types of CME credits. While Category I credit remains the same, all other categories are now consolidated under Category II.

Respectfully submitted,
Robert R. Raszkowski, M.D., Chairman
Committee for Continuing Medical Education

The Reference Committee reviewed the report of the Committee for Continuing Medical Education and recommended acceptance of this report.

REPORT OF THE GRIEVANCE COMMISSION

The Grievance Commission has met with a minimal number of complaints. The grievances considered included some concerns between physicians on two occasions. I think this is the first time that the Grievance Commission has dealt with this type of problem. I predict that there will be more of these in the future because of the changing climate of medical care.

The Commission, which includes Dr. Winston Odland of Aberdeen, Dr. Durward Lang of Sioux Falls, Dr. Joseph Hamm of Sturgis, and Dr. Howard Saylor, Jr., of Huron, has continued to provide access for patients and physicians who have concerns in their practice of a confidential nature involving patient care.

I want to thank the rest of the commission for their fine efforts in serving on this commission.

Respectfully submitted,
Bruce Lushbough, M.D., Chairman
Grievance Commission

The Reference Committee reviewed the report of the Grievance Commission and recommended acceptance of this report.

REPORT OF THE LONG RANGE PLANNING COMMITTEE

The Long Range Planning Committee met on October 9, 1985, in Sioux Falls, SD. In attendance were Drs. Guddal, Loos, Zielike and Nemer.

We discussed the future role of para-professionals in the delivery of health care. It was agreed that, in order to assure quality of care in a cost effective manner, all medical services should be directed by the physician. We recommended that the South Dakota Medical Association stress the merits of this concept to the general public.

The Committee also discussed problems of credentialing and hospital staff privileges, professional liability, and potential topics for future study.

Respectfully submitted,
W. Nicol Guddal, M.D., Chairman
Long Range Planning Committee

The Reference Committee reviewed the report of the Long Range Planning Committee and recommended acceptance of this report.

REPORT OF THE SOUTH DAKOTA POLITICAL ACTION COMMITTEE

The SoDaPAC Board of Directors have held two meetings since the annual meeting of the State Medical Association, June 7, 1985.

January 27, 1986, the Board of Directors met in Pierre in conjunction with the Medical Auxiliary Legislative Day Program. District membership was reviewed, expenditures for a full page ad in the South Dakota Journal of Medicine was approved and the second “Meet the Candidates” political forum luncheon to be held Friday, June 6, in conjunction with the annual meeting of the State Medical Association in Rapid City, was discussed and finalized.

March 6, the SoDaPAC Board of Directors met in Pierre to review the Senate, Congressional and Gubernatorial candidate’s voting records. The board divided into three subcommittees to consider each candidate, and after considerable discussion reconvened. It was the consensus of our subcommittees, and board approval followed, to support the following candidates in their respective primary campaigns. Gov. Wm. Janklow — Senate; former state Senator Don Frankenberg — Congress; and former state representative George Mickelson — Governor.

Financial support from AMPAC was requested and received for Governor Janklow and Mr. Frankenberg in the amount of $5,000 each. The SoDaPAC board voted to contribute $3,000 of SoDaPAC funds to George Mickelson’s campaign for Governor of South Dakota.

In fiscal year, January 1, 1985 — December 31, 1985, our total income from dues was $14,090.00, of which $5,480.00 was forwarded to AMPAC.

Only one contribution to SoDaPAC’s educational account was received. The Watertown District Medical Society contributed $100. Educational account dollars are not used for candidate support, but for operating expenses such as phone, postage and audits. I would urge all districts to consider such a financial contribution, in any amount, to the educational account.
Recruiting efforts for Auxiliary and physician board members this year has been quite favorable. And, since 1986 is an election year, the board is anticipating continued involvement in candidate selections for State and Federal Offices. Your financial and personal support is essential to enable SoDaPAC’s continued support of candidates who are willing to work with and for the medical profession.

**ACTIONS BECOME COMMITMENTS — Support SoDaPAC.** If you have not already done so, please consider joining SoDaPAC.

Respectfully submitted,

Marlys Porter, Chairman
SoDaPAC

The Reference Committee reviewed the report of the South Dakota Political Action Committee, noted that an additional $300 donation had been received from the Aberdeen District Medical Society for the educational fund, and recommended acceptance of this report with the addition.

**REPORT OF THE BOARD OF DIRECTORS OF THE SOUTH DAKOTA MEDICAL SCHOOL ENDOWMENT ASSOCIATION**

As prescribed by the Bylaws, the annual meeting of the Board of Directors of the South Dakota Medical School Endowment Association was held during the annual meeting of the South Dakota Medical Association on June 6, 1985, in Sioux Falls, South Dakota. The Board elected officers, approved the financial report and conducted other business. A special Board of Directors meeting was held on September 26, 1985, in Sioux Falls, South Dakota. Throughout the year other matters were addressed as necessary by mail and telephone with the assistance of the staff of the South Dakota State Medical Association.

The goals of the Endowment Association continue to be assistance to students at the University of South Dakota School of Medicine through loans at reasonable rates of interest, and the support of the office of the Dean of the School in essential activities for which there are no other funds.

Sixty-nine students were granted loans totaling $30,000 during the present academic year. Loans ranged from $200 to $745. The loans are tailored to imperative needs and at rates which enhance the impact of available funds.

$5,000 was set aside for South Dakota residents who attend medical school outside of our State. Three students were granted loans in the amount of $475 each, which is the average loan. The rate of interest remains at 6%.

Contributions from 129 physicians totaled $16,620 in 1985. Federal sources comprise the preponderance of student loan funds. That source is seriously threatened by the proposed federal budget presenting a crisis to the students of the School of Medicine. The Endowment Association remains an essential function of the South Dakota State Medical Association.

Respectfully submitted,

The Board of Directors
Joseph N. Hamm, M.D., President
Robert R. Giebink, M.D.
Warren Jones, M.D.
Bruce C. Lushbough, M.D.
Gerald E. Tracy, M.D.
Bruce H. Allen, M.D.
Theodore H. Sattler, M.D.

The Reference Committee reviewed the report of the Board of Directors of the South Dakota Medical School Endowment Association and recommended acceptance of this report.

**REPORT OF THE IMPAIRED PHYSICIANS COMMITTEE**

The committee met on June 7, 1985, and has continued to function on an informal basis throughout the year. The new informational brochure on the Physician Rehabilitation Program was adopted and has been distributed to physicians, spouses, hospital administrators, clinic managers and others who may be closely related to physicians to help explain the function of the Physician Rehabilitation Program. Work is still underway at trying to improve the insurance coverage for Alcohol Treatment Programs through cooperation of the South Dakota Department of Health.

Respectfully submitted,

David Yecha, M.D., Chairman
Impaired Physicians Committee

The Reference Committee reviewed the report of the Impaired Physicians Committee and recommended acceptance of this report.

**REPORT OF THE MEDICAL/LEGAL COMMITTEE**

The Medical/Legal Committee met on March 8, 1985, and held a joint venture presentation with question and answer period at the Aberdeen Medical District meeting in September, 1985, and also met on June 22, 1985. Much time and discussion was devoted to the March meeting to lay the ground work for a joint presentation in Aberdeen in September. The concept was to bring the medical and legal profession together in that district for dialogue on issues of current interest. Dr. Mike Driscoll was primarily responsible for setting up the content of the panel discussion for both members. The State Medical Association and State Bar Association participated in the presentation. It was well received encouraging the committee to invest more time and effort in bringing the two associations together for dialogue.

The Committee had its last meeting on November 22, at which time it was decided to initiate more projects with educational value and to formulate a questionnaire with regard to fees doctors charge for depositions and copies. The ultimate goal would be to provide some guidelines in this area.

Respectfully submitted,

Jerry L. Walton, M.D.
Chairman, Medical/Legal Committee

The Reference Committee reviewed the report of the Medical/Legal Committee and recommended acceptance of this report.

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**FAMILY PHYSICIANS**

The Duluth Clinic, Ltd., a 125 physician multispecialty comprehensive regional medical center, is actively seeking two or three family physicians for one of its metropolitan satellite facilities. State of the art diagnostic equipment, surgical and hospital facilities are available.

Qualifications required include board certification or eligibility in family practice.

Metropolitan area includes 125,000 people. Ample outdoor recreational and cultural opportunities readily available. Please respond with complete curriculum vitae to:

Stan E. Salzman
Executive Director
The Duluth Clinic, Ltd.
400 East Third Street
Duluth, Minnesota 55805

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ANNUAL MEETING MINUTES
SOUTH DAKOTA FOUNDATION FOR MEDICAL CARE
June 6, 1986 10:00 A.M. Howard Johnson's Rapid City, SD

The 11th Annual Meeting of the South Dakota Foundation for Medical Care was held on Friday, June 6, 1986, at 10 a.m. at the Howard Johnson's, Rapid City, South Dakota.


The Chair declared a quorum present for the purpose of conducting business of the corporation.

The Chair called for consideration of the minutes of the last annual meeting. He referred the membership to the Foundation minutes in the printed manual furnished to each member. Dr. Gere moved that the minutes be accepted as published and the reading thereof waived. The motion was seconded by Dr. Tracy. Upon voice vote the same was approved unanimously.

Dr. Rittmann called for the report of the Nomination and Selection Committee. The Nomination and Selection Committee reported that the following persons were elected to serve three year terms on the Board of Directors: Craig Hansen, M.D.; Nathaniel Whitney, M.D.; Stephan Schroeder, M.D.; Duane Reaney, M.D.; and George Thompson, D.O. Dr. Rossing moved that the foregoing named parties be elected to serve for three year terms on the Board of Directors. The motion was seconded by Dr. Tam. Upon voice vote the same was approved unanimously.

Dr. Rittmann called for consideration of the corporate financial report. He noted that the financial report was published in the Handbook which was furnished to each member of the body. Dr. Rittmann asked the membership if there were any questions, qualifications, or corrections. None were submitted by the membership. Dr. Rittmann moved that the financial report be accepted as published. The motion was seconded by Dr. Gere. Upon voice vote the same was approved unanimously.

Dr. Rittmann referred the membership to the written report made by himself, and published in the handbook, and also the written report contained therein of the Foundation's Medical Director. He asked if anyone had any questions therein. There being none, he noted that the reports would be filed with the records of the Foundation accordingly.

Dr. Rittmann then asked for any comments from the floor. John Pekas, M.D. of a family physician from Gregory, South Dakota, stated that under the bylaws there is not enough time between providing the list of nominees by the Nominating Committee and the time for submitting additional names and nominations. It was noted that the process provides that the Secretary shall provide a list of nominees to the Foundation 40 days before the annual meeting and that additional nominations must be submitted at least 30 days prior to such meeting. This leaves only 10 days for the submission of additional nominees by persons desiring to submit the same.

Dr. Malm requested a change in the articles and bylaws to permit more time for the submission of additional nominees by five members of the Body after the members have had time to review the list provided from the Nominating Committee.

Mr. Paul Jensen explained the reasons why the bylaws were passed as they were. At the time they were originally passed, there were many constraints put on the formation of the PSRO by federal requirements and slotting of directors was not permitted. He also reviewed a number of prohibitions that were placed thereon. He stated that in view of the comment from the floor the entire process of nominating directors would be reviewed to see what changes might be made to permit more time for members of the Body to submit additional nominations. Dr. Malm stated that he appreciated the consideration being given to his request.

Chairman Rittmann asked if there were any further matters that any member of the Body cared to present. There being none, Dr. Jahraus moved that the meeting be adjourned. The motion was seconded by Dr. Lang. Upon voice vote, the motion was passed unanimously.

The Chair declared the meeting adjourned at 10:15 a.m.

ANNUAL MEETING MINUTES
SOUTH DAKOTA PHYSICIAN'S HEALTH GROUP
June 6, 1986 9:15 A.M. Howard Johnson's Rapid City, SD

The 1st Annual Meeting of the South Dakota Physician's Health Group was held on Friday, June 6, 1986, at 9:15 a.m. at the Howard Johnson's, Rapid City, South Dakota.


The Chair declared a quorum present for the purpose of doing business of the corporation.

SDPHG received final approval of their application for the Certificate of Authority on March 5, 1986. A series of 15 marketing luncheons in 11 South Dakota communities were held with nearly 500 employers attending. DAKOTACARE is receiving many requests for quotes and has signed several groups for coverage at this time.

Dr. Gere called for consideration of the election process. Several bylaws indicate that no more than two directors may be from any one district medical society. There is a potential of three directors from Rapid City and three directors from Sioux Falls. A tally of the ballots indicate the following directors have been elected to the Board: Frank Messner, M.D., Yankton; John F. Barlow, M.D., Rapid City; Howard Saylor, M.D., Huron; Richard Gere, M.D., Mitchell; Robert Ferrell, M.D., Rapid City; Gerald Tracy, M.D., Watertown; and Bruce Lushbough, M.D., Brookings.

Another vote was taken between Drs. Perreinin, Tschetter and Dr. Gere. The vote was for both candidates. The vote was then taken between Drs. Pekas and Tschetter. A count of the ballots indicated Dr. Pekas was elected to the Board. As a result, the two director positions from Sioux Falls will be filled by Dr. Lang and Dr. Pekas.

One additional director position needed to be filled. The eligible individuals to serve in this position are Dr. George Thompson and Dr. Phillip Hoffsten. A vote was held and Dr. George Thompson was elected to serve on the SDPHG Board of Directors.
As required by the Health Care Financing Administration, South Dakota Foundation for Medical Care will implement Generic Quality Screens for all Medicare claims reviewed as of October 1, 1986. Cases failing the screens will be referred to SDFMC physician reviewers for peer review to determine if a variation indeed exists with the quality of care. If a physician reviewer determines that there is a quality of care variation, SDFMC will notify the attending physician in writing to allow him an opportunity to provide additional information which would justify the suspected variation. It is very important that physicians respond promptly to inquiries from SDFMC pertaining to quality of care problems, so that any justified variations may be quickly resolved.

Another SDFMC physician reviewer will review each variation along with any additional documentation supplied by the attending physician. If SDFMC still believes the case is a quality of care problem, the attending physician will again be notified in writing and provided an opportunity for reconsideration of SDFMC’s determination.

HCFA requires SDFMC to take action to correct quality of care problems for physicians with multiple confirmed variations. If after following the steps outlined above, SDFMC determines that a physician has two or more confirmed variations, the attending physician will be notified in writing that the quality of care problems have been discovered, and, if applicable, be sent educational information. SDFMC will require the physician to take corrective action to prevent further incidences.

If a third confirmed quality of care variation is discovered, SDFMC will notify the attending physician in writing that the problems continue to exist and that the physician is subject to sanction. The physician will be afforded an opportunity to meet with SDFMC to resolve the problem.

HCFA is under great political pressure to assure quality of care in the Medicare program, and will be monitoring PROs very closely to assure that the PROs are correctly identifying quality of care problems, and taking appropriate actions against physicians with patterns of variations.
MINUTES OF SOUTH DAKOTA MEDICAL SERVICE, INC. CORPORATE BODY MEETING

Howard Johnson Motor Lodge
Harney Peak Room
Rapid City, South Dakota
June 6, 1986, 9:45 a.m.

Chairman Dean called the meeting of the Corporate Body of the South Dakota Medical Service, Inc. to order at 9:45 a.m., on June 6, 1986, at the Howard Johnson Motor Lodge in Rapid City, South Dakota.

Upon roll call vote, the following members of the Corporate Body of the South Dakota Medical Service, Inc. were present: Doctors Richard Gere, W. O. Rossing, Robert Ferrell, M. George Thompson, Frank Messner, G. E. Tracy, Bruce Lushbough, Curtis Wait, R. C. Jahauss, David Buchanan, C. D. Monson, D. G. Ortmeier, Richard Tschetter, Michael Pekas, Lowell Hyland, Guy Tam, James Reynolds, Jay Hubner, Thomas Kraftka, N. R. Whitney, Louis Hogrefe, James Wunder, V. Janavs, John Hastings, Warren Redmond, Alfred Shousha, Jay Bachmayer, Parry Nelson, Tad Jacobs, Richard Sample, Thomas Huber, Steve Schroeder, Louis Karlen, Walter Baas, T. H. Bhatti, Jeffrey Hagen, Rodney Parry, Jerome Freeman, C. Roger Stoltz, Bruce Vogt, Robert Talley, Jerry Simmons, Larry Schafer, Robert Van Demark, Jr., Dennis Johnson, Durward Lang, T. H. Sattler, Morris Radack, Kenneth Halverson, Arthur P. Reding, Robert Allen, John Barlow, J. Geoffrey Slingsby, Robert Williams, Carol Zielike, Richard Renka, James Rud, Tony Berg, Leonard Linde, Richard Porter, M. C. Thompson and Mr. Joe Villa. Dr. Rossing moved that the roll call be accepted by the Corporate Body. The motion was seconded by Dr. Tracy. Upon voice vote, the same was approved unanimously.

A quorum being present, the Chairman declared the annual meeting of the membership of the Corporate Body of the South Dakota Medical Service, Inc. to be duly in session for the transaction of business.

Dr. Gere moved that the reading of the minutes of the last meeting of the corporate body, being the 1985 annual meeting, be waived, the same having been published previously and mailed to each member. Such motion was seconded by Dr. Tam. Upon voice vote the same was approved unanimously.

Dr. Dean presented the Chairman's message to the Corporate Body which was also contained in the Delegates Handbook. He presented a brief history of the origin of South Dakota Blue Shield, some of the problems it faced in past years and listed a number of problems currently facing the plan.

Chairman Dean called for consideration of the next agenda item entitled "Financial Report." He called upon Ben Johnson to present the same. Mr. Johnson referred the Delegates to the 1985 Annual Report contained in their Delegates Handbook. He noted from the report that 1985 premium income totalled $26,900,000 of which $23,756,000 was paid on claims. The pay-out on claims amounted to $88.3% of all premiums collected. He further noted that operating expenses as a percentage of income amounted to 10.8%. He also noted that at the end of the year the Plan had an unassigned surplus of $5,389,000 and that the total number of claims paid was 294,149.

Ben Johnson asked if anyone in the Body had any questions on the Financial Report. No questions were forthcoming and the Chairman called for approval of the Financial Report. Dr. Gere moved approval of the Financial Report. The Motion was seconded by Dr. Lang. Upon voice vote the same was approved unanimously.

The Chairman called for consideration of the Agenda Item entitled "Report of the Nominating Committee." The Chairman requested that the Chairman of the Nominating Committee, which nominating committee consisted of Judd Mabce, M.D., chairman, James A. Rud, M.D., W. Nichol Gudual, M.D., A. P. Reding, M.D. and Dennis L. Johnson, M.D., present their recommendation. Dr. Mabce reported that the Committee recommended and nominated the following present Directors of South Dakota Medical Service, Inc. for re-election to the Board of Directors for three year terms:

John J. Stransky, M.D., Watertown
Winston Olland, M.D., Aberdeen
Glenn Waltner, Freeman
Ralph Nauman, Gettysburg.

He reported that all such existing directors were eligible for an additional 3 year term.

Dr. Lushbough moved that the Body accept the report and that the Secretary be instructed to cast a unanimous ballot for the nominees. Such motion was seconded by Dr. Tracy. Upon voice vote the same was approved unanimously.

The Chairman called for consideration of Old Business. There being none, he asked for consideration of New Business.

Under New Business he notified the group that the Internal Medicine Society asked for a moment of privilege and that he was requesting the Body to grant the same. There being no objection, Dr. Don Humphreys, Chairman of the South Dakota Society for Internal Medicine, addressed the body and noted their concern about the Board not having an internist member for a number of years and stated the reasons for such concern. He stated his presentation was not an objection to the continuing terms of the Directors elected at this meeting but that his group specifically requested that the nominating committee next year give consideration to the Internists' concern.

The Chairman noted that there would be openings on the Board next year because of the expiration of terms of persons who would no longer be eligible for re-election and stated that he was certain the nominating committee would be advised of the concern of the Medical Internists.

The Chairman asked if there was any further business to come before the Body. None was presented.

Dr. Gere moved adjournment. Such motion was seconded by Dr. Tracy. Upon voice vote the same was approved unanimously. The meeting of the Corporate Body was duly adjourned at 10:30 a.m.

John H. Zimmer
Secretary
DISTINGUISHED SERVICE AWARD

Started in 1951 — T. F. Riggs, M.D., Pierre (deceased)
1952 — H. Russell Brown, M.D., Watertown (deceased)
1953 — Guy VanDemark, M.D., Sioux Falls (deceased)
1954 — J. C. Ohlmercher, M.D., Vermillion (deceased)
1955 — R. G. Mayer, M.D., Aberdeen (deceased)
1956 — J. C. Ohlmercher, M.D., Vermillion (deceased)
1957 — W. E. Donahoe, M.D., Sioux Falls (deceased)
1958 — Drs. J. C. Hagin (deceased), M. W. Pangburn (deceased), and James DeGeest, Miller
1958 — J. F. Brenckle, M.D., Superior, Wisc. (deceased)
1959 — Mrs. Agnes Holdridge, Madison
1960 — Walter L. Hard, Ph.D., Vermillion (deceased)
1961 — Rev. and Mrs. Robert O. Bates, Sturgis
1962 — R. M. Kilgard, M.D., Watertown (deceased)
1963 — L. J. Pankow, M.D., Sioux Falls (deceased)
1964 — Gregg M. Evans, Ph.D., Custer
1965 — Edward Shaw, Ph.D., Vermillion (deceased)
1966 — Arthur A. Lampert, M.D., Rapid City
1967 — John C. Foster, Phoenix, Arizona
1968 — A. P. Reding, M.D., Marion
1968 — Mrs. C. Rodney Stoltz, Watertown
1969 — G. J. Bloemendaal, M.D., Ipswich
1970 — F. W. Haas, M.D., Yankton (deceased)
1970 — Paul Bunker, M.D., Aberdeen (deceased)
1971 — E. T. Lietzke, M.D., Beresford (deceased)
1972 — C. B. McVay, M.D., Yankton
1973 — G. E. Tracy, M.D., Watertown
1974 — J. A. Muggly, M.D., Madison (deceased)
1975 — Harvey Wollman, Hitchcock
1976 — R. H. Quinn, M.D., Sioux Falls
1977 — E. H. Heinrichs, M.D., Vermillion
1978 — John Olson, Sioux Falls, and Evans Nord, Sioux Falls
1979 — Helen Jane Hare, M.D., Rapid City
1980 — Warren Jones, M.D., Sioux Falls
1981 — Paul Freifeld, M.D., Brookings
1982 — G. Robert Bartron, M.D., Watertown
1983 — Oscar J. Mabee, M.D., Mitchell
1984 — Karl Wegner, M.D., Sioux Falls
1985 — William R. Taylor, M.D., Aberdeen
1986 — R. E. VanDemark, Sr., M.D., Sioux Falls

COMMUNITY SERVICE AWARD

1961 — R. A. Buchanan, M.D., Huron (deceased)
1962 — Roland F. Hubner, M.D., Yankton
1963 — George W. Mills, M.D., Wall (deceased)
1964 — John C. Hagen, M.D., Miller (deceased)
1965 — Alonzo P. Peeke, M.D., Volga
1966 — Hugo C. Andre, M.D., Vermillion (deceased)
1967 — G. Robert Bartron, M.D., Watertown
1968 — M. M. Morrissey, M.D., Pierre (deceased)
1969 — N. J. Sundet, M.D., Kadoka (deceased)
1970 — W. H. Saxton, M.D., Huron (deceased)
1971 — R. E. VanDemark, Sr., M.D., Sioux Falls
1972 — R. H. Hayes, M.D., Wall
1973 — B. F. King, M.D., Aberdeen (deceased)
1974 — M. C. Tank, M.D., Brookings
1975 — Karl Wegner, M.D., Sioux Falls
1976 — John T. Elston, M.D., Rapid City
1977 — W. F. Stangar, M.D., Pierre
1978 — C. S. Roberts, Jr., M.D., Brookings
1979 — C. J. McDonald, M.D., Sioux Falls (deceased)
1980 — E. A. Johnson, M.D., Milbank
1981 — J. A. Muggly, M.D., Madison (deceased)
1982 — Robert R. Giebink, M.D., Sioux Falls
1983 — Theodore H. Sattler, M.D., Yankton
1984 — Paul Hohn, M.D., Huron
1985 — George Magnus, M.D., Philip
1986 — Richard Friess, M.D., Sioux Falls

AESCULAPIUS AWARD

1966 — Paul R. Leon, M.D.
Walter Miller, M.D., Aberdeen
1968 — H. Phil Gross, M.D., Sioux Falls

FIFTY YEAR CLUB MEMBERS

C. V. Auld, Plankinton (deceased)
G. J. Bloemendaal, M.D., Ipswich
W. C. Brinkman, M.D., Sisseton (deceased)
R. A. Buchanan, M.D., Huron (deceased)
John L. Calene, M.D., California (deceased)
Myrtle Carney, M.D., Ft. Worth, Texas (deceased)
Bernard S. Clark, M.D., Spearfish
J. C. Clark, M.D., Sioux Falls (deceased)
F. L. Class, M.D., Yankton (deceased)
M. E. Cogswell, M.D., Wolsey (deceased)
E. H. Collins, M.D., Gettysburg
J. Cook, M.D., Bonesteel (deceased)
G. I. W. Cottam, M.D., Sioux Falls (deceased)
Harold L. Crane, M.D., Avon, Conn. (deceased)
S. A. Donahoe, M.D., Sioux Falls (deceased)
W. E. Donahoe, M.D., Sioux Falls (deceased)
J. A. Eckrich, Sr., M.D., Aberdeen (deceased)
V. W. Embree, M.D., Pierre (deceased)
W. D. Farrell, M.D., Aberdeen (deceased)
R. B. Fleeger, M.D., Lead (deceased)
R. R. Fisk, M.D., Flandreau (deceased)
F. W. Freyberg, M.D., Mitchell (deceased)
E. E. Gage, M.D., Sioux Falls (deceased)
D. A. Gregory, M.D., Gloudestown, Mont. (deceased)
E. H. Grove, M.D., Arlington (deceased)
J. C. Hagen, M.D., Miller (deceased)
Lyle Hare, M.D., Spearfish (deceased)
John F. Hill, M.D., Yankton (deceased)
Emil Hofer, M.D., Huron
J. A. Hohf, M.D., Yankton (deceased)
F. S. Howe, M.D., Deadwood (deceased)
A. H. Hovne, M.D., Salem (deceased)
Roland Hubner, M.D., Yankton (deceased)
A. S. Jackson, M.D., Rapid City (deceased)
R. J. Jackson, M.D., Hot Springs (deceased)
J. A. Jacobel, M.D., Milbank (deceased)
G. T. Jordan, M.D., Vermillion (deceased)
F. F. Keene, M.D., Wessington Springs (deceased)
Ray Lemley, M.D., Rapid City (deceased)
Bernard Lens, M.D., Huron
J. H. Lloyd, M.D., Mitchell (deceased)
O. J. Mabey, M.D., Mitchell
P. V. McCarthy, M.D., Aberdeen (deceased)
G. W. Mills, M.D., Wall (deceased)
B. C. Murdy, M.D., Aberdeen (deceased)
T. F. O'Toole, M.D., Rapid City (deceased)
N. T. Owen, M.D., Rapid City (deceased)
L. L. Parke, M.D., Canton (deceased)
C. C. Pascale, D.O., Centerville
A. P. Peeke, M.D., Volga
M. O. Pemberton, M.D., Deadwood (deceased)
R. J. Quinn, M.D., Sioux Falls (deceased)
F. J. Radusch, M.D., California (deceased)
T. B. Ranney, M.D., Aberdeen (deceased)
Arthur P. Reding, M.D., Marion
T. F. Riggs, M.D., Pierre (deceased)
I. R. Salladay, M.D., Ft. Meade (deceased)
W. H. Saxton, M.D., Huron (deceased)
H. L. Saylor, M.D., Huron (deceased)
C. E. Sherwood, M.D., Brookings (deceased)
Arthur W. Spiry, M.D., Mobridge
Myron Tank, M.D., Brookings
F. J. Tobin, M.D., Mitchell (deceased)
Leonard W. Tobin, M.D., Mitchell
J. S. Tschetter, M.D., Huron (deceased)
Paul Tschetter, M.D., Huron (deceased)
F. W. Valkenaar, M.D., Chancellor (deceased)
G. E. VanDemark, M.D., Sioux Falls (deceased)
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy directed to the individual. If this condition is considered the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in diabetes, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hyperkalemia develops or dietary intake of potassium is markedly impaired. It is available in combination with hydrochlorothiazide, which contains potassium. Hypokalemia should not be used. Hyperkalemia can occur, and is associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically serum K+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K+ intake. Associated widened QRS complex or arrhythmia requires prompt medical intervention. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires adjusting anticipated benefits against possible hazards, including fetal or neonatal jaundice, metabolic acidosis, or other adverse reactions seen in adults. Thiazides and amiloride may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of adverse reactions to thiazide diuretics. The theoretical risk of the biodegradable thiazide component of Dyazide is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entity of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with Dyazide suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium use with caution with Dyazide. Do periodic serum electrolyte determinations particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticosteroids (AITE). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients treated with triamterene, and diuretics, thiazides, thiazide, and amiloride may be reported with triamterene. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically significant reductions in platelet responsiveness to nonapeptide have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in children with splenomegaly. Anaphylactic effects may be enhanced in patients with lymphoma. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculi. Triamterene should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indometacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevations of serum creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered, hyperuricemia and gout, digitalis intoxication (if hyperkalemia), decreasing alka/urea with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinine. Hypokalemia is common with 'Dyazide', but should develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as diuretic hypertension. Concurrent use with chlorpropamide may increase the risk of severe hypokalemia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be used with caution in patients with renal disease. Thiazides may add to or potentiate the action of other anti-hypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth, anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions, tinnitus and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension may be aggravated by alcohol, barbiturates, or narcotics except those with vasoactive properties. Naevus, pancreatitis, xanthoma and respiratory distress include pleuritic chest pain, and pulmonary edema; transient biochemical abnormalities, stasis, sloughing, and vertigo occur with triamterene alone. Triamterene has been found in nephrotic syndrome in association with other usual calculi. A few occurrences of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules, Single Unit Packages (unit-dose) of 100 intended for institutional use only), in Patient-Pack unit-of-use bottles of 100.

In Hypertension... When You Need to Conserve K+
Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Potassium-Sparing
DYAZIDE
25 mg Hydrochlorothiazide/50 mg Triamterene/SK\nOver 20 Years of Confidence

The unique red and white Dyazide caputure: Your assurance of SK&F quality.
Cefaclor®
250-mg Pulvules® t.i.d.
offers effectiveness against
the major causes of bacterial bronchitis

Hemophilus influenzae, H influenzae, Streptococcus pneumoniae, Streptococcus pyogenes
(ampicillin-susceptible) (ampicillin-resistant)

Note: Cefaclor® is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Cefaclor® (cefaclor)
Summary. Consult the package literature for prescribing information.
Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of Streptococcus pneumoniae, Hemophilus influenzae, and S. pyogenes (group A beta-hemolytic streptococci).

Contraindications: Known allergy to cephalosporins.

Warnings: Cefaclor should be administered cautiously to penicillin-sensitive patients. Penicillins and cephalosporins show partial cross-allergenicity. Possible reactions include anaphylaxis. Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
• Discontinue Cefaclor in the event of allergic reactions to it.
• Prolonged use may result in overgrowth of nonsusceptible organisms.
• Positive direct Coombs’ tests have been reported during treatment with cephalosporins.
• In renal impairment, safe dosage of Cefaclor may be lower than that usually recommended. Cefaclor should be administered with caution in such patients.
• Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
• Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Cefaclor penetrates mother’s milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
• Gastrointestinal (mostly diarrhea): 2.5%.
• Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
• Hypersensitivity reactions (including morbilliform rashes, pruritus, urticaria, erythema multiforme, serum-sickness-like reactions): 1.5%; usually subside within a few days after cessation of therapy. These reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Cefaclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

• Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
• Other: eosinophilia, 2%; genial pruritus or vaginitis, less than 1%.

Abnormalities in laboratory results of uncertain etiology:
• Slight elevations in hepatic enzymes.
• Transient fluctuations in leukocyte count (especially in infants and children).
• Abnormal urinalysis; elevations in BUN or serum creatinine.
• Positive direct Coombs’ test.
• False-positive tests for urinary glucose with Benedict’s or Fehling’s solution and Clinistix tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

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Additional information available in the prescribing information issued by ELI LILLY and COMPANY, Indianapolis, INDIANA 46206.
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You want what’s best for your patients—not what’s cheapest. Medicine shouldn’t be practiced any other way.

