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Medical Bulletin

OFFICIAL PUBLICATION OF THE
UNIVERSITY OF MINNESOTA HOSPITALS
THE MINNESOTA MEDICAL FOUNDATION
AND THE MINNESOTA MEDICAL ALUMNI
ASSOCIATION

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University of Minnesota Medical Bulletin

University of Minnesota Medical School

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VOLUME XXVII *February 1, 1956* *NUMBER 7*

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Staff Meeting Report

Anesthesia for Emergency Surgery

John R. Gordon, M.D.,[1] Frederick H. Van Bergen, M.D.,[2] and D. Stuart P. Weatherhead, M.D.[3]

Challenging problems arise in anesthesia for critical procedures. The patient's condition and tolerance for added stress must be judged quickly and precisely. Caution may narrowly limit methods and drugs, and the immediate postoperative state may require diligent and expert care.

Severely ill patients do not need and cannot endure profound anesthesia. Local infiltration and regional nerve block are best, either alone or with light general technic. Often, analgesia is so efficient that the subject may answer questions by moving his head, yet is not even aware that surgery is being performed.

Preoperative Assessment and Preparation

• *A patent airway is indispensable.* Obstruction may result from blood, vomitus, laryngospasm, relaxed tongue and jaw, fractured tracheal cartilages, bronchospasm, or pulmonary atelectasis.

All mucus, blood, and solid foreign matter must be aspirated. Temporarily, the jaw and tongue may be held forward and an oropharyngeal airway inserted. For prolonged patency, a cuffed Magill tube is passed into the trachea.

Laryngeal reflexes are quieted by 2 cc. of 5% Cyclaine solution injected through a 20-gauge needle passed through the cricothyroid membrane. The mouth and pharynx may be deadened with a nebulized agent.

If tracheotomy is necessary, a cuffed, kinkproof tube is preferred to the silver type. Both bronchi are suctioned by a special long catheter; bronchoscopy is avoided if possible.

When respiration falters, as after pneumothorax, intermittent

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*This is an abstract of a report given at the Staff Meeting of the University of Minnesota Hospitals on January 20, 1956. A copy of the complete report, including references, may be obtained by writing to the Editor, UNIVERSITY OF MINNESOTA MEDICAL BULLETIN, 1342 Mayo Memorial, Minneapolis 14, Minnesota.

[1]Instructor, Department of Anesthesiology.
[2]Associate Professor and Head, Department of Anesthesiology.
[3]Instructor, Department of Anesthesiology.

positive pressure may be applied. In emergencies, simpler means, such as mouth-to-mouth breathing, may be lifesaving.

• *Circulation* is often reduced by shock; with low central blood volume, vasoconstriction and cellular hypoxia progress. Plasma or dextran may be given intravenously while awaiting whole blood. If superficial veins collapse, external jugulars or venous cut-down may be employed.

Shock is lessened by Trendelenburg position, oxygen, vasopressors, and adrenergic blocking agents. Drugs should be given intravenously because subcutaneous or intramuscular doses may be absorbed too slowly at first but in dangerous amounts later.

A possible hypertensive response to injury is most likely after damage to limbs of children and young adults. High pressure commonly falls during general or spinal anesthesia or autonomic blockade. Pentothal or ether may induce grave hypotension.

• *Response to stress* is poor in aged and debilitated patients, after long mental strain and tension, and after ACTH or cortisone therapy within a year. Disease or injury then evokes gradual deterioration of blood pressure, pulse, and respiration in spite of ordinary resuscitative procedure. Hydrocortisone, 100 to 200 mg., is often helpful.

• *Complicating diseases* call for special skill.

a] Coronary involvement produces great sensitivity to hypoxia and little tolerance of low blood pressure with vasodilatation.

b] Congestive heart failure must be eliminated and pulmonary function restored before operation on a critically ill or injured person. If decompensation reappears under surgical stress, acetyl strophanthidin may be given by Levine's method in divided doses of 0.6 to 1.2 mg. Exact optimal levels of digitalization are obtained by electrocardiographic monitoring.

c] Respiratory acidosis, which often develops in emergencies, strengthens vagal cardioinhibition, yet too rapid return to normal *p*H may start ventricular fibrillation or greatly lower blood pressure.

