

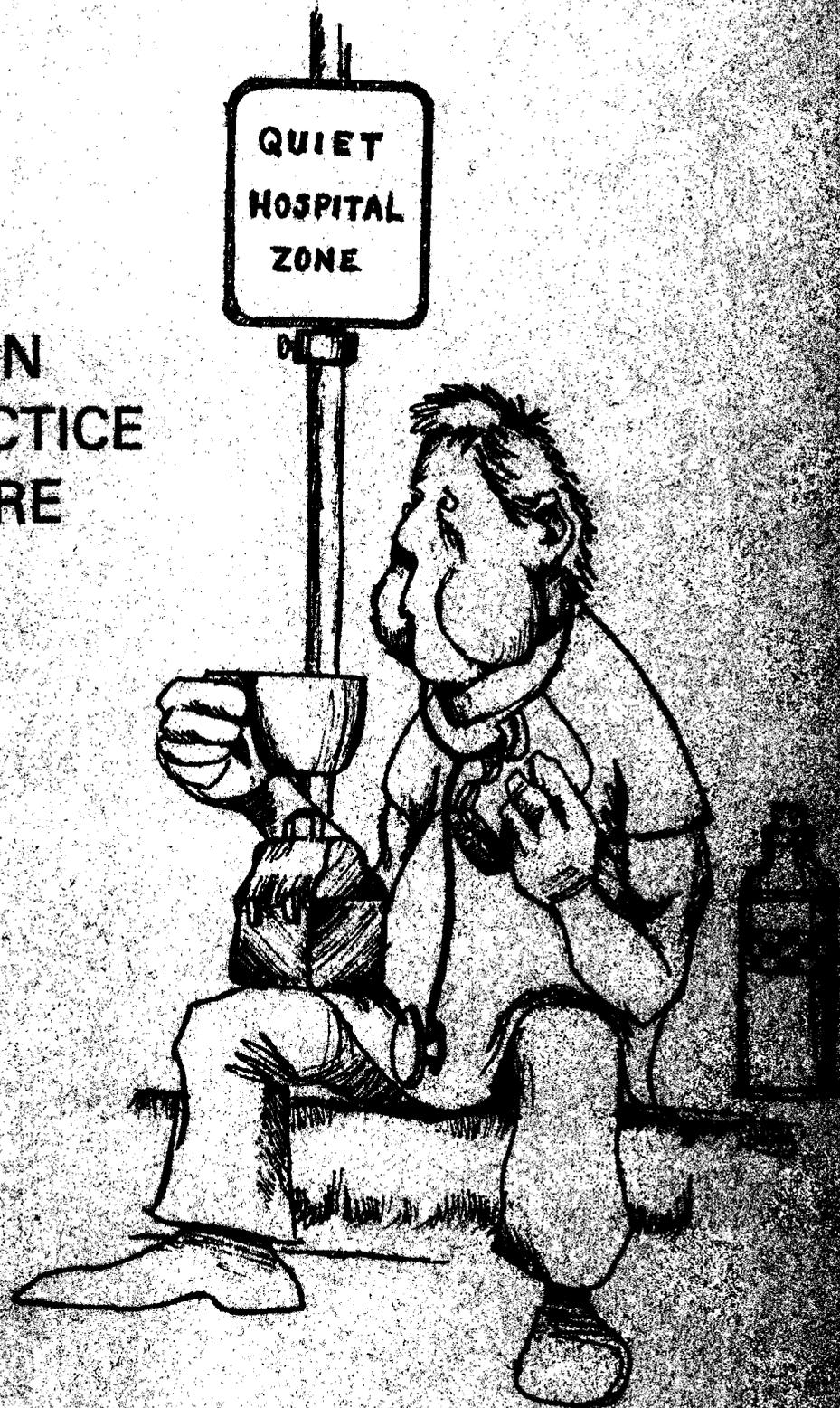
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MEDICAL BULLETIN

UNIVERSITY OF MINNESOTA

VOLUME 44—NUMBER 1

THE PHYSICIAN
AND HIS PRACTICE
IN THE FUTURE





**THE UNIVERSITY OF MINNESOTA
MEDICAL BULLETIN**

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TOM PATTERSON, MANAGING EDITOR**

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Larry on Larry

The *Medical Bulletin* is pleased to once again feature the talented pen of Dr. Larry Peterson (Med. '71). His cartoons appear on the cover of this issue and accompanying the lead article by Dr. Fifer. In past issues he has drawn cartoons for use on the subjects of hair and computers. In this issue, he offers his own unique statement on the future of medical education and practice.

Larry served his internship at Abbott-Northwestern Hospitals in Minneapolis, where the staff could not escape his prolific pen. He published a 20-page booklet of caricatures of his fellow medical workers, under the title "Howard's Heroes" (for Robert B. Howard, Med. '44, director of medical education at Abbott-Northwestern).

Larry is now in a psychiatry residency program at the Mayo Clinic, where his artistic talents have certainly not gone unnoticed. He has already been called upon to do caricatures and cartoons for the *Mayo Alumnus*.

We are pleased to take this opportunity to publicly thank Dr. Peterson for his efforts on behalf of the *Medical Bulletin*.

THE PHYSICIAN AND HIS PRACTICE IN THE FUTURE

By William R. Fifer, M.D.

(Remarks by Doctor Fifer at the 19th Annual Medical Sciences Day, March 3, 1973, at Mayo Memorial Auditorium.)

Because of my checkerboard medical career (returning to the medical education scene at the University after 15 years of practice) I was asked by Dean Cavert to speak this morning to you prospective medical students about what it's *really* like to be a practicing doctor. In thinking about my assignment, I decided you should not only hear what it *is* like, but what it *might* be like a decade from now, when you are in practice.

To know where we're going, we must know where we are, and where we have been. The image of "good old doc" with his little black bag, making house calls in his buggy, is remembered vividly by people living today. The interface between medicine and society at that time was between the individual doctor and his patient. In times when influenza epidemics wiped out whole families and large parts of communities, old doc was a comforting, helping presence, fighting his own weariness to be where he was needed day and night. People were realistic about old doc's ability to change the course of disease. Their lack of expectations was happily exceeded when doc "pulled one through" the crisis in lobar pneumonia or mastoiditis. Medical care was unavailable to a vast segment of Americans primarily because they could not afford it. Health insurance did not exist. The hospital was a place where one went to die.

As I look out over your young faces, I am compelled to tell you what some of *my* people died of: My father's little sister died at age six of diphtheria. My wife's grandmother died of tuberculosis. My colleague from internship days (1950) died of bulbar poliomyelitis. A wonderful 19-year-old boy who was my patient died of progressive nephritis in 1958. None of you will ever have to die or see death from these causes in your lifetime. Think of that!

THE CHANGING YEARS (1945-1965)

After American technology had contributed so greatly to the defeat of the enemy in World War II, we Americans turned our attention to defeating disease and death. Could we not bring the same technology to bear on disease that had produced the planes and tanks which won the war? Immense amounts of federal funds were committed to biomedical research. Brilliant research breakthroughs occurred. The fund of biomedical knowledge increased to the point of an "information explosion." So much was learned that no one man could ever again keep up with everything medical. This fact, coupled with the physician's desire to excel by command of information, led to medical specialization. Caught up, as we were, in 1955, bringing new discoveries to the care of patients in exciting graduate specialty programs, we took for granted that patients were "created unequal." They were divided into three categories at University Hospitals, A, B, and D. The "private" (D) patient paid the bill for his room, his lab tests, and his own "private" attending staff physician. The intermediate (B) patient, less affluent, did not get a doctor bill, but paid for room, board, and lab tests. The "county" (A) patient had to go begging, hat in hand, for "papers" from his county's commissioners indicating that the cost of his care (free to him) would be borne by the citizens of his county. To qualify for free care he had to dispose of all his assets — his house, his farm, his cows, his auto. He had to use up the savings of a lifetime's work on his medical expenses before he qualified as a "county" or charity patient. For this patient, we took away his dignity before we took out his diseased gallbladder.

THE PRESENT (1965-1972)

1965 will be marked by historians as the year when the interface between medicine and society widened beyond the individual patient and his physician. Despite the dollar infusion of two decades, despite the breathtaking scientific advances in medical knowledge and technology, many lives were untouched by the wonders of medicine. The same "miracle" which lowered Minnesota's infant mortality to 18 per 1,000 live births did not occur on the west side of Chicago, where infant mortality remained four times as high
(Continued next page)

as in Minnesota. America's health and social policy makers discovered that making medical miracles possible did not assure their availability to all people. For the lack of expectations of 1920 we had substituted a cruel situation by 1965 — the realization that something wonderful *could* be done but wasn't possible for some people. We created a cohort of disadvantaged — a promise and a failure.

Because, for the first time in history, the patient with renal failure could be salvaged by chronic dialysis and organ transplantation, we had to make it possible (just to be fair) for *all* patients with renal failure to have a crack at a cure. Gradually there evolved the social philosophy of *medical care as a right, rather than a privilege*. The immense significance of this statement of social policy must be underscored. The doctrine that medical care is a *right* of all people caused (and still causes) new directions to be pursued in health policy, with many far-reaching consequences.

Our federal policy makers, advised that lack of purchasing power prevented many people from good care, enacted Medicare and Medicaid legislation in 1965. These giant steps removed the barrier of inability to pay for a great segment of Americans. Those over 65 would no longer have to lose the savings of a lifetime — the charity patient was abolished. Yet we forgot the powerful marketplace effect which operates in the health industry: we created an increased demand without increasing the supply or affecting the organization of medical services, so inflation occurred, and continues to occur at an express-train rate of increase. The health industry now is a \$70 billion annual business — 7% of our GNP — and the rising cost of health care has moved to the central position among issues.

Whenever something costs a great deal, and is paid for increasingly by the government (three of every eight of these \$70 billion are government funds) the "public presence" increases. Medical care has become a social enterprise and a public enterprise by virtue of public involvement in its financing. We are now beginning to see a major effort aimed at accountability (PSRO legislation) as a consequence of the public presence. Such a trend will continue and increase, and be articulated in a variety of ways.