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14-099
South Dakota State Medical Association Roster — 1986 Membership by Districts

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Sec./Treas., Robert Suurmeyer, M.D.

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Andersen, Calvin F. .....................Aberdeen  
Anderson, Esther E. ..........Aberdeen  
Bachmayer, Jay D. ..........Aberdeen  
Bartholomew, Kenneth A. ....Faulkton  
Berg, Sterling .........................Redfield  
Berry, Scott ............................Aberdeen  
*Bloomendaal, Gerrit J. .......Ipswich  
Brevik, Alan K. .........................Redfield  
Broadhurst, Kennon E. ..........Aberdeen  
Brown, Robert H. .................Aberdeen  
Bunker, Thomas .......................Aberdeen  
Carter, Peter B. .......................Aberdeen  
Chang, Joe P. ........................Aberdeen  
Chavier, Juan R. ......................Aberdeen  
Chen, Cheng-Fu .......................Aberdeen  
Christopher, John R. .............Aberdeen  
*D'Souza, Edward P. ..........Aberdeen  
Eckrich, Jerome A., Jr. .........Aberdeen  
Fahrenwald, Myron E. ..........Aberdeen  
Falk, Alex ..............................Aberdeen  
Gerber, Bernard C. .................Watertown  
Giridhar, Sanjeev ..................Aberdeen  
Harlow, Mark C. ......................Aberdeen  
Hart, Harvey J. .......................Aberdeen  
Hastings, John .......................Aberdeen  
Heinemann, Phyllis E. .............Aberdeen  
Heisinger, Randolph ..........Aberdeen  
Holkesvick, R. E. .................Aberdeen  
Hovland, James I. .................Aberdeen  
Hsu, Ven .............................Aberdeen  
Huber, Joel B. .........................Redfield  
Janusz, Albin J. ......................Aberdeen  
Kazi, K. Stephen .................Aberdeen  
Kom, Carlton J. .......................Aberdeen  
Kosse, Karl H. .........................Aberdeen  
Leon, Paul R. .........................Aberdeen  
McFee, John L. .......................Ipswich  
McGee, Robert C. .................Aberdeen  
McIntosh, George F. ..........Eureka  
Mogen, Mark ..........................Aberdeen  
Myrmo, Arlin M. .................Aberdeen  
*Norgello, Viki E. .................Siou Fells  
Odland, Winston B. ..........Aberdeen  
Ostrowski, Susan M. ..........Eureka  
Patterson, David M. ..........Redfield

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Barton, G. Robert ..........Watertown  
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Berryman, Wm. ..........Watertown  
Carter, Roger L. ...............Watertown  
*Clark, Carroll J. ..........Watertown  
Desai, Bhasker J. ........Watertown  
Engelhart, Kenneth E. ....Watertown  
Fedt, Donald N. ............Watertown  
Feeley, Steven ..............Estelline  
Frazier, Paul D. ..........Clear Lake  
Gehring, S. ......................Watertown  
Gerrish, Catherine ..........Watertown  
Gerrish, Edwin ............Watertown  
Gibbs, Stephen ............Watertown  
Guddal, W. Nicol ..........Watertown  
Hanson, Bernie H. P. ....Watertown  
Harding, Frank ..........Watertown  
Hughes, Howard D. ..........Clear Lake  
*Huppler, E. G. ..........Minnesota  
Lamb, Marlin ..........Watertown  
Lawson, James C. ..........Watertown  
Lawson, Paul ..............Watertown  
Likness, Clark W. ..........Watertown  
Meyer, Robert J. ..........Watertown  
Nelson, Parry S. ..........Watertown  
Ostby, Jason ..........Watertown

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Appelwick, James E. ..........Madison  
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Bandiera, Samuel J. ....Brookings  
Bruning, Gary .................Flandreau  
*Friefeld, Saul ...................Minnesota  
Halliday, David ..........Lake Norden  
Heidorn, Richard ..........Arlington  
*Henry, Robert B. ..........Brookings  
*Hill, Richard P. ..........Brookings  
Jacobs, Ted B. .................Flandreau  
*Kershner, Calvin N. ..........Brookings  
*Lampert, Arthur A., Jr. ......Rapid City  
Long, Ronald A. ..........Brookings  
Lushbough, Bruce C. ......Brookings  
McHardy, Bryson R. .....Brookings  
*Oety, Bedford T. ..........Flandreau  
Pederson, Kim ........Sioux Falls  
*Peeke, Alonzo P. ........Volga  
Peik, Donald J. ..........Brookings  
*Plowman, Elven M. ......Brookings  
Rietz, R. R. .................Brookings  
Roberts, Charles S., Jr. ....Brookings  
Sample, Richard G. ........Madison  
Saxena, Satish ..........Watertown
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<th>District No.</th>
<th>President</th>
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<th>Secretary</th>
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<td>District No. 4</td>
<td>Pierre</td>
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<td>Barnett, George L.</td>
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* enclosed in brackets indicates a removed person from the list.
**Sioux Falls**

**Deadwood**

**Yankton**

**Rapid City**

**Yankton District No. 8**

Pres., David Smith, M.D.

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Dendinger, William J. ... Vermillion
Dunganari, M. ... Menno
Foyl, Robert J. ... Tyndall
Frank, John ... Yankton
Gilmor, H. ... Yankton
Gunderson, Dale E. ... Yankton
Halveryson, Kenneth ... Yankton
Heck, Louis ... Yankton
Heinrichs, Eberhard H. ... Vermillion
Held, Gordon ... Yankton
Holzwarth, David R. ... Yankton
Honke, Richard W. ... Yankton
Hubner, Jay W. ... Yankton
Isburg, Carroll D. ... Yankton
Jacobsen, John J. ... Norfolk, NE
Jameson, G. Malcolm ... Yankton

Williamson, Buck J. ... Sioux Falls
Wilson, Thomas M. ... Sioux Falls
Wirtz, Patricia S. ... Sioux Falls
Witzke, David ... Sioux Falls

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Johnson, Virginia P. ... Vermillion
Kalda, Ellison F. ... Platte
King, Patrick ... Yankton
Krause, Steven ... Yankton
LaPorte, John ... Hartington, NE
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McVay, Chester B. ... Yankton
McVay, Michael R. ... Yankton
Menesser, Frank D. ... Yankton
Meyer, Larry A. ... Yankton
Neubauer, Jo ... Yankton
Neumayer, Robert J. ... Yankton
Olson, Thomas H. ... Vermillion
Pese, Ulises ... Yankton
Petersen, Loren P. ... Yankton
Porter, Richard J. ... Yankton
Potas, D. G. ... Yankton
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Provow, Susan R. ... Vermillion
Pullen, Myrick ... Yankton
Radack, Morris L. ... Yankton

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Rhoades, Marques E. ... Yankton
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Sattler, Theodore H. ... Yankton
*Sebring, Floyd U. ... Minn.
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Wilcocks, Thomas H. ... Yankton

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Anderson, Dale ... Rapid City
Anderson, Wayne ... Deadwood
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*Bailey, John D. ... Rapid City
*Bailey, S. ... Rapid City
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Bauman, Randell E. ... Rapid City
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Berkebeil, Dale E. ... Rapid City
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Bobadick, M. ... Rapid City
*Borgmeyer, Henry J. ... Rapid City
*Boyce, Raymond A. ... Rapid City
Boyer, David W. ... Rapid City
*Branch, Robert F. ... Rapid City
*Bray, Robert B. ... Rapid City
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Butz, Gerald W. ... Rapid City

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*Ferre, Robert L. ... Rapid City
*Fetter, B. ... Hot Springs
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Frost, Harold L. ... Rapid City
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*Gilbert, Freeman J. ... Belle Fourche
*Gill, Timothy ... Rapid City
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Jackson, James W. ... Rapid City
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James, Edward H. ... Rapid City
Jennings, Gerti ... Rapid City
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Jentner, George W. ... Sturgis
Jentes, Paul K. ... Fort Meade
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Klar, W. ... Fort Meade
Knecht, John F. ... Martin
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Kovarik, Richard A. ... Rapid City
Kovarik, Wenzel J. ... Rapid City
Kraftka, Thomas L. ... Rapid City
Kullbom, James B. ... Rapid City
Kunz, James A. ... Rapid City

**August 1986**

Sec., N. R. Whitney, M.D.
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<tr>
<td>Kwan, Francis P.</td>
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<td>*Saxton, A. J.</td>
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<td>Sejvar, Joseph P.</td>
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<td>Wright, Paul L.</td>
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<td>Yamada, Andrew R.</td>
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<td>*Zanka, J. A.</td>
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<td>Zielike, Carol M.</td>
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**ROSEBUD DISTRICT No. 10**

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<tr>
<td>Berg, Tony L.</td>
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<td>Carpenter, Mary</td>
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<tr>
<td>Hanson, Jeffrey</td>
<td>Rosebud</td>
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<td>Hogrefe, Louis H.</td>
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<td>Malm, John A.</td>
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<td>Nemer, Raymond G.</td>
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<td>Stiehl, Robert L.</td>
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**NORTHWEST DISTRICT No. 11**

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<tr>
<td>Collins, James D.</td>
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<tr>
<td>Henderson, Ben J.</td>
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<td>Knowles-Smith, P.</td>
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<td>Linde, Leonard M.</td>
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<td>*Nolan, Bernard P.</td>
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<td>*Spiry, Arthur W.</td>
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**WHETSTONE VALLEY DISTRICT No. 12**

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<tr>
<td>Bell, Eldon E.</td>
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<tr>
<td>Bjordahl, Kevin</td>
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<td>Janavs, Visvaldis</td>
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<td>*Johnson, Edward A.</td>
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<tr>
<td>Kass, Joseph</td>
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<td>Kass, Thomas</td>
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<td>Nelson, Lawrence F.</td>
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<td>Oey, David L.</td>
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<td>Staub, David W.</td>
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<td>Vanadurongvan, K.</td>
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<td>Vanadurongvan, V.</td>
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</table>

* Indicates Honorary Members

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South Dakota State Medical Association Roster — 1986 Membership — Alphabetical Listing

<table>
<thead>
<tr>
<th>Name</th>
<th>City</th>
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<tbody>
<tr>
<td>Aanning, Harald, L.</td>
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<td>Abu-Ghazaleh, Samir Z.</td>
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<td>Ahlvin, H. Lee, Jr.</td>
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<td>*Ahlvin, Hollis L.</td>
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<td>Albano, Paterno C.</td>
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<td>*Alcorn, Floyd</td>
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<td>Alvine, Frank G.</td>
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<td>Anderson, A. Byford</td>
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<td>*Anderson, Thorswald R.</td>
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<tr>
<td>*Andersen, Warren R.</td>
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<tr>
<td>Anderson, Wayne</td>
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SOUTH DAKOTA
ASSOCIATE MEMBERS
(MEDICAL SCHOOL STUDENTS, RESIDENTS)

†Allen, Raymond, M.D.  Minneapolis, MN
Anderson, Mark  Vermillion
Ballinger, Beth  Vermillion
Barden, Andrew  Yankton
Barrett, Kathryn  Vermillion
†Beecher, Mary, M.D.  Sioux Falls
Behrend, Robert  Vermillion
†Behrens, B. J., M.D.  MO
Bloom, Alan  Fargo, ND
Bormes, Jerome  Vermillion
†Braastad, Fred, M.D.  Yankton
Bubak, Cynthia  Tyndall
†Bubak, Mark, M.D.  MN
Carter, Amy  Sioux Falls
Cecil, Daniel  Vermillion
Cech, M. M.  Watertown
†Davies, Michael, M.D.  Sioux Falls
†Davis, John B., M.D.  Sioux Falls
†Donnell, James, M.D.  Sioux Falls
Drabek, Greg  Winner
Dwyer, David  Vermillion
Eccarius, Scott  Sioux Falls
Eckrich, Paul  Yankton
Ehring, Lewis  Vermillion
†Elston, Michael, M.D.  IA
†Foley, Stephen, M.D.  Sioux Falls
†Fowler, Carol, M.D.  Yankton
Fullerton, Donna  Sioux Falls
Fullerton, Thomas  Sioux Falls
†Geise, Douglas, M.D.  Sioux Falls
Giebink, Patricia  Baltic
†Glas, Ronald, M.D.  Sioux Falls
Goertz, Elizabeth  Sioux Falls
Gosewich, Gary  Vermillion
Gregg, Mark, M.D.  Rapid City
Hamon, Joseph  Vermillion
Hammer, Bryan  Sioux Falls
Helvig, Bethany  Vermillion
†Herrmann, Harland, Jr., M.D.  Yankton
†Hill, Laurie, M.D.  Sioux Falls
Hockenberry, Tim  Sioux Falls
†Hof, Jem J., M.D.  Sioux Falls
Hofer, Roger  MN
†Hottman, Jeff, M.D.  Omaha, NE
Hovland, Michael  Vermillion
Irons, Barry  Vermillion
†Johnson, Mark, M.D.  TX
†Johnson, Michael, M.D.  Yankton
†Jung, Shelley  Rapid City
†Kaplan, Richard, M.D.  AZ
†Kidman, Brian, M.D.  Sioux Falls
Kovacevich, Guy  Rapid City
†Kremer, Wm., M.D.  Sioux Falls
†Laposky, David, M.D.  Sioux Falls
†Larsen, David, M.D.  Sioux Falls
Leyba, Christine  Sioux Falls
†Lindbloom, Brent, D.O.  Yankton
†Lushbough, Kathryn, M.D.  Yankton
Lutzwick, Steven  Sioux Falls
Mabee, Mark  Yankton
†Mahoney, Thomas  Sioux Falls
†Malters, Joseph, M.D.  CA
‡Mantz, Donald, M.D.  NE
Martin, Douglas  Sioux Falls
†Meyer, J. Paul, M.D.  MI
†Murphy, Cindy, M.D.  Sioux Falls
†Nelson, Steven, M.D.  MD
†Ober, Kathleen  Sioux Falls
Olson, Brad  Vermillion
Owsiany, Leonard  Sioux Falls
Paulson, Brad  Sioux Falls
‡Peterson, Steven, M.D.  Yankton
‡Piquette, Craig A., M.D.  Yankton
†Rabenberg, Rita  Yankton
†Rains, Ronald, M.D.  Sioux Falls
Rand, Scott  Vermillion
 Welsh, Gary L.  Rapid City
Werpy, Mark  Pierre
‡Werthmann, Hubert E.  Pierre
Wessel, A.  Rapid City
Westaby, Robert S.  Hot Springs
Wetzlberger, W.  Madison
White, Thomas C.  Sioux Falls
Whitney, Nathaniel R.  Rapid City
Wicks, Dennis R.  Custer
Wieland, C. D.  Fort Meade
Wierda, Daryl R.  Sioux Falls
Wilde, Kim L.  Madison
Willecockson, John R.  Yankton
Willenson, Thomas H.  Yankton
Williams, Buck J.  Yankton
†Williams, Francis R.  Sun City, AZ
Williams, H. Stephen  New Orleans, LA
Williams, R. J.  Rapid City
Wilson, Thomas M.  Louisville, KY
Wingert, Robert  Rapid City
Wirtz, Patricia S.  Sioux Falls
Wischemeyer, Curt  Aberdeen
Witzke, D.  Sioux Falls
Wolff, David  Bowdle
Wrage, Theodore J., Jr.  Watertown
Wright, Paul  Rapid City
Wunder, James F.  Mobridge
Wyatt, George W.  Sioux Falls
Wyatt, Ronald O.  Sioux Falls
Yackley, James V.  Rapid City
Yamada, Andrew R.  Rapid City
Yecha, David J.  Gettysburg
Zakahi, Raymond J.  Pierre
†Zanka, J. A.  Rapid City
Zawada, E. T.  Sioux Falls
Zielke, Carol M.  Rapid City
Zvejnieks, Karlis  Aberdeen

†Indicates Honorary Member
An article in the June 20 issue of A.M. News, written by Mitchell Karlan, M.D., caught my attention. The title was “Arrogance is a Malaise That Needs to be Cured.” He defined arrogance as a “feeling of superiority manifested in an overbearing manner, presumptuousness, self-importance, haughtiness, and/or insolent pride.” He indicated this is, of late, a somewhat evident trait among physicians, nurses, administrators, and government bureaucrats.

At a time of lessened respect for the physician, it is imperative that medical students be continually reminded of the Hippocratic Oath and the “raison d’etre” as they study anatomy and physiology. It is necessary that the trait of arrogance, which seems to correlate in growth with increase of skills and confidence be balanced with traits of sincere caring and concern.

However, I take issue with the simplicity of the criticism. The impression of arrogance I believe is, in reality, a protective shield against the tremendous forces bombarding the profession and lowering its self-esteem.

With the increasing rivalry between physicians and nurses, physicians and attorneys, physicians and administrators, physicians and the government, and yes, physicians and patients, the medical community is becoming more isolated and introverted. The excessive stress and tension resulting from these circumstances can create the appearance of arrogance.

Physicians’ spouses have an enormous responsibility to help our physicians to maintain balance in their lives. We must see that they remain humble, yet confident and secure. We must reduce their stress by providing a home environment of peace and love and financial solvency. We must represent them to the community, volunteering in helpful ways, so that the barriers to mutual respect and understanding can be penetrated. With physicians and spouses working together as a team, we can enhance respect and understanding of the medical community.

Together we will “make a difference.”

Annette Shousha, President
South Dakota State Medical Association Auxiliary
September

**Increased Competition in Medicine**, Westin O’Hare Hotel, Rosemont, Ill., Sept. 5-6. Fee: $175. 8 hrs. AMA Category I credit. Contact: AMA, Dept. of Registration Serv., 535 N. Dearborn St., Chicago, IL 60610. Phone: 1-800-621-8335.

**ACEP 1986 Scientific Assembly**, Georgia World Congress Center, Atlanta, GA, Sept. 15-18. Phone: (214) 500-0911.


October


**Current Advances in Pediatrics**, Disneyland Hotel, Anaheim, Calif., Oct. 17-19. Contact: OCPS/Calif. Chapter 4, AAP, P. O. Box 1297, Orange, CA 92668. Phone: (714) 978-2415.


E. T. Bell Pathology Symposium, Radisson Univ. Hotel, Minneapolis, Minn., Oct. 24. Contact: CME, U. of Minn., Box 202, 420 Delaware St., SE, Minneapolis, MN 55455. Phone: (612) 626-5525.


November

First Annual Heart and Lung Institute Conference, Radisson Univ. Hotel, Minneapolis, Minn., Nov. 4-5. Contact: CME, U. of Minn., Box 202, 420 Delaware St., SE, Minneapolis, MN 55455. Phone: (612) 626-5525.


Current Approaches for the Diagnosis and Treatment of Gastrointestinal Cancers, Hotel Inter-Continental, Houston, Tex., Nov. 12-14. Contact: Off. of Conf. Services, Box 131, M.D. Anderson Hosp. & Tumor Inst., 6723 Bertner Ave., Houston, TX 77030. Phone: (713) 792-3030.

43rd Annual Meeting of the American Geriatrics Society and the 7th Annual Meeting of the American Federation for Aging Research, Marriott Hotel, Chicago, Ill., Nov. 16-19. Contact: Am. Geriatrics Society, Rm. 1470, 10 Columbus Circle, New York, NY 10019. Phone: (212) 582-1333.

A Model of Adjustment in Bereavement: A Normal Process

USD School of Medicine
Use of Nitroglycerin — 1986

A Patient With Known Unilateral Renal Cysts Who Developed Epigastric Pain, Nausea and Vomiting
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Every day more and more physicians are hearing something remarkable from some of their hypertensive patients...
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INDERAL LA as well tolerated as atenolol and metoprolol in a double-blind, crossover, placebo-controlled study of 138 hypertensives.¹

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As with all fixed-combination antihypertensives, INDERIDE LA is not indicated for the initial treatment of hypertension.
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Please turn page for brief summary of prescribing information.
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Each capsule contains propranolol HCl (INDENER LA), 80 mg, 120 mg, or 160 mg, and hydrochlorothiazide, 50 mg.

**BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULARS)**

**INDENER LA** Brand of PROPRANOLOL HYDROCHLORIDE (LA) and HYDROCHLOROTHIAZIDE (Long Acting Capsules)

**INDENER LA** Brand of PROPRANOLOL HYDROCHLORIDE (LA) and HYDROCHLOROTHIAZIDE (Long Acting Capsules)

**INDENER LA and INDENER LA Capsules should not be considered simple mg-for-mg substitutes for INDENER and INDENER Tablets. Please see package circulars.

**CONTRAINDICATIONS**

Propranolol hydrochloride (INDENER LA): Propranolol is contraindicated in:

1. Cardiac arrest, shock, 2. sinus bradycardia and greater than first degree block, 3. bronchial asthma, 4. congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarythmia treatable with propranolol.

Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulphonamide-derived drugs.

**WARNINGS**

Propranolol hydrochloride (INDENER LA): CARDIAC FAILURE: Symptomatic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta-blockade may precipitate more severe failure. Although beta blockers, when used in the proper dose, have been shown to be useful in heart failure, necessary, they can be used with close follow-up in patients with a history of failure who are well compensated, and are receiving digitals and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitals on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta-blockers in cases of heart failure or cardiac arrest is not contraindicated.

**IN PATIENTS WITH ANGINA PECTORIS,** there have been reports of exacerbation of angina in some patients following abrupt discontinuation of propranolol therapy. Therefore, when discontinuation of propranolol is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when propranolol is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol is abruptly discontinued, angina pectoris may occur. In such cases, it may be necessary to reinstitute propranolol therapy and take other measures appropriate for the management of any associated symptoms or complications of untreated angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atheroembolic heart disease who are given propranolol for other indications.

**THYROTOXICOSIS:** Beta-blockade may mask certain clinical signs of hyperthyroidism. Therefore, beta-blocking agents should be used with caution in patients with known or suspected thyrotoxicosis.

**IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME,** several cases have been reported in which propranolol treatment was followed by the development of atrioventricular block.

**MALIGNANT HYPERTENSION:** The necessity or desirability of withdrawal of beta-blocker therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthetic and surgical procedures.

**Congenital Bronchopasm (eg, chronic bronchitis, emphysema—PRECAUTIONS)**

Propranolol should be used with caution in patients with chronic bronchitis or emphysema, particularly when bronchospasm is not controlled by other means.

**BETA BLOCKERS:** INDENER should be administered with caution, since it may block bronchial Bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

**DIABETES AND HYPOGLYCEMIA:** Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (palse and pressure changes) of acute hypoglycemia in insulin-dependent diabetics. In these patients, it may be more difficult to recognize and treat hypoglycemia.

**HYDROCHLOROTHIAZIDE:** This diuretic should be used with caution in renal disease, especially in patients with impaired renal function, cumulative effects of the drug may develop.

**LACTATION:** Propranolol should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate exacerbation of hepatic disease.

**THYROID FUNCTION:** Thiazides may alter thyroid function by decreasing thyroid uptake of iodine. The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

**PRECAUTIONS**

Propranolol hydrochloride (INDENER LA): GENERAL: Propranolol should be used with caution in patients with severe cardiovascular, cerebrovascular, or pulmonary disease. Beta blockers can cause reduction of intracranial pressure. Patients should be told that propranolol may interfere with the results of any intracranial pressure screening test. Withdrawal may lead to a return of increased intracranial pressure.

**DOPAMINERGIC TOXICITY:** Elevations in plasma levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

**DRUG INTERACTIONS:** Patients receiving catecholamine-depleting drugs, such as reserpine, should be closely observed if propranolol is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity, which may result in hypotension, marked bradycardia, vention, syncope, or shock attacks, or orthostatic hypotension.

**CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY:** Long-term studies in rats and mice have shown propranolol to have no adverse effects on fertility and reproductive potential. In 18-month studies, both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects observed in long-term studies in rats. Although propranolol does not cause any impairment of fertility, there are no adequate and well-controlled studies in pregnant women. Propranolol should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**NURSING MOTHERS:** Propranolol is excreted in human milk. Caution should be exercised when propranolol is administered to a nursing mother.

**REFERENCES:**


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NEXT MONTH

Family Abuse: Child, Spouse, Elderly
Lack of Complete Documentation May Result in Denial

SDFMC has identified problems in reviewing Medicare and Medicaid cases which have incomplete medical record documentation.

When the situation occurs where a physician advisor is unable to find adequate record documentation and/or a documented need for acute care hospitalization based on the available medical record information, a notice of non-certification will be issued.

This action will provide the attending physician with a notice that the medical record lacks sufficient information supporting a need for acute care hospitalization. This notice will also provide the attending physician with an opportunity to document any additional information regarding the case.

The SDFMC nurse review coordinators will notify the attending physician that any additional information that the attending physician may have regarding this case, which is currently not on the record, may be added in the form of an addendum.

A signed copy of the addendum will be placed in the medical record and a signed copy forwarded to SDFMC. The initial physician advisor will then have an opportunity to review the completed record and, when appropriate, adjust the review determination.
A Model of Adjustment in Bereavement: A Normal Process*

W. Vail Williams, Ph.D.†

ABSTRACT

This study examined the possibility of determining to what extent a knowledge of environmental, family systems, and individual functioning stressors at the time of or just prior to acute object loss can predict subsequent outcome adjustment. Recent studies have revealed that prior stressful events including psychosocial factors are directly linked to onset of depression, cancer, and cardio-vascular problems. Based upon a sample of 204 bereaved families, 8 pre-factors were identified and used to predict 16 outcome adjustment factors. Results indicated that a combination of the hypothesized conditions prior to or at the time of acute object loss did predict adjustment both at 6 months post-loss as well as 18 months post-loss. Discussion centered on development of intervention techniques aimed at those individuals who are identified as high risk for negative outcome adjustment prior to or at the time of acute object loss.

During the past decade, research has effectively demonstrated that stressful events can have a subsequent effect upon physical and emotional adjustment. Certainly, acute object loss through death of a loved one can act as a stressor in the onset or exacerbation of physical illness. The increased risk of physical illness may be the result of stress effects upon the neuroendocrine system, and immune system. Additional increase risks may involve mortality rates and emotional illnesses.

In order to investigate the effects of acute object loss upon subsequent personal adjustment, a series of studies were designed which centered around a crisis intervention service offering assistance to recently bereaved family survivors. In addition to personal adjustment, the general hypothesis that a timely crisis intervention service might decrease the risk of physical and emotional illnesses of survivors following the acute object loss was also investigated. The results of these investigations indicated that sudden death has a two phase impact upon family survivors. The first phase, lasting about one year, shows increased risk of ill health in subjective psychological and somatic-anxiety type symptoms; increased difficulty in dealing with family, interpersonal and interpersonal problems; and increased concerns for personal role functioning, social functioning, as well as a loss of quality of life. The second phase lasting longer than one year is characterized by a concentration on more pragmatic problems involving finances and quality of life assets. It is interesting to note that the crisis intervention service had no impact upon the adjustment of family survivors by decreasing of physical and emotional illnesses. Also, there was a slight increase in mortality rate for widowed spouses.

With the failure of the crisis intervention service to ameliorate the effects of acute object loss upon subsequent adjustment, it seemed inappropriate to apply such a service to all survivors. Rather the question was raised, "Might not a crisis service be more effective if offered to those survivors experiencing difficulty in adjustment provided they could be identified?" Thus, this paper reports an attempt to determine to what extent a knowledge of conditions at the time of acute object loss can predict subsequent outcome adjustment. Recent studies have demonstrated that prior stressful events as well as psychological factors seem directly linked to the onset of depression, cancer and cardio-vascular problems. In this sense, a comprehensive picture of an individual’s adjustment to acute object loss may best be predicted and understood only when conditions at the time of loss are taken into account. Such conditions might involve environmental

* This study was supported by an NIMH grant MH15867, and was conducted while the author was at Ft. Logan Mental Health Center, Denver, Colorado, USA.
† Associate Professor, USD School of Medicine, Dept. of Psychiatry, Sioux Falls, SD.

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stresses, family system stresses, and individual functioning.

METHOD

Design and Subjects

A total sample of 204 bereaved families and 158 non-bereaved intact families were randomly selected according to a 3 x 2 repeated measures design. The first factor involved three subject groups: an experimental group (E) which received a crisis intervention service following acute object loss; a bereaved control group (C1) which received no service after acute object loss; and a normal control group (C2) that experienced no acute object loss nor received any service. The second factor involved two adjustment assessments: 6 months following object loss and again at 18 months. Initial refusal rates, drop-out rates and procedure are documented elsewhere. Analysis of demographic data indicated that the three groups did not differ with respect to age, cultural group, religion, education, income, or home ownership. As might be expected the C2 group had significantly more males. Overall, subjects with complete sets of outcome assessment data revealed twice as many females as males, mostly of the white race, had a high school education, with the majority owning their own home.

Measurements

Assessments were based upon initial contact and outcome. Initial contact was at the time of acute object loss or in the case of the C2 families at the time of eliciting participation in the study. Outcome assessments were completed 6 months post-loss and 18 months after initial identification. Initial contact data consisted of (a) demographic data; (b) rate-based data from interviews asking for behavioral events prior to initial contact; (c) and bereaved families were asked to recall factual events about the loss itself. This set of data was subjected to factor analytic procedures which resulted in 8 factors accounting for 75% of the total variance. These orthogonal factors, the number of subjects in each, and reliability indexes are shown in Table I. All initial contact factors were scored so that a high score indicated a high attribute.

Outcome assessments were collected on: (a) medical illness; (b) psychiatric illness; (c) social functioning and coping behavior; (d) family functioning; and (e) social/income costs. Factor analytic procedures were applied to these sets of data resulting in 16 factors accounting for 67% of subjects in each, and the reliability indexes are shown in Table II. Most factors were scored so that a high score indicates high attribute. Factors II, IV, and XVI were reversed scored so that a high score indicates low attribute. Details regarding the factor analytic procedures used are reported elsewhere.

Since this report is concerned only with the ability to predict adjustment following acute object loss based upon a knowledge of conditions at the time of loss, only those data pertaining to the E and C1 groups are reported.

RESULTS

Initial Contact Comparisons

Analyses of variance comparisons between E and C1 groups were conducted on initial contact factors in order to determine equivalences of groups and to identify potential covariates in analyses of predictive outcome. Three of the eight initial contact factors revealed significant differences between the E and C1 groups. The treatment group (E) experienced more accidental deaths outside the home (F = 15.6, df = 1/110, p < .01), had more family crisis in the year prior to acute object loss (F = 14.2, df = 1/110, p < .01), and the family environments were rated as more destructive prior to the loss (F = 11.9, df = 1/110, p < .01). Three significant initial contact factors were treated as covariates in further analyses involving outcome which have been reported previously.