d] Pulmonary emphysema produces varying degrees of compensated respiratory acidosis. When carbon-dioxide retention is corrected, the depressed ventilating response to carbon dioxide does not improve as it would without pulmonary disease. In general, the acid-base balance should not be upset in any way. With severe emphysema, high oxygen concentrations supplied during anesthesia readily cause apnea. Moreover, active help of expiratory muscles ceases under anesthesia, and, if elastic fibers are much reduced, expiration is prolonged.

e] Bronchial asthma lowers vital capacity even between attacks, and drugs like Pentothal, cyclopropane, or curare may precipitate spasm. Rapid bronchodilators are intravenous Benadryl, aminophylline, and Isuprel. The latter is useful with cyclopropane and relatively free of epinephrine-like side effects. If bronchial spasm is orificial rather than tubular, a mixture of helium with 20% or more oxygen may give relief.

f] Liver dysfunction is likely during anesthesia and surgical trauma, still more so with severe illness, and worse with shock or multiple transfusion. Hepatic damage may be increased by chloroform, ethyl chloride, trichlorethylene, tribromethanol, divinyl ether, and diethyl ether, particularly during respiratory or circulatory hypoxia.

g] Renal dysfunction results from any general anesthesia and apparently increases with depth – an argument for the lightest feasible plane.

h] Diabetes with no time for complete evaluation requires cyclopropane, spinal agents, or a weak gas such as nitrous oxide combined with Pentothal and a muscle relaxant. Volatile vapors drastically reduce liver glycogen and cause extreme hyperglycemia.

i] Transfusion of citrated whole blood in large amounts may result in citrate intoxication, lowered plasma calcium, metabolic acidosis, high plasma potassium, and progressive hemolysis of bank blood.

Anesthetic Management

All methods must offer a patent airway, good ventilation, elevated oxygen tensions, and normal alveolar carbon dioxide.

- In *conduction anesthesia* – the most desirable type – concentration and volume of drugs should be less with fever, debility, shock, and similar factors.

- *Spinal anesthesia* is avoided during shock, remembering that high or normal blood pressure of a casualty may be a transient hypertensive response. Spinal block may cause refractory hypotension or, during intestinal obstruction, may rupture the distended bowel.

- Emergency *general anesthesia* carries the threat of inhalation of gastric contents. The stomach should be emptied by lavage and continuous Wangensteen suction. In addition, a cuffed esophageal tube, such as the Miller-Abbott, Sengstaken, or recent special kinds, should be inserted and the cuff inflated before anesthesia. The cuff is held against the cardia or just above the lower end of the esophagus until a cuffed endotracheal tube can be inserted. The esophageal tube is reinserted during extubation of the trachea and left until the patient

can protect his own airway.

1] Ether administered during serious illness may cause hyperglycemia or glycopenia, respiratory and cardiovascular dysfunction, and progressive metabolic acidosis. Prophylactic hyperventilation with increase of 20% has been advised.

2] Other volatile agents such as chloroform, divinyl ether, trichlorethylene, and ethyl chloride are restricted because of toxicity.

3] Cyclopropane is the most potent gas, with perhaps a wider margin of safety than any other anesthetic now in use. Suitable in urgent cases, it does not harm the liver or kidney and permits high levels of oxygen therapy. However, deep anesthesia is not tolerated in shock. Respiratory acidosis is circumvented by augmented respiration. The gas is inflammable and may cause arrhythmia, which probably can be prevented with experience.

4] Nitrous oxide is useful with other agents, as in nitrous oxide-oxygen, intravenous barbiturate, and muscle relaxant technics.

5] Extremely short-acting barbiturates include Pentothal, the most commonly used intravenous anesthetic. Though allowed in some critical circumstances, doses must be small and administration slow with shock.

A promising new nonthiobarbiturate, Lilly No. 22451, has been employed successfully in a small group of patients with oligemic shock, severe toxemia, debility, and hypertension. Nitrous oxide-oxygen mixtures are added. Within minutes after discontinuance of anesthesia, the subject regains consciousness, protective reflexes, and adequate ventilatory exchange. The compound surpasses thiobarbiturates in several respects.

6] Muscle relaxants permit light anesthetic planes with any type of surgery. Newer synthetic products are largely devoid of histamine-liberating, cumulative, and hypotensive properties. Flaxedil (gallamine triethiodide) may prevent reflex cardiac disorders, though pulse is accelerated. Succinylcholine is quickly counteracted by plasma and tissue cholinesterases. Side effects are slight but may be prolonged in the aged, weak, or anemic patient.

