Rapid changes are continuing to take place in this country with regard to the admission of students to medical schools. The 75th Annual Report on Medical Education of the *Journal of the American Medical Association* highlights some of these changes.

The number of students applying for admission into medical schools in the United States has increased 122 percent in the past ten years. Twenty-seven new schools of medicine have become operational since 1964-1965. This is remarkable growth in a single decade. The competition has increased. For the 1974-75 class, there were 8.5 applications per individual student, in contrast to 5.5 applications per individual five years ago. There were 54,074 medical students enrolled in 114 medical schools in 1974-75, compared to a total of 32,001 enrolled ten years ago.

The most remarkable recent change in medical student admissions is the tremendous increase in the number of women. There were 3,260 women enrolled in the first year class in 1974-75. This represents an increase of 360 percent over the number entering just four years ago.

Another statistic is rather interesting. Of the men who applied to medical school last year, 33.5 percent were enrolled in the first year class. Of the women applicants to medical school, 37.5 percent were enrolled. Assuming that discrimination is not involved, the females must be presenting applications which are stronger overall. Recently we certainly have had a remarkable increase in the number of women in our own School of Medicine.

Readers of *Outlook* are probably familiar with the increasingly higher grades of entering students all over the United States. For the past ten years the percentage of students entering with a grade point average of 3.6 or higher (A equals 4.0) has been steadily increasing. This may be due to several factors, one of which is almost certainly grade inflation.

For the past ten years the medical student attrition rate has been dropping steadily. The gross attrition rate for the academic year 1974-75 was 1.83 percent of the total enrollment, as compared to 3.19 percent in 1965-66. Twenty years ago it was still higher.

We are going to have an increasing number of new physicians in this country in the 1980's. Some are already predicting that there will be too many. I doubt this. Many more doctors will be needed to meet the increasing expectations for health care by the public.

*M. Kenton King, M.D.*

*Dean*
### Outlook

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*On the Cover:*
Therapist Liz Walker counsels a patient with a hand injury. See story page 2.

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The hand is one of the most necessary and useful tools for everything we do, yet it is the most exposed and most vulnerable to injury.

To make available the necessary therapy to people with injured hands a rehabilitation center was created at the School of Medicine in April, 1971.

"Function of the hand is so complex, that even an injury to the tip of a finger can affect the whole hand and even the arm and shoulder," said Paul M. Weeks, M.D., director of the Hand Center and head of the Division of Plastic Surgery.

Dr. Weeks became interested in hand surgery and therapy at the University of North Carolina, where he met Dr. Paul Brand. Dr. Brand had been a medical missionary in India where he had helped lepers who lost sensation in their hands.

"He gave me the idea of trying to make hand surgery and rehabilitation a science," Dr. Weeks said. "To do this, we must make careful measurements and develop a recording system so that one can really find out whether he is doing the patient any good—not just going by what he said about being better or worse."

The John T. Milliken Hand Center was initially funded by Thomas M. Moore, president of the Milliken Publishing Co. in St. Louis, who named the center after his grandfather.

Four patients were seen in the center during the first month of operation. Now, five years and more than 1,000 patients later, more than 200 patients are seen a month and the clinic has been moved to a new facility. About 90 percent of the patients seen have received injuries that are a result of industrial accidents.

Other Hand Center personnel includes Liz Walker, a physical therapist,

"All human art is the increment of the power of the hand." The Destiny of Man.
Dr. Weeks consults with hand clinic patient.
Mary Kuxhaus, an occupational therapist, and an assistant, Jim Burgess.

“Our philosophy is that we want to see the patient extensively as soon as possible after an injury or surgery,” Ms. Walker said. “If the patient gets a lot of therapy immediately the rehabilitation process is considerably shortened.”

Dr. Weeks agreed, “We consider it part of our job to keep the hand active. In many cases, the dressings are discarded two or three days after surgery and active and passive motion of the hand is started.

“They don’t appreciate this treatment much in the beginning because the hand can be a little stiff and sore. But eventually they end up with a much more useful hand. Scar tissue, if exercised from the beginning, can be supple and strong, not stiff and crippling.

“When a patient presents a problem, such as a broken bone, setting and immobilization of the fracture are the initial steps in management. Our goals are to keep the uninjured part of the hand functioning normally while the fracture is healing and to restore as much function as possible in the injured part,” Dr. Weeks said.

“A patient can come in with a simple fracture in an otherwise normal hand. But unless it is treated properly, he may end up with a stiff, useless hand.”

A patient in the hand center first receives a full evaluation of his injury. “We test the strength and grip of the hand as well as how fast the patient can do a dexterity test,” Ms. Kuxhaus said. “We check how much each joint in the hand can move and how much feeling there is in the hand.”

Usually, the patients visit the center for three hours a day three times a week. They work both individually and with a therapist and are remeasured periodically. This allows the therapist to pinpoint where there has been improvement and what changes need to be made in the therapy.

An individual program of therapy is developed for each patient. Ms. Kuxhaus and Ms. Walker work together with Jim Burgess to develop devices and techniques to strengthen patients' hands and keep them limber.

“Jim has a special understanding of the patients' needs,” Ms. Walker said, “since he also has had a hand injury. He is often able to think of things that a certain patient can do for therapy.”

Burgess was working as a cabinet maker when he injured his hand and came to the Hand Center. While there, he applied for the assistant position and is now a full-time member of the staff.

Since he has experience in cabinet making, he has practical skills from which the patients benefit.

“We like to get the patients involved with practical activities as soon as possible,” Ms. Walker said.

“We have found that woodworking is excellent therapy and Jim can help patients with these skills.”
"We feel strongly about working with our patients to develop the skills they need on the job," she said.

"We stress the importance of resuming normal activities as soon as possible," Ms. Walker said.

"We try to duplicate the job situation so the patient can regain his confidence," Ms. Kuxhaus added. "For instance a man was injured whose job involved a lot of sanding and filing on steel pipes. Now, he's working on a wood figurine that utilizes the same type of skills he needs on the job.

"We found that not only woodworking, but leather work and copper tooling are good therapy too, in combination with exercise," Ms. Kuxhaus said. "These projects are good because they employ a variety of tools and skills and are goal directed. The patient finishes a project and can take it home."

Sometimes a patient will not take his project home, however. For instance, Mr. Burgess had the idea of making a miniature totem pole with many patients sculpturing one section of it.

"A lot of times it doesn't matter whether they get to take it home or not," Mr. Burgess said. "They look forward to working on a project and really enjoy this part of the therapy.

"Many of our patients didn't think they would ever be able to use their hands again," he said. "So as soon as they can use some tools, we put them to work to prove to them what they can do."

Because the clinic is equipped with a kitchen another kind of practical activity is possible. "Often it is just as important for a patient to regain their confidence in the kitchen as on the job," Ms. Walker said. Patients sometimes practice kitchen chores by baking a cake or cookies, peeling potatoes or doing some other kitchen activity they need to practice.

The therapists also make hand splints for most of the patients. These splints are designed to be worn part-time to position the hand so stiffness will not develop. If the hand is already stiff the splint will help the hand regain mobility.
An old printing press is used in the hand clinic to build strength in the arm. Karine Pender prints some personal memo paper under the supervision of Jim Burgess.

Hand rehabilitation was not a well-established concept when the Hand Center started. "Ours was one of the first three or four such clinics in the country," Dr. Weeks said. "Since then, however, representatives from many medical schools have visited the clinic. At least ten schools have established similar clinics after visiting ours.

"One of the reasons we wanted to have a hand clinic was to develop ways of measuring and documenting what we were doing so that we could see whether we really were helping the patient," Dr. Weeks said. "We wanted to see whether we could modify traditional methods of treating hand injuries so that we could get patients back to work more quickly. "We recently analyzed the results of what happens with patients that come in with stiff hands."

"We took 212 patients whose chief complaint was of stiff fingers or a stiff hand. We found that with conservative therapy, and no surgery, the patients increased their range of motion almost 100 percent in every joint and finger involved. Only 39 required surgery out of 212. So, for 85 percent of the patients, therapy alone was enough to regain function.

"We pinpoint problems and take them to the laboratory and use laboratory animals to establish a scientific basis for treating these problems.

"For instance, no studies had ever been done about the most effective way to treat partial tendon laceration. Most authorities had recommended that such tendons be sutured but we weren't sure that was the best treatment."

A medical student, Barbara Reynolds took this problem to the laboratory.