Prediction of Adjustment

Sixteen regression analyses at the six month and eighteen month post-loss were performed in order to determine the pre-factor or combination of pre-factors predictive of each outcome adjustment factor. The results (Table III) indicate that at 6 months post-loss almost all adjustment factors (12 of 16) could be predicted; whereas at 18 months post-loss only six of sixteen adjustment factors were predicted. Furthermore, at 6 months, pre-factors I, II, III, VII account for five times the predictive weight of all adjustment factors as compared to pre-factors IV, V, and VIII (180 cumulative % to 36 cumulative %). At 18 months post-loss a similar relationship exists that shows 3.6 times the predictive weight. In order to take into account the relative perspective of the pre-factors, all individual/family oriented pre-factors (II, IV, VI, VII) were combined and all environmental-factual oriented pre-factors (I, III, V, VIII) were combined. At 6 months, of the total predictive weight, 58% was contributed by the individual/family perspective as compared to 42% for the environmental-factual perspective. However, at 18 months, the relationship had changed — 75% was contributed by the individual/family perspective as compared to 25% for the environmental-factual perspective.
### TABLE I
**PRE-TREATMENT FACTORS**

<table>
<thead>
<tr>
<th>Factor</th>
<th>N</th>
<th>KR</th>
<th>Range</th>
<th>X</th>
<th>S.D.</th>
<th>E Group</th>
<th>C Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Accidental Death</td>
<td>112</td>
<td>.67</td>
<td>4.2-10.2</td>
<td>7.0</td>
<td>1.4</td>
<td>6.0</td>
<td>1.3</td>
</tr>
<tr>
<td>II. Family Stress and Maladjustment</td>
<td>112</td>
<td>.57</td>
<td>1.0-18.6</td>
<td>7.9</td>
<td>3.2</td>
<td>7.4</td>
<td>2.3</td>
</tr>
<tr>
<td>III. Socioeconomic Status</td>
<td>112</td>
<td>.53</td>
<td>21.5-86.0</td>
<td>41.1</td>
<td>10.8</td>
<td>43.1</td>
<td>8.5</td>
</tr>
<tr>
<td>IV. Physical and Mental Health</td>
<td>112</td>
<td>.60</td>
<td>1.0-15.0</td>
<td>6.0</td>
<td>3.0</td>
<td>5.2</td>
<td>3.1</td>
</tr>
<tr>
<td>V. Suddenness of Death</td>
<td>112</td>
<td>.70</td>
<td>4.0-16.0</td>
<td>13.0</td>
<td>3.1</td>
<td>12.4</td>
<td>3.4</td>
</tr>
<tr>
<td>VI. Number of Crises prior to Loss</td>
<td>112</td>
<td>.71</td>
<td>32.0-379.0</td>
<td>136.2</td>
<td>70.0</td>
<td>87.2</td>
<td>50.4</td>
</tr>
<tr>
<td>VII. Stress of Home Environment</td>
<td>112</td>
<td>.47</td>
<td>4.0-8.0</td>
<td>5.5</td>
<td>1.0</td>
<td>4.8</td>
<td>1.0</td>
</tr>
<tr>
<td>VIII. Violentness of Death</td>
<td>112</td>
<td>.79</td>
<td>4.0-8.0</td>
<td>5.3</td>
<td>1.4</td>
<td>4.8</td>
<td>1.4</td>
</tr>
</tbody>
</table>

### TABLE II
**OUTCOME FACTORS**

<table>
<thead>
<tr>
<th>Factor</th>
<th>6 Months Bereaved Group (E and C1)</th>
<th>18 Months Bereaved Group (E and C1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Neurotic Symptoms Scale</td>
<td>112</td>
<td>.86</td>
</tr>
<tr>
<td>II. Bodin Family Closeness</td>
<td>112</td>
<td>.96</td>
</tr>
<tr>
<td>III. External Aggressive Symptoms Scale</td>
<td>112</td>
<td>.54</td>
</tr>
<tr>
<td>VI. Crisis Coping Scale</td>
<td>112</td>
<td>.88</td>
</tr>
<tr>
<td>V. Religious Helping of Others</td>
<td>112</td>
<td>.70</td>
</tr>
<tr>
<td>VI. Authoritarian Family Functioning</td>
<td>112</td>
<td>.46</td>
</tr>
<tr>
<td>VII. Depression and Physical Complaints</td>
<td>112</td>
<td>.74</td>
</tr>
<tr>
<td>VIII. Positive Family Functioning</td>
<td>112</td>
<td>.82</td>
</tr>
<tr>
<td>IX. Concerns, Work, Family Well-Being</td>
<td>112</td>
<td>.64</td>
</tr>
<tr>
<td>X. Depression and Seeking Help</td>
<td>112</td>
<td>.52</td>
</tr>
<tr>
<td>XI. Monthly Income</td>
<td>112</td>
<td>.11</td>
</tr>
<tr>
<td>XII. Monthly Expenses</td>
<td>112</td>
<td>.14</td>
</tr>
<tr>
<td>XIII. Social Costs (Losses)</td>
<td>112</td>
<td>.79</td>
</tr>
<tr>
<td>XIV. Individual/Family Weakness</td>
<td>112</td>
<td>.92</td>
</tr>
<tr>
<td>XV. Death Intensifies Conflict</td>
<td>112</td>
<td>.68</td>
</tr>
<tr>
<td>XVI. Bereavement/Adjustment</td>
<td>112</td>
<td>.45</td>
</tr>
</tbody>
</table>

### TABLE III
**REGRESSION ANALYSES THAT INVOLVE OUTCOME DIMENSIONS AND SHOW THE CONTRIBUTION OF SIGNIFICANT PREDICTIVE WEIGHTS**

<table>
<thead>
<tr>
<th>Outcome Dimensions</th>
<th>I 6 18</th>
<th>II 6 18</th>
<th>III 6 18</th>
<th>IV 6 18</th>
<th>V 6 18</th>
<th>VI 6 18</th>
<th>VII 6 18</th>
<th>VIII 6 18</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>.084</td>
<td>.084</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td>.063</td>
<td>.004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>.268</td>
<td>.185</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>.044</td>
<td>.006</td>
<td>.078</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>.004</td>
<td>.004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>.002</td>
<td>.137</td>
<td>.005</td>
<td>.130</td>
<td>.008</td>
<td>.008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>.001</td>
<td>.003</td>
<td>.003</td>
<td>.002</td>
<td>.144</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>.336</td>
<td>.003</td>
<td>.078</td>
<td>.002</td>
<td>.005</td>
<td>.005</td>
<td>.168</td>
<td>.185</td>
</tr>
<tr>
<td>10.</td>
<td>.005</td>
<td>.096</td>
<td>.055</td>
<td>.005</td>
<td>.005</td>
<td>.005</td>
<td>.168</td>
<td>.185</td>
</tr>
</tbody>
</table>

Scores are $R^2$ increments significant at the $p < .01$ level of confidence.
DISCUSSION

As this study demonstrated, not only is it possible to predict post-loss adjustment from a knowledge of environmental and individual/family stressors prior to or at the time of loss, but the greatest impact appears to be within the first year following the loss. In this respect, an accidental death outside the home, high family stress and malfunctioning prior to the loss, low socioeconomic status, and financial stress along with poor physical and mental health of the survivor prior to the loss — all contribute to the high probability of negative bereavement adjustment. Furthermore, the high family, financial, physical and mental health stressors of the survivors prior to the loss are predictions of long term adjustment difficulties beyond one year post-loss. Thus, while grieving is a normal process, it is not surprise that some individuals who become "stuck" in this process and experience prolonged difficulty and misery do so possibly as the result of biopsychosocial stressors occurring prior to or at the time of acute object loss. In our opinion it may be that these biopsychosocial stressors render some individuals a feeling of helplessness and hopelessness which becomes exacerbated by acute object loss resulting in prolonged negative adjustment. If this is indeed the case, it would appear that intervention-education techniques which causes a shift in perception of potentially stressfulful situations so that such situations can be viewed as challenges rather than as insurmountable problems would be of significant value in negative bereavement outcome. In this regard, it is interesting to note that techniques based upon elicitation of the relaxation response or meditation practices in conjunction with good medical practice are currently being utilized to treat a wide range of illnesses — heart disease, hypertension, cancer, chronic pain, and depression.11

REFERENCES
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PREMARIN used alone does not adversely affect lipid levels. In fact, a clinical study has shown a significant increase in HDL cholesterol—from 49.7 mg/dL to 56.4 mg/dL—and decrease in LDL cholesterol—from 165.1 mg/dL to 138.1 mg/dL—after one year of therapy with PREMARIN, 0.625 mg.

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The most widely used, most extensively studied estrogen worldwide.

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(Conjugated Estrogens Tablets)
Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms. Please see following page for brief summary of prescribing information.
PREMARIN® (Conjugated Estrogens Tablets)
Vaginal Cream

For moderate-to-severe vasomotor symptoms

1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA.

Three independent case control studies have reported an increased risk of endometrial cancer in postmenopausal women who have been using estrogen replacement therapy. However, this risk appears to be independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the U.S. where estrogen replacement therapy has been widely utilized, particularly in regions of the country where the rapidly expanding use of estrogen during the last decade. The three case control studies reported that the increased risk of endometrial cancer was associated with estrogen use that was more prolonged than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogen replacement therapy is used it will be important to monitor women with prolonged use of hormone replacement therapy for the development of endometrial abnormalities. Early clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that estrogen replacement therapy augments the risk of cervical or vaginal cancer.

2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY.

The use of estrogen and sex hormone preparations, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diphosphoestradiol, a non-steroidal estrogen, have an increased risk of developing in later life a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated to be greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal or cervical carcinomas at the time of delivery, or within the first few years of life. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with other estrogenic agents, it cannot be excluded that similar changes occur. Several reports suggest an association between intratracheal exposure to female sex hormone and congenital anomalies, including congenital heart defects and limb reduction defects. One case-control study estimated a 4 fold increased risk of the latter of possible adverse effects on the developing fetus (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some contraceptive measures were very short and used only a few days of treatment. The data suggest that the risk of limb reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that such treatments are ineffective and that the adverse effects of these agents are more severe than expected. Women who are on long-term hormone replacement therapy should be informed that treatment in early pregnancy can seriously damage the offspring of the female partner.

INDICATIONS AND USAGE. PREMARIN® (conjugated estrogens tablets, USP). Moderate-to-severe vasomotor symptoms associated with menopause.

PREMARIN® (conjugated estrogens tablets, USP) is indicated for use in the treatment of moderate-to-severe vasomotor symptoms associated with menopause. These symptoms include hot flashes, night sweats, and vasomotor instability. EEG changes associated with vasomotor instability may be reduced. Oral contraceptives should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, the risk of these complications greatly exceeds that associated with typical estrogen replacement therapy. The benefits of such therapy should be carefully weighed against the risk of serious adverse effects. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of renal thrombosis, mesenteric thrombosis, and omphalocele have been reported in oral contraceptive users. An increased risk of postoperative thromboembolic complications has also been reported in oral contraceptive users. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type that could lead to hypotension and prolonged immobilization. Estrogens should not be used in patients with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, the risk of these complications greatly exceeds that associated with typical estrogen replacement therapy. The benefits of such therapy should be carefully weighed against the risk of serious adverse effects. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of renal thrombosis, mesenteric thrombosis, and omphalocele have been reported in oral contraceptive users. An increased risk of postoperative thromboembolic complications has also been reported in oral contraceptive users. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type that could lead to hypotension and prolonged immobilization. Estrogens should not be used in patients with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease.

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0.625 mg/g

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President's Page

Last evening as I sat out on the deck of our home savouring the relaxation of a three-day July 4th weekend, watching the beauty of a South Dakota sunset, I picked up a tattered old book. Tossed into a box of odds and ends as several years earlier we had been clearing out a parental home, I wondered at the time whether it might have antique value, or was I just pack-ratting... too sentimental to discard some of the old dust-collectors. I looked at the title, "Selections from Robert Burns," copyright, 1898, penned inside, the name of Oscar Olson, St. Olaf College, 1924, who might that have been and how did it get into my dad's library?

Reaching back into the memory bank of college years and specifically the hours spent pouring over the Brit. Lit. text, I recalled a bit about this famous Scottish poet. Poems difficult to read and occasionally to understand written as they were in Scotch vernacular, a reckless style who in typical English style might be termed "... a dissipated rake," rheumatic heart disease resulting in premature death, misunderstood in his time. As I thumbed through the table of contents, ranging from "Tam O'Shanter" to "Scotch Drink" to "Flow Gently Sweet Afton," I stumbled on an old familiar title, "John Anderson, My Jo" page 135.

John Anderson, my jo, John,
When we were first acquaint,
Your locks were like the raven,
Your bonnei brow was brent
But now your brow is beld, John,
Your locks are like the snow;
But blessings on your frosty pow,
John Anderson, my jo.

John Anderson, my jo, John,
We clamp the hill thegither;
And monie a canty day, John,
We've had wi' ane another,
Now we maun totter down, John,
And hand in hand we'll go,
And sleep thegither at the foot,
John Anderson, my jo.

Two verses capsulizing a life-time of togetherness... love, heartache, joy and pain... the human experience of sharing life's pleasures, surmounting life's obstacles, and leaving the world scene, "to sleep thegither," so to speak as time tears us from our earthly moorings.

What am I driving at with this somewhat abstract discourse? Let me call your attention to Report MM, Board of Trustees, AMA-A-86 Subject: Proposal for Financing Health Care of the Elderly, also high-lighted in editorial fashion in American Medical News 27 June 1986. The problem as stated: impending bankruptcy of the current Medicare program. "According to 1986 Medicare reports, by the late 1990s the Part A trust fund will be totally exhausted. It will be $1 trillion in debt by the 2010s. The Medicare financing mechanism is flawed. Its pay-as-you-go system creates an intergenerational transfer of resources and is adversely affected by the deteriorating worker-to-beneficiary ratio."

The AMA is moving out front rapidly and with vigor in adopting a pro-active position on this major impending social welfare program. As the "graying of America" marches inexorably forward, the burden of providing a dignified terminal decade of life for our citizenry, with adequate health care resources before they lie down "... to sleep thegither," becomes progressively more gargantuan for the younger generations. "This proposal would: (1) assure access to affordable high quality health care for the elderly, (2) assure sound mechanisms for financing health care of the elderly, with responsibility shared by the federal government, providers and beneficiaries, (3) assure fiscal and actuarial soundness, (4) provide comprehensive benefits, including catastrophic health care expense coverage, (5) provide for different levels of beneficiary cost-sharing based on ability to pay, and (6) allow free choice by beneficiaries among private plans providing specified adequate benefits. (B of T. Rep. MM—page 5)"

I would encourage each of you to familiarize yourself with this proposal or the discussion that will surface in the months ahead in much of the health economics literature. "Medicine, having had the foresight to develop such a wideranging series of proposed revisions, has served notice on the rest of the nation that it is time for that debate and negotiation to begin in earnest." (AMN, 27 June 86, p 4.)

William O. Rossing, M.D., President South Dakota State Medical Association

A copy of the Board of Trustees Report MM is available on request at the S.D. State Medical Association office.

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Use of Nitroglycerin — 1986

Robert C. Talley, M.D.*

ABSTRACT

The clinically demonstrated effectiveness of sublingual nitroglycerin has led to search for an effective long acting form of the medication. Long acting forms of nitroglycerin have been developed, but questions have been raised as to effectiveness, ability to deliver an adequate amount of nitroglycerin, and development of attenuation or tolerance. There is good evidence that appropriate plasma levels of nitroglycerin can be obtained with oral isosorbide dinitrate, with the 2% ointment form of isosorbide dinitrate cream, and with currently available transdermal patch preparations.

While single doses of each of these preparations has been demonstrated to have a salutary effect on the exercise time to angina pectoris, the ST-T changes induced by exercise, and on the frequency of anginal episodes, tolerance has been demonstrated to each form when used in a sustained manner; that is, when given in daily doses over several days. Tolerance seems to develop within 24 hours, and becomes so significant that little therapeutic effect can be demonstrated by any of the preparations.

As a strategy to overcome this tolerance, a “nitrate free interval” is recommended when using all three preparations. This nitrate free interval is suggested to occur overnight, while the patient is resting. Oral isosorbide dinitrate is recommended not to be given after 5 p.m., and both the ointment form and the transdermal patches are suggested to be removed at bedtime. Using such a “nitrate-free interval” studies have demonstrated that tolerance does not develop to sustained therapy.

The sublingual form of nitroglycerin is effective for relief of angina pectoris and is of symptomatic and hemodynamic benefit in congestive heart failure. No one has to convince the physician who observes the relief of a patient with angina pectoris, and no one has to tell the patient more than once to use nitroglycerin in this situation. The salutary effect of nitroglycerin is so reproducible that a history of pain relief with nitroglycerin is frequently considered diagnostic of ischemic heart pain. Because of its effectiveness there has been, and continues to be, a search for long acting forms of the medication. Several such preparations have been developed including oral forms such as isosorbide dinitrate and transdermal forms such as nitro paste ointment and the popular transdermal patches. Yet there are questions about all of the long acting forms as to their effectiveness, the amount of nitroglycerin they deliver, individual patient variability, and the development of attenuation or tolerance during sustained therapy.

Before discussing the plasma levels of nitroglycerin obtained with various long acting nitroglycerin preparations, it may be helpful to review the plasma levels achieved with sublingual nitroglycerin. From the data of Wei¹ and Armstrong,² 0.6mg (1/100 grain) sublingual nitroglycerin produces a plasma level of 1.6 to 3.9ng/ml in two to five minutes. Levels are undetectable in 20 to 30 minutes. In these studies the patient’s heart rate and systolic blood pressure were affected at two, five, and ten minutes after the sublingual dose. It is generally felt a plasma level of nitroglycerin of at least 1ng/ml is necessary for a hemodynamic effect, and that the hemodynamic effect is the reason nitroglycerin is effective in angina pectoris and congestive heart failure. For the present purpose we will assume a plasma level of at least 1ng/ml is necessary for a therapeutic effect.

The plasma levels achieved with isosorbide dinitrate oral tablets have been extensively studied.
Thadani in 1982, reported plasma levels of four doses of oral isosorbide dinitrate tablets given as a single dose, and four times daily. Plasma levels greater than the 1ng/ml were obtained with a single dose of 30, 60, or 120mg, and lasted at least eight hours. A 15mg dose reached a serum level of greater than 1mg/ml only at two and four hours after ingestion. Giving the same dose four times a day, all dosages except the 15mg dose were in the therapeutic range (>1ng/ml) for an eight hour period. Plasma levels of 5ng/ml or above were achieved for the entire eight hour period, using the 60mg dose. It appears clear that oral isosorbide dinitrate produces plasma nitroglycerin levels in the therapeutic range, and the level is maintained for eight hours after a single dose, especially during sustained four times a day use.

Parker studied the plasma levels obtained by using a 2% isosorbide dinitrate cream, 100mg spread over 200cm2 area on the patient’s back. The area over which nitroglycerin is spread as the ointment form, or the area of the transdermal patch is critical to the dose delivered. Measuring a ribbon of nitroglycerin paste is effective only if the paste is spread over a large area. Parker found mean plasma levels from a single dose of isosorbide dinitrate cream to be 0.8ng/ml at two hours, 1.7ng/ml at four hours, 1.8ng/ml at eight hours, and 0.8ng/ml at 24 hours. If applied at 8 a.m. for seven consecutive days, the nitroglycerin plasma levels were 5.2ng/ml at four hours, 4.3ng/ml at eight hours, and 4.4ng/ml at 24 hours, all in the “therapeutic” range.

The salutary effect of nitroglycerin is so reproducible that a history of pain relief with nitroglycerin is frequently considered diagnostic of ischemic heart pain.

In evaluating reports of plasma nitroglycerin levels achieved by transdermal patches the doses become confusing. Dosages are variably reported, some investigators using disc surface area in square centimeters (cm2), while others use the brand names of the discs. Abrams in 1984, suggested the appropriate way to discuss transdermal nitroglycerin dosage is by the amount of nitroglycerin delivered over 24 hours. The CIBA (Transderm) and Key (Nitro-Dur) systems deliver approximately 0.5mg of nitroglycerin per cm2 of disc area over 24 hours. Thus, a 5cm2 unit delivers 2.5mg in 24 hours, a 10cm unit delivers 5mg in 24 hours, a 20cm unit delivers 10mg in 24 hours, etc. The Searle (Nitrodisc) product delivers the same amount of nitroglycerin with slightly less surface area. Currently, a number of patches are marked with the number of milligrams delivered in 24 hours making it somewhat less confusing for the physician. For example, a “Transderm S” delivers 5mg in 24 hours.

Using a unit which delivered 5mg in 24 hours, Shaw reported, that transdermal nitroglycerin releases a steady amount of nitroglycerin over 24 hours, and that a “therapeutic” (>1ng/ml) plasma level is maintained. However, Reichek in 1984, showed that in order to obtain the hemodynamic effect of the usual low dose of sublingual nitroglycerin, a transdermal system must deliver at least 10mg per 24 hours. Since this is the “threshold dose,” physicians should consider a system which delivers 10mg in 24 hours as the lowest starting dose of transdermal nitroglycerin in the majority of patients. This would be a 20cm2 patch.

All studies indicate that all forms of nitroglycerin, whether isosorbide dinitrate as oral tablets given four times a day, isosorbide dinitrate ointment applied once a day, or transdermal nitroglycerin patches used once a day, deliver a 24 hour plasma level of nitroglycerin which is in the therapeutic range (1ng/ml) in both acute and sustained usage.

Individual patient variation, the dose necessary to achieve a hemodynamic response in a specific patient is huge, both in obtaining an expected plasma level and also the level which will have pharmacological effect. Wei found the dose of IV nitroglycerin to produce the same hemodynamic effect, in this case, lower mean arterial pressure by 10%, varied from 37.5 to 175mcg/min. This dosing produced serum levels which ranged from less than 0.5ng/ml to 2.7ng/ml. Reichek, in 1974, found the dose of nitro ointment necessary to lower systolic blood pressure by 10mm of mercury, ranged from 1.5 to 19mg in 14 patients. Rajfer in 1984, infused IV nitroglycerin in amounts enough to lower the pulmonary wedge pressure to 12mm of mercury, or the systemic blood pressure to 95mm of mercury in nine patients. To match the effect of more than 2.5 mcg/Kg/min of intravenous nitroglycerin took 30-40mg of transdermal nitroglycerin (patches from 48 to 64 cm2), and to match the effect in patients who needed only a “low dose” of IV nitroglycerin (less than 2.5mcg/Kg/min) to achieve the hemodynamic effect, required 15-20mg of transdermal nitroglycerin; that is, patches which range from 30-40cm2.

It appears that any use of nitroglycerin requires a dose titration for each individual patient.

Shaw, investigated all three patch preparations and demonstrated wide variation in the individual plasma levels achieved by the same size patch. While “mean” levels reached using each type of 10cm2 patch (5mg in 24 hours) were comparable, even
though mostly below the therapeutic level, the individual patient data revealed large variations between patients in the plasma level achieved. In a number of patients no therapeutic level could be achieved, while in others a similar dose gave levels clearly in the therapeutic range. It appears that any use of nitroglycerin requires a dose titration for each individual patient. Perhaps as far as angina pectoris is concerned, the National Institute of Health Protocol for the dose needed to raise the sitting heart rate by 10 beats, or lower the sitting systolic blood pressure by 10mm of mercury, is one a clinician can accept as useful. This is considered the threshold (low dose); "high dose" is considered the amount needed to lower the systolic blood pressure to 95mm of mercury or intolerable headache occurs.

What are the actual studies on the effectiveness of these nitroglycerin preparations, both for acute, one-time and for sustained daily therapy? What about the question of tolerance? Thadani, in his 1982 paper, noted the effects of oral isosorbide dinitrate on blood pressure, heart rate, and exercise duration to angina in 12 patients with coronary artery disease and stable angina pectoris. He studied oral doses of isosorbide dinitrate of 15, 30, 60, and 120mg. We have already seen that these doses in sustained use develop "therapeutic" levels of nitroglycerin. With single dose, systolic blood pressure was reduced in a dose related manner throughout the eight hour study. However, with sustained therapy, the systolic blood pressure was lowered for only four hours after each dose, and fascinatingly, there was no dose relationship to the extent of blood pressure depression or the period of time the blood pressure was lowered. All different doses seemed to produce the same quantitative effect when used in sustained daily treatment. In single dose, acute studies, the exercise duration to the first onset of angina, and to angina of modern severity, was significantly elevated over control for eight hours in a dose related manner; however, again, with sustained therapy (the type of therapy a clinician uses with patients) the exercise duration was increased only at two hours after any of the four doses. Thadani concluded that, "during sustained therapy with isosorbide dinitrate partial tolerance to the antianginal and circulatory effects develops rapidly." He recommended during sustained therapy that isosorbide dinitrate should be prescribed every three hours, rather than every eight hours.

Parker, in 1984, reported the effect of acute and sustained therapy with 2% isosorbide dinitrate ointment, 100mg spread over 200cm2 area, given once daily. With a single dose; that is, acute therapy, the exercise time to angina was significantly prolonged over that of control at 2, 4, and 8 hours after the dose, but not at 24 hours. However, with sustained therapy; that is, the same dose applied at 8 a.m. for six days, the exercise time to angina was no different than placebo at 4, 8, and 24 hours after the dose was applied, despite almost constant serum levels of 5mg/ml or higher.

Reichek, in 1984, in an acute only study, used "high" dose transdermal nitroglycerin patches to treat 14 patients with exertional angina. He defined a high dose as enough to lower the systolic blood pressure to 90mm of mercury in the sitting position or to produce intolerable headaches. The mean dose used in the 14 patient study was 25mg delivered in 24 hours, or 50cm2 of patches. In this acute study (one time only treatment) the exercise time to angina was increased at four and eight hours after the patch was applied, but not at 24 hours. Reichek found no effect at any time with low dose patches; that is, using a system that delivered 10mg in 24 hours.

Parker, in 1984, studied Key’s Nitro-Dur patches in 11 patients with stable angina using 10-90cm2 patches. In single dose studies, the 10, 20, 30, 60, and 90cm2 patches increased the exercise time to angina at two and four hours, but not at 24 hours. He then treated patients with 30cm2 patches (15mg of nitroglycerin delivered in 24 hours) daily for two weeks. At the end of the two weeks all exercise times were identical to the placebo group. Parker concluded that patches are inadequate in size to produce 24 hours of antianginal protection. Further, he concluded that during sustained therapy, tolerance develops to the antianginal efficiency of this form of nitroglycerin administration. It was already noted that tolerance also develops to the oral and ointment forms of sustained nitroglycerin therapy.

Thadani concluded that, "during sustained therapy with isosorbide dinitrate partial tolerance to the antianginal and circulatory effects develops rapidly."

Crean, in 1984, examined the results of treating 11 patients with coronary artery disease and angina pectoris in a randomized, placebo-controlled, double-blind, double crossover trial of four one week periods. He used the 10cm2 patch releasing 5mg/24hr of nitroglycerin. He followed ST depression and exercise tolerance at two and four hours after applying the patch. This study failed to show any consistent difference between patients treated with placebo or transdermal nitroglycerin. Perhaps too low a dose was given, since from Reichek’s data, his "low dose" actually appears to be double that which Crean gave his patients.

We may conclude from the reviewed data that all forms of long acting nitroglycerin, the oral tablets,
nitro ointment, and transdermal patches, while able to produce continuous steady-state plasma levels, are not clinically effective at 24 hours in the acute setting; that is, once only dose. More importantly, with sustained treatment patients develop tolerance within 24 hours of starting the medication, and subsequently the preparations are active only a very short time after the dose is applied, if at all.

What recommendations can be made? What can we do to properly treat patients? It has been suggested that since there appears to be discordance between clinical effects as seen in these studies, and patient acceptance of the drugs, perhaps the studies can be explained away as follows:

1. Placebo effect. Twenty to thirty percent of patients with angina pectoris will get a salutary effect with placebo. It is difficult, however, to explain away these studies as placebo effect since the studies reveal negative, rather than positive results and we have reviewed five carefully done studies.

2. The variability of angina pectoris itself. As all clinicians know, patients with angina may have considerable difficulty for several weeks, then be relatively pain free for a month or so. Perhaps the variability of the disease makes its study unacceptable.

3. We know there are variable physiologic mechanisms, of angina. Some patients may require only venodilatation for relief of pain, while others may need afterload reduction, or coronary dilatation. Since tolerance has not been shown to develop to venodilatation, perhaps patients who require only venodilatation will get relief no matter how we use the nitroglycerin. On the other hand, it is believed that the most effective ischemic pain relief is obtained either by arterial dilatation or the relief of arterial spasm, both of which are effects to which tolerance has been demonstrated.

4. Most patients don't have angina at night; therefore, there is rarely need for more than 10 hours of effectiveness for any type of preparation. This may be true, but the data reviewed suggests that the sustained form of therapy is not effective at any time, once the patient has been treated more than 24 hours.

5. Perhaps these antianginal protocols were too demanding to show the effectiveness of the drugs in the treatment of angina.

6. Perhaps the individual variability is so great that even with titration studies, as was done in each of the reported studies, we cannot adequately study this medication.

Dr. Abrams has discussed each of these possibilities in a careful editorial in the American Journal of Cardiology, which clinicians may wish to review. Given the number of studies and the careful protocols reviewed, I believe we must agree that clinically significant hemodynamic attenuation occurs with all forms of long acting nitrate therapy, despite all forms achieving serum levels which are ‘therapeutic.’

There are two bits of additional data. First, at any point in all of the sustained treatment studies reviewed, despite the long acting preparation being inactive, and despite serum levels of nitroglycerin being clearly in the ‘therapeutic’ range, sublingual nitroglycerin is still active and produces antianginal and hemodynamic effects. This has been interpreted to mean that if we could only get higher plasma levels of nitroglycerin, we could overcome tolerance. A multi-center study is underway to test this hypothesis. However, another interpretation would be that bolus therapy rather than steady-state therapy is the only effective way to use nitroglycerin.

with sustained treatment patients develop tolerance within 24 hours of starting the medication, and subsequently the preparations are active only a very short time after the dose is applied, if at all.

The second piece of information, and I believe the most important, is the observation that tolerance not only develops quite rapidly, but also disappears quite rapidly as well. This has led to the suggestion that we need a daily “nitrate free interval” for long term, sustained therapy, and indeed, there are clinical studies to support this suggestion.

Rudolph, in the German literature, demonstrated tolerance to arterial and antianginal effects of 40mg of isosorbide dinitrate orally 4 times daily by showing no difference from placebo in the exercise time to angina after two weeks of therapy. He then used 20mg of oral isosorbide dinitrate at 8 a.m. and 1 p.m. only, producing a nitrate free interval overnight. After two weeks of such therapy no tolerance had developed, and exercise times to angina remained significantly elevated above those of control.

‘a daily nitrate free interval is necessary to prevent the development of tolerance with respect to the antiischemic effects.’

Parker, in Circulation in 1984, used buccal nitroglycerin at 7 a.m., 12 noon, and 5 p.m. with a nitrate free interval overnight. He demonstrated no tolerance to the effects of this medication 1, 3, and 5 hours after the individual doses after 14 days of therapy. This was a double-blind, placebo controlled, crossover study. The same patient quickly
developed tolerance to oral isosorbide dinitrate given four times a day at 7 a.m., 12 noon, 5 p.m., and 11 p.m. That is, no nitrate free interval.

Silber, et al demonstrated that use of a sustained release form of isosorbide dinitrate, 80mg twice daily, quickly attenuated the beneficial effects of isosorbide dinitrate on the appearance of exercise induced ST depression and left ventricular ejection fraction. However, using the same dosage as a one-time daily approach circumvented the tolerance. He concluded, “a daily nitrate free interval is necessary to prevent the development of tolerance with respect to the anti-ischemic effects."

A review of recent review articles reveals the following suggestions: Parker, in December 1985, suggested three times a day treatment with oral nitrate, giving none after supper, and recommended that all nitroglycerin patches be removed 12-16 hours after placement, producing a nitrate free interval overnight. He stated, “intermittent, low-dose nitrate therapy is suggested to produce prolonged clinical effects without development of clinically relevant tolerance to the hemodynamic and antianginal effects.”

Flaherty also, in the December 1985 American Journal of Cardiology, suggested removing the patches each evening and reapplying new patches each morning. He stated, “it is likely a nitrate free interval (discontinuing nitroglycerin at night) avoids this nitroglycerin tolerance.”

If we accept these above recommendations, which I believe we should for treatment of angina, we must remember the variability of the dose necessary to achieve an effective clinical response in individual patients, and use some method of dose titration. I suggest the protocol used by the National Institute of Health; i.e., a low starting dose of nitroglycerin which is that dose which acutely (within two hours), lowers sitting systolic blood pressure by 10mm of mercury, or raises the sitting pulse rate (patient not receiving beta blockers) 10 beats/min.

Finally, we have reviewed the use of nitroglycerin in angina pectoris, where attenuation or tolerance is rapid and deleterious. However, some of the hemodynamic effects of nitroglycerin useful in treating congestive heart failure do not show such attenuation. The venodilatation effects of nitroglycerin have not been shown to be attenuated by sustained therapy, as have the antianginal and arterial effects. Therefore, we may still successfully use any long acting nitroglycerin preparation around the clock to reduce preload in patients with congestive heart failure.

REFERENCES


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Auxiliary News

“O wad some Pow’r the giftie gie us
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Robert Burns

Robert Burns could have been speaking for present-day physicians when he wrote that famous quotation so long ago. The image of the medical doctor has changed dramatically since the “horse and buggy” days when he was envisioned as a dedicated, unselfish, and untiring public servant. The image of the physician spouse has equally suffered. She is perceived as pampered, self-centered, and extravagant. The public, noticeably, has not digested the fact that almost one-third of the physician spouses are male.

A recent national survey concluded that the image of the profession as a whole is at an all-time low. Why does the general public view us so differently and so negatively? Ironically, the respondents overwhelmingly described their personal physicians in a most positive manner.

