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Manuscripts—All manuscripts for publication, news items, books and monographs for review, and correspondence relating to editorial policy should be addressed to Dr. John A. Wagner, *Editor,* Bulletin of the School of Medicine, University of Maryland, 31 S. Greene Street, Baltimore 1, Md. Manuscripts should be typewritten double spaced and accompanied by a bibliography conforming to the style established by the *American Medical Association Cumulative Index Medicus.* For example, the reference to an article should appear in the following order: author, title, name of journal, volume number, pages included, and date. Reference to books should appear as follows: author, title, edition, pages, publisher, and date published. A reasonable number of illustrations will be furnished free.

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COMMUNITY MENTAL HEALTH
FACT and FANCY
A Hypothetical Interview

EUGENE B. BRODY, M.D.*

The term, "community mental health," is heard everywhere these days. Just what does it mean?

This term refers first to a system of mental health services. Such services include the diagnosis and treatment of people who have identifiable emotional or mental disabilities, i.e., those who can be labelled as "patients."

Second, the term refers to the mental health of the community, itself—the nature of the social system rather than of the individuals who make it up. There are problems in defining a "community" and measuring its "health." However, considerable research has been done in this field and many people do regard the mentally and emotionally ill, at least in part, as casualties of the social system. They believe, therefore, that the most effective mass prevention of such illness or disability will require changes in the society or community.

This has been a source of conflict within the staffs of some urban mental health centers. Some have felt that more time and energy should be devoted to changing the presumed casualty-producing aspects of society. Others, more oriented to illness, such as psychiatrically trained physicians, have been inclined to emphasize service to those already defined as patients or potential patients. This may be because psychiatrists see mental disturbances among the well-to-do and educated as well as the poor and deprived, and are not so ready to attribute most such suffering to social ills. It is a particular issue now because the main thrust of community mental health programs is toward the poor.

Even within the National Institute of Mental Health, which provides initial funding for most programs, there have been persistent policy differences in this respect. At the top echelon talk has been largely of prevention and social change.

* Professor and Chairman, Dept. of Psychiatry, Director, Institute of Psychiatry and Human Behavior, University of Maryland School of Medicine, Baltimore Campus.

At the bottom level of regional administrators, who actually inspect programs, the emphasis has been mainly on the provision of conventional services to previously deprived populations.

What makes community mental health treatment services different from other psychiatric services?

At the very end of the delivery system nothing is basically different. There are still a help-seeker and a helper, whether the encounter is individually or in groups. The helper does his job by talking or listening or by administering drugs or some other physical treatment. All of the forms of individual, group and family psychotherapy, milieu therapy in the hospital, counselling of various kinds, social work assistance and so on, may be found in any large psychiatric center whether or not it carries a "community" label. It is also important to remember that while we know a great deal about reducing disability, we still do not know the basic causes of the major mental health illnesses. It is these, such as schizophrenia, which make up the bulk of the hospitalized population, and there exists no definitive easily applied treatment for them.

The major distinguishing feature of community mental health services, then, is less a matter of treatment than of organization. This is neither unique nor historically new. The idea of a service for geographically defined "catchment area," for example, is a basic feature of the health systems of several European countries. In a city such as Baltimore with a mobile inner city population it may not be so easy as in more stable societies to adhere strictly to the patient's address as means of determining his eligibility for services.

Another aspect of organization is the availability as part of a single system, of a spectrum of services. The components of this spectrum, defined by the National Institute of Mental Health, are inpatient, outpatient, partial hospitalization, emergencies, consultation, and education. Again this spectrum has been present for years in most large departments of psychiatry. However, it is hoped that in the community centers the linkage of a range of services will make it possible to maintain continuity of care, with the patient seeing the same helper or team of therapists, whether he is cared for on an ambulatory, outpatient basis or within the hospital.

Accessibility Is Important

The third aspect is physical and psychological accessibility. The idea of treating a patient close to home so that he doesn't break his ties with family and neighborhood, rather than sending him away to the hospital on the edge of town, is an important part of the community concept. I believe that the idea is right and look forward to the day when patients will come in and out of psychiatric units just as general hospitals. I also like the idea of rapid crisis intervention in the home, itself—a method successfully used by Dr. Querido in Amsterdam. On the other hand, until more definitive treatments for major disorders are discovered, there will always be those who will require a prolonged period of rehabilitation in a setting removed from that in which their troubles began. Furthermore, many who come into psychiatric units with acute disturbances, such as delirium tremens for example, are drifters and social isolates without families or similar ties. Rehabilitation for them is often a matter of building from the ground up and the stable community of a relatively isolated institution could in the long run be more supportive than the atmosphere of a rapid turn-over city-based hospital.

Psychological accessibility also involves a special aspect of providing mental health services for the poor and socially excluded. Here I refer to the use of people who can speak the "language" of the neighborhoods and who are able in their counselling to recognize the social and economic contributions to emotional disorders. Such neighborhood counselors or health aides have been trained and employed by a number of programs. They have been immensely useful, but centers such as that at the Lincoln Hospital in the Bronx where studies have been made also report significant difficulties. For example, their identification with local socioeconomic problems and their need to be part of the general upward thrust of previously deprived groups sometimes makes it difficult for them to recognize signs of severe mental illness and they often tend to attribute them to immediate circumstances. Also their close relationships with others in the neighborhood may make it difficult for them to be objective; conversely, it has sometimes inhibited people who might know them or their families, so they haven't been able to talk so freely to them as to a more highly trained stranger.

How does prevention fit into the community mental health concept?

This is potentially the most exciting feature of the community concept but its implementation is the most difficult. Prevention has been divided into three categories. So-called tertiary or third-level prevention refers to nothing more than adequate treatment aimed at the prevention of disability. This, while very important, is a part of all medical or psychiatric services. Secondary prevention brings us closer to the community idea. This refers mainly to early case-finding. For every person identified as psychotic, for example, there are probably several managing to survive outside the treatment network. For many it is probably just as well since we can't change them anyway. Others, however, may be found before their illness has progressed too far. Many of these can be helped to lead more satisfying and productive lives, and above all, their impact on their families may be reduced. This is one way of reducing the social transmission of mental illness. So case-finding or outreach activities may be aimed at locating people with a variety of disorders who are afraid of seeking help, or are ignorant of resources, or don't know that they are sick. One problem is that case-finding, which can be done by relatively unskilled personnel, can swamp existing facilities and outrun the supply of highly trained therapists. In other words, added case-finding without added facilities may be less than useful.

Identify Potential Cases

Consultation to the courts. the police, the schools and other institutions can identify potentially disturbed people early and help initiate remedial programs. Several members of our faculty, for example, work with the courts and are often able to prevent inappropriate legal dispositions of psychiatrically sick offenders. Psychiatrists and psychologists in our children's division have worked for several years with selected public schools in the inner city area. Consultation with teachers and others who function as surrogate parents may strengthen the process of healthy socialization and thus have primary preventive value.

Primary prevention, clearly, means avoiding the development of sick or maladaptive ways of thinking, feeling and acting in the first place. Perhaps the most fundamental aspects of primary prevention of psychiatric disturbance are really not tasks of mental health workers at all. They involve, for example, ensuring re-

sponsible parenthood. The limitation of children to loving and healthy parents who want and are able to care for them would probably do more to reduce the incidence of mental illness than any other measure I can imagine.

This leads us to the broader issues of primary prevention, all of which involve society as a whole rather than the health or mental health professions in particular. For example, it has been estimated that almost 20 per cent of those in large public mental institutions throughout the country are there because of defects associated with events during their mother's pregnancies, the birth process or their first months of extra-uterine life. These defects are the consequences of malnutrition, infections, other illness and trauma. At first glance one thinks that the remedies are in the hands of obstetricians and pediatricians. These health problems, however, are significantly associated with poverty, ignorance and lack of basic resources. Should the health worker then devote his energies to attacking the problems of poverty?

Gender Identity Critical

As another example, it is well established that the achievement of an adequate gender identity, i.e. as a male or female, requires an available role model in the person of the parent of the same sex. The failure of such identity-formation appears to have particularly severe consequences, promoting vulnerability to a variety of psychiatric problems, in boys. The absence of a self-confident economically adequate father as a role model has in the past been frequently noted in the poorer strata of the black community. This has, to an important degree, been a consequence of racial discrimination making it impossible for men to obtain adequate education and jobs. Should the mental health worker, then, fight against discrimination as part of his preventive job?

There is some reason to believe that social powerlessness while not causing major mental illness does promote feelings of hopelessness, despair, lack of initiative, feelings of futility about long-range planning, and vulnerability to self-narcotizing behavior. Should mental health workers spend time to help open channels of communications between the people their clinics are to serve and city hall? Should they become involved in struggles against expressways which threaten dislocation? Should they help tenants' groups fight against retaliatory eviction by landlords?

These are illustrations of the dilemmas posed to community mental health programs by the challenge of preventive public health oriented psychiatry. These dilemmas will not be easily solved, and they are important contributors to the turbulence which has been characteristic of such centers as they have been developing in urban centers throughout the nation. It seems likely, on one hand, that health workers who are visible to their clients as allies in the struggle for a better life will be more psychologically accessible to them as counsellors and therapists. Experiences of successful self-determination and autonomy can certainly do much for personality growth and development. On the other hand, the concomitant tendency to politicize all health activities can easily result in blindness to our ignorance about basic causes of illness and malfunction, and neglect of the large mass of patients whose already existing psychiatric problems will remain fundamentally untouched by social-preventive activities.

Pros and Cons

So, there is something to be said on both sides and program directors will have to decide where to place their major

efforts. My own feeling is that the community mental health staff should document, whenever possible, the role of preventable social problems in producing psychiatric disability. It should be prepared to offer consultation to community leaders and agencies in remedying these conditions. Even more, members of the staff may well assist groups in achieving their social goals, and certainly the center staff should be clearly identified as on the side of the community in its efforts toward self-development and freedom of opportunity. On the other hand I don't think that the energies of highly trained professionals should be diverted to this goal any more than the job of doctors who identified the mosquito as the malarial vector was to clear the swamps. Their social responsibility was to alert governments and communities to the importance of swamp clearing, and to insist that it be carried out—but not to stop their primary tasks to do it themselves.

Dr. Eugene B. Brody

One unfortunate consequence of inappropriate politicization can be the alienation of highly trained professional people who prefer to confine their work to their areas of technical competence and whose contributions are essential if any health program is to be worthy of the name. This last factor also becomes important because the outreach, social action, and simpler counselling activities of a program require the development of less educated "paramedical" workers. These people in programs throughout the country have wanted a greater share of the decision-making power, and more control over policy and administration. They have had particular leverage since they usually come from the communities the programs are designed to serve, and thus regard themselves as representing the community. The fact that others in the "catchment area" don't agree and that local jurisdictional disputes then arise further complicates the problem of administration and direction. These and related issues have turned community health and mental health programs into political football in several large cities.

What is the role of a university department of psychiatry in community mental health programs?

The traditional social role of the university medical center has been the long-range one: the production of professional manpower without which health services cannot be maintained, and the production of new knowledge without which they will be ineffective. The pursuit of these goals constitutes the most fundamental kind of service; they are basic to everything else. Another way of saying it is that research is the imaginative form of compassion. But it isn't so easy to separate research and education from direct clinical care. Society needs doctors, nurses, social workers and others who

know and are interested in the community and in the problems of the city. If a university is to place its students and residents in a community mental health program it must be able to ensure the professional adequacy of that program. It cannot do so without a measure of influence on the administration and particularly on the recruitment and employment of senior professional people. There is also a mutuality here. The community program in this era of a seller's market cannot hope to attract adequate professional staff without the attraction of the university association. It cannot operate extensive services without the participation of students of medicine, social work, psychology and nursing, and without the assistance of residents in psychiatry.

All of these considerations mean that new and imaginative patterns of collaboration between states (responsible for providing service and disbursing tax funds for the purpose) and university medical centers will have to be evolved. Premature crystallization or polarization of opinion on either side can impair the orderly evolution of a system which will provide optimum care at the same time that it provides a setting for the training of much needed helping personnel. They mean, also, that the collaborative pattern must include a mechanism for participation by community representatives. In this way the health programs will remain psychologically accessible to the people they are designed to serve, and responsive to their changing needs.

GROWS NEARER COMPLETION—A maze of steel fabrication forms the North Hospital building in mid-December as it approaches completion. University Hospital can be seen adjacent to the construction which has a decorative fence painted by local artists to enhance the beauty of the construction area.

Managing Editor Named

The Editorial Board of the *Bulletin* has announced the appointment of Miss Jan Katherine Walker as Managing Editor effective January 1, 1971.

A native of Jacksonville, Fla., and an alumna of Florida State University, Miss Walker is a professional editor, coming to the University of Maryland from the American National Red Cross where she served as an Information Specialist writer in the Office of Public Relations. Miss Walker has also had considerable experience in newspaper work including having served three years as a staff writer with the Associated Press in Atlanta, Ga., and Birmingham, Ala.

Her academic career is distinguished by her membership in Theta Sigma Phi, a professional society for women in journalism and communications, in Phi Alpha Theta, national honorary society for students of history, and the American Alumni Council. Miss Walker's current interests will be in assisting the Editorial Board in further improving the quality of the *Bulletin* and assisting the Editor in broadening its influence in behalf of faculty and school.

Miss Walker will serve in a fulltime capacity with offices in Davidge Hall, School of Medicine, 522 W. Lombard.

Dean Names Committee

In an effort to improve communication with the people who live near University Hospital, many of whom depend on the hospital as their primary source of medical care, Dean John H. Moxley, III, has formed a Community Advisory Committee.

In announcing the formation of the committee, Dr. Moxley, who will act as chairman of the group, explained that the Medical School is in the process of reviewing many of its programs, including service programs that directly affect neighborhood people.

"We are reorganizing our ambulatory services, including our emergency department, in anticipation of the greatly enlarged facilities that will be available for this purpose when the new North Hospital Building is completed in late 1972," he said. "We need to exchange ideas with the community about this reorganization. And, there are many local problems that can be solved much more easily through a joint committee of the Medical School and the community—safety, traffic, job training and recruitment, for example. I feel sure that this committee can exert a very considerable influence in improving the quality of life in this community."

Other members of the committee include:

Thomas Seaborn, assistant director and community relations director of the West Baltimore Civic Association; member of the executive committee of the Safety First Club of Maryland, and organizer and director of the West Side Community Club.

Myrtle McCullers, acting chairman of the Neighborhood Advisory Council for the Inner City Community and Mental Health Program. The council acts as a group of consultants for the program in

decisions on new locations for mental health centers in the city, choice of new staff members, and issues involving innovations in delivery of mental health care.

Yusuf Karrieam, community organizer for the Foresight Community Council, a Model Cities field office.

Father Thomas J. Donnellan, administrator of St. Peter the Apostle Church.

Dr. Eugene B. Brody, professor and chairman of the department of psychiatry, University of Maryland School of Medicine, and director of The Psychiatric Institute.

Dr. William Spicer, Jr., associate dean for health care programs, University of Maryland School of Medicine.

Dr. George H. Yeager, director, University of Maryland Hospital.

Dr. J. Tyson Tildon, research assistant professor in pediatrics and assistant professor in biochemistry, University of Maryland School of Medicine.

Dermatology Wins Award

Dr. Harry M. Robinson, head of the division of dermatology, has received the American Academy of Dermatology's Gold Award for Excellence in Teaching and Research.

The award, citing Dr. Robinson for his pioneering efforts in dermatological rehabilitation, was presented at the academy's recent annual meeting where the division's exhibit won top honors. Dr. Robinson was assisted in preparing the exhibit by **Dr. Carolyn J. Pass** and **Dr. Emanuel H. Silverstein.**

Dr. Robinson and his staff are concerned in rehabilitating what he calls "dermatological cripples"—people who are incapacitated for work by skin disorders ranging from acne to cancer.

Two years ago, Dr. Robinson established the nation's first clinic designed to rehabilitate workers who were out of jobs because of skin disorders.

"We have helped dropouts return to school and helped young adults who had given up hope of returning to work," he said. "We have rehabilitated 82 per cent of the patients our unit accepted for care. Not only were their skin disorders alleviated, but they are now economically independent."

A result of his research is an index of dermatological disability which takes into account evaluations of a dermatologist, vocational counselor, social worker and psychologist and standardizes terms used to describe degrees of disability. It is also helpful in predicting the rehabilitation potential of the patient.

Dean's LETTER

MEDICAL SCHOOL SECTION

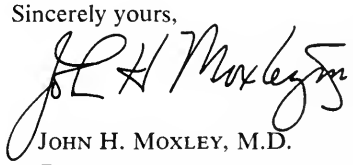
Dear Alumni and Friends of the Medical School:

The University of Maryland, like many other educational institutions, is undergoing significant change. These changes stem in great part from the unprecedented growth experienced by higher education in our country in the past decade or two. How to continue to grow without completely destroying the interpersonal relationships involved in the educational process is one of the major challenges of the day. The universities' attempts to seek a solution has led them to develop programs centered around a series of decentralized campuses—in College Park, Catonsville, Princess Anne and Baltimore. Each campus will be directed by a Chancellor with the Office of the President as an over-all umbrella agency coordinating the growth and development of the total university. Dr. Albin O. Kuhn, who has been the Chancellor at Catonsville and Baltimore, will be moving to the Baltimore Campus fulltime in the near future. The new organization augurs well for the medical center in that for the first time there will be a fulltime chancellor to supervise and coordinate the many activities of this professional school campus and to provide an on-going interface with developments throughout the university.

It is unfortunate that at this time of great change Dr. William Long (Class of 1937) has for personal reasons found it necessary to resign from the Board of Regents. Dr. Long, who was chairman of the Regents Baltimore Campus Committee, was an advocate of and catalyst for growth and development here in Baltimore. Further, as a loyal graduate of the Medical School he has been of enormous help to the school and to me personally. I have on several occasions discussed medical school matters with Dr. Long and have always benefitted by his thoughtful and sage advice. Whoever is chosen to succeed him will have very large shoes to fill. All of us here wish him well in the future and extend to him a heartfelt thank-you for all that he has done.

With best wishes,

Sincerely yours,



JOHN H. MOXLEY, M.D.
Dean

Adolescent Medicine Division

Adolescents have unique problems, but one usually not brought to light is that adolescence is the time when many serious diseases develop.

Dr. Felix P. Heald, Director of the new division of adolescent medicine at the School of Medicine, reports psychosocial and developmental problems are common, but less recognized problems of hypertension, otherosclerosis, and obesity also begin to appear during the teenage years. Addiction to tobacco, alcohol, and drugs has become increasingly common during middle to late teens.

Dr. Heald

"The need for specialized physicians in adolescent medicine is becoming more and more important," he relates. "Teenagers are shuffled from ward to ward in medical centers. Sometimes he is cared for by the department of pediatrics, other times he's treated in adult wards. Pediatricians or other physicians tend to handle the adolescent in a mother-child relationship, directing discussion to the mother as if the child weren't present. Privacy is needed in order to create an atmosphere of confidence and trust. The physical examination must be thorough, yet sensitive—especially for the adolescent girl."

With the appointment of Dr. Heald, Maryland became the sixth institution in the United States to conduct training and research in adolescent medicine. University Hospital's new north wing, now under construction, will devote its eighth floor to this specialty.

The whole idea of adolescent medicine is a young one. In the past few years, however, more and more people are becoming interested in the field. Dr. Heald says that there are already a number of pediatricians who limit their practices to the adolescent.

Dr. Heald was the first to train in adolescent medicine, having received his training at the Children's Hospital in Boston. He established a department of adolescent medicine at the Children's Hospital in Washington, D.C., and has taught pediatrics at Harvard Medical School, Georgetown University School of Medicine, and most recently at George Washington University. Prior to his move to Baltimore, he was professor and chairman of the department of pediatrics at George Washington University and pediatrician-in-chief at the Children's Hospital in Washington, D.C.

He is president of the Society of Adolescent Medicine, participated in the White House Conference on Nutrition in 1969, and is a member of the Joint Commission on Mental Health for Children, Inc., Task Force III, the Society for Pediatric Research, and the American Pediatric Society. His name appears on more than 70 scientific publications.

"If you took a group of eight-year-old children," Dr. Heald says, "shaved their heads, removed all of their clothing, and lined them up with their backs to you; you couldn't distinguish between male and female. If you took the same group ten years later, I'll bet you can tell the difference. That's what adolescent medicine is all about."

Dr. Trump Heads Pathology

Dr. Benjamin F. Trump, formerly Professor of Pathology, Duke University Medical Center, Durham, N. C., has been appointed Professor and Head, Departmen of Pathology.

Prior to his September 1970 Maryland School of Medicine appointment, he had been a professor of pathology at Duke since 1967. He replaces Dr. Robert Schultz, professor of Pathology, who became acting head when Dr. Harlan Firminger stepped down as department head on July 1, 1967.

Dr. Benjamin Trump

The pathologist has a balanced interest in patient care, teaching and research. Concurrent with his other duties, Dr. Trump will assume administrative and professional responsibility for operations of Hospital Clinical Laboratories.

"We are delighted to have Dr. Benjamin Trump join the School of Medicine faculty. He brings to Maryland a distinguished career as an investigator as well as a deep understanding of the teaching and service functions of a department of pathology," said Dean John H. Moxley, III.

"His presence, and the staff that he is recruiting to the University, will provide us with a balanced effort in pathology. This type of balance becomes increasingly important when one views the department of pathology as the primary bridge between the teaching and investigative thrust of the preclinical departments dealing primarily with the cell and subcellular structures, and the efforts of the clinical departments in the application of principles of pathophysiology to the disease process. It is in the area of pathology that these two types of efforts must be interdigitated," he added.

Dr. Trump said, "The primary goal of the Department of Pathology is the undertaking of human disease with emphasis on mechanisms and changes occurring at the subcellular level and in molecular terms. An all around approach to the study of pathology, the department correlates gross and clinical pathology with changes at the molecular level. The scope of training ranges from forensic pathology and toxicology to modern diversified training in clinical pathology, anatomic pathology, neuropathology, surgical pathology and experimental pathology," outlined the new department head.

Teaching Aspect Excellent

He continued, "The teaching aspect of the department here is excellent. I hope to augment existing programs through new ideas broadening both the areas of clinical and experimental pathology."

Dr. Trump will also be director of research for the Shock Trauma Center.

"Our program at the Trauma Center makes possible the study of human diseases at autopsy with modern techniques. In this program we'll be dealing with cell injury as it relates to shock," he added.

Other areas in which greater investigations will be forthcoming are those of environmental pathology to study the effects of chemical agents such as industrial toxins, pollutants and pesticides on membrane structures and in marine pathology. In marine pathobiology studies are conducted to determine the role of environmental toxins on marine animal systems. Several marine animal systems provide important models for study of cellular reactions to injury.

A native of Kansas City, Mo., Dr. Trump received his B.A. degree from the University of Missouri and his M.D. from the University of Kansas School of Medicine. His internship in pathology was at the University of Kansas Medical Center, 1957-58; he was a resident-fellow, Department of Pathology, University of Kansas Medical Center, 1958-59; a research associate in Anatomy, University of Washington School of Medicine, Seattle, Washington, 1959-60, and a trainee in experimental pathology, University of Washington School of Medicine, 1960-61.

His first academic appointment was 1961-63 when he was named as an investigator in experimental pathology, Office of the Scientific Director, Armed Forces Institute of Pathology, Washington, D. C.; from 1963-65 he was Assistant Professor of Pathology, University of Washington School of Medicine, and in 1965 he joined the staff of Duke University Medical Center as an Associate Professor of Pathology.

Dr. Trump served in the Medical Corps, United States Army Reserve, 1958-64, and was on active duty from August 15, 1961 to August 12, 1963, Armed Forces Institute of Pathology.

He is a member of the American Association for the Advancement of Science; the Electron Microscope Society of America; the International Academy of Pathology; the Histochemical Society; American Association of Pathologists and Bacteriologists; American Society of Experimental Pathology; American Association of University Professors; American Society for Cell Biology; and the American Society of Microbiology.

Faculty NOTES

The Maryland Obstetrical and Gynecological Society has elected **Dr. Umberto VillaSanta,** associate professor of obstetrics and gynecology, as president for 1971.

Dr. VillaSanta

Others elected were: **Dr. James P. Durkin,** assistant professor of obstetrics and gynecology; **Dr. Jerome Glowacki,** director of obtetrics and gynecology at Franklin Square Hospital; delegate-at-large, **Dr. Albert H. Dudley, Jr.,** assistant in gynecology and obstetrics at The Johns Hopkins School of Medicine.

Goldstein Named to Editorial Board

Dr. Robert O. Goldstein, a Baltimore urologist and parttime teacher at University Hospital, has been named to the editorial board of the *Bulletin* by the Board of Directors of the Medical Alumni Association.

Dr. Goldstein fills the alumni representative quota on the alumni publication's board. He is very active in alumni affairs as a member of the medical alumni association, the Baltimore Alumni Association of the University of Maryland, and as a representative to the University of Maryland Alumni General Council.

Dr. Edward F. Cotter Is Honored

Dr. Edward F. Cotter, associate professor of medicine, has been honored at a testimonial dinner by the Department of Medicine in recognition of his special contributions to the medical school and the Department.

"Through his efforts the educational program at the Maryland General Hospital was reorganized and developed," said Dr. Theodore E. Woodward, head of the Department of Medicine. "He deserves the lion's share of credit for growth of the affiliations in internal medicine between our respective hospitals."

Dr. Cotter

Dr. Cotter, who recently retired as Head of the Division of Introduction to Medicine (Physical Diagnosis) for sophomore medical students, received a University of Maryland chair with an inscribed plate which read:

"Edward F. Cotter, M.D., F.A.C.P.: From Friends And Associates Who Know Him As A Wise Physician And Humble Gentleman. In Recognition Of His Excellent Record As Chief Medical Resident 1939-40, A Distinguished Career As Practitioner And Leadership In Teaching Of Physical Diagnosis."

A member of the Class of 1935, he is among Dr. T. Nelson Cary, Dr. William Love and others who have been honored by the Department at an academic dinner for senior faculty and staff members.

Dr. Raiti Heads Hormone Research Agency

Dr. Salvatore Raiti of London, England, has recently become director of the National Pituitary Agency, based at the School of Medicine.

Funded by the National Institute of Arthritis and Metabolic Diseases, the agency each year collects about 80,000 human pituitary glands from which it prepares growth hormone for distribution to investigators throughout the country for clinical research on certain kinds of dwarfism in children.

Dr. Raiti

"The growth hormone extracted from one pituitary gland, a pea-sized gland at the base of the brain, is only enough for treatment of one individual for three or four days," Dr. Raiti explained. "It takes many glands to determine the growth pattern and metabolism in one patient. With more than 10,000 children suffering from hypopituitary dwarfism and many more who have other types of dwarfism, much more growth hormone is needed, and so investigators are searching for ways to synthesize it."