"We used chickens as experimental models because they have a long flexor tendon that is very similar to man's. She cut those tendons one quarter through in one group, half way through in another and three quarters through in a third. One group of birds had their tendons sutured, while the other did not.

She found that if partially severed tendons were sutured, they were much weaker than those not sutured and that the rupture rate was much greater in those sutured.

"There have been a number of problems that have been solved because we have a Hand Center," Dr. Weeks said. "We can use the computerized data we keep on each patient, his injury, surgery, treatment, etc. to solve problems that come up later."

"Through research we are trying to find better methods of treatment."

"I believe we have shown that a hand center is a valuable part of a rehabilitation program," Dr. Weeks said, "with tremendous potential for understanding and solving many of the problems associated with upper extremity injuries."
Depression

Most Common Affliction in U. S.
Present in Children as Well as Adults

By Sharon Stephens Murphy
Depression

Jill was six-years-old the day she swerved her bicycle into the path of an oncoming car. Fortunately, she was not seriously injured, but her mother wasn’t convinced this episode had been an accident.

She feared Jill may have wanted to die. For several months she had been concerned over her daughter’s extreme sadness and apathy. Her mother realized Jill hadn’t been the same since her father’s death.

A child psychologist found Jill was suffering from depression, perhaps the most difficult yet often most curable childhood disease. After a year of counseling, Jill understood her feelings about her father’s death and was able to live her life, free of the anxiety that had driven her into the path of that car.

Jill was lucky. Other children live long, lonely lives suffering from depression which they may carry with them into adulthood.

E. James Anthony, M.D., chairman of the Division of Child Psychiatry and Doris C. Gilpin, M.D., acting director of the Child Guidance Clinic have worked extensively with depressed children.

Although suicidal tendencies do not always accompany depression, Dr. Gilpin has observed that whenever a child views his situation as hopeless, he may consider suicide.

“While the suicide rate among children is fairly low, suicide threats from children seem to be on the increase,” Dr. Anthony said. In his recently published book, Depression and the Human Existence, co-edited with Therese Benedek, M.D., Dr. Anthony said that child psychiatry clinics, in the United States and Britain, have consistently reported that between 7 and 10 per cent of their referrals are children who have threatened or attempted suicide. An even higher percentage of suicidal children are seen as psychiatric emergencies.

Accurate statistics on the incidence of childhood depression, however, are nonexistent.

Although depression in adults is considered more widespread than the common cold, until recent years, depression in children was thought to be impossible or at best improbable. Most child specialists now agree children do suffer depressions, although there is still debate on a definition for childhood depression.

The National Institute of Mental Health (NIMH) has just recently become concerned over their lack of a definition. Last September NIMH sponsored a conference of 12 specialists to determine if childhood depression was indeed a critical concern.

Dr. Anthony was one of the specialists asked to attend the conference. “NIMH said if the group found depression in children to be important, they would start funding such research,” Dr. Anthony said. “Herefore, there had been no in depth work with only scattered reports from various clinics.

“Generally, the conclusions of the conference were that this was an important clinical condition and is a real entity and that it might even be on the increase,” he said. “We recommended that NIMH should look into it.”

Currently, NIMH and the American Academy of Pediatrics are surveying a sample group of general pediatrics to find with what frequency they treat mental illness, including depression. After the results of this study are tabulated, the organizations hope to continue the program nationally.

Although there is confusion about a formal definition, most specialists agree there are two kinds of childhood depression.

Chronic depression, sometimes called deprivation, is caused by the lack of basic needs during infancy and early childhood. These needs include warmth, love and food. If these are not available the child loses his feeling of self-worth and his ambition and develops an “I don’t care” or “what’s the use” attitude.

“The only way to correct chronic depression is to put the child in a situation where these needs are met,” said Dr. Gilpin.

Chronic depression is common in lower socio-economic classes and in children who have been institutionalized. Often this childhood condition leads to criminal behavior.

The other, more general depression, is known as acute depression, which stems from a crisis or loss. This could be a loss of a parent or of anyone or anything that was loved by the child, such as a pet.

On the other hand, it also can be the loss of something intangible such as self-confidence or self-worth. Crises such as failing in school or constant fighting with a sibling can lead to this depression as well.

Fortunately, curing depression in children is not a problem. What is difficult is getting treatment for those who need it.

Today, it is recognized that youngsters show their depression in ways different from adults. Some exhibit their feelings with physical ailments such as headaches, abdominal pain or nausea.

Anorexia, bed wetting and migraine headaches also are indicators of depression in children.

Most often, depressed children exhibit their feelings in aggressive, disobedient behavior which often gets them labeled a problem child. These children often are disciplined, rather than helped, with counseling. However, some children try to hide their sadness. Children learn early that they are expected to be happy and present a cheerful image.

Family physicians, as well as teachers and parents, should be aware of the symptoms and signs of depression. These include:

* Any suicidal tendencies.
* A prevailing ailment for which a physician finds no reason.
* Aggressive behavior.
* Repetition of phrases like “nobody loves me” or “I’m no good.” May leave notes such as “I wish someone loved me” or “why won’t someone help me?”
* A change in school work. The previously good or average student begins doing poor to failing work.

In the case of a loss:
Length of time mourning—a child's mourning is usually briefer than adults. If he is still gloomy after others have adjusted, he may need counseling.

A child that can't talk about a loss may go into depression. Those lucky enough to get treatment usually respond to it very well. Dr. Gilpin said most often children can work out their problems in about eight months.

Some clinics treat the child alone, hoping to solve the individual problem. Others, however, have good results treating a number of children in group therapy or by treating the child and his parents.

"The basic treatment," Dr. Gilpin said, "is to make the child feel worthy and happy with himself and to work out any guilt feelings he might have. We teach them to keep a piece of themselves separate from the family, especially when the parent's relationship is one of the causes for depression," she said.

"Although some do go downhill again, we help them recognize the symptoms and give them the tools to cope with it the next time."

"We use psychotherapy to achieve these goals," Dr. Gilpin said. "Antidepressants usually cover up the problem while therapy gets to the root of the problem and makes the child feel okay."

Children are usually more open and more anxious to learn about themselves, Dr. Gilpin said. This and the fact that their depression is relatively short, makes it much easier to get to the root of the problem.

Unfortunately, far too often, the child's depression goes unnoticed and he carries it with him into adulthood. But with increasing study and availability of treatment, there is hope that depression can be treated in the child, thus avoiding what may turn into years of treatment as an adult.

Dr. Doris Gilpin and Dr. E. James Anthony both use individual counseling to treat childhood depression.
Who does a new parent turn to when a newborn baby seems to cry too much, or an infant gets a cold or a toddler has a stomachache? Until recent years, the obvious health care resource was the pediatrician.

But now with increasing frequency, there is an alternative: the pediatric nurse practitioner (PNP).

The PNP is a nurse who has received special education so she can work closely with the physician, not only to provide services which the pediatrician would normally provide, but to add to those a special competence of her own. In addition to traditional nursing qualifications, the PNP has skills which traditionally have been confined to the physician.

Many PNP training programs have been established since the idea was first advanced by Dr. Henry K. Silver in 1965. He and Dr. Lee Ford, R.N., set up the first program at the University of Colorado.

Among the first programs to follow, and the only exclusively medical school based program, is the one at Washington University. Lawrence Kahn, M.D., associate professor of pediatrics, is director.

The philosophy of this and similar programs is that nurses are capable of and committed to providing primary care to children and that nurses, because of the nurturing aspect of their profession, are often better able than the highly educated physician to provide certain aspects of primary care.

Registered nurses, preferably those with B.S. degrees, are eligible for the pediatric nurse practitioner program. During the nine-month training, the nurse spends half her time in formal lectures, seminars, case presentations and demonstrations accompanied by time spent in closely supervised clinical experience.

The trainee works with outpatients in both general and specialty areas, in the offices of private pediatricians and on the ward. Work in well-baby clinics and maternal and infant care clinics is included. Heavy emphasis is placed on history taking and the physical examination (including the ophthalmoscope, otoscope and stethoscope).
The common problems of general pediatric practice are presented, with special attention to those involving the child's psycho-social development.

The second half of the program is a practicum period during which the trainee may work in a neonatology unit, the office of a private pediatrician, the outpatient department of St. Louis Children's Hospital, well-baby clinics, maternal and infant care clinics, neighborhood health centers or other special areas where pediatric services are provided.