Let us turn our attention for a few minutes to the present status of medical education, with which many of you will be so intimately involved as consumers, in the next few years. We have 106 medical schools in the nation producing an annual crop of about 13,000 graduates, excellent biomedical research, and a goodly amount of medical service. Yet medical education is, viewed as an instrument of public policy, a

"non-system," to use the popular jargon. Despite the fact that the medical education enterprise is heavily subsidized, there is little accountability for results. It might be accepted that the general purpose of medical schools is to raise the health status of the American people, yet there is little evidence that the heavy financial subsidies of the last 20 years produced commensurate results in this direction. There is no general relationship between undergraduate (pre-M.D.) and graduate (post-M.D.) medical education, a situation which precludes rational medical manpower production. The block grant support of biomedical research is giving way to contract support of targeted research — the systems analyst has us convinced that a "moon-shot" approach (the NASA model) will cure cancer — yet there is no general integration of research goals or a national research policy.

To conclude our brief glimpse of the present situation, let's look at the state of the community hospital, vintage 1972. Medical science has indeed changed the hospital from a place one goes to die to a place one goes to get well, but in the process we have created another dis-integrated industry. Federal support of hospital construction began with Hill-Burton (1946) and resulted in the creation of thousands of nice little hospitals all across the land. Competition for patients and doctors, empire building, and overlapping of services are but a few of the results of promoting the growth of the hospital industry in the absence of policy. We allowed a hospital insurance industry to grow which promoted the provision of health services in the most costly setting — the institutional environment. We then fed the inflationary fire by Medicare and Medicaid, and produced runaway hospital costs which now exceed \$100 per day, and constitute a legitimate "crisis." The countryside is dotted with 30-bed hospitals in almost every little town, standing half empty, a costly tribute to poor planning.

THE FUTURE (1972 AND BEYOND)

Now comes the interesting part of my assignment. We have looked at where we've been and where we are — now let's look at where we might go in *your* years in medical practice. I'll try to cover the topics we have looked at so far. *Medical manpower* will increase greatly by 1980. Assuming no new medical schools, and current production rates, we will turn out about 15,000 physicians a year by 1980, and have 400,000 in the work force. Because physician production is growing more rapidly than population, we will have about 180 M.D.'s per 100,000 people, as a national ratio, by 1980. Compare this with the present ratios of 99 per 100,000 in Minnesota, and 70 per 100,000 in North Dakota.

Supply alone, however, presents only one facet of the physician manpower picture. In your day we will be seriously addressing the questions of utilization, distribution, and organization of manpower. Efforts will be made, through the differential financial subsidy of graduate medical education, to produce the "right" proportion of the various medical specialties. To use a perfectly obvious example, we do not need as many neurosurgeons as we do family doctors, so family practice training will be more heavily subsidized.

There are those who believe the "market place" will take care of producing the right numbers of each kind of doctor, by the law of supply and demand, but that method would be a slower, more costly and more painful alternative to careful planning. Supply and demand do not affect the health industry as they do, say, the snowmobile industry. To illustrate this, let me tell you that Massachusetts with a population of 6 million has as many neurosurgeons as Great Britain with a population of 48 million. Thoughtful people really doubt that there are eight times as many brain tumors in Massachusetts.

Even if we produce the right numbers of the right kinds of doctors, how can we get them to practice where they are needed? The present maldistribution of physicians leaves rural areas and inner-city slums medically underprivileged. It is likely that all or many of you will be asked to practice in areas of need for a couple of years after graduation from medical school. A national health service corps will replace compulsory military service, and your medical education will be subsidized by loans or grants, the latter to be repaid by a period of service in an area of need. Already, the federal government offers forgiveness of Health Professions loans in exchange for your practice in qualified need areas.

In your day, policy makers will look at the organization and efficiency of health services as well. There will be an increased tendency toward group practice and regionalization of health services, whereby a regional center of 5,000 people will have a group clinic and serve the smaller towns in a circle with a 20 to 30-mile radius, rather than having one doctor in solo practice in each of those smaller towns. Advances in transportation technology will contribute to the availability of health services. Finally, each physician will increase his efficiency by utilizing paramedical personnel for delegated, routine tasks such as data gathering, screening, and management of stable chronic illness.

Now let's look at *facilities* in your day. We will stop replicating small community hospitals (Hill-Burton legislation is being discontinued as I speak) and create an integrated hospital system. By public policy, hospitals will have to justify their existence



But, Dean, it says here I am admitted to Medical School only if I agree to practice in Pequot Lakes.

(this is called "certificate of need" and became law in Minnesota in 1971). Having justified it, they will be both franchised and subsidized. As hospitals become an instrument of public policy (a consequence of the "health as a right" doctrine) we will follow the airline industry model in providing hospital services. Just as only three or four airlines are franchised to fly between Minneapolis/St. Paul and Chicago, only so many hospitals will be franchised to provide for the service needs of a defined population. Just as an unprofitable airline route to a small town is subsidized now to provide service to people who would otherwise be without it, hospital services will be subsidized in areas of need where they do not exist. Along with the franchise, of course, goes accountability for good medical care, accompanied by a series of accountability mechanisms such as mandatory accreditation.

Finally, you will see increasing efforts to move the hospital into the arena of ambulatory care — to become the *center* of medical care. A major challenge is to wed the organizational and management expertise of the hospital to the healing capability of the health professionals force to produce a social instrument capable of accepting a "can do" responsibility for the provision of comprehensive health service to a defined population. In terms of your professional lives, this means that more of you each year will be salaried employees of these health service enterprises that evolve from present-day hospitals.

(Continued next page)

Let's look at how we will *pay for* medical care in your day. You remember that I said people went without health services in bygone days because they simply couldn't afford them. The next step was the demeaning "charity patient" with his county papers. Now we have Medicare and Medicaid. In your day all people will have health insurance — national health insurance — removing the barrier of inability to pay. You will be spared the worry about whether the patient can afford the quality of care you feel his medical situation deserves. In exchange for this, however, you will be asked to participate in cost containment — hospitalizing patients only when appropriate, keeping length of stay in hospitals down, and ordering only those laboratory and x-ray studies necessary for good medical care. You will likely practice in the HMO (health maintenance organization) model, in which you will be *involved* in cost containment. In this system, you will belong to an organization which is responsible for delivering comprehensive health services to a defined population for a set prepaid fee, and you will have an incentive to keep costs down.

Medical education will change in your day, as it becomes an instrument of national health policy. As in any other production enterprise, some rational output planning will control the supply of physicians. There will develop a more integrated model in medical education which will eliminate duplication of course work in the later college years and the early medical school years. The biochemistry taught a freshman medical student will depend on whether he was a chemistry or English major in college. Currently, a few medical schools, using selected students, are producing an M.D. six years after graduation from high school. Integration of medical learning is occurring at the end of medical school, as well as at the beginning: Senior year elective clerkships are being designed to simulate the internship learning to eliminate overlap. The freestanding internship will be eliminated by 1975, and graduate (post-M.D.) training will be considered as an integrated package.

In addition to integration, externalization of medical education will occur in which many of you will receive clinical training in community hospitals by extension faculty. The integration of the classical "teaching hospital" with the community hospital will prevent duplication of expensive facilities, permit sharing of faculty resources, and increase the relevance of medical education. The "medical school without walls" concept is being tested now in Michigan, Illinois and Missouri, among other places.

A quiet conceptual revolution in medical education is also occurring. I mentioned earlier that because of the information explosion the time has passed when one person can command all medical knowledge. Medical educators have, as a consequence, had to

abandon the "content model" in which every manifestation of every disease was carefully poured into the weary student, like filling a milk bottle. Medical education must follow the "process model" from here on, in which the student is taught to be a problem solver and a lifetime self-learner. By teaching information gathering and problem solving, the essence of medical education will be to teach you how to gather information to correctly identify the problem and then seek the solution in the information bank.

Since we won't fill you with content, we won't have to measure your information supply, so no examinations. Before you revel too happily in that good news, however, let me tell you the bad news: You will be evaluated by a whole new set of behavioral parameters, a process (vs. content) evaluation. We will measure our finished products in terms of thoroughness and reliability of information-gathering, ability to analyze the information to arrive at problem statements, and efficiency in problem solving. The "core of behavior" will replace the "core of knowledge" as the main goal of the medical education process.

The world in which you practice medicine will be different from today's in many ways: Instead of "hanging up your shingle" above a drugstore or in a medical office building, many of you will join some sort of medical *organization* in which your role will be defined. Whether it be a small group practice, a free-standing health maintenance organization, or an "extended hospital," it will free you from organizational and management tasks, or at least help you with them. You will be assisted in the information-gathering job by surrogate health personnel, the patient himself, and electronic data processing. You will be responsible for the accuracy and reliability of your extended data-gathering resources, and assume as your major professional responsibility the critical interpretation and analysis of data leading to diagnostic and therapeutic decision-making and action. You will have to acquire some management skills if you expect to be the leader of the health care team — there are now about 200 separate health occupations and professions that need to be brought to bear in an integrated fashion to solve the patient's problems.

The *process* of medical care will change fundamentally. If you have been to a physician lately, you know that the encounter usually begins with you sitting opposite him, and, armed with a blank piece of paper and pen, he asks "Why are you here?" He then develops an account of your "present illness," asks pertinent questions about your past medical history, performs a physical examination of some sort, and arrives at a tentative conclusion as to what's bothering

For your final exam, you will cure Mr. Robertson.



you. In your day, the widespread implementation of multiphasic health screening will mean that by the time you see the patient much of the data base will have been assembled, abnormal findings flagged, and you will develop the requisite number of "present illness" descriptions to permit analysis of the data and problem definition. Rather than a piece of paper, you will enter data by desk top CRT (cathode ray tube) to a central bank of patient-centered data stored in a computer. Your decision-making will be aided by displays of data interactions stored as computer programs. When the problem has been identified, you will access a computerized "information bank" relative to that problem to assist your clinical management. These electronic textbooks will be continually updated by inputs from the biomedical research effort, so your patient has the benefit of the latest knowledge.