Attending the 1986 AMA Auxiliary annual session House of Delegates in Chicago as one of two delegates from South Dakota, I sat in awe of the dedication, commitment, and determined spirit of that body. The National Auxiliary board encourages us to implement and support AMA-sponsored health projects in our communities to help neutralize the negative image. South Dakota physician spouses have always, and continue to be, valuable volunteers; some working in community projects, others serving side-by-side with their physicians in medical offices across the state. The rest of the nation can look to South Dakota as a role model. Our physicians are loved and respected. I believe the reason for the dichotomous result of the survey is that the public wants to respect and trust the medical community, but the government and legal system is projecting an opposite view.

Let us be proud of this noblest of professions, and remember. . . “To whom much is given, much is required.”

Bible

Annette Shousha, President
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Dr. Charles Jean Colley has accepted the offer to establish a clinic in Springfield. He was born and raised in Springfield, where he graduated from high school. He attended college in Oberlin, Ohio where he received his pre med major. He left college and served as a ski trooper and mountain climber during World War II. He was decorated with the Purple Heart and the Silver Star. He then returned to medical school, graduating from the University of Louisville School of Medicine in 1949. He completed a one year internship in family practice in Hawaii and has done post graduate work in electrophrology and aviation medicine.

He established the Oberlin Clinic in Oberlin, Ohio in 1950, where he practiced for 28 years as a family practitioner. Dr. Cooley is also an avid aviator and founded the Oberlin Flying Club and was a member of the National Flying Physicians Organizations and the Airplane Owners and Pilots Association.

Dr. Cooley and his wife Esther came here from Naples, Florida where he was semi-retired.

Dr. A. P. Reding, family practice physician in Marion, has been elected to serve a three year term on the Board of Directors of the newly organized South Dakota Medical Directors Association. Dr. Reding has been the Medical Director of Mom and Dad’s Health Care and Nursing Home in Sioux Falls for more than 25 years. He has also been associated with area nursing homes for many years.

A new physician to South Dakota, Dr. Ken Peterson, family practice physician and also a native of Sioux Falls, has joined the Brown Clinic in Watertown. Dr. Peterson received his MD degree from the University of South Dakota School of Medicine. He completed his family practice residency at Fort Bragg, North Dakota. He was then transferred to Wildflecker, Germany where he served as clinic commander for a year and then was transferred to Wurzburg, Germany where he has been serving on the staff of Wurzburg Army Hospital. He is certified by the American Board of Family Practice.

Dr. Peterson and his wife, Agnes, also a former Sioux Falls resident, have five children.

Jack Robbins, M.D., Huron, recently received notification that he has passed the examination given by the American Board of Urology and has received his Board certification in urology.

A new physician has been recruited for Lemmon, Helen Soule, M.D., Board certified in Internal Medicine, will be working for United Clinics. She received her BS degree from Springfield College in Springfield, Massachusetts and her MD degree from Tufts University in Boston. Her internal medicine internship and residency were both completed at the Medical College of Virginia in Richmond, Virginia.

Dr. Soule had been practicing in Elgin, North Dakota before coming to South Dakota with her husband Russell and their two children.

Bruce Kocourek, D.O., family practitioner, has joined Dakota Family Practice in Parkston. He is a native of Tyndall. He graduated from the University of South Dakota and received his D.O. degree from the Kirksville Missouri College of Osteopathic Medicine. He completed his internship at Mesa General Hospital in Mesa, Arizona.

Dr. Kocourek and his wife Diana have two children. His hobbies include hunting, fishing, golf and camping.

Dr. Lloyd C. Vogelgesang, family practice, has joined the Gregory Professional Associates in Gregory. He received his BA degree from Concordia in Moorhead, Minnesota. He then spent two years at the University of South Dakota and went on to earn his MD degree at the Kansas University Medical School in Kansas City. He completed his internship in Wichita, Kansas.

Dr. Vogelgesang practiced in Kadoka for one year before entering the U.S. Air Force serving as a Flight Medical Officer. In 1963, he moved to Gregory where he practiced until 1969. He then practiced in Webster until 1984. And now has relocated in Gregory after spending several years in Ainsworth, Nebraska.

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A Patient With Known Unilateral Renal Cysts Who Developed Epigastric Pain, Nausea and Vomiting

L. M. Gutnik, M.D.*
Anne Coury†
Robert Raszkowski, M.D.‡

ABSTRACT

A patient with known unilateral renal cysts who developed epigastric pain, nausea and vomiting. The diagnosis of partial duodenal obstruction secondary to massively enlarged left renal cysts was made by computerized tomography of the abdomen. Percutaneous aspiration of cyst fluid alleviated the patient's symptoms, and he has remained without gastrointestinal or renal symptoms for over five years.

Gastrointestinal manifestations of renal disease, such as anorexia, nausea, and vomiting, were frequently encountered in advanced renal disease prior to intermittent dialysis. Such symptoms are rarely associated with renal disease in the absence of untreated renal failure. We report a case of unilateral renal cysts manifested as gastrointestinal symptoms which resolved following percutaneous aspiration of cyst fluid.

A 74 year old caucasian male was admitted to the hospital for evaluation of early satiety, nausea, vomiting, and a sensation of upper abdominal pressure. He denied other gastrointestinal or renal symptoms but had noted an approximate ten pound weight loss in the two months prior to hospital admission. His surgeries included an appendectomy and transurethral prostatectomies seven and two years prior to the admission. At the time of his first transurethral prostatectomy, an intravenous pyelogram revealed the presence of multiple cysts of the left kidney with a normal appearing right kidney. The family history revealed no evidence of any gastrointestinal or renal disease.

Physical examination at the time of hospital admission revealed a moderately obese male in no acute distress and normal vital signs. His examination was normal for his age with the exception of upper abdominal fullness. Stool was negative for occult blood.

Normal laboratory evaluations included a complete blood cell count, prothrombin time, activated partial thromboplastin time, urinalysis, electrolytes, automated blood chemistry analysis (SMA-12), serum amylase, and serum lipase. The serum creatinine was elevated on two occasions at 1.7 mg% and 1.9 mg% (Normal, 0.5 to 1.3 mg%); the creatinine clearance was decreased at 75 cc/minute (Normal, 105 to 126 cc/minute). Upper gastrointestinal barium study did not reveal obstruction to be present, but the upper small intestine was displaced anteriorly in the region of the left kidney. Computerized tomography of the abdomen revealed large left renal cysts causing displacement of the small bowel, colon and pancreas in adjacent areas.

Under radiologic guidance, approximately 350 cc of clear, xanthochromic fluid was removed by percutaneous aspiration. This fluid contained 1.9 mg% protein and no cells. At the termination of the procedure the left kidney was noted to have moved laterally. The patient immediately experienced complete relief of his symptoms and has remained asymptomatic for over five years.

DISCUSSION

Multiple renal cysts should be differentiated from adult polycystic kidney disease and tumors. Polycystic kidney disease is a relatively common autosomal dominant condition which is bilateral and generally encountered after the second decade of
The disease progresses to end-stage renal failure over a period of several decades. It has been estimated that 1/1000 persons admitted to hospitals and 5-8% of renal allograft recipients have polycystic disease. In polycystic kidney disease there are associated hepatic cysts and a 22% incidence of berry aneurysms in the Circle of Willis.

In contrast, simple cysts are not heritable and can be bilateral. Clinical morbidity is rare. The family history is extremely important to differentiate bilateral multiple cystic kidney from polycystic disease. Simple cysts can usually be differentiated from tumors by ultrasound; the cysts have smooth contours and are usually avascular.

In our patient, the presence of cysts on the left kidney was detected on a routine IVP five years prior to admission. The CT scan was extremely valuable in revealing the displacement of the small bowel and possible compression of the tail of the pancreas. There is the possibility that the cysts will refill with fluid and exacerbate the patient's symptoms. The cysts could be aspirated again; exploration with unroofing of the cysts could also be considered.

REFERENCES
Dr. Clayton Behrens, a classmate and former professional associate, has recently announced his retirement. At the same time a news item reported that Dr. Behrens had lost a law suit for malpractice which he had previously won.

Clayton is a Korean war veteran. He, along with a very few other professionals, was ordered by General MacArthur’s staff to take charge of the health care of all civilians in the Seoul area, literally millions.

After the war, he was offered a residency in pathology at Ancker (now Ramsey County Hospital). He met his future wife, Edythe, a dietitian there.

Following his pathology residency, he and his wife lived and worked in Wessington Springs, until he joined the University of Minnesota medical staff as a surgical resident under Dr. Wangensteen.

Now 40 years later, this humble, dedicated, capable physician and surgeon is retiring from helping the sick and injured with “no regrets.” He knows he has done a good job. We, who know him well, are taking this opportunity of saying thanks for being one of the best in the golden era of medicine.

Roscoe E. Dean, M.D.
Wessington Springs

South Dakota Society Of Pathologists

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### Future Meetings

#### October


#### November


**First Annual Heart and Lung Institute Conference**, Radisson Univ. Hotel, Minneapolis, Minn., Nov. 4-5. Contact: CME, U. of Minn., Box 202, 420 Delaware St., SE, Minneapolis, MN 55455. Phone: (612) 626-5525.


**43rd Annual Meeting of the American Geriatrics Society and the 7th Annual Meeting of the American Federation for Aging Research**, Marriott Hotel, Chicago, Ill., Nov. 16-19. Contact: Am. Geriatrics Society, Rm. 1470, 10 Columbus Circle, New York, NY 10019. Phone: (212) 582-1333.

#### December


**33rd Annual Scientific Meeting — Nebraska OB/Gyn Society**, MGM Grand Hotel, Las Vegas, Nev., Dec. 4-6. Fee: $200. 9 hrs. CME credit. Contact: Dennis Beavers, M.D., Univ. of Neb. Med. Ctr., 720 N. 87th St., Omaha, NE 68114. Phone: (402) 390-1200.

Family Abuse: Child, Spouse, Elderly

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<tr>
<th>No. of Patients</th>
<th>Impotence</th>
<th>Weakness</th>
<th>Weakness</th>
<th>Nightmares</th>
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<td>3</td>
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<td>Women (n = 72)</td>
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CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice employing doses up to 10x the human dose, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any indication of an increased incidence of fetal anomalies.

PREGNANCY: Category C. Propranolol has been shown to be embryotoxic in rats and rabbits at doses of 10x the human dose. There are no adequate and well-controlled studies in pregnant women. Propranolol should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: Propranolol is excreted in human milk. Caution should be exercised in nursing mothers.

ADVERSE REACTIONS
Propranolol hydrochloride (INDERAL® LA): Most adverse effects have been mild or moderate and have disappeared upon discontinuation of therapy.

Cardiovascular: Bradycardia, congestive heart failure, intensification of AV block; hypotension, especially in patients with systemic lupus erythematosus.

Respiratory: Dyspnea, respiration may be labored.

Gastrointestinal: Asthenia, nausea, vomiting, diarrhea, anorexia, constipation, abdominal pain.

Hepatic: Jaundice, gallstones, hepatomegaly, dark urine, light-colored stools.

Musculoskeletal: Arthralgia, myalgia.

Neuromuscular and skeletal: Muscle weakness, tremor, paresthesia.

Psychiatric: Insomnia, anxiety, depression, nervousness, emotional lability, hallucinations, confusion, dizziness, weakness, vertigo, tremor, personality changes, delirium, or psychosis.

Other: Rash, fever, angioedema, enteritis, pancreatitis, hemolytic anemia.

Skin: Photosensitivity, urticaria, pruritus.

Laboratory: Blood: Anemia, neutropenia, agranulocytosis, granulocytopenia, granulocytic hyporegenerative, thrombocytopenia.

Liver: Hepatomegaly, jaundice.

NURSING MOTHERS: Propranolol may be excreted in breast milk in concentrations from 20% to 80% of the maternal plasma concentration.

DIRECTIONS FOR USE:
Use INDERAL® LA capsules as directed by your doctor. If you have any questions about your dose, please call your doctor.

CONTRAINDICATIONS:
Propranolol hydrochloride (INDERAL® LA): Propranolol is contraindicated in patients with significant bradyarrhythmias or greater than first degree block, 3rd degree heart block, 4th degree heart block, or a history of congestive heart failure. Propranolol is also contraindicated in patients with a history of chronic obstructive pulmonary disease, asthma, or other bronchial asthma. Propranolol is also contraindicated in patients with a history of significant renal impairment.

WARNING:
Propranolol hydrochloride (INDERAL® LA): Cardiac failure. Symptomatic prolongation of the Q-T interval occurs in patients with congestive heart failure, and its inhibition by beta blockade may precipitate severe failure. Although beta blockers should be avoided in overt congestive heart failure, if premature attention is controversial. If started in patients with history of heart disease, it may produce symptoms of congestive heart failure, and the dosage should be gradually increased until the patient is accustomed to the drug. Beta blockers should be used with caution in patients with hypertension or cerebral vascular disease. Propranolol hydrochloride is contraindicated in patients with angina pectoris. The patient should be cautioned about the possibility of exacerbation of angina pectoris. The patient should be warned about the possibility of exacerbation of angina pectoris. The patient should be warned about the possibility of exacerbation of angina pectoris.

In patients with angina pectoris, there have been reports of exacerbation of angina and in some cases, myocardial infarction following abrupt discontinuation of propranolol therapy. When therapy is discontinued, the dosage should be gradually reduced and the patient carefully monitored. In addition, continued beta blockade may be indicated for angina pectoris. The patient should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it is usually advisable to continue therapy in doses adequate to control symptoms. The patient should be warned about the possibility of exacerbation of angina pectoris. The patient should be warned about the possibility of exacerbation of angina pectoris. The patient should be warned about the possibility of exacerbation of angina pectoris.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—Patients with bronchospastic diseases should, in general, be treated with caution, since they may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors. 

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of hypoglycemia in some patients. Therefore, in patients who are prone to hypoglycemia, it may be more difficult to adjust the dosage of insulin. Hypoglycemic attacks may be accompanied by symptoms and signs of hypoglycemia in patients treated with beta blockers.

Hydrochlorothiazide: Thiatazide should be used with caution in severe renal disease. In patients with impaired renal function, the dose of the drug should be reduced. Thiatazide should also be used with caution in patients with impaired hepatic function or prolonged prothrombin time. In patients with impaired renal function, the dosage may be increased by 25% to 50% of the usual dose. Thiatazide should also be used with caution in patients with impaired hepatic function or prolonged prothrombin time. In patients with impaired renal function, the dosage may be increased by 25% to 50% of the usual dose.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma. The patient should be warned about the possibility of exacerbation of angina pectoris. The patient should be warned about the possibility of exacerbation of angina pectoris. The patient should be warned about the possibility of exacerbation of angina pectoris.

The potential for exacerbation or activation of systemic lupus erythematosus has been reported.

PRECAUTIONS:
Propranolol hydrochloride (INDERAL® LA): General: Propranolol should be used with caution in patients with impaired hepatic or renal function. Propranolol is not indicated for the treatment of labile hypertension.

Beta-adrenergic blockade can cause reduction of intracranial pressure. Patients should be warned about the possibility of exacerbation of angina pectoris. The patient should be warned about the possibility of exacerbation of angina pectoris. The patient should be warned about the possibility of exacerbation of angina pectoris.

Diluting solutions: Patients receiving catecholamine-depleting drugs, such as reserpine, should be closely observed if propranolol is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity, which may result in hypotension, marked bradycardia, ventricular arrhythmias, or orthostatic hypotension.
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NEXT MONTH

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USD School of Medicine
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It was a beautiful day as my family and I moved along rapidly on Interstate 90 in central Montana, returning home from another relaxing vacation at our small wilderness niche in the Swan River Valley. Recollections of lovely scenery, mountain sunsets and the successful completion of the transfer of a rickety old outhouse on to new pit floated idly in my mind. By mid-day we were beginning to compliment ourselves on the good time we were making and perhaps we might reach Rapid before nightfall at that.

Moving along through the hilly regions west of Billings, Mont. we occasionally passed construction crews . . . bridge reconstruction seems to be the name of the game these days. Then the scene changed abruptly, and what had been a panorama of natural beauty along the picturesque Yellowstone River suddenly turned into a war-zone. We noted a column of smoke and flame rising over the oncoming hillside, and I thought to myself, "who is burning tires this close to the highway?" As we came over the hill and around the bend the answer became starkly evident. A large semi-trailer had collided with a highway maintenance vehicle painting stripes on the highway, both were overturned and on fire and small explosions spewing napalm-like debris from the cargo of paint were on-going.

We were among the first vehicles on the scene, and it was quickly evident that I was the only medically-sophisticated person in the area. My only recollection of similar human carnage was the episode of a small mass casualty during my military service years in Europe when a Claymore mine was placed in backwards and detonated in the face of a troop assembly. Triage, a word used frequently then in our maneuvers, and subsequently in our civilian mock casualty exercises suddenly became a real entity. Suddenly one felt professionally naked . . . without the comfort of the sterile bright environment of the hospital emergency room, the quiet heave and sigh of the ventilator, the myriad of IV lines and the quick response of allied personnel to the least request from the attending physician.

Back to Boy Scout first aid principles . . . I think I did earn that merit badge . . . treat shock, keep 'em warm, check the airway, look for compound fractures and splint with whatever, keep the head down (your own) so as not to be hit with shrapnel from the exploding vehicles . . . get some help to move them to safer cover . . . get the helicopter from Billings! Within minutes a nurse identified herself, and shortly an EMT going the other direction stopped and offered her services . . . another doctor newly graduated from a FP residency checked in . . . then the police and in what seemed a lengthy period of time but probably only 30 minutes, the flight nurse with all the tools of the trade floated gently down in the chopper like an angel from heaven.

As we released our charges to the transportation vehicles and EMT's and watched them disappear into the sky and over the hillside, we passed a few idle comments with each other to relieve the tension, wished each other a good trip and moved past the disaster back into the hot mid-afternoon sun, wondering about the families who soon would receive news of the injured husbands and fathers.

For the next hour or so, I pondered the early arrival of the nurse and EMT who, if unable to do much else for lack of equipment or resources, were at least able to provide a stabilizing calm to the horrified bystanders, and who could sensibly gather data that kept me abreast of the others injuries until help arrived. I recalled the program of EMT training started in Sioux Falls by Dr. Warren Jones and Dr. Everett Sanderson years ago, the work put in by Dr. Howard Saylor with the SD State Emergency Medical Services program . . . all pioneers in what has evolved into a nation-wide rescue and trauma assistance team. A marvelous end result it seems,
exceeded only in my mind as we traveled on, by the comment of my son... “Gee, Dad, I was really proud of you...”

William O. Rossing, M.D., President
South Dakota State Medical Association

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Haemophilus influenzae, H influenzae, Streptococcus pneumoniae, Streptococcus pyogenes

Note: Cefaclor® is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Cefaclor® (cefaclor)
Summary. Consult the package literature for prescribing information.
Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of Streptococcus pneumoniae, Haemophilus influenzae, and S. pyogenes (group A beta-hemolytic streptococci).
Contraindications: Known allergy to cephalosporins.
Warnings: Cefaclor should be administered cautiously to penicillin-sensitive patients. Penicillins and cephalosporins show partial cross-allergenicity. Possible reactions include anaphylaxis. Administer cautiously to allergic patients.
Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.
Precautions:
• Discontinue Cefaclor in the event of allergic reactions to it.
• Prolonged use may result in overgrowth of nonsusceptible organisms.
• Positive direct Coombs' tests have been reported during treatment with cephalosporins.
• In renal impairment, safe dosage of Cefaclor may be lower than that usually recommended. Cefaclor should be administered with caution in such patients.
• Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
• Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Cefaclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
• Gastrointestinal (mostly diarrhea): 2.5%.
• Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
• Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, erythema multiforme, serum-sickness-like reactions): 1.5%; usually outside within a few days after cessation of therapy. These reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Cefaclor. No serious sequelae have been reported. Antihistaminic and corticosteroids appear to enhance resolution of the syndrome.
• Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
• Other: eosinophilia, 2% genital pruritus or vaginitis, less than 1%.

Abnormalities in laboratory results of uncertain etiology:
• Slight elevations in hepatic enzymes.
• Transient fluctuations in leukocyte count (especially in infants and children).
• Abnormal urinalysis; elevations in BUN or serum creatinine.
• Positive direct Coombs' test.
• False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinistix® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly)

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Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630
Can you pass this test?

1) Do your office procedures include a mechanism for follow-up when a patient misses an appointment?
2) After you refer a patient to another physician, do you ever verify that the patient was indeed seen by the consultant and determine the results of that consultation?
3) Do you, as a consultant, always contact the referring physician to discuss your findings regarding his/her patient?
4) If you order diagnostic tests on an office patient, do you or your staff follow up to confirm that the tests were performed and that the test results were communicated to you, entered into the patient’s chart, and, ultimately, related to the patient?

If you answered “No” to any of the above, it’s time to establish and implement routine office procedures in this regard.

When a patient misses an appointment, it is a very good practice to have an established mechanism whereby your office staff attempts to contact the patient (preferably by phone) to determine why the patient was unable to keep the appointment and to reschedule it. These attempts to contact the patient should be documented in the record, even if the phone call(s) went unanswered and the patient was never reached.

This follow-up is especially important with patients who, in your opinion, require careful, frequent monitoring because of an existing medical condition, present drug therapy, etc. It is arguable that, should subsequent litigation develop, your failure to follow up on a missed appointment by such a patient could be characterized as a breach in the standard of care and, therefore, negligence. In these cases, if several phone calls are unsuccessful, a letter to the patient may be advisable. Obviously, a missed appointment for a yearly physical, for example, is a much different situation. However, follow-up by your staff in such a non-emergent case can only help strengthen your rapport with the patient.

A physician has the duty to consult with another physician when he/she knows or reasonably should know that the patient’s condition is beyond his/her knowledge, ability, or capacity to treat. The referring physician’s duty to the patient does not end with the consultation, and he/she continues to maintain control of the case throughout the consultation process; however, both the referring physician and the consultant have specific follow-up responsibilities with regard to the patient in question. A referring physician has the responsibility to see that the consultation did indeed occur and to obtain the results of that consultation, inform the patient of those results, and act upon the information derived from the consultation. All aspects of the consultation process, from the physician’s rationale for obtaining the consult through the actions taken or not taken based on the consultant’s recommendations, should be thoroughly documented in the patient’s chart. The consultant also has the responsibility to communicate the results of his/her consultation to the referring physician. Too often, PMSLIC’s Claims Committee has reviewed cases where a breakdown in the consultation process led to serious problems for the patient and, ultimately, for the involved physicians when litigation resulted.

When ordering diagnostic tests such as laboratory or radiologic studies on an office patient, it is also important to have a mechanism to assure that the tests were indeed performed. Often, patient non-compliance can be a factor with regard to diagnostic testing. A patient may delay having a test performed for a variety of reasons — anxiety, illness, lack of transportation or funds, etc. — or may simply refuse to go for testing. While a patient may be found to be contributorily negligent if a delayed diagnosis or treatment can be at least partially attributed to the patient’s own delay in having an ordered test carried out, juries readily accept the argument that the physician better understands the consequences of a patient’s non-compliance. Patient delay or non-compliance can be effectively avoided by the physician explaining the necessity for the specific test to the patient at the time it is ordered. If the patient understands the importance of the test findings with respect to his/her present condition, non-compliance will be a less frequent occurrence. A follow-up procedure should be developed by the physician and his/her office staff to ensure that all diagnostic test results are seen by the physician upon receipt in the office.
Double payment of medical claims can cost thousands of dollars each year. With the increasing number of working couples there is a chance they are covered by each other’s group policy. Often neither health carrier is aware of the other, which results in double payment of claims.

By screening incoming claims, contacting physician offices and corresponding with our subscribers, we can find out if an individual is covered by more than one group policy. Blue Shield works with health carriers across the country to coordinate health coverage benefits and make sure claims are divided fairly between us, but only paid once.

C.O.B. insures that the third party payment does not exceed the physician’s total charge and prevents the subscriber from making a profit on medical services. With the cooperation of South Dakota physicians, our Coordination of Benefits program reduced multiple payments in 1985 by $470,822.

C.O.B., it’s one of the cost containment methods we use to hold down premiums and that benefits all of us.
CONFIRMED BY CLINICAL EVIDENCE

ZANTAC® 150 h.s.
ranitidine HCl/Glaxo 150 mg tablets

EFFECTIVE MAINTENANCE THERAPY
for healed duodenal ulcer patients
In two randomized, double-blind, and well-controlled clinical trials, ZANTAC 150 mg h.s. significantly superior to cimetidine 400 mg h.s. for maintenance therapy in healed duodenal ulcers.

Percent of patients with observed duodenal ulcer recurrence

<table>
<thead>
<tr>
<th></th>
<th>0-4 months</th>
<th>0-8 months</th>
<th>0-12 months</th>
<th>No. patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA¹</td>
<td>ranitidine</td>
<td>9%</td>
<td>14%*</td>
<td>16%†</td>
</tr>
<tr>
<td></td>
<td>150 mg h.s.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>cimetidine</td>
<td>23%</td>
<td>34%</td>
<td>43%</td>
</tr>
<tr>
<td></td>
<td>400 mg h.s.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK, Ireland,</td>
<td>ranitidine</td>
<td>8%‡</td>
<td>14%‡</td>
<td>23%‡</td>
</tr>
<tr>
<td>Australia²</td>
<td>150 mg h.s.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>cimetidine</td>
<td>21%</td>
<td>34%</td>
<td>37%</td>
</tr>
<tr>
<td></td>
<td>400 mg h.s.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p=0.02
†p=0.01
‡p<0.004
%
=life-table estimates
All patients were permitted prn antacids for relief of pain.

These two trials used the currently recommended dosing regimen of cimetidine (400 mg h.s.) and ranitidine (150 mg h.s.). A comparison of other dosing regimens has not been studied.

The studied dosing regimens are not equivalent with respect to the degree and duration of acid suppression or suppression of nocturnal acid.
The superiority of ranitidine over cimetidine in these trials indicates that the dosing regimen currently recommended for cimetidine is less likely to be as successful in maintenance therapy.

Convenient once-a-night dose with a low incidence of side effects

Headache, sometimes severe, seems to be related to ranitidine administration. Other side effects have been reported; for a complete listing, see the ADVERSE REACTIONS section in the Brief Summary.

No significant interference with the hepatic cytochrome P-450 enzyme system at recommended doses

ZANTAC 150 mg has no significant drug interactions with theophylline, phenytoin, or warfarin. The bioavailability of certain medications whose absorption is dependent on a low gastric pH may be altered when ZANTAC or other medications that decrease gastric acidity are administered.
One tablet at bedtime for maintenance therapy in healed duodenal ulcer patients

ZANTAC®
ranitidine HCl/Glaxo 150 mg tablets

INDICATIONS: See Contraindications. ZANTAC® is indicated in:
1. Short-term treatment of active duodenal ulcer. Most patients heal within four weeks.
2. Maintenance therapy for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of pathological hypersecretory conditions (e.g., Zollinger-Ellison syndrome and systemic mastocytosis).
4. The short-term treatment of active, benign gastric ulcer. Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of gastroesophageal reflux disease (GERD). Symptomatic relief commonly occurs within one or two weeks after starting therapy. Therapy for longer than ZANTAC® has been established. In active duodenal ulcer, active, benign gastric ulcer, hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: ZANTAC® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: General: 1. Symptomatic response to ZANTAC® therapy does not preclude the presence of gastric malignancy. 2. Since ZANTAC® is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function. Caution should be observed in patients with hepatic dysfunction since ZANTAC® is metabolized in the liver.

Laboratory Tests: False-positive tests for urine protein with Multistix® may occur during ZANTAC® therapy, and therefore testing with sulfosalicylic acid is recommended.

Drug Interactions: Although ZANTAC® has been reported to bind weakly to cytochrome P-450 in vitro, recommended doses of the drug do not inhibit the action of the cytochrome P-450 linked oxygenases in the liver. However, there have been isolated reports of drug interactions which suggest that ZANTAC® may affect the bioavailability of certain drugs by some mechanism as yet unidentified (e.g., a pH-dependent effect on absorption or change in volume of distribution). Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no indication of tumorigenic or carcinogenic effects in lifespan studies in mice and rats at doses up to 2,000 mg/kg/day. Ranitidine was not mutagenic in standard bacterial tests (Salmonella, E. coli) for mutagenicity at concentrations up to the maximum recommended for these assays. In a dominant lethal assay, a single oral dose of 1,000 mg/kg to male rats was without effect on the number of two matings per week for the next nine weeks. Pregnancy: Teratogenic Effects: Pregnancy Category B: Reproduction studies have been performed in rats and rabbits at doses up to 160 times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ZANTAC®. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed. Nursing Mothers: ZANTAC® is secreted in human milk. Caution should be exercised when ZANTAC® is administered to a nursing mother. Pediatric Use: Safety and effectiveness in children have not been established. Use in Elderly Patients: Ulcer healing rates in elderly patients (65 to 82 years of age) were no different from those in younger age groups. The incidence rates for adverse events and laboratory abnormalities were also not different from those seen in other age groups.

ADVERSE REACTIONS: The following have been reported as events in clinical trials or in the routine management of patients treated with oral ZANTAC®. The relationship to ZANTAC® therapy has been unclear in many cases. Headache, sometimes severe, seems to be related to ZANTAC® administration.

Central Nervous System: Rarely, malaise, dizziness, somnolence, insomnia, and vertigo. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients.

Cardiovascular: Rare reports of tachycardia, bradycardia, and premature ventricular beats.

Gastrointestinal: Constipation, diarrhea, nausea/vomiting, and abdominal discomfort/pain.

Hepatic: In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid IV for seven days, and in 4 of 24 subjects receiving 50 mg qd IV for five days. With oral administration there have been occasional reports of reversible hepatitis, hepatocellular or hepatocanicular or mixed, with or without jaundice.

Musculoskeletal: Rare reports of arthropalgie.

Hematologic: Rare reports of reversible leukopenia, granulocytopenia, thrombocytopenia, and pancytopenia.

Endocrine: Controlled studies in animals and man have shown no stimulation of any pituitary hormone by ZANTAC® and no antiandrogogenic activity, and clomid-induced gynecostasia and impotence in male patients have resolved when ZANTAC® has been substituted. However, occasional cases of gynecostasia, impotence, and loss of libido have been reported in male patients receiving ZANTAC®. However, the incidence did not differ from that in the general population.

Integumental: Rash, including rare cases suggestive of mild erythematous, urticarial, and, rarely, alopecia.

Other: Rare cases of hypersensitivity reactions (e.g., bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

DOSEAGE AND ADMINISTRATION: Active Duodenal Ulcers: The current recommended adult oral dosage is 150 mg twice a day. An alternate dosage of 150 mg once daily at bedtime can be used for patients in whom compliance is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison Syndrome): The current recommended adult oral dosage is 150 mg twice a day. In some patients it may be necessary to administer ZANTAC® 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg twice a day.

GERD: The current recommended adult oral dosage is 150 mg twice a day. See full prescribing information for dosage adjustment for patients with impaired renal function.

HOW SUPPLIED: ZANTAC® 300 tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0339-40) and unit dose packs of 100 tablets (NDC 0173-0393-47).

ZANTAC® 150 tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 tablets (NDC 0173-0344-42) and unit dose packs of 100 tablets (NDC 0173-0344-47).

Store between 15° and 30°C (59° and 86°F) in a dry place. Protect from light. Replace cap securely after each opening.

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Glaxo Inc.
Research Triangle Park, NC 27709

References:
3. Data available on request, Glaxo Inc.
The importance of a working relationship between auxiliaries and their medical societies is stressed by the National Auxiliary. In fact, the American Medical Association Auxiliary published a booklet entitled ‘Medical Auxiliary/Medical Society: How to Make Them a Team’ which lists ideas and information on a number of joint programs and projects.

Listed in the booklet under the topic Project Teamwork are six suggestions for auxiliaries:

1. Work together to improve physician/spouse image in the community.
2. Compile a fact sheet for the medical society on what the auxiliary has accomplished, is working on, plans to do.
3. Have an exchange of speakers: medical society speakers at auxiliary meetings; auxiliary speakers at medical society meetings; speakers of interest to both groups at joint meetings.
4. Implement joint projects in the areas of health education, legislative activity, membership recruitment and retention, and fund-raising.
5. Use existing medical society and auxiliary publications to exchange information on each other’s goals and activities.
6. Request that the state medical association president write a letter to the county societies encouraging the establishment or continuance of a cooperative effort between local societies and their auxiliaries; letter may cite previously successful team efforts or auxiliary accomplishments.