He added, "In the Department of Pediatrics, we are studying dwarfism and comparing the effectiveness of different forms of therapy. But there are many more problems to be studied. For example, why are some children small from the time of birth? Is this owing to hormone deficiency or to nutritional problems during pregnancy? Would such babies benefit from growth hormone given during the first year of life? Would babies of diabetic mothers benefit from growth hormone given early in life?"

In discussing other hormonal problems of childhood, Dr. Raiti said, "We do not know why the normal time of puberty is after the tenth year. Understanding the mechanism of puberty might lead to more effective treatment for very early or very late puberty."

Another endocrinologist who recently joined Dr. Raiti's staff, **Dr. Fima Lifshitz**, is participating in these studies.

"We see from 15 to 20 children a week with such hormonal problems as hypopituitary dwarfism, thyroid and adrenal disorders, abnormal puberty, and diabetes mellitus. Since many of the basic problems in pediatrics can be answered only in the laboratory, research techniques for measurements of hormones and other body constituents are being set up."

The new NPA director is an associate professor and director of pediatric endocrinology in the School of Medicine and at University Hospital. He received his medical degree at the University of Queensland, Australia, and trained in pediatrics in Australia, Edinburgh and London.

In 1963, he was a fellow in the steroid training program at the Worchester Foundation, Shrewsbury, Mass. From 1964-67 he was a fellow in pediatric endocrinology at the Johns Hopkins Hospital and School of Medicine. He then returned to England as senior lecturer and consultant endocrinologist at London University's Institute of Child Health and the Hospital for Sick Children.

Accreditation Granted

The continuing education program of the University of Maryland School of Medicine has been granted full accreditation by the American Medical Association's Council on Medical Education.

In a letter received by the Dean, the Council stated: "In the annual listing 'Continuing Education Courses for Physicians,' which will appear in the August 2, 1971, issue of the *Journal of the American Medical Association,* courses of the University of Maryland School of Medicine will be specifically designated as courses offered by an accredited institution."

The Council will periodically review all accredited institutions, probably at three or four year intervals once the accreditation program has been fully implemented.

Ophthalmology Receives Funds

The Department of Ophthalmology has received an unrestricted grant of $5,000 from Research to Prevent Blindness, Inc., to support and accelerate intensive studies of the eye and its diseases.

"The unrestricted nature of the grant permits our investigators to pursue new ideas for which other funds are not available," said Dr. R. D. Richards, head of the department.

The University of Maryland has received $10,000 in unrestricted grants from RPB over the past two years. Nationwide RPB has made grants amounting to more than $1.5 at 43 medical schools and has channeled more than $16 million into construction of modern eye research centers.

You, too, Can Receive the BULLETIN Postpaid!

The BULLETIN is published four times a year, jointly by the Faculty of the School of Medicine of the University of Maryland and the Medical Alumni Association. Active members of the Medical Alumni Association receive the BULLETIN upon the payment of annual membership dues which include the yearly subscription fee of the BULLETIN.

All members of the Faculty who are not members of the Medical Alumni Association and other friends of the Medical School are invited to subscribe to the BULLETIN. The subscription fee is $3.00 per annum, postpaid. Make check payable to the University of Maryland and mail it to

MISS JAN K. WALKER
522 W. LOMBARD ST.
BALTIMORE, MD. 21201

The U. of M. Medical Alumni SALUTE

Dr. Margaret B. Ballard of Union, West Virginia, doctor and historian, is now well into her second career and recently received the C. Samuel Kistler Travel Award in recognition of her "outstanding contributions" to the West Virginia travel industry.

At the presentation of the award, Gov. Arch A. Moore of West Virginia spoke of Dr. Ballard's great love and affection for the state and her energy and enthusiasm in promoting the state. The award is given annually to an individual or group making outstanding contributions to the state's travel industry.

"For the first time in more than 70 years, I'm speechless," said the University of Maryland School of Medicine graduate upon accepting the award at the Governor's Conference on Travel.

Following graduation in 1926, Dr. Ballard completed residency in Obstetrics and Gynecology and for many years taught her specialty at the School of Medicine. One of her outstanding contributions was her continued interest and enthusiasm for the controversial planned parenthood movement. She has lived to see her ideas and efforts take form of a now accepted facet of modern society.

Because of her profound and continuing interest in history, Dr. Ballard became the author of an important volume on the history of the University of Maryland which is entitled "A University Is Born" published in 1965.

Shortly after her book was published "Dr. Maggie" retired from active practice devoting her interest and energy to historical research and to the promoting of the many interesting aspects of her home state.

The School of Medicine and its Alumni Association are happy to recognize Dr. Ballard's continuing academic interest and achievement, and extends herewith its salute and congratulations on a continuing active and non-academic career.

Exhibit Illustrating Pioneering Efforts in Dermatological Rehabilitation Wins Award

ALUMNI ASSOCIATION SECTION

President's Letter

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Dear Fellow Alumni:

In the past there have been many problems in connection with the publication of the *Bulletin*. By the employment of fulltime people we hope that we can give better service to all who receive the *Bulletin*. I welcome any suggestions or comments on how we can improve this publication. I would like to make one suggestion and that is to encourage sending to the Alumni Office your biographical sketch.

I consider it of importance to inform you that the School of Medicine and the Medical Alumni Association are working closely together to improve the future publication of the *Bulletin*. Recently a Managing Editor was hired on a fulltime basis as the first step toward looking at what changes should be considered. The Managing Editor will have a small staff and all indications are that future *Bulletins* will be sent to you early in each quarter of the year.

The response to the Davidge Hall Restoration Fund Drive is encouraging and I suggest to those Alumni who have not had the opportunity to contribute to consider doing so over the period of five years that we plan to run this Fund drive. I wish to thank those who have already contributed to the Fund and who have made pledges for the years to come.

Sincerely,

Theodore Kardash

THEODORE KARDASH, M.D.
President

Class NOTES

Your achievements, fellow alumnus, are of interest to your classmates. They constitute a reward to the faculty, are a challenge to the younger physicians, and are an item of prestige for the University. Please cooperate with us by forwarding news of yourself or any alumnus to the BULLETIN. *Thank you.*

CLASS OF 1929

Dr. Jacob H. Conn, assistant professor emeritus of psychiatry at Johns Hopkins University Medical School, has received the Gold Medal Award for his contributions to Scientific Hypnosis.

The 1929 University of Maryland Medical School graduate was a fellow in psychiatry at the Phipps Clinic, Johns Hopkins Hospital (1931-33) and was in charge of sex research at the Children's Psychiatric Service from 1937-40. He was the first practicing psychiatrist in Maryland to be certified in 1935 by the American Board of Psychiatry and Neurology.

He was acting chief medical officer of the Supreme Bench of Baltimore, past president of the Maryland Association of Private Practicing Psychiatrists, consultants to the United States District Court Public Health Service and the Veterans Administration.

Dr. Conn was the recipient of the 1960 award for the best clinical contribution to scientific hypnosis, the 1961 Raginsky Bronze Plaque, the 1964 Schneck Award, the 1966 S.C.E.H. Presidential Award, and the 1968 award for the best paper in clinical hypnosis.

His latest recognition came at the Society for Clinical and Experimental Hypnosis 22nd annual meeting.

CLASS OF 1936

Dr. Benjamin H. Issacs has announced the change of his office address from 1261 E. Belvedere Avenue in Baltimore to Mercy Hospital, 301 St. Paul Place, for the practice of Otolaryngology. He is currently serving as the president of the Maryland Ear, Nose and Throat Society.

CLASS OF 1952

Dr. Robert A. Douglas closed his Homestead, Fla., office in May 1970 and went to Belgium for training to be a Medical Missionary in Africa. He is expected to be out of the country for at least four years.

CLASS OF 1965

Dr. Sanford Levin, 15141 Middlegate Rd., Silver Spring, Md., recently discharged from the Army where he was a pediatrician at the United States Military Academy and hospital commander at Stewart Air Force Base, has joined a pediatric corporation in Laurel, Md.

He has been appointed as clinical instructor in pediatrics at George Washington Medical School and has staff privileges at Children's Hospital in Washington and Holy Cross Hospital of Silver Spring.

Deaths

Dr. Irving J. Cohen, 62, former executive vice president of the Maimonides Medical Center, Brooklyn, N.Y., and assistant chief medical director for planning at the Veterans Administration, died October 29, 1970.

Dr. Cohen, a native of Brooklyn, received his M.D. degree in 1930 from the University of Maryland Medical School. Following internship in pediatrics at Massachusetts General Hospital in Boston, he served as assistant resident in pediatrics at Children's Hospital, Philadelphia; as pediatrics resident at Beth-El Hospital, and then as executive physician at the Brooklyn Hebrew Orphanage.

During WW II he was in the Army Medical Corps, and after the war became an assistant clinical director at the VA hospital in the Bronx. In 1952 he became manager of the VA hospital in Baltimore and two years later became deputy director of all VA hospitals.

From 1959 until he resigned from the post in 1962, he served as the assistant VA chief medical director of planning. His leadership in medical care for the chronically ill earned him high commendation.

In 1962 he joined Maimonides as executive vice president, which under his administration, became internationally known. Its community mental health center was one of the first in the nation.

He retired from Maimonides in 1969. However, he still served as consultant to the Maimonides VA, and the Department of Health, Education and Welfare until his death.

* * * *

Dr. Frank A. Carozza, Jr., assistant professor of medicine at University of Maryland Medical School and head of the Division of Physical Diagnosis, died October 30, 1970 at age 35.

He was graduated from Gilman School in 1953, attended Lehigh University and received his M.D. degree in 1962 from the University of Maryland School of Medicine.

Dr. Carozza was known for his work and research in infectious medicine. He did extensive research into the way certain bacterial toxins influence the defense systems of the body and how the body resists such influences.

Early in his career, Dr. Carozza served as a fellow in international medicine for the University of Maryland in Lahore, Pakistan. Another academic pursuit was the study of the history of medicine. He was a fellow of the Institute for the History of Medicine at the Johns Hopkins medical school and was instrumental in organizing a Society for the History of Medicine at the University of Maryland medical school.

* * * *

Dr. John A. Buchness, a Catonsville, Md., physician, died November 18, 1970 at age 78.

Dr. Buchness, a specialist in Industrial Medicine and Surgery, was graduated from the University of Maryland Medical School in 1919. He attended Loyola High School and Loyola College and was later active in the Alumni Associations of both schools.

In addition to his medical practice, Dr. Buchness was a noted Philatelist, winning several honors for his collection of Lithuanian stamps. He was a 50-year member of both the Medical and Chirugical Faculty of Maryland and the American Legion.

* * * *

Dr. William Wallace Walker, a general surgeon who practiced for more than 45 years in Baltimore hospitals, died December 2, 1970 at age 72.

A graduate of the University of Maryland Medical School, he began his practice in Baltimore in 1923. His internship was at Mercy and University Hospitals and he later practiced at Franklin Square, North Charles, Maryland General, Bon Secours and Lutheran Hospitals.

He also served as an associate professor of surgical anatomy at the University of Maryland Medical School.

CLASS OF 1898 BMC

Dr. Arthur M. Loope, 217 Sherbourne Rd., Syracuse, N.Y., died June 26, 1970 at age 94. He is survived by a daughter, Mrs. Jordan A. Zimmerman.

CLASS OF 1903 P&S

Dr. C. Melvin Coon, Star Route, Milan, Pa., died April 1970 at age 94.

CLASS OF 1903

Dr. George S. M. Kieffer, 1010 Leeds Ave., Baltimore, Md., died July 1970.

CLASS OF 1908

Dr. Frederick Snyder, 44 Clinton Ave., Kingston, N.Y., died February 24, 1970 at age 88.

CLASS OF 1908 P&S

Dr. George Davis, 28 S. Church Street, Waynesboro, Pa., died recently.

Dr. Oscar T. Barber, 145 Temple St., Fredonia, N.Y., died August 26, 1970.

CLASS OF 1909

Dr. Clarence Irving Benson, Box 123, Port Deposit, Md., died September 2, 1970.

CLASS OF 1912 P&S

Dr. Leonard O. Schwartz, 3421 Pennsylvania Ave., Weirton, W. Va., died in June 1970 at age 83.

CLASS OF 1912 BMC

Dr. William T. Rumage, Sr., 171 Vose Ave., South Orange, N.J., died April 25, 1970 at age 83. He is survived by his wife.

CLASS OF 1912

Dr. Dawson Orme George died December 21, 1970.

CLASS OF 1914

Dr. Lowrie W. Blake, 5609 7th Ave. Dr. West, Bradenton, Fla., died September 10, 1970.

CLASS OF 1917

Dr. Milton Cumin, 130 Slade Ave., Apt. 306, Baltimore, Md., died recently.

CLASS OF 1918

Dr. Thomas C. Speake, 211 Lynhurst Dr., Ormond Beach, Fla., died October 9, 1970 at age 77.

CLASS OF 1919

Dr. C. Wilbur Stewart, 6 East Read St., Baltimore, Md., died October 16, 1970 at age 74.

CLASS OF 1923

Dr. Joseph M. Gutowski, 433 Brace Ave., Perth Amboy, N.J., died July 28, 1970.

CLASS OF 1925

Dr. Cecil M. Hall, 608 Strain Building, Great Falls, Mont., died in November, 1970.

Dr. Morris Albert Jacobs, 1010 North Point Rd., Baltimore, Md., died September 20, 1970.

CLASS OF 1926

Dr. Henry DeVincentis, 285 Henry St., Orange, N.J., died in September 1970.

Dr. Harry Anker, 4445 Coldbath Ave., Sherman Oaks, Calif., has died at age 66.

CLASS OF 1927

Dr. Herbert Reifschneider, Chestertown, Md., died November 28, 1970.

CLASS OF 1929

Dr. Fred L. DeBarbieri, 4723 Park Heights Ave., Baltimore, Md., died January 12, 1970 at age 70.

(Cont'd. on page xiv)

ALUMNI NEWS REPORT

TO THE BULLETIN:

I would like to report the following: _____

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SUGGESTIONS FOR NEWS ITEMS

American Board Certification
Change of Address
Change of Office
Residency Appointment
Research Completed
News of Another Alumnus
Academic Appointment
Interesting Historic Photographs

Name _____

Address _____

_____

Class _____

Send to

Dr. John A. Wagner, Editor
Bulletin—School of Medicine
University of Maryland
31 S. Greene St.
Baltimore, Md. 21201

CLASS OF 1932

Dr. Maxwell Herman Shack, Patton State Hospital, Patton, Calif., died recently.

CLASS OF 1934

Dr. Nathan Rudo, Mt. Zion Hospital Medical Center, San Francisco, Calif., died August 29, 1970.

CLASS OF 1935

Dr. Gerard P. Hammill, Vanadium Road, Pittsburgh, Pa., died October 21, 1970.

Dr. J. B. Anderson, 12 West Wing, Doctors Bldg., Asheville, N.C., died August 7, 1970.

CLASS OF 1936

Dr. Joseph E. Bush, 117 S. Main St., Hampstead, Md., died October 25, 1970.

Dr. Saul Karpel, 190 Montauk Ave., New London, Conn., died July 2, 1970 at age 60.

CLASS OF 1937

Dr. Robert F. Cooney, 512 Lackawanna Ave., Mayfield, Pa., died July 16, 1970.

Dr. Thomas D'Amico, 208 Passaic Ave., Passiac, N.J., died recently.

CLASS OF 1943

Dr. William Henry Pomeroy, 1852 Poquonock Ave., Poquonock, Conn., died October 5, 1970.

CLASS OF 1944

Dr. David T. Rees, 702 Montgomery Ave., Cumberland, Md., died April 8, 1970.

CLASS OF 1946

Dr. Clemmer M. Peck, 480 Monterey Ave., Los Gatos, Calif., died in September 1970.

CLASS OF 1951

Dr. Guy Reeser, Jr., St. Michaels, Md., died October 1, 1970 at age 47.

Support Davidge Hall Restoration Fund

Send Contributions To:

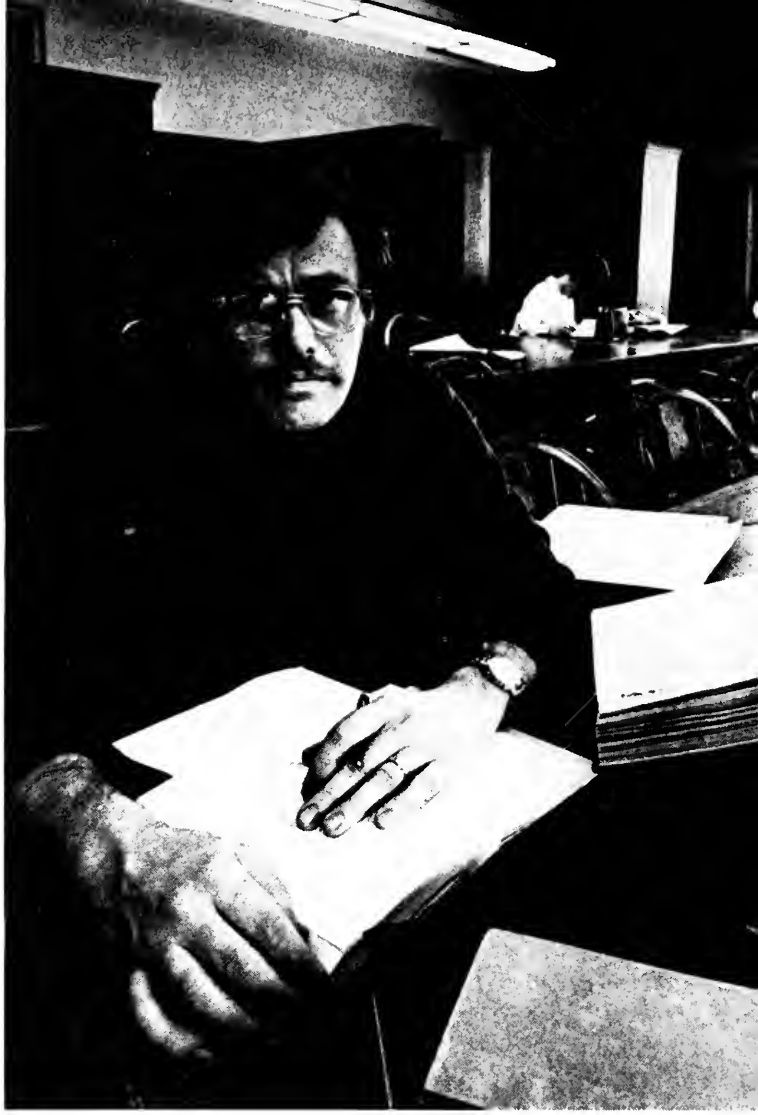
Alumni Association
Room 102, Davidge Hall
University of Maryland
School of Medicine
Baltimore, Maryland 21201

Symbols in a life of psychic tension

M.A.
class of '66

Ph.D.
thesis . . . in progress

G.I.
series and complete examination normal
(persistent indigestion)



Valium®
(diazepam)

2-mg, 5-mg, 10-mg tablets
t.i.d. and *h.s.*

for relief of psychic tension and resultant somatic symptoms within the first day for some patients

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).
Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE
Roche
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Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

BULLETIN

School of Medicine

University of Maryland

April, 1971 VOLUME 56 • NUMBER 2

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AND THE MEDICAL ALUMNI ASSOCIATION

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Volume 56

Number 2

APRIL, 1971

BULLETIN *School of Medicine University of Maryland*

Policy—The Bulletin of the School of Medicine University of Maryland contains scientific articles of general clinical interest, original scientific research in medical or related fields, reviews, editorials, and book reviews. A special section is devoted to news of Alumni of the School of Medicine, University of Maryland.

Manuscripts—All manuscripts for publication, news items, books and monographs for review, and correspondence relating to editorial policy should be addressed to Dr. John A. Wagner, *Editor,* Bulletin of the School of Medicine, University of Maryland, 31 S. Greene Street, Baltimore 1, Md. Manuscripts should be typewritten double spaced and accompanied by a bibliography conforming to the style established by the *American Medical Association Cumulative Index Medicus.* For example, the reference to an article should appear in the following order: author, title, name of journal, volume number, pages included, and date. Reference to books should appear as follows: author, title, edition, pages, publisher, and date published. A reasonable number of illustrations will be furnished free.

Reprints—At the time the galley proof is returned to the author, the publisher will insert an order form for reprints which are purchased directly from the publisher. Any delay in the return of this order form may result in considerable additional expense in obtaining reprints.

Alumni Association News—The Bulletin publishes as a separate section, items concerning the University of Maryland Alumni and their Association. Members and friends are urged to contribute news items which should be sent to Dr. John A. Wagner, *Editor,* Bulletin of the School of Medicine, University of Maryland, 31 S. Greene Street, Baltimore, Md. 21201.

Subscriptions—The Bulletin is issued 4 times a year. Its subscription price per annum, post paid is $3.00; single copies, $.75, when available. Active members of the Medical Alumni Association receive the Bulletin in connection with the payment of annual membership dues. Non-Alumni subscriptions should be made payable to the University of Maryland and remitted through the office of Miss Jan K. Walker, *Managing Editor.*

Advertising—The Bulletin accepts a limited number of advertisements. Rates may be obtained upon application to Miss Jan K. Walker, Managing Editor, Davidge Hall, School of Medicine, 522 W. Lombard St., Baltimore, Md. 21201.

BULLETIN *School of Medicine*
University of Maryland

VOLUME 56 APRIL, 1971 NUMBER 2

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ALUMNI DAY
THURSDAY, JUNE 3, 1971
MEDICAL ALUMNI ASSOCIATION

MORNING PROGRAM

9:30 a.m. — **Registration – Coffee** — Davidge Hall

10:00 a.m. — **Opening of Alumni Day** — Chemical Hall

Report to Alumni
John H. Moxley III, M.D.
Dean, School of Medicine
Theodore Kardash, M.D.
President, Medical Alumni Association, Presiding

10:30 a.m.

Assistant Dean's presentation to Alumni on student selection admission policies and changes in the School of Medicine curriculum

11:30 a.m.

Presentation to Alumni on Davidge Hall Restoration Plan

12:00 noon

Annual Alumni business meeting and presentation of Alumni Gold Key Honor Award

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1:00 p.m. — **Alumni Complimentary Luncheon** — Psychiatric Institute Gymnasium 5th Floor

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EVENING PROGRAM

6:00 p.m. — Lord Baltimore Hotel

Reception for 50 Year Graduates and Graduating Class of 1971

7:00 p.m. — **Annual Alumni Banquet** — Lord Baltimore Hotel Ballroom

Only One Door

The Community Pediatric Center

Not long ago in the Inner City, a mother who wanted to get complete medical services for her sick child might have had to pass through the doorways of five or ten different clinics and wait a couple of hours in each.

Today for many mothers the only door necessary is the single one leading into the University of Maryland Community Pediatric Center, located in an old textile office building at 412 West Redwood Street.

And, indeed the center belongs to the children.

"Our charge by legislation is to provide health care to a designated population from zero to their nineteenth birthday. Since we are with the University it is also within the spirit and desire of legislation that we look at new ways to offer comprehensive care in a more effective, more efficient way. As an euphemism . . . to have new ways to do more things efficiently for the same or less cost," said Dr. George A. Lentz, Director of the center.

"In the early days we used to talk about the three 'Cs' that went along with our charge and operation—continuity, comprehensivity and community. In other words, continuing comprehensive health care to a designated community. And, this also implies community participation in the program," explained John Gleason, CPC administrator.

Last year approximately 10,000 children were registered for care at the center. The area served is bounded by Mulberry Street, Greene, Pratt and Sharp Streets, down to Howard to Middle Branch and then to Gwynns Falls, around Carroll Park to Carey Street, across Baltimore Street to Fremont Avenue and finally north to Mulberry.

Prior to the existence of the CPC the children in the adjacent area had to go from one doctor to another, from one clinic to another if their families wanted to secure sound medical services. Treatment occurred by symptom with little regard for the child as a person.

ELIGIBILITY

"In addition to the geographic eligibility, the family's income must fall within certain economic levels," stated Mr. Gleason. "The division between preventive and comprehensive care is often subtle, but when the child reaches a point where prevention and diagnosis cease and treatment begins, in order to be eligible for treatment they must fall within the levels set by the Baltimore City Health Department.

The income levels apply to four clinics that operate with the cooperation of the Baltimore City Health Department. Other community pediatric clinics are operated by the Greater Baltimore Medical Center, Sinai Hospital, and Baltimore City Hospitals. The income eligibility levels were set at the beginning of the project and in spite of cost of living increases have not been changed.

"A family of two which would be a mother and a child, in our case, must fall within an income level of $1,800 and it goes up so that a family of ten—a mother, father and eight children or whatever combination—should fall within an income level of $6,500 a year," said Mr. Gleason.

Is there any possibility of eliminating the income requirement?

"We'd like to see this income criteria for eligibility eliminated, just saying that anyone who lives within the area is eligible. Our observations of what happens here and who comes here indicate that the difference between prevention and treatment for those who don't fall within the economic levels would not be so great that we couldn't take care of them," Mr. Gleason explained.

How does the center distinguish between preventive and comprehensive care?

"The way we distinguish between the two is what we refer to as child health supervision which is ongoing supervision of the well child—periodic checkups, plus inoculations—preventive care of that sort and diagnosis. But where prevention and diagnosis cease and actual treatment of a diagnosed complaint begins we still carry the responsibility for referring that child to a source of help that can treat the child. This care is paid for by Medicaid, insurance or the family," said Mr. Gleason.

PROBLEMS CREATED

"Economic requirements create too many problems," said Dr. Lentz. "It forces the decision making process on the person at the reception desk as to whether the person according to his eligibility is to be treated . . . and before long you begin to split hairs. You make mothers angry . . . you only need to make one or two people angry a day over technicalities and you destroy your purpose. She may be over the income limit, but because of great extenuating circumstances that really don't become apparent, such as social problems, everything else . . . well one's hands are tied. Then you get into the business 'We can see your child if he has an illness type of problem,' in other words, if she comes with a problem we can take care of it on an emergency walk-in situation but we can't help if he's not ill. And, we can't follow the child in a longitudinal care program."

Mr. Gleason added, "Just on the score that you never turn away a sick child you can handle it in the emergency walk-in situation . . . for an acute illness; but then if you adhere to this income scale thing maybe you can't take care of that child on a long-term basis."

CARE PROVIDED

There are three levels of service at the center.

Emergency Walk-In: Total emergency care is provided for those who come into the center. If the child has a runny nose, fever, convulsions . . . this area is like a regular outpatient department.

Health Supervision and Total Preventive Care: Youngsters have a scheduled visit planned for the second, third, fourth, sixth and ninth months the first year, twice the second, and yearly thereafter. During the visits the child receives health supervision including physical measurements such as height and weight which are compared against a standard growth curve chart. The parent during these visits routinely sees the nutritionist, and there also is a standard program for them to see a dentist at particular times in the whole health care plan.