Functioning as a part of a system, you will be subject to system-wide *accountability* in a number of ways. Quality control in medical care, now appearing in the newly (1972) enacted Professional Standards Review legislation (PL92-603) as applied to health care paid for by social security, will extend to all patient care with the advent of national health insurance. Some of you will devote your professional lives to *medical care evaluation*, the process of quality control, in medical care. This process will advance from its present dependence on *input measures* (licensure, board certification, etc.) to develop methodology to systematically evaluate the *process* and *outcome* measures. Medical care evaluation will serve as a feedback loop to the process of medical education to

more closely relate the purpose of medical education (improvement of the health status of people) to its achievements. You will all contribute to the medical education of those who follow you by providing an analysis of your results (health care outcomes) to medical educators to shape future curricula.

The general picture of health care a generation from now will look like the utility model. Medical care must be as utilitarian as the telephone and electricity. When you want to speak to your mother-in-law in Trenton, you simply pick up a phone at any convenient site and access a *system* that accomplishes your objective. This system was carefully built by a public/private partnership, requires teamwork and organization, and uses the franchise and subsidy principles to achieve its ends. In implementing the social policy of health care as a right, we would do well to emulate the utility model.

In closing our look at the brave new world in which you will practice let's remember a couple of things. Whatever the system, sick people will, as individuals, ask the physician, as an individual, three questions laden with importance. What is wrong with me? What is probably going to happen to me? and What can be done about it? We will fail you unless we prepare you to answer those questions with skill and compassion. Whatever the system, the doctor's job, described long ago, won't really change much: to cure sometimes, to relieve often, to comfort always.

Thank you and good luck in your careers in medicine! □

1973

STUDENT ACHIEVEMENT AWARDS

The Award

The second annual Medical Student Achievement Awards of the Minnesota Medical Foundation were presented April 26, 1973, at a meeting of the Board of Trustees of the Foundation. The award winners each received a certificate and a \$1,000 prize.

Purpose

The object of the Student Achievement Award program is to find and reward medical students who demonstrate rare qualities of current performance and appear capable of exceptional future contributions to medicine. Candidates are sought for qualification under any or all of the following three general areas of achievement:

ACADEMIC EXCELLENCE — In recognition of exceptional scholastic record, scientific research activities, academic awards won.

STUDENT LEADERSHIP — In recognition of service to institutional goals of the Medical School, and involvement in student organizations and extracurricular activities.

COMMUNITY SERVICE — In recognition of demonstrated concern for the public good, volunteer professional service and humanitarian responsibility.

Selection

Award winners were selected by the Honors and Awards Committee of the Minnesota Medical Foundation from nominations submitted by students, faculty and other persons associated with the University of Minnesota Medical Schools. The Honors and Awards Committee also determines the number of awards to be given and the amount of the honoraria.



Michael Belzer, 25, is a third-year medical student recognized with this award primarily for his work in venereal disease education programs. He wrote a VD education handbook which was published by the Minnesota State Department of Health and later adopted by the Junior Chamber of Commerce for national distribution. With another student, he set up a VD education speakers' bureau and participated widely in it himself. He served as 1972 chairman of the Student American Medical Association (SAMA) National VD Community Outreach Education Program and serves on the Minnesota Governor's VD Awareness Committee. He also established a counseling program at the University of Minnesota to bring together undergraduate students interested in various health science fields with professional students already studying in their fields. He is a consultant to the SAMA-Roche Video Journal for production of a medical education tape and he helped produce four half-hour television shows on health care in Minnesota, the latter in cooperation with other students and KTCA-TV. He has been active in many of these programs through his association with the University's all health sciences student group called the Council for Health Interdisciplinary Participation (CHIP). Belzer also served as a member of the Medical School's Educational Policy Committee for two years and has been Minnesota's student representative to the Association of American Medical Colleges. He received his undergraduate degree in psychology from the University of Minnesota. He is a son of Dr. M. S. Belzer, Minneapolis, (Med. '31).

George Blatti, 28, is a fourth-year transfer student from the University of North Dakota's two-year medical school. He was selected primarily for his national leadership in medical student affairs. For 1972-73, he served as president of the Student American Medical Association (SAMA), the largest independent national body of medical students in the United States, with about 18,000 members. His extensive involvement with SAMA involved a great deal of travel and he delayed completion of his own medical education to present SAMA policy before Congress, organized medicine and schools throughout the country. SAMA planning in which he was involved includes development of student summer health projects in Appalachia, in migrant worker camps, on Indian reservations and in rural community hospitals. SAMA has also produced many medical education films and publishes a magazine. SAMA sponsors a foreign student exchange program which each year involves about 250 professional students from the United States and several other countries. Blatti is a member of the American Medical Association (AMA) Committee on Long Range Planning and Development and is a delegate to the AMA House of Delegates. He is a member of student advisory committees to the Secretary of Defense for Health and Environment and the U.S. Bureau of Health Manpower Development. After graduating with honors from St. Mary's College in Winona in 1967, he taught junior high and high school in Minneapolis for two years before entering the University of North Dakota Medical School. His parents are Mr. and Mrs. Milton R. Blatti, Mankato, Minn.



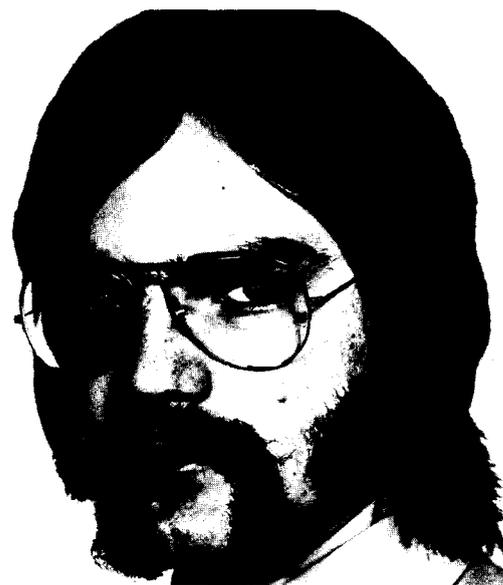
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STUDENT ACHIEVEMENT AWARDS Continued



Per Freitag, 30, receives his M.D. degree from the University of Minnesota June 8, 1973. He received a Ph.D. in anatomy from the University of Illinois Medical Center in 1971. A native of Norway, Dr. Freitag became a U.S. Citizen in 1969. He has helped teach anatomy at the University of Minnesota since arriving here as a medical student. He was chairman of the Phase B (second year) Steering Committee and served as student representative on the Medical School's Home and Joint Teaching Committee. With another student, he developed a teaching program for the Learning Center of the University's Bio-medical Library. He also helped develop an independent study program for medical students, a project which later withered due to lack of funding. His internship and residency programs will be in orthopaedic surgery. Per is the only married student among the four winners of 1973 Student Achievement Awards. He and his wife, Carol, are expecting their first child in August.

Robert P. Hebbel, 26, completed all the work necessary for his M.D. degree in March, 1973, and is vacationing and doing research until his class graduates in June. His research on blood ("The Effects of Hypophosphatemia Upon the Human Erythrocyte"), co-authored with Dr. Harry S. Jacob, was presented at the American Society of Hematology meeting in Hollywood, Fla., in December, 1972, and has also been accepted for presentation to the Annual International Symposium on Red Cell Structure, in East Berlin. With another student, he helped develop four half-hour television shows dealing with health care delivery and its problems in Minnesota. He also served on an ad hoc committee of the Medical School to consider a student's scholastic standing appeal. He served as medical facilitator at the Cedar-Riverside free clinic for two years, working there at least one night a week. He is a son of Dr. Robert Hebbel (Med. '32), professor of pathology at the University of Minnesota Medical School.



MINNESOTA M.D. DISTRIBUTION: WHO COUNTS?

Statistics on the distribution of graduates of the University of Minnesota Medical School tend to vary considerably from one study to another, with differences depending as much on who does the counting as on when the count is taken.

Research conducted by Judith Garrard, Ph.D., is reported in the June, 1973, issue of *Minnesota Medicine*. Dr. Garrard is curriculum evaluator for the Medical School and assistant professor in the department of physical medicine and rehabilitation. The study reports geographical location, specialty and type of practice of 5,572 graduates of the University of Minnesota Medical School. Data was acquired from the American Medical Association in June 1971. According to the report, 2,631 of the 5,572 graduates were practicing in Minnesota (47%).

In December of 1972, the Minnesota Medical Foundation asked Medical Mailing Service, Chicago, for a distribution report on graduates of the University of Minnesota Medical School. The mailing service owes the accuracy of its lists to AMA, which provides the data and closely monitors its use. The computer printouts said there were 5,164 living graduates of the Medical School, 2,536 of them practicing in Minnesota. With an infusion of 181 graduates of the Medical School in 1971, we showed a net loss of 408 alumnae and a net loss of 95 practicing in Minnesota. Don't you believe it.

Dr. Garrard's study showed 5,863 total physicians in Minnesota (regardless of medical school background) as of June, 1971. The *Medical Bulletin* asked

the Minnesota State Medical Association for its count of physicians in the state as of December, 1972. The total was 5,756.