With this advanced education and experience, the PNP is proficient in interviewing, monitoring the patient's condition, managing relatively uncomplicated problems, instituting preventive measures and providing emotional support and guidance.

The PNP sees patients independently and evaluates the patient's health status. The PNP can distinguish between a well and a sick baby and decides if a child needs to see the physician.

If the baby is apparently well, the PNP can spend the necessary time giving parents the information and counseling they need. If the baby is sick, the PNP can determine the severity of the child's problem and then decide whether she or the doctor can best manage the illness.

"A pediatrician in private practice spends much less than half of his/her time on problems which are serious from a medical point of view," Dr. Kahn said. "The majority of the pediatrician's time in present day office practice is spent dealing with problems which could be handled by someone with less expertise."

A medical team of a physician and a PNP allows each to excel in what they are best trained to do for the patient. Etta Storm, R.N., PNP, nursing director of the PNP program at Washington University, explained that nursing is predominantly interested in health and illness from the psycho-social aspect. "Many nurses are interested in the why and how of cure from a behavioral point of view, while medicine tends to utilize the physiological model. Primary ambulatory care should be composed of an interdependence of both components," she said.

"The physician is directed by education and training to be more involved in the management and curing of disease," Dr. Kahn said. "Often he doesn't have time to sit down and talk with patients and give them the comfort and care they need."

Nursing, on the other hand, is primarily concerned with caring for the patients and responding to their emotional needs as well as to their physical needs.

"It's very rewarding work," Ms. Storm said. "I could never go back to staff nursing after experiencing this area of nursing."

"The thing that impresses me most," she said, "is the totally different relationship I have with the physician. Since physicians have been involved in my education as a PNP they accept me more as working in an interdependent role with them and they have more respect for my opinion."

"PNPs are generally allowed a great deal more decision making and responsibility," agreed Marcia Custer, R.N., PNP, program coordinator. "It's certainly a lot more satisfying than regular nursing.

"The PNP can do so much the physician is not equipped to do and often doesn't want to do," Ms. Custer explained. "Physicians have spent years focusing on disease and curing and..."
they become frustrated when their education is underutilized. So the team approach is often more successful in fulfilling the patient’s health care needs as well as the need for emotional support and counseling.”

The PNP works interdependently with the physician, as a colleague or an associate, Ms. Custer explained. “In primary care settings nurses have traditionally not been involved in decision-making regarding patient care,” she said. “Many nurses find this dependence on the physician frustrating. When a nurse becomes a PNP she can be actively involved in the decision making process.”

“For many the role of a nurse hasn’t been sufficiently satisfying to keep trained nurses in nursing,” Ms. Storm said. To get these people back into nursing it was suggested that the role of the nurse needs to be extended beyond routine tasks to include a degree of responsibility and decision making.

Allowing the PNP to work interdependently and have responsibility on the health care team is of benefit to physicians as well as the nursing profession. “The PNP’s service supplements those of the pediatrician by providing counseling skills for important needs of mothers and children that most physicians are not as well equipped for, or as interested in providing,” Dr. Kahn said.

The School of Medicine graduated their first three PNPs in 1970. The program now boasts a total of 50 graduates with 13 students in this year’s class.

Many graduates are working in situations where a doctor is seldom available, such as in rural and inner city areas, as well as in underdeveloped countries.

The Medical School has committed itself to this program, Dr. Kahn said, “it recognizes the importance of non-physician practitioners in providing health services to the people of this country. Nationally,” he said, “organized medicine and nursing through organizations such as the American Medical Association, the American Academy of Pediatrics and the American Nursing Association have lent their support to the concept of the extended role of the nurse.

“This concept of the nurse with greater responsibility is not new,” Ms. Storm said. “Public Health Nurses, especially those working in remote areas, and nurses working in intensive care units often exercise independent judgment and develop expertise in many areas.

“The day of the nurse as a totally dependent helper to the physician is past,” she said. “A nursing career can be much broader and deeper and nurse practitioner programs are one way of affecting that.”

PNPs can use their skills anywhere where pediatric services are needed. “Also, PNPs seem to be more evenly distributed across the country,” Dr. Kahn said, “while doctors tend to be in urban and suburban areas.”

In addition, by working with a PNP, the physician is able to concentrate on his own area of expertise, and can spend more time on the more difficult patient problems. The two professionals are able to see more patients and are able to provide more comprehensive care than either could alone.

Some PNPs will probably develop special skills in areas which interest them, such as adolescence, children with behavioral problems or particular kinds of disease.

The American Academy of Pediatrics agrees that the emergence of PNPs as professionals on the health care team is a great benefit to the pediatrician, parents, and, of course, most importantly, the children.
Ms. Storm, nursing director, talks with PNP students.
Graduation, an End
Internship, a Beginning

"It has had its ups and downs, but by and large, I have really enjoyed medical school," said Dennis Shanahan, a fourth year student.

His statement echoes the sentiments of 138 students who will graduate from the School of Medicine later this month.

And as graduation is an ending, internship is a beginning. On March 10, seniors who participated in the National Internship Matching were told where they would spend the next one to three years.

Most were not disappointed. From St. Louis to Hawaii to Maine to California to the District of Columbia W.U. medical graduates will intern in 29 states. Forty-four graduates will do internships in St. Louis and one student is going to Paris, France. A comprehensive list of students and where they will be interning follows.

ARIZONA
Phoenix
Good Samaritan Hospital
Joseph Hardy, Family Practice
Maricopa County General Hospital
Walter E. Koppenbrink, Medicine

Tucson
University of Arizona Medical Center
Jacqueline A. Krohn, Pediatrics

CALIFORNIA
Long Beach
Memorial Hospital
Donald E. Zimmerman, Surgery

Los Angeles
Los Angeles County, U.S.C. Medical Center
David Deutsch, Ob./Gyn.
Allen Hurt, Flexible

Robert Lamberg, Medicine
Ian Thorneycroft, Ob./Gyn.
University of California Hospital
John Krettek, Surgery

San Diego
University Hospital
Jonathan C. Greenberger, Medicine
Craig S. Risch, Psychiatry
U.S. Naval Hospital
Colleen Kyle Flint, Surgery
John Metcalfe, Pathology

San Francisco
Children's Hospital
Michelle Flicker, Medicine
Letterman Army Medical Center
Richard A. Boyer, Medicine
Neil E. Sherman, Flexible
Mount Zion Hospital
Allan Teranishi, Medicine
University of California Hospitals
Robin Bernhoft, Surgery
Diane L. Elliot, Medicine

Stanford
Stanford University Hospital
Eugene C. Butcher, Pathology

CONNECTICUT
New Haven
Yale-New Haven Medical Center
Richard Baron, Medicine
Christopher Canny, Pediatrics

DISTRICT OF COLUMBIA
Malcom-Grow Air Force Medical Center
Kenneth Rugh, Flexible
Walter Reed Army Medical Center
Jamela J. Pratt, Pediatrics
Richard P. San Antonio, Medicine
Patricia Stapler, Psychiatry

FLORIDA
Jacksonville
U.S. Naval Hospital
Monte T. Mellon, Family Practice

GEORGIA
Atlanta
Grady Memorial Hospital
Dennis B. Cooke, Medicine

HAWAII
Honolulu
Tripler Army Medical Center
Milton T. Mendenhall, Flexible
Dennis Shanahan, Surgery

ILLINOIS
Chicago
Michael Reese Hospital
Alan M. Chausow, Medicine
Karen Sumers, Medicine
University of Chicago
Myra Collins, Fellow in Physics and Biophysics
University of Chicago Clinics
Gideon Bosker, Medicine
John Turk, Medicine

Maywood
Loyola University Affiliated Hospital
Robert H. Anschuetz, Orthopedic Surgery

IOWA
Iowa City
University of Iowa Hospitals
John P. Schilling, Medicine

KENTUCKY
Lexington
University of Kentucky Medical Center
Donald B. Edelen, Medicine
Thomas R. Pohlman, Medicine

Louisville
University of Louisville Affiliated Hospitals
John A. Milton, Medicine

LOUISIANA
New Orleans
Ochsner Foundation Hospital
James Douglas, Medicine
MAINE
Bangor
Eastern Maine Medical Center
Christopher Brigham, Family Practice

MARYLAND
Baltimore
Baltimore City Hospitals
Evelyn S. Weiner, Medicine
Johns Hopkins Hospital
Thomas R. Turnbaugh, Surgery
University of Maryland Hospital
Thomas G. Hartmann, Family Practice