Muscle relaxants are given with care to avoid respiratory depression. For potassium deficiency, potassium chloride may be injected by vein, 0.3% solution at 100 to 120 drops per minute.

7] Chlorpromazine potentiates analgesic and anesthetic compounds. Preoperatively, 2 mg. is injected intravenously every two or three minutes to a total of 10 to 20 mg. Since the drug is hypotensive, blood pressure must be constantly observed.

Editorials

Laboratory Medicine

The field of laboratory medicine, or clinical pathology as it is often called, may be defined as that concerned with the laboratory phases of patient care. Clinical chemistry, hematology, diagnostic bacteriology, and serology are among the subdivisions of this area of medical endeavor. Perhaps because it is a field to which men and women of many scientific disciplines are drawn, it has held a rather ill-defined position in the larger picture of education in medicine. To be sure, its formal place in the medical school curriculum is well recognized.

Still the day seems to be passing in which the physician performs much of his own laboratory work. Important as it may be in the diagnosis and management of disease, he will expect others to perform this role. He will come to rely increasingly on the skill of these other hands. This becomes clear when one considers the large contribution that chemistry, bacteriology, and other laboratory sciences are making to the breath-taking advance of American medicine in this century.

A physician is a skeptical person and tends to trust what he sees and hears and can touch. A report from the laboratory may be to him just a slip of paper of questionable value. Still he must come to trust the skills of the laboratory worker in order that these skills may help him to make the decisions he must make. For this reason, if for no other, each physician and all physicians must be vitally concerned with the establishment of standards of laboratory training and practice.

There are now many workers poorly trained; there are many schools that exploit heartlessly the needs for workers in this field. Glowing advertisements promise a short easy course, immediate vocational success. At the same time, approved schools of medical technology are suffering progressive decrements in enrollment. Perhaps this field needs a sober study such as that which culminated in the Flexner report in medical education in the early part of this century. After that report organized medicine developed and enforced high standards of medical education, closing the "diploma mills." Today medical technology, an emerging profession under the aegis of organized medicine, needs its general support and encouragement. It will, under the best of circumstances, gradually help to fill the need for professional clinical laboratory workers.

In a further attempt to alleviate the shortage of adequately trained personnel, a course for laboratory workers at a sub-professional level was established at the University of Minnesota two years ago. This was established and developed with the co-operation and aid of the Minnesota State Medical Association, the Minnesota Hospital Association, the Minnesota Societies of Clinical Pathology and Medical Technology, and the Minnesota Department of Health. It is a one-year course with six months of formal training at the University and six months of internship in an approved hospital laboratory. The graduates of this course, called Laboratory Aides, will help to provide the need for workers especially in hospitals in smaller communities and in doctors' offices.

Finally, there are being developed at various centers throughout the country, including the University of Minnesota, graduate training programs in clinical pathology for physicians. Physicians, especially pathologists, are interesting themselves in this field as a career.

Modern medicine requires a larger laboratory participation in patient management than ever before. The physician is not physically able to perform all these laboratory functions himself. To meet this challenge medical technology arose as an ancillary profession and, with the support of organized medicine and of each individual physician, will continue to play a steadily more effective role. There may be needs for well-trained workers at a lower level such as laboratory aides. Finally, physicians themselves specializing in this field of endeavor will give it new orientation, force, and efficiency.

The Passing of a Physician

He was tall and somewhat stooped. His hair was pure white except for three or four individual strands that had somehow managed to retain their original black hue. Recent care-filled years had etched his face with an expression of chronic anxiety, but even this could not completely hide the underlying good humor that we had known so well in earlier years.

His medical career was not a distinguished one as judged by the standards by which most of us here are accustomed to measuring distinction. He developed no new surgical techniques, and his contributions to the medical literature were few. He didn't even know much about the porphyrins, a fact which at one time appeared to us as a dereliction of medical responsibility, but one which we came to

view with considerably less disapprobation in more recent years. Yet he possessed in abundance those qualities and attributes which all of us want to find in the physician who takes care of us: a sound knowledge of general medicine, sympathy and understanding, primary consideration of the patient's best interests, and inflexible honesty. Following his death a surprisingly large number of his former patients called to pay final respects despite the fact he had retired from active practice almost 10 years previously. This, after all, is the sort of tribute which speaks for itself.