In South Dakota, we already have in place an exemplary example of teamwork. In fact, by the time you read this article, I will have experienced sharing our goals and activities with the Executive Commission of the South Dakota Medical Society by their invitation. In our local district, the medical society and auxiliaries enjoy a joint cocktail and dinner before separating for their respective business meetings. SoDaPAC board members are comprised of both medical society and auxiliary members. Recently, the Ways and Means Committee adopted, by a vote of 18-16 a compromise provision dealing with medicare reimbursement. Much cooperative effort of physicians and auxiliaries in sending nearly 2000 mailgrams to committee members made an impact in producing this positive outcome. Many health projects and health fairs, across the state, are served by both. In South Dakota about $20,000 is donated annually to AMA-ERF through joint efforts such as the Christmas sharing card.

Let us continue to develop the relationship between our state medical society and auxiliary, so that together we can “MAKE A DIFFERENCE.”

Annette Shousha
Annette Shousha, President
South Dakota State Medical Association Auxiliary

SAVE on premiums for Workers’ Compensation Insurance

Program approved by SDSMA

Dividends have run up to 43.5%, averaging 30% since 1976.

Write or call toll-free for complete information.

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I would like to extend a sincere “thank-you” to the South Dakota Medical Association for the recognition they extended me at the annual meeting in Rapid City. Bob Johnson and my wife certainly did an excellent job of keeping me in the dark, and it came as a total surprise. I feel very privileged to be a part of the Sioux Falls medical community as it is one of the finest any place in the country. Their willingness to commit themselves and their finances to improve the community is the envy of almost all communities throughout America. I’m proud to be a part of that medical community and enjoy telling others what we have in Sioux Falls.

Again, thanks for the recognition.

Sincerely,
Richard W. Friess, M.D.
Sioux Falls

I am honored to have been selected as recipient to the SDSMA scholarship. The money will be a great help and being selected to receive the scholarship means a great deal to me. I hope that I can continue to justify this honor.

Thank you
Dan Cecil
Vermillion

I thank you for the $500 scholarship provided by the SDSMA. As you know, government funding for medical education is becoming more difficult to obtain. Private contributors, such as your organization, play an essential role in the future of medical education.

I sincerely appreciate your foresight and generosity.

Yours truly,
Scott Eccarius
Sioux Falls

I would like to take this opportunity to thank you for the South Dakota State Medical Association Award of which I was a recipient. The contribution you are making to help finance my medical education is greatly appreciated. Without the support of scholarships such as yours, it would truly be difficult to meet the financial responsibilities of medical school.

Thanks again, I truly appreciate your support.

Sincerely yours,
Rocci V. Trumper
Vermillion

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**Physicians Needed**

Family practice and internal medicine physicians to join seven doctor family practice clinic in Cloquet, MN, a community of 12,000 (30,000 service area), located 20 minutes from Duluth-Superior. Clinic facility is located one block from modern, well equipped 77-bed hospital. Cloquet enjoys a stable economy (forest products). Additionally, our community is noted for its excellent school system. First year salary guarantee, paid malpractice, health and disability insurance, vacation and study time.

Contact: John Turonie, Administrator
Raiter Clinic, LTD
417 Skyline Boulevard
Cloquet, MN 55720
Phone: (218) 879-1271

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**FAMILY PRACTITIONER**

Board certified or eligible to join 11 physician, expanding multi-specialty practice in northern Wisconsin. Clinic adjoins JCAH Hospital. Rural location with abundant outdoor recreational opportunities, small four year college. Excellent salary and benefits.

Send curriculum vitae with names of references to:

Marshfield Clinic — Ladysmith Center
Howard T. Chatterton, M.D.
906 College Avenue W.
Ladysmith, WI 54848

Call collect: (715) 532-6651
Dr. Kenneth Rogotzke has recently joined the staff at the Bartron Clinic in Watertown. Dr. Rogotzke specializes in otorhinolaryngology and facial plastic surgery.

He is a native of Springfield, Minn. and attended Augustana College in Sioux Falls. He received his degree from Chicago College of Osteopathic Medicine in 1981 after accepting a student fellowship in the Osteopathic Medicine Department. He was selected twice, in 1976 and 1981, to "Who's Who in Colleges and Universities." He completed a five year internship and residency at Bi-County Hospital and Detroit Osteopathic Hospital in the otorhinolaryngology — facial plastics program.

Dr. Rogotzke and his wife, Gretchen, have two children.

** * * *

Karla K. Murphy, M.D., a native of Lansing, Michigan, accepted the position of pathologist for Dakota Midland Hospital in Aberdeen. She attended the College of St. Catherine in St. Paul, Minn. for her undergraduate degree and received her medical degree from USD School of Medicine in 1982. Dr. Murphy then completed a 4-year pathology residency at Sioux Valley and R. C. Johnson V.A. Hospitals in Sioux Falls this past spring.

John V. McGreevy, M.D., a retired Sioux Falls surgeon, died recently at the age of 74. He was born February 20, 1912 in Odell, Ill. He moved with his family first to Winner and then in 1926 to Sioux Falls. He graduated from Cathedral High School and then Creighton University Medical School in 1936.

Dr. McGreevy married Helen C. Snell in 1936 in Omaha, Neb. He practiced medicine in Mitchell from 1937-46. In 1946 he came to Sioux Falls where he practiced until his retirement in 1977. He had been chief of staff at McKennan and Sioux Valley Hospitals and in 1976 was chairman of the McKennan Hospital Building Committee. He was a member of the Seventh District Medical Society, South Dakota State Medical Association, American College of Surgeons, Knights of Columbus, Elks Lodge and St. Marys Parish.

Survivors include his wife; three sons: Michael, Warrensburg, Mo.; Patrick and Timothy, both of Sioux Falls; two daughters: Mary Keating, Placerville, Calif; and Peggy Pehl, Sioux Falls; 14 grandchildren; and two brothers: James, Omaha; and Dr. Ed, Sun City West, Ariz.

Long-time Yankton physicians, T. H. Sattler and T. H. Willcockson, were honored by their peers at the quarterly medical staff meeting at Sacred Heart Hospital. They were elevated to emeritus status in a special presentation.

Dr. Sattler, a native of South Dakota, began his internal medicine practice in Yankton in 1948, after receiving his medical degree from Northwestern University of Chicago in 1942; serving his internship at Evanston General Hospital; serving in the U.S. Army from 1943-46; and completing a residency in internal medicine at Wesley Memorial Hospital in Chicago from 1946-48.

Dr. Sattler has held a membership in many professional organizations. He is past president of South Dakota State Medical Association; past president of the Sacred Heart Hospital medical staff and also served on the board of directors of the South Dakota Foundation for Medical Care. He has been the recipient of many awards including the Distinguished Service Award from the SD Heart Association in 1958; the A. H. Robins Award for outstanding community service by a physician presented by SDSMA in 1983; and he was named Yankton's citizen of the year in 1983. He is also very active in the USD School of Medicine and in community affairs.

Dr. Willcockson, a native of Fillmore, Ill., received his medical degree from the University of Nebraska Medical School in 1942; after a one year internship at the U. of Nebraska Hospital, he served in the U.S. Navy from 1943-47; and then served a preceptorship in ophthalmology in Omaha from 1947-50. In 1950, he came to Yankton and began his ophthalmology practice.

Dr. Willcockson has also been an active supporter of the USD School of Medicine, serving as a professor of ophthalmology; he has served as a consultant for the Public Service Hospital in Wagner; has staff privileges at the University of Nebraska Medical Center in Omaha, the PHS Hospital in Wagner and the Baptist Hospital in Winner. He is a member of many community and professional organizations. He is a past president of the Sacred Heart Hospital medical staff and the Yankton School Board. He was elected to the Yankton School Board to serve five-year terms in 1958, 1964 and 1970.

** * * *

Drs. David Staub, Sisseton and Mitchel L. Rydberg, Dell Rapids, have completed continuing education requirements to retain active membership in the American Academy of Family Physicians.
Dr. Charles Monson is celebrating his 25th year of practice in Parkston. Dr. Monson, a native of Sioux Falls, attended the USD School of Medicine for 2 years and received his medical diploma from the University of Kansas in 1959. He completed his internship in Wichita, Kansas and shortly after that began his practice in Parkston where he plans to continue practicing for many years to come.

* * * *

Dr. Bruce Romanic and his wife, Jeanne, have recently moved to Salem from Wilmington, Delaware. He has set up his family practice at the Salem Community Clinic. Dr. Romanic, a native of Pennsylvania, received his medical degree from the Thomas Jefferson University in Philadelphia; and completed his internship and residency at the Medical Center of Delaware in 1986. Dr. Romanic says his hobbies include tennis, basketball and reading science fiction. He has built an apparatus to take 35mm pictures through his microscope.

* * * *

Neurologist, Dr. James W. Wiggs joined the staff of the Yankton Medical Clinic in July. Dr. Wiggs is a native of Berwyn, Ill. He received his medical degree from the Indiana University in 1963. He completed an internship and residency in neurology at the Indiana University from 1964-1967. He has been in private practice for the past 17 years in Great Bend, Kans. He has also served on staff at the University of Kansas School of Medicine for 16 years.

Dr. Wiggs and his wife, Mary Ann, have four children.

* * * *

Steven Giuseffi, M.D., Spearfish, recently became a diplomate of the American Board of Surgery after successfully passing the exam.

* * * *

Dr. George F. Diehl has begun his family practice at the Marshall County Medical Clinic in Britton. Dr. Diehl, a native of Detroit, received his medical degree at Wayne State University School of Medicine in 1983. He completed a family practice residency at St. John’s Hospital in Detroit in 1986.

Dr. Diehl’s recreational interests are tennis, swimming, golf and bridge.

G. Robert Bell, M.D., of DeSmet, has been named the 1986 South Dakota Family Doctor of the Year by the S. D. Academy of Family Physicians at its summer seminar in Rapid City. Dr. Bell has practiced as a family practitioner in DeSmet since 1956 and at the Clinic in Bryant since 1983. He has been an active member and is a past president of the S. D. Academy of Family Physicians and is a member of South Dakota State Medical Association.

* * * *

Mujeeb Khan, M.D., a native of Pakistan, has begun his psychiatric practice at the S.D. Human Service Center in Yankton. Dr. Khan received his medical degree at the King Edward Medical College in Lahore, Pakistan in 1978. He completed his internship in medicine and surgery in Pakistan in 1979. He was in private practice in Pakistan until 1982, at which time he came to the United States and completed a residency in psychiatry at Creighton University School of Medicine in Omaha in 1986.

* * * *

Enrique Mendoza, M.D. recently began his radiology service at Dakota Midland Hospital in Aberdeen. He received his medical degree in 1974 from the University of Santo Tomas in the Philippines; and completed a residency in radiology in 1980 in the Philippines and a residency in therapeutic radiology at the University of Louisville in Kentucky in 1984.

Since 1984, Dr. Mendoza, a native of Manila, has been in private practice in Conyers, Ga., until coming to Aberdeen with his wife Teresita.
Physician Needed

For satellite clinic sponsored by local specialists in a large regional shopping center. Family Practice, Emergency Medicine or Internist considered. Candidate must have a warm, caring personality. Compensation based on salary plus incentives and benefits. Located in Sioux Falls, South Dakota, population 100,000, three state regional medical center, outstanding quality of life with excellent school system, colleges and recreational opportunities. Call or write John Peckham, Administrator, Empire Medical Clinic, 1200 South Euclid, Sioux Falls, South Dakota 57105. (605) 335-3878.

Family Practice Specialist

Marshfield Clinic Department of Family Medicine is seeking a BE/BC Family Practitioner to replace a retiring colleague. The physician joining this six member department will enjoy the support of one of the nation’s largest multispecialty groups, share the philosophy of family oriented care with a preventive focus, and enjoy full hospital privileges but without the distractions of OB or surgical responsibilities. Marshfield Clinic offers an excellent salary plus extensive fringe benefits.

Please send curriculum vitae to:

John Folz, Assistant Director
Marshfield Clinic
1000 N. Oak Avenue
Marshfield, WI 54449
or call collect:
(715) 387-5181

FAMILY MEDICINE FACULTY POSITION

A full time, tenure track faculty position is available at the Assistant or Associate Professor level, in the Department of Family Medicine, University of South Dakota School of Medicine. Fifty percent time teaching, curriculum development, research and other scholarly activities; fifty percent time patient care. Salary negotiable.

Qualifications: M.D., Diplomate American Board of Family Practice, Family Practice Residency training preferred. Position open until filled. Starting date: As soon as possible.

Send application, curriculum vitae and three references to:

James E. Ryan, M.D.,
Professor and Chairman
Department of Family Medicine
University of South Dakota
School of Medicine
800 E. 21st Street
Sioux Falls, South Dakota 57101

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South Dakota: Expanding physician-owned emergency group has opening for full-time career-oriented emergency physicians in South Dakota. Excellent benefits including malpractice, disability, health insurance, profit sharing, etc. Flexible work schedules, excellent working and living conditions.

Contact: Donald Kougl, M.D.
(307) 632-1436

or send CV to: EMP, P.C.
P.O. Box 805
Cheyenne, WY
82003-0805
AMA Physicians' Recognition Award Recipients

Congratulations to the members of the South Dakota State Medical Association who have earned the AMA Physicians' Recognition Award in June, July and August 1986.

**June**

Joe Ping Chang
David W. Staub
Jerel E. Tieszen
Douglas M. Traub

Aberdeen
Sisseton
Sioux Falls
Watertown

**July**

James G. Ruggles
Stephan D. Schroeder

Watertown
Miller

**August**

Barry T. Pitt-Hart

Sioux Falls

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**PHYSICIANS NEEDED**

North Central South Dakota family-oriented community is looking for DOCTORS. Community has a 28-bed hospital with a new surgical and OB suite. A new clinic is available with a full compliment of clinic equipment or opportunity to join group practice. Community population is 1,400 and hospital serves an area population of 7,500. Fishing, hunting, and golf among popular local recreation. Financial arrangements are negotiable. Satellite arrangements a real possibility. Contact: Administrator, Eureka Community Hospital, P.O. Box 517, Eureka, South Dakota 57437.

---

**FAMILY PHYSICIAN WANTED**

Practice family medicine in rural South Dakota and use all your family practice skills — pediatrics and obstetrics to orthopedics and geriatrics and everything in between.

Platte, a peaceful, clean, friendly and busy community in south central South Dakota is only 15 minutes from the Missouri River — excellent for water sports, fishing, camping and hunting. Beautiful scenery.

Modern hospital with attached nursing home. Clinic space available. Guaranteed income. Call shared 3 ways.

Plenty of work, but plenty of time to relax and grow with your family. Rural medicine is stimulating, challenging and very satisfying. You’re needed and appreciated here.

Contact: J. W. Bentz, M.D.
P.O. Box 818
Platte, SD 57369
(605) 337-2633
UNNECESSARY READMISSIONS

One of the unfortunate side-effects of the Prospective Payment System has been allegations by Health Care Financing Administration and others that Medicare patients are being prematurely discharged. This allegation is a real concern to the Foundation for Medical Care and has resulted in a HCFA requirement to set an objective to eliminate premature discharges. A premature discharge occurs when a patient is discharged even though he should have remained in the hospital for further testing or treatment, or was not medically stable at the time of discharge.

Effective immediately, SDFMC will be making a determination as to the possible premature discharge of Medicare cases subject to review. If a physician reviewer determines that a premature discharge has occurred, a notice will be immediately issued to the attending physician, who will be allowed an opportunity to send additional information to SDFMC clarifying the decision. If SDFMC physician reviewers determine that an attending physician has prematurely discharged a Medicare patient, review will be intensified on claims of that physician. Continued abuse in this area may lead to a sanction.

SDFMC will especially be reviewing all readmissions within 15 days, and will deny unnecessary readmissions resulting from a premature discharge or where the services provided could have been rendered during the previous admission. In regards to readmissions, physician advisors will be looking for clear documentation as to why the readmission is necessary. Denials of a readmission, because of premature discharge or readmission for services which could be provided during the initial admission, are not covered by waiver of liability. The hospital does not get paid for these denials.

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Family Abuse: Child, Spouse, Elderly

Roy C. Knowles, M.D.*

ABSTRACT

The physician's role in identifying, preventing, healing, reporting. This is an attempt to define abuse and the victim and the aggressor. What is abuse? Who are participants? What is the cause? What are the results? What can a doctor do? What can society do? Out of personal professional experience and out of literature review an attempt will be made to discuss abuse in each category, defining both differences and similarities and cause, purpose, and results. We will also discuss the physicians role in the recognition of abuse, help which can be offered, prevention, reporting, and coordination of effort with other agencies.

In this article we are attempting to put together the subjects of violence, sexual abuse, neglect, and abandonment under subgroupings of child, spouse, and elderly. (Spouse in this usage covers husband-wife, or any live-in arrangement).

And we will be identifying types of abuse as it passes parent-to-child, child-to-parent, child-to-child, spouse-to-spouse, adult-to-elderly, child-to-elderly, elderly-to-adult, and elderly-to-child.

Because of the great storm which has risen recently concerning violence and sexual abuse, I am going to, at this point, interject a caveat. We always seem to overdo everything, especially if it has an emotional base. As we try to correct, we over-correct and thus we do damage. To put it in the simplest terms — the human being is the only animal that can take a good idea and louse it up.

In the city of Denver there is a very strong reaction to the fact of child kidnapping. There is no question that this is a very troublesome and emotional problem. There is no question that parents must find ways of protecting their children and society must find ways of coralling the perpetrators. However, the thing which bothers me is that the children are becoming terrified of the outside world. As a result of this, children are going to grow up with very strong problems in separating from parents and their safe environment or they are going to be very paranoid, untrusting, and pessimistic concerning the future. There is no way the children are going to be able to accept a smile or a friendly gesture from an adult stranger as anything but a threat instead of the usual translation that the world out there must be friendly if people are friendly to me.

Then there is the problem that we will blind ourselves to the fact that some people ask for trouble and are not content unless they have trouble. On the surface this sounds ridiculous and at the present time such an idea arouses ire among those who have taken one viewpoint and blinded themselves to others.

CASE 1

A twelve year old boy came to the attention of the authorities because of violent fighting. As he talked about this, he indicated that he characteristically would go into a movie and wait until his eyes adjusted to the dark, then he would find three or four boys seated together. He would sit behind them and pester and pester and pester until they invited him out into the alley where he would fight all of them and get himself thoroughly beaten up. When I asked him how he felt after being beaten up like that, his response was "clean."

Certainly a story like this does not justify our thinking that everybody who gets beaten up likes it or wants it or is asking for it, but it does suggest that we do not approach a case with our view too constricted. There are children who will pester their parents until they are spanked because they have done something wrong or wished something wrong and being spanked provides them with the feeling of being clean.

CASE 2

A woman was seen for a number of months in individual psychotherapy and then was transferred into a group. Every week without fail she would arrive at the group session and attract the group members' attention to the fact that she had a black eye or was bruised on some part of her face. "See what that son-of-a-bitch of a husband did to me." The group was too new to have the courage to handle that kind of thing well, so because I already knew her, I would...
ask her to tell the group how she stuck her eye out in order to get it hit. She would be appropriately angry, but she stuck with the group and eventually the group members began to ask her the same question. Then there was a long time when there were no bruises. One day she said to the group, “You guys used to make me mad by asking what I did to stick my eye out so it would get hit by my husband. Right now he is sitting home baby-sitting the children, watching television, waiting for me to come home, and there’s nothing I’d like to do any more than to go home and have a fight with that son-of-a-bitch.” She indicated she was not going to fight with him and then she was able to explain to the group that in actual fact she was meaner to him than he was to her. She would let him hit her and then she would be very sweet and kind to him. Every time she was near him she would look at him and smile so that he had to see the bruises and the black eyes, and he would cringe and feel miserable about himself. This was her victory over him.

This case does not loudly acclaim that women who are battered want to be battered. It is simply to give us an indication that we must keep our eyes and ears open if we are to be helpful to even this small number.

Human history has indicated that there have been acts of abuse, neglect, sexual misuse, and abandonment for as long as history has been recorded. Young virginal girls have been deflowered by priests and tribal leaders as if “the father” has the first choice and even the first obligation. Unwanted children, especially unwanted female children, in Asian countries were carried into the mountains and left to be consumed by wild animals since there was no way they would be able to support such female children and it was felt that what was needed was more warriors. Elderly people in southeast Asia would come to recognize their inefficiency in hunting or otherwise supporting themselves and the other members of their community and they would go off into the jungle and build a little hut where they would stay until they starved or the hut was broken into by wild animals. (Elderly in these cases was a matter of ability to function rather than age.)

C.H. Kempe and his colleagues in Denver, Colorado started us on the course which is pursued all over this country when they wrote an article “The Battered Child Syndrome” published in the Journal of the American Medical Association in 1962. Using the same kind of terminology, we can recognize that the battered spouse syndrome later began to be a concern and this was followed by the battered elderly syndrome. We shall try to identify mostly similarities but some dissimilarities in the abuse among these three groups.

I doubt that numbers help very much as we try to get a hold on abuse. Perhaps it would be helpful if for a moment we stayed entirely on the subject of battered children. The best information we have at the moment comes from the National Center on Child Abuse and Neglect. Their estimation is that approximately 250,000 children are physically abused per year. However, this figure is based on incidents that come to the official attention and leave out the vast number of cases in which physical abuse is not reported. When household interviews were conducted in a national probability sample of 2,143 families, the rate of child abuse was reported to be 14 out of every 100 children, ages 3 through 17. This means that of the children of this age group in the United States who live with both parents, approximately 650,000 are abused each year. When we add infants and toddlers and add sexual abuse and neglect and abandonment to the subject of battering, we have no idea what numbers we are talking about. Then if we add the subjects of spouse abuse and elderly abuse we are even more befuddled about what numbers we are considering.

In that same national survey concerning battering, they did include questions related to adults as well as children. The behaviors included throwing something at another person, pushing, grabbing, shoving, slapping, kicking, biting, punching, hitting with an object, beating up, threatening to use a knife or gun, and using a knife or gun. In the survey, violence was recorded as occurring between spouses, parent-child, child-child, child-parent. And there was a high degree of severe violence of child-to-child. We seldom speak of that except in isolated cases. (Note there is no mention of elderly battering.)

You will note that this list leaves out actions such as dunking a child in a tub of scalding water or burning a child with a cigarette or placing a child on a roof in the middle of a winter storm with no way for the child to get down off the roof, or blindfolding a child and placing the child in a pen with a bull.

Definitions of child abuse and spouse abuse and elderly abuse are sticky and will continue to be debatable issues. Objections will be raised and have been raised about classifying behaviors such as shoving and pushing as “violent” and regarding “hitting with an object” which includes spanking with a paddle as child abuse.

As we go on through the major portion of this article, we shall be largely walking along the path which indicates that the perpetrator is mean or nasty or evil and that the victim is an innocent sufferer at the hands of the perpetrator. But I would like to pause at this time and interject a caveat or a series of caveats which will add some confusion to your thinking, but at the same time I hope will make it possible for you to serve better those people who will come to your attention.

I am no different from the rest of you, I think, when I hear of sexual abuse or violence or neglect or abandonment. I become angry, somewhat ashamed, and I think thoughts in the direction of
punishment. On the other hand, I keep warning myself that we are all inclined to pick up causes and we make within these causes absolute rules of thought, belief, and conduct and we are inclined not to bend any of these since we are sure we know "the truth."

**CASE 3**

Because the parents of an infant girl recognized that the fontanelles had closed much too early in their little child they began the torturous road of going to their pediatrician who ultimately referred them to a large medical center where a surgeon cut out the frontal bone and turned it upside down as he replaced it so that it did not fit snugly and thus provided space for the brain to expand. The child did well and was taken home. A short time after she returned home she developed a respiratory infection sufficient that the mother took the child to a local hospital emergency room since it was the weekend and she could not reach her pediatrician. As she carried the baby into the emergency room the nurse looked at the baby and said, "You don't have to tell me anything about it — we get things like this all the time." The mother had really anticipated something of this kind of response because the baby's eyes were swollen and black and blue, so she kept her cool and tried to tell the nurse why she had brought the baby in. The nurse made a similar accusatory remark so the mother quietly slipped off the little knitted cap she had on the baby's head and the nurse suddenly turned pale and sat down in order to keep her balance.

**CASE 4**

A mother with a known manic-depressive mental illness called her doctor's office each day for five days to report that her daughter was ill. On each occasion the call was received by a nurse who advised the mother what to do. Finally the mother took the child into the doctor's office refusing to any longer try to get help by telephone or advice by telephone. When the physician saw the child he called the protection office to report neglect.

**CASE 5**

A seven year old girl accused a neighbor man of sexually fondling her, including rubbing his penis between her legs. The mother immediately jumped to the defense of the child and took the matter to court. During a court hearing the defense attorney asked the little child to describe what a man's penis looks like. She said, "It is long and hard and red and shiny." The girl's mother exclaimed, "My God, she's lying!" and the case was dismissed.

**CASE 6**

A fifteen year old boy was seen by me in a mental health center because the court had given him a choice between being sent to the training school or the mental health center because he had burned down a barn on his uncle's farm. After a number of months he finally told me why he had burned the barn. His thirteen year old female cousin kept trying to entice him into the hay mow to have sex with her. He didn't want to do that and the only way he could think of stopping it was to burn up the hay mow. By the time we had gotten that far in treatment he was committed enough that he continued and he revealed one kind of trouble after another, including slashing up some of his father's possessions as he tried to attract attention to the fact that there was trouble in the family. Finally, in his senior year in high school, he brought to me one of the pictures that are so often taken in school classes. This was a picture of a very pretty girl. He said, "I've got a date with her tonight and I know that as I walk out the door my mother will say to me, 'Remember what causes syphilis.'" I exclaimed, "My God, your mother takes the girl's pants off before you even get in the car!" He said she had been doing that ever since he'd started dating. I called the mother in and she indicated that the most pleasant sexual experience she had, was sitting at home after he had gone on a date fantasizing how that girl was feeling as that son of hers had sex with the girl. This is a rather unusual form of incest — mother-to-son.

**CASE 7**

A mother reported to me that she had had intercourse with each of her four sons, "I want them to learn how to do it right. I don't want them being taught by those dirty girls in high school."

**CASE 8**

A woman brought to me one day her new foster daughter; a little girl of about four. This girl had been sexually molested by the father person in her family over quite a long period of time. It was finally discovered, and she was removed from the home, partly because the mother would not separate from her man. The foster mother simply wanted to be sure that she and her husband were on the right track with this little girl. Everything I could find was very good; but at the very end of the session I told the foster mother that one thing they were going to have to watch for was that this little girl would try to seduce her new daddy. The mother smiled and said that it had already happened. This little girl, sitting in her new daddy's lap, was wiggling around in a very seductive way. When I asked the mother how the father handled it she said, "He looked over at me and smiled and winked." I commended both of them for their sensitivity to this little girl and warned her that the chances were the little girl would try more than once until she found out if this was the kind of behavior that was expected with her new daddy.

I present to you these exceptions because all of them run against the grain of what helping people feel are the real situations in various kinds of abuse. Incest is almost always reported as male-to-female; battering is almost always reported male-to-female. A little girl never tries to seduce a male; and medical personnel can always easily identify battering or neglect. You as physicians will be right more often than not, if you follow the usual rules and expectations, but you will be able to help a small minority if you listen for and observe and honor the exceptions.

In the matter of abuse of children, be it violence, sexual, neglect, or abandonment the physician is pretty well protected by law so that he may, and indeed must, report suspected cases. The physician may lose a patient or two in this process, but he can and must report. There will be times that the evidence is so weak or indecisive that it will be difficult to satisfy yourself that there is real and reportable trouble. You may have to permit yourself to simply feel that there is something wrong, and you may have to permit yourself to even overreact if the maltreatment of the child touches a sore or sensitive spot in you.

Perhaps the easiest way to meld all of the various
forms of abuse together would be to acknowledge that we have set up in each person and surrounding each person several organizations or systems. There is the system within the person, or, interpersonal, the mix of heredity traits, learned experiences, value systems, self-identification, residuals of dependency, quantities of autonomy. Then there are intrafamilial factors, the family system, largely parent, child, and siblings and this is the one you’ll most often read about because of the evidence that a battered child is more prone to batter and that a sexually abused child is more prone to sexually abuse and a neglected or abandoned child is more prone to neglect or abandon. Then there is the extension of the intrafamily system to a muti-generational family including grandparents and other close relatives. Then there is the general societal system with many small subgroups and a very massive “total” society. Herein the child becomes under rules and regulations applied by society. He comes under expectations developing out of race, creed, sex, social position, and the total socioeconomic situation or even political situation.

The intergenerational transmission of abuse can oftentimes be traced back two or three generations and forward two or three generations. A great-grandpa was harsh, authoritarian, unloving, brutal, sexually assaultive, and great-grandma joined in the abuse by permission or by actual participation. Grandpa was equally abusive to his family and children and daddy was equally abusive to his family and children, and now Daddy’s son beats up on his siblings or on the neighbors kids or even upon his own mother. He gets married and he beats up on his wife and abuses his children, and his child starts the same process with his new family and at the same time begins to be overridden by the burden of elderly parents or grandparents and even while he is abusing his own children he is abandoning, neglecting, starving, battering, or sexually assaulting the elderly members of his family.

Put in this way it sounds as if I am saying this is an absolute, 100% pattern of behavior to be followed in abusing families. In actual fact, it is more a possibility than an absolute, but the possibility is greater in the abusing family than in the non-abusing family.

Let us look at the perpetrator for a moment and see if this helps us clear up the picture and see if it also helps us recognize that some abusing comes out of families in which abuse is not so obvious, so definable, so diagnosable. In the experience of most people working with abusing persons, the perpetrator appears to have an underlying authoritarian/dependent-type of personality characteristic. These two words are being mixed and on the surface they may seem strangely contradictory, but what it amounts to is that if a person is basically quite dependent he will show it directly or he will be inclined to cover it under a mask of being the boss, and as the boss or the leader he has a right to whip or beat or take advantage of at will. Actually the little boy, little girl dependency has never been fulfilled, never been fully succored and the hungry, angry, unfilled, envious little child lashes out at those who place serious demands upon him/her or turns to the ones he or she should be guiding and helping and feeding and loving and instead takes from them. Many of these people on the surface give the impression of being perfectly normal, well adjusted people, but placed in a situation in which they are responsible to care for, love, and protect others they rebel and take advantage or take more than an appropriate share or they punish those who appear to be getting part of their share.

Can the perpetrator be helped? We almost have to individualize case by case as we try to answer this, but it is worth a try. We must remember that everything we are talking about comes in some degrees. We have to remember that there are those among the perpetrators who are so demanding of proof of their superiority, of their own authority over others that they will go from victim to victim to victim, from family to family to family seeking the reassurance that they are strong and brave and in charge. With our present skills these cases cannot be helped except by incarceration or other legal action to keep them separated from potential victims until they become so old that it no longer matters, and they then potentially put themselves in the position of being an aggravating burden to others as elders. But there are many lesser degrees of authoritarian/dependency traits which can be helped. A woman taking her children to a shelter to avoid future abuse, be it sexual or battering, may attract her husband’s attention so strongly that he will accept the idea of getting help in order to change and in order to not lose the persons who promise to fulfill most adequately his own dependency needs. Occasionally if the law is wrapped around the perpetrator he will make a try at getting help, though it may be a long time before he shifts from simply submitting to the law to actually actively working to turn his life into something better. You can see where this kind of thing is very difficult if you accept the explanation of cause in the development of the perpetrator. The very mixed and uncomfortable messages of his own infancy and childhood, his own perpetual and never satisfied hunger for love and attention and fulfillment, his own perpetual dependency make it so that it is difficult for him to try to change anything in himself because changing
anything in himself in no way promises that he will then get what he has for so many years missed. In the instance of a child-to-child perpetrator, the treatment is more hopeful because one still has a chance to fill up the empty void of unfulfilled dependency requirements of the child in a treatment situation. This is far more effective if the parents will enter the treatment also. In the case of the perpetrator of abuse toward the elderly and of abandonment or neglect of the elderly or adult or child one often finds that there is not only a problem of the unfulfilled dependency needs of the responsible adult, it is exaggerated by the reality of social and economical deprivation. In some cases providing direct social and economic support, including required medical care and so on, can alleviate further abuse. When the situation is so bad that the perpetrator can, in no way, be diverted from his route of providing abuse, then legal separation becomes a necessity. The adults may have to separate, the elderly may have to go into a nursing home or be assigned to the care of other family members, the children may have to go into foster care or adoption. It may be sufficient to place the elder person in a nursing home, although if the elderly person has contributed to the abuse by being irascible and exceedingly demanding, the nursing home will have similar trouble. If the adults separate, the victim may very well need treatment or counseling lest the victim seek nurturance from the arms of some other adult and get back into the same pattern with a new perpetrator. If the children are forced out of the custody of the parents in order to protect them, the new parents will have to be helped to provide the excess of nurturance the children will need until they have steadied down, or the children and possibly the new adults, will have to have treatment-oriented counseling to aid in filling in some of the gaps left in the developmental phases of the child.