MASSACHUSETTS
Boston
Beth Israel Hospital
Toby L. Litovitz, Surgery
Massachusetts General Hospital
John S. Cantieri, Psychiatry
Peter Bent Brigham Hospital
Tien H. Cheng, Diagnostic Radiology

MICHIGAN
Ann Arbor
University of Michigan Affiliated Hospitals
Andrew Delbaum, Medicine
Marilou Terpenning, Medicine

Detroit
Wayne State University Affiliated Hospitals
O. L. Matthews, Medicine

Kalamazoo
Bronson-Borgess Hospitals
Carlton M. Newsome, Flexible

MINNESOTA
Minneapolis
University of Minnesota Hospitals
Kenneth Malas, Family Practice
Neal R. Olson, Pathology
Henry Votava, Pathology

MISSOURI
St. Louis
Barnes Hospital
Robert Baglan, Radiology
Mark Blumenthal, Surgery
Robert A. Brinkman, Medicine
Patrick Buckley, Pathology
Thomas W. Cooper, Medicine
Randall E. Dalton, Surgery

NEBRASKA
Omaha
University of Nebraska Affiliated Hospitals
Gary R. Ensz, Family Practice

NEW YORK
Albany
Albany Hospital
Emily G. Lowry, Medicine

Bronx
Bronx Municipal Hospital Center
Michael Weissman, Pediatrics

Buffalo
SUNY Affiliated Hospitals
Sterling H. Baumwell, Ob./Gyn.
James E. Belcher, Ob./Gyn.

Cooperstown
Mary Imogene Bassett Hospital
Patricia Garrison, Flexible

New York City
Harlem Hospital
James Robins, Flexible

NORTH CAROLINA
Durham
Duke University Medical Center
Dorwyn W. Croom, Pathology

OHIO
Cincinnati
Cincinnati General Hospital
Mary Connolly, Pediatrics

Cleveland
Case Western Reserve Affiliated Hospitals
Stewart B. Ater, Pediatrics
Karl S. Hsieh, Pathology

Columbus
Ohio State University Hospitals
Alan P. Lyss, Medicine
Laurence E. Stempel, Ob./Gyn.

OKLAHOMA
Oklahoma City
University of Oklahoma Hospitals
Helen L. Hammer, Medicine
Richard C. Lockmiller, Medicine

PENNSYLVANIA
Danville
Geisinger Medical Center
James E. Schall, Medicine

Philadelphia
Hospitals of the University of Pennsylvania
James F. AufderHeide, Medicine

TENNESSEE
Nashville
Vanderbilt University Affiliated Hospitals
Curt Hagedorn, Medicine
TEXAS
Dallas
Children’s Medical Center
Diane Rasmussen, Pediatrics
University of Texas SW Affiliated Hospitals
Paul V. Carlile, Medicine
Kenneth Moss, Surgery
Kent R. Rasmussen, Medicine
James D. Wilson, Surgery

San Antonio
Wilford Hall Air Force Medical Center
John Seaworth, Medicine

UTAH
Salt Lake City
University of Utah Affiliated Hospitals
E. Marlowe Goble, Orthopedic Surgery
Stephen G. Jolley, Surgery
Robert S. Kiyomura, Medicine
Barry A. Siegfried, Surgery

VERMONT
Burlington
Medical Center Hospital of Vermont
Wesley Wasdyke, Medicine

VIRGINIA
Richmond
Medical College of Virginia
Richard H. Haar, Surgery
George F. Moxley, Medicine

WASHINGTON
Seattle
University of Washington Affiliated Hospital
Cheong F. Lai, Surgery
Kathleen G. Todd, Family Practice

WISCONSIN
Madison
University Hospitals
Edward Kendrick, Pediatrics

Milwaukee
Medical College of Wisconsin Affiliated Hospitals
Glenn A. Handler, Flexible
Peter G. Mavrelis, Flexible
Mount Sinai Hospital
Bruce S. Frank, Medicine
Steven J. Kream, Medicine

PARIS, FRANCE
University of Paris
Francoise Hentier, Medicine
Four Couples Among Members Of Senior Class

Alan Teranishi and Michelle Flicher (above photo) are one of four married couples who are in the senior class. They each received the Ph.D. degree before coming to medical school. "We both had always been interested in medical problems but neither of us wanted to go to medical school right out of college," Michelle explained. "The reason being in medical school you have to submerge yourself. We wanted to do something on our own first." "We decided we wanted to be more involved with people, not just research," Alan said. "We chose Washington University because the atmosphere here is friendlier and less high pressured than other schools we've attended." Right now Michelle and Alan plan to go into internal medicine and sometime in the future do independent research. "We've had enough academics for a lifetime," Michelle said, "now we would like to get down to the business of taking care of patients."

Linda Loney and Tom Cooper are another married couple in the senior class. They met at medical school and were married last year. They think being married to another student has simplified medical school. "For one thing we both understand how much time is involved," Linda said. "We know what the other person's commitment is and how much it means. It really means we have to share a lot more, and the traditional roles really break down." "It's also good," Tom said "because we know what the other person is talking about. We're able to talk about medicine and what we're doing." Linda and Tom will be interning in St. Louis in pediatrics and internal medicine respectively. They both are considering going into primary care.
They Run More for Their Minds Than Their Hearts

By Glenda King Rosenthal

"As a runner, I live totally. I view the weather, the terrain, the environment as a runner. In the creative action of running, I become convinced of my own importance, certain that my life has significance."—George A. Sheehan, M.D., On Running

We've all seen them—the runners who endure cold, heat and adverse weather. They seem steadfast and devoted to their sport, and they have to be. For the average person, to whom a lap around the track was a gym class punishment, it is hard to understand why these people pursue such an activity. Four men from the School of Medicine are among the growing number of long distance runners.

Robert Fitts, Ph.D.; Gustave L. Davis, M.D.; Walter Bauer, M.D.; and Robert Spain, M.D., all have arranged their lives around running.

The School of Medicine's star runner is certainly Dr. Fitts, 33, a fellow with the Muscular Dystrophy Association and the Division of Preventive Medicine, who studies the role of exercise in rehabilitation. Dr. Fitts was the 1970 National marathon champion and holds national titles in 20, 25 and 30 kilometers. He is one of few people to hold every United States championship between the 20 kilometer and the 26 mile marathon. Also, Dr. Fitts has qualified for the Olympic marathon trials this month in Oregon. In addition to his usual fast-paced 100-110 miles of running per week, he is taking six weeks off from work to intensify his training for the marathon trials. Dr. Fitts is a member of the St. Louis Track Club, and all of those interviewed agreed that he is an inspiration for them.

Dr. Davis, associate professor of pathology and acting pathologist-in-chief at Jewish Hospital, is another faculty member who is a distance runner. Although he was a college cross-country runner, he didn't run seriously again until four years ago. A new member of the American Medical Joggers Association, Dr. Davis has belonged to the St. Louis Track Club for three years and ran his first marathon in March, 1975.

Dr. Bauer, professor of pathology and chief of surgical pathology at Barnes Hospital, has many varied athletic interests. He is a backpacker, a mountain climber, and, as of eighteen months ago, a distance runner. Dr. Bauer ran his first marathon last year at the age of 49. He is now one of the top Master's competitors (50 and over age group) in the Track Club and averages 50 miles of road work a week.

Dr. Spain, 33, is a second year fellow in the Division of Hematology and Immunology. He joined the Track Club last June and ran his first marathon last year without any formal competitive distance training. Running always sounded appealing to him, he said, so he entered last year's marathon with a "what have I got to lose" attitude. He now averages 90 miles of running a week and occasionally runs from University City to the Medical Center with Bob Fitts.

Why do these men put themselves through as gruelling a sport as distance running? For a non-runner, the obvious reason would be for their health. As an exercise physiologist, Dr. Fitts is professionally aware of the research which has been done on endurance running and health. The quality of fitness achieved from endurance running is significantly better than an occasional game of tennis. There are beneficial effects to the cardiovascular, respiratory, and neuromuscular systems, Dr. Fitts explained. Regular daily training increases one's work capacity due in part to a bigger, stronger heart which is capable of pumping more blood per minute.

Dr. Fitts noted that because the runner has an increased work capacity, his normal stress factors are less. Epidemiology studies are beginning to indicate that people who engage in regular vigorous exercise have a reduced likelihood of suffering heart attacks than their more sedentary counterparts. They also have a better chance of surviving a heart attack. The endurance runner is able to attain a higher percentage of his peak body function. One's work capacity always decreases after age 40, but vigorous exercise can certainly retard that inevitable process.