Another part is a blood or hemoglobin screening for anemia and a quick psychological test, the Denver Developmental test, is given by the nurse. The nurse does the interviewing, looking at any problems that the mother has, putting them all together and then calling a doctor for consultation. Immunizations are also given in this phase.

Extra Diagnostic Services: Should a special problem be detected in either of the first two areas, the child is referred to a speciality clinic. Among the clinics at the center are allergy and ophthalmology and in some instances the child may be referred to a regular clinic at the University. However, a number of the CPC staff physicians have special talents, special skills and they take it upon themselves to man the speciality clinics and follow up the kids in chronic care situations.

"The kids for instance who have muscular skeletal disabilities and so forth are sent to me," said Dr. Lentz, "and I usually consult or see them. If a youngster has behavioral problems, Dr. McCaffrey sees those; we have an adolescent program where we follow teenage pregnancies and we're in the process of evolving a drug clinic. Again, serving the population in our area."

CPC STAFF

The center, which opened its doors in 1967, is staffed by about 85 professionals including physicians, nurses, dentists, social workers, nutritionists and psychologists, psychiatrists, radiologists, ophthalmologists, obstetricians, gynecologists, cardiologists and orthopedists. Some are fulltime, others parttime on a retainer per clinic basis.

In addition to Dr. Lentz, the center is administered by Dr. Ray Hepner, director of research, and Dr. Prasanna Nair, director of education. The center operates under the Department of Pediatrics headed by Dr. Marvin Cornblath.

Is there any volunteer work at the CPC?

"There are volunteers from the community—The Citizens Council. It's a very active Citizens Council that has been developed slowly and has been playing an important role. We're looking more and more to them to help us define and to help us know what they see as needs in the community in which we are called upon to serve. These are mothers from our population," said Dr. Lentz.

CENTER UNIQUE

One uniqueness of the center is the nursing staff.

"Most centers have as their nursing staff, clinic nurses who are indigenous to the unit," stressed Dr. Lentz. "We are among the few who have public health nurses who are by training 'the family practitioner of nursing or family advocate.' "

Each of the nurses is assigned to a certain census tract and they go when possible, when needed and regularly to visit the homes in their area. They are on a first name basis with these families and know the problems of the grandmother, the brother, the father—the entire home situation. Two days a week Nurse "A" is in the field visiting her assigned census tract and then two days a week she's in the clinic when children from her area are scheduled for child health supervision appointments.

"Another thing that takes place here, too, is that when those children from a given census tract come in for their health supervision appointments, the Baltimore City Health Department Public Health nurse who is assigned to that census tract is usually here to be with the families as is our PH nurse," added Mr. Gleason.

The Baltimore City Health Department nurse has responsibility for all members of the family not just the children. The

duties of the two often overlap but also are well coordinated.

"For instance if Mrs. Jones, the patient and her family have a problem and our nurse detects this in talking with the mother or notices something herself during her home visits, our nurse will call her city nurse colleague and tell her about the problem and find out what she can do about it or she'll seek consultation with someone at the CPC," said Dr. Lentz.

He continued, "Many times I'll suggest to the nurse that they (the family) might contact a certain doctor or clinic or that she ask the social worker where Mrs. Jones can get what she needs. The nurse

will either relate that to Mrs. Jones directly or to the Baltimore City nurse. This is not by accident, but by design and there is constant conferencing between these nurses. This is why I say our center has a uniqueness to its services."

All of the centers working with the Baltimore City Health Department have relationships which make them different.

CPC ROLE

"Ours is affiliated with the University of Maryland School of Medicine and the University Health Sciences Campus so that we have an added role—the responsibility of education in addition to service. Medical, Dental, Nursing and Social Work students are able to take part and observe the operation. So, our program here is not just service alone. Research is a smaller part of the overall, total effort of the people here," said the CPC director.

Mr. Gleason explained that "the education and research are based upon the service in that educationally the center is an effort to provide an exemplary instance of health care for the student and the house staff."

The research is also service related because it is directed to evaluating the service being provided at the CPC. Multiphasic screening that is undertaken in five area schools provides data on cardiac examinations, vision testing and blood testing for anemia.

"One means of determining the center's effectiveness—just a piece in measuring the total effectiveness—can be shown through a program in which it was discovered one quarter of the boys in one school had anemia. We're not saying it was our operation alone but at least the input was used to educate the responsible authorities about the need for adequate school lunch programs. Now the number of anemia cases is down to about eight per cent. So, the collection of data, which is a research tool, documented proof of the problem and resulted in our staff being able to help in alleviating the problem. That's a small piece in the total impact on the community."

INNER CITY YOUTH

Inner City youth are plagued not only by the difficulties of growing up in a confused world, but also by an almost unbelievable excess of disease and dislocation over surburban counterparts. And, hospitals are filled with children from these areas suffering from such illnesses as diarrhea dehydration or old-fashioned

pneumonia which are "totally anachronistic."

"We're doing widescale evaluation of hospitalization rates trying to compare our service population with a similar population that doesn't have our services. As for dislocations, it is not uncommon that we see dislocated families. The income levels are very low and many times there is only one parent at home. We find the young girl going to school and the grandmother caring for the child. This is a social type situation," related Dr. Lentz.

A large percentage of the beds in pediatric wards throughout the city are filled with children from the Inner City.

"It's safe to say you won't see as many kids from our census tracts or our responsible area in hospitals as you would from other similar areas that don't have our services. Because if the youngster comes here with diarrhea or it's the very beginning of diarrhea or a cold there's no limitation to his coming back for treatment," explained the CPC head.

"I saw a youngster today and have seen him every day for the past five days. He's a small baby and had diarrhea but we were able to keep on top and follow-up through our Public Health nurse. So there's no question we prevented an admission. Ordinarily he might not have been taken to a doctor until maybe the third day of the illness," said Dr. Lentz.

REDUCE ADMISSIONS

For the quarter ending December 31, 1970 with almost 1,500 visits at the center, only 39 cases were hospital admissions. This is about 12 persons out of 500 and many of those were emergency walk-in cases who hadn't been seen previously.

"I definitely think we have had an impact on hospitalization. Dr. Stine, head of program evaluation, is looking at this in more concrete terms. What we're talking about here are subjective observations and impressions, however, which are pretty reliable," said Dr. Lentz.

"We have very close supervision of health care problems and one of the things is that the youngster doesn't have to go back to a regular outpatient clinic, hospital clinic etc. where it's busy and he must wait and have the burden of the expense," pointed out the CPC director. "So many different kinds of things can be handled right here under one roof. There's no shuffling them about from clinic to clinic and from location to location."

Last year statistics show that there were 67,000 contacts between patients and professional staff. In other words, during approximately 25,000 patient visits (not individuals but patients coming for treatment) there were 67,000 professional

contacts. Each child that came to the center on the average saw a doctor, nutritionist, social worker and psychologist.

CPC GOALS

Dr. Ray Hepner, director of the CPC when it was established, once stated the center's goals as striving "to make contact with children in the area and assure that they receive the preventive and curative services needed, not to duplicate or to replace any existing services, but to assure through coordination that the objective—a better coming generation than the last one—is achieved."

Some methods through which the center is trying to "make contact" with the deprived families:

—A school heart disease screening program whereby heart specialists use a special electronic device for rapid heart examination.

—The installation of computers at the center to make treatment and services easy and less time consuming.

—Door to door visits by public health nurses and consultants.

—Publication of a monthly newsletter to instruct people in basic health care and proper living. The newsletter carries simple, but nutritious meals and tips on child behavior.

—Counseling on how to buy food at reasonable prices, how to prevent food wastage, how to use leftovers, and how to get the most out of the food stamp program.

—Mothers are taught how to nurse babies properly, how to prevent home accidents, how to combat infant problems such as teething, diaper changing, etc.

BETTER GENERATION

In line with creating a "better coming generation" Dr. Lentz remarked:

"I think that what one is talking about is that if you are able to improve the overall health of the child—lower the morbidity of disease, lower the absenteeism in schools, and work with schools in evaluation of learning disabilities . . . in that way improving a child's health and helping them with their education—that you have an adolescent, a young adult who will be better off than a person who was sick with his chronic problems not cared for, who missed school and perhaps had problems of identification."

Another way of putting this, said Mr. Gleason, is "that if we can raise the level of these children's physical, mental and emotional well-being they are that much better able to cope with the problems of growing up in the kind of environment they must face every day."

"I think if we have social work to look at the family problems and try to help people with their marital problems and if we work with the schools to improve or work with their learning and behavior, we are making efforts to assist the families in their family organization or structure. The very fact that we have a citizens council creates a sense of re-

sponsibility or helps people help themselves. If parents see that people are willing to help them and are available then there's a different outlook on the part of the family, and that's what you really change," said the director.

"If the child is healthier and goes to school and you help him with his school problems so that he does better in school, then you have less problems at home. The family home situation is improved, i.e. the better chance of a youngster growing up in a more supportive, totalistic manner of being better equipped to meet adulthood," explained Dr. Lentz.

CPC'S FUTURE

What about the role of the CPC in the future?

"I think that there will be an attempt to coordinate—and I'm in favor of it 100 per cent—our cooperation with other project grants that involve maternal and infant programs with family practice programs—adult programs. I see the direction as a family centered program. It would be my greatest desire if this unit were responsible and had obligations and responsibilities for, not just the children we already serve but their families. There is no way we can provide total health care for everybody but if we can improve the family health in the World Health Organization's definition of more than just the absence of disease but better living . . . we can be the patient-family advocate with the political community," Dr. Lentz observed.

"This area needs help . . . we can document that there's lead in the houses and that the heat is bad, and so forth . . . become the family advocate to improve a segment of the population. A nice measure of success might be the reduction of crime in the area," concluded the center's director.

TEACHING MOTHERS—Dr. Misbah Khan, center, directs a discussion with mothers-to-be about contraception, sex, how to care for a baby and many other subjects during classes once a week at Edgar Allan Poe Schools No. 1 and No. 1A. Looking on as Dr. Khan talks is, left, Mrs. Hargrove, teacher of family living and home economics, and, right, Dr. Cicely Williams, visiting professor of pediatrics, University of Maryland.

Teenage Mothers

Students at Edgar Allan Poe Schools No. 1 and No. 1A study the basic three R's, but share a unique status requiring special education—a need fulfilled by staff and students from the University of Maryland School of Medicine.

Not too long ago these girls who are pregnant mothers ranging in age from 12 to 20 would not have been permitted to finish their basic education. Today these schools, a junior and senior high, are operated exclusively for pregnant girls or girls who have recently given birth. The schools have a total combined enrollment of approximately 3,000.

Since the summer of 1969, the Community Pediatrics staff as well as medical students have augmented the curriculum through once a week classes at each school. Every girl takes a course entitled "Laboratory for Effective Living" which is divided into three units taught by staff and students from the University in collaboration with the school's family living and home economics teacher.

"People are receiving education about birth prevention but the young girl who is already pregnant is often forgotten," said Dr. Misbah Khan, coordinator of pediatric ambulatory services at University

Hospital. "The main purpose of our program is to prevent the birth of a second unwanted child."

The course's family living unit stresses personal, medical, and nutritional care during the prenatal period, care of the infant, and includes discussion of contraception, sex information and education.

"These girls are very immature," remarked Dr. Eric Fine, chief resident in Community Pediatrics. "Some girls think that a baby at birth comes from the navel. It is our desire to give these girls continuing health education, and to help correct any misconceptions they might have in regard to a variety of health related subjects."

Dr. Khan explained, "Some of the girls, especially the junior high girls don't even know how they became pregnant, let alone what to expect during pregnancy. We know of one mother who told her daughter that you die seven times when you go into labor. With information like that, how can you expect a child to go through her pregnancy without great apprehension?"

The section on family relationships focuses on the role of the student in the family structure and attempts to help the girl understand her responsibilities as a teenage mother. In a home management section the girl is given pointers on budgets and managing a home with emphasis on purchasing techniques and distribution of household responsibilities.

Dr. Khan leads the discussions which cover topics suggested by the girls themselves.

"Topics range from drugs to family planning, jobs, money, taxes, etc.," commented Dr. Khan. "Some of the medical students assisted in answering questions regarding drugs."

Questions for the next lecture-discussion are submitted during the ensuing week.

Following each laboratory session six to eight of the girls who are nearest their delivery dates are given tours of the delivery room at University Hospital and Maryland General Hospital. At Maryland General the girls are shown slides by the nursing staff illustrating what happens in the labor room and through delivery. These tours are planned and conducted by the nursing supervisors, Mrs. Lois Hundertmark and Mrs. M. E. Messner, University Hospital, and Mrs. B. Thornton, Maryland General Hospital.

"The cooperation we receive from the two nursing staffs makes the visits dynamic and invaluable in helping the girls understand pregnancy. The girls become familiar with the delivery room area, then they see the nursery. This is to help remove any of the girls' fears about giving birth," stressed Dr. Khan.

Mrs. Vivian E. Washington, principal of the two schools, describes the girls as "eager to learn."

Last summer, the Department of Pediatrics, through Dr. Khan's efforts, secured jobs for 14 of these young mothers in the hospital's pediatric department as Neighborhood Youth Corps workers.

The two Baltimore schools are open a 10-month school year plus a six-week summer session for girls who want to make up fourth quarter work. The girls carry a normal school load and get social and medical counseling.

A student transfers to the Poe School from her regular school and attends until she delivers, when she is out from four to six weeks. After her post partum checkup, she returns to Poe School and is transferred to a regular school at an appropriate time in the school year, usually at the end of the quarter or semester.

Those girls who live in a certain area of the city are eligible for free medical care from the University's Community Pediatric Center (CPC), until they become 19 years old. Prenatal care is administered by the University Hospital's Department of Obstetrics and Gynecology.

At the CPC, each teenage mother-to-be is assigned a freshman medical student who serves as her patient advocate, who follows her through his four years of medical school. Dr. Prasanna Nair, assistant professor of pediatrics, is in charge of the program.

The program is advantageous to both mother and medical student. The teenage mother benefits by having her patient advocate see that she gets proper attention and medical care when she needs it. The medical student is notified when the young mother goes into labor and he helps her through the traumatic shock of delivery. Thus, he has the opportunity to establish rapport with a patient in the first year of his medical education; most medical students don't have this opportunity to work with patients so early in their training. The medical student also has a chance to become acquainted with the social aspects relating to his patient's history as well as learn to function effectively as a member of a team made up of a public health nurse, social worker and nutritionist. After the child is born, the student maintains a follow-up contact with the mother and the child during his remaining years at the University.

Dr. Oscar Stine, associate professor of pediatrics, has done studies on prematurity rate and frequency of death of infants born to girls who attended School No. 1 and those born to girls who did not. Twelve per cent of the infants born to mothers who attended school weighed less than five pounds while 23 per cent of the infants born to the control group were of low birth weight.

In one year, Dr. Stine found that there were 13 deaths among babies born to girls who did not attend the school, and no deaths of babies born to mothers who attended Poe School. Another year yielded similar results, pointing up the importance of concern for the mothers' nutritional, emotional, educational and medical experience. Dr. Stine found that infant mortality was greatest for the very young mothers, for those from the poorest neighborhoods, and for those mothers who did not receive prenatal care.

Dr. Stine also convenes a Council for Teenage Parents during which representatives from the schools of social work, nursing and medicine meet once every two months to stimulate further campus involvement with the problems relating to teenage parents.

Dr. Khan added, "We try to give them facts to prevent another unwanted baby. This program is already too late to prevent one unwanted pregnancy. The challenge is to prevent another one from happening. We give them the facts. They decide their own destiny."

The first edition of the school newspaper expressed the sentiments of many of the girls. On the cover, a stork grips in his beak the traditional baby bundle, with the words, "The Raven," printed on it. And, on the last page was Poe's refrain,

"NEVERMORE."

Profile . . .

Humanitarian, Physician and Mother

Dr. Misbah Khan

There is no pursuit more worthwhile in life than man's service for another.

"The need for the world today is man's humanity to man. The decade 1960-69 was the age when men began to contemplate the welfare of all human beings and the 70's have the opportunity to see this concept emerge," predicted Dr. Misbah Khan, Director of Community Programs and Assistant Professor of Pediatrics, shortly before returning to West Pakistan.

She added, "The challenge is not technical or even scientific advancements, but in reaching out to the hearts of men, to stir that longing in every human being to do something good."

Dr. Khan, mother of four children ranging in age from six to 11, left her native West Pakistan almost five years ago to come to the United States for further formal training in pediatrics and public health. Since that time she has become "the spirit and one of the most dynamic forces in the University of Maryland Department of Pediatrics."

Dressed in her native sari, her serene face, long black hair pulled in a bun and gentle manners are perhaps contradictory to her constant drive and concern for all human beings. However, she feels just as much at home in Baltimore counseling teenage mothers on health practices, contraception and prevention of teenage pregnancies as she did expounding the values of infant care to a farmer's wife in West Pakistan where she was born.

Her typical day is packed with coordinating community projects and even though she has a busy schedule she's never too busy for a mother, child, student, or visitor to consult her. Dr. Khan sees no other way than to involve herself in community programs. Her husband and children live with her in Baltimore.

Dr. Marvin Cornblath, Professor and Head, Department of Pediatrics, called Dr. Khan "one of the most unusual humanitarians . . . women . . . physicians, human beings and mothers . . . it's been a

privilege to know and work with her. You go through life and only meet one person like her. She has the ultimate concern for every human being by doing, not planning . . . by doing what she can to help each and every one.

"She is the spirit and one of the most dynamic forces in our department. As my first chief resident she worked with a total house staff of nine . . . it's now up to 21 and by July it'll be 28. As we've added new staff Dr. Khan has found five meaningful jobs for them in which they, the staff, the patient and the medical student have always gained, or benefitted.

"She is an irreplaceable loss. We'll continue to seek and achieve our missions and goals, but we'll never be able to do, without her, what we could have done with her."

"She's a beautiful person . . ."

"Dr. Khan is one of our most active and effective teachers at the student and house officer level. She is a catalyst among the various paramedical personnel as relates to the patient and has taught all of us what the 'team' approach to the patient and his problem really is," said Dean John H. Moxley, III. "Her talents and personality will be missed when she returns to West Pakistan."

Dr. Khan served as pediatrician to the United Christian Hospital in Lahore from October 1962 to June 1966 as well as being the only pediatrician at the West Pakistan Research and Evaluation Center in Lulliani. She came to the United States in 1966 to obtain additional formal training in pediatrics and in public health. Dr. Khan holds certification from the American Board of Pediatrics and has a master's degree in Public Health from Johns Hopkins School of Hygiene and Public Health. She has been on the Pediatrics faculty for two years and has been in charge of developing, evaluating and implementing community programs in the Department of Pediatrics, University of Maryland School of Medicine.

Under the direction of Dr. Cornblath and Dr. Khan, a wide spectrum of community programs have been initiated and implemented. With Dr. Khan's return to Pakistan at the end of March, Drs. Murray Kappelman and Eric Fine will assume these responsibilities.

"Perhaps the inner cities, ghettos, and slums with their unforgiveable living conditions for the masses of people exist as they are today because we are what we are. The changes may lie in the out-reaching hands of the students today, the builders of the future who have not yet reached the pinnacle of their contributions nor inflexibly established their beliefs nor have had their say as have some of their professors," the Pakistani physician observed.

Dr. Khan made the preceding observation in establishing a home care program in which pediatric patients can be treated with much more thoroughness and with less expense at home than in a hospital. In such a program better perspective is obtained of the child's total needs.

"As a teacher, we fail our students if we teach them only the pathology of disease. We neglect them if we do not invest an awareness of all the facets of the circumstances that surround the child at the time of his illness," she explained.

Dr. Khan continued, "The child and his illness are immeasurably affected by the family constellation, the home condition, the hygiene, the plumbing, the roaches, rats, the physical and mental health of the family members as well as the neighbors. There is an area to be

covered in obtaining the history of the ill child which is rarely taught in the medical schools and rarely observed by those people involved in the child's care; the quality of the child's life."

Speaking of her work with the pregnant girls at Edgar Allan Poe Schools No. 1 and No. 1A, Dr. Khan said:

"This is the time when these young girls need the most help. They need information on prenatal care, advice on how to plan for their lives and most of all how to prevent further unwanted pregnancies. You can't shut your eyes and ignore these girls. They need help not condemnation. It is easier to condemn them than it is to take care of their problems."

The objectives of the teenage mother program are to augment the school's educational program, provide antenatal and well baby care as well as impart information regarding family planning, job objectives, planning for the future, better utilization of existing services, and sex education.

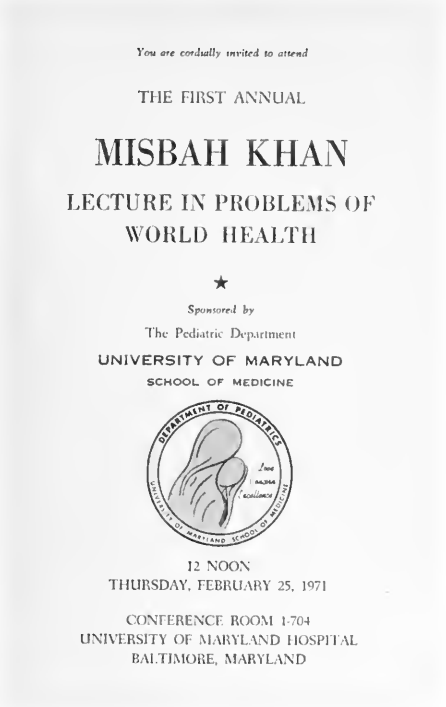
Other community programs in which Dr. Khan plays a role:

Maryland State School for the Blind—The Department of Pediatrics since June 1969 has undertaken the total medical care of the State of Maryland's blind children registered at the school. This involves delivery of comprehensive health services including psychiatry, dentistry, nutrition and obesity studies as well as the use of nurse practitioners.

The Community Pediatric Center—This center offers comprehensive medical services to a child population of about 10,000 children. This program involves service, education and research as well as continuing evaluation.

Citizen's Council—In line with the University of Maryland's deep commitment to the inner city community a Citizens Council was established consisting of parents using Pediatric Services, community leaders, representatives of service personnel in the Department as well as representatives of community agencies.

HOUSE STAFF 1968-69—Dr. Misbah Khan is shown with other members of the Department of Pediatric's house staff when she was Chief Resident. Front row, left to right, Dr. Jane McCaffery, Dr. Gary Fleming, Dr. Marvin Cornblath, professor and head, Department of Pediatrics, Dr. Khan, and Dr. Eric Fine. Back row, left to right, Dr. Robert Gingell, Dr. Shih-Wen Huang, Dr. Kenneth Koskinen, Dr. John Ignatowski, and Dr. Theodore Wolfe.



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"This certificate is presented to Dr. Misbah Khan in recognition and in appreciation of her immeasurable contributions to the Department of Pediatrics, to mothers, to children, to the community and to the State of Maryland. Teacher, friend, physician, humanitarian, citizen of the world . . . Dr. Khan's place in the department and in our hearts will be forever honored for her compassionate service to all. A woman of action, gentle but firm, dynamic yet patient Misbah Khan's foremost concern is always man's humanity to man. Her example, her contributions, her devotion, her achievements will remain always as a goal for all to emulate."

February 25, 1971

Marvin Cornblath
Professor and Head
Department of Pediatrics

Fellowship in the Maryland State Health Department—In October 1970 a program was begun with the State Health Department in which resident physicians become acquainted with problems of the community and administrative medicine.

Neighborhood Youth Corps In-School Program—In April 1970 a program was initiated for 16 high school youngsters in areas of service such as nursing, secretarial, laboratory, child life, etc.

Dr. Khan cannot stress enough the importance of infant and child care. When she returns to her home she hopes to begin a program of comprehensive maternal and child health services on family planning and family health in rural villages.

"To preach birth control to a woman in the village who knows nothing about childhood diseases, nutritional values and preventive medicine is wrong," said Dr. Khan.

She says the basic needs of health measures in Pakistan are water supply, waste disposal and compulsory immunization.

"We need legislative measures to give health care the first priority," she said. "The need of Pakistan is in implementing ways to train health aides and utilizing available resources from the women of the village so they can staff village clinics and augment the shortage of doctors. She said that 93 per cent of the country's population is concentrated in villages.

Dr. Khan, who will be chief of pediatrics, United Christian Hospital, Lahore, West Pakistan, would like to see two things accomplished in her country during her lifetime: compulsory immunization and compulsory education.

She concluded: "Values and needs of human beings are the same everywhere."

RAMSAY NAMED

Dr. Ramsay

Dr. **Frederick J. Ramsay** has been named Assistant Dean, Student Affairs, by **Dean John H. Moxley, III.**

He succeeds **Dr. George A. Lentz, Jr.,** who has assumed the directorship of the Community Pediatrics Center (CPC) full-time.

"The Office of Student Affairs is the primary link between the students, the faculty, the administration, the alumni and other groups," said Dr. Ramsay.

He added, "We are charged with the responsibility of overseeing the distribution of scholarships, loans and grants in aid; the management of student activities; scheduling senior elective opportunities and miscellaneous registrar functions, and for both personal and professional counseling."

Dr. Ramsay chairs the Advancement Committee, Student Activities Committee, the Scholarship and Loan Committee, and the Honors and Graduation Committee. He is a member of the Curriculum Committee, the Internship Advisory Committee and the Senior Elective Committee.

"Future plans call for the establishment of a housing bureau, a job placement service and an extensive student advisory system," said Dr. Ramsay.

In July 1970, Dr. Ramsay was named the first director of the Office of Research in Medical Education. It was established to study the school's present curriculum and to plan changes that would fit the needs of changing medical practice and the demands of a changing society.

Dr. Ramsay, who taught Anatomy at the medical school from 1964-69, spent a year at the Center for the Study of Medical Education conducted by the University of Illinois School of Medicine in Chicago.

In addition to directing the Office of Research in Medical Education he has continued to teach embryology.

The Baltimore native, also an ordained Episcopal minister, was raised on the McDonogh campus where his father, A. Ogden Ramsay, has taught Biology for over 40 years. He himself earned a bachelor's degree in Biology at Washington and Lee University, Lexington, Va., and received M.S. and Ph.D. degrees in Anatomy and a M.E.D. in Medical Education from the University of Illinois School of Medicine.

Also a Baltimore native, Dr. Lentz succeeds Dr. Ray Hepner, who is now Director of Research for the CPC.

Dr. Lentz received his M.D. from the University of Maryland School of Medicine in 1957 after attending Johns Hopkins University for his A.B. degree. He interned, held his Pediatric residency and later a fellowship in Physical Medicine Rehabilitation at the University of Maryland Hospital. He was assistant professor of Pediatrics 1964-68. Currently he is an assistant professor, Physical Medicine and Rehabilitation, and an associate professor of Pediatrics.