Our fondest early recollections are of time spent with him making hospital rounds. He would discuss medical problems in a language then unfamiliar to us but which enthralled us nonetheless. These experiences, together with admiration for him, undoubtedly were important factors in our subsequent vocational choice. We can only hope that we can as fully live up to the ideals of medicine as he did. We shall miss him, indeed.

Leadership in Medicine

In preparing this issue of the BULLETIN for publication, we were impressed with the Alumni News section. It is apparent that a good many of our alumni occupy positions of importance medically in many parts of the country. Particularly impressive to us, though, was the manner in which our graduates have become active leaders of medicine in Minnesota. At the present time the president, immediate past president, both vice-presidents, secretary, treasurer, speaker of the house of delegates, and chairman of the council of the Minnesota State Medical Association are alumni of our Medical School. All of the newly installed officers, as well as the outgoing president and the new directors, of the Minnesota Academy of General Practice also graduated from Minnesota as did the new officers of the Southern Minnesota Medical Association and the incoming and retiring presidents of the Northern Minnesota Medical Association. Our alumni have been instrumental in the development and activities of a number of other important medical organizations. We believe that this is a remarkable record indeed! It shows that our alumni have not only practiced excellent medicine but also assumed their share or more of leadership in the medical community.

Minnesota Medical Foundation

Meeting of Board of Trustees

The Board of Trustees of the Minnesota Medical Foundation met on January 11, 1956. Those present were: MRS. FRANK BOWMAN; MESSRS. A. A. HECKMAN, MALCOLM MC DONALD, and M. E. HERZ; and DOCTORS RAYMOND D. PRUITT, MOSES BARRON, KARL W. ANDERSON, HERMAN E. DRILL, BERNARD HALPER, WILLIAM F. MALONEY, BYRON B. COCHRANE, CHARLES E. REA, DONALD J. COWLING, FRANCIS W. LYNCH, N. LOGAN LEVEN, H. S. DIEHL, WESLEY W. SPINK, and ROBERT B. HOWARD.

The Secretary-Treasurer reported the present membership of the Minnesota Medical Foundation as follows: Patron members, 69; life members, 425; annual members, 714; contributing members, 11; sustaining members, 1; total, 1,220.

This represents an increase in membership which was due at least in large part to the new BULLETIN, a sample copy of which was sent to all physicians in the state of Minnesota and to all alumni of the Medical School in November. Along with the BULLETIN went an invitation to join the Foundation. As a result of this 236 new members joined, 224 of whom are annual members, 1 sustaining member, and 11 contributing members.

There was an extensive discussion of the question of scholarship funds and loan funds. Dr. Spink appointed a Scholarship Fund Committee consisting of Dr. Cowling as chairman and Dr. Karl Anderson and Mr. Malcolm McDonald as members. This committee will be encouraged and supported in its efforts to raise funds currently for next fall's scholarship program and will be asked to study ways and means of obtaining scholarship endowment funds and to report back its findings and plans at the next meeting of the Board. It was the consensus of the group that the advisability of establishing a loan fund required further study. Dr. Cowling moved that the officers of the Foundation should acquire further information concerning present student loan funds, their availability, the extent to which they have been utilized, and the terms under which they are granted. This motion was seconded and passed.

There was also discussion of the Health Forum, adoption of a corporate seal, and speakers for the meeting of the Minnesota State Medical Association next spring and for Foundation Day next fall.

Medical School Activities

Student Organizations

There are on the Medical School campus a number of student organizations which are of importance to medical students and faculty alike. We thought that readers of the BULLETIN might like to learn something of these groups.

Medical fraternities are, of course, traditional. In addition to the customary housing and social functions, these organizations provide their members with the opportunity of meeting physician-alumni who are in active practice. Out of professional contacts of this type frequently grow associations which last many years after graduation.

The Medical Inter-Fraternity Council consists of the officers of the various medical fraternities and deals with mutual problems which the fraternities face. It sponsors the annual Medical Six O'Clock Dinner and an annual Student-Faculty Dance.

The Medical Students' Advisory Council consists of the officers of the various classes plus three members elected by the previous year's Council to provide continuity of thought and action. Its functions have been described in previous issues of the BULLETIN. In brief, the Council concerns itself with various matters related to medical education such as grading and testing procedures, student-faculty relations, etc.

The Student American Medical Association, affiliated with the American Medical Association, introduces the medical student to organized medicine and is helpful in preparing him for eventual practice.