Dr. Bauer is an excellent example of this phenomenon. In a recent treadmill test, his oxygen utilization (work capacity) was that of a man less than half his age. "I have achieved a sense of well-being from running, as well as the pleasure that comes from knowing my body's capabilities and limitations," Dr. Bauer said. Dr. Davis, who trained under Dr. Bauer, feels he is approaching Dr. Bauer's level academically but commented, "I've never been able to catch him in a race."

At 38, Dr. Davis envisions a running career of at least 30 more years. He noted that the older runners he knows look younger than their years, and at any given age, a runner will look healthier (as well as actually be healthier) than his counterparts. With each year Dr. Davis has knocked more and more seconds off of his running time. "As I approach 40," he remarked "it's not like adding two more years; I view it as knocking off two more minutes."

It is a common misunderstanding
that a runner “peaks” in his twenties. According to Dr. Fitts, it is simply the fact that as a person passes through his twenties his lifestyle becomes more sedentary and tends to remain that way. Dr. Bauer, as well as many other runners, seems to feel that the rewards of distance running come later in life because the discipline necessary to train for a marathon comes with maturity.

Dr. George A. Sheehan, a heart specialist from New Jersey and an avid distance runner, says in his book On Running, “One of the beautiful things about running is that age has no penalties. The runner lives in an eternal present. The decline of this ability does not interfere with the constant interchange between him, the world, and everyone around him.”

The physical benefits of running are certainly obvious even to a non-runner, but what about the philosophy behind running that keeps the runner constantly striving for new goals and longer distances. It becomes apparent from talking to these men that the distance runner perseveres, as Dr. Davis put it, “more for his head than his heart.”

All these runners expressed common feelings about why they run and what they derive from the experience. Dr. Bauer spoke of the exhilarating feeling he gets when he’s running well and the “sense of invincibility” that comes over him. “Perhaps it is a feeling similar to that when one meditates,” he said, “a clearing of the mind and being more in tune with your inner self.”

“A great relief from tension and daily pressures comes with running,” Dr. Spain said. The sense of accomplishment running brings is also important to Dr. Spain. “One finds a different sense of accomplishment on the road than you do in the lab,” he said.

Dr. Davis described it as a “high, a feeling as if I could keep on going forever.”

Dr. Fitts, who is certainly the most accomplished runner in the group, said, “I’ve been running so long, I don’t even think about the philosophy behind it. It’s my profession.”

Running is also one of the few sports
in which one can compete totally against oneself. A runner, whether or not he is in the same league as Robert Fitts, or simply a Sunday afternoon jogger, can receive a tremendous amount of self-satisfaction in watching his times and stamina improve. "There is no keener competition than the competition with yourself," Dr. Spain said.

"It is important also to know your limitations," Dr. Davis said. "You have to be in tune with your body's needs, and stop when it hurts."

On the other hand, Dr. Spain said that "No one really knows his limitations. A reasonable amount of pain won't hurt the person who's in good shape."

While anyone can run for pleasure, competition, or both, "the key is discipline," Dr. Davis said.

Running is fun, too. Dr. Davis calls it "game playing, adult style." Immediate rewards are available in the form of ribbons, trophies, all visible signs of one's accomplishments, but it is the game itself that provides the pleasure.

Dr. Davis described running as a "positive addiction." All agreed that there is such a person as the "main-line jogger," the person who goes into withdrawal symptoms if they have to give up running for more than 48 hours.

"There is a change in your philosophy of life when you start running," Dr. Spain said. "New things become important. When you run everyday, your workout becomes the center of the day. I feel guilty when I miss a day of running without a good reason."

According to the runners, the conversation at the starting line of a distance race is usually filled with what type of shoe each other is wearing and what leg muscles are hurting that day. Running is a common ground that brings people of varied backgrounds and interests together. It can be a great equalizer because the main competition is with yourself. "Another runner won't put you down for your time," Dr. Davis said.

The families of these runners have had their lives affected by running. Mealtime, weekends, leisure time, must be geared to the runner's schedule. Dr. Robert Fitts: "I've been running so long I don't even think about the philosophy behind it. It's my profession."
Fitts said, "A runner can allow his sport to interfere with his family's lifestyle, but on a longterm basis, this is not desirable. The runner must integrate running and family life," he said, "mixing them together if at all possible. In other words, running must be geared around the family if both are to prosper."

Family participation is encouraged by the Track Club, whether it involves running or simply keeping track of the runner's times. Dr. Davis finds a great deal of pleasure in having his son run with him, and he would someday like to have them run a marathon together. Even though Drs. Davis and Bauer have sons who are interested in running, both agree they would never push their children into any one particular athletic area.

All four of the runners recently competed in the St. Louis Track Club's fourth annual marathon. The 26 mile-385 yard race began at Washington University's Francis Field and followed a course similar to that of the marathon in the 1904 Olympic games held in St. Louis. Drs. Davis, Bauer and Spain also competed in the Boston marathon in April.

The marathon is the ultimate race for a distance runner and, as Davis put it, "We run the marathon simply because it is the marathon." Dr. Fitts said the strategy for a marathon should be to run an even pace.

"Half the race is in your head," Dr. Spain said. "Running is very much psychological; you can think yourself through the race. You have to be mentally prepared; you know what's coming and have to accept the fact that you'll feel bad. Your mind can make excuses for you after eighteen miles; you have to push back these thoughts."

"There is a tremendous sense of accomplishment after finishing a marathon," Dr. Davis said. "It is an exhilarating feeling, a feeling as if you've gone beyond human endurance." This is a common ground of experience shared by marathon runners.

These runners are not "Sunday joggers." However, they all feel the occasional runner is not to be laughed at;
he is just not as committed. They feel that running a marathon, like anything worth doing, offers both risks and rewards to the person who is willing to undertake the task. It offers the possibility of going beyond the usual limits of human endurance, but there is also an equal chance of failure. Each runner “wins” by his own definition of the word, they said, whether he is trying to set an Olympic qualifying time, knock off two minutes from his previous time, or simply finish the race. Each runner sets his own personal goals. There is also a sense of victory when one finishes a marathon. More than any other race, the runners view the marathon as a personal challenge and the success of each runner is measured in personal terms.

“You gain an inner respect for yourself when you run,” Dr. Spain said. “When you gain this respect, it carries over into the way others view you and the way you view other people. It works both ways.”

Dr. Robert Spain: “A great relief from tension and daily pressures comes with running.”
Death and Dying

Understanding the Needs Of the Terminally Ill Patient
By Glenda King Rosenthal

Eighteenth century author Henry Fielding once wrote: “It hath been often said that it is not death, but dying, which is terrible.” Death and dying is certainly a universal experience, one that has fascinated philosophers, medical professionals, and laymen for centuries. Even though the interest is not new, the professional study of death and dying is.

John Vavra, M.D. ’54, professor of medicine, has been teaching a Death and Dying course at Washington University for two years. The course has become extremely popular to medical, pre-medical and other students as well.

Dr. Vavra feels the interest in death and dying and medical ethics began some twenty years ago when Joseph Fletcher wrote a book entitled Morals and Medicine. “The purpose of the book was to draw to the physician’s attention the fact that they have a great deal of control over life and death and the manipulation of other human beings,” he said. “It raised the question of what is the appropriate and inappropriate use of medical technology.”

More and more courses of this nature are appearing in universities across the country, Dr. Vavra said. Some universities have entire departments devoted to the area of medicine and the humanities. Unfortunately, the number of good textbooks on the subject of death and dying is still limited. Therefore, he uses a series of handouts taken from the best material available, sometimes written by lawyers, physicians, philosophers and other specialists in the field, to illustrate the rational and non-rational aspects of death and dying.

“We all consider ourselves to be reasonable and rational and we try to analyze things,” Dr. Vavra said. “The subject of death and dying is one which has to be tackled in a variety of ways. We are trying to make sense of something that is really not rational. In the beginning of the course we try to use material that can be reasoned with; in the middle and end, we switch the idiom to a more non-rational kind of discourse. By that I mean Dr. Kubler-Ross’s book On Death and Dying which describes reaction patterns that are really not rational at all.”