His hospital appointments include: chief, Department of Pediatrics, Lutheran Hospital, 1964-67; pediatrician, James L. Kernan Hospital for Crippled Children, and pediatrician, University of Maryland Hospital. He is also medical director, United Cerebral Palsy Center of Baltimore, Inc., and director, Mental Retardation Center.

Would you, could you on a boat?

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Anything Is Possible In the World of Kids

On the 5th Floor Pediatrics Ward

AT UNIVERSITY HOSPITAL

* Dr. Seuss Drawings designed by Carol Stretch and painted by Joseph Ford, both art students.

AMBULATORY NURSING

The Department of Ambulatory Nursing Services is undergoing a period of change as the University Health Science Center begins to respond to the need for improving the delivery of health services and the health manpower shortage.

"Because there is an increasing emphasis on ambulatory care as well as an increase in the number of patients, the Ambulatory Health Services staff has sought more effective means of delivering the best health care to the greatest number of people," stated Dr. William S. Spicer, associate dean for Health Care Programs. "Among the ways this may be achieved are through Nurse Clinics and further education of the nurse."

In present and future programs, the Ambulatory Nurse may participate as a nurse practitioner or care team leader, and may supervise preventive maintenance and surveillance clinics for chronic diseases, direct screening and triage functions. She may also provide leadership in community health situations, specialty emergency and treatment roles, patient education and family planning.

"With the creation of new educational programs, careers, primary and specialty health care teams, the nurse will play an expanded, pivotal role in the six C's of good care: continuity, coordination, compassion, competence, comprehensiveness, and community responsibility and involvement," Dr. Spicer added.

In November, Dr. Samuel T. R. Revell, chief of the Medical Clinic, Mrs. Rachel Booth, RN, associate director of Nursing, and Mrs. Rose Rieger, RN, team leader for the Medical Clinic, with the cooperation of the nurses on her team, initiated plans for a "Nurse Clinic" in Ambulatory Services. A group of patients with the diagnosis of diabetes mellitus was selected for the first clinic. A protocol outlining patient care was developed.

In the Nurse Clinic the physician makes the initial diagnosis, prescribes specific therapy, and refers select patients to the nurse. The nurse accepts the referral, provides a continuing surveillance of the disease and promotes the maintenance of health through observation and teaching. Plans have been made to refer the patient back to the physician for periodic examinations and consultations.

"Nurses and physicians have recognized the need to determine their functions and roles in order to maximize the utilization of each profession. It is becoming increasingly evident that competent professional nurses can make tremendous and independent contributions to the maintenance care of patients with such chronic diseases as obesity, hypertension, diabetes mellitus, pulmonary disease and psychosomatic disorders," Dr. Spicer explained.

At the University of Maryland, an extensive staff development program in Ambulatory Nursing is being planned to prepare nurses for their responsibilities in this area. A staff development committee, formed last year, is offering lecture series, conferences, films and classes on subjects basic to progressive nursing.

One of the presentations which was given by Drs. Leonard Scherlis, Jerry Salan and other members of the Division of Cardiology was on intensive coronary care. In a series of ten demonstrations, the nurses learned about cardiopulmonary resuscitation, coronary artery disease, electrocardiography, and aarhythmias in order to extend effective therapy for cardiac emergencies from the intensive care units to Ambulatory Services and, hopefully in the future, into the community.

The Electrodiagnosis of Neuromuscular Disease

Frank Kemble, M.D., M.R.C.P.

Neuromuscular disorders are caused by diseases of the lower motor and sensory neurones. They are best diagnosed by clinical criteria but when clinical differentiation is difficult, then reliance must be placed upon electrodiagnostic, histological and biochemical investigations.

This article describes the basic electrodiagnostic procedures together with their usefulness and limitations in differentiating neuromuscular disease.

Instrumentation

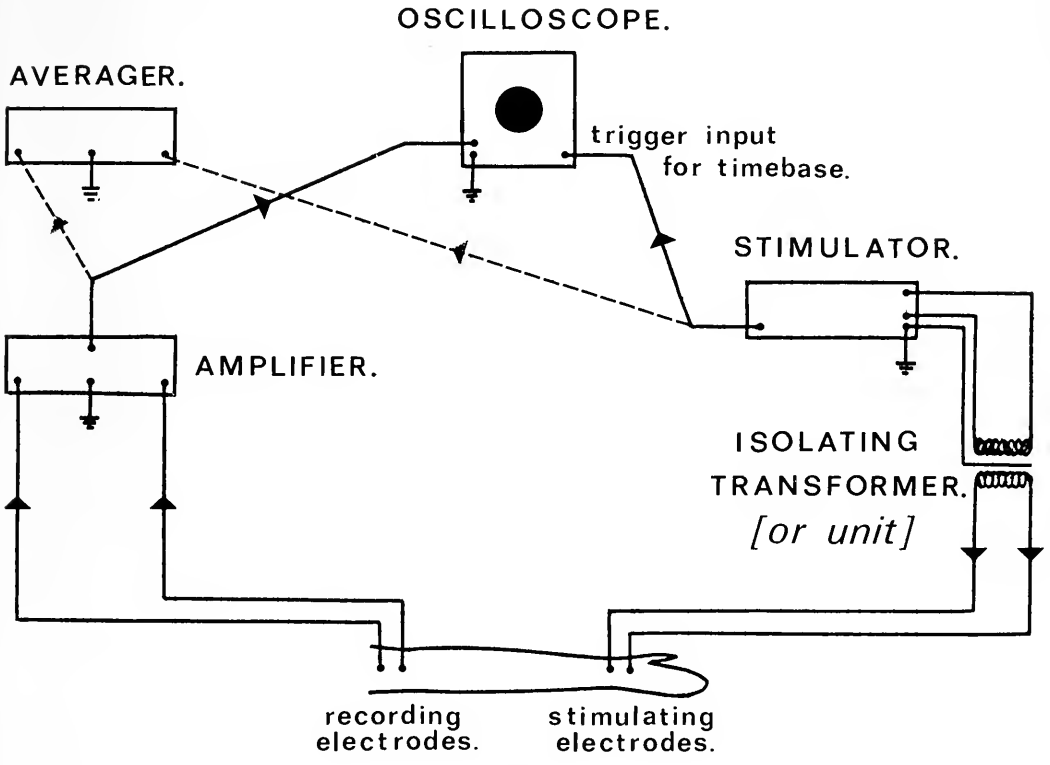


Fig. 1

The above diagram of the equipment layout (Fig. 1) is fairly self explanatory. An averaging device or an oscilloscope may be used for recording nerve and motor unit potentials.

Electrodiagnostic Procedures

A simple classification of electrodiagnostic neuromuscular procedures is given below. These will then be described more fully in the text.

A. Nerve Conduction
   1. Sensory and motor conduction
   2. (H) reflex testing
   3. Strength-duration curves

B. Muscle Sampling

Sensory and Motor Nerve Conduction:

The technique for measuring nerve conduction involves applying a stimulus to a peripheral nerve and then recording the transmitted nerve or muscle action potential so that a conduction time or latency is obtained between the stimulus artifact and the action potential.

The stimulus is a product of current duration and strength, the latter being measured in either amperes or volts. Either one of the three variables, i.e., time, amperage, or voltage, can be varied leaving the other two constant.

The availability of peripheral nerves for testing depends upon their relationship to the surface of the extremity.

This means that some nerves are particularly accessible to testing, such as the median and ulnar nerves in the arms, the common peroneal and posterior tibial nerves in the legs, and the facial nerves. Other nerves are more difficult to test because they lie somewhat deeper, buried within the soft tissues of the extremities. These include the radial and musculocutaneous nerves in the arm and the femoral and sciatic nerves in the leg. Conduction is extremely difficult to measure in nerves other than those listed above.

The relationship of peripheral nerves to the surface also limits the extent to which nerve conduction can be measured along their course. The following is a list of peripheral nerves and the extent to which conduction can be measured along their course:

median nerve—digits up to the axilla

ulnar nerve—digits up to the axilla

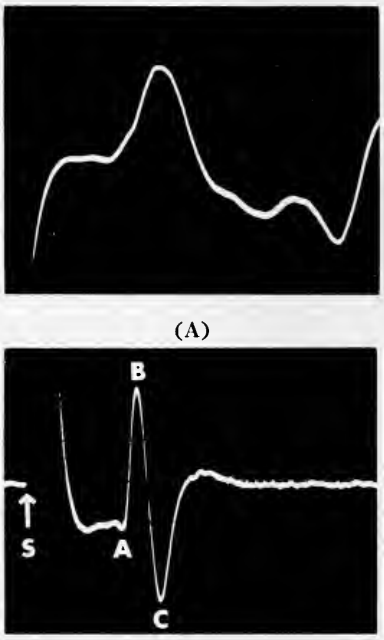
radial nerve—digits up to the axilla

common peroneal nerve—digit up to the sciatic notch

posterior tibial nerve—digit up to the sciatic notch

femoral nerve—mid thigh up to the groin

facial nerve—the stylomastoid foramen to the facial musculature



(A)

(B)

Typical muscle action potential (A- amplitude 3000$_\mu$ V) and sensory nerve action potential (B-Amplitude 100$_\mu$ V).

Fig. 2

Sensory and motor conduction can both be measured in peripheral nerves. Sensory conduction may be affected (delayed) before motor conduction in many neuropathies and, therefore, may be a more sensitive indicator of disease than motor conduction. However, a sensory nerve action potential (SNAP) is between 25 to 200 times smaller than a muscle

action potential (MAP) and is, therefore, more difficult to record (Fig. 2). Sensory recording is further complicated by the fact that SNAP's decrease in amplitude with increase in age and with lowering of limb temperature, therefore under these two conditions (age and low temperature), measurement of the small SNAP's can be extremely difficult and inaccurate. These problems can be overcome to some extent by warming limbs before testing and by summating responses on an averaging device which summates any constant baseline abnormality and rejects inconstant variations from the baseline.

Reduced peripheral nerve conduction is the most obvious measure of peripheral nerve disease. Less constant abnormalities include decrease in the amplitude of the MAP and SNAP, increase in their duration and alterations in refractory periods with paired stimuli.

Nerve fiber conduction velocity is proportional to nerve fiber diameter, the fastest conducting fibers being those of the largest diameter (nerve fiber diameter in μ x 6 = the velocity of conduction in meters/second).

There are two likely conditions which cause reduced conductive velocity. The first is segmental demyelination, either limited to a segment of a nerve fiber or affecting the nerve fiber along the whole of its course. The second is regeneration of nerve fibers after Wallerian degeneration. (This must presume that all fibers in a peripheral nerve degenerated initially, since theoretically only a few fibers of normal diameter need to survive for nerve conduction to be maintained. This latter state of affairs sometimes occurs in motor neuron disease and poliomyelitis, i.e., diseases which involve the anterior horn cells).

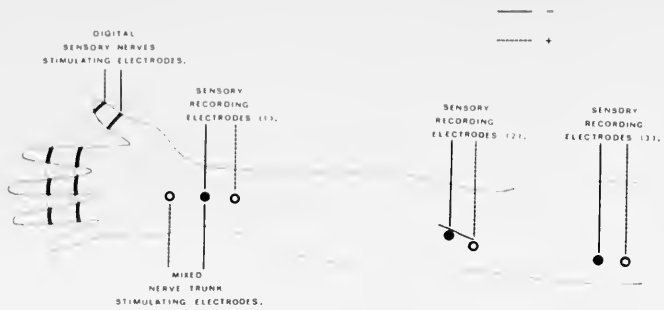
Detailed steps in the measurement of median nerve conduction will now be described since the basic technique is similar for other peripheral nerves.

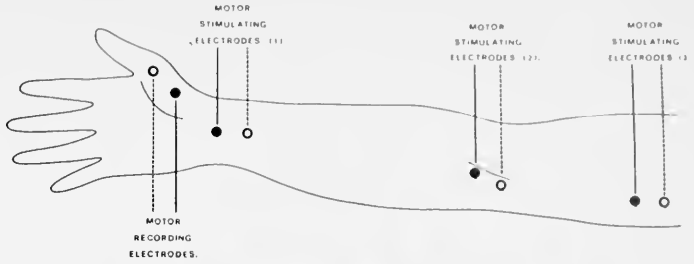
1. Make sure that the limb is warm which means that either the surface temperature must be over 30°C or the room temperature must be over 26°C.

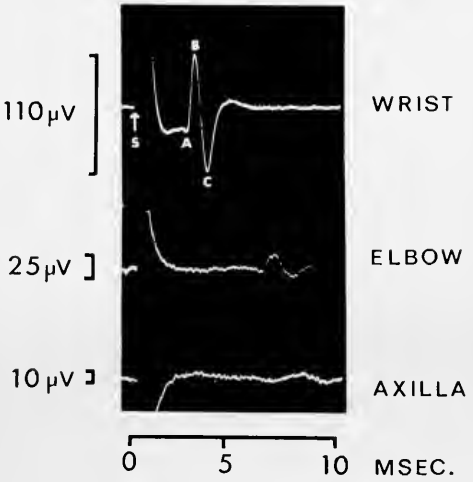
2. Apply a weak stimulus to the skin above the wrist and find the point which will evoke the maximal visible twitch of the thenar muscles. Mark the stimulating point and the one of maximal muscular twitch, and then repeat using the same technique medial to the bicipital tendon at the elbow and at the axilla. These "stimulating" points can now be used for stimulating (motor conduction) and for recording (sensory conduction), since we now know that at these points the median nerve is at its closest to the surface.

3. Evoke a SNAP by stimulating either the index finger or all of the median innervated fingers with ring electrodes and record the evoked response at the wrist, elbow, and axilla. The conduction times are measured from the onset of the stimulus artifact on the oscilloscope to the peak of the initial positive (downward) deflection of the SNAP. These conduction times are measured upon an oscilloscope or averaging device which has two beams, one of the beams being used to record the SNAP, the other being used to record a time base measured in milliseconds (1,000th of a second).

4. Measure the distances between the proximal ring electrode and the distal electrode of the pair of recording electrodes at the wrist, elbow, and axilla. These measurements are usually made in centimeters by using a metal tape measure.







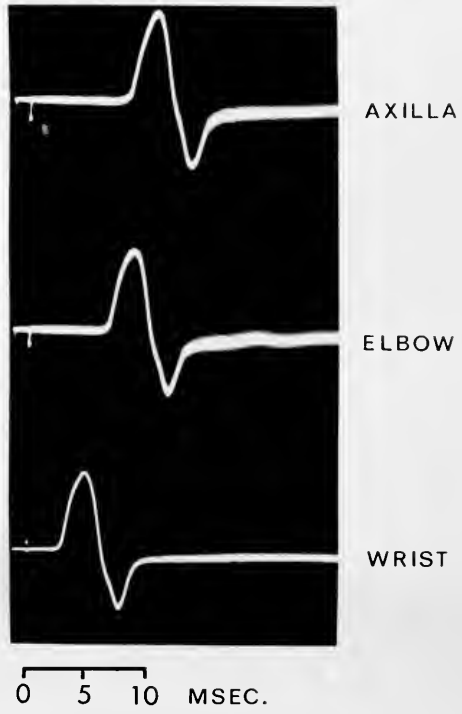


Fig. 3

Right, Median nerve muscle action potentials recorded following stimulation at the axilla, elbow and wrist.

Left, Median nerve sensory action potentials recorded at the wrist, elbow and axilla.

5. There are now available three conduction times (Fig. 3) which represent sensory conduction between finger and wrist, finger and elbow, the finger and axilla respectively. Conduction times between the wrist and elbow and between the elbow and axilla can now be calculated by simple subtraction. These conduction times in milliseconds are now divided into the conduction distance in centimeters which gives a velocity measured in centimeters per millisecond or which can, in turn, be completely multiplied by 1,000 to give a velocity in meters per second. It must always be remembered that theoretically the sensory velocity measures the rate of conduction of the fastest (largest) digital sensory nerve fiber. Sensory conduction can also be measured up the arm following stimulation of the median nerve trunk at the wrist.

6. Motor conduction can be measured in a similar way, if it is remembered that on this occasion we are stimulating at either the axilla, elbow, or wrist and recording over the thenar muscles, and also remember that the terminal motor conduction time is a compound time, not simply resulting from nerve conduction but also resulting from conduction in the terminal branches of the fibers of the median nerve together with delay at the neuromuscular junction. It can, therefore, only be used empirically as a measurement of neuromuscular conduction against a set of normal values.

7. Approximate normal values for median nerve conduction:

   Distal motor latency—2 to 4 msec.

   Motor conduction, wrist to elbow—56 ± 10 M/sec

   Motor conduction, elbow to axilla—65 ± 10 M/Sec

   Sensory velocity, finger to wrist —60 ± 10 M/Sec

   Sensory velocity, wrist to elbow —62 ± 10 M/Sec

   Sensory velocity, elbow to axilla —72 ± 10 M/Sec

Radial and ulnar nerve conduction can be measured in a similar way to median nerve conduction. When measuring in the legs it must be remembered that conduction is slightly reduced in the peripheral nerves of the leg compared with the arms.

Abnormalities of Nerve Conduction may involve many peripheral nerves, single nerves or only segments of one peripheral nerve.

Localized delay is seen in the so-called "entrapment" neuropathies, such as in the median nerve at the wrist in the carpal tunnel syndrome, the ulnar nerve at the elbow, and the lateral popliteal at the head of the fibula. The conduction measured in other segments of these nerves is normal.

Generalized delay in all of the measurable nerve segments is seen in the affected nerves of polyneuropathies or mononeuropathies.

Marginal or no delay of nerve conduction is seen in either radicular lesions or in lesions involving either the dorsal root ganglion cells or the anterior horn cells. It should be noted that the evoked muscle action potential may be polyphasic in all three of the above groups compared with normal potentials.

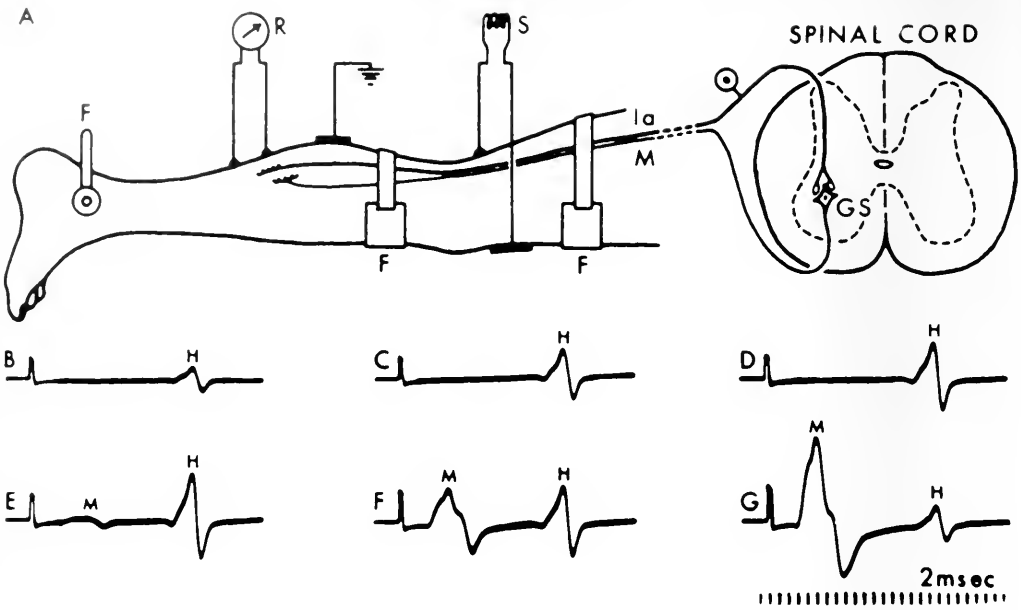


Fig. 4

A—"H" reflex testing; The stimulus at S evokes a response recorded by R. B to G show the recorded H and M responses with increasing stimulus strength.

"H" Reflex Testing

"H" reflex testing is the electrophysiological equivalent of the tendon jerk (muscle stretch reflex). The basic principle is that a weak threshold stimulus which is lower than that used to stimulate motor fibers will evoke a response, "H", at a latency of approximately 25 to 30 milliseconds from the stimulus artifact (B to D—Fig. 4). This is due to conduction proximally along the spindle afferent fibers, across the monsynaptic junction of these fibers with the anterior horn cells, and then down the motor nerve fibers to cause a muscular twitch in the triceps surae muscle. Upon increasing the threshold of this weak stimulus, a second response is recorded which has a much shorter latency (E to G—Fig. 4). This is the direct response from stimulating the motor nerves to the triceps surae muscle and is called the "M" response. The amplitude of the M or muscle response increases with increasing strength of the electrical stimulus and, in turn, the amplitude of the "H" or late response decreases. The practical significance of this reflex is that the "H" wave amplitude is increased and the "H" reflex cycle to paired stimuli is abnormal in extra-pyramidal or pyramidal tract lesions, and the reflex may be abolished or delayed by diseases which affect the muscle spindle or nerves.

Strength Duration Curves

Strength-duration curves (S-D curves) have been supplanted in the majority of instances by a combination of muscle sampling and nerve conduction which are

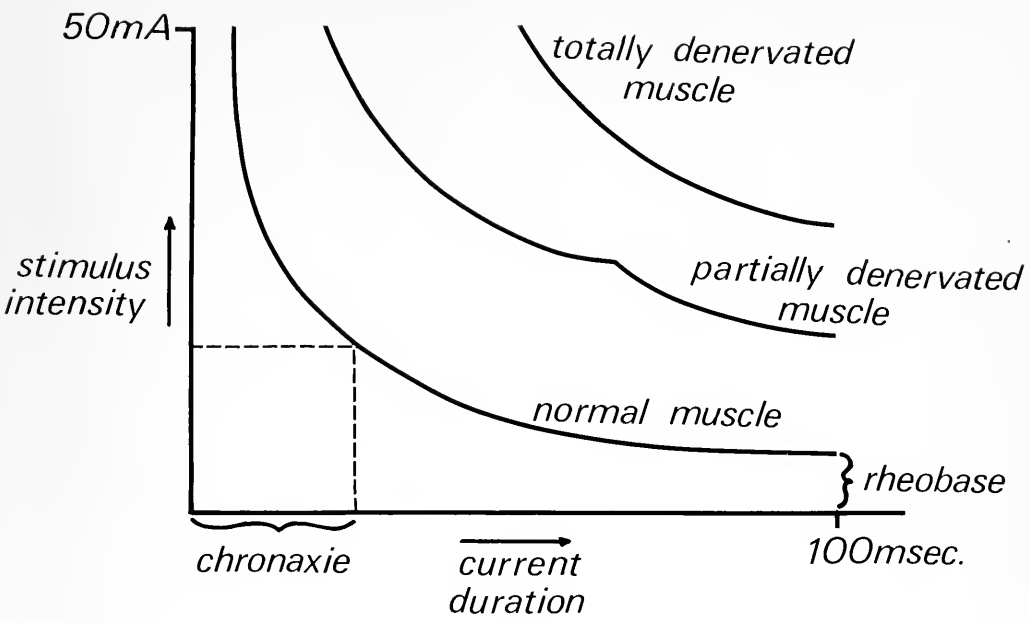


Fig. 5

Typical strength duration curves in normal muscle, partially and completely denervated muscle.

simpler and probably technically easier to perform. Strength-duration curves are interpreted by utilizing certain neurophysiological principles. Firstly, tissues vary in their excitatory thresholds and also in their decay rates. Secondly, the decay rate is a measurement of the increased duration of stimulus needed as the stimulus threshold reduces. Thirdly, muscle fibers have a low decay rate and a high excitatory threshold and are best stimulated by long duration currents (see Fig. 5). Nerve fibers have a high decay rate and low excitatory threshold and, therefore, respond better to short duration stimuli (see Fig. 5).

The significance of strength duration curves is that they indicate denervation and were used for following the pattern of regeneration following denervation. As can be seen in the diagram (Fig. 5), a partially denervated muscle will exhibit a curve which is intermediate between the strength duration curves for totally denervated and normal muscle. Totally denervated muscle gives a S-D curve equivalent to that of isolated muscle.

The chronaxie and rheobase are measurements used to quantitate strength duration curves. The chronaxie is the duration of current needed to cause muscular contraction by using a current strength of twice the rheobase. The rheobase is the lowest strength of current needed to stimulate a particular muscle regardless of the duration of the current flow.

Normal muscles respond vigorously to Faradic stimulation (A/C) for as long as the current is passing. They respond to Galvanic stimulation (D/C) only when the current is made or broken. In a lower motor neuron lesion, there is no response to Faradism after 5-7 days be-

cause of the short current duration (Fig. 5), but there is a response to Galvanism which, however, requires a stronger current than in the normal muscle (see S-D curve complete denervated muscle in Fig. 5). This change of response to Faradic and Galvanic stimulation by denervated muscle is called the reaction of degeneration. It has been supplanted by charting strength/duration curves, and in practical terms the latter have been supplanted by muscle sampling and nerve conduction studies.

Muscle Sampling

Muscle sampling is performed by inserting a needle recording electrode into the muscle to be tested and electrical activity is observed upon an oscilloscope. The instrumentation is no different from that used for conduction studies other than the fact that the time base is "compressed" by using 20 msec. to cover approximately 1 cm. instead of 1 msec/cm. as with nerve conduction. The oscilloscope tracing is set to run continuously so that immediately the trace "runs off" one end of the oscilloscope it then reappears at the opposite end. This enables visualization of many MUP's together.

The next step is to observe for spontaneous electrical activity in the muscle at rest *after, but not during, insertion* of the needle electrode. Normally a muscle is absolutely silent at rest but in pathological conditions abnormalities may be found such as fibrillation potentials, positive sharp waves, fasciculation potentials and myotonic discharges.

Fibrillation potentials (Fig. 6) indicate denervation, are found five days after denervation has commenced and are found at their most profuse level between 15 and 20 days following denervation. They may persist for months or even years. They exhibit a high pitched crackling noise on the audio link from the oscilloscope and repeat themselves regularly, like the crackling of fat in a frying pan. The following are parameters of fibrillation potentials:

Fig. 6

Fibrillation potentials and a positive sharp wave.

a. amplitude, 10 to 600 microvolts (average less than 100 microvolts)
b. duration, 1 to 2 msec.
c. disphasic and occasionally triphasic
d. 2 to 30 second intervals (average 10 second intervals)

Positive sharp waves (Fig. 6) also indicate denervation and have been attributed to the synchronous discharge of a number of denervated muscle fibers, compared with a fibrillation potential arising from a single completely denervated muscle fiber. They have a dull, thud-like sound on the audio link from the oscilloscope. The following are parameters of these positive sharp waves:

a. variable voltage
b. duration up to 100 msec.
c. disphasic
d. 2 to 100 second intervals

Fasciculation potentials are attributed to the *spontaneous* firing of

motor units. They are found in the presence of denervation (especially in anterior horn cell degeneration), nerve root "irritation," and in benign myokymia. They, therefore, may or may not indicate denervation when found on their own.