As you can see, we have already been defining the victim as we have been trying to talk about what to do about the situations of abuse. I have a strong belief, for example, that marriages are never mistakes. People choose their mates to satisfy the needs of that moment. Fortunately, many people grow and change as life situations change and the marriage thus changes appropriately. If one adult marries a battering mate and grows not at all in the process, that person will marry a second mate who will also batter. Fortunately, many of them do grow as a result of the painful process of living with a battering spouse and will marry a new spouse who promises to fulfill other requirements, hopefully more mature and healthful. Unfortunately a statement such as the foregoing is misinterpreted as meaning that I or others who would speak this way feel that the victim wants to be sexually or physically abused within the family. Actually what it means is that these people have never danced to any other tune. It may be only as they learn that there are other tunes to dance to that they seek other partners. Children do not have that choice, although the longer they live in an abusing environment the more they take on the duties of the essentially assigned role in the family. The sexually abused little girl may learn that being loved and being considered special means having one’s genitals fondled. She will climb on daddy’s lap in order to be fondled or thus to be loved, whereas a typical little girl might climb on her daddy’s lap so daddy can read a book to her.

Perhaps before I neglect the idea I should interject a little more about the victim of elderly abuse. The elderly person may be an unsupportable burden upon an already burdened adult. The elderly may turn back to old times and further burden the adult by demanding care and payment for all the years of care and payment given to the adult when the adult was a child. And perhaps more importantly the elderly person may be looking toward the end of the road and be frightened by seeing a six foot hole into which he must one day jump. He no longer has the strength, the agility, the purpose, or the ability to do the things he once was able to do, the things which gave him his identity, his purpose, and the approval for his very existence. These things are no longer there or at least they are fading. His place in life is changing and in the changes he places upon others demands for change which are more excessive than the adult caretakers can handle. The rapidly increasing specialty of geriatrics and of the social and socioeconomical and political care of the elderly requires that we find ways to make the state of old age be celebrated somewhat more than feared or hated.

THE ROLE OF THE PHYSICIAN

Prevention, identification, intervention, referral, or reporting.

The physician’s role in the prevention of family abuse is not a distinct one. In the case of the family physician or the pediatrician or the good next door neighbor who is a doctor being basically a supportive member of society and being available to the patients may be all you or we can do. I can give only one example out of my own general practice (Family Practice).

CASE 9

I had one family with three teenage daughters. I never saw the father who was handicapped enough so that he was not working, except for a little garden he planted, but I had many contacts with the mother and with the three girls. We developed a friendly, chatty, close relationship in which
we talked about everything from kids in school and the boys they were beginning to pay attention to, and so on and on. One day the youngest of these three girls came in to talk to me about the fact that her dad was sexually brutalizing the mother. Those three girls would lie awake well into the night hearing the mother scream and howl and protest. I asked the mother to come in to see me. She indicated that she didn’t want sex with this man anymore and he wanted it every night so they would have a big, big fight. They might go to bed at 10:00 and she would scream and howl until maybe 2:00 in the morning before she would give in to him. When I questioned why she didn’t give in to him right away and get it over with so she could sleep through the night, she looked startled and then even smiled and thought maybe that was a good idea. I did not jump all over her about the sexual brutality as it was being purveyed by her to the girls. The older girl got married and moved about thirty miles away. She came back to my office one time weeping telling me that she was having a terrible time; she had not been able to have intercourse with her husband; she was terrified of the severe pain that would result; and yet she knew she was torturing him by not having sex with him. She based her decision to come see me about this on our relationship of the preceding years, and based on that, I gently examined her one, two, and three fingers and then held up my fingers and asked if he was bigger than those three fingers. She acknowledged that he was not. She was amazed that it was not painful, but she was now reassured that it was not painful. The next time I heard from her she simply stopped in the office to deliver a message by way of my nurses that she was pregnant.

I realize that this is a different situation or a different form of sexual abuse, but the point is that these girls could use their doctor to talk about something that was bothering them very much.

Identification of battering and sexual abuse often times comes from suspicion. The doctor recognized that the child looks ill and should long ago have had attention, but did not get it. The doctor recognizes that this is the third broken arm this kid has had and when he takes a picture there are evidences that perhaps other bones have been broken at other times. There are cuts and bruises with explanations that do not make sense. This is likewise the kind of thing one suspects in cases of abuse of the elderly. There can even be contractions of muscles because the elderly person has been tied for long, long periods of time in restraint and the muscles have contracted or atrophied as a result. Sexual abuse, if there has been recent and obvious intercourse or attempts at intercourse is somewhat different from the sexual abuse of just fondling a little boy or a little girl. As the children get to a point where they begin to recognize that what is happening in their home is bad and evil and that this probably means they are bad or evil may withdraw, may stop going to school, may fail subjects in school, may begin to fight, may begin to make suicide gestures. Blathering of an adult by an adult may come to the attention of the physician again simply because the reason for the injury does not make sense. The repetition of injuries does not make sense. Evidence of unreported injuries compound the suspicion.

The point at which physicians get themselves into difficulties is that they sometimes feel they either are not equipped to talk with people to find out what’s going on with them, or they feel they cannot do justice because they cannot spend the time. Then we get into the situation of the possibility for referral. Many people, being yet unwilling to uncover what is going on in their homes, will not accept a referral unless the physician in some way follows through to make sure that the contact is truly made. If the physician has, through his contact, been able to identify that there is indeed abuse, it is again likely that he will feel he cannot, in justice to the people involved, spend the time necessary nor demonstrate the skill necessary to be helpful, and thus he refers. He may refer an adult to a shelter or an adult and children to a shelter. There may be instances in which he can refer an elder person to a shelter.

Reporting of even suspected cases is now required so far as children are concerned. Laws are doubtlessly going to come on the books which will make it required that suspected abuse of adults will be reported and I suspect there will be similar laws concerning the elderly. It can sometimes be assumed that the elderly person is incapable of protecting himself and therefore suspected sexual or violent abuse or neglect can be reported even though it is not required as is the case with children.

All states have child protection agencies to whom child abuse cases or suspected cases can be reported. Even if the report goes directly to police or states attorney’s office the child protection people will be the ones who will actually make the investigations and make the necessary moves. It is still less definite in cases concerning adult and elderly, although if the abuse is severe enough to be endangering to the life of the person, reporting to the police or to the states attorney’s office will be expected until laws define this more fully and carefully.

The elderly are becoming a special and troublesome group and this touches physicians closely. My thoughts at the moment go to the nursing home group. Example: A 76 year old depressed man who is being treated for a cardiovascular malfunction. Is he depressed because his world is empty and he must die or is he depressed as a reaction to his medication? Our own feelings about the elderly can lead to neglect. He is old and on his way out may be what the family feels as they “neglect” him. Is it possible for the physicians to be a member of the larger societal system and his form of neglect too — just because the guy is old?

Beyond this, the function of the physician is to comfort, treat and care for as he is using his skills to identify or diagnose abuse.

SOUTH DAKOTA
And then let me add just one other thought: It is easy to suspect that things as reprehensible as serious abuse will occur among the lower socioeconomic classes, the undereducated, the chronically mentally ill. Please remember abuse in all of its forms occurs in all socioeconomic levels. Family abuse does not belong to one class.

Remember also that it is not possible to legislate morality. New laws will not stop abuse. Hopefully new laws will give us easier access so that we may apply some skills of education, prevention, and remediation.

REFERENCES


A full list of references may be obtained by calling or writing the SOUTH DAKOTA JOURNAL OF MEDICINE, 608 West Avenue, North, Sioux Falls, SD 57104. Phone: (605) 336-1965.

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October

Annual Autumn Seminar on Obstetrics and Gynecology, Marriott Hotel City Ctr., Minneapolis, Minn., Oct. 22-24. Fee: $295. 17.25 hrs. AMA Category I & AAFP credit. Contact: Lynne Olson, CME, Box 202, 420 Delaware St., SE, Minneapolis, MN 55455. Phone: (612) 626-5525.


November


A Primary Care Update, Town & Country Hotel, San Diego, Calif., Nov. 10-13. Fee: $195. 24 hrs. AMA Category I & AAFP credit. Contact: Interstate Postgraduate Medical Asso. of North Am., P. O. Box 1109, Madison, WI 53701. Phone: (608) 257-6781.

121st Annual Scientific Meeting of Michigan State Medical Society, Hyatt Regency, Dearborn, Mich., Nov. 11-13. 18 hrs. AMA Category I credit. Contact: Michigan State Medical Society, 120 W. Saginaw St., P. O. Box 950, East Lansing, MI 48823.


December


January


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USD School of Medicine
The Effect of a Prescribed Exercise Program
on Respiratory Muscle Strength and Endurance
of Middle-Aged Subjects

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The Management of Asymptomatic Carotid Stenosis: Continuing Controversy
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The Effect of a Prescribed Exercise Program on Respiratory Muscle Strength and Endurance of Middle-Aged Subjects*

Tamara Poling, MSI†
Evelyn H. Schlenker, Ph.D‡

ABSTRACT

Respiratory muscle endurance (maximal ventilatory ventilation, MVV) strength evaluated by maximal inspiratory (PІmax) and expiratory pressures (PЕmax) were determined in 23 normal middle-aged males and females before, during, and after a prescribed exercise program. Male and female subjects improved both PІmax and PЕmax by about 20 cm H₂O. Ten male subjects improved their respiratory muscle endurance (MVV) whereas 5 did not. The primary reason for the difference between the two groups of males was the pattern of breathing they used during the MVV procedure. Five of the 8 female subjects showed a significant improvement of MVV even though almost all were above their predicted value. This study therefore, has shown that normal middle-aged subjects can improve respiratory strength as well as endurance by undergoing a prescribed exercise program.

INTRODUCTION

Is it possible to improve ventilatory muscle performance in middle-aged subjects by a prescribed exercise program? If so, does training affect predominantly respiratory muscle strength, endurance, or both?

The maximum ability of respiratory muscles to function during exercise depends upon mechanical characteristics of the respiratory system, the ability of gases to diffuse across the alveolar capillary complex, the biochemical activity and fiber type composition of the respiratory muscles as well as cardiovascular function. Abnormalities in any of these components severely limit exercise and the ability of respiratory muscles to become trained.

To avoid possible problems with underlying abnormalities the subjects we chose for this study were healthy, but generally sedentary, middle-aged male and female subjects who participated in the Wellness and Fitness Program at the University of South Dakota.

METHODS

Subjects. Fifteen men and eight women participated in this study. The subjects were all in good health. Prior to the onset of the program, each underwent a complete physical examination which included a stress test, a chest x-ray, a flexibility and a body composition evaluation. Anthropomorphic data and pulmonary function measurements are presented in Table I. Each subject received an individual exercise prescription with a target maximum heart rate. The subjects were expected to exercise three times per week for a 12 week period. All participants signed consent forms approved by the Human Experimentation Committee of the University of South Dakota.

* This work was part of the Pilot Project for the Center of Wellness and Fitness, under Drs. James Ryan (Department of Family Medicine) and Charles Spencer (Health, Physical Education and Recreations Division), Sioux Falls, SD
† First Year medical student, USD School of Medicine, Vermillion, SD.
‡ Assistant Professor, Department of Physiology and Pharmacology, USD School of Medicine, Vermillion, SD.
TABLE I
ANTHROPOMORPHIC CHARACTERISTICS AND PULMONARY FUNCTION TESTS OF SUBJECTS.
MEAN ± SD

<table>
<thead>
<tr>
<th></th>
<th>Males (N = 15)</th>
<th>Females (N = 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>43.8 ± 7.4</td>
<td>41.1 ± 9.5 years</td>
</tr>
<tr>
<td>Height</td>
<td>180.8 ± 8.65</td>
<td>167.3 ± 7.4 cm</td>
</tr>
<tr>
<td>Weight</td>
<td>195.0 ± 32.2</td>
<td>140.0 ± 18.2 lbs</td>
</tr>
<tr>
<td>FVC</td>
<td>4.88 ± 0.74</td>
<td>3.64 ± 0.74 L</td>
</tr>
<tr>
<td>FEV₁</td>
<td>5.21 ± 0.44</td>
<td>3.74 ± 0.50 L</td>
</tr>
<tr>
<td>FEV₁, pred</td>
<td>3.64 ± 0.38</td>
<td>2.92 ± 0.57 L</td>
</tr>
<tr>
<td>FEV₁, pred</td>
<td>3.89 ± 0.29</td>
<td>2.90 ± 0.44 L</td>
</tr>
<tr>
<td>FEV₁,R</td>
<td>0.75 ± 0.08</td>
<td>0.80 ± 0.03</td>
</tr>
<tr>
<td>FEV₁,R pred</td>
<td>0.74 ± 0.03</td>
<td>0.77 ± 0.02</td>
</tr>
</tbody>
</table>

FVC = Forced vital capacity
FEV₁ = Forced expiratory volume in 1 second
FEV₁,R = the ratio of FEV₁ to FVC
Pred = the predicted values used the equations of Morris et al.\(^\text{17,18}\)

Measurements. Maximum static inspiratory and expiratory pressures to evaluate respiratory muscle strength at the mouth were measured using a pressure transducer coupled to a Grass recorder. The pressure transducer was also connected to a mouthpiece which had an approximately two mm diameter hole punched in its side. A mercury manometer was used to calibrate the pressure transducer. Maximum expiratory pressure (P\(_{\text{Emax}}\)) was measured near total lung capacity after a maximal inspiration. Maximal inspiratory pressure (P\(_{\text{Imax}}\)) was measured near functional residual capacity after a maximal expiration. A minimum of three reproducible measurements was obtained.\(^3\)

To determine maximum voluntary ventilation (MVV, an indication of respiratory muscle endurance), subjects inspired oxygen-enriched air through a mouthpiece attached to a water-sealed 11 l spirometer. Subjects were asked to breath maximally for 15 seconds. They were allowed to choose the breathing pattern with which they were most comfortable. Two measurements were obtained, with a five minute rest period between trials. All volumes were corrected to Body Temperature Saturated (BTS). The best effort was used in calculating results. Data were analyzed using paired and unpaired Student’s t tests. Significance was defined as \(p\) values \(\leq 0.05\).

RESULTS

P\(_{\text{Emax}}\), P\(_{\text{Imax}}\), and MVV Results in Male Subjects. Overall, every male, with the exception of one individual showed a significant increase in final P\(_{\text{Imax}}\) from the initial value (Table II). There was no significant difference between middle-initial values, but a significant increase was shown between final-middle values. Most of the males’ initial values of P\(_{\text{Imax}}\) were well below the predicted value (about 120 cmH\(_2\)O) which was obtained from equations developed by Black and Hyatt.\(^3\)

Twelve of the fifteen males showed a significant increase of final P\(_{\text{Emax}}\) from the initial value. Changes between final-middle values and middle-initial values were not statistically significant. Three males exhibited an overall decrease in P\(_{\text{Emax}}\) from the initial value, but none of the decreases were significant.

<table>
<thead>
<tr>
<th></th>
<th>Males (N = 14)</th>
<th>Females (N = 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI max</td>
<td>94 ± 27</td>
<td>103 ± 20</td>
</tr>
<tr>
<td>± 114 ± 20</td>
<td>(\Delta 20 ± 18, p &lt; 0.01)</td>
<td>(\Delta 13.2 ± 7, p &lt; 0.01)</td>
</tr>
<tr>
<td>PE max</td>
<td>103 ± 29</td>
<td>117 ± 29</td>
</tr>
<tr>
<td>± 122 ± 29</td>
<td>(\Delta 13.2 ± 7, p &lt; 0.01)</td>
<td>(\Delta 20 ± 11, p &lt; 0.01)</td>
</tr>
</tbody>
</table>

* Only 2 subjects performed the test satisfactorily.
Values are means ± SD.
Statistics are paired Student’s t test.

Twelve of the fifteen males showed a significant increase of final P\(_{\text{Emax}}\) from the initial value. Changes between final-middle values and middle-initial values were not statistically significant. Three males exhibited an overall decrease in P\(_{\text{Emax}}\) from the initial value, but none of the decreases were significant.

The changes in MVV in the males are presented in Table III. Ten of the fifteen subjects increased their final MVV from the initial value. No significant increase of MVV was observed after approximately six weeks, as indicated by the lack of change in final-middle values. The same phenomenon appeared in the five males whose final MVV decreased significantly from the initial value: there was a significant decrease of MVV values between the middle-initial values. Frequency of breathing appeared to have played a major role in the MVV values achieved. Ten males whose final MVV increased showed a significant increase in frequency between the middle-initial and final-initial trials (Table IV), whereas the five males whose MVV decreased from the initial value showed a decrease of breathing frequency (Table V). There was no significant difference in the tidal volumes either between trials or between groups.

P\(_{\text{Imax}}\), P\(_{\text{Emax}}\), and MVV Results in Female Subjects. Table II shows the changes of P\(_{\text{Imax}}\) in the females. Over the twelve week period, four of the
TABLE III
MAXIMUM VOLUNTARY VENTILATION (MVV) IN L/MIN. IN MALES

<table>
<thead>
<tr>
<th>Subject</th>
<th>Initial</th>
<th>Middle</th>
<th>Final</th>
<th>Predicted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects whose MVV Improved</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>133</td>
<td>145</td>
<td>167</td>
<td>138</td>
</tr>
<tr>
<td>2</td>
<td>64</td>
<td>126</td>
<td>96</td>
<td>137</td>
</tr>
<tr>
<td>3</td>
<td>181</td>
<td>198</td>
<td>233</td>
<td>130</td>
</tr>
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<td>4</td>
<td>120</td>
<td>175</td>
<td>152</td>
<td>125</td>
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<tr>
<td>5</td>
<td>149</td>
<td>176</td>
<td>175</td>
<td>121</td>
</tr>
<tr>
<td>6</td>
<td>71</td>
<td>112</td>
<td>112</td>
<td>125</td>
</tr>
<tr>
<td>7</td>
<td>113</td>
<td>..</td>
<td>130</td>
<td>135</td>
</tr>
<tr>
<td>8</td>
<td>126</td>
<td>78</td>
<td>64</td>
<td>135</td>
</tr>
<tr>
<td>9</td>
<td>108</td>
<td>97</td>
<td>85</td>
<td>156</td>
</tr>
<tr>
<td>10</td>
<td>97</td>
<td>57</td>
<td>56</td>
<td>130</td>
</tr>
<tr>
<td>11</td>
<td>142</td>
<td>69</td>
<td>83</td>
<td>113</td>
</tr>
<tr>
<td>12</td>
<td>214</td>
<td>209</td>
<td>237</td>
<td>144</td>
</tr>
<tr>
<td>13</td>
<td>93</td>
<td>159</td>
<td>137</td>
<td>138</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

final-initial: change = 33.3 ± 10.3, p < 0.001
middle-initial: change = 35.4 ± 24.3, p < 0.01
final-middle: change = 0.3 ± 23.8, NS

Subjects whose MVV Decreased

<table>
<thead>
<tr>
<th>Subject</th>
<th>Initial</th>
<th>Middle</th>
<th>Final</th>
<th>Predicted</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>126</td>
<td>78</td>
<td>64</td>
<td>135</td>
</tr>
<tr>
<td>9</td>
<td>108</td>
<td>97</td>
<td>85</td>
<td>156</td>
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<td>10</td>
<td>97</td>
<td>57</td>
<td>56</td>
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<td>209</td>
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<tr>
<td>13</td>
<td>93</td>
<td>159</td>
<td>137</td>
<td>138</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

final-initial: change = 39.6 ± 21.7, p < 0.02
middle-initial: change = 37.8 ± 28.5, p < 0.05
final-middle: change = 0.4 ± 14.0, NS

TABLE IV
MAXIMUM VOLUNTARY VENTILATION (MVV) IN L/MIN. IN FEMALES

<table>
<thead>
<tr>
<th>Subject</th>
<th>Initial</th>
<th>Middle</th>
<th>Final</th>
<th>Predicted</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>139</td>
<td>142</td>
<td>134</td>
<td>102</td>
</tr>
<tr>
<td>20</td>
<td>91</td>
<td>133</td>
<td>122</td>
<td>101</td>
</tr>
<tr>
<td>21</td>
<td>94</td>
<td>105</td>
<td>95</td>
<td>82</td>
</tr>
<tr>
<td>22</td>
<td>112</td>
<td>124</td>
<td>116</td>
<td>88</td>
</tr>
<tr>
<td>23</td>
<td>122</td>
<td>149</td>
<td>133</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

final-initial: change = 8.4 ± 13.9, NS
middle-initial: change = 18.0 ± 15.5, NS
final-middle: change = 10.6 ± 3.3, p < 0.01

TABLE V
FREQUENCY OF BREATHING (f) AND TIDAL VOLUMES (V) OF MALE AND FEMALE SUBJECTS PERFORMING A MAXIMAL VENTILATORY MANEUVER (MVV)

A. Pattern of Males whose MVV improved (N = 8)

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Initial</th>
<th>Middle</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>V</td>
<td>f</td>
</tr>
<tr>
<td>27 ± 12*</td>
<td>4.2 ± 1.0</td>
<td>41 ± 14‡</td>
<td>3.9 ± 1.0</td>
</tr>
</tbody>
</table>

B. Pattern of Males whose MVV decreased (N = 4)

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Initial</th>
<th>Middle</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>39 ± 22</td>
<td>3.4 ± 1.2</td>
<td>15 ± 5</td>
<td>4.4 ± 1.0</td>
</tr>
</tbody>
</table>

C. Females’ MVV Pattern (N = 5)

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Initial</th>
<th>Middle</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>73 ± 41</td>
<td>1.0 ± 1.0</td>
<td>73 ± 50</td>
<td>2.2 ± 0.9</td>
</tr>
</tbody>
</table>

Values are mean ± SD of f (b/min) and V(L). MLV is in L/min.
‡ p < 0.01 comparing f of group A and B
* p < 0.01 comparing f of group A and C and B vs C

The V of females at all times were significantly less (p < 0.01) than those of males in groups A and B.

DISCUSSION

This study found that most individuals participating in a general exercise program improved both the strength and the endurance of the respiratory muscles. In 1976, Leith and Bradley first reported that respiratory muscles could be specifically trained in normal young persons. By performing static inspiratory and expiratory maneuvers at various percentages of the vital capacity range, they found that individuals increased their maximal inspiratory and expiratory pressures by approximately 55%. Using an inspiratory resistive breathing device, other au-

eight females exhibited a significant increase in P_{\text{Imax}} from the initial value. None of the other changes were statistically significant. It should be noted that, at the outset, most of the females were at or near their predicted P_{\text{Imax}} value (about 90 cm H_2O.)

Changes in P_{\text{Emax}} in the females are presented in Table II. Four females had a significant (p < 0.01) increase of final P_{\text{Emax}} compared to the initial value. The decrease of P_{\text{Emax}} shown by the other four females was not statistically significant (data not presented).

Five females increased their final MVV from the initial value (Table IV). The results, however, are difficult to interpret. Final-initial and middle-initial values were not statistically different, but final-middle values showed a significant decrease. It must be pointed out that, at the outset, every female with the exception of one, was way above her predicted MVV value. The decrease of final MVV from the initial value, shown by three females, was not statistically significant. The breathing frequency used during the MVV trials was very important. There was no difference in frequency between initial and middle trials, but frequency decreased in the final trial. In general the frequency of breathing was high and tidal volume significantly less in the female vs. male subjects (Table V).
thors have reported significant increases in $P_{\text{Imax}}$ in healthy individuals and in those with chronic obstructive pulmonary disease. Middle aged individuals participating in the present study underwent a general exercise program opposed to specific training of the respiratory muscles. Nonetheless, the male subjects showed an average increase of 20 cm H$_2$O in $P_{\text{Imax}}$ values and of 19 cm H$_2$O in $P_{\text{Emax}}$ values. Thus, by overall body exercise both inspiratory and expiratory muscles were equally trained. The females exhibited a different pattern of improvement. The magnitude of change of $P_{\text{Imax}}$ (20 cm H$_2$O) was greater than, but not significantly so, compared to the change of $P_{\text{Emax}}$ (13 cm H$_2$O). However, five of the eight females were initially at or near their predicted $P_{\text{Imax}}$ values, which probably accounts for the smaller increase observed in $P_{\text{Imax}}$ values.

Because normocapnic hypercapnic exercise is dynamic in nature, it is well suited for the development of respiratory muscle endurance. This type of exercise also trains the inspiratory and expiratory muscles, both of which are used during MVV maneuvers. Leith and Bradley reported a 14% increase of MVV in normal subjects who underwent endurance training of this type. In middle-aged men (43.0 + 2.4 yr.) who underwent endurance training, no significant changes in MVV were found; however, a 25% increase in maximum $O_2$ consumption, which is the primary measure of cardiorespiratory endurance, was reported. A similar result was reported for older individuals who endurance trained for twelve months.

In the present study, increases in inspiratory muscle strength of male subjects, as determined by $P_{\text{Imax}}$, paralleled improvements in MVV. No such pattern was seen in female subjects. Other researchers have found that specific resistive training of inspiratory muscles increases $P_{\text{Imax}}$ and greatly increases inspiratory muscle endurance, as measured by the length of time subjects could endure their initial $P_{\text{Imax}}$. Since MVV tests are sustained for only 12-15 seconds, the strength of the respiratory muscles in addition to their endurance is of great importance. Braun et al. found that in subjects with various myopathies respiratory muscle strength was linearly related to MVV%.

Freedom found that a given level of ventilation could be sustained longer with lower frequencies and that frequencies of breathing in the 15-second MVV were significantly higher than those in the 4-minute MVV. In his study, changes in MVV are significantly related to breathing frequency. Why would the five males whose MVV decreased from the initial value choose lower breathing frequencies and thus a more inefficient breathing pattern? Decreased drive to the respiratory center, increased airway resistance, and hypocapnia have been offered as explanations. Shephard suggested that drive to the respiratory center probably has a relatively minor effect on 15-second MVV maneuvers. Increased airway resistance in the males whose MVV decreased does not seem a likely explanation because mean predicted FEV$_1$ values averaged 91%. Since the subjects rebreathed air during the MVV maneuvers, hypocapnia did not occur. Moreover because both $P_{\text{Imax}}$ and $P_{\text{Emax}}$ improved in all males who showed a decreased MVV, we most likely should have constrained their breathing pattern to evaluate this point. It is of interest, however, that female subjects who showed an improved MVV always chose to breathe at a high frequency and lower tidal volume. Why female subjects adapted this pattern is not known.

In summary, this study has shown that normal middle-aged subjects can improve respiratory muscle strength as well as endurance by undergoing a general exercise program. Furthermore, in order to evaluate maximal voluntary ventilation accurately, a pattern of increased frequency of breathing and decreased tidal volume should be encouraged.

REFERENCES


(Continued on page 15)
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CONTRAINDICATIONS

Propranolol hydrochloride (INDERAL LA)* Proranolol is contraindicated in: 1) Advanced bradycardia; 2)2nd or 3rd degree atrioventricular block; 3) Reversibly impaired right ventricular function; 4) Congestive heart failure.

Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or decreased sensitivity to this or other sulfonamide-derived drugs.

WARNINGS

Propranolol hydrochloride (INDERAL LA)* CARDIAC FAILURE: Symptomatic and/or severe toxicity and death may occur following circulating function in patients with congestive heart failure, and its inhibition by beta-blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, it is not recommended that a beta blocker be withdrawn abruptly in the presence of known or suspected heart failure. These patients are usually well compensated, and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digoxin on heart muscle.

Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or decreased sensitivity to this or other sulfonamide-derived drugs.

IN PATIENTS WITH ANGINA PECTORIS: There have been reports of exacerbation of angina and, in some cases, myocardial infarction following abrupt discontinuation of propranolol therapy. Therefore, when discontinuation is desired, the drug dosage should be gradually reduced and the patient carefully monitored. In addition, when converting to propranolol, the physician should be aware that beta adrenergic blockade may mask the usual precursors of ischemic pain, and may mask the appearance of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms. Propranolol should be discontinued gradually and propranolol dosage should be reduced to achieve blood levels equivalent to 10 mg propranolol per day.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controverted. Only in patients in whom propranolol has been known to influence recovery has the drug been withdrawn preoperatively.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD, IN GENERAL, NOT RECEIVE BETA BLOCKING AGENTS. However, since many patients with chronic bronchitis and emphysema do not have beta-adrenergic blocking agents, it may be more difficult to adjust the dosage of these agents. Hyperglycemic attacks may be accompanied by fever and hypothermia; compensatory blood pressure response is not found.

Diabetes and Hypoglycemia: Beta-adrenergic blockade may prevent the appearance of certain precipitating symptoms (pulse rate and pressure changes) of acute hyperglycemia in labile diabetics. In these patients, it may be more difficult to adjust the dosage of insulin. Hypoglycemic attacks may be accompanied by fever and hypothermia; compensatory blood pressure response is not found.

Hydrochlorothiazide: Thioureas should be used with caution in severe renal disease. In patients with impaired renal function, cumulative effects of the drug may be prolonged.

Thiazides should also be used with caution in patients with impaired hepatic function or protein binding. The rate of removal of the drug and its metabolites is decreased in patients with liver disease, and minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

The concomitant use of thiazides or diuretics may potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic-blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma. Thiazides should be avoided in the presence of exacerbation of systemic lupus erythematosus has been reported.

PRECAUTIONS

Propranolol hydrochloride (INDERAL LA)* General: Propranolol should be used with caution in patients with impaired hepatic or renal function. Propranolol is not indicated for the treatment of hypertension in patients with significant hyperthyroidism.

Beta-adrenergic receptor blockade can cause reduction of intraventricular pressure. Patients should be monitored for possible development of the glaucoma screening test. Withdrawal may lead to a return of increased intraventricular pressure. Patients should be monitored for possible development of the glaucoma screening test. Withdrawal may lead to a return of increased intraventricular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea nitrogen levels in patients with severe heart failure may occur after the administration of propranolol hydrochloride. It is not known if these elevated levels are caused by the glaucoma screening test. Withdrawal may lead to a return of increased intraventricular pressure. Patients should be monitored for possible development of the glaucoma screening test. Withdrawal may lead to a return of increased intraventricular pressure.

DIAGNOSIS INTERACTIONS: Patients receiving catecholamine-depleting drugs, such as reserpine, should be closely observed if propranolol is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous tone, which may result in hypotension, marked bradycardia, vertigo, syncope attacks, or orthostatic hypotension.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate the effects of toxicologic and carcinogenic potential. In 18-month studies, propranolol, both in rats and dogs, showed no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any increased incidence of congenital abnormalities in the offspring.

PREGNANCY: Pregnancy Category C: Propranolol has been shown to be embryotoxic in animals. It should not be used during pregnancy at doses equivalent to human dose. There are no adequate and well-controlled studies in pregnant women. Propranolol should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: Propranolol is excreted in human milk. Caution should be exercised when propranolol is administered to nursing mothers.

Pediatric Use: Safety and effectiveness in children have not been established.

INTERACTIONS

Propranolol hydrochloride (INDERAL LA)*: Other drugs that may potentiate hypotension include: Digitalis (eg, increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements, such as foods with a high potassium content.

Any chloride deficit is generally mild and usually does not require specific treatment, except under extraordinary circumstances (as in liver or renal disease). Diuretic hypotension may be prevented or corrected in the presence of hypokalemia.

Thiazide diuretics may increase the effects of other antihypertensive agents, and some drugs may cause potassium withdrawal. The potassium level should be monitored in patients receiving both of these drugs.

Beta-adrenergic blocking agents may augment the hypotensive effect of epinephrine and other catecholamines.

Propranolol hydrochloride (INDERAL LA)*: Propranolol is contraindicated in: 1) Advanced bradycardia; 2)2nd or 3rd degree atrioventricular block; 3) Reversibly impaired right ventricular function; 4) Congestive heart failure.

Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or decreased sensitivity to this or other sulfonamide-derived drugs.