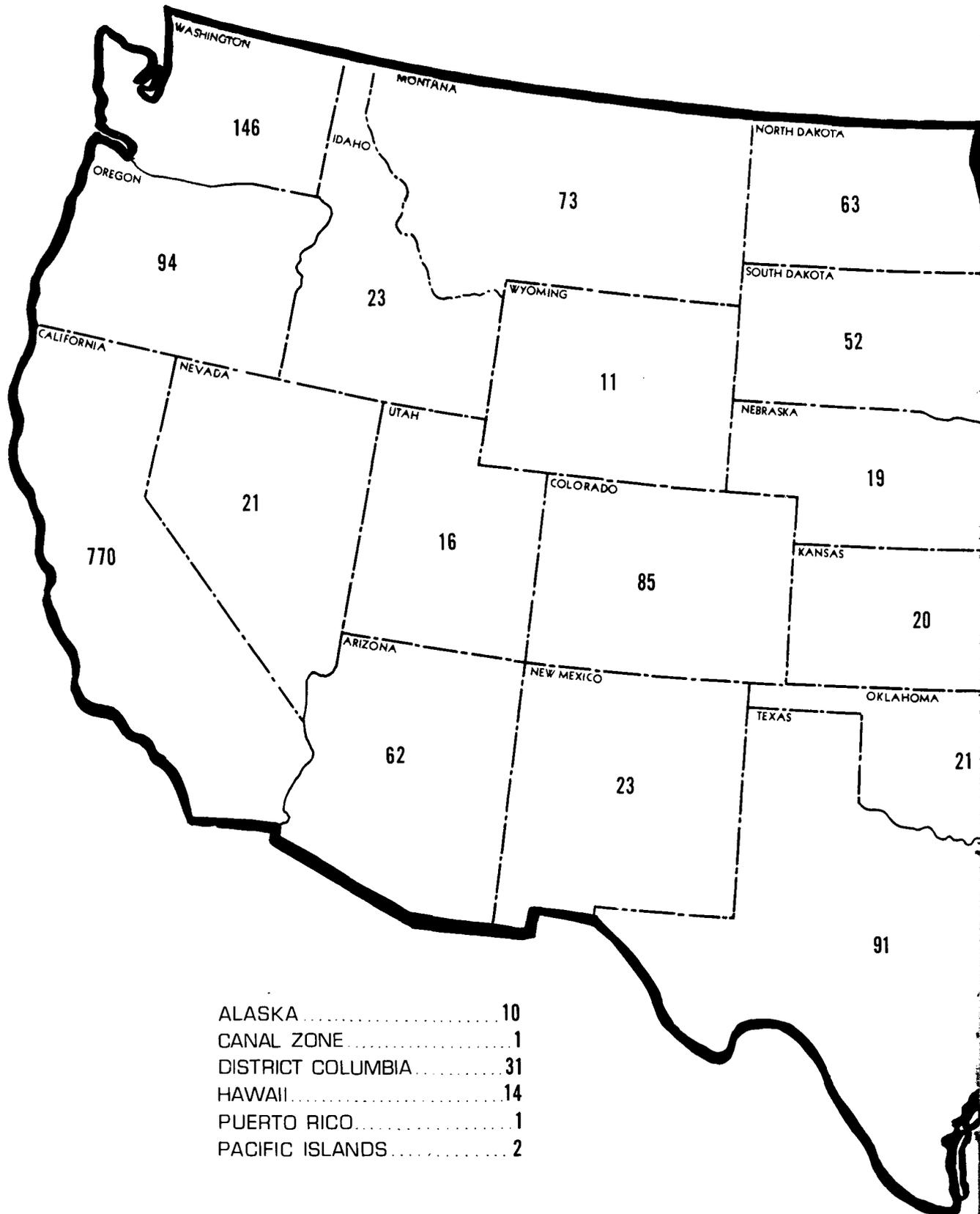
The *Medical Bulletin* carries a medical alumnae distribution map in this issue (next two pages). We used the counts acquired from Medical Mailing Service. We checked a few of the counts against our own mailing lists. The map shows one Minnesota medical graduate in South Carolina and nine in Georgia. We have names and addresses for two of our graduates in South Carolina, but we only have names and addresses for eight in Georgia.

COMMON DENOMINATORS

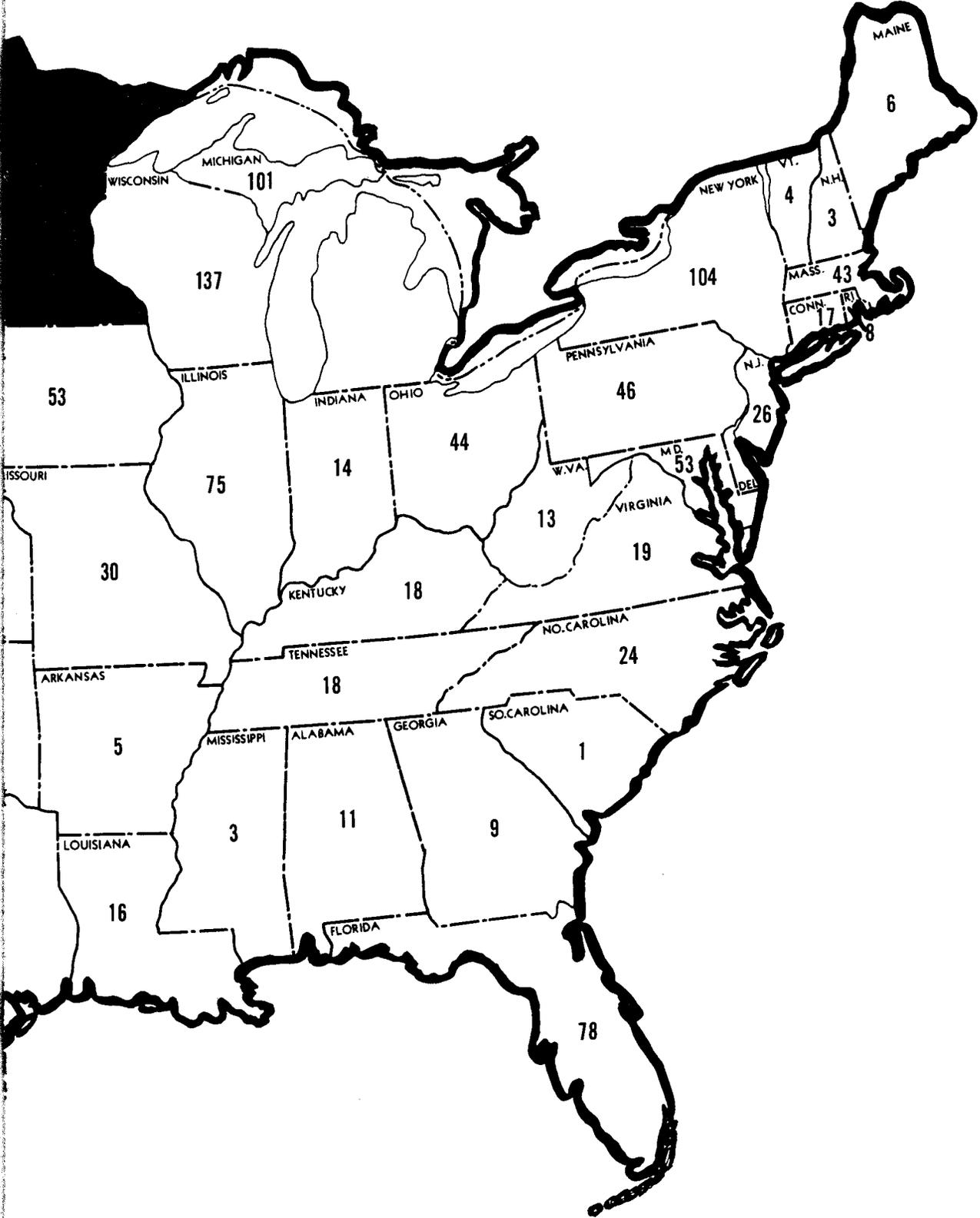
About half of the graduates of the University of Minnesota Medical School are practicing in Minnesota, 47% by the Garrard count and 49% by our later count. About 40% of all Minnesota medical graduates have been certified by a specialty board. About half of Minnesota's medical graduates, on the average over the years, took an internship in Minnesota. (The percentages of Minnesota internships have been running considerably on the plus side of 50% of graduating classes in the past several years. See the internship analysis on page 26 of this issue). About a third of the Minnesota medical graduates currently located in Minnesota call themselves "general" or "family" practitioners.

For more details of the Minnesota study, contact Dr. Garrard, in care of the Medical School. □

DISTRIBUTION of University of Minnesota Medical School living alumni by state. Information at December 31, 1972, from Medical Mailing Service, Chicago.



TOTAL: 5,164



Profile of a CUHCC (kook)

By Patricia Bloom

Medical Student

Member of Editorial Board, *Medical Bulletin*

Few people at the University of Minnesota have ever heard of the old five-story apartment building on Minneapolis' near south side called the Community University Health Care Center (CUHCC — "kook"). But to the people of the surrounding area, and especially to CUHCC's 2,000 children and their families, it is the home of a multi-faceted approach to good health, and to the things that make good health happen.

THE CUHCC PLAN

On paper, CUHCC is one of the Child and Youth Projects provided for by Title V of the Social Security Amendments of 1965, the same bill which established Medicare and Medicaid. In contrast to the simple monetary reimbursement approach taken by these two programs, the inception of the "Child and Youth Comprehensive Health Care Service Delivery Program" sought an upheaval of old ways by new philosophies and methods, in hopes of answering unmet needs in health care. The challenge of the projects would be "to make it possible . . . to offer an opportunity to develop, test, and apply new methods of providing care to children . . . (with) departure from traditional methods of providing child health supervision (if) necessary."

The necessity of this departure from tradition was pointed to by the inadequate, piecemeal care received by children of low-income families in crowded, often inaccessible outpatient departments of large city hospitals. It was called for by the existence of racial, cultural, and language barriers to health care, and by conditions which fostered poor health while, by their pressing nature, making health care a low priority: poor housing, crowding, unemployment, undernutrition, violence, alcoholism, drug addiction.

It was decided that each Child and Youth (C-Y) Project, in response to the unique needs of its community, would organize itself in a manner judged to best meet those needs. By the provision of medical, dental, nursing, social service, nutrition, speech and hearing, psychology, and physical and occupational therapy care it would provide immediate, acute care for those children needing it, while more importantly establishing comprehensive health assessment and

maintenance programs which would eliminate much of the demand for acute care. The uniqueness of each project would lie in its special services, created to answer the unique needs of the community: poison control centers, programs for teens, unwed mothers, parents and drug addicts, legal aid centers, day care centers, learning disabilities centers. Eligible grantees for the program would include medical schools, teaching hospitals, crippled children programs, and health departments, their dollars matched three-to-one by federal monies.