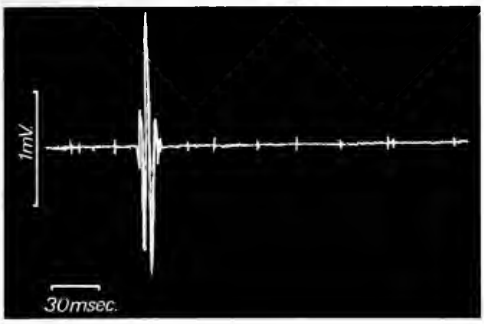


Fig. 7

A polyphasic motor occurring in a denervation fasciculation, together with fibrillation potentials.

Denervation fasciculations (Fig. 7) have the same parameters as the polyphasic potentials evoked by voluntary contraction. One exception is the large (often > 10 mV) fasciculation potentials sometimes seen in anterior horn cell degeneration and less often in chronic neuropathies.

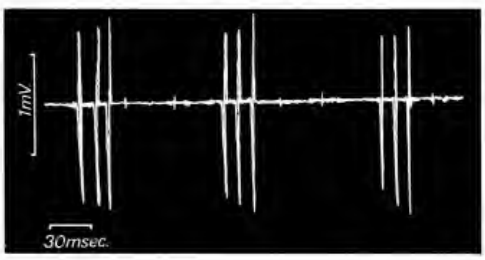


Fig. 8

Triplets of triphasic potentials occurring in fasciculations of motor root irritation.

In nerve root irritation, the fasciculation potentials are usually di- or triphasic and not polyphasic. They characteristically tend to occur in groups of 2 or 3, called doublets or triplets (Fig. 8).

Fig. 9

A group of normal MUP's occurring in a fasciculation of benign myokymia.

In benign myokymia, the fasciculation potentials may not be polyphasic if recorded with a bipolar needle electrode. They tend to occur as a *cluster* of spontaneously but normally formed MUP's (fig. 9). Contraction fasciculations appear as groups of normal MUP's evoked by *minimal movement* and are therefore not spontaneous.

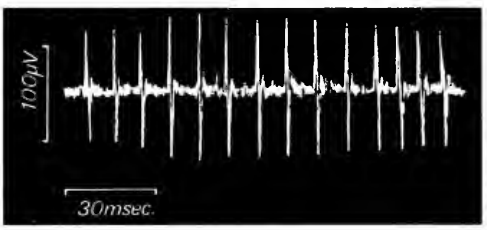


Fig. 10

Spontaneous myotonic discharge of simple short duration action potentials.

Myotonic discharge occurs spontaneously and wanes both in amplitude and frequency with a sound like a dive bomber. The individual action potential parameters may vary between a normal muscle action potential and a fibrillation potential, and some of these are probably due to sarcolemmal membrane abnormality. The most characteristic potentials are of short duration and of low voltage (Fig. 10). Prolonged myotonic discharge is

characteristic of clinical myotonia. Repetitive high frequency discharge which is unsustained can be found in clinical myotonia but also in other neuromuscular disorders and even in apparently normal persons.

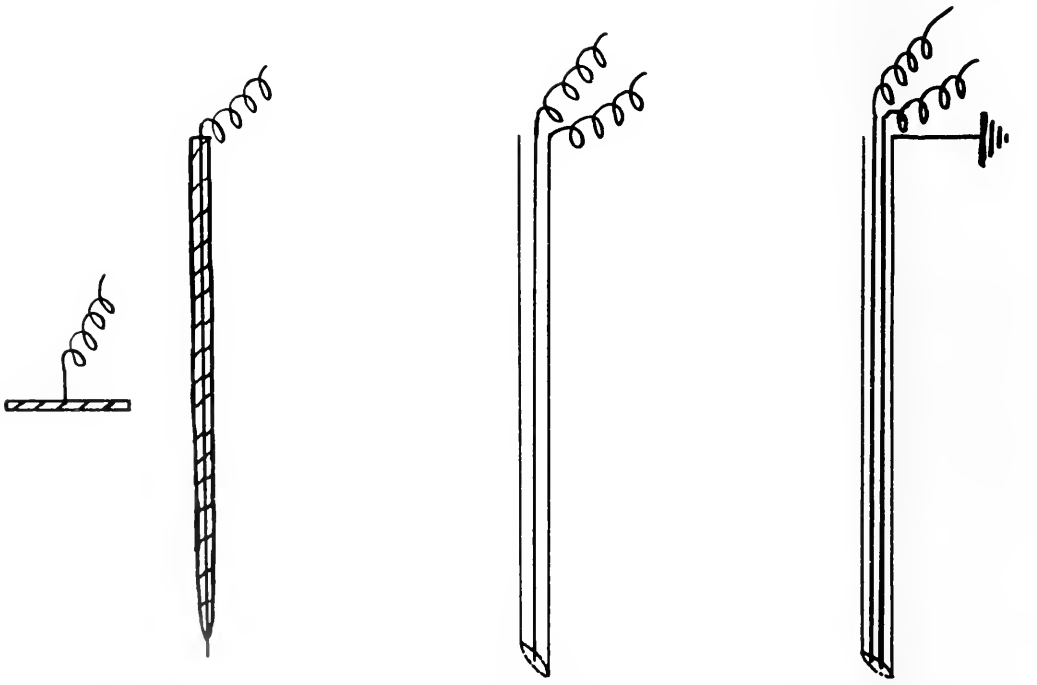
Having observed the absence or presence of electrophysiological activity at rest in the muscle to be tested, we now proceed to observe if there are any motor unit potentials following contraction by the patient of the muscle against the inserted needle recording electrode. By this means, scattered, individually dispersed, motor unit potentials may be recorded. These can be observed and photographed for parameters such as the amplitude, duration, number of phases, etc.

The characteristic normal motor unit potential evoked by muscular contraction has the following parameters, however, these can vary considerably with different muscles.

amplitude, 100 to 2,000 microvolts
duration, 5 to 15 msec.
number of phases, 2 to 4 (usually 3)
recur at 2 to 25 second intervals

They have a plunk-like sound on the radio link from the oscilloscope.

There are 2 types of abnormal motor unit potentials, both of which are polyphasic, and indicate neuromuscular disease. One type consists of polyphasic muscle action potentials with similar parameters to normal MUP's other than the extra number of phases.



SIMPLE MONOPOLAR NEEDLE RECORDING ELECTRODE WITH DISTANT INDIFFERENT ELECTRODE.

"MONOPOLAR" CONCENTRIC NEEDLE RECORDING ELECTRODE.

BIPOLAR CONCENTRIC NEEDLE RECORDING ELECTRODE.

Fig. 11

These potentials probably indicate reinnervation and their parameters are listed below.

amplitude, 20 to 5,000 microvolts
duration, 2-25 msec.
number of phases, 5-25
recur at 2 to 50 second intervals

They have a typically rasping character on the audio link from the oscilloscope.

It has been stated that these polyphasic potentials occur in between 1 and 12 per cent of normal individuals, but they are not usually found when using bipolar needle electrodes which considerably limit the pickup or recording area (see Fig. 11). It may well be that the previous description of polyphasic potentials occurring in normal individuals was due to distant recording by simple monopolar or monopolar concentric needle electrodes from a greater area than when recorded with bipolar electrodes. Thus, a distant potential superimposed upon one lying closer to the needle would give the appearance of simple single polyphasic potential. Giant polyphasic units with amplitudes of over 10 millivolts are often found in anterior horn cell degenerations. These giant units occur less often with more peripheral denervation and subsequent regeneration with peripheral sprouting; e.g., in chronic polyneurophathies.

The second type of abnormal motor unit potentials are of low amplitude and short duration and are characteristic of primary muscular disease. Their parameters are at the lower end of the normal range for muscle action potentials with regard to amplitude and duration. They may even simulate fibrillation potentials (100 microvolts amplitude and 1-2 seconds duration), although they obviously occur only on volition. They have a characteristic high pitched noise and many of them are polyphasic.

The pattern of motor unit potentials is now observed following a maximal sustained voluntary contraction by the patient. There are three typical patterns.

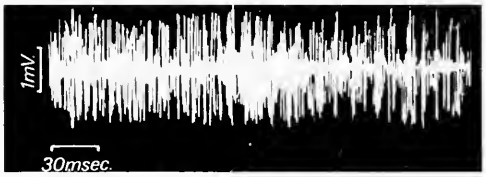


Fig. 12

Development of maximum muscular contraction in a normal muscle (Fig. 12) gives a typical crowded grouping of MUP's with similar amplitudes.

Fig. 13

Denervation is characterized by a marked reduction of the total number of motor units on maximum muscular contraction (Fig. 13). Many of the surviving motor units are polyphasic and smaller than normal in the early stages of the disease. Later the pattern changes in that the surviving polyphasic units may be of larger than normal amplitude. This pattern is often described as a discrete motor unit pattern.

Fig. 14

Potentials characteristic of primary muscular disease are reduced in amplitude and duration (Fig. 14). When many of these MUP's are evoked by a maximum muscular contraction, they give an appearance of being crowded together (more MUP's per contraction).

Typical Findings in Various Neuromuscular Diseases

Typical electrophysiological findings in neuromuscular diseases are tabulated below.

A. Peripheral Neuropathy
   1. nerve conduction
      a. This is usually impaired after one or two weeks (sometimes earlier)
      b. Sensory conduction is impaired more than motor conduction but often the former can only be tested satisfactorily in the arms since no SNAP's are recordable in the legs.
      c. All of the nerve segments below the elbow show a proportionate decrease of nerve conduction, while axillary conduction may be normal.
   2. muscle sampling
      a. Spontaneous fibrillation potentials, positive waves and fasciculation potentials appear after the first week. On minimal muscular contraction polyphasic motor units are seen and on full muscular contraction a discrete motor unit pattern occurs.

B. Mononeuropathies (e.g., polyarteritis nodosa)

Nerve conduction and muscle sampling findings are similar in all respects to those found in polyneuropathy except that they are limited to the distribution of one peripheral nerve.

C. Entrapment Neuropathies
   1. Nerve conduction
      a. There is a localized reduction of motor and sensory conduction at the site of entrapment with normal proximal and distal conduction. In the median nerve there is delayed conduction across the wrist in the carpal tunnel syndrome, but normal conduction may be found both distally and proximally. In practice, it is not easy to measure conduction just across the wrist or in the fingers alone, therefore a significant finding is taken as delayed conduction below the wrist, which is the average of normal conduction distal to the carpal ligament and delayed conduction across the carpal ligament.
      b. muscle sampling—exhibits abnormalities which are identical to those described in A and B.

D. Proximal neurogenic lesions are those lesions which affect the anterior horn cells and the motor roots, e.g., disc lesions.
   1. Nerve conduction. Usually this is normal or only minimally reduced but in rare instances can be completely absent. The explanation for these findings is that conduction is measured along peripheral nerves which receive their innervation from more than one spinal cord segment. If all of the motor nerve fibers from one spinal cord level were lost, conduction would still be preserved in any given peripheral motor nerve since conduction would be maintained along fibers from adjacent spinal cord segments.
   2. Muscle sampling. If the anterior horn cells or the motor nerve roots are affected, sampling abnormalities similar to those described in

A, B, and C may be found. Giant polyphasic potentials of 10 millivolts are seen more often with proximal neurogenic lesions and motor root lesions are often associated with coupling or tripling of simple diphasic or triphasic motor unit potentials.

It should be noted that a sensory radiculopathy usually cannot be diagnosed by electromyography since there will be no sampling abnormalities and sensory conduction will be normal or, in rare instances, completely lost.

E. Clinical Myotonia

1. Nerve conduction—normal
2. Muscle sampling—A rapid volley of motor unit potentials of short duration and low amplitude are evoked simply by inserting the needle into the affected muscle. These sound like a dive bomber (piston engine) on the audio link from the oscilloscope. These myotonic bursts seem to occur more or less *spontaneously* although, of course, they may be due to irritation due to minor movements of the point of the needle. They are *sustained* although they tend to wane. Unsustained high frequency discharges are seen in other diseases of the motor unit and even in apparently normal persons.

F. Primary Muscle Disease

1. Nerve conduction—Normal
2. Muscle sampling—The motor unit potentials characteristically tend to approach the parameters of fibrillation potentials which are those of a single muscle fiber, i.e., they are of short duration and of low amplitude. Typically they have a high pitched sound on the audio link from the oscilloscope and appear as small units densely grouped together. Some of the units on minimal volition seem to to be polyphasic. There is no spontaneous activity at rest.

   It is rare that one can differentiate between a polymyositis and a dystrophy or myopathy. In occasional cases, fibrillation potentials may be found in polymyositis, and these are sometimes attributed to the fact that edema surrounding the muscle fibers may cause compression and denervation of fine intramuscular nerve terminals.

G. Myasthenia gravis and the myasthenic syndrome.

These findings are described under the assumption that a myasthenic syndrome can exist without other evidence of neurogenic disease. A peripheral nerve such as the median or ulnar, is usually stimulated while examining for myasthenia. It should be noted that all of the neurophysiological investigations may be normal in myasthenia gravis.

The table shows the characteristic electrophysical changes in normal persons and in patients with myasthenia gravis and the myasthenic syndrome.

Investigation	*Normal*	*Myasthenia Gravis*	*Myasthenic Syndrome*
1. Muscle sampling	N	N	N
2. Nerve conduction	N	N (may get some delay of distal motor latency in severe myasthenia)	N
3. Amplitude single MUP evoked by nerve stimulation	N	N (or slightly reduced)	Small

4. Repetitive stimuli

Repetitive stimuli are delivered to the nerve for an estimated period and the MUP's are recorded in order to see whether there are any alterations of their amplitude (Fig. 15). The tests are then repeated following "tensilon" (edrophonium chloride).

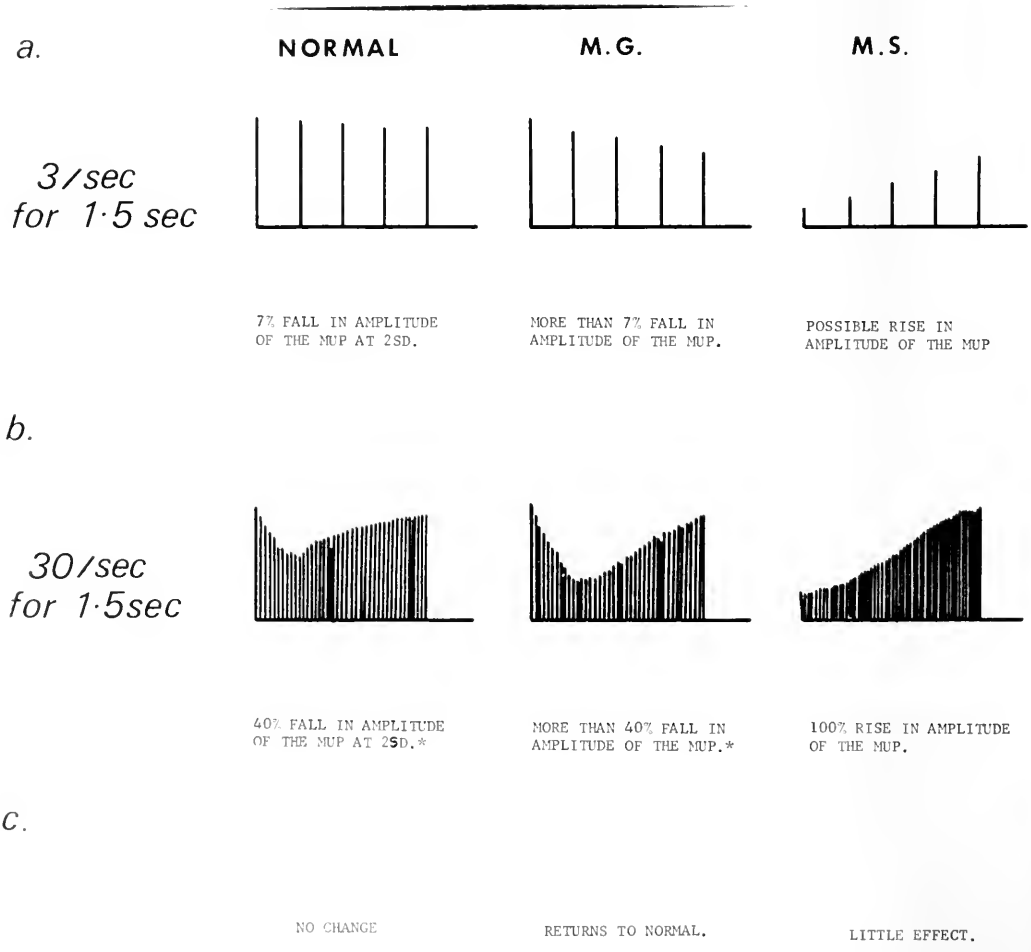


Fig. 15

The response in normal patients and in patients with myasthenia is variable at faster rates of stimulation. An initial rise of up to 10% or a fall may occur in normal persons although eventually there is a decrement. In myasthenia gravis a variable rise or fall of amplitude may occur at 30 stimuli per second.

5. Paired stimuli

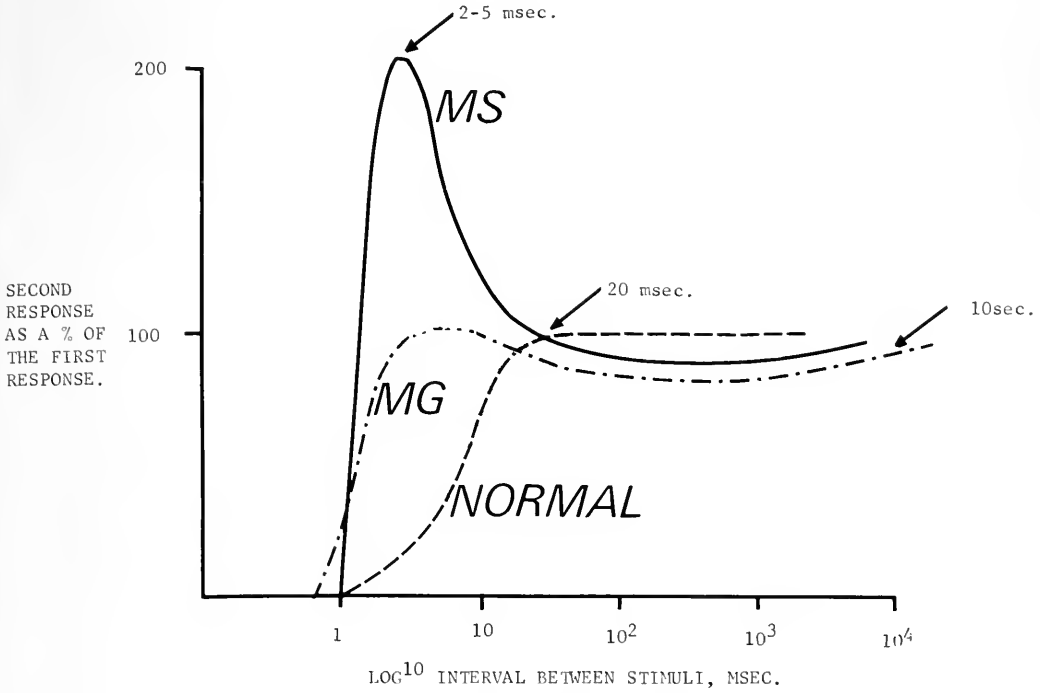


Fig. 16

Characteristic curves may be obtained for each of these groups (Fig. 16). A conditioning stimulus is applied to peripheral nerve and amplitude of the evoked MUP is measured. Paired stimuli are then applied to the nerve at increasing intervals of time. The amplitude of the second of each pair of stimuli is measured as a per cent of the conditioning stimulus.

The responses of MUP's to paired stimuli and to repetitive stimuli at slow rates are probably the best means for electrodiagnosis of and for differentiation between normal persons, patients with myasthenia gravis and the myasthenic syndrome.

Dr. Frank Kemble was graduated from Manchester University in England. He trained initially in Internal Medicine, then in Electromyography and later in Neurology. Dr. Kemble, who has been in the Department of Neurology at the University of Maryland School of Medicine three years, was Chief Resident 1969-70 and is now working as a Clinical Fellow. His special interest is in neuromuscular diseases and in the clinical applications of neurophysiology.

Conclusion

The electrodiagnostic procedures described in this article help to differentiate neuromuscular diseases when clinical evaluation is difficult. They should always be used in conjunction with clinical, histological and biochemical evidence in order to fully differentiate the patient's disorder.

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MEDICAL SCHOOL SECTION

Dean's LETTER

Dear Alumni and Friends of the Medical School:

The financial crisis that exists in most American medical schools is now receiving national attention. Hardly a week passes without mention of it in the news media and frequent reference to the situation occurs in the legislative bodies of our states and in Washington. The crisis has been precipitated by both a cutback in federal funding and by a change in the federal priorities regarding how federal funds are to be spent in the health area.

For the past 20 years medical education has increasingly been financed indirectly. Financed indirectly via the support of biomedical research. Whether or not this approach to funding was sound need not concern us here. What must concern us is that federal biomedical research funds have permitted medical schools to expand into new programs, have catalyzed a rise in quality of medical education and have permitted the development of academic medical centers which are very important to our society. They did this by providing support for individuals not only involved in research but also involved in teaching and patient care.

The crisis is magnified by its timing. It is hitting medical schools at a time when multiple new demands are being placed upon them. Demands to increase class size, to increase the admission rate of socioeconomically deprived students, to involve ourselves in meeting the needs of our surrounding communities, and to help approach the overall problems facing our country in the organization and delivery of health care. The schools stand ready to move forward in each of these areas but they cannot move without support.

The situation at our school is doubly difficult. We are being hit hard by the federal cutbacks while we continue to suffer from less than adequate state support. The medical school will not be in a position to meet the multiple demands that so desperately require attention, unless both the state and federal support improve, improve quickly and significantly. I would encourage all alumni to bring the current financial plight of medical education to the attention of as many people as possible in the hope that the message will reach those who have the power to correct it.

Sincerely yours,

JOHN H. MOXLEY III, M.D.
Dean

Faculty Appointments and Promotions

Dean John H. Moxley has announced the following faculty promotions and appointments in the School of Medicine through January 1971.

Dr. Leeds E. Katzen has been appointed Director of Medical Education in Ophthalmology—Mercy Hospital. **Mrs. Rachel Booth** is now Associate Director, Ambulatory Care Nursing.

Appointed Professor were: **Dr. Franklin L. Angell**, Radiology; **Dr. Eugene Rosemberg**, Pediatrics; **Dr. Felix Heald**, Pediatrics, and **Dr. Gardner Smith**, Surgery (Baltimore City Hospital).

Promoted to the rank of Associate Professor were: **Dr. Irving I. Kessler**, Preventive Medicine; **Dr. Genevieve M. Matanoski**, Preventive Medicine; **Dr. Lewis H. Kuller**, Preventive Medicine, and **Dr. Sheldon E. Greisman**, Physiology. Associate Professor appointments include: **Dr. Ira Wexler**, Neurology; **Dr. Richard A. Currie**, Surgery; **Dr. Peter Chodoff**, Anesthesiology, and **Dr. Daniel S. Ruchkin**, Physiology & Computer Science Center.

Mr. Otto Payton was named Assistant Professor and Acting Head of Physical Therapy.

Promoted to Assistant Professor were: **Dr. William D. Lynn**, Surgery; **Dr. Arthur A. Serpick**, Medicine; **Dr. Pradman K. Qusba**, Pharmacology; **Dr. Donald H. Dembo**, Medicine, and **Dr. Misbah Khan**, Pediatrics. Appointed Assistant Professor were: **Dr. Robert M. Beazley**, Surgery; **Dr. Willy N. Pachas**, Medicine; **Dr. Eleanor Jantz**, Psychiatry; **Dr. Willem Bosma**, Psychiatry; **Dr. Brigita M. Krompholz**, Preventive Medicine; **Dr. Robert W. Sherwin**, Preventive Medicine; **Dr. Clarence W. Hardiman**, Physical Therapy; **Dr. Edward C. Knoblock**, Medicine; **Dr. Magdi G. Henein**, Surgery; **Dr. Gary Nobel**, Surgery; **Dr. James E. Olsson**, Clinical Pathology; **Dr. Lorence A. Gutterman**, Medicine; **Dr. Sidney Marks**, Surgery; **Dr. Wolfgang J. Mergner**, Pathology; **Dr. Nathan B. Hyman**, Radiology; **Dr. Ranier M. E. Engel**, Surgery, and **Dr. Herbert Schwartz**, Surgery.

Dr. Frederick J. Balsam, Rehabilitation Medicine, and **Dr. Sheppard Kaplow**, Anesthesiology, were promoted to Assistant Clinical Professor.

New Instructors include: **Dr. Perry Austin**, Medicine; **Dr. Young Chun**, Medicine; **Dr. Kenneth Gray**, Medicine; **Dr. Bruce T. Brian**, Medicine; **Miss Barbara Fleming**, Psychiatric Social Work; **Mr. Robert Ude**, Physical Therapy/Anatomy; **Mrs. Judy Waldman**, Psychiatric Social Work; **Dr. Allan T. Leffler III**, Pediatrics; **Dr. Sylvester Sterioff**, Surgery; **Dr. Henry R. Herbert**, Preventive Medicine; **Dr. Simon C. Beaudet**, Rehabilitation Medicine; **Dr. Larry A. Snyder**, Radiology; **Dr. Samuel Andelman**, Radiology; **Dr. Edwin J. Goldman**, Anesthesiology; **Dr. Robert Hoffenberg**, Anesthesiology; **Dr. Cecil B. Calderon**, Pathology, and **Dr. Edward W. Stockblower**, Rehabilitation Medicine.

Clinical Instructors are: **Dr. Martin L. Lipson**, Ophthalmology; **Dr. Andrew D. Logue**, Psychiatry, and **Dr. Patricia N. Carver**, Psychiatry.

Mr. Joseph J. Dombrowski has been named research associate in Pharmacology; **Dr. Mitsuhiro Yanagida** in Biochemistry; **Mrs. Joan M. Starr**, Psychiatry; **Dr. Kaumo U. Laiho**, Pathology; **Dr. Henry Joseph Wehman**, Pediatrics; **Mr. Robert E. Pendergrass**, Pathology; **Dr. Joseph E. McDade**, Microbiology; **Mrs. Mary Smith**, Pathology; **Mrs. Jane Dees**, Pathology, and **Dr. V. S. Sethi**, Pharmacology.

Dr. Belur S. Bhagavan is a Visiting Assistant Professor and Visiting Clinical Assistant Professors are **Dr. Victor A. Frazekas** and **Dr. Andrew J. Saladino**, both in Pathology.