The following are the responsible officers of the various organizations:

Medical Students' Advisory Council

RALPH B. SWANSON, President JAMES LARSON, Secretary

Medical Inter-Fraternity Council

HAROLD J. (JERRY) STULBERG, President IRENE KOSIAK, Secretary

Student American Medical Association

DUANE FLOGSTAD, President GLENN LEWIS, Secretary

Medical Fraternities

Alpha Epsilon Iota
LAVONNE BERGSTROM, President

Alpha Kappa Kappa
JOHN P. WILLIAMS, President

Nu Sigma Nu
WILLIAM C. JOHNSON, President

Phi Beta Pi
JEROME SCHEREK, President

Phi Chi
EVERETT LENSINK, President

Phi Delta Epsilon
LOREN ROTHSTEIN, President

Phi Rho Sigma
ROBERT ANDERSON, President

Faculty News

DR. H. S. DIEHL, *Dean,* and DR. VICTOR JOHNSON, *Director of the Mayo Foundation,* spoke at a meeting of 75 Minnesota business leaders on January 10 concerning the importance of industry's support of medical education. Host to the group was Mr. T. P. Heffelfinger, Chairman of the Twin Cities Committee of American Industry of the National Fund for Medical Education.

DR. A. SIGRID GILBERTSEN has been promoted to Instructor in the Department of Medicine.

DR. HAROLD O. PETERSON, *Clinical Professor, Department of Radiology,* attended the International Medical Assembly of Southwest Texas in San Antonio from January 23 to 25. He spoke on gastric ulcer, ureteral stones, and ruptured intervertebral discs and participated in a panel discussion on intestinal obstruction.

DR. WALLACE H. COLE, *Professor and Director, Division of Orthopedic Surgery,* was honored by his former residents at a banquet at the Leamington Hotel on Friday evening, January 27. A scientific program presented by Dr. Cole's former residents preceded the banquet and a special orthopedic conference was held on Saturday morning at the University Hospitals. DOCTORS HARRY B. HALL, DONALD R. LANNIN, and MALVIN J. NYDAHL were in charge of arrangements.

DR. WILLIAM SCHOFIELD, *Associate Professor, Division of Clinical Psychology,* was appointed recently to the Committee on Educational Research and Services of the Association of American Medical Colleges.

MISS KATHARINE J. DENSFORD, *Director* of the University of Minnesota School of Nursing and second vice-president of the International Council of Nurses, was one of the speakers at the unveiling ceremony of the rare, life-size bronze bust of Florence Nightingale at the Hillcrest Medical Center, Tulsa, Oklahoma.

Alumni Association

A Message from the Alumni President

The Minnesota Medical Alumni Association has been increasing its activity in recent years. It has sponsored an "annual spring luncheon" for senior medical students. It has published an Alumni Association Directory and will keep it renewed as necessary. It is responsible for the annual Medical Alumni Homecoming Banquet and Dance.

A strong, active alumni group has become of increasing importance to schools in recent years. This is particularly true of private schools, but the time has now arrived when our own medical school is a better place because of the energetic support of alumni. We, as officers of the Minnesota Medical Alumni Association, are pledged to make it as strong and active as possible.

Each student who graduates from medical school assumes certain obligations as a doctor; in addition, he also takes on certain responsibilities of citizenship, among which is the duty of allegiance to his school. This is not an onerous burden, but rather a privilege. The well-adjusted physician not only practices medicine, but, among other things, participates in the activities of his community, belongs to his church, and takes an active interest in his school.

All doctors who graduated from the University of Minnesota Medical School are members in good standing of the Minnesota Medical Alumni Association. There are no dues. During the year, however, you may be asked to participate in various alumni activities such as those mentioned above.

The next few years will show a surge of development and activity of our Alumni Association, which is in keeping with the interest shown by private groups all over the country in financial aid to our schools.

Byron B. Cochrane, M.D., *President*
Minnesota Medical Alumni Association

Alumni News

New officers of the Minnesota State Medical Association include DR. ROLLAND H. WILSON, '28, Winona, President; DR. GORDON MAC RAE, '23, Duluth, First Vice-President; DR. MANCEL T. MITCHELL, '34, Minneapolis, Second Vice-President; DR. B. B. SOUSTER, '23, St. Paul, Secretary; DR. W. H. CONDIT, '99, Minneapolis, Treasurer; and DR. CHARLES G. SHEPPARD, '35, Hutchinson, Speaker of the House of Dele-

gates. DR. A. O. SWENSON, '23, Duluth, is immediate Past President, and DR. CHESTER L. OPPEGAARD, '21, Crookston, is Chairman of the Council.