CUHCC IN PRACTICE

What has happened between the paper plans of 1965 and the CUHCC of today? Has it realized its potential as a radically broad-based attack, not only on disease but on the absence of physical, mental, and emotional health?

Dr. Barbara Schulte of the CUHCC staff.



In 1966, both the Minneapolis Health Department and the University of Minnesota applied for a grant to found a Child and Youth Project. With the diplomacy unique to governmental programs, the grant was awarded to the health department with the University grant becoming a sub-project under the administration of the University. The choice of area was based upon the increasing mobility and decreasing income of CUHCC's neighborhood, manifest in perinatal and infant mortality rates, especially in the Indian and black populations, far above the rest of Minneapolis, a higher percentage of high-risk pregnancies, higher percentage of mothers under the age of 18, and higher fertility and birth rates than the rest of Minneapolis.

Thus, with an old rented apartment building as home base and a set of priorities: to provide preventative-oriented health care to the community, under the direction of the community, and to serve as a model and teaching lab for community-based comprehensive health care, CUHCC opened in 1967. As with any unprecedented venture, it encountered an array of problems along the way, but has evolved in five years into a viable demonstration of the workability of community comprehensive care.

CUHCC's health program, through a rather complex network of services, attempts to provide the comprehensive medical, social, and developmental care envisioned by its founders. Children are given a complete medical exam, including physical examination, and laboratory, hearing, and vision tests (Child and Youth Projects statistics for one year ending June 30, 1971 showed that 14% of 71,000 children tested failed vision screening tests, and 7.6% of 77,000 children failed hearing tests); dental assessment includes exam, x-rays, and fluoride treatments; a nutritionist meets with the parents to discuss the family diet and food buying and preparation; the child is assessed concerning his developmental and social status. Following the assessment, the child's immediate health problems are treated, after which he becomes part of the health maintenance program and is assigned to a community health worker who, as family health coordinator, follows the child's progress in his home environment. For a child under three years of age, a nurse may become the family's health coordinator, and help the family keep abreast of the infant's development by discussions about toilet-training, safety, discipline, and other "parenting" techniques. The baby's physical, psychological, and social development are assessed every month for the first six months of life, at nine and twelve months, and then every six months until the age of three.

A full health team of three pediatricians, one in-clinic nurse, a group of visiting nurses, three community health workers, a nutritionist, dentist, dental hygienist, social worker, psychologist, speech and

hearing specialist, and health educator work together to optimize each child's health picture. A hospital network involving Lutheran Deaconess, Fairview, University, and Hennepin County General, a private group of pediatric surgeons, and consulting orthopedists, ophthalmologists, and ENT specialists are available for referrals, laboratory tests, x-rays, and hospitalization. Psychiatric diagnosis, therapy, and hospitalization are also available.

At present, CUHCC's efforts at prevention of health problems, outside the realm of the physical health maintenance program, are centered around community and school health education, classes in "parenting", and the upcoming opening of a child development center.

CUHCC'S FUTURE

In the future, CUHCC hopes to place special emphasis on sex education, family planning, and perinatal care, to reduce teenage pregnancy and venereal disease, and to reduce perinatal and infant mortality.

Community involvement in CUHCC has slowly grown over the last five years. A "career ladder program" was started to encourage community people to choose health careers, by employing them as "new professionals" and heading them in the direction of medicine, nursing, psychology, and human services. A movie made by community people welcomes each new family to CUHCC. An advisory committee made up of community members provides feedback and direction for CUHCC's programs and has one note on CUHCC's executive committee.

Whatever problems CUHCC has faced over the years — staff turnover, difficulty in obtaining specialists, the time-consuming nature of comprehensive health care, the division of authority integral to the team approach, and the sometimes differing interests between the University and the health department — nothing has been as frustrating and psychologically defeating as the uncertainty of supporting funds. Funding for CUHCC in 1972 remained at approximately the 1967 level, despite inflation and increased patient population. Funds from the Emergency Employment Act and Northlands Regional Medical Program were lost. Minnesota Crime Commission funds are still in limbo. Next year's funds, and the life of the clinic, are very much in question.

Is CUHCC worth saving? The answer is obvious to CUHCC's families and to the 464,000 (1971 statistics) children cared for under nation-wide Child and Youth Projects. In fact, Child and Youth Projects have proven their merit in many ways. Statistics demonstrate the correctness of the idea that comprehensive, preventative health care can reduce the



Dentist Elliott Karpeles.



Nutritionist Sharol Hopwood.



Communicologist Lee Moody.

need for acute, crisis-oriented health care, and that the initial investment in health assessment will reduce future maintenance health costs. Inpatient hospital care was required by 7.7% of C and Y patients in 1968, with an average stay of 7.5 days; in 1970, 4% of C and Y registrants required hospitalization, with an average of 6.4 days. Total hospital days were 113,000 in 1968, and 98,000 in 1970, despite a clinic population increase of 80%. Cost has declined from \$200 per child in 1968 to \$133 per child in 1971.

The projects have shown the competency of health paraprofessionals in delivering health care, and demonstrated an answer to the problem of health manpower shortage in doing so. They have proven the value of community participation in meeting the unique needs of each community. They have raised the index of awareness concerning issues and problems of community health care delivery in the medical and other health science schools whose students participate (about one third of the projects are run by medical schools).

There are many ways the University of Minnesota and the Medical School could improve their support of, and I think benefit from, CUHCC's programs. Up to this time, the Medical School has had little direct contact with CUHCC. The University and state have so far directed their support to large, centralized

medical complexes and not to smaller community clinics. Although CUHCC, admittedly, does not provide a great number of medical cases of academic interest, it could be effective in exposing health science students to comprehensive community-oriented health care if it could be incorporated into the satellite teaching hospitals program of the Medical School.

Dr. N. L. Gault, Medical School Dean, has stated, "Every medical school today needs a model health care delivery unit in which comprehensive primary care can be given. Medical students should have an opportunity to study in such a center. CUHCC certainly offers this example in the pediatrics field but lacks a program in adult medicine. Perhaps in cooperation with the city of Minneapolis the program can be staffed and expanded in the future to offer primary care to all ages thus establishing a more important resource for education of all health science professional programs."

A parents group from the CUHCC area, called Community Health, Incorporated, has already been



Joanne Bednar, R.N.

formed to seek the extension of CUHCC into just such a program in adult medicine, but again, funds are a limiting factor.

Other medical schools have effectively evolved a community health program around a C-Y Project, some with surprising results. The New York University-Bellevue Hospital project was influential in causing 24% of the 1971 graduating medical class to choose internships in pediatrics.

In our present medical system in which doctors'

specialties and areas of practice are the product of free choice and not assignment, areas of greatest medical need will only receive adequate medical manpower if students can be shown the feasibility and rewards of community-based comprehensive health programs.

The Medical School and state legislature have demonstrated interest in community health care, as shown by the broad financial and staff support given the Rural Physician Associates Program. Surely Minnesota can also support CUHCC and its philosophy.

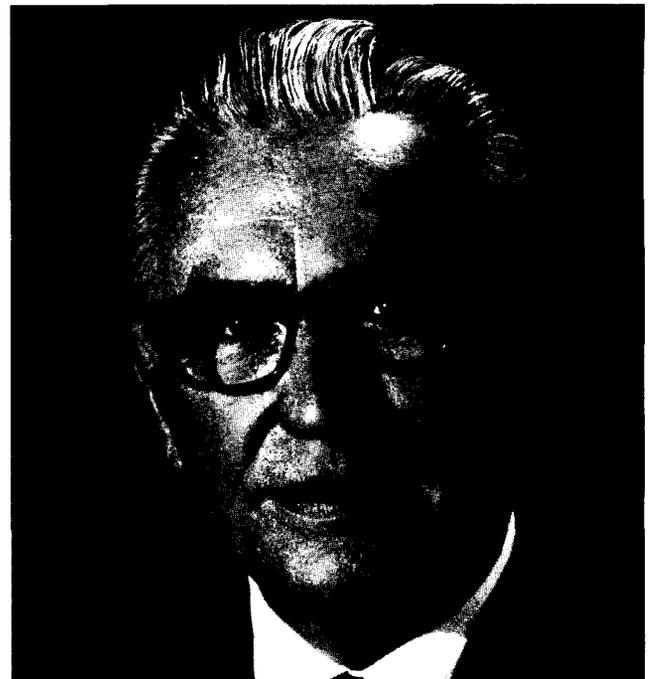
THE NOBILITY AND RESPONSIBILITY OF MEDICINE

By Wesley W. Spink, M.D.
Regents' Professor of Medicine and Comparative Medicine

(Address presented to graduating medical students at Annual Medical School Recognition Day, University of Minnesota, June 8, 1973).

I find myself in a rather unique and pleasant position today. Commencement exercises mark the beginning of a career and the time for festivities. You, as members of the Class of 1973, have reason to be festive and so have I. At the conclusion of hard work in Medical School, you are ready to launch your careers, most of you as practitioners. And I, after 36 years in this Medical School, will also depart and embark on a different phase of medical science. Since my most active years are in the past, it would appear most appropriate for me to look briefly with you at our medical heritage, and to ascertain where we are today and what can be expected of you in the near future.

The traditional concept of the physician has been that of a distinguished figure widely known and respected in his community. His base was an office in his home, and he responded to the needs of his patients promptly — night or day. Although lacking modern scientific technology, he did bring with him comfort and assurance to the patient and to his family; in fact, he knew all members of the family. But the rush of modern life has changed much of this. Families are not only nomadic, but family life has



Wesley W. Spink, M.D.

disintegrated. The doctor is now based in a medical center, usually a suburb, and in large hospital. It is often difficult to locate a doctor in an emergency and home visits are rapidly declining.