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Best Wishes For A Happy Thanksgiving

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The AMA’s Reach For Youth

Several months ago, while describing the events of the annual meeting of the AMA in Chicago, I made reference to the exposure of the young physicians in that large assembly and the effort that was being made by the governing body to hear more from these folks and provide more opportunity for them to air their concerns. This concern for underpinning the AMA with a sound and sturdy base from the rapidly increasing youthful segment of medicine surfaced with the formation of an ad hoc Committee on Young Physicians by the AMA Board of Trustees in September 1984. The committee was charged with studying the “special concerns of young physicians and (to) determine ways in which organized medicine could be more responsive to such concerns. The Committee was also requested to provide specific recommendations which would increase the involvement of young physicians at all levels of organized medicine.” The definition of a young physician for this purpose is an individual who is under 40 years of age or within the first five years of professional employment.

Two years of study culminated in the presentation of Report FF of the Board of Trustees to the House of Delegates this past June along with Report B from the Council on Constitution and Bylaws. Broad support for the recommendations presented was evident, and as a result, the House created the new AMA Young Physicians Section which will convene its first meeting this December in Las Vegas just prior to the opening of the Interim House of Delegates of the AMA.

I have discovered that there is a certain level of fascination for me in perusing the various reports that arise out of the deliberations of the Trustees. For anyone who has an interest in a specific socioeconomic topic as relates to health care, you are very apt to find an in-depth exhaustive and factual analysis incorporated in one of these reports . . . though one may not necessarily subscribe to the conclusions at all times. Report FF establishes a justification for this new section, noting that: “1) young physicians represent a sizeable and growing constituency of organized medicine (37% of active SDSMA members currently are under 40!, and 41% of licensed physicians in S.D. fall into this category). 2) Due to a changing environment, young physicians have a unique set of needs and concerns, many of which are different from more established physicians. (Note the obvious problems of indebtedness, trend to employee status rather than solo or small group practice on entering the practice years, high costs of establishing practice locations and obtaining professional liability insurance, overall lowering of physicians incomes, increasing numbers of female physicians . . . not to imply that the latter is classified as a problem!! but to highlight the difficulty in assessing the impact of a given physician: patient ratio in conventional work units.) 3) Most young physicians lack a sense of identity with the AMA, but many also desire more active involvement in organized medicine and currently are underrepresented in positions of leadership throughout the profession. 4) Although young physicians share values and concerns in common with all physicians, their unique position in a changing environment enables them to contribute a different perspective to policy discussions within organized medicine.”

There seems little question that both state and national organizations will be strengthened by movement in this direction. SDSMA has been quick to enlist the young physician who makes his interest known in the affairs of the organization. Communication with your district leadership will help make the Association more responsive to your needs and desires. And with that, a Happy Thanksgiving to you all!

William O. Rossing, M.D., President, South Dakota State Medical Association
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Egon Dzintars, M.D., a South Dakota native, has recently begun his family practice in Sturgis. He attended the University of Utah for two years before receiving his B.S. degree from USD School of Medicine and his M.D. from Ohio State University Medical School in 1983. He completed an internship in Kalamazoo, Michigan in 1984 and a family practice residency in Kalamazoo in 1986.

Before beginning his practice at the new Sturgis Medical Center, he participated in a high-risk obstetrics rotation at Los Angeles Harbor General Hospital and took a course in laparoscopy and tubal ligations.

Dr. Dzintars is happy to be back in the Black Hills region where he grew up. He and his wife, Rita, have one daughter and another child due in November.

* * * *

David Ellerbusch, M.D., recently began his practice in family medicine in Aberdeen where he grew up. He attended Northern State College for four years, receiving his degree in 1979 and then received his M.D. at USD School of Medicine in 1983. He completed his internship at Sioux Valley Hospital in Sioux Falls and his family practice residency in 1986 in Sioux Falls.

Dr. Ellerbusch and his wife, Caron, also of Aberdeen, have two children.

* * * *

The Seventh District Medical Society and Auxiliary received national attention last year when they sponsored the Kickoff of the United Way campaign drive. As a result, Dr. Richard Friess, Sioux Falls and the 1985 Chairman of the Sioux Empire United Way, was invited to attend United Way of America’s Volunteer Leaders Conference held in Cincinnati this summer, to explain how they increased their leadership giving program 81%. The Seventh District Medical Society and Auxiliary have again sponsored the Kickoff for the 1986 campaign drive.

* * * *

Marc Rhoades, M.D., Yankton, recently participated in the annual Tinman Triathlon in Menomonie, Wisconsin, capturing first place in the 45-49 year age division. Over 260 athletes competed in the grueling event, which consists of a one-mile swim, 55-mile bike and 13.2-mile run.

Dr. Roger L. Carter, a native of Hoven, has recently joined the staff of Bartron Clinic in Watertown. Dr. Carter is a general surgeon with emphasis on vascular and thoracic surgery. He received his B.S. and M.D. degrees at USD School of Medicine. He completed a 5-year surgical residency in Wichita, Kansas in 1986. He is a member of the AMA and a candidate member of the Fellowship of the American College of Surgeons.

Dr. Carter and his wife, Shirley, have one son.

* * * *

Bernard Linn, M.D., recently began his internal medicine practice in Pierre. He was born in Maryland but grew up in Pierre. He received his B.S. in 1979 and his M.D. in 1983 at USD School of Medicine. He completed a 3-year internal medicine residency at Marshfield Clinic, Marshfield, Wisconsin.

Dr. Linn and his wife, Julie, have one daughter.

* * * *

Dr. Kenneth Peterson, a native of South Dakota, has begun his practice of family medicine in Watertown. He received his M.D. at USD School of Medicine in 1980 and his family practice residency training at Womack Hospital, Fort Bragg, North Carolina from 1980-1983. He was transferred to Wildflecker, Germany where he served as clinic commander for a year. He then transferred to Wurzburg, Germany and was on the staff at Wurzburg Hospital until now. He is certified by the American Board of Family Practice.

(Continued on next page)
The University of South Dakota School of Medicine announced that Robert C. Talley, M.D., Sioux Falls, Freeman Professor and Chairman of the Department of Internal Medicine, has received the Annual Teaching Award from the American Heart Association Council of Clinical Cardiology. Dr. Talley received the award in recognition for his outstanding record of instruction and education in diseases of the cardiovascular system. He has been the Chairman of the Department of Internal Medicine at the School of Medicine since 1975.

* * * *

Mitchell has a new internal medicine specialist, Dr. John R. Fritz. He is a South Dakota native, born in Watertown and raised in Brookings. He received his B.S. degree at the South Dakota State University in 1979 and his M.D. at USD School of Medicine in 1981. He completed his internship and internal medicine residency at the University of Iowa in Des Moines in 1986.

Dr. Fritz and his wife, Linda, are parents of two children.

* * * *

Drs. James Ryan and David Bean, both of Sioux Falls and Howard Saylor, Huron, recently spoke on a panel of experts in dealing with the problems of the elderly during the 12th annual Senior Citizens Seminar held in Huron.

* * * *

Jean Gerber, M.D., general surgeon, has recently begun her practice in Aberdeen. She was born in Chicago and raised in Aberdeen. She received her B.S. degree at USD School of Medicine in 1979 and her M.D. at Northwestern University Medical School in Chicago in 1981. She completed 5-years of a general surgery residency at Northwestern University-McGraw Medical Center in Chicago.

She has joined her father, Dr. Bernard C. Gerber, with Gerber Professional Association.

* * * *

Dr. Robert Preston, internal medicine, has recently began his practice in Hot Springs. Dr. Preston was born in Iowa and grew-up in Hermosa. He received his B.S. from Kansas Newman College in Wichita in 1978 and his M.D. in 1983 from USD School of Medicine. He completed a one-year residency and a two-year internal medicine residency in Salt Lake City, Utah.

Dr. Preston and his wife, Krista, have two children.

Thomas H. Olson, M.D., Vermillion, announced that the Olson Medical Clinic is planning a monthly specialty clinic in pulmonary medicine. The first clinic was under the direction of Dr. David Rossing, who practices pulmonary medicine in Sioux Falls.

* * * *

Drs. Curtis and Carole Buchholz recently began their respective practices in Huron after four years at Elmendorf Air Force Base, Anchorage, Alaska.

Dr. Carole Buchholz, a native of Dell Rapids, is a board certified pediatrician and also a member of the American Academy of Pediatrics. She attended Sioux Falls College for 3-years and then received her B.S. degree in 1975 and her M.D. in 1979 from USD School of Medicine. She completed her internship and pediatric residency in Gainesville, Florida. She had been on the pediatrics staff at Elmendorf Air Force Base since 1982.

Dr. Curtis Buchholz, a native of Mitchell, is a board certified pathologist and a member of both the College of American Pathology and American Society of Clinical Pathology. He received his B.S. degree from Sioux Falls College in 1974 and his M.D. from USD School of Medicine in 1978. He completed his internship in Madison, Wisconsin and his pathology residency and a Fellowship in developmental pathology in Gainesville, Florida. He had been on the pathology staff as Chief of Anatomic Pathology at Elmendorf Air Force Base since 1982.

The Buchholzs have two children.

CORRECTION:

The following credit line was inadvertently omitted from the "Professional Liability Briefs" section of the October 1986 issue of this journal.

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The 100 units will be placed on a selective basis only to meet our needs. In cases of overlapping, we will return the check. Fill out the coupon below and send it along with your $3,500 check.

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Anesthesia for Cesarean Section
Edward F. Anderson, M.D.*

ABSTRACT
The Cesarean section rate has increased during the past ten to fifteen years and has been associated with a decline in perinatal mortality. Cesarean sections may be performed under general endotracheal or regional anesthesia. The techniques, advantages, disadvantages, and possible problems of general, spinal, and epidural anesthesia are discussed. The technique to be chosen should be that which is safest and most comfortable for the mother, provides the least amount of depression to the newborn, and allows the most optimal working conditions for the obstetrician. In the average patient with good judgment and appropriate technique, either regional or general endotracheal anesthesia may be administered. When there is need for an emergency Cesarean section because the mother and/or fetus are in jeopardy, general endotracheal anesthesia should be administered. It is important when administering regional anesthesia to allow appropriate time for infusion of fluids, completion of the block, and a sensory level to develop. The choice of intraoperative monitors is determined by the condition and needs of the parturient and fetus. Postoperative monitoring should be consistent with that after other major surgery.

During the past ten to fifteen years, the Cesarean section rate in the United States has increased. In 1970, approximately 195,000 Cesarean sections were performed in U.S. hospitals (an incidence of about 5.5%). In 1978, on the other hand, there were 510,000 women who had abdominal deliveries accounting for 15.2% of hospital deliveries. In some hospitals, especially tertiary care facilities, the incidence of Cesarean section has risen as high as 25%.1,2 Indications for a Cesarean section are numerous and are listed in Table I. The National Institute of Child Health and Human Developments consensus development task force on Cesarean section found the greatest indicators for Cesarean section to be repeat Cesarean section, dystocia, bridge presentation, and fetal distress.3 Two major factors accounting for the increased section rate include the widespread use of electronic and biochemical fetal monitoring prior to and during labor and the acceptance that serious trauma to the baby can be eliminated by avoiding potentially difficult mid-forceps or vaginal breech deliveries. An important point to note is that the dramatic increase in Cesarean section rate has been mirrored over the same years by an equally dramatic decline in perinatal mortality. This article will discuss the anesthetic techniques that are available for Cesarean sections.2,4

Anesthesia for a Cesarean section can be divided into general anesthesia and regional anesthesia. Regional anesthesia would consist of spinal anesthesia, epidural anesthesia, and local anesthesia. The choice of anesthesia depends upon the reason for the operation, the degree of urgency, the desires of the patient, and the skills of the anesthesiologist. It is important to note that there is no one ideal method of anesthesia for a Cesarean section. The technique to be chosen must be that which is safest and most comfortable for the mother, provides the least amount of depression to the newborn, and allows the most optimal working conditions for the obstetrician. The technique, advantages, and disadvantages of gen-

TABLE I
INDICATIONS FOR CESAREAN SECTIONS:

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<th>Indication</th>
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<tr>
<td>Previous Cesarean section</td>
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<tr>
<td>Cephalo-pelvic disproportion</td>
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<td>Failure to progress</td>
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<tr>
<td>Failure of Induction</td>
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<tr>
<td>Malpresentation</td>
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<td>Breech</td>
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<td>Failed forceps</td>
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<td>Hemorrhage</td>
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<td>Toxemia</td>
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<td>Chorioamnionitis</td>
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<td>Herpes genitalia</td>
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<td>Fetal distress</td>
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<td>Chronic utero-placental insufficiency</td>
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<td>Rh isoimmunization</td>
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<td>Prolapsed cord</td>
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<td>Hypertonic uterus</td>
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eral, spinal and epidural anesthesia will be discussed in this article.

When considering the immediate preoperative management of Cesarean section patients, premedication generally is not given except for belladonna alkaloids such as atropine 0.4-0.6 mg. or glycopyrrolate 0.2-0.3 mg. I.M. These increase the tone of the gastroesophageal sphincter, decrease secretions and minimize nausea. Neither atropine nor glycopyrrolate (which does not cross the placental barrier) harms the fetus.● Narcotics and sedatives which do cross the placental barrier should be unnecessary if the procedure is well explained and if there is good rapport with the patient and family.

In some hospitals, especially tertiary care facilities, the incidence of Cesarean section has risen as high as 25%.

The patient having a Cesarean section is often a prime candidate for aspiration and pneumonitis. Reasons for this include: mechanical obstruction of the pylorus by the gravid uterus; decrease in gastric and intestinal motility due to pain, fever and narcotics; an increase in gastric acidity secondary to increased gastrin levels; and an incompetent gastroesophageal sphincter. Routine administration of antacids prior to induction significantly raises gastric pH. It should be noted, however, that use of antacids will not diminish the risk of aspiration of particulate matter. The aspiration of antacids containing simethicone can cause a chemical pneumonitis. An acceptable alternative is a non-particulate antacid such as 0.3 mol/liter sodium citrate (Bicitra). One usually mixes 15 ml. of Bicitra with 15 ml. of water and administers this to the patient approximately 30 minutes prior to the anticipated induction of anesthesia.● To stimulate gastric emptying, increase lower esophageal sphincter tone, and prevent nausea by a central effect, one can administer 10-20 mg. metoclopramide hydrochloride (Reglan) I.V. or I.M. 15-30 minutes prior to the induction of anesthesia.● In addition, cimetidine (Tagamet) 300 mg. can be given orally the night prior to surgery and/or I.M. 90 minutes prior to anesthesia.

While the patient is lying on the operating table, left uterine displacement should be performed to minimize the effects of the uterine impingement on the inferior vena cava and aorta (which results in a decrease in venous return to the heart, a decrease in cardiac output, and a decrease in uterine blood flow resulting in fetal asphyxia). Crawford, in 1972, found that the length of anesthesia time made little difference in the Apgar scores of infants whose mothers were managed with left uterine displacement whereas the scores were decreased as anesthesia time increased in mothers who did not receive left uterine displacement.● Continuation of the fetal monitoring should be considered on the operating table if there is any preexisting evidence of fetal distress. In the presence of accompanying severe medical problems, the insertion of an arterial line, central venous pressure line, or flow directed pulmonary artery catheter may be necessary.

The use of general anesthesia for Cesarean section implies the use of an oral endotracheal tube. General anesthesia for Cesarean section has the advantages of: a more rapid induction; less hypotension and cardiovascular instability than with regional anesthesia; better control of the airway and ventilation; being asleep and unaware which many patients prefer; total pain relief; optimal operating conditions; and minimal drug depression in the fetus when anesthesia is properly administered. The disadvantages of general anesthesia are: the inability of patients who wish to experience the birth to do so; the inability of anesthesia personnel to watch the father and administer aid to him should he require it; slight risk of drug depression in the fetus; and the possibility of aspiration especially in the difficult or failed intubation (which may also be present with regional anesthesia). General anesthesia is specifically indicated in the presence of hypovolemia or active hemorrhage, severe acute fetal distress requiring immediate Cesarean section, patient refusal of regional anesthesia, inability of the patient to cooperate during the regional block or surgical procedure, the presence of certain forms of heart disease that do not tolerate hypotension (for example, aortic or mitral stenosis), the presence of inexperienced anesthesia personnel in providing regional anesthesia, and the presence of specific contraindications to regional anesthesia.●

The choice of anesthesia depends upon the reason for the operation, the degree of urgency, the desires of the patient and the skills of the anesthesiologist.

Since oxygen consumption at term is 20% higher than in nonpregnant patients, patients should be preoxygenated before the induction of general anesthesia for their Cesarean sections. Since at term there is a decrease in functional residual capacity of 20% due to upward displacement of the diaphragm by the gravid uterus, the parturient is more likely to become hypoxic during induction of anesthesia than a nonpregnant patient. During a one minute period of apnea a parturient will sustain a
150 torr reduction in \( P_{\text{O}_2} \) compared to a 50 torr reduction in nonpregnant women. Preoxygenation, therefore, is mandatory before induction of anesthesia. Previously, it had been thought that five minutes of oxygen delivery was necessary prior to induction, however, recent studies in nonpregnant patients indicate that only four or five deep breaths may be necessary.\(^1\),\(^10\)

Pretreatment with a small dose of a nondepolarizing muscle relaxant such as d-tubocurarine 3 mg. I.V. or pancuronium bromide 0.5-1.0 mg. I.V. is done to inhibit succinylcholine-induced muscle fasciculations with secondary increase in intragastric pressure.\(^11\) Sodium thiopental (Pentathol) 3-4 mg./kg. I.V. or ketamine 1 mg./kg. I.V. (when thiopental is contraindicated) can be used for induction. Both have minimal effects on the fetus.\(^12\) It is very important during the induction of general anesthesia to apply cricoid pressure immediately after thiopental or ketamine injection to prevent passive gastric regurgitation. This pressure should not be released until the endotracheal tube has been inserted within the larynx with the cuff inflated.\(^13\)

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The technique to be chosen must be that which is safest and most comfortable for the mother, provides the least amount of depression to the newborn and allows the most optimal working conditions for the obstetrician.

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Once the patient is asleep succinylcholine should be administered intravenously in a dose of 1-2 mg./kg. for rapid patient paralysis to facilitate endotracheal intubation. The oral endotracheal tube should then be placed and the cuff inflated. It is important to note that the incidence of difficult or delayed intubation is approximately 5%. Bilateral breath sounds should be checked immediately after intubation to verify proper endotracheal tube placement before the surgeon makes the incision. A 50-50 mixture of nitrous oxide in oxygen is administered and is safe for both mother and fetus. This should continue until shortly before delivery of the infant at which time 100% oxygen is then administered.\(^14\)

If necessary, prior to delivery either halothane (Fluothane), enflurane (Ethrane), or isoflurane (Forane) may be given in light concentrations (0.25-0.5%) for additional analgesia. These concentrations will not result in fetal depression or uterine bleeding.\(^15\),\(^16\) Succinylcholine, d-tubocurarine, or pancuronium bromide may be used for further muscle relaxation. Pregnant patients with a pseudocholinesterase deficiency will be markedly sensitive to succinylcholine, and those receiving I.V. magnesium sulfate will be very sensitive to the nondepolarizing muscle relaxants. Therefore, after injection of an intubating dose of succinylcholine, return of neuromuscular function should be assured before additional muscle relaxant is administered.\(^17\)

Gallamine (Flaxedil), a nondepolarizing muscle relaxant which crosses the placenta, should not be used. Once the infant is delivered and the umbilical cord is clamped, a deeper level of anesthesia may be administered with a narcotic (such as fentanyl) or one of the above halogenated inhalation anesthetics to provide additional analgesia. Oxytocin is then administered, usually in an infusion, to minimize the development of hypotension.\(^18\) When the surgery is complete, the patient should be awake, responsive to oral commands, breathing well with good vital capacity, and recovered from any effects of the muscle relaxant to minimize the occurrence of aspiration at extubation.

It is important to note that Cesarean section patients should be monitored during their recovery period by trained personnel as would any patient having major surgery. Two points regarding the use of inhalation anesthetic agents should be made. The first is the fact that anesthetic requirements for halogenated agents are decreased during pregnancy. The minimal alveolar concentrations necessary for surgery with halothane, isoflurane, or methoxyflurane are 25-40% less in pregnancy than at term. The reduced maternal functional residual capacity not only results in a more rapid development of hypoxia, but also a faster rate of equilibration between inspired alveolar and brain gas tensions causing a more rapid rate of induction.\(^19\) As a result, overdosage may easily occur. The second point to be made is that concentrations recommended for use (50% of the minimal alveolar concentration) are less than those resulting in uterine muscle relaxation with subsequent bleeding.\(^16\)

The use of regional (epidural or spinal) anesthesia for Cesarean section: allows the mother to be awake for delivery of her infant(s); minimizes the problem of maternal aspiration; does not require intubation unless a total block occurs; avoids the possibility of neonatal drug depression; and, will more likely allow the father to be in the delivery room to also participate in the delivery. Should conditions be such that the presence of the father in the delivery room would be detrimental to the care of the patient, he should be asked to leave. The disadvantages of regional anesthesia include: an awake and aware patient (which many prefer not to be); the presence of an inadequate block; hypotension (which occurs in 25-75% of spinal or epidural procedures); the possibility of a total spinal anesthetic with resulting hypotension and inability to ventilate necessitating endotracheal intubation; the possibil-
ity of local anesthetic toxicity secondary to inadvertent intravascular injection; the possibility of a spinal headache; and the rare possibility of transient of permanent neurologic sequelae. Definite contraindications to regional anesthesia include: hypovolemia, hemorrhage, severe acute fetal distress, allergy to local anesthetics, presence of a neuropathy or muscular disease, infection at the site, coagulopathy, previous lumbar surgery, obesity (making the block difficult to impossible), and patient refusal.1,9

The patient having a Cesarean section is often a prime candidate for aspiration and pneumonitis.

Before the regional anesthetic is administered, a good intravenous should be placed, preferably a 16 gauge indwelling catheter, and one to two liters of a nonglucose containing balanced salt solution administered to prevent hypotension.20 Rapid I.V. administration of dextrose may produce hypoglycemia in the newborn.21 In patients who are diabetic two intravenous lines may be used, the first may be used for drugs and preloading solution, and the second for careful titration of glucose. A subarachnoid block has the advantage of being easily administered with rapid and reliable production of anesthesia. The continuous epidural technique is thought to result in less hypotension and allow additional injections should these be necessary. The onset of operating anesthesia with an epidural is approximately four times that of a spinal with the same medication. Needless to say, this technique requires a patient surgeon. Except for anesthesia training programs, spinal anesthesia appears to be the preferred technique nationwide for regional anesthesia in Cesarean sections.1

. . . on the operating table, left uterine displacement should be performed to minimize the effects of the uterine impingement on the inferior vena cava and aorta.

Before administering regional anesthesia, one should also ascertain that oxygen delivery, emergency airway equipment (including a laryngoscope and endotracheal tubes), thiopental or diazepam for possible convulsions, ephedrine for treatment of hypotension, and suction are available. Both spinal and epidural anesthesia may be administered in the lateral or sitting position. Appropriate asepsis should be obtained with betadine or other solution to prevent the occurrence of aseptic meningitis. In patients receiving spinal anesthesia, the smallest needle possible should be used. Generally, a 25 gauge is preferred since this is small enough to minimize the occurrence of spinal headache, yet large enough to allow free-flowing cerebrospinal fluid to occur easily. On the average a hyperbaric solution of 5-10 mg. of tetracaine or 50-75 mg. of lidocaine is given to patients depending upon their height.

When utilizing epidural anesthesia the drugs most commonly used include 0.5% bupivacaine without epinephrine or 3% 2-chloroprocaine (Nesacaine). When using the epidural technique, it is very important to use a 2 ml. test dose (1.5-2% lidocaine or 0.75% bupivacaine with 0.015 mg. ephedrine) before injecting the full amount to ascertain that there are no signs either of a systemic reaction due to inadvertent intravenous injection or spinal anesthesia due to inadvertent dural puncture. If there is no change in heart rate or level of sensation after three minutes, subsequent increments of 5 ml. of local anesthetic should be injected every 30 seconds until a total of 20-25 ml.22 After the initial 20-25 ml. injection to distend the epidural space, the epidural catheter should be inserted. Additional drug may be injected as necessary through the catheter to obtain a sensory blockade to the 4th thoracic dermatome. The patient should be placed with left uterine displacement at a slight 10 degree trendelenburg tilt. Oxygen should be given by plastic face mask, and ephedrine (the only vasopressor which increases both maternal blood pressure and uterine blood flow) may be administered either I.M. or I.V. once the block is completed.23 Arterial blood pressure should be obtained every minute for 20 minutes and then every five minutes for the duration of the block.

If the systolic blood pressure falls by 30% or is less than 100 mm Hg., the intravenous fluids should be infused at a greater rate and 10-15 mg. ephedrine should be given I.V.24 If the patient is nauseated additional atropine should be given in a dose of 0.3 mg. I.V. as well. Nitrous oxide may be added incrementally through a mask if the block is not complete or is spotty. Additional local anesthesia may be necessary in the incision again for inadequate block. Should the analgesia continue to be inadequate, if there is no contraindication, one should proceed to general endotracheal anesthesia. Once the infant is delivered, supplementation may be given for sedation or pain relief as necessary with narcotic...
or other medications. More recently the use of preservative free morphine has been suggested in regional anesthesia for pain relief postdelivery. The preservative-free morphine can be injected initially into the spinal fluid or subsequently into the epidural catheter after delivery of the infant. If this technique is used, it is imperative to monitor vital signs in a recovery room or intensive care setting for 24 hours.

The use of general anesthesia for Cesarean section implies the use of an oral endotracheal tube.

The choice of local anesthetics for epidural anesthesia is very important. In the 1960's and 1970's, lidocaine (Xylocaine) and mepivacaine (Carbocaine) were the agents of choice. In the mid-1970's, 2-chloroprocaine (Nesacaine) and bupivacaine (Marcaine) gained immense popularity in epidural anesthesia. Chloroprocaine (an ester) is quickly metabolized by plasma cholinesterase and has a half life of 21 seconds in maternal blood. If an inadvertent intravascular injection occurred, less effects would be seen in the mother, and there would be minimal placental transmission. Bupivacaine and etidocaine (amides) are metabolized in the liver, are highly protein bound, rarely cross the placenta, and provide good pain relief with little motor impairment. During the past few years, 2-chloroprocaine has been associated with prolonged neurologic damage if inadvertently injected into the spinal fluid. The antioxidant in 2-chloroprocaine, sodium bisulfite, has been implicated as being responsible for the neurologic deficit. The use of bupivacaine, especially a 0.75% concentration, has been associated with cardiovascular depression and unresuscitable cardiac arrest at blood levels usually toxic only to the central nervous system. Since there remains the question whether bupivacaine is more depressant to the cardiovascular system, the use of 0.75% concentration has been prohibited in obstetrics.

Bilateral breath sounds should be checked immediately after intubation to verify proper endotracheal tube placement before the surgeon makes the incision.

Schneider and Levinson feel that between 12 and 14% of all patients receiving regional anesthesia for a Cesarean section will require supplementary analgesia before birth of the baby. It is important to note that engorgement of the epidural venous plexus during late pregnancy results in a smaller subarachnoid and epidural space. Consequently, the dose required to achieve a given level with spinal anesthesia is approximately 50% of the dose required for nonpregnant women. With epidural anesthesia a similar dose requirement reduction has also been reported. One of the most troublesome and annoying complications with spinal and possibly epidural anesthesia is the postdural puncture headache. The incidence directly increases with increasing needle size. Inadvertent dural puncture associated with epidural anesthesia occurs in approximately 3% of patients and when it occurs, should be converted to a spinal anesthetic technique. The use of a 17 gauge needle in epidurals (which is necessary for catheter placement) will result in 80% of patients developing a postdural puncture headache should puncture occur. Conservative therapy consists of bedrest, analgesics, hydration, and, if necessary, a tight abdominal binder to increase epidural pressure and decrease the leak of cerebrospinal fluid. Fifty percent of these headaches will abate within four days. If use of conservative therapy does not result in relief of the headache, an epidural blood patch may be administered, especially if the patient is due to go home. Approximately 95% of patients will experience immediate relief when they receive an epidural blood patch.

Cesarean section patients should be monitored during their recovery period by trained personnel as would any patient having major surgery.

The condition of the newborn should be discussed in regard to regional versus general anesthesia. Virginia Apgar was the first to point out that babies were more vigorous following Cesarean section under spinal anesthesia than under general endotracheal anesthesia. Schneider and Levinson reported that after general anesthesia, despite a slightly increased incidence of depressed newborns at one minute, there was no difference in Apgar scores by five minutes. Furthermore, they found that babies delivered shortly after the induction of general anesthesia were as vigorous as those born with regional anesthesia and that neonatal depression after general anesthesia was related to the duration of anesthesia rather than asphyxia. If, however, the induction to delivery interval exceeds 15 minutes, fetal accumulation of nitrous oxide during general anesthesia will depress Apgar scores. Other data indicates that the uterine incision to delivery time, regardless of the anesthetic technique, is just as important and will result in depressed neonatal Apgar scores with acidosis and hypoxemia in the fetus if it exceeds three minutes. This is probably due to the effects of uterine manipulation on aorta-caval
The uterine incision to delivery time will result in depressed neonatal Apgar scores if it exceeds three minutes.

Occasionally, sudden, unexpected complications occur during late pregnancy or labor which may adversely affect the mother or fetus. This can result in a need for an emergency Cesarean section. Examples include massive third trimester bleeding, prolapsed umbilical cord, or severe fetal distress. When there is need for an emergency Cesarean section and the mother or fetus is in immediate jeopardy, Cesarean section should not be delayed in order to establish an effective sensory block with a regional anesthetic technique. Other urgent situations in which neither the mother nor fetus is in immediate danger, may be delayed somewhat in order to establish an effective sensory level with a regional technique. Examples may include repeat Cesarean section in early labor, failure of induction, failure to progress, failed forceps, chorioamnionitis, and malpresentation. In these situations either regional or general anesthesia may be administered. In conclusion, the indications, contraindications, and techniques of regional and general anesthesia as well as treatment of some of the problems that may occur have been discussed. Appropriate preoperative evaluation of these patients should determine the choice and management of the anesthesia. When good judgment is used and the technique is appropriately done, there is little difference between regional and general anesthesia as far as the mother or fetus is concerned. It is important when administering regional anesthesia to allow appropriate time for infusion of fluids, completion of the block, and a sensory level to develop. The use of general anesthesia requires an endotracheal tube. A rare situation may occur in which both regional and general anes-

REFERENCES


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Recently I had the opportunity to hear President Napoleon Duarte of El Salvador speak to the University of Notre Dame graduating class. As we approached the arena in which the ceremony was held, we passed a mob of dissidents waving their signs while angrily chanting slogans. Even though security was tight, and admission was by formal invitation, two of the demonstrators managed to enter unnoticed. Embarrassing insults were shouted from the balcony, interrupting President Duarte’s speech before the police managed to physically remove them. A president of another country was verbally insulted in the school in which he had graduated. I felt embarrassed.

During the Thanksgiving season, I invite you to reflect with me the significance of this incident as it relates to medicine.

Those demonstrators were committed to their beliefs and ideals, and were zealously working to achieve their perceptions of needed protest and positive change. President Duarte likewise was committed to a cause beyond himself, and deserved the respect of his office. Is it possible that an avenue of understanding and compromise might be possible if each really listened to the other? As an observer, I wanted to hear the message of both.

Physicians are committed men and women. They are committed to a life of service to others through the use of their medical skills and knowledge, but isn’t the government equally committed? Washing-
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SOUTH DAKOTA
The Council of the South Dakota State Medical Association met on Friday, September 26. The following items of business transpired at that time.

1. MEMBER DIRECTORY. In the 1987-88 member directory physicians belonging to the AMA will be designated as such.

2. PUBLIC RELATIONS. The Association will purchase a one-half hour video entitled “Preserving Tradition-Embracing Change” for use by service clubs. This is to promote understanding and to improve public relations and can be used by district societies and individual physicians.

3. FIVE-YEAR PROGRAM. The Commission on Internal Affairs, Communications and Liaison has been charged with drafting a five-year program to improve and promote medicine’s image.

4. ANNUAL PHYSICALS FOR WOMEN. The Council voted not to endorse a resolution calling for annual physical exams, including pelvic exams and pap tests for women, which was submitted by the New Mexico Medical Society.

5. ANNUAL MEETING PROGRAM. The 1987 annual meeting scientific program will be “Transplantation for the ’80’s and Beyond.”