Elisabeth Kubler-Ross, M.D. is the Medical Director of the Family Service and Mental Health Center of South Cook County, Illinois. Dr. Kubler-Ross has worked with dying patients for the past several years and has talked with dying patients to learn more about the final stages of life. By learning about the patient’s anxieties and fears, Dr. Kubler-Ross hopes to enable medical professionals and family to deal more effectively with the patient’s needs. Through her studies, Dr. Kubler-Ross has discovered five stages that most dying persons will go through as their illness progresses.

Dr. Vavra became acquainted with Dr. Kubler-Ross at Ellis Fischel Cancer Research Hospital, Columbia, Mo.

“When I first read her book, I felt that what I had seen in my own experience was now put into some kind of order,” Dr. Vavra said. “She represents crisis psychology which says a person who is reasonably well and in command of a lifestyle will react in certain patterns when confronted by a tragedy.” What Kubler-Ross did for the first time was to use the subject of death, specifically adults dying of cancer, and study their reaction patterns.

When discussing the five stages the dying patient goes through, it is important to remember Dr. Kubler-Ross’s limitations. Her book applies to a patient whose illness is of a longer duration, specifically adults dying of cancer. “She is looking at a disease that relentlessly progresses,” Dr. Vavra said. “The patient is not likely to get relief from the symptoms that he has begun to develop. Dr. Kubler-Ross’s theories are correct as long as they are applied to the patient suffering from a lingering terminal illness.”

The first reaction pattern, denial, is usually a temporary defense which eventually gives way to at least partial acceptance. During denial, a patient insists “It can’t be me.” “It’s a gut reaction,” Dr. Vavra said, “a way of saying ‘maybe the symptoms will go away, maybe the lab tests aren’t correct, maybe the doctor didn’t know enough.’”

Denial acts as a buffer, allowing the patient time to collect himself and, in time, form more realistic defenses. “Frequently,” Dr. Vavra explained, “the denial stage can’t last very long because an operation will be performed and the patient won’t be able to deny the illness any longer. On the other hand, for diseases other than cancer, denial can last for a longer period of time. The need for denial exists in every patient, especially at the beginning of an illness.

When the patient can no longer deny his illness, his feelings of denial are replaced with anger and resentment. Anger is also a gut reaction, a way of saying “why me?” In contrast to the denial stage, the stage of anger is particularly trying for the family and medical personnel. “It is important to remember that angry patients are physically sick patients,” Dr. Vavra explained. “They aren’t feeling well, they’re losing weight, they can’t be at work, they continue to have pain. Dr. Kubler-Ross’s perception of this, and I think it’s correct,” he said, “is that anger is a gut reaction directed to the
John Vavra, M.D. addresses his class on Death and Dying.
whole world of well people.”

“These patients can be extremely hostile,” Dr. Vavra said, “flying off the handle over the smallest thing. All decisions are made for them; they are essentially ‘captive patients.’ Studies have shown that it takes nurses three times as long to answer the call of these patients. In addition, because an angry patient can provoke anger in the people around them, they are often treated roughly.

“Dr. Kubler-Ross is certainly directing her book to medical personnel by telling them it’s important to let an angry patient just be angry,” Dr. Vavra said. “It’s a normal reaction; you can expect it. It’s really not right for these people to be sick and dying. If you permit them to be angry and let them have more control over their environment, say by letting them decide when they want visitors, then they tend to be less hostile.”

“When the physician understands these stages, he is better able to make a psychological diagnosis,” he said. “These patients have a right to be angry, and it helps if the physician and family are supportive and let the patient verbalize this anger.” But he added, “You have to listen with the understanding that this is a legitimate way of reacting. You should in no way criticize the patient for this anger.”

The family of the angry patient also may be provoked to anger. “Very frequently the wife of a dying husband will say to her neighbors, ‘you don’t know how hard this is on me.’ If the spouse is suffering,” Dr. Vavra said, “it is very hard to be in tune with the patient’s needs.”

There is no clear-cut time span between the stages of anger and the third stage which is bargaining. “Sometimes bargaining and anger will merge; the patient will oscillate between the two,” Dr. Vavra said.

Bargaining can be helpful to the patient, but only for short periods. Dr. Kubler-Ross found that most patient bargains are made with God; for example, a patient may promise to “dedicate his life to God” in exchange for a longer life. Dr. Vavra says the physician hears bargains such as “only if the next chemotherapy treatment will work” or “if the next operation will get it all.”

Patients are usually much more compliant and easier to work with during this stage. They may not want to know much about their condition, but at least they follow the treatment procedures. Dr. Kubler-Ross observed it’s impossible for the patient to keep the bargain. “The reason for this is that the disease can never keep the bargain,” Dr. Vavra said. The wish is always for an extension of life, or even a few days free from pain. “When you strike a bargain, there’s hope . . . hope that this operation is the last one, etc.,” he said. “The bargain is not kept when a new lump is discovered, for example. But hope, which is also a gut reaction, is always present in all stages.”

The fourth stage of depression occurs when the patient can no longer deny his illness. The anger and numbness soon gives way to an overwhelming sense of loss. Dr. Vavra finds these are people who are extremely sad, frequently weeping, who don’t want to do daily things. “Next to anger, it is probably the most difficult stage for everyone concerned,” he said.

Dr. Kubler-Ross observed that depression really occurs in two stages, reactive and preparatory. Reactive depression is more of a sadness directed toward specific things such as concern over hospital bills, and guilt over separation from the family. These reasons for depression can be easily understood and sympathized with.

Preparatory depression involves the contemplation over and grieving for the loss of all things and persons important to them. Most of us know how extremely painful it is to lose a person we love. As Dr. Vavra observed, “These people are anticipating the loss of everything, everything they’ve ever cared for, everything they’ve ever treasured. Their losses are multiplied many times over.”

The first type of depression is usually much more verbal, with the patient sharing his concerns with people from many different areas. In the preparatory stage there is little need for words. In fact, his emotional preparation for his impending death can be hindered by visitors who try to cheer him up. Dr. Kubler-Ross has observed that this type of depression is necessary if the patient is to prepare himself to die in a stage of peace and acceptance.

“This stage can be healing in the sense that as the patient grieves about the people they’re going to lose, it does become easier to say good-bye,” Dr. Vavra said. “At the time of death, it is only important to be close to a very few people, whereas before many associations were worthwhile. The circle of people surrounding the dying person becomes smaller and smaller as death approaches,” he said.

Patients in this stage may indicate a readiness to separate themselves from life. Dr. Kubler-Ross described many patients who are not cheered by receiving promising treatment for their illness. Many times the patient’s family and friends may expect him to “keep up the fight” when he is preparing to die. This discrepancy between the patient’s wishes and the family’s expectations may cause the patient much unnecessary grief.

“Frequently people come from out-of-town to see the dying patient,” Dr. Vavra said. “When the patient is less than happy to see them, it causes hurt and resentment on both sides. People around a person who’s dying will know when the goodbyes have been said; you know when the patient is no longer comfortable in your presence and vice versa. When the patient is ready for an emotional parting of the ways, everyone knows it if they don’t fool themselves.”

Dr. Kubler-Ross feels the medical profession can aid in helping the dying patient’s family and friends understand the patient’s need for this emotional separation. Dr. Vavra said it is important to remember that these goodbyes and the need to go back to important places is not at all morbid. “This is not irrational behavior,” he said. “This is indigenous to our emotional needs, to
our feelings for other people, and the meaning they've had for us."

Assuming that the patient's illness is of long enough duration and inexorably progressive and he has received help in his emotional journey through the previous stages, Dr. Kubler-Ross says he will reach a stage of acceptance. "Very few of us can actually accept our own death," Dr. Vavra said, "so I feel resignation is a better word. It is a period of ennui, of tense expectation, sometimes an ending of misery." The patient may wish to be left alone; he is no longer in a talkative mood and his interests have narrowed. During this stage, the family often needs more support and understanding than the patient. "During this stage intense feelings are shared," Dr. Vavra said, "usually through non-verbal communication. These people don't want to talk, but they do want to be touched. They don't want to be alone."

The presence of the physician is important during this final stage, even when there is no medically effective treatment left. "The physician can act as a guide for the patient and the family," Dr. Vavra said. "Physicians are people who have seen people die. Physicians have to be able to communicate to the patient that they're going to be with them and see them through to the end."

It is much too easy in the milieu of modern medicine to deal only with the physical needs of the dying patient. It is also important, however, to be in tune with the emotional needs of the terminally ill patient. Dr. Vavra feels the family physician who sees the patient throughout his life is best able to do this. But sensitivity and understanding are also possible within the framework of a large teaching institution.