Although scientific technology has brought this country to the highest standard of living and to the most advanced medical care in man's history, the public is dissatisfied. They voice the opinion that we may have the finest medicine in the world but they can't get at it, and when they do they

can't afford it. The people have alerted their elected representatives, who very likely will choose to do something about health care delivery, hoping to receive the cooperation of the medical profession. In this crisis there is no question but that the image of the physician has been tarnished. He is looked upon as being resistant to change; he has been driven to specialization through his medical education; he is oriented to a country club-affluent type of life; and he seems to be lacking in the compassion and personal sacrifice exhibited by his predecessors.

In endeavoring to resolve the present dilemma let us look at and defend the physician himself. I have continually maintained that the average doctor is a decent, hard-working, compassionate and dedicated human being. Trained as a scientist he is cautious in accepting the new, but like everyone else, he is overwhelmed at times by the conflicts in modern society. Furthermore, because of the tremendous advancements in scientific medicine he is at the same time a victim of this very progress, a factor which I will clarify shortly. I sincerely believe that you have joined the ranks of a noble profession and that you will exert yourselves to uphold this tradition.

On the other hand, the physician has always been an individualist. In his daily practice he is selected for advice and treatment. He tells the patient what is wrong and what needs to be done. With or without further aid, his wishes are carried out. His fee is usually determined fairly, and in many instances omitted. He has always resisted any type of regimentation. After all, he is a descendant of the priest-physician tradition. Little wonder, then, that his medical organizations reflect this independence and have not only resisted change, but have often fought legislation that would inhibit his freedom in this doctor-patient relationship.

What, then, is the crux of the present crises in medical care? I have stated that the medical profession is locked within the confines of scientific and social progress, progressive changes that include lower infant mortality rates; better nutrition and housing; the control of infectious disease; superb sanitary engineering and public health; and increased time for leisure and play. As a result, people are living to a more advanced age. We have a population of at least 25 million persons in this country 65 years and older. Chronic, degenerative diseases with physical and mental disability are foremost challenges to the medical profession today. The elegant medical facilities and excellent personnel available are beyond the financial potential of millions of people. Change is essential and changes will be made. What then can you anticipate?

Let me point out some revisions under way. I

emphasize that these projections have a price tag on them in dollars and cents, and if these are what the people desire, then the public must pay, and that means the taxpayer.

First, there is a serious movement on foot for a program of National Health Insurance that would guarantee every man, woman and child in this country adequate health care. I seriously doubt that this coverage will be total, at least I hope not. There is ample room for an accompanying improvement in private insurance management for health care. This should be a joint endeavor, and I believe that it will be.

Second, there will continue to be an increased emphasis on a revision of medical education to meet the changing demands of practice. Unquestionably more physicians, paramedical assistants, faculty and facilities are required for adequate primary health care. This means changes in the curriculum with more diversification, such as the core-track type. But in carrying out this educational mandate there are many hurdles that must be surmounted. I am not certain that with such diversification a standardized academic approach should be made in evaluating and grading the efforts of the students at all levels. It does appear to me that uniform sets of written examinations on a national basis are taken more seriously than is warranted. Without deterring from excellence, further elasticity should be introduced. One feature in a changing medical program that I do fear is a reduced emphasis on the basic sciences. This aspect of the medical curriculum is important for good medical training, no matter what the eventual goals are. Perhaps such instruction and guidance should continue throughout all three or four years in medical school. Again, this requires more faculty and adequate facilities. Above all, during this crisis with its attending hysteria and many voices crying out for rapid action, we must not turn our medical schools into vocational institutions.

Third, as a continuation of the foregoing thoughts I urge that basic research should be adequately funded. The problems of heart disease, hypertension, cancer and many other ailments will not be resolved by crash programs of so-called applied research. The history of all scientific progress is that "break throughs" are built upon the efforts of many scientists contributing to basic knowledge. Individuals and small groups should be supported, and at the same time, should be monitored by their peers, as they pursue their own research ideas. Remember that it was a chemist, Louis Pasteur, and a general practitioner, Robert Koch, who built on past accomplishments and broke open the field of microbiology, and subsequently the control of infectious diseases.

Fourth, medical care in the future will be delivered
(Continued next page)

SPINK continued

principally by small regional groups throughout the country in which the primary physician will play a major part. These groups will include specialists, and where the need is urgent, consultation with large regional medical centers will be speedily available, which is possible because of modern means of communication and transportation. The day of the lone practitioner is subsiding. Group practice means sharing responsibilities and improved care at all levels of society.

Fifth, because of the continuing progress in medical science practitioners will need to keep up with the new knowledge through refresher courses at our large medical centers, especially medical schools. The University of Minnesota has pioneered in this effort, but on a national basis we haven't done very well with postgraduate medical education. Reorganization and expansion of this phase are in order. No longer can a person graduate from medical school and then practice for 40 years, acquiring new information through the cursory review of a medical journal or two, or by listening to the representatives of the pharmaceutical industry. You will face a public which is much better informed today as to what constitutes good medical care.

What can you do as you enter into this rapidly changing world of medicine? You should listen to the outside world and understand what the public wants and how the politicians are responding to those demands. Support that which is good, and speak up against that which is not. But above all — don't consistently shout out against change in a destructive way.

The objectives of individual physicians can be best crystallized through medical organizations, especially at a local level. This should and does channel up to a national level. I ask of you that you join your local and state medical societies, and as young people make yourselves known for what you stand.

Finally, we must not forget our medical school and what it has done for us. The school will need our support, morally and financially. The connecting link between us and our school can be the Minnesota Medical Foundation. The *Bulletin* will keep us abreast of what is going on. Many of you have shared in the scholarship and loan program and have been awarded prizes through the Foundation. Let us make every effort to support its continuation.

And now as I bid you and my medical school associates farewell and good-bye, I am mindful of those words of the ancient Hebrew prophet, Joel:

*"Your old men shall dream dreams
Your young men shall see visions."*

□



Dr. Baker

ALUMNI DEATHS



Dr. Ramsey

A. B. BAKER, M.D. NAMED REGENTS' PROFESSOR

A. B. Baker, M.D., Ph.D., professor and head of the department of neurology, has been named a Regents' Professor, the highest academic appointment attainable at the University of Minnesota.

Dr. Baker graduated from the University of Minnesota Medical School in 1930. He received all of his undergraduate and professional degrees from the University of Minnesota. After a one-year internship at Robert Pack Hospital in Pennsylvania, he returned to the University of Minnesota to enter his residency training and to teach. While working on his Ph.D. in neuro-psychiatry, he was a teaching assistant in neuro-pathology.

His bibliography of professional publications numbers about 200 works, including multi-volume textbooks, chapters in other texts and articles in a wide variety of medical journals.

He was a founder of the American Academy of Neurology in 1948, and served as the organization's first president from 1948 to 1951, and as its chairman of special courses from 1949 to 1964. He served as chairman of the National Committee for Research in Neurological Disorders from 1952 to 1969. He is a past director, vice president and president of the American Board of Psychiatry and

Neurology. He has also been president of the American Neurological Association and the Epilepsy Foundation of America. He serves on the advisory board of the Multiple Sclerosis Society and is chairman of the professional advisory committee of the Minnesota Easter Seal Society.

He has received U.S. Presidential Awards for his work in poliomyelitis and for advancing the employment of the physically handicapped. He has served on a number of committees of the National Institute of Neurological Disease and Stroke. He served on a United States Public Health Service cerebrovascular disease committee and is currently a member of a special commission on neurological manpower for the Secretary of Health, Education and Welfare.

The impetus behind the University of Minnesota's Regents' Professorships was provided by the Minnesota Medical Foundation which honored Drs. Owen H. Wangenstein and Maurice B. Visscher with Distinguished Service Awards in 1960. MMF's awards provided honoraria and special recognition for some of the University's most distinguished medical teachers. The University later adopted the program under the name Regents' Professorships and broadened it to recognize distinguished professors in fields other than medicine as well.

Walter R. Ramsey — 1896

Died March 11, about four months after his 100th birthday. Dr. Ramsey was one of the first doctors to specialize in pediatrics and was the founder of St. Paul Children's Hospital. Born on a farm in Canada, he came to Duluth when he was 21. After graduating from the University of Minnesota Medical School he did some post-graduate study in Europe. During World War I he served in France, where he was honored by the French government for his work with children. He was instrumental in establishing a maternity hospital, a children's hospital and an orphanage in Rouen, France. He established St. Paul Children's Hospital in the early 1920s.

Roger S. Countryman — 1920

Died Feb. 20 in California at age 77. Dr. Countryman practiced in the Twin Cities for 32 years. He was director of the prenatal clinic at the Wilder Dispensary and chief of the free obstetrical services at Charles T. Miller Hospital.

Douglas P. Head — 1926

Died April 4 in Minneapolis at age 74. Dr. Head retired as an associate professor of medicine in the Medical School about five years ago. He was a member of the Hennepin County Medical Society, the Minnesota State Medical Association and AMA. He was also a member of the Minnesota Society of Internal Medicine, which was founded by his father. He served with the armed forces in World Wars I and II and was awarded a Bronze Star in World War II.

Charles King Holmes — 1917

Died at Walter Reed Hospital April 5 at age 82.

Robert E. Kohlhasse — 1951

Died March 7 at age 47.

(Continued next page)

ALUMNI DEATHS continued

Paul F. Meyer — 1921

Died in Tampa, Fla., Feb. 13 at age 76. Dr. Meyer had practiced in Faribault, Minn., since 1925. He was visiting his daughter in Tampa when he died.

Tilden I. Moe — 1929

Died Nov. 13, 1972, at Bakersfield, Calif. He was 75. Dr. Moe was certified by the American Board of Pathology.

George W. Ruhberg — 1921

Died Jan. 23 in Santa Barbara, Calif., at the age of 80. Dr. Ruhberg did his post-graduate work in neurology and psychiatry at Harvard. He practiced in St. Paul for 25 years as neuropsychiatrist at Ancker Hospital and Gillette State Hospital, as chief of neuropsychiatry at the Wil-

der Dispensary, and as consulting neuropsychiatrist at the Shriners' Hospital in Minneapolis. He also served as an assistant clinical professor at the University of Minnesota. He was a past president of the Ramsey County Medical Society and the Central Neuro-Psychiatric Association.