6. DIABETES EDUCATION GRANT. The Center for Disease Control has awarded a $97,000 grant to the South Dakota Health Department for diabetes education in the state. The Commission on Medical Service expressed their concern and hope that the grant would be used primarily for direct patient care, particularly for the Indian population, with a minimum expenditure for administrative purposes. The Council concurred with this recommendation.

7. USDSM AND RESIDENCY PROGRAM FUNDING. The Council endorsed the Family Practice Center residency program and their attempt to obtain increased state funding. The Council also took action to support increased funding for all residency programs and for the USD School of Medicine.

8. HONORARY LIFE MEMBERS. Walter Patt, M.D., formerly of Brookings; Jose Villa, M.D., Freeman; Bill Church, M.D., Sioux Falls; H. O. Kittelson, M.D., Sioux Falls; E. H. Collins, M.D., Gettysburg; and Visvaldis Janavs, M.D., Milbank, were elected to honorary life membership in the State Medical Association.

9. SODAPAC BOARD OF DIRECTORS. James Jackson, M.D. and Marc Boddicker, M.D., both of Rapid City; Brad Randall, M.D., Sioux Falls; and James Hovland, M.D., Aberdeen, were elected to the SoDaPAC Board of Directors for a one-year term.

10. DAKOTACARE ELECTION. The Council recommended that the DakotaCare Board leave its election and nominating process as is but extend the time for submission of nominations to thirty days after receipt of report from the Nominating Committee.

11. PRO. The executive office was directed to send a letter to the Professional Review Organization contracting officer requesting that peer review be done on a local basis and specifically recommending the South Dakota Foundation for Medical Care.
December


January


February

Coronary Heart Disease and Hypertension, Freepport, Bahamas, Feb. 1-6. Fee: $450. 28 hrs. AMA Category I credit. Contact: Creighton Univ. School of Med., Div. of CME, Omaha, NE 68178. Phone: 1-800-228-7212, ext. 2550.


Trauma Management 1987, Hotel Intercontinental, San Diego, Calif., Feb. 2-4. 20 hrs. AMA Category I. Contact: UCSD School of Med., M-017, CME, La Jolla, CA 92034. Phone: (619) 534-3940.


Pathology and Treatment of Esophageal Disorders, Wyndham Rose Hall Beach Hotel, Montego Bay, Jamaica, Feb. 12-17. Fee: $475. 24 hrs. AMA Category I credit. Contact: Creighton Univ. School of Med., Div. CME, Omaha, NE 68178. Phone: 1-800-228-7212, ext. 2550.


March

HAWAI’I 87: Critical Issues in Primary Care, Waikiki Hotel, Poipu Beach, Kauai, Hawai‘i, Mar. 9-13. 20 hrs. AMA Category I & AAFP credit. Contact: Valerie Murray, The Pacific Inst. of Cont. Med., P. O. Box 1059, Koloa, Kauai, HI 96756. Phone: (808) 742-7471.
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1. **ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA.**

Three independent case-control studies have reported an increased risk of endometrial cancer in postmenopausal women receiving estrogen without progesterone in combination with other risk factors. The risk of endometrial cancer appears to be related to the duration of estrogen use. The highest risk was seen in women taking estrogen for more than 5 years. Endometrial cancer is rare in women receiving estrogen in combination with a progestin or progesterone.

2. **ESTROGENS SHOULD NOT BE USED DURING PREGNANCY.**

There are no adequate and well-controlled studies in pregnant women. Estrogens should not be administered to pregnant women except when the potential benefit justifies the potential risk to the fetus.

3. **ESTROGENS ARE NOT EXPECTED TO CAUSE HARM.**

These agents have not been shown to cause harm to the fetus. However, estrogens administered during the latter part of pregnancy may cause masculinization of the external genitalia in a female fetus if administered to a pregnant woman in the third trimester.

4. **ADVERSE REACTIONS:**

The common adverse reactions (0.1% to 1% of patients) are: breakthrough bleeding, spotting, spotting of clots, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenderness, breast tenders. The most common adverse reactions (0.1% to 3% of patients) are: constipation, diarrhea, dyspepsia, headache, nausea, vomiting, flatulence, and rectal or vaginal bleeding. The most common adverse reactions (0.1% to 1% of patients) are: fever, chills, malaise, myalgia, and asthenia. The most common adverse reactions (0.1% to 2% of patients) are: rash, pruritus, and urticaria. The most common adverse reactions (0.1% to 3% of patients) are: headache, nausea, vomiting, and abdominal pain.

5. **ACTIVE OVERDOSAGE:**

There is no specific antidote for overdose of estrogens. In case of overdose, symptomatic and supportive measures should be taken, including observation of the patient's condition, supportive therapy, and, if necessary, administration of specific antidotes or drugs to counteract the effects of the overdose. The patient should be observed for signs of toxicity, such as hyperestrogenic effects (e.g., breast tenderness, pelvic pain, and gastrointestinal symptoms). If necessary, supportive measures such as fluid and electrolyte replacement, diuretics, and measures to correct acid-base imbalances should be employed. The patient should also be monitored for signs of adverse effects of the overdose, such as hyperprolactinemia, hypercalcemia, and hyperglycemia. In cases of severe overdose, continuous hemodynamic monitoring and supportive care should be provided. The patient should be observed for signs of toxicity, such as hyperestrogenic effects (e.g., breast tenderness, pelvic pain, and gastrointestinal symptoms). If necessary, supportive measures such as fluid and electrolyte replacement, diuretics, and measures to correct acid-base imbalances should be employed. The patient should also be monitored for signs of adverse effects of the overdose, such as hyperprolactinemia, hypercalcemia, and hyperglycemia. In cases of severe overdose, continuous hemodynamic monitoring and supportive care should be provided.

**REFERENCES:**


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The Management of Asymptomatic Carotid Stenosis: Continuing Controversy

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duodenal ulcers
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Controls nocturnal acid to relieve pain and heal duodenal ulcers

Heals active duodenal ulcers after 4 weeks in most patients*1

<table>
<thead>
<tr>
<th>Drug</th>
<th>Healing Rate</th>
<th>Healing Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZANTAC 300 mg h.s.</td>
<td>270/320</td>
<td>84%</td>
</tr>
<tr>
<td>ZANTAC 150 mg b.i.d.</td>
<td>292/345</td>
<td>85%</td>
</tr>
</tbody>
</table>

In well-controlled, double-blind, multicenter trials, ZANTAC 300 mg h.s. healed active duodenal ulcers in 84% of patients after 4 weeks. After 8 weeks, healing rates may be higher with ZANTAC 150 mg b.i.d. (92%) than with ZANTAC 300 mg h.s. (87%).

Relieves pain and other symptoms as effectively as ZANTAC 150 mg b.i.d.1
Once-daily dosing may enhance compliance in patients for whom dosing convenience is important

Side-effects profile comparable to ZANTAC 150 mg b.i.d.\(^1-3\)

Headache—sometimes severe—has been reported. Rare effects on the CNS, cardiovascular, GI, hepatic, and integumental systems have been observed, as well as rare cases of hypersensitivity reactions. See ADVERSE REACTIONS section of Brief Summary of Product Information before prescribing.

No significant interference with the hepatic cytochrome P-450 enzyme system at recommended doses

ZANTAC 300 mg h.s. had no significant drug interactions with theophylline or warfarin. The bioavailability of certain medications whose absorption is dependent on a low gastric pH may be altered when ZANTAC or other medications which decrease gastric acidity are administered.

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SCIENTIFIC ARTICLES

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Long Term IUD User at Menopause
Season's Greetings

With every good Wish
for your Happiness this Holiday Season

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Bob Johnson, Patty Butler, Jan Anderson, Jeri Spars,
Lorin Pankratz, Susan Jahraus, Audrey Martell
The Management of Asymptomatic Carotid Stenosis: Continuing Controversy

While current data generally support the nonsurgical management of asymptomatic carotid stenosis, progressive high grade carotid occlusion may occasionally constitute an indication for prophylactic endarterectomy.

Jerome W. Freeman, M.D., F.A.C.P.*
Leonard M. Gutnik, M.D., F.A.C.P.†

ABSTRACT

The treatment of severe, asymptomatic carotid stenosis has occasioned considerable debate in recent years. Most authorities have recommended nonsurgical management. Doppler-ultrasound may be used to identify a subset of patients with severe carotid stenosis and a high risk of cerebral infarction. This group of patients may benefit from prophylactic carotid endarterectomy.

In recent years, there has been much debate on the management of asymptomatic carotid bruits and stenoses. There have been no well controlled studies to contrast a medical versus a surgical approach to asymptomatic carotid disease. Very simply, no current consensus exists as to how these lesions should be managed. Until recently, the only way to accurately assess a carotid bruit or the degree of carotid stenosis was with invasive contrast angiography. However, with the advent of good noninvasive vascular screening in the form of doppler-ultrasound (duplex scanning), it is now more appropriate to consider these discussions in terms of the degree of carotid stenosis, rather than in terms of the presence or absence of a bruit. This is more satisfactory, because one cannot accurately predict the degree of stenosis by the presence or absence of a bruit. Often a bruit can be associated with a carotid having a less than 50% diameter reduction, and conversely, very severe stenotic lesions may be present and generate no audible bruit.

Part of the difficulty in deciding how the asymptomatic carotid stenosis should be managed, has been the lack of definitive data on the natural history of such lesions. A number of studies have documented fairly rapid disease progression in asymptomatic carotids. For instance Javid et al. using serial arterial angiograms, showed that one third of patients had a greater than 25% increase in carotid stenosis in one year. Still, it is not known how many patients with asymptomatic carotid disease will actually develop a transient ischemic attack (TIA) or stroke on the involved side. In Roederer et al.'s series there was an annual rate of symptom occurrence of 4%. Colgan et al. demonstrated a similar 4% risk of TIAs in patients followed after carotid endarterectomy for asymptomatic contralateral stenosis. Dorazio et al. generated more ominous figures, asserting that in their series of patients with asymptomatic carotid bruits there was an 11% incidence of TIA and a 19% incidence of stroke.

Some authors, during the past fifteen years, have argued strongly for prophylactic surgery on carotid lesions. However, they have tended to be in the minority. Many other authorities have contended that the available data does not support prophylactic carotid endarterectomy. A very recent series published by Chambers and Norris suggested that only 3% of the time do high grade carotid stenosis lead to stroke not preceded by a TIA. Given this low risk of unheralded stroke, these authors argued that there is no present justification for end-
arterectomy in the asymptomatic patient. The often quoted report by Ropper et al.\textsuperscript{15} asserted that asymptomatic carotid bruits did not place patients undergoing elective surgery at increased risk for preoperative stroke and that these patients did not require carotid artery evaluation.

However, the advent of effective non-invasive vascular testing may well refine the approach to asymptomatic carotid disease. Certainly, it is now well documented that this method of studying the carotids is very sensitive and specific.\textsuperscript{16, 17} This national experience has been duplicated regionally.\textsuperscript{18} This ability to non-invasively and accurately monitor the degree of carotid stenosis has permitted some new insights into the natural history of carotid disease progression.

The Strandness group's recent data\textsuperscript{3} suggested that the overall rate of significant progression in carotid stenosis was 60\% over a three year period. The overall rate for patients with asymptomatic stenosis developing symptoms was only 4\% per year. However, their data pointed to a subset of patients at considerably higher risk of ischemic symptoms. They found that 90\% of ischemic symptoms (either TIA or stroke) developed in patients after their carotid lesions had evolved to 80\% or greater stenosis. Interestingly, in those patients who did develop these very high grade stenoses, 40\% of their carotid lesions had demonstrated less than 50\% stenosis when initially studied. The major risk factors for disease progression were cigarette smoking, diabetes mellitus and age (with patients under 65 years of age most likely to show disease progression). Based on this data, the Strandness group suggested that it is safe to follow, at six month intervals, asymptomatic patients with less than an 80\% diameter carotid stenosis. If a lesion reaches the 80\% figure, there is a 35\% risk of ischemic symptoms or carotid occlusion within six months. Clearly, these latter patients are at an extremely high risk for stroke and the Strandness group suggested that these patients should be considered for prophylactic endarterectomy.

Kistler et al.\textsuperscript{19} also suggested that while in general there is little reason to operate on asymptomatic bruits, there may be a subgroup of patients with tight carotid stenosis (reduction of lumen to less than 1.5mm) who are at major risk for TIA and stroke. Again the implication is that this subgroup may benefit from prophylactic endarterectomy.

In stressing the significance of high grade carotid stenosis, it should be noted that it is the consensus of most authorities that ischemic symptoms generally arise from embolic debris from ulcerated plaques, rather than from decreased perfusion due to the stenosis. However, it is much more common for such significant ulcerations to occur as part of a significant focal stenosis, than for such ulcerations to occur with minimal stenotic disease.\textsuperscript{3, 18, 20}

Another important observation is the fact that carotid stenosis in general is an important marker signifying a propensity for coronary artery disease. Indeed, Adams et al.\textsuperscript{21} noted that TIA's should be viewed both as a warning of impending cerebral infarction and as a harbinger of increased risk of death from myocardial infarction. Thus in those patients who are found to have asymptomatic carotid disease, a careful cardiovascular evaluation is warranted.

**CONCLUSION**

It must be noted that the optimal treatment approach to asymptomatic carotid stenosis has not been unequivocally established. For most patients it would appear that a non-surgical approach is advisable. Aspirin could be initiated in hopes of retarding progression of carotid stenosis and ischemic symptoms, although its role in this setting remains empirical. Patients found to have occlusive carotid disease should be followed at regular intervals with doppler-ultrasound testing. In those patients whose lesions progress to 80\% or greater diameter stenosis, prophylactic endarterectomy may be considered. However, such surgery should be undertaken only in centers which demonstrate a combined surgical and angiographic risk of major morbidity and mortality in the 3-4\% range.\textsuperscript{22} Complication rates that exceed these figures render carotid endarterectomy on symptomatic lesions of dubious benefit, and would certainly seem to preclude prophylactic endarterectomy.

**REFERENCES**

12. Levin SM, Sondheimer FK, Levin JM: The contralateral

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Christmas Wishes

As I was relaxing for a few precious moments between patients and gazing out the window observing the beauty of an October afternoon in South Dakota, my eye caught the cover of a “throw-away” magazine which had come in the morning mail. The shadow of a Pacific isle against the brilliant blues and greens of the ocean; undulating palm trees in a gentle breeze . . . all designed to arrest the attention of someone like myself with a few minutes to spare, and seduce one into investigation of the contents of the publication. I did not succumb to further study of the brochure, but it did generate a moment of thought . . . of all things . . . about retirement years.

Each decade of life that we are privileged to experience seems to be marked by a certain maturation of thought and self-image. At 20, I’m no longer a teenager; at 30, I’m now a productive member of society, adult in thought and deed; at 40, I’m halfway there, or often otherwise stated, “. . . over the hill” and the concept of one’s own mortality becomes quite distinct; at 50, time to start preparations for the retirement years. And so it goes!

As I play with the thoughts of leisure time in idyllic surroundings, the harsh reality of affordability surfaces. How is my retirement program doing? Will it continue to grow in the years to come with sufficient vigor to permit some self-indulgence after years of work? I then recalled an article written by AMA President-Elect Dr. Hotchkiss in which he enumerated a number of reasons for support of the AMA with our individual memberships, and what the AMA has and is doing for us both individually and collectively. Some of this I have heard or read before as have you; a single organization speaking for all of medicine; an effective lobby effort at the national level; a clearinghouse for implementation of ideas and dissemination of information; an insurance broker for all of our individual material needs, etc. Then a statement that reminded me (us) that had it not been for the aggressive and forceful work of the AMA a number of years ago, the self-employed non-corporate physician might never have had the opportunity to develop his own retirement program such as embodied in what is presently the Keogh program or HR-10 retirement trusts. Thanks a lot for that effort AMA, I thought! It’s a small measure of personal self-interest showing through, but also a very critical one for a large number of our physicians. I’m not sure who else would have taken up that fight for us. Perhaps something would have been done in a measure of time, but the AMA did achieve it’s goal, and for that we owe the organization a considerable measure of gratitude.

So as your bills for dues to our state and national organization come across your desk this month, hang in there and continue to support the groups that are working with you and for you. And if possible, a little check in the box for support of the Endowment Association and SoDaPAC will be greatly appreciated by those responsible for the dissemination of dollars provided as they work to assist our junior colleagues and extend the goals of our professional interests.

Ihlene and I look forward to filling our “empty nest” with children and grandchildren this Holiday Season, and extend to you all our very best personal wishes for a Merry Christmas and Happy New Year!

William Rossing, M.D., President, South Dakota State Medical Association

William O. Rossing, M.D.
Greetings of the Season

Best Wishes For the Holidays and for Health and Happiness Throughout the Year

* 

From The Staff of SOUTH DAKOTA BLUE SHIELD
Small Business Computers in the Doctor’s Office

One doctor’s experience with a small computer in his office.

Sandro Visani, M.D., F.A.C.S.*

In present day computer era, physicians are the target of some rather aggressive advertising by salespersons who try to encourage them to purchase or lease computer systems for their practice. At the same time the computer market has undergone a very steep decrease in prices and a very substantial increase in quality. The “toy” computer is no longer the item selling for several hundred dollars and personal or small business computers are now the products more energetically advertised by the media.

The doctors (or clinics) approached by computer sales persons are bombarded by slogans such as “you are a specialist in your field, I am a specialist in my field, you should appreciate how much my expertise is worth” or “garbage in garbage out, you don’t want to skimp on an investment as vital as this,” etc.

Once I asked a computer sales person why I should buy an expensive system, if a program can be set up to sell shoes, why can’t it be set up to sell operations, or office visits, etc. The horrified response was that I absolutely should not place my trust in a “cheap” system which would doubtlessly generate more headaches than it resolved, but if I possessed the innovative imaginative business acumen that a man with my high degree of education certainly was capable of displaying, I would quickly realize that by spending a few thousand more dollars in the system she was proposing, I would be able to accomplish wonderful things, increase my revenue, maximize patient satisfaction, make my secretary deliriously happy and possibly even enhance my sex appeal.

With this type of experience, it is easy to understand that my initial curiosity soon evolved into apathy and distrust and, after all, my secretary was doing OK with her system of ledger cards, so why bother to change.

In the plethora of cliches, however, there was one statement which made sense: “if you need more than one clerical person in the office, then you will benefit from a computer, a computer does not need a salary or fringe benefits or workmen compensation, etc.” This basically fair and correct assessment prompted me to investigate computers further and after a series of adventures and misadventures I stumbled upon a system which I definitely feel is the next best thing since cupcakes.

The Hardware

The necessary hardware to run the system is an Apple 2 E (or an Apple 2 Plus with a 16 K card), 2 disk drives, 80 column card, monitor, printer and the appropriate interface cards to connect the terminals (disk drives and printer) to the CPU (Central Processing Unit). There is also a version of the software which will function in an IBM PC. Any reputable computer store should be able to provide this. One word of caution, however, the software program may not boot (be transferred from the diskette to the CPU) if you have the latest version of the Apple 2 E. If the system does not boot, ask the computer store to make the appropriate adjustments to the CPU, which they can do in a few minutes. This happened to a colleague whom I set up with the system and there was no problem.

The Software

I use a general business software packet called Versaform, produced by Applied Software Technology. The system is truly versatile and can be adapted to serve a multitude of purposes. In my office we have a program for patients accounts and
one for tumor registry, both derived from Versaform. A rather voluminous manual accompanies the diskettes (6 in all) with detailed instructions on how to customize it. My personal experience was that it takes a little time, in my case 3-4 months, to be familiar with the various nuances of the system, however knowledge of computer language is not required and once you have mastered the system, or somebody has customized it for you, you will be amazed by how easy it is to operate.

What It Does

The versatility of the system is almost limitless. This is what the system does for my office.

1. Patient accounts

The computer stores information about patient accounts, automatically updates the balance every time a new entry is typed in, it retrieves information promptly even if you don’t remember the chart number (but I have to know the name of the patient). It automatically fills in description of procedure and charge, all I have to do is enter the code number. It produces any report I want, commonly we obtain monthly reports for accounts receivable, gross bookings and cash receipts. It prints insurance forms and patient statements. It automatically selects who to send a bill to and produces the statement ready to be mailed out. It will produce aged accounts.

There are multiple safety features built into the program, too long to enumerate, but basically it is a very idiot proof system.

2. Tumor registry

The tumor registry program keeps an ongoing record of all our cancer patients with data pertaining to previous tests such as chest x-ray, CBC, urinalysis, etc. It will produce monthly reports with patient’s name, chart number and diagnosis of all patients who need a follow-up appointment in any given month.

This system also lends itself quite readily to statistical analysis since it can produce reports collecting all cases of a specific type of cancer from a given area, or, within a certain age group, or from a certain referring primary care physician.

Limitations

Floppy disks contain only a limited amount of available space. In my practice (2 urologists) we operate with eight floppy disks. Every disk is in triplicate for safety reasons, therefore we use a total of twenty four diskettes. One diskette stores about 120 patient accounts, but obsolete accounts (patients who expired or relocated) can be removed from the diskette to make space for new patients.

Normally inactive accounts are deleted after the screen display containing all pertinent information is printed and stored in the patient’s chart.

The Best News

I have kept this for last because I think it is the best feature of the system. The cost of the hardware in South Dakota is $1,600 and the software package retails for about $100. If your computer store cannot get it for you, ask me and I’ll get you one.

I have customized the system for some colleagues for $500. I expect that if you wish to have somebody customize it for you, the charge would be comparable. Your secretary would have to participate in the customization process which is good hands on experience since he/she will have to operate the program.
12th ANNUAL

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2:00 p.m. SDAFP Board of Directors Meeting

THURSDAY, FEBRUARY 5, 1987

Oncology

MORNING SESSION

Richard C. Finley, M.D., Moderator
7:00-7:30 a.m. Registration
7:30-8:10 a.m. Evaluation of the Patient with Suspected Lymphoma
8:15-8:45 a.m. Hodgkin’s Disease: Stages I, II, and III
9:00-9:40 a.m. The Diffuse Large Cell Lymphomas
10:00-12:00 noon SDAFP Committees

EVENING SESSION

Richard C. Finley, M.D., Moderator
5:00-5:30 p.m. Registration
5:30-6:35 p.m. The Follicular Lymphomas
6:40-7:45 p.m. New Programs for Relapsing Disease
7:45 p.m. EVENING FREE

FRIDAY, FEBRUARY 6, 1987

Upjohn Day: Doctors’ Lounge: Seminars in Family Medicine

MORNING SESSION

L. H. Amundson, M.D. Moderator
7:00-7:30 a.m. Registration
7:30-8:10 a.m. Premenstrual Syndrome
9:00-9:40 a.m. Cardiovascular Disorders (Panic Disorder)
10:00-12:00 noon SDAFP Committees

EVENING SESSION

L. H. Amundson, M.D., Moderator
5:00-5:30 p.m. Registration
5:30-6:10 p.m. Anxiety, Depression
6:15-7:45 p.m. Osteoporosis
8:00 p.m. Social and Buffet sponsored by Marion Labs and SDAFP

SATURDAY, FEBRUARY 7, 1987

Upjohn Day: Doctor’s Lounge: Seminars in Family Medicine

MORNING SESSION

L. H. Amundson, M.D., Moderator
7:00-7:30 a.m. Registration
7:30-8:55 a.m. Complimentary continental breakfast
9:00-9:40 a.m. Alcoholism
9:45 a.m. Panel

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CONTRIBUTORS

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A PRESCRIPTION FOR PHYSICIANS

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MSgt Edward Dean Fender
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'Twas (litigious) night before Christmas

"St. Nicholas would probably be sued for malpractice"

'Twas the night before Christmas (in litigious 1985), when all through the house
(Which was worrisomely underinsured because of high homeowner insurance rates due to big settlements in liability cases.)

Not a creature was stirring, not even a mouse;
(The last time a mouse stirred, the exterminator was threatened with a lawsuit.)

The stockings were hung by the chimney with care,
In hopes that St. Nicholas soon would be there;
(He would probably be sued for professional malpractice if he didn't show up.)

The children were nestled all snug in their beds. While visions of sugar-plums danced through their heads;
(Unfortunately, there was a shortage of sugar-plums because manufacturers were being threatened with lawsuits over the use of artificial food dyes.)

When out on the lawn there arose such a clatter, I sprang from my bed to see what was the matter. When what to my wondering eyes should appear, But a miniature sleigh and eight tiny reindeer,
(The sleigh and reindeer had been downsized to comply with federal mileage regulations, but collision and liability insurance were getting to be more than a non-profit institution could afford.)

With a little old driver, so lively and quick
I knew in a moment it must be St. Nick.
(This may be the last year he'll be making the run; despite his centuries-long safety record, his pilot's insurance is being canceled because of his age and his violation of FAA limits on flying time every Dec. 24. His lawyer is suing on grounds of age and religious discrimination.)

And then in a twinkling I heard on the roof.
The prancing and pawing of each little hoof.
(Last year, 1,174 homeowners sued Santa for causing roof damage, although his lawyers got experts to testify that reindeer hooves couldn't possibly damage a roof because they are mythical.)

As I drew in my head and was turning around,
Down the chimney St. Nicholas came with a bound.

(His insurance company insists on charging him skydivers' rates because of this aspect of his job.)
He was dressed all in fur from his head to his foot,
And his clothes were all tarnished with ashes and soot;
(Santa is pushing his congressman to get benefits for an occupationally related lung disorder due to constant exposure to ashes and soot. He also intends to sue homeowners whose dirty chimneys and fireplaces endanger his health and violate air pollution standards.)

A bundle of toys he had flung on his back
(Several of the toys the kids had on their Christmas lists were missing, however; Santa's lawyers said there might be liability problems.)

And he looked like a peddler just opening his pack.
(Which carried the disclaimer, "Not responsible for anything made by elves.")

His eyes how they twinkled! His dimples how merry!

His cheeks were like roses, his nose like a cherry;
(Symptoms, his lawyer would later tell the jury, that indicated his health had been harmed by his working conditions.)

The stump of a pipe he held tight in this teeth,
And the smoke it encircled his head like a wreath.
(If the tobacco companies lose any of the current product liability suits brought by smokers or their survivors, Santa's lawyer is ready to sue them, too, on grounds of deliberately addicting people to a product they know is harmful.)

He spoke not a word, but went straight to his work,
(His lawyers insisted he curb his normal gregariousness lest he provide ammunition that could be used against him in court someday.)
And filled all the stockings; then turned with a jerk,
And laying his finger aside of his nose,
And giving a nod, up the chimney he rose.
But I heard him exclaim, ere he drove out of sight;
"Happy Christmas to all, and see you in court!"

Happy Holidays

[Signature]

Annette Shousha, President, South Dakota State Medical Association Auxiliary

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Consider the causative organisms...

Ceclo

Cefaclor

250-mg Pulvules® t.i.d.
offers effectiveness against the major causes of bacterial bronchitis

Haemophilus influenzae, H influenzae, Streptococcus pneumoniae, Streptococcus pyogenes

(ampicillin-susceptible) (ampicillin-resistant)

Note: Cefaclor® is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Cefaclor® (cefaclor)
Summary: Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of Streptococcus pneumoniae, Haemophilus influenzae, and S. pyogenes (group A beta-hemolytic streptococci).

Contraindications: Known allergy to cephalosporins.

Warnings: Cefaclor should be administered cautiously to patients with a history of penicillin allergy.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Cefaclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- In renal impairment, safe dosage of Cefaclor may be lower than that usually recommended. Cefaclor should be administered with caution in such patients.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Cefaclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, erythema multiforme, serum sickness-like reactions): 1.5%, usually subside within a few days after cessation of therapy. These reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Cefaclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%.

Abnormalities in laboratory results of uncertain etiology:
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive results for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape (glucose enzymatic test strip, Lilly)

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Additional information available in the prescribing information from Eli Lilly and Company, Indianapolis, Indiana 46285

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Physicians’ Recognition Award

AMA Physicians’ Recognition Award Recipients

Congratulations to the members of the South Dakota State Medical Association who have earned the AMA Physicians’ Recognition Award in September and October 1986.

September

Jack T. Berry
Jorge H. Johnson
M. Venugopal Brookings

October

Edward F. Daw

Sioux Falls

Sioux Falls

Sioux Falls

Sioux Falls

Sioux Falls

Sioux Falls

Sioux Falls

Sioux City, Iowa

Rapid City, SD

Billings, MT

SEASON’S GREETINGS! !

Wyeth

Jerry Maginn
Helpful Medical Record Documentation Guidelines

To help facilitate complete and uniform patient record documentation, the following set of hospital medical record charting guidelines are suggested.

As indicated below, the guidelines describe the attending physician's responsibilities in medical record documentation.

Following these charting guidelines should help reduce errors of omission and facilitate identification of the patient's clinical status at any point in time.

THE FOLLOWING SHOULD BE WELL DOCUMENTED ON EVERY CHART:

1. A complete history and physical written or countersigned by the attending physician. A note written by the admitting physician within 24 hours of admission should usually include the following:
   A. Reason for admission.
   B. Projected workup.
   C. Projected therapy.
   D. Discharge plan.
2. All indicated ancillary services recorded and interpreted in progress notes.
3. Any necessary consultations should be answered within a reasonable time, usually within 24 hours for acute problems.
4. Progress notes should be written at least every 48 hours and they should reflect the clinical status of the patient. Any necessary updates as to changes in diagnosis and/or current workup should also be documented in the progress notes. Progress notes should provide evidence of continuous control by the responsible physician at all times.
5. Patient records should justify need for any surgery and reasons if surgery is delayed.
6. Sequential pre-op and post-op anesthesia notes should be recorded in the record.
7. Discharge summaries should be completed within two weeks after discharge and should include the following:
   A. Reason for admission;
   B. Discharge diagnosis;
   C. Any and all procedures performed;
   D. Pertinent discharge instructions (including post hospital care instructions).
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South Dakota Society Of Pathologists

Officers for 1985-86

Tom C. Johnson, M.D., President
Jerry L. Simmons, M.D., Secretary-Treasurer
January

10th Annual Postgraduate Assembly in Surgery, U.S. Grant Hotel, San Diego, Calif., Jan 19-23. 30 hrs. AMA Category I credit. Contact: UCSD School of Medicine, Cont. Med., Education, M-017, La Jolla, CA 92036. Phone: (619) 534-3940.


February

Coronary Heart Disease and Hypertension, Freeport, Bahamas, Feb. 1-6. Fee: $450. 28 hrs. AMA Category I credit. Contact: Creighton Univ. School of Med., Div. of CME, Omaha, NE 68178. Phone: 1-800-228-7212, ext. 2550.


March

Update '87: Office Obstetrics and Gynecology, Shadow Ridge Resort, Park City, Utah, Mar. 1-7. Contact: Scott & White, Charlene Lee, 2401 S. 31st St., Temple, TX 76508. Phone: (817) 774-4073.


Topics in Geriatric Medicine: Drug Therapy Symposium VIII, Radisson Univ. Hotel, Minneapolis, Minn., Mar. 4-5. Contact: CME, U. of Minn., Box 202 UMHC, 420 Delaware St., SE, Minneapolis, MN 55455. Phone: (612) 626-5525.


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**BLACK HILLS NEUROLOGY SEMINAR**

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WARNING
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. Therefore, a patient transferred from the corticosteroid and hydrochlorothiazide or hydrochlorothiazide chloride should be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the small, unpremeditated volume less than one liter/day, the elderly, and in the presence of renal insufficiency. Periodically serum K+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restricted K+ intake. Associated with renal or natriuresis requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal and neonatal bradycardia, thrombocytopenia, and other adverse reactions seen in adults. Thiazides appear to and amitriptyline in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or asthma. Possible exacerbation of chronic atopic eczematous dermatitis has been reported with thiazide diuretics.

Contraindications: Concomitant use with other potassium-sparing agents such as amiloride or spironolactone. Further use in auricular, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless a deficiency is clearly demonstrated. If serum potassium is markedly impaired, a potassium supplement from the corticosteroid and hydrochlorothiazide or hydrochlorothiazide chloride may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the older hydrochlorothiazide biocompatibility could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Alkaline phosphatase converting enzyme (ACE) inhibitors can elevate serum potassium, use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B, cyclosporin, or colchicine). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other delayed reactions. Blood dyscrasias have been reported in patients receiving indomethacin, levodopa, levamisole, triamterene, and aminoglycosides, and aspirin, whereas fatalities have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to nondepolarizing blockers have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as succinylcholine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in patients with hemochromatosis. Antiarrhythmic effects may be enhanced in post-sympathomimetic patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the usual calciuria components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated 

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