"By and large this concern and understanding is the art of medicine," Dr. Vavra said, "and most physicians do a pretty good job of it."

Dr. Vavra has had a long-standing interest in the role of medical ethics in death and dying.
Genetic Research Funded

The School of Medicine has received a grant of $150,000 per year for five years from the National Institutes of Health to study the immune response in animal models.

Donald C. Shreffler, Ph.D., professor and acting director of the Department of Genetics, is the principal investigator in the study. He plans to study the organization and function of the H-2 gene complex as an animal model in order to understand what part genes may play in the survival of human transplants. The H-2 gene complex is a small segment of one chromosome which carries factors that cause transplantation rejections and control immune responses in laboratory mice.

Dr. Shreffler received the Ph.D. degree in genetics from the California Institute of Technology in 1962. From 1971-1972 he was a visiting scientist at the Basel Institute for Immunology in Switzerland. After 14 years on the University of Michigan Medical School faculty, Dr. Shreffler joined the Washington University School of Medicine in July, 1975.

Heart Research Funded by Mallinckrodt

The Mallinckrodt Foundation has granted $10,000 for the continuation of research on a treatment to decrease the amount of damage after a heart attack.

The research, which is being done at the School of Medicine and St. Luke's Hospital, was begun in 1974 by John D. Davidson, M.D. '52, clinical instructor of medicine and director of the Division of Hyperbaric Medicine at St. Luke's Hospital. He is collaborating with researchers in the Division of Cardiology at Washington University.

Dr. Davidson has found that permanent heart damage may be significantly lessened by placing the heart attack victim in a hyperbaric chamber (a specially designed apparatus in which the oxygen content is greater than under ordinary conditions). The chamber provides oxygen under pressure, which allows some potentially damaged cells to live. St. Luke's Hospital has one of the few hyperbaric chambers in the midwest.

One of the important aspects of this research is that the victim can receive this treatment as long as six hours after suffering an attack and may still benefit significantly.

Although only experimental animals have been treated, Dr. Davidson hopes this treatment will prove practical and advantageous for humans in the near future.

Names Make News

Juan C. Corvalan, M.D., clinical instructor of psychiatry, is working with the Diogenes Foundation in organizing a clearinghouse for volunteer work for compiling data on the effects of television.

Thomas B. Ferguson, M.D., clinical professor of surgery at W.U., was recently installed as the president of the Society of Thoracic Surgeons at their annual meeting in Washington, D.C. He also was the visiting professor at Michigan State University and the Cleveland Clinic. In October he gave the Third Francis X. Byron Lecture at the University of California at Irvine.

Marcel T. Saghri, M.D., has been named president of the medical staff of St. Vincent's Hospital, Normandy. He is currently clinical assistant professor of psychiatry at W.U.

Three medical students have received the Merck Manual Award for outstanding achievement in the study of medicine.

Colleen K. Flint, Diane L. Elliot and Paul V. Carlile were the recipients of the award, which is given annually to students across the country by Merck & Co., Inc.

Curt Hagedorn, a fourth year medical student, has received the 1976 Student Research Award from the American Gastroenterological Association. His abstract, "The Extent of Intrinsic Factor B-12 'IF-B12' Binding in Human Ileal Mucosa," was judged the most outstanding from among those submitted for competition.

As a recipient of this award, Hagedorn will attend the American Gastroenterological Association's annual meeting May 22-27 in Miami. He will present his paper at this time and his abstract will be published in Gastroenterology.

Ogura Chairs Head, Neck Cancer Meeting

Joseph H. Ogura, M.D., chairman of the Department of Otolaryngology, recently chaired a National Head and Neck Cancer Planning Cadre in New Orleans. This State of the Art Conference culminated two years work by Dr. Ogura, who felt the need for such a conference and was responsible for organizing it. Walter Bauer, M.D., professor of pathology, was a member of the nationwide steering committee and also attended the meeting.

Head and neck cancer is the fifth leading cause of cancer deaths; however, there hasn't been any research in this area. The conference, which assembled experts from all over the
country, was the first step in organizing research efforts.

The Cadre's objective was to create a national program for the prevention, cure and control of cancers of the head and neck. Five major areas were covered during the three day conference: 1) immunology, 2) pharmacology, radiation biology and cell kinetics, 3) epidemiology, carcinogenesis and virology, 4) natural history and modification of head and neck cancer, and 5) quality of life.

Dr. Ogura said the State of the Art Conference concluded that "if patients gave up smoking and drinking, head and neck cancer would be eliminated by 80%.

The goal of the conference was to generate original and innovative ideas for investigation to be pursued in a national head and neck cancer program.

View of remodeled foyer to newly refurbished Wohl Auditorium.

Newly styled signs now decorate the Washington University Medical Center.
Arthur C. Fortney, '27, Mission Viejo, Calif., retired from the practice of internal medicine in January.

Calvin S. Drayer, '31, Bryn Mawr, Pa., co-authored (with Albert J. Glass) the first three chapters of Volume II (Overseas Theaters) Neuropsychiatry in World War II, which was released last year by the Surgeon General's Office, U.S. Army.

Tom F. Whayne, '31, Lexington, Ky., served as associate editor for the 12th edition of Control of Communicable Disease in Man, which was published last September.

Jean F. Rogier, '34, Mason City, Ill., has retired after 35 years of service with the federal government, 32 of which were spent with the Agency of International Development in a cooperative program of health and sanitation overseas.

Wallace E. Allen, '36, Modesto, Calif., has retired as senior otolaryngologist at Gould Medical Group, Inc.

F. Richard Crouch, '36, Farmington, Mo., has retired from practice.

John W. Records, '36, Oklahoma City, Okla., president of the Oklahoma City Clinic, wrote the "Hazards of IUDs" which was published in the Southern Medical Journal last September.

James F. Trucks, '36, Birmingham, Ala., has retired from practice and is now serving as medical advisor to Blue Cross of Ala. and is chairman of the Birmingham Housing Authority.

John H. Beatty, '41, Chula Vista, Calif., is medical director of National Steel and Shipbuilding Corp., San Diego.

Donald M. Bramwell, '41, Eureka, Calif., is director of Mental Health for Humboldt County, Calif., in the "Heart of the Redwood Empire."

Joseph N. Dills, '41, Cedar Key, Fla., has retired from the practice of general surgery and now does commercial photography.

William L. Topp, '41, Seattle, Wash., was program chairman of the last meeting of the International Family Planning Research Association and is now vice president of that organization.

James C. Folsom, '46, Reston, Va., is serving a three year term as Delegate-at-Large in the House of Delegates of the American Hospital Association. He was nominated to the position by the Psychiatric Services Section of the American Hospital Association.

Ann DeHuff Peters, '46, La Jolla, Calif., was elected an Honorary Associate Fellow of the American Academy of Pediatrics. She has been active in providing child day care on a state and local level and is medical co-director of a nurse practitioner's program. She traveled to Greece, Turkey and Iran in 1975 as part of a delegation of American Women for International Understanding.

Arnold J. Brody, '47, White Sulfer Springs, W.Va., has been elected president of the Greenbriar Clinic, Inc.

Elfred H. Lampe, '48, Fort Wayne, Ind., is president of the Indiana Obstetrical and Gynecological Society.

Quentin H. Lehmann, '56, La Mesa, Calif., and Gerald E. Hands, '59, Sacramento, Calif., have been cited for distinguished achievements by being named Fellows of the American College of Radiology.

Ralph H. Harder, '57, has relocated his family practice from a suburban San Jose community to the small gold rush town of Jackson, Calif.
Richard E. Lauritzen, '57, was elected president of the medical staff of the Montana Deaconess Medical Center, Great Falls, Mont.

Dixon F. Spivy, '57, Chicago, Ill., is assistant clinical professor of psychiatry at the University of Illinois.

Hunter Heath, III, '68, Rochester, Minn., is assistant professor of medicine at Mayo Medical School and in August will be a consultant in endocrinology and medicine, Mayo Clinic, Rochester.

Michael L. Cowan, '69, is with the Department of Internal Medicine, Naval Air Station Hospital, Jacksonville, Fla.

James F. Jekel, '50, New Haven, Conn., is doing research on the problem of school age parenthood and testified before the Kennedy subcommittee on the Kennedy Bill.