Howard W. Satterlee — 1927

Died Nov. 26, 1972, at age 77.

Oscar M. Smith — 1909

Died Dec. 1, 1972, at Dickinson, N.D. He was 94.

Chauncy Su — 1961

Died Sept. 22, 1972.

Irving H. Young — 1924

Died in Hollywood, Fla., Nov. 12, 1972, at age 72.

MEDICAL SCHOOL GRADUATION:

WHERE THE CLASS OF '73 GOES FROM HERE . . .

NAME	TYPE OF INTERNSHIP	PLACE OF INTERNSHIP
Thomas Ahrens	Rotating	Hennepin County General
Brian J. Anderson	Rotating Medicine	Hennepin County General
Charles Anderson	Rotating	Emanuel Hospital, Portland, Ore.
Floyd O. Anderson	Psychiatry Residency	University of Minnesota Hospitals
Glen F. Anderson*	Rotating	Milwaukee County General
John H. Anderson*	Graduate Study	University of Minnesota
John T. Anderson	Family Practice	Hennepin County General
Stephen N. Barton	Psychiatry Residency	V.A., Minneapolis
Dennis Berge	Straight Pathology	Hennepin County General
Nicholas P. Bernier	Family Practice	St. Paul-Ramsey Hospital
Barry Bershaw	Family Practice	University of Minnesota/St. John's Hospital
Dale C. Betterton*	Family Practice	University of Texas, San Antonio
Michael S. Bladyka*	Surgical Residency	V.A., Los Angeles Medical Center
Jayne M. Boche	Straight Pediatrics	Cincinnati General Hospital
Robert A. Bonner	Straight Medicine	University of California, L.A.
Terrance R. Borman	Straight Medicine	University of Utah Hospitals
Arlene P. Boutin	Psychiatry Residency	University of Minnesota Hospitals
Michael J. Bowers	Rotating	Valley Medical Center, Fresno, Calif.
Robert A. Braun*	Rotating	Hennepin County General
Gerald Brooksby	Rotating Medicine	University of Oregon
Carl A. Brown	Rotating Medicine	St. Paul-Ramsey Hospital

NAME	TYPE OF INTERNSHIP	PLACE OF INTERNSHIP
Gary R. Burke	Rotating	Milwaukee County General
Thomas Burkhart	Rotating Medicine	Hennepin County General
William A. Callahan	Rotating Medicine	Hennepin County General
Donald C. Campbell	Rotating	St. Paul-Ramsey Hospital
Gregory R. Campion	Rotating Surgery	U.S.P.H.S., San Francisco
Douglas J. Carlson	Straight Medicine	Kaiser Foundation, San Francisco
Wayne Carlson	Rotating	Hennepin County General
Linda Yee Chak	Rotating	Hennepin County General
JoAnn Chalgren	Rotating	St. Mary's Hospital, Duluth
Robert Chalgren	Rotating	St. Mary's Hospital, Duluth
James W. Chastek	Family Practice	University of Minnesota/Fairview-St. Mary's hospitals
Sterling K. Clarren	Pediatrics Residency	University of Washington Hospitals
Robert A. Coates	Straight Medicine	Northwestern Hospital, Minneapolis
Richard S. Cohen	Rotating	Emanuel Hospital, Portland, Ore.
Mary Margaret Conroy	Family Practice	Hennepin County General
John Corcoran	Rotating Psychiatry	Western Psychiatric Institute, Pittsburgh
David D. Darcy*	Rotating	Hennepin County General
John J. DeMars*	Rotating	Hartford Hospital (Connecticut)
Henry Doerr IV	Rotating	Royal Jubilee Hospital, Victoria, B.C.
Timothy A. Dooley	Rotating	Emanuel Hospital, Portland, Ore.
David D. Dragotis*	Rotating	Hennepin County General
Peter E. Droubay	Rotating	San Francisco General
Larry Duckert	Otolaryngology Residency	University of Minnesota Hospitals
Lawrence Erickson	Family Practice	Hennepin County General
James S. Erwin	Family Practice	University of Minnesota/Bethesda Hospital
Gary Fifield	Pediatrics Residency	University of Minnesota Hospitals
Per Freitag*	Surgery Residency	Northwestern University-McGaw
John Fremstad	Rotating Surgery	St. Paul-Ramsey Hospital
Thomas R. Friberg*	Rotating Medicine	Hennepin County General
John W. Gfrerer	Rotating	Valley Medical Center, Fresno, Calif.
Stephen J. Gilberstadt	Straight Medicine	V.A., Los Angeles Medical Center
Robert Goffstein	Rotating Pediatrics	University of Wisconsin Hospitals
George R. Gordon	Rotating	St. Francis Hospital, Peoria, Ill.
James W. Green*	Rotating	St. Mary's Hospital, Duluth
Michael J. Gregg	Rotating	Philadelphia General Hospital
Stefan P. Guttormsson	Rotating	St. Mary's Hospital, Duluth
James H. Haemmerle	Rotating Surgery	St. Paul-Ramsey Hospital
Mark T. Hanson	Family Practice	Doctors Hospital, Seattle
John T. Harbaugh	Rotating Medicine	Hennepin County General
Robert P. Hebbel	Straight Medicine	University of Washington Hospitals
Albert E. Henderson	Rotating Medicine	Northwestern Hospital, Minneapolis
Thomas W. Hennessey	Straight Surgery	University of Minnesota Hospitals
Gregory Herring	Rotating	Good Samaritan Hospital, Phoenix
Marvin A. Heuer	Family Practice	University of Minnesota/St. John's Hospital
Terry O. Hope*	Rotating Pediatrics	University of Utah Hospitals
Wayne E. Hoppe	Rotating	St. Luke's Hospital, Denver
David W. Hunter	Rotating Surgery	St. Paul-Ramsey Hospital
Allene Bjustad Jackson	Rotating	Maricopa County General, Phoenix
James K. Jackson	Rotating	St. Mary's Hospital, Duluth
James M. Jaranson	Research	
Anthony C. Jaspers*	Family Practice	Hennepin County General
Peter B. Johansen	Family Practice	University of Minnesota/Bethesda Hospital
Richard F. Johnson	Family Practice	St. Vincent's Hospital, Jacksonville, Fla.
Ronald G. Johnson	Rotating	St. Mary's Hospital, Duluth

NAME	TYPE OF INTERNSHIP	PLACE OF INTERNSHIP
John H. Kaeding*	General	St. Mary's Hospital, Minneapolis
Paul Kaldor	Rotating	St. Paul-Ramsey Hospital
George G. Klee*	Research	
Phillip Kofron	Rotating	Sioux Valley Hospital, Sioux Falls
William P. Korchik	Straight Medicine	University of Minnesota Hospitals
Anthony J. Kotnik	Rotating	St. Paul-Ramsey Hospital
Robert A. Krause	Pathology Residency	Birmingham Baptist Medical Center
Keith M. Kubasch	Family Practice	University of Minnesota/North Memorial Hospital
Thomas E. Kunze	Rotating	St. Mary's Hospital, Duluth
Edward LaMotta	Rotating Medicine	St. Paul-Ramsey Hospital
James R. Larson	Rotating Surgery	Hennepin County General
Steven S. Lebow*	Rotating Medicine	St. Paul-Ramsey Hospital
Richard M. Levinson	Surgery Residency	University Hospital of San Diego County
Barbara Lindman	Straight Pediatrics	University of Wisconsin Hospitals
Richard L. Lindstrom	Rotating Medicine	Northwestern Hospital, Minneapolis
Calvin Loken	Rotating	St. Mary's Hospital, Duluth
Harold N. Londer	Straight Medicine	University of Minnesota Hospitals
Thomas G. Loo*	Family Practice	University of Minnesota/St. John's Hospital
Leon Lubianker	Straight Pathology	University of Minnesota Hospitals
Stephen B. Lund	Family Practice	University of Minnesota/St. John's Hospital
Gary D. MacGregor	Rotating	University of California Hospitals, Davis
Joan Madden	Straight OB-GYN	University of Minnesota Hospitals
James D. Madison	Straight Medicine	Southern Illinois University Hospitals, Springfield
Reuel A. Martinson	Rotating Medicine	Northwestern Hospital, Minneapolis
Richard McDougall	Straight Medicine	Maricopa County General, Phoenix
Robert C. McEvoy*	Pediatrics Residency	University of Minnesota Hospitals
Peter J. McKenna	Psychiatry Residency	University of Minnesota Hospitals
Ronald K. Menk	Rotating	Norfolk General Hospital
Gerald Merwin	Straight Medicine	Northwestern Hospital, Minneapolis
Clinton T. Moen	Rotating	St. Mary's Hospital, Duluth
Rolf K. Naley*	Family Practice	University of Utah Hospitals
James W. Nettleton	Straight Pediatrics	Presbyterian Hospital, New York City
Jerrold Noller	Rotating Medicine	Hennepin County General
David Nordin	Rotating Medicine	Hennepin County General
Robert O'Dea	Pediatrics Residency	University of Minnesota Hospitals
Dale S. Odell	Rotating Pathology	St. Paul-Ramsey Hospital
James J. O'Leary	Research	
Steven B. Ollie	Rotating	Emanuel Hospital, Portland, Ore.
Robert H. Olson	Rotating	Los Angeles County U.S.C. Medical Center
Robert J. Olson	Straight Medicine	West Virginia University Hospital, Morgantown
Warren Opheim	Rotating Medicine	St. Paul-Ramsey Hospital
John R. Parkin	Rotating	Berkshire Medical Center, Pittsfield, Mass.
Barbara K. Patrick	Rotating	Hennepin County General
David A. Paulson	Psychiatry Residency	University of Minnesota Hospitals
Alan L. Peterson	Straight Medicine	University of Minnesota Hospitals
Charles E. Pexa	Family Practice	University of Minnesota/North Memorial Hospital
Michael W. Piepkorn*	Rotating	St. Paul-Ramsey Hospital
Charles Pogemiller	Family Practice	Hennepin County General
Thomas Quam	Family Practice	Hennepin County General
Allan Reishus	Family Practice	St. Paul-Ramsey Hospital
Ronald L. Richardson	Straight Medicine	West Virginia University Hospital, Morgantown
Timothy Rietz	Rotating	Sacred Heart Medical Center, Spokane
Joseph L. Rigatuso	Pediatrics Residency	University of Minnesota Hospitals
Robert J. Risdall*	Straight Medicine	University of Minnesota Hospitals