ALUMNI ASSOCIATION SECTION

President's Letter

Dear Fellow Alumni,

My year as President of the Medical Alumni Association passed very quickly. It appears that as President you just about become familiar with the office when it is time to depart. I have sincerely enjoyed my year as President, and I wish at this time to express my gratitude to the officers and Board of Directors of the Medical Alumni Association and to all who have so willingly helped when called upon to work within the year. I especially wish to commend the Davidge Hall Restoration Committee and the committee who will select a nominee for our annual Gold Key Award. I also wish to congratulate Dr. Edward F. Cotter, my friend and associate for many years, on his pending year of office as President of the Medical Alumni Association.

Final plans for Alumni Day, June 3, 1971, appear in another section of this *Bulletin*.

It has been an honor and a pleasure to serve as your President and I look forward to continue to serve as ex-officio for the next two years.

Sincerely,

Theodore Kardash

Theodore Kardash, M.D.
President
Medical Alumni Association

50 Year Graduates

Bruce Barnes, M.D.
107 Pine St.,
Seaford, Del. 19973

Carl Fisher Benson, M.D.
5111 York Rd.,
Baltimore, Md. 21212

John R. Bernardo, M.D.
198 High St.,
Bristol, R. I. 02809

Vincent Bonfiglia, M.D.
4010 W. 21st St.,
Los Angeles, Calif. 90018

Earl E. Broadrup, M.D.
Park Terrace, Apt. B36,
Aberdeen, Md. 21001

Oscar Costa-Mandry, M.D.
1613 Sta Bibiana,
Rio Piedras, P. R. 00926

Samuel H. Culver, M.D.
2308 South Rd.,
Baltimore, Md. 21209

Herman J. Dorf, M.D.
7404 Liberty Rd.,
Baltimore, Md. 21207

Charles F. Fisher, M.D.
321 W. Main St.,
Clarksburg, W. Va. 26301
Waynesboro, Pa. 17268

John W. Guyton, M.D.
c/o W. L. Guyton,
130 W. Main St.,

Albert Jaffe, M.D.
130 Slade Ave.,
Baltimore, Md. 21208

George R. Joyner, M.D.
133 Chestnut St.,
Suffolk, Va. 23434

Frank A. Pacienza, M.D.
700 N. Charles St.,
Baltimore, Md. 21201

Moses Paulson, M.D.
11 E. Chase St.,
Baltimore, Md. 21218

Edgar A. P. Peters, M.D.
394 Bergen Ave.,
Jersey City, N. J. 07304

Jos. Pokorny, M.D.
2200 E. Madison St.,
Baltimore, Md. 21205

Francis A. Reynolds, M.D.
43 Cottage St.,
Athol, Mass. 01331

Harold A. Romilly, M.D.
16701 Seneca Ave.,
Lakewood, Ohio 44107

Louis M. Timko, M.D.
3015 Ripley Rd.,
Cleveland, Ohio 44120

Herman E. Wangler, M.D.
616 S.E. 18th St.,
Ft. Lauderdale, Fla. 33316

George E. Wells, M.D.
4100 Edmondson Ave.,
Baltimore, Md. 21229

William F. Weinkauf, M.D.
Corunna, Mich. 48817

Mortimer H. Williams, M.D.
711 Med. Arts Bldg.,
Roanoke, Va. 24011

ALUMNI DAY CLASS CAPTAINS

1921 Moses Paulson, M.D.
1926 Walter C. Merkel, M.D.
1931 Emmanuel A. Schuminek, M.D.
1936 Gibson J. Wells, M.D.
1941 Pierson M. Checket, M.D.
1946 James A. Roberts, M.D.
1951 William G. Esmond, M.D.
1956 G. Edward Reahl, Jr., M.D.
1961 Francis A. Clark, Jr., M.D.
1966 Richard M. Susel, M.D.

Members of the Class 1921 will be honored guests at the Alumni banquet and will receive their certificates of a half century of service from the President of the Medical Alumni Association.

Deaths

CLASS OF 1913

Dr. Charles L. Mowrer, 159 W. Washington St., Hagerstown, Md., died October 8, 1970.

CLASS OF 1913 BMC

Dr. George Pines, 240 S. LaCienga Blvd., Beverly Hills, Calif., died December 26, 1970.

CLASS OF 1916

Dr. William T. Ferneyhough, 719 S. Main St., Reidsville, N. C. died recently.

CLASS OF 1918

Dr. Harley M. Johnson, Box 87, West Columbia, S. C., died recently.

CLASS OF 1919

Dr. John W. Kellam, Jamesville, Belle Haven, Va., died June 14, 1970.

CLASS OF 1924

Dr. Joseph G. Miller, 107 W. Saratoga St., Baltimore, Md., died October 31, 1970.

CLASS OF 1928

Dr. A. I. Grollman, 19 Garfield Place, Cincinnati, Ohio, died recently.

CLASS OF 1929

Dr. Saul Schwartzbach, 1726 Eye St., Washington, D. C., died November 1, 1970.

CLASS OF 1934

Dr. Edward S. Hoffman, 7 Brookside Dr., Rochester, N. Y., died December 25, 1970.

CLASS OF 1964

Dr. Charles H. Asplen, Peter Bent Brigham Hospital, Boston, died January 30, 1971 at age 38.

ALUMNI NEWS REPORT

TO THE BULLETIN:

I would like to report the following: _____

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SUGGESTIONS FOR NEWS ITEMS

American Board Certification
Change of Address
Change of Office
Residency Appointment
Research Completed
News of Another Alumnus
Academic Appointment
Interesting Historic Photographs

Name _____

Address _____

_____

Class _____

Send to

Dr. John A. Wagner, Editor
Bulletin—School of Medicine
University of Maryland
31 S. Greene St.
Baltimore, Md. 21201

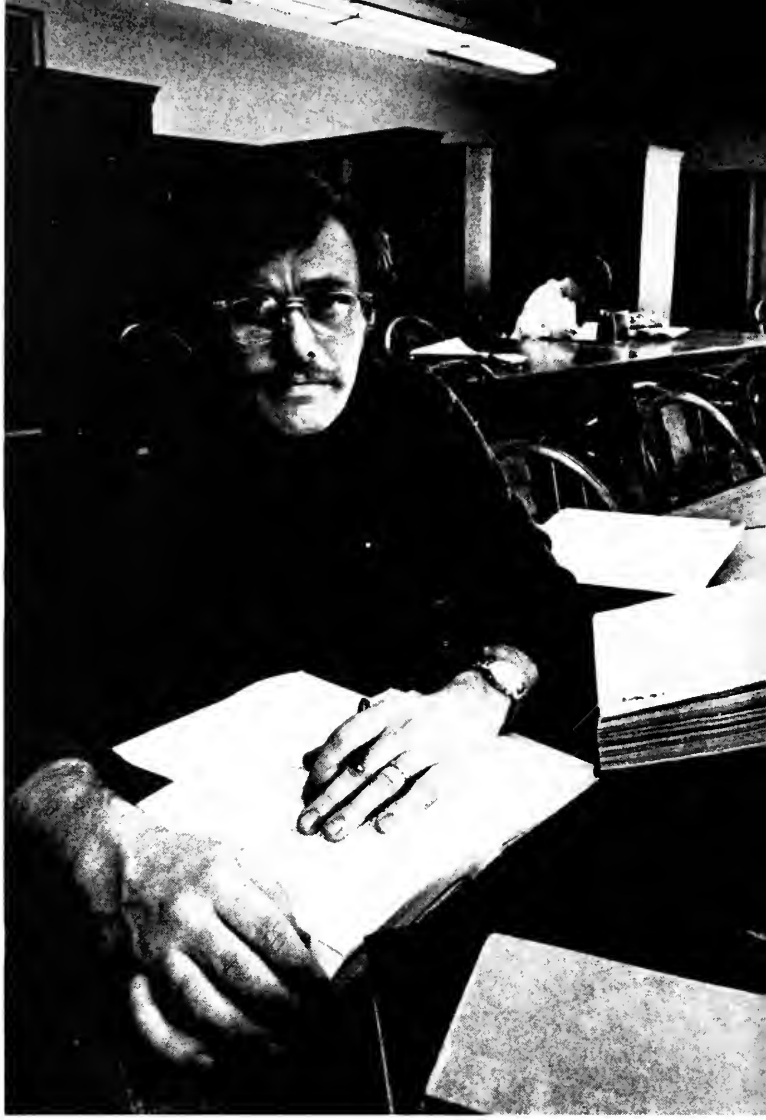
Symbols in a life of psychic tension

M.A.
class of '66

Ph.D.
thesis . . . in progress

G.I.
series and complete examination normal

(persistent indigestion)



Valium®
(diazepam)

2-mg, 5-mg, 10-mg tablets
t.i.d. and *h.s.*

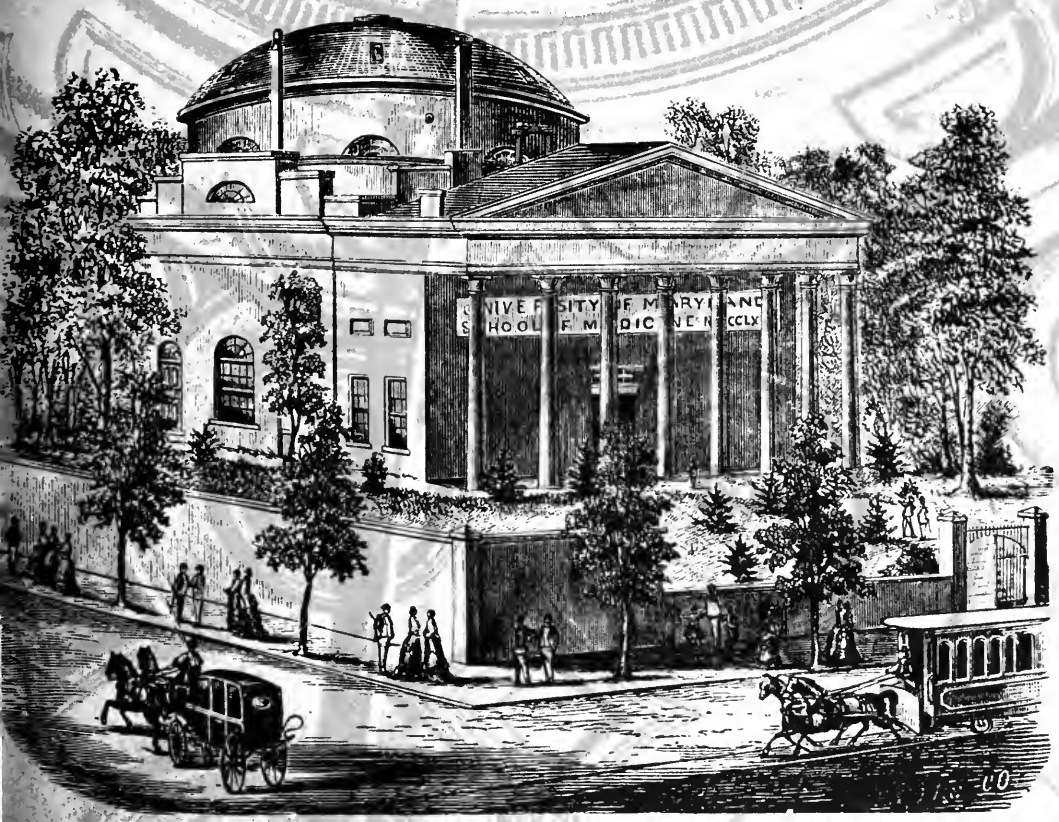
for relief of psychic tension and resultant somatic symptoms within the first day for some patients

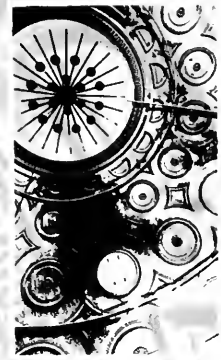
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).
Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

BULLETIN

university





Left — Ceiling of Anatomical Hall gives the illusion of being coffered by the decorative plasterwork which has rosettes of of anthemion, circles, semicircles and filler lozenges. Right — Ehler's woodcut of Davidge Hall as it appeared in 1873.

BULLETIN

PUBLISHED FOUR TIMES A YEAR, JANUARY, APRIL, JULY AND OCTOBER JOINTLY BY THE FACULTY OF THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF MARYLAND AND THE MEDICAL ALUMNI ASSOCIATION.

Second class mailing privilege authorized at Baltimore, Maryland

davidge hall

Bryden B. Hyde

Rich in tradition and virtually unchanged in its fabric, Davidge Hall is rapidly becoming more appreciated as an integral part of the American medical heritage.

The original Davidge Hall was razed some ten years ago to make space for the Health Sciences Library. The brick structure had perhaps the largest double-hung sash window in Baltimore with its 36 large panes or "lights." A fire insurance policy dated February 20, 1824 issued by the Baltimore Equitable Society (1794) describes the edifice:

> *To the University of Maryland, upon the brick building fronting on the south side of Lombard Street near the west side of Greene Street sixty feet and extending back forty feet, being four stories including basement story. Also three-story brick stairway at the back part thereof seventeen feet by twenty feet also three-story building at the south end of said stairway thirty-six feet square, the whole plan finished having brick cornice.*

From the architectural historians' and preservationists' viewpoint, the loss of the original Davidge Hall is great. This indicates the need to preserve and recondition the present Davidge Hall, which was renamed from "The Medical College" or "College Building," to honor Dr. John B. Davidge, who was largely responsible for its construction in 1812.

HISTORY

The Baltimore physicians organized themselves into the Medical Society of Baltimore around 1789 and elected officers. These doctors at the time were giving lectures on anatomy, the theory and practice of physic, surgery and chemistry in their homes.

Around 1800, Dr. John B. Davidge, who was educated in Europe, delivered lectures on the principle and practices of midwifery, and then added practical surgery and demonstrative anatomy. Even though less than a dozen students attended his lectures, Dr. Davidge built

Editor's Note: Davidge Hall is the oldest medical school building in the nation. It is noted for a unique, classical appearance which typifies the period of classical revival during which it was built. Bryden B. Hyde, A.I.A., a Baltimore architect, describes the historic edifice in architectural terms and tells why and how the building was built. His expertise was sought in planning for the restoration of Davidge Hall and the eventual designation of the structure among sites of national historic interest.

an anatomical hall near the southeast corner of Liberty and Saratoga streets and was joined by Dr. John Shaw, who gave lectures on chemistry. The anatomical lectures were short-lived as the building was demolished by the populace and what was described as "ignorant neighbors." For the next two to three years, the anatomical and surgical lectures were delivered in the county almshouse.

It was preventive medicine, perhaps, that first aroused the interest of the Maryland Legislature in the teaching of Medicine. Inoculation against smallpox was introduced into the area by Dr. James Smith. Upon Dr. Smith's application, the Maryland Legislature became the first to sanction distribution of the vaccine. In 1809, he was granted a lottery to raise money for the distribution of the vaccine free for six years.

Anxious to establish medical education upon a firm basis, and to afford it the protection of the law, Drs. Davidge, Shaw and Cocke applied to the legislature for the privilege of establishing a college and on January 20, 1808 an act was passed by the General Assembly. The following appeared in the *History of Baltimore City and County, Maryland:*

> *. . . for founding a medical college in the city or precincts of Baltimore for instruction of students in the different branches of medicine . . . by the name of the College of Medicine in Maryland.*

The faculty as suggested by the petitioners was included within the act. At the same time John Eager Howard, James McHenry, James Calhoun, Charles Ridgely of Hampton, William Gwynn, John Comegys, Charles A. Warfield, John Crawford, Soloman Burkhead, John Beale Davidge and Ennals Martin were appointed commissioners and authorized to propose a lottery scheme for raising an amount not exceeding $40,000 for the college's use.

However, the lottery was not held. Destitute of everything but an enthusiastic spirit, and without a place to accommodate a class, the faculty lectured in their own dwellings to the first class of seven pupils. An old frame schoolhouse was used for anatomy classes and found to be so cold that the professor's subjects were frozen. During the winter of 1809-10 a ballroom on Commerce St. near Exchange Place was allowed to be used by its owner, Mr. Mallet, between the hours 12-2 p.m. The class increased to 18 and in April 1810 the first degrees of Doctor of Medicine were conferred on five candidates. Determined to start operations on their own credit and responsibility, the managers of the college secured a lot from John E. Howard on the northeast corner of Lombard and Greene streets where they proceeded to build the needed structures.

Dr. Davidge was selected as the first dean of the school and under his leadership a new concept of medical education was formed: "The science of medicine could not be successfully taught under the usual organization of medical schools; that without the aids of physiology and pathology, either associated with anatomy or as a separate chair institutes, the philosophy of the body of sickness or in health could not be understood."

THE ARCHITECT

Robert Carey Long Sr. (1770-1833), the architect selected for Davidge Hall, is often confused with his son, Robert Carey Long Jr., also an excellent architect. Unlike his son who started his career as an architect, the senior Long worked his way up and became the leading Baltimore-born architect of the 19th century. In the city directories from 1796-1823 he lists himself as a carpenter, in 1824 as an architect and

in 1833 as architect and engineer. He was a carpenter-builder when there were no architects in town.

In 1798, Long and three others built the Assembly Room at the northeast corner of Fayette and Holliday streets from a design by Col. Nicholas Rogers. Next Long became associated with the architects B. F. Latrobe, Maximilen Godefroy and Robert Mills. Godefroy, who was trained in France, had much sought architectural books that weren't readily available to all architectural students. Long worked with him on St. Mary's Seminary Chapel which was designed in 1807 and completed in 1808. The Bank of Pennsylvania built in 1797 and designed by Latrobe along a Pantheon scheme also influenced Long. Latrobe's designs for the Roman Catholic Cathedral (1808) had an impression on Long, particularly the dome with the central skylight which was designed, but not built.

In turn, Robert Mills was probably influenced by Long's Davidge Hall dome and skylight when he designed the First Baptist Church in 1817. The church which was demolished in 1878 had a "lantern" skylight with vertical windows around it. And, Godefroy was influenced by Long's dome as shown by his skylight on the First Unitarian Church built in 1817 which was quite similar to the segmentally glazed one on Davidge Hall.

When Long designed the Union Bank in 1807, he drew upon a recent English publication to update the traditional square brick structure. He included such devices as the recessed vestibule with colonnade screen, the arched recesses with windows and the sculptured panels and pediment now located in the Peale Museum garden.

Robert Carey Long, Sr. was an honorary member of the National Academy of Design, New York, and exhibited architectural designs there 1827-28. He also did water colors and one of Mt. Vernon Place (1829) is in the Maryland Historical Society collection. He became the patron of Signor Capellano as sculptor of several panels on St. Paul's Church in 1815. As a patriot he offered his services along with his 30 carpenters in the defense of Baltimore in 1814. They were the only men who functioned as a unit in building the fortifications for the city.

Long moved from Conowago St. (now Lexington St.) near Charles to 16 W. Hamilton (Hamilton St. Club) before 1824. He built and owned this row of houses. Except for Davidge Hall and the Peale Museum (1813), these are the only vestiges of the "vast number of edifices both public and private" for which Long was architect.

His Holliday Street theatre (1813) also built by Col. James Mosher, his masterpiece, St. Paul's Church (1817) in the Greek Doric Order which cost $126,000, the City Jail (1800), "Calverton" Alms House (1822), Robert Oliver's resident "Greenmount," and William Gwynn's residence "Tusculum" (1823) which was located behind Barnum's Hotel, have all disappeared, at a great historic and architectural loss to Baltimore.

Long died in February 1833.

THE BUILDERS

Records show that Messers. Towson and Mosher were the builders of Davidge Hall. Thomas Towson, a stonemason, or Henry Towson, a carpenter, may have been referred to. Col. James Mosher, who started as a bricklayer, built many of the better buildings at that time. The whereabouts of the cornerstone, which was laid May 7, 1812 by Col. Howard, is a mystery. The building was "partly tenantable" by October 1812.

DAVIDGE HALL

Over the main entrance door still hangs the wooden gilt and black "clasped hands" fire insurance policy sign No. 7791 of the Baltimore Equitable Society. The $12,000 policy de-

scription dated November 15, 1823 reads:

To the University of Maryland upon their brick Medical College, fronting on the north side of Lombard near the east side of Greene Street 63 feet and extending back 93 feet one story high with large dome thereon and portico in front 10 feet wide with eight stone pillars to support the same conveniently laid off and finished for said purpose.

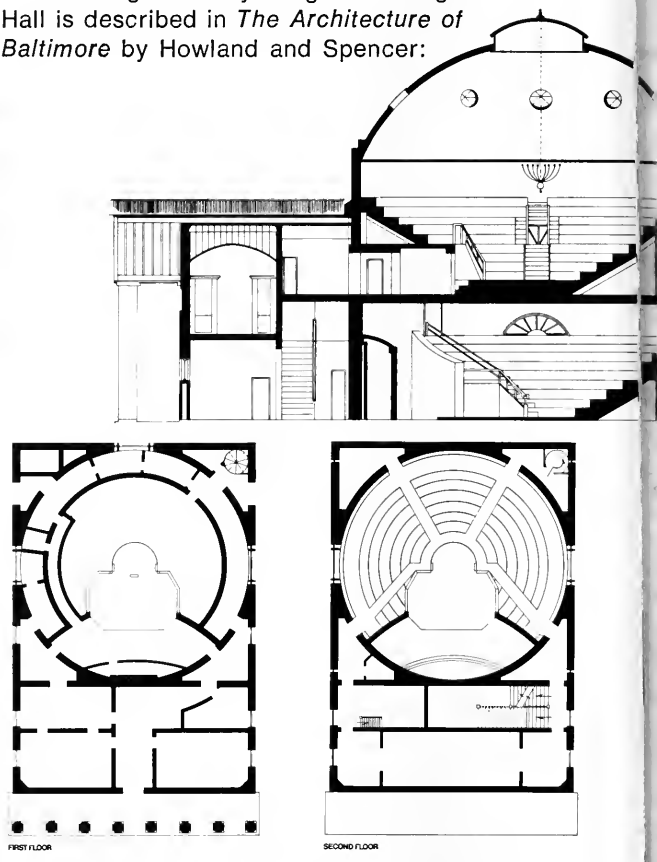
It is of interest that on the same day another insurance policy by Baltimore Equitable for $2,000 was issued for the building now known as Gray laboratory:

To the University of Maryland upon their brick building near the northeast side of the Medical College, being sixty-four feet by thirty-four feet occupied for a medical museum two high stories. Plain finished for said purpose having a brick cornice.

The prospects of the institution began to improve during this period, and the medical class increased in numbers yearly until in 1825 it numbered 300. In the meantime, "Practice Hall" and the Baltimore Infirmary had been created, and a museum established by the purchase of a valuable pathological collection of Professor Allen Burns of Glasgow, Scotland.

The earliest representation of Davidge Hall known is an engraving taken from the border of Poppleton's Map of 1820. "After Parthenon of Athens" should read "After Pantheon in Rome." An interesting question for historians to consider is, "Why was a $200,000 building only insured for $12,000?" The engraving shows how little the building has changed since being built.

The design used by Long for Davidge Hall is described in *The Architecture of Baltimore* by Howland and Spencer:



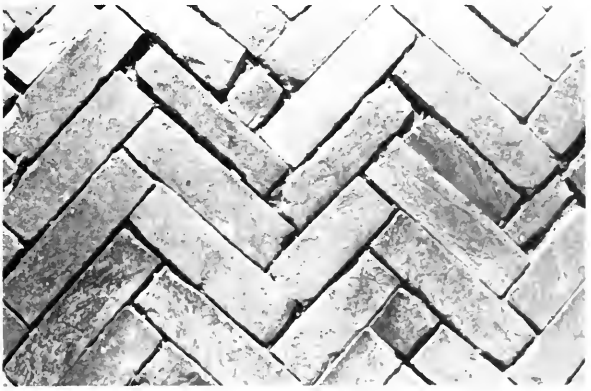
The design is a bold one with little precedent in American architecture. The main room is a circular anatomical theater (Anatomical Hall), roofed by a wooden dome. Below is a room of the same diameter, sixty feet, originally used for the Chemical Hall. A section with offices and a library, in conveniently rectangular rooms, is added to the front of the lecture room, between this part of the composition and the porch. The exterior reveals nothing of the fact that the main room is round, except for the very low dome rising above a high drum. Long's building . . . is one of the first Pantheon schemes in this country . . . In some details Long shows himself to be a very provincial

architect; there is much wasted space in the interior, particularly at the junction of the curved theatre and the outside walls; the porlico is wide for its height; the wooden facade attached to the brick building presents a barren appearance with little appropriate ornamentation. Perhaps this latter drawback was dictated by economy rather than the architect's taste, for Long would have known that the Doric Order carries metopes and triglyphs.

Long demonstrated with the Union Bank his ability to handle an elaborate design including sculpture, and it is said that he intended the long recessed panel high in the portico wall to receive a relief sculpture eventually. Although spaces between circles and squares are generally wasted in order to gain dramatic effect, one wonders whether their original uses in Davidge Hall may not have justified them more. Cadavers in whisky barrels filled dark corners and a dissection could be performed in some obscure room unobserved by the public. Ghouls could secrete a freshly buried body from St. Paul's cemetery up Wine Alley through one of several rear doors into some odd-shaped space.

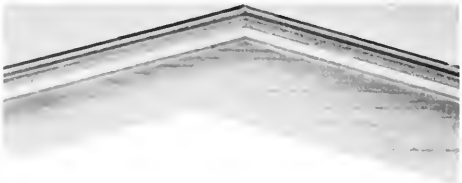
The building is on a monumental scale and "in the spirit of simplicity exemplified by Mills." The walls of handmade bricks are laid up with fairly thin joints (three brick courses of eight inches as is standard today). The rear wall of the front portico is in the more formal Flemish Bond with alternate header (end) and stretcher (side) bricks in alternating courses. The other walls including the drum are in common bond: five stretcher courses are bonded by the sixth course of headers. Paver brick in a herringbone pattern were laid in sand in the portico floor which has a granite curbing.

The exterior walls are generally 18 inches of brick plus plaster on the inside face. Where the drum is tangent, the walls increase to 24 inches of brick plus plaster.



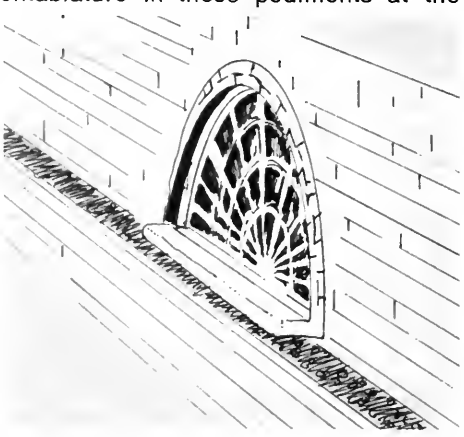
The eight stone Doric columns of the portico have stone bases and taper to a smaller diameter at the cap. They are of four 60-inch high sections plus cap section, and although the stone has been painted — perhaps it is a relatively soft Aquia Creek sandstone — the joints can be seen. The window and door sills are made of this stone as is the collar under the lunette windows of the drum.