DR. EMIL J. FOGELBERG, '29, St. Paul, was named President-Elect of the Minnesota Academy of General Practice at the annual meeting of the organization in Minneapolis on October 18. He will succeed DR. RAYMOND PAGE, '26, St. Charles, who will serve as President during 1956. Other officers named at the meeting were DR. E. J. TANQUIST, '21, Alexandria, Vice-President, and DR. JOHN BUTLER, '36, Cloquet, Secretary. DR. HERMAN E. DRILL, '28, Hopkins, a Past President of the Medical Alumni Association, was President of the Minnesota Academy during 1955. Named as new Directors of the organization were DR. HERBERT L. STOLPESTAD, '33, St. Paul; DR. PAUL M. SMITH, MAR. '43, Lake Crystal; and DR. H. A. KORDA, '41, Pelican Rapids.

DR. CONRAD E. EASTWOLD, '49, is serving as a medical missionary at the Hospital des Missiones Protestantes, Ngaoundere, Cameroun Francais, Africa. He writes that he and one other doctor are responsible for a 50-bed hospital which is located only seven degrees north of the equator.

DR. WILLIAM WINTHROP HALL, '19, Bakersfield, California, is Director of the California Division of the American Cancer Society. Dr. Hall, a retired Rear Admiral in the Navy Medical Corps, holds the Legion of Merit with combat star.

DR. RODNEY B. HARVEY, DEC. '46, is *Assistant Professor of Physiology* at the University of Utah Medical School, Salt Lake City.

DR. ROXIE MUDGETT HOLLAND-MORITZ, '43, is an *Instructor in Pediatrics* at the University of Michigan Medical School, Ann Arbor.

DR. MILAN V. NOVAK, '37, is *Professor and Head*, Department of Bacteriology, and *Associate Dean*, University of Illinois Medical School. Dr. Novak holds an honorary D.Sc. degree.

DR. JOSEPH F. PETERS, '33, Albuquerque, New Mexico, is President of the New Mexico Society of Anesthesiologists. Dr. Peter's record during World War II was an outstanding one. He received the Silver Star, the Legion of Merit, a Bronze Star Medal, three Presidential Unit citations, and a Phillippine Presidential award.

DR. REX A. PITTENGER, '48, is an *Instructor* in the Department of Psychiatry, University of Pittsburg Medical School.

DR. KARVER L. PUESTOW, '21, is *Professor of Medicine* at the University of Wisconsin Medical School, Madison. Dr. Puestow is also a Regent of the American College of Physicians.

DR. W. H. HALLORAN, '15, Jackson, Minnesota, is the new President of the Southern Minnesota Medical Association. Elected as Vice-President of the organization at the group's annual meeting this fall was DR. LEO R. PRINS, '32, Albert Lea, Minnesota. Named as Secretary-Treasurer was DR. G. R. DIESSNER, '41, Rochester, Minnesota.

Named as President of the Northern Minnesota Medical Association at its annual fall meeting in Bemidji was DR. L. F. WASSON, '36, of Alexandria. He succeeded DR. W. W. WILL, '05, of Bertha in the office.

DR. GUSTAF A. HEDBERG, '29, Superintendent and Medical Director of Nopeming Sanatorium, Nopeming, Minnesota, has been awarded the 1955 Dearholt Medal by the Mississippi Valley Conference on Tuberculosis. The medal, highest honor the organization can bestow, was named after the late DR. HOYT E. DEARHOLT, of Milwaukee, and is presented for outstanding service in tuberculosis control in the Midwest.

IN MEMORIAM

DR. EDGAR H. NORRIS, '19, Detroit, Michigan

DR. ELMER N. HUNTER, '25, Detroit, Michigan

Postgraduate Education

Neurology and Neurosurgery for General Physicians and Specialists

Neurology will be the subject of a continuation course to be presented by the University of Minnesota at the Center for Continuation Study from February 6 to 11, 1956. Intended primarily for physicians in general practice, the program will have appeal also for neurologists and neurosurgeons. The most commonly seen neurological symptoms and syndromes will be stressed. Guest faculty will include DR. WILLIAM F. MEACHAM, *Professor of Neurological Surgery,* Vanderbilt University School of Medicine, Nashville; DR. MORRIS B. BENDER, *Director, Neurology Service,* Mount Sinai Hospital, and *Professor, Clinical Neurology,* New York University College of Medicine, New York City; DR. JOHN F. SULLIVAN, *Associate Professor and Head, Department of Neurology,* Tufts College Medical School, Boston; and DR. OLIVER H. LOWRY, *Professor and Head, Department of Pharmacology,* Washington University School of Medicine, St. Louis.