NAME	TYPE OF INTERNSHIP	PLACE OF INTERNSHIP
Dorothy Ann Ritter	Pediatrics Residency	Baylor College Hospitals, Houston
Peter Rodman	Rotating	St. Mary's Hospital, Duluth
Louis J. Rusin	Straight Medicine	Northwestern Hospital, Minneapolis
Shawn D. Saavedra*	Family Practice	Highland Hospital, Rochester, N.Y.
Sandra K. Sackett	Rotating Pediatrics	St. Paul-Ramsey Hospital
David J. Sanderson	Family Practice	University of Minnesota/Bethesda Hospital
Elliott B. Scherling	Straight OB-GYN	Los Angeles County U.S.C. Medical Center
Roger E. Schmid*	Straight Medicine	Rhode Island Hospital, Providence
Mark J. Schmidt	Straight Medicine	University of Washington Hospitals
Michael R. Senta	Rotating Surgery	Hennepin County General
Daniel R. Sherry	Rotating Medicine	Northwestern Hospital, Minneapolis
Steven J. L. Shirilla	Straight Pediatrics	Los Angeles County U.S.C. Medical Center
Richard F. Shrouts	Straight Medicine	Grady Memorial Hospital, Atlanta
Richard M. Siebold	Straight Surgery	Johns Hopkins Hospital
Satinder Singh*	Rotating	San Bernardino County General
Ronald A. Skyles*	Rotating	State University-Kings County Hospital, N.Y.
Clark M. Smith	Pediatrics Residency	University of Minnesota Hospitals
Harvey D. Smith	Rotating	St. Mary's Hospital, Duluth
Marvin L. Smitherman*	Straight Surgery	Indiana University Medical Center
James Spenningsby	Rotating	St. Mary's Hospital, Duluth
James V. Springrose	Family Practice	University of Minnesota/North Memorial Hospital
Ruggles M. Stahn	Rotating	St. Luke's Hospital, Fargo
Charles L. Steinberg	Pediatrics Residency	University of Colorado Hospitals
John Sternquist	Rotating	Hennepin County General
Dennis W. Stone	Straight Pathology	Mayo Clinic
Raymond L. Struck	Rotating Surgery	Hennepin County General
Robert J. Strukel*	Orthopedic Surgery	University of Washington Hospitals
Gary A. Swanson	Straight OB-GYN	University of California, Los Angeles
Ronald A. Swanson	Straight Pathology	University of Washington Hospitals
Diane S. Tanabe	Rotating Pathology	St. Paul-Ramsey Hospital
Lyn E. Tangen	Family Practice	St. Paul-Ramsey Hospital
Joel L. Thompson	Rotating Medicine	St. Paul-Ramsey Hospital
Frank A. Thorngren	Family Practice	San Bernardino County General
Thomas Timmons	Family Practice	Hennepin County General
Elliot I. Trach	Pediatrics Residency	University of Minnesota Hospitals
John T. Twiggs*	Rotating	Hennepin County General
John A. Twomey*	Rotating Surgery	Hennepin County General
Rolf Ulvestad	Rotating	St. Paul-Ramsey Hospital
David Uthus	Rotating	Charity Hospital-Tulane University
Paul E. VanGorp*	Family Practice	St. Paul-Ramsey Hospital
Jane E. VanRoekel	Rotating Pediatrics	St. Paul-Ramsey Hospital
Lenore VanSanten	Research	University of Minnesota
Joan A. Veits	Straight Medicine	St. Louis University Group
Robert Vigesaa	Rotating	St. Elizabeth Medical Center, Dayton
James A. Walker	Family Practice	St. Paul-Ramsey Hospital
Bruce F. Waller	Straight Medicine	Mayo Clinic
Michael H. Walton	Family Practice	University of Minnesota/Bethesda Hospital
Mark B. Wolverton	Unknown	
Mark G. Wood	Rotating	Highland General Hospital, Oakland Calif.
Paul E. Youngquist	Rotating Medicine	Hennepin County General
Martin T. Zanna	Psychiatry Residency	University of Minnesota Hospitals
Donald T. Zatochill	Rotating	Miller Hospital, St. Paul

*Three-year graduate

1973 INTERNSHIP ANALYSIS

<i>Number of students</i>	177	209	181	174	163	149	155	133	146
<i>Class of:</i>	1973	1972	1971	1970	1969	1968	1967	1966	1965

(All of following values as percentage of class)

Type of Internship

Straight	21%	24%	28%	34%	32%	25%	24%	21%	12%
Medicine	12	10	17	17	23	16	14	14	7.5
Pathology	3	2	1	5	1	—	1.5	1	1.4
Pediatrics	3	7	8.5	12	7	7	7	4	3
Surgery	1.5	3	1.5	5	1	2	1.5	2	.7
Ob-Gyn	1.5	2	—	—	—	—	—	—	—
Residency	12	1	—	—	—	—	—	—	—
Family Practice	17	13	—	—	—	—	—	—	—
Rotating (and Mixed)	50	62	72	66	68	75	76	79	88

Affiliation

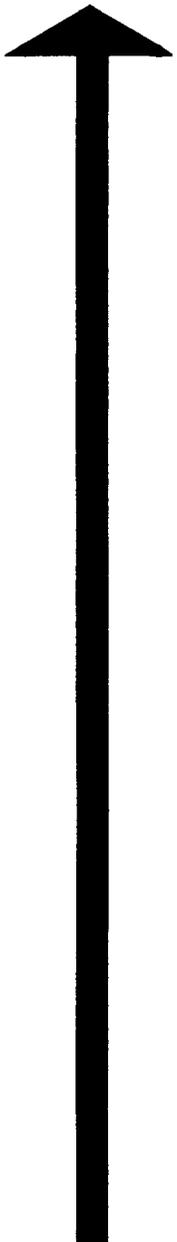
Major Teaching	83%	79%	79%	67%	68%	63%	62%	53%	53%
Lesser Teaching	11.5	4	4	5	5	4	7	7	5
Graduate Teaching	2.5	2	4	—	6	7	1	3	3
Non-Affiliated Gen.	—	3	3	12	—	7	6	11	11
Non-Affiliated Pvt. Services, P.H.S.	2.5	10	8	14	15	15	16	14	23
	.5	2	2	2	6	4	8	12	5

State

Minnesota	60%	56%	57%	43%	37%	34%	33%	28%	38%
University	18	15	17	7	4	6	6	4	4
Hennepin County	16.5	16.5	19	14	6	6	8	10	10
St. Paul-Ramsey	12.5	13.5	8	7	9	8	5	2	8
Duluth	7	5	2	6	4	6	7	4.5	8
Twin Cities Pvt.	1	.5	2	5	5	4	7	7.5	8
Mayo	1	2	—	—	—	—	—	—	—
Northwestern	4	3.5	3	—	2.5	1	—	—	—
California	9%	17%	13%	18%	17%	32%	20%	33%	19%
Illinois	1.5	—	1	2	1	1	5	3	3
West Virginia	1	—	1	.6	4	5	4	5	6
New York	1.5	2	8	2	2	6	5	2	9
Others	27	23	18	30	39	22	33	29	26
Armed Forces	—	2	2	2	—	—	—	—	—

NIRMP Matching Results

Rank Order									
1	53%	65%	61%	69%	65%	63%	58%	75%	71%
2	15	13	20	16	13	15	23	12	18
3	9	8	8	4	9	10	8	7	5
4	3.5	6	3	6	4	8	4	3	2
5	2	1	2	2	3	2	2	1.5	1
6 or greater	6.5	3	3	1	2	1	3	—	1
Unmatched	11	4	3	1	4	1	2	1.5	3



TUITION

The University of Minnesota Board of Regents has approved some dramatic tuition increases for Medical School, beginning with the coming Fall Quarter. The increases are in response to studies which showed that medical students have been paying in tuition only about 9% of the direct costs of their medical education, while students in other fields pay up to 31%.

Tuition for Minnesota resident medical students will go from \$278 per quarter to \$435 per quarter, an increase of 56%. Non-resident medical student tuition will go from \$641 per quarter to \$1,015 per quarter, an increase of 58%. Both the residents and non-residents must pay "fees" of \$45.50 per quarter on top of the tuition.

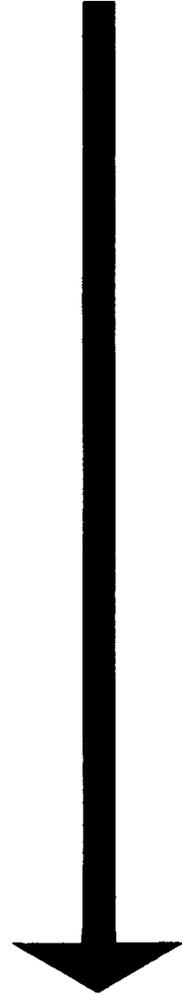
Medical students in most classes go to school year-around. That makes tuition, on an annual basis, \$1,740 for residents and \$4,060 for non-residents, not counting the fees.

With "impoundment" and a general downswing in federal funding help, the crunch is on medical students. W. Albert Sullivan, M.D., assistant dean of the Medical School, recently told a group of medical students that he feared Minnesota would soon lose the right to boast that it had never lost a medical student for financial reasons.

Students are turning in ever-larger numbers to the Minnesota Medical Foundation for long-term low-interest loans. Your gift to the Student Aid Fund of the Minnesota Medical Foundation will be put to good use without delay.

Minnesota Medical Foundation
Box 193 - University Hospitals
Minneapolis, Minn. 55455

FEDERAL AID



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