The entablature is quite simple and is the unadorned pediment of narrow tongue and groove (or possibly shiplap) boards painted white with the columns.

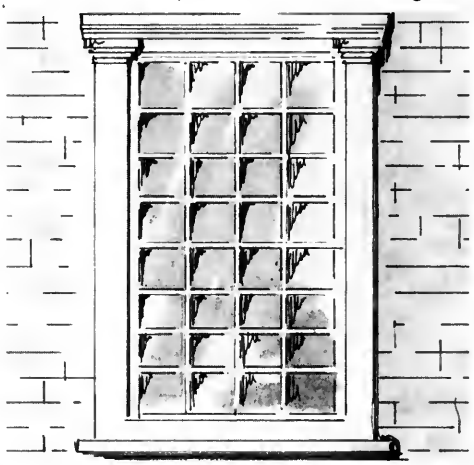


The entablature is carried along the sides with an "architectural break" in the wall expressing the square dome "base." Wood coping trim occurs above this on the three-stepped Neo-Greco pediments occurring on all four sides

of the dome base. Large 33-pane fanlight windows are centered over the entablature in these pediments at the



sides. On both side walls centered below this fan light is a large Palladian window with a narrow wooden frame which is recessed. Flanking the Palladian window are a pair of 12-over-12 double-hung sash windows with semicircular headed frames which are filled, as the portico pediment, with horizontal tongue and groove boards. These also have 12-inch ground brick arches. First story windows toward the portico are the same size sash, but have flat brick arches. The second story windows are the same width, but have 8-over-8 lights.



Around the dome drum are 16 regularly spaced lunettes with 12-inch brick arches. Most of these are "blind" and

only every fourth one is a lunette-fanlight window hinged at the sill into Anatomical Hall providing both light and ventilation. Centered on line to the center of the dome and over every other one of these lunettes are eight skylights halfway up the dome, which has a three-stepped base. These square skylights conceal circular openings through the dome and add considerably to the light given by the 25 pie-shaped segments

of the round central skylight. The copper-standing seam roof recently installed duplicates the old tin roof and the seams all radiate from the center of the dome. The original roof of the dome was seen when the tin roof was removed exposing the wooden shingles laid over solid wood sheathing. The sheathing in turn was nailed to radiating wooden rafters. The roofing contractor, Nicholas Detorie, states that the construction of this dome and the upper dome of Godefroy's First Unitarian Church are similar.

THE INTERIOR

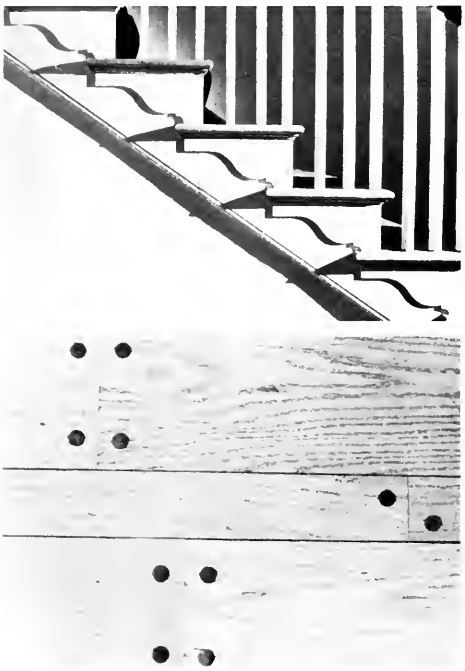
One enters the building through the large, original double doors, 3 feet wide by 12 feet high. The original box lock was stolen within the past five years, but the keeper is present on the right door. The floor, now terrazzo, was originally wood, brick, or square gray and black marble on a diagonal. Doors off the entry lead to adjacent offices.

A contemporary and excellent wooden bust of Dr. John B. Davidge, probably by William Rush, is in the entry on a pedestal in a shallow stove-niche and quite unprotected. Above and to the left of the bust is an original clock face with the works missing. To the right, the L-shaped hall leads to a long flight of 21 stairs. The wooden treads have been replaced as well as the scrolled step-end brackets. The outline of the originals, differing in shape from the replacements, can be seen outlined in the old paint.

Past the staircase, the corridor leads to the circular "Chemical Hall" which is on the ground level. It has a later herringbone brick floor. (There are rumors, but no evidence of a part basement). At the top of the stair, a corridor leads to the top of eight tiers upon which students are seated for lectures. The students look down on the rostrum and forward to a bowed classical procenium with niches, panels, and a shelf for statuary surrounding it. The procenium is closed now and conceals the six wrought iron doors, damper handles, etc., of the retorts where chemical demonstrations were made.

An office at the head of the stairs leads to the Faculty Alumni Lounge which has a barrel-vaulted ceiling and is parallel to the portico. The present ceiling is below the higher original ceiling. Beyond the lounge area the Post Graduate office has steps which have been partitioned off and an arch and skylight can be seen.

Around the back, in the northeast corner, a small wooden stair leads up the wall of all-header brick and curves on the inside of this corner only. Ancient anatomical drawings are displayed in the adjacent corridor. The pitched ceiling under the tiers of Anatomical Hall and above the steps leading to the hall is the original random width five-foot four-inch yellow pine tongue and groove floors with some exposed nailing.



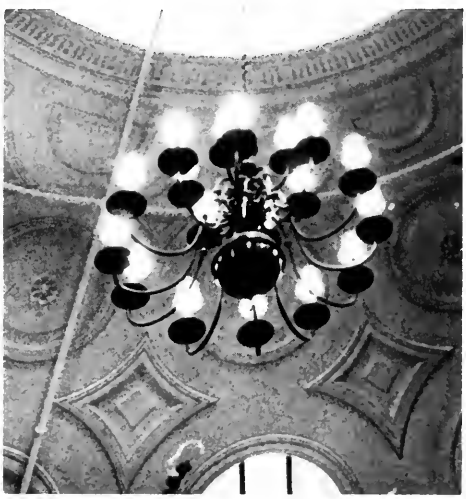
Going up the main front stair, there is a carved skirting board adding a restrained embellishment. This stair has also been partitioned off at the top. Here a two-panel door with original wishbone platelach can also be seen.

ANATOMICAL HALL

Upon entering the lowest level of Anatomical Hall, adjacent low doors permit access to the space between the floors and a view of the interesting framing which is heavy and sound. Four by four ceiling joists support hand-split lath and plaster of the flat ceiling of Chemical Hall below. Supporting these joists are paired 12′ x 16′ beams at approximately 1/3 points of the span of the drum. These beams are tied (with wrought iron) perpendicular to a pair of 12′ x 16′ beams and also tied at 1/3 points of the span of the drum. Resting on this mesh are other beams which support the tier beams, radiating upward.

The most exciting and inspiring space in Davidge Hall is the Anatomical Hall. Steps lead up at intervals to the tiers and the top walkway which has lunette windows on the floor and niches where coal stoves once stood on brick "hearth," their stacks passing through holes in the brick drum and out beyond the cornice. Fires were caused in several places and is evidenced by charred timbers.

The ceiling gives the illusion of being coffered by the decorative plasterwork which has "rosettes" of anthemion, circles, semicircles and filler lozenges. Into this design the circular skylights find their places, the whole being beautifully crowned and lit by the huge central skylight. A chandelier (not the original) hangs in the center.



LIGHTING

Lighting was at first by oil lamps and soon after by gas, it appears. R. C. Long Sr. was one of the founders and secretary of the Baltimore Gas Company in 1816. A piece of gas pipe, its age as yet unknown, exists in one of the side corridors. Rembrandt Peale was a pioneer in lighting by gas, and Long worked with him on it.

pot pourri

family practice

Because of a growing student interest and concern over the future of a family practice program at University Hospital, the Student Council has provided $1,800 for summer precepteeships.

Dr. William Layman, associate director of the Division of Family Medicine, said the funds will be used to sponsor three students for eight weeks of study and work with private physicians.

The stipends received by the students in the program vary between $600-$800 and the degree of knowledge obtained by the students is as individualized as the physician working with the student doctor.

Dr. Layman stated the purpose of the program as threefold: to interest the medical student in a career in Family Medicine; to influence his ultimate place of practice by exposing him to various locations in the state that are in need of physicians, and to involve the student in a research project in some aspect of the delivery of health care while he's out in the community.

Participating in the program this summer will be freshmen, sophomores and several juniors. Freshmen students are required to work in the Family Medicine unit for a week under Dr. Layman's direction before they begin their precepteeship. Funding for the precepteeships has come from county medical societies, the Maryland Academy of Family Practice Physicians, private physicians as well as an outside business firm. Dr. Layman said that this summer the Board of Trustees of Washington County Hospital, Hagerstown, Md., have voted to provide room and board for four students serving as preceptees.

During the student's eight week clinical experience they will shadow their preceptor during office hours, attending medical meetings and participating after hours in emergencies and on house calls. Two of the students will also be participating in a study of the management of primary care problems in family practice and also the collection of data on the attitudes of family physicians with respect to the use of physicians' assistants.

Dr. Layman said, "Precepteeships are the oldest method of instruction for students. There is an interchange of ideas between the physician and the student and the student learns by doing — participating in examinations, emergencies, delivery, intensive care, etc. It's a one-to-one teaching experience."

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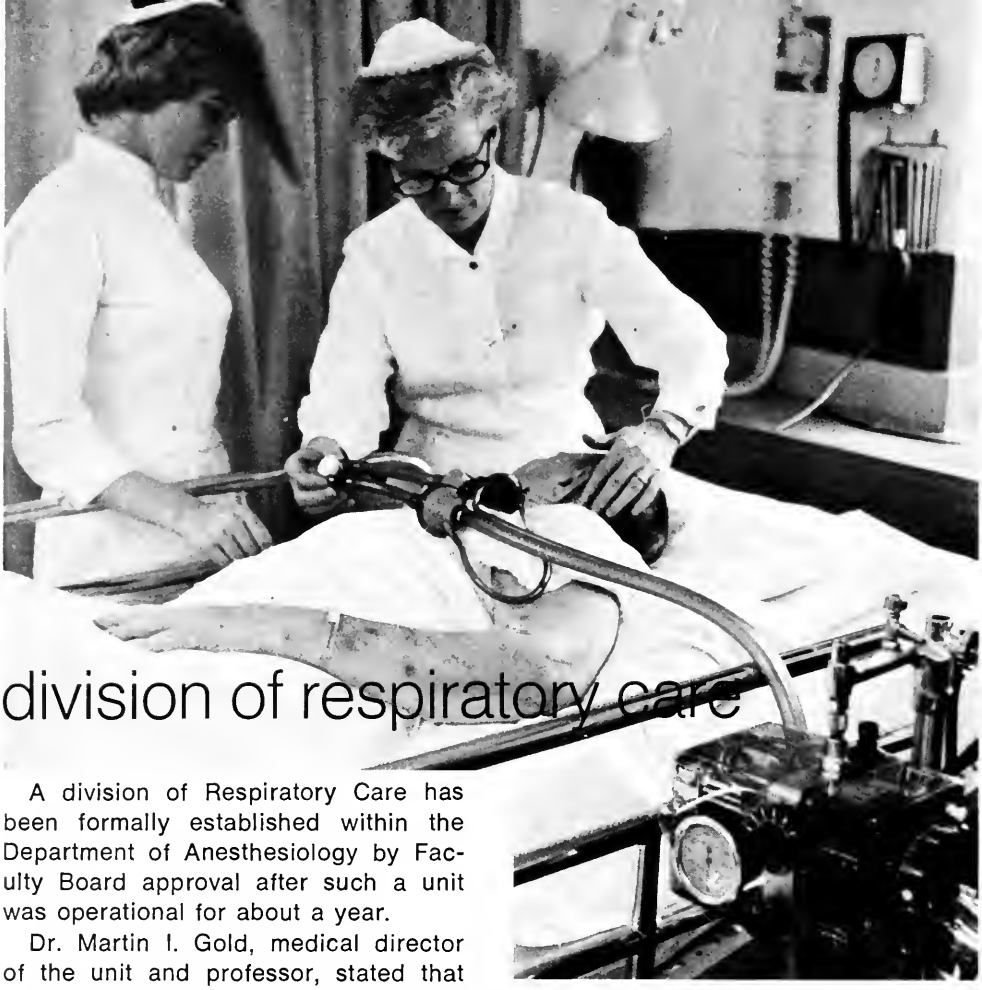
grant for genes study

The John A. Hartford Foundation, Inc. of New York City has awarded a $293,340 grant to the University of Maryland, School of Medicine for joint use by the Department of Cell Biology and Pharmacology and the Department of Pediatrics for research in the area of gene therapy.

Funds will be used to implement the proposal entitled "The Use of DNA for Gene Therapy: Development of a New Treatment for Inherited Metabolic Diseases." The specifics of the research were stated by Dr. H. Vasken Aposhian, professor and chairman, Department of Cell Biology and Pharmacology, and Dr. Marvin Cornblath, professor and head, Department of Pediatrics, in seeking support from the Foundation as follows:

"Significance of the proposed research: The possible recovery of the large number of future life years lost by birth defects and the possibility of providing a normal or improved life for patients with non-fatal inherited disease indicates there is a need for DNA as a therapeutic agent."

Another important long range goal described in the research proposal which is of mutual interest of the two departments, is the DNA treatment of insulin deficient juvenile diabetes.



division of respiratory care

A division of Respiratory Care has been formally established within the Department of Anesthesiology by Faculty Board approval after such a unit was operational for about a year.

Dr. Martin I. Gold, medical director of the unit and professor, stated that the purpose of the unit is to function outside the operating room in contrast to the traditional function of an anesthesiologist which operates inside the operating room.

"Many patients in the hospital need various degrees of respiratory care. Some need oxygen, some need humidification, some have tracheotomies, others have tubes in their mouth or noses leading to the windpipe . . . these patients require certain expertise," Dr. Gold explained.

Patients presently requiring respirators or ventilators at University Hospital include a 14-year-old girl suffering from myasthenia gravis who developed breathing problems; bronchitis and emphysema cases; post-operative cases whose bandages and dressings make breathing difficult; pediatric cases including newborn infants, and an overdosed narcotic addict. All need respiratory support.

The service shall manage respiratory care of patients through the use of respirators or ventilators and through analytical technique such as taking arterial blood and measuring the blood gases which indicate the lungs are working with mechanical help. Adjustments are made according to the blood gas readings so that the respirator can be adjusted to fulfill the patients' needs.

Currently, Dr. Gold has a resident and inhalation therapists assisting him in the program. He hopes that upon completion of the North Hospital a special respiratory intensive care unit will be available where only patients with respiratory problems would be located, not spread throughout the hospital as is currently the situation.

"However, since this is not possible presently and the patients are still spread throughout the hospital, we hope that physicians and nurses can rotate through the division where they can learn techniques necessary to give the patient the best respiratory care available," said Dr. Gold.

Maryland's Division of Respiratory Care is among the first to be set up across the nation.

bressler fund committee grants

The Bressler Fund Committee has approved $51,867 for research to be carried out in the Frank C. Bressler Research Laboratory.

A trust fund established by the will of the late Frank C. Bressler built and equipped the laboratory and income from the fund makes possible monies each year for research to be carried out by departments and individuals who are located in the building.

The following were approved to receive funding: Joseph W. Burnett, M.D., Dermatology/Medicine, $3,500; Edward J. Donati, Ph.D., Anatomy, $950; Charles P. Barrett, Ph.D., Anatomy, $1,500; Stephen R. Max, Ph.D., Neurology, $6,905; Charles C. C. O'Morchoe, M.D., Anatomy, $3,700; A. H. Janoski, M.D., Endocrinology/Medicine, $2,512;

Patricia J. O'Morchoe, M.D., Anatomy, $4,000; Hugh G. Beebe, M.D., Surgery, $2,000; John G. Wiswell, M.D., Medicine, $1,200; Priscilla Gilman, M.D., Pediatrics, $3,000; Fima Lifshitz, M.D., Pediatrics, $3,000; J. Tyson Tildon, Ph.D., Pediatrics, $6,000; Salvatore Raiti, M.D., Pediatrics, $4,000; Marvin Cornblath, M.D., Pediatrics, $7,600; and Ronald Gutberlet, M.D., Pediatrics, $2,000.

microscopes for students

In an effort to help alleviate the economic needs of first and second year medical students, the Student Council, Dean's Office and the Medical Alumni Association have contributed $2,600 to purchase second-hand microscopes for loan to these students.

"Today there is a tremendous concern about the delivery of medical care to the population at large, but there is a tendency to overlook the needs of the medical student," said Peter Vash, Student Council president, in seeking support for the project. "One of the more imminent complications of the student's education is cost and this problem must be solved before he can begin to attack the essentials of medical education."

The $300 provided by the Student Council, the matching $300 provided by the Alumni Association and the $2,000 provided by the Dean's Office provide a total of $2,600 for the microscope fund to be administered by the Office of Student Affairs. Some 10 microscopes are now currently available for loan. Second-hand microscopes cost between $250-$300.

Vash said that it is the hope of the Council to donate a similar amount each year so that eventually incoming students will not have to buy or rent their microscopes unless they wish to do so.

maryland folk medicine

By George G. Carey, Ph.D.
(English Department, University of Md.)

A large segment of folk belief hinges on the traditional practices carried out in the area of folk medicine. Belief in the efficacy of folk healers or "pow-wows" as they are known in some parts of Maryland, has fostered an active trade in folk medicine over the years.

One attempting to gather and study Maryland's rich bounty of folk beliefs will find that despite the average person's suspicion that a belief is particular to one region, in most cases Maryland superstitions are known throughout the country and, in certain instances, throughout the world.

Conversion plays a salient part in the area of folk medicine. Presumably all folk cures suggest ways of turning sickness of some sort into health. In some instances, the people who propose these cures swear to their efficacy citing chapter and verse of cases where the patient has been miraculously brought to health.

"Now," reported a Crisfield, Md. man, "there was this girl and she was burned real bad, third degree burns and the flesh just running right off her and so they said you'd better go and see Miss Emmy. So they took her down and she didn't use any ointment or anything. Just rubbed her hands along those burns and when that girl healed, there wasn't one scar on her anywhere."

Inevitably, women like Miss Emmy became accepted in the community as people with special powers. In some parts of the Eastern Shore, they became

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Editor's Note: George G. Carey, Ph.D., 36, was born in New Jersey and received his doctorate degree in English from Indiana University. He has written several books on Maryland folklore, Maryland Folklore and Folklife, *published by Tidewater Publishers, Cambridge, Md. and two other books,* Folklore of the Eastern Shore Watermen *and* Maryland Legends and Folksongs, *will be published in the Fall. Portions of the text are from Dr. Carey's book,* Maryland Folklore and Folklife,

known as "high women," and their male counterparts were "high men." Their cures were many and varied, and though the white healers seem to be less in evidence than they were a century ago, black healers still provide medicine for believers, both black and white. One such healer is found in Perryhawkin:

You could probably describe Annie as a sweet old colored lady who would help anyone she could. She's in her late sixties and a hard worker — one of the best farm hands you can find to pick tomatoes, beans, cucumbers or anything like that. She lives on her social security check but she can't work in the factory in the summer because of her pension check. She raised seven boys and seven girls and some of them went to college. Everyone thinks she's one of the best people around. And if you have some minor ailment, a skin disease or mild sickness, you can just dial Annie and she'll give you a remedy.

Here is a clearly defined instance of traditional folklife patterns fitting themselves to modern conventions. Seventy-five years ago, one would have gone to the folk practitioner's house to receive the cure, and probably have her prepare and apply it. But modern communications have changed all this. Today one can dial a folk remedy as simply as one can dial-a-prayer or the weather.

A practical base often underlies much of folk medicine. Crude or unappetizing as some of the cures may sound, time and tradition have proven them effective. When prescribed medicine is not easily come by because there may be no one to prescribe it, people fall back on traditional prescriptions. Many of the cures for colds, coughs, and croup, for instance, require inhaling a strong smelling substance. Whereas a doctor might prescribe a croup kettle filled with water and benzine, Eastern Shoremen wear a piece of flannel soaked in kerosene, and surely the smell from this garment would act probably more effectively to open up breathing passages than a croup kettle. Likewise, goose grease applied to the chest, as is done on the Eastern Shore for a chest cold, would certainly help to lessen the chance of chill on the chest.

The origin of much of the folk medicine practiced today on the Eastern Shore derives in part from the large pharmacopoeias published several hundred years ago. In these thick volumes appeared long lists of cures, then accepted as medical fact. But with the advancement of scientific knowledge, physicians dropped many of these remedies from their practice. Still the folk continued to use them, and through the binding factor or oral tradition, many of the cures have persisted in time and are administered today as much as they were 200 years ago. Then, too, there is the simple fact that many of these folk remedies may have more efficacy than scientists are willing to admit.

One licensed Crisfield doctor actually deferred to his folk counterpart for the treatment of warts:

Now there used to be some 'doctors' in this area who could cure your warts. There was a time when I had grown a big horn wart on the end of my nose and I went to a regular doctor in the village and he wouldn't touch it. He told me to go see George Stevenson. Said he could fix me up. My regular doctor said all he used was spit and all he did was rub a little spit around on the wart and it went away. But in the end I didn't go; I went to Baltimore instead and had it burned off.

Some healers miraculously removed warts by absorbing them into their own skin. Others had the power to induce warts as well as remove them.

If a medicinal reason can be offered for some traditional cures, there is little rationale that can be applied to the magic suggested in most of the cures provided for warts. Here's a few ideas to get rid of warts.

- — Take a kernel of corn and criss-cross it over the wart nine times. Then feed the corn to a chicken and the wart will go away.
- — Rub a wart until it bleeds; then rub the bleeding area with a flannel cloth, until the bleeding stops; then bury the cloth in the ground, and when it rots the wart will go away.
- — Tie a knot in a string over the wart and then throw the string into the water. When the string rots, the wart will disappear.
- — Find a hollow stump in the woods with water in it; wash your warts there and they will go away.
- — Take an old dirty penny, rub it on your warts, and then throw it over the right shoulder facing the full moon, and the wart will go away.
- — Rub a chicken liver over a wart; then put the liver in a holly tree in the woods and the wart will go away.

Clearly, with folk medicine, the more common the malady, the more varied the traditional means of healing it. With a cold, for instance, one would concoct

a brew of kerosene and sugar, or rub mutton tallow on the chest, or prepare a pine shat tea, or grease the temples and bottoms of feet with beef suet, or cover the chest with a rag soaked in turpentine and tallow, or simply wear a tar rope around the neck.

But, if one were clever, he didn't get sick. He prevented colds by carrying an onion around in his pocket all winter, or hanging an asafetida bag around his neck. Other safeguards were more elaborate:

To ward off colds: rub down in goose oil; take a fresh muskrat skin and sew the bloody side to a red flannel vest; put the red flannel next to the skin with the fur side out and wear until it falls off.

Eastern Shoremen also use a rag rung out in child's urine around the throat. Urine also worked as a beautifying agent. Pimples disappeared if the face was swabbed with a wet baby's diaper. Fevers subsided when beaten horseradish was bound to the pulse or an onion poultice lashed to the head and feet. A combination of sulphur and molasses replaced geritol for tired blood in folk cures.

Common everyday aches, pains and discomfort likewise found relief in folk remedies. An axe under the bed prevented sweating, while children were

fed chicken gizzard to curb bedwetting. A wad of chewed tobacco on bee stings drew pain out, and placed on cuts it brought the wound together faster.

A sharks tooth hung down the back of the neck prevented nosebleeds. If one occurred, however, the victim could either chew a piece of brown paper vigorously or apply a piece of brown paper with the word STOP written on it to the roof of the mouth and hold the head back. Toothaches subsided if a fried egg were bound to the ear or if the face were bathed in water boiled with a hog jowl bone.

Children's ailments naturally demanded the attention of the folk practitioner. A mole's foot dangled from the child's neck alleviated teething. So did a thimble rubbed over the gums. For weak infants, some bathed their heads in whiskey to make them gain strength faster. Mumps subsided when the swelling was rubbed with the marrow of a hog's jawbone, or if the soot from a wood stove was smeared from one side of the face to the other.

Less well-known afflictions also developed traditional cures. If a person contracted worms, pumpkin seeds were the answer, or else he could wear a ball of garlic around the neck and say a prayer. The smell of garlic suffocated the worms. But if the patient vomited, it was a sign that the worms had already gone to the heart.

Eastern Shore traditions also included a cure for love ills:

If a woman takes a drop of blood from her menses and puts it into a man's drink, he will be hooked on her for life, sexually. For fertility a man should eat sunflower seeds.

FOLKLORE ARCHIVES

Until recently little had been done to activate the study and collection of Maryland folklore. In 1966 the Maryland Folklore Archive was established at the University's College Park Campus. Since then the Archive has become the repository for more than seven hundred student and faculty collections, in excess of ten thousand items of Maryland folklore.

black physicians

Emerson C. Walden, M.D.

The black doctor is rare and in danger of becoming extinct, says Dr. Emerson C. Walden, member of the Board of Regents, if more of them are not trained.

Dr. Walden, who was appointed to the Board in January 1971, is a practicing Baltimore surgeon and president-elect of the National Medical Association. His sons, Emerson Jr. and Thomas, are first and second year medical students at Maryland, School of Medicine.

The 47-year-old surgeon, who fills the unexpired Board of Regents term of the late Charles McCormick, has been in private practice of surgery in Baltimore since 1951. He is attending surgeon at Provident, Lutheran and South Baltimore General Hospitals; Surgeon Out-Patient Department, Johns Hopkins Hospital and Instructor in Surgical Nursing, Provident Hospital.

Dr. Walden feels there is a critical manpower shortage in health and this can be translated into the black community: "It is estimated that a need exists for 50,000 physicians to serve the American public. If you consider that blacks are 12-13 per cent of the total population, then one could reason that they should be 13 per cent of the physician population. Providing this were true, there would be nearly 35,000 black physicians in this country."

He adds, "However, there are only 6,000 black physicians and that makes them almost a 'rarity.' There needs to be some 30,000 additional black physicians from somewhere just to equate the population quota. If one considers the total need of 50,000 physicians then the majority of the need is a black need — 50,000 minus 35,000 leaves 15,000. As a black physician I am commited to closing the gap however we can do it."

As president-elect of the NMA Dr. Walden explains that he and others are working to do something about the black shortage in medicine.

"We are empathetic, as a matter of fact, and we have pushed the paramedical program, but don't see this as an answer completely. We don't want to see all impetus being put on paramedical people and none on black physicians, dentists and nurses. We are not asking for lowering of standards. We are asking, especially in state supported schools that blacks be given an opportunity.