Phillip E. King, '61, North Kansas City, Mo., is president-elect of the Missouri Chapter of the American College of Emergency Physicians.

John D. Rich, '62, Denver, Colo., is completing a residency in plastic surgery at Fitzsimons Army Medical Center.

Ronald G. Evans, M.D. '64, Elizabeth E. Mallinckrodt Professor and Head of the Department of Radiology and Director of the Mallinckrodt Institute of Radiology, presented the Annual Preston M. Hickey Memorial Lecture to the Michigan Radiological Society in Detroit. Dr. Evans' lecture "A New Frontier for Radiology-Computed Tomography" will be published in the June 1976 issue of the American Journal of Roentgenology.

David A. Hardy, '64, is a clinical instructor in urology at St. Louis University.

Allan J. Goldstein, '67, Great Neck, N.Y., completed his otolaryngology residency and is in private practice in Hempstead, N.Y.

Richard J. Slavin, '67, Los Altos, Calif., an instructor in surgery at Stanford Medical School, is in practice in general, thoracic and vascular surgery at the Sunnyvale Medical Clinic.

Frank Vinicor, '67, Indianapolis, Ind., is assistant professor at Indiana University Medical Center and research associate at the V.A. Hospital, Department of Medicine.

Oren M. Conway, '71, is currently serving at Fort Campbell, Ky., as a pediatrician. In July of 1975 he was sent to Fort Chaffee, Ark., to serve in the Vietnamese refugee center.

James T. Shaw, '71, Augusta, Ga., is clinical instructor of family practice at the Medical College of Georgia and on the teaching staff of Dwight David Eisenhower Army Medical Center.

Roger A. Warnke, '71, Stanford, Calif., will be an assistant professor of pathology at Stanford University July 1.

Loren A. Crown, '72, Memphis, Tenn., has completed his family practice residency at MacNeal Memorial Hospital in Chicago and is in a full time emergency medical group practice at Methodist Hospital in Memphis.

Former House Staff and Former Faculty

Carl E. Chism, M.D., Seattle, Wash., is president-elect of the American Association of Plastic Surgeons and will assume the presidency in May 1976 at the annual meeting in Atlanta, Ga.

Robert W. Huntington, M.D., Cambria, Calif., has retired from practice.

John E. Keiter, M.D., Ogden, Utah, has been board certified by the American Board of Plastic Surgery.

Robert J. Sokol, M.D., Cleveland, Ohio, assistant program director of the Perinatal Clinical Research Center and assistant professor of Ob./Gyn. at Cleveland Metropolitan General Hospital/Case Western Reserve University, received sub-specialty boards in maternal-fetal medicine and was elected to membership in the Central Association of Obstetricians and Gynecologists.

John S. Spratt, Jr., M.D., Columbia, Mo., has been named a member of the Review Committee of the Cancer Control Support Services and Rehabilitation, National Cancer Institute.

Occupational Therapy

Shirley Filbert Gordon, OT'47, had her biography published in Who's Who of American Women.


Health Care Administration

David J. Elliott, HC '71, has been named Hospital Administrator at Beckley Appalachian Regional Hospital, Beckley, W. Va.

Robert Graves, HA '75, has been named Assistant in Administration at Alton Ochsner Medical Foundation, New Orleans.

John W. Packard, Jr., HA '75, is the assistant administrator at Valley Children's Hospital, Fresno, Calif.

Larry W. Weller, HA '75, is a management analyst at the V.A. Hospital in Grand Island, Neb.

In Memoriam

Milton A. Broemser, '11 . Feb. 9, 1976
Roy H. Moore, '31 . Aug. 27, 1975
Is Pindar in the House?

The record-setting response of you Washington University Medical School graduates and former House Staff to the Alumni Annual Giving Campaign (AAG), now almost ended, merits the immediate attentions of a Pindar. You all remember Pindar. He was the poet assigned to lay appropriate lines on the winners of the Olympiads, at the same time laurel wreaths were laid on their heads, during the second Golden Age of Greece. If you really remember him you recall that he would scarcely mention the contest itself, but would strive to make each winner feel that he could and should do even better next time! Most people presently regard a "Pindaric Ode" as equivalent to a supreme accolade, and that is what you all deserve.

By late February '76 the numbers of M.D. alumni contributing had exceeded the total in 74-75 by 12%, as had the total value of their pledges. Former house staff staged a meteoric upward response, the number of contributors increasing by 200%, and the total value of their pledges by 122%! Now that's an increase!

You may also note with pride that more than 20% of all M.D. alumni have made pledges in 75-76 in addition to paying alumni dues. The ranks of dues-paying medical alumni have swelled also, thanks to the gentle urging of our Great President (George Rader, that is).

A final indicator of the stirring response of medical alumni to this year's AAG Campaign is the M.D. Century Club membership, which presently exceeds the comparable number in February '75 by 17%, or about 80 new members!

It is immensely gratifying to report such a successful Campaign, although it would take a 100% response to convert this Chairman into a poet. To prepare to be Chairman, I sought counsel from a friend who is an outrageously effective fund-raiser. His advice was simple: "If you believe in the worth of your institution, your sincerity will persuade your prospects. Besides," he added, "'76 is going to be a better year than '75 was, so you should get more money automatically." Now the worth of Washington University Medical Center has ever been clear to me; it's the best retardant of cerebral calcification I know, so that part was easy. But since, for example, our M.D. alumni in California have had to deal with exploding malpractice premiums, the effects of anesthesiology strikes and other vicissitudes a professional man doesn't expect to confront, they at least might not see '76 as a year to turn their billfolds inside out. So credit for the success of this year's AAG Campaign must go to the solicitors who worked diligently, to the alumni and former house staff who responded generously, and to the Medical Center for deserving their support.

You probably saw the results of recent polls rating the nation's medical schools, one conducted by Medical Economics, the other by medical school deans, each using different criteria. By the standards of both, Washington University ranks among the top 10 medical schools in the United States. As AAG Chairman I see this as a proper position for the Medical School. It can truly be said that it would be terrible for our country if there were no medical schools as good as Washington University. At the same time one can say "Try harder," and we will, we WILL!

In summary your Medical Center enjoys a position like the St. Louis Cardinals' "Dizzy" Dean, who observed, "I may not have been the greatest pitcher who ever lived, but I wuz up there among 'em."

Thank you all for your efforts, your contributions and your continued involvement with your great Medical Center.

Jack Barrow, M.D. '46, Chairman, Medical Alumni Annual Giving Campaign

President's Letter

Dear Fellow Alumnus:

Since this is the last of these letters I'll be writing to you there are still a few things I need to mention. First of all I hope to see many of you at the reunion. If you haven't yet made plans there is still time left.

Secondly, I would be utterly remiss if I didn't acknowledge all the help I have been given this past year. The women in the Alumni Office have been splendid—they have needled me just the proper amount. Also, I hope I can offer the same quality of moral support to my successor, Ed Lansche, as Don Finger has given me.

Thirdly, folks, don't forget that our alma mater continues to need your financial support. April 15, with all its internal revenue connotations, has now come and gone—if there's anything left, break out the check book.

Finally, let an old ex-president thank all of you for the privilege of holding this office the past year—my best wishes to you all in the years to come.

George B. Rader, M.D. '51
President,
Medical Center Alumni Association
London, possibly the most civilized city in the world, will be the site of the fall postgraduate program of the Washington University Medical Alumni.

Sample the best of British medicine with an outstanding faculty at different centers throughout the city each morning. Afternoons and evenings are free to savor the charm and excitement of this vibrant city. Do you prefer the museums, the ballet, Gilbert and Sullivan, Shakespeare or modern theater? Perhaps you would choose to browse through bookshops, seek bargains in woolens, fine china, antique furniture.

Enjoy the city when the crowds of tourists are gone, when the mists hover over the Thames and crisp evenings accentuate the warmth of the unexpected pub.

A highlight of the week is a trip to Oxford with a tour of the colleges, luncheon in the elegant dining hall of Queen’s College, and an afternoon tour of Blenheim Palace. Plan now to attend.

Charter Flight (Pan Am) directly from St. Louis, Monday, September 27, returns Tuesday, October 5.

Hotel Chelsea will be headquarters (on Knightsbridge near Harrods).

Cost:
$697 for tour package (double occupancy) (based on minimum of 125 participants).
$100 registration fee for postgraduate program.

Registration cut-off date: July 27.

For additional information
Call: Ann Kirkland
816-531-0704