Recent Advances in Internal Medicine for Internists

The University of Minnesota announces its fourth annual continuation course in Recent Advances in Internal Medicine for Internists. As in previous years, no attempt is made to cover all aspects of internal medicine. Instead a few restricted fields have been selected, and recent important advances within these fields will be considered. This year's program will deal principally with cardiovascular and renal diseases and metabolic and endocrine disorders. DR. JOSEPH W. JAILER, *Associate Professor of Medicine,* College of Physicians and Surgeons, Columbia University, New York City, will be the guest speaker. The program will be presented under the direction of DR. C. J. WATSON, *Professor and Head,* Department of Medicine.

Notice

All continuation courses presented by the University of Minnesota are approved for formal postgraduate credit by the AMERICAN ACADEMY OF GENERAL PRACTICE. Attendance certificates will be furnished on request.

Further information concerning the above programs or others to be presented may be obtained by writing to Dr. Robert B. Howard, 1342 Mayo Memorial, University of Minnesota, Minneapolis 14.

Coming Events

February 8 . . . . J. B. JOHNSTON LECTURE; "The Measurement of Enzymes in Single Cell Bodies"; *Dr. Oliver H. Lowry,* Professor and Head, Department of Pharmacology, Washington University School of Medicine, St. Louis, Missouri; Mayo Memorial Auditorium; 8:15 P.M.

February 13–15 . . Continuation Course in Internal Medicine for Internists

February 14 . . . . MINNESOTA PATHOLOGICAL SOCIETY LECTURE; "The Etiology of Hyperadrenalism"; *Dr. Joseph W. Jailer,* Associate Professor, Department of Medicine, College of Physicians and Surgeons, Columbia University, New York City; Mayo Memorial Auditorium; 8:00 P.M.

February 16–18 . . Continuation Course in Cancer Detection for General Physicians

February 16 . . . . CLARENCE M. JACKSON LECTURE; "The Significance of the Sero-Flocculation Reaction"; *Dr. Harry S. Penn,* Associate Professor, Department of Radiology, University of California at Los Angeles Medical School, Los Angeles; Mayo Memorial Auditorium; 8:00 P.M.

February 27–29 . . Continuation Course in Eye, Ear, Nose, and Throat for General Physicians

March 5–7 . . . . Continuation Course in Pediatrics for General Physicians

March 6 . . . . . PHI DELTA EPSILON LECTURE; *Dr. Katharine Dodd,* Professor and Head, Department of Pediatrics, University of Arkansas School of Medicine; Mayo Memorial Auditorium; 8:00 p.m.

WEEKLY CONFERENCES OF GENERAL INTEREST

Physicians Welcome

Monday,	9:00 to 10:50 A.M.	OBSTETRICS AND GYNECOLOGY Old Nursery, Station 57 University Hospitals
	12:30 to 1:30 P.M.	PHYSIOLOGY 214 Millard Hall
	4:00 to 6:00 P.M.	ANESTHESIOLOGY Todd Amphitheater, University Hospitals
Tuesday,	12:30 to 1:20 P.M.	PATHOLOGY 104 Jackson Hall
Friday,	8:00 to 10:00 A.M.	NEUROLOGY Station 50, University Hospitals
	9:00 to 10:00 A.M.	MEDICINE Todd Amphitheater, University Hospitals
	1:30 to 2:30 P.M.	DERMATOLOGY Eustis Amphitheater, University Hospitals
Saturday,	7:45 to 9:00 A.M.	ORTHOPEDICS Powell Hall Amphitheater
	9:15 to 11:30 A.M.	SURGERY Todd Amphitheater, University Hospitals

For detailed information concerning all conferences, seminars and ward rounds at University Hospitals, Ancker Hospital, Minneapolis General Hospital and the Minneapolis Veterans Administration Hospital, write to the Editor of the BULLETIN, 1342 Mayo Memorial, University of Minnesota, Minneapolis 14.