"If I am going all over the country telling everybody else at state schools what they should do where blacks are concerned, I certainly have to talk to the University of Maryland, whose record along with Hopkins, has been poor in the number of blacks and minorities admitted and later graduated," said Dr. Walden referring to his membership on the Board of Regents.

The native of Cambridge, Md. also believes that as expounded by the late Whitney Young there should be a "Marshall Plan" with regards to blacks.

"We need bending over backwards, preferential treatment, what ever you

call it, in this regard to get rid of educational, economic and political barriers, poor housing — all the things that have meant that young blacks do not see medicine as a life goal," he says.

The National Medical Association has a program called "Motivation" because it was found that young blacks do not have medicine as a life goal, but see it as an impossible dream.

"I have frequently told them (blacks), that I wasn't born a doctor, it was a strain to be trained and taught, and that opportunity is for you. I have many people who are black tell me they are amazed that I am a doctor. The idea that you have to spend so much time in school, it costs so much money . . . You also have to motivate parents. They ask 'What do you mean going to medical school — I don't have that kind of money — go out and make a living.' So we've had to motivate a lot of people, business and educators, into accepting the fact that a young black can become a physician," Dr. Walden explains.

The temper of the times is swinging toward the direction where opportunity should be available to all people Dr. Walden believes:

"There is a critical problem in health which can be ascribed to manpower shortages and all the way back to the deprivation of opportunities for all of our people. If more people get into medicine, more people will be able to solve the medical problems. There is a lot of talk about National Health Insurance, health maintenance organization etc., but at the crux of it is going to be the guy who delivers the care.

"In the black community, that responsibility is going to fall back on the rare black physician, who numbers 6,000, and this figure has stayed at 6,000. If we graduate 1,000 a year, 1,000 die or go into retirement so you never get ahead.

"Therefore, if you look at the figures there is a reverse quota almost 99.4 per cent white. There are maybe 20 black students at Maryland and that certainly doesn't come near 13 per cent. Nationally the NMA has a program called 'Project 75' which is designed by 1975 to have as many blacks in all medical, dental and nursing schools as are in the population, that is percentage wise. We on the Board of Regents, I say 'we', because it happened after I was appointed, have what we call 'Project 74' where the same thing is suppose to happen here by 1974," said the newly appointed Regent.

How does Dr. Walden propose the problem of recruiting and then graduating more black physicians be solved within the state's educational system?

"You can't wait for them (black students) to come to you. Recruitment must go into the schools. We've got to be more than just physicians. When black physicians are on admissions committees they should see that more blacks get admitted; re-evaluate the entrance exams and requirements . . . We aren't asking for liquidating or lowering standards, but certainly broadening the base so that one reaches out to the black talent that is available.

"The black talent which we (black physicians) are going to be telling 'Yes, you apply, you're qualified, you can go.' There's got to be a willingness that once a black student gets into medical school, he will graduate if it takes five years or six. You can run tutorial programs. This is the 'Marshall Plan' that is necessary," Dr. Walden remarks. "We feel the larger white communities had this type of help, this type of preferential treatment all along. Now it's got to be given to the black."

Medical schools and larger universities have in the past had things funded because of research. Dr. Walden says a consumer type market now exists and everybody is crying "where is all this wonderful American health we're talking about. It doesn't get delivered to the grassroots."

He continues, "We think we have the people but you need more medical schools, you need larger classes . . . this means more money. You get back to the federal government, end the war and bring money back, take money from the space program . . . some of our priorities are a little out of line. The benefits of those programs notwithstanding, we think there're a whole lot of higher priorities at home — it takes money to buy brains, buy personnel and build buildings. You don't put up a medical school and it runs itself. I think the most important building in a city is

a hospital and the most important person probably is the physician."

"We do not differ on the type of person needed for delivery of medical care," he carefully points out. "We want qualified people also, and whatever it takes to get that, we want at the University of Maryland. This is what we'll be working for as the NMA is doing nationwide."

The white physician can do more than he has to get rid of injustices in housing, jobs and education especially in organizations which are para-medical, outside the medical field, according to Dr. Walden.

"When City Councils vote to cut the school budget, they (white physicians) should be writing letters, talking to congressmen, local, state and national, about seeing that proper priorities are established. And, these people fund programs and institutions designed to see that every American gets what is considered the 'American Dream' and that it doesn't remain a dream for blacks."

Dr. Walden proposes that, "education as to opportunities available to blacks should begin perhaps upon entering school. There are programs in junior high and health clubs that support this orientation. We are beginning to get schools and types of schools where the abilities of the individual count more than the color of your skin. If he can produce, he moves up."

Both of Dr. Walden's sons were partipicants in the University's Summer Program for prospective medical students.

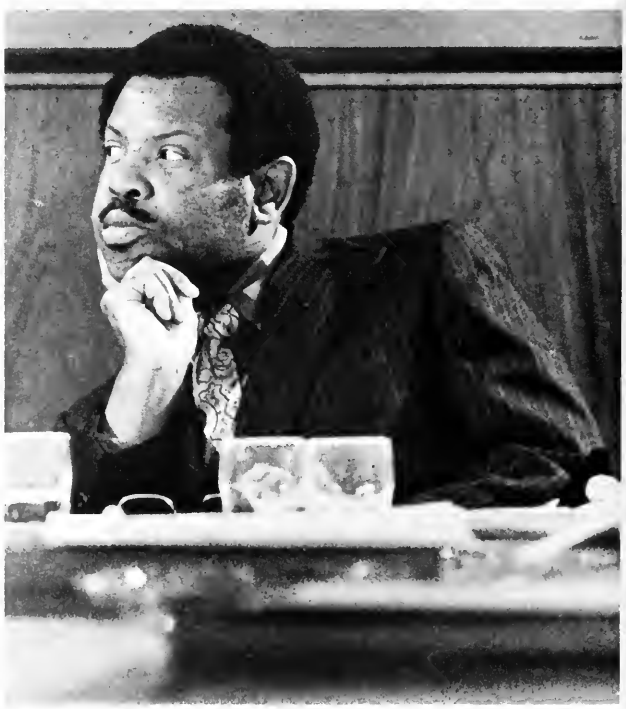
"They are concerned that sometimes the people who finish it don't actually get into school. They would like for all of the people who participate in the summer program to move up to the next step of the ladder. Hopefully, some will come into the September class and if not September, some class in some school," he comments.

Dr. Walden understands many of the problems in recruiting blacks for entrance to the Maryland School of Medicine. As a graduate of Howard, he recognizes that even two black medical schools must compete for applicants.

"This is a two-edged sword because it raises havoc with the traditional black medical schools, Howard and Meharry.

They must now compete for 'qualified' blacks. You must put qualified in quotes. Qualified by whom? The white superstructure or qualified in terms of their own life styles with the ability, if taught, to be physicians. You have to overlook certain things that have happened in the past as a result of the black life style, which has as its basis, injustice.

"We feel that we wouldn't have any problem getting minority and 'qualified' minority students to enter medical schools, receive the disciplines of medical schools and turn out to be excellent doctors. I hope the cure for cancer is not that far away . . . some black youngster just might have the cure for cancer locked up in his brain, and, I say again, I hope that we're not that far off in finding a cure for cancer," he concludes.



nutrition of children in developing communities

Barbara Underwood, M.D.

Malnutrition among preschool children is a fact, not a fantasy, especially among the poor, illiterate and ignorant of developing communities throughout the world.

The term "developing communities" rather than the more traditional terminology of "developing" countries has been chosen in order to encompass many situations which exist today in the United States. Until very recent years, the "developed" Western world focused concern on the poor and ignorant of Latin America, Asia and Africa, but showed less concern about the plight of people on reservations, in migrant camps, and in the Appalachias and Deltas, and even in the accessible urban ghettos of Baltimore, New York City and other metropolitan areas.

The toll of malnutrition on the children of the world is difficult to assess accurately. Seldom is fatality attributed on death certificates to malnutrition. More often, gastroenteritis, measles, whooping cough or some respiratory or other infectious disease is the recorded killer. Usually, however, chronic undernutrition so debilitates the victim that he is vulnerable to the ravages of an infection which is tolerated with minimal discomfort in a well-nourished individual.

Infant mortality rates are five to ten times higher in countries where Protein Calorie Malnutrition (PCM) is frequent. Certainly not all of these deaths are related to malnutrition, and one can't isolate malnutrition from other public-health and medical concerns such as proper sanitation, immunization, housing and health care.

The magnitude of the malnutrition aspect of the problem is dramatized by focusing only upon mortality in the one to four age group. Mortality rates in this age group are 20 to 50 times higher in many countries than those in the Western world. This means that less than ½ the children born alive can be expected to reach five years of age. It is not rare for village women in Northeast Brazil and elsewhere to bear 13 live babies, only to have two or three who survive the pre-school years.

FAMILY PLANNING

In developing countries family planning programs are currently receiving much emphasis and financial support. Such programs which do not consider this high incidence of mortality in the preschool years, much of it nutrition-related, cannot hope to succeed. Unless you can offer reasonable assurance that the children born will live, you cannot expect a poor woman to limit the size of her family. A Jordanian mother brought to a hospital a two-year-old child in the terminal stages of marasmic-kwashiorkor. She already had lost six children with similar symptoms. When asked why she continued to have children when she could not afford to feed and care for them; why didn't she go to the family planning clinic? She answered: "You can make me poor by not letting me have money, or land, or animals, but you cannot make me poor by not letting me have children."

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These deaths in the preschool years are preventable and reduction in this needless waste of human life must be of first priority for health workers internationally. However, our concern must not be limited to reducing mortality but also must extend to reducing morbidity and the possible permanent effects of acute and chronic malnutrition on those children who survive. In these individuals lie the future hopes for raising the productivity and hence the economic level of poverty stricken populations around the world. Such economic development is fundamental to achieving the goal of establishing a peaceful, reasonably prosperous world community.

The evidence is quite clear that acute malnutrition in the first year of life, and perhaps during the intrauterine period, can have irreversible effects on organ development including the very important development of the central nervous system.

The period in development in which growth in cell number is rapidly occurring appears to be especially vulnerable to an acute deficiency of calories. Depriving the organ of sufficient energy during the period when cells of an organ are being formed (hyperplasia) results in an irreversible decrease in the number of cells produced. In contrast, calorie deprivation during the time when cells are growing in size rather than in number results in a decrease in size of cells. Such effects are reversed by adequate feeding. In summary, cells of organs may gain in weight by feeding more calories, but the number of cells present cannot increase once the time of growth by hyperplasia has ceased.

The human brain grows by hyperplasia very rapidly during intrauterine and early postnatal life. Acute malnutrition, in this period has been known to decrease the number of cells in the brain resulting in altered behavior patterns of children who survive. On the other hand, acute malnutrition in the second or subsequent years, which usually is in the form of kwashiorkor or marasmic-kwashiorkor, is reversible. The size but not the number of brain cells is reduced and most studies show no permanent impairment in behavioral

patterns. However, the mechanism by which malnutrition influences subsequent behavioral patterns is not known. It isn't known if the number of brain cells directly correlates with functional capacity, i.e., learning ability. At present, it is premature to draw conclusions on the possible permanent effects of severe, early malnutrition and caution should be taken in interpreting the limited data available from human studies and especially in extrapolations from data obtained from animal studies.

Acute malnutrition manifested as marasmus or kwashiorkor affect relatively small numbers of children compared with the masses of children who are simply chronically undernourished. These children simply fail to grow at an expected rate. However, the possible effects, especially in the preschool years, of chronic undernutrition in childhood on the physical and mental capacity of adult populations are not known.

Failure to grow at a normal rate after the first four to six months of life typifies the child populations of poverty-stricken communities. Nearly all newborns in these communities abroad are breast fed and for about four months their growth equals or exceeds that of children of prosperous communities. Subsequent growth usually falls below the accepted standard until about the fourth or fifth year when growth may again parallel the standard but at a lower level. The critical period of inadequate growth manifested at about

six months corresponds to the time when breast milk becomes quantitatively inadequate to meet calorie needs. This is realized by most mothers who, according to cultural dictates, introduce supplementary feeding at about six to nine months. Usually the supplementary food consists of small portions of the family diet, which may be a spicy curry, or of a watery gruel which add little quantitatively or qualitatively toward meeting the child's real food needs. In fact, because such food is often prepared and fed under poor sanitary conditions, it may be a significant source of contaminants leading to diarrheal disease.

The growth stunting of early childhood may never be fully recovered. A child from a poor family may be retarded by 2 to 4 years in growth achievement and never fully attain his apparent genetic potential.

Is it really so important for people to achieve their full growth potential? The answer is no when considering stature only. There are advantages to populations of "little people" — less space required, less protoplasmic mass to support, smaller cars, less material for clothing, etc. But, data suggest that the significant growth retardation after the first year among the poor reflects the chronic debilitating effects of subadequate nutrition which in turn is manifested in an increased morbidity. Most certainly increased morbidity means decreased productivity.

Malnutrition develops because of improper food given under unsanitary conditions. Poverty is part, but not all, of the problem. Ignorance as to the food needs of the child and how to supply these in a wholesome manner within the cultural context and the economic potential of the family is the major cause of preventable malnutrition.

Theoretically, the solution to this problem is known and the technical competence to alleviate malnutrition is available but those concerned have failed to find practical ways of getting the message to mothers. Why? Some solutions which have been tried but largely failed include:

- — Food distribution programs of dry skim milk, corn-soya mixture, etc. or food stamp programs. These meet acute needs but are not long-term solutions; they do not change feeding practices and their effect terminates when the supply is exhausted. Further, they bear the stigma of charity.
- — Lecture courses for mothers by professionals in traditional dietetics. Often these courses bear little relation to the reality of the poverty-plagued environment of the mother.

An effective program has emerged during the 1960's and has now proven its practicality and long range effectiveness in over 17 different countries. The program known as Mothercraft Centers or Nutritional Rehabilitation Centers recognizes certain basic facts about the environment which breeds malnutrition.

1. Extreme poverty.
2. Illiteracy or ignorance as to the food needs of children.
3. Limited numbers of trained professionals available in relation to the vast need.
4. Suspicion and distrust of the highly educated professional by the illiterate and ignorant.

Recognizing these facts, programs are developed which, as stated by K. King, attempt to educate mothers "in the best practical, hygienic feeding practices

for their children that are compatible with their financial, educational and food resources." Traditional dietetics, the meat, milk, egg approach, is useless in this setting. Familiarity with the cultural and child rearing practices is essential in order that nothing is taught that the mother cannot immediately put into practice in her home. Menus must not only be low-cost and nutritious but must be tailored to the food practices of the particular culture. The professional cannot ram-rod the basic seven or the basic four concepts of nutrition down the throats of a distrusting group of mothers.

Mothercraft Centers making use of locally available foods and personnel have successfully eradicated malnutrition as a significant contributor to preschool mortality in several communities. The secret of success is to retain a *low-cost* program and to bridge the gap of apprehension by using *community leaders* of limited education; leaders with whom the mothers can identify and in whom they trust.

There are some dangers in developing Mothercraft programs. One tendency is to develop these programs into sophisticated health centers. The program must develop on the local level at a rate compatible with the community's ability to support its needs. The more the program is identified with the community, the greater its chances for permanent acceptance.

The underlying philosophy of preventing malnutrition abroad applies equally well to the "developing communities" in the U.S. Commodity food programs, school lunch programs and food stamp programs alone are not long term solutions. Community action must institute programs utilizing low level "teachers" to get the message to the mother. The Headstart concept has much merit, but largely ignores the mother's education and is a bit late in preventing malnutrition in the critical first years of life. The gap of apprehension and suspicion which has developed among the minority and ghetto populations can't be completely judged by health professionals. Local, perhaps less educated, but wholly *dedicated* talent must be tapped to reach these people.

Recently, the Young Lords of New York City used unacceptable means to take over a Church and establish a breakfast center for preschool children. Irrespective of their method, they established a needed service which was accepted and welcomed by the community. Is there not some way this dedication to improving the lot of the poor can be tapped and channeled into effective long range programs? It is the responsibility of health professionals to shake off the shackles of traditional approaches to education and be receptive to creative and what may sometimes appear radically new approaches. The main ingredient needed is compassion and a dedication to serve needy people.

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dean's thoughts

People have often asked me what the most glaring defect in our health care system is. In my opinion it is its organization and delivery system. Often health manpower in terms of sheer numbers is pointed out to be the most pressing problem. It is true, we don't have enough physicians. There's no question that we need more doctors and all types of allied health personnel. However, if one looks at the numbers just as numbers, one finds that the educational system has been producing more physicians each year; indeed the rise in the number of physicians has actually outstripped proportionately the rise in population. This is even more true of nursing and some of the other allied health professions. The number of people trained in these disciplines during the past ten years is astronomical.

A major contributor to the problem is that the health care delivery system being used today is essentially decentralized with "individual" physicians and "individual" offices. One way to combat this would be to produce enough "individual" physicians so that they could be distributed equitably. Unfortunately this requires a vast number, a number perhaps than our society is willing to pay to produce. The theory behind this approach is that if the desirable areas of practice become saturated more physicians will begin to move into the rural and central city areas.

Some people advocate using new types of group specialists in new ways; others advocate a new type of practitioner, or "specialist," called a family practitioner. Still others advocate using more allied health professionals, some using less.

No one knows the answer at this point in time but one of the values of the university academic medical center might be to try some of the various experiments and see which one comes out best. The goal to be achieved is a situation in which the health professional and the consumer (patient) both get a reasonable amount of happiness out of the relationship.

(This is excerpted from an interview with Dean Moxley which appeared in The Paper.)

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Byank, Ronald	Sinai Hosp., Inc. Baltimore, Md.	Rotating
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ambulatory health services - a new era

William S. Spicer Jr., M.D.

There can be little doubt in any health professional's mind that we are in a period of significant change in the delivery of health care. While few of us expect or desire a total upheaval, we do anticipate that there will be some changes in the nature and practice of medicine, in the methods of payment for health care delivery, in the utilization of other health professionals, and in the organization of health professionals for decision-making and quality of care controls, e.g., peer review. This is a time, therefore, in which decisions will be made which will have an impact on the way physicians presently in practice are able to carry on their practice and in which physicians yet to come will be trained. However, this period of change will not only affect physicians, but all other types of health professionals as well, possibly even including types not presently available.

Our experience with the so-called "research revolution," which began approximately 20 years ago, has been the discovery that changes which occur in the medical school will have a profound effect on the future practice of medicine. From our past experience, we can recognize that the change from the training of generalists to the training of highly-specialized and sub-specialized individuals has been a predominent

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feature of the past 20 years of health care delivery. It is, therefore, reasonable to assume that if the medical school once again makes a rather marked change in its mode of educating medical students, the impact of this change will be felt for the next two decades. For that reason, it is exceedingly important that any changes which occur in the University of Maryland, School of Medicine, and in the other health professional school curriculum and programs be carefully thought out, and that every opportunity be made available for thorough consultation and coordination with all of the health professional members who are concerned. Now is the time and the opportunity to bridge some of the gaps between faculty and alumni, to recognize that there is little or no room for carping, but a great need for consultation and constructive criticism through the establishment of new lines of communication.

The Medical School is proceeding to make changes in its own mode of delivery of health care, in the education of its students, and in its relationship with its surrounding community of both lay people and health professionals. It is proceeding on the following postulants:

1. All health professional education must be founded on the demonstration of the delivery of *optimal health care;*

2. We must start from a working definition of optimal health care for the future. Our present working or operational definition of optimal health care is: Optimal health care for large numbers of people is provided by health care teams and includes these elements:

a) *Detection* of symptomatic and asymptomatic disease and *identification* and introduction of individuals who make up a "population" into the health care system.

b) Health *maintenance* and disease *prevention,* including collecting and maintaining a lifetime history of health and disease.

c) *Education* of the consumer for health maintenance, disease prevention, utilization of available services and disease therapy.

d) *Diagnosis* and *management* of disease.

e) Coordination of *community* resources to support individuals and families.

f) A *health care information system* which assures referral, scheduling, consultation and retrieval of individual patient records and data.

g) *Quality of care* control and system *evaluation.*

At the present time, our health care delivery and educational programs emphasize the diagnosis and management of symptomatic disease. They are mostly concerned with the sick and very sick individuals, usually those in hospital beds. Instead, we must develop concern for *all* elements of care. Optimal and economically realistic health care is best delivered to a defined population in a coordinated, hierarchical system of primary, secondary and tertiary care, with built-in regulation of flow into and through the different parts of the system.

For our present purposes, we accept these definitions of primary, secondary and tertiary care:

Primary care is the care which the patient receives when he first approaches the health services system and during continued participation, active or nonactive, in the process of medical care. Primary care includes the elements of comprehensiveness, continuity, prevention, etc. suggested above. It also includes *acute episodic* and *emergency* care. It is "caring for" and "caring about" the patient; and it is the coordinator and advocate of the patient's movement within the care system. Primary care does not

always have to be provided by physicians, but it should be supervised and monitored by them.

Secondary care is specialty consultation. Referral to secondary care should come from primary care professionals. It should normally be on an ambulatory basis. The patient should return to primary care upon the completion of secondary care, or, in selected instances, continue to receive secondary care and management for a particular problem in conjunction with overall primary care.

Tertiary care is bed care in an institution. It is the most misused element of our present health care system. It not only increases the cost of the whole health services system, but may be harmful and even life-threatening. Its purposes and constraints must be re-defined.

3. It is very important that we recognize that our working definition implies an increase in the quantity, as well as the quality of care.

The vast majority of health care delivery is involved with the ambulatory patient. The intense and growing concentration of the health professional schools with educational and training programs surrounding the bed patient, and particularly the bed patient in highly specialized University Hospital, has provided all of the students with a limited view of the practice of medicine. It would seem apparent that the place in which change would first occur in the health educational curricula would therefore be in a marked expansion and redefinition of the ambulatory care services.

At the beginning, it is pertinent to say that we do not believe there is only one way to deliver optimal health care and, in fact, we feel strongly that in this country there should be a multiplicity of ways. We also feel that our students should be exposed to as many options as possible in order for them to make a reasonable and logical career choice. For the University Health Science Center and its own campus, these options will be fairly limited. However, through a broad affiliation program with community hospitals, group practices, family practitioners and voluntary agencies, it should be possible to provide a coordinated and regional health care education program.

In our definition of optimal health care, we state that delivery of care will probably be a team effort. There must be, however, many types of health care teams. The team concept involves the coordinated sharing of responsibility by members of the various health professions in order to improve the efficiency and effectiveness of utilization of health resources, costs and services, and in order to increase the comprehensiveness of health services.

The health care team is not a new concept, per se. The practicing physician and his nurse or secretary are traditional examples of teamwork designed to increase the capacity of the physician and the quality of care. However, it is important to note that the University of Maryland has an obligation to train all types of health professionals because of its location in the heart of the inner-city, thereby developing teams which can best serve its role in education and training. These teams are likely to be large and complex for two reasons: They must provide a basis for training a broad variety of both undergraduate and postgraduate health personnel, e.g., physicians, nurses, pharmacists, etc.; and, our location in the heart of the urban complex provides a population whose health care needs are large; and the fulfillment of these needs is critical to the renewal of the inner-city.

Under the auspices of the Office of Health Care Programs, a number of changes are already under way with the goal of delivering optimal health care.

Primary emphasis is being placed on Ambulatory Services and, in particular, on the development of primary care. In terms of education, our training programs are now concerned with the expansion of the role of the nurse and the pharmacist. In our plans for the development of primary care, we are stressing two types, i.e., the development of a family medicine program and the development of a general internist-general pediatrician-general obstetrician combination primary care unit.

In order to improve the quantity as well as the quality of health care, our present activities in ambulatory nursing services serve as an immediate example of change. The role of the nurse is being expanded with the development of nurse clinics, nurse practitioner programs and our fundamental core program, which is called the Primary Care Nurse Program. In this program, the nurse's role is being altered from one which is primarily task-oriented to one which is whole-patient-oriented in close working cooperation and consultation with the physician. In reviewing the seven elements of optimal health care described earlier, it appears to us that the primary care nurse should be prepared to make a contribution, to a greater or lesser extent, to all of the seven elements. Thus, a further purpose of this program is to enlarge the role of the nurse.

Upon completion of the North Hospital Building in 1972, our ambulatory care space will have been expanded threefold. We hope that by the time we move into this new building, most of our new basic training and educational programs will have been completed. Included in these programs are those directly related to patient care, such as new training programs and new staffing patterns in the Emergency Department and the Out-Patient Department, and others such as changes in the health care record system, patient scheduling and flow and administrative support.

During this period of change, communication plays a vital role in linking together all the people who are directly and indirectly concerned. The Ambulatory Health Services publishes a Newsletter which attempts to bring to all personnel the descriptions of changes now in progress and the opportunities for their involvement in these changes. Any alumni interested in following this program are invited to receive this newsletter. To be included in our mailing, please contact Mrs. Susan Dilts, Office of Health Care Programs, Room 551, Howard Hall, 660 West Redwood Street, Baltimore, Md., 21201; or call 955-7195.

professors of surgery 1807-1970

(a two-part series)

Harry C. Hull, M.D.

john davidge

John Beale Davidge (tenure 1807-12) was born at Annapolis, Md. in 1768. His father was an ex-captain in the British Army and his mother, Honor Howard, was a relative of Col. John Eager Howard.

Despite the early loss of his father, and having little or no funds, he resolved to obtain an education. Davidge inherited some slaves after the death of a relative, and with further aid from friends, he was able to enter St. John's College at Annapolis. He obtained his master's from St. John's in 1789 and after a preceptorship under Dr. Murray of Annapolis, he entered the University of Edinburgh. It is recorded, however, that for financial reasons, he obtained his M.D. at Glasgow University, April 22, 1793 at age 25.

In the same year, he married a Scot, Wilhelmina Stuart, and moved to Birmingham, England where he practiced until 1796. He then returned to Baltimore and settled permanently.

In 1797 an epidemic of yellow fever struck Baltimore and his views on the epidemic, published in a volume in 1798, attracted considerable notice. The doctor remained in the "limelight" thereafter. As early as 1802 he advertised private courses of lectures to medical students, which continued annually until they merged with lectures at the opening of the College of Medicine of Maryland in 1807.

His positive views kept the College of Medicine of Maryland in the foreground of American Medicine. He disagreed with the, then greatest figure in American medicine, Dr. Benjamin Rush. Rush's theory held that all diseases were identical and that one "universal cure" was appropriate for all. Davidge convinced his colleagues, however, that each disease was different and had to be studied and treated differently. The rivalry continued to the point of personal animosity between Rush and Davidge. "The Maryland Theory" of Davidge was recognized in prevailing medical circles throughout the country.

As at the few schools of medicine in the United States at that time, Davidge, as did others, wore several hats. At times he was listed as Professor of Surgery, Professor of Anatomy and of Mid-Wifery. Therefore, his writings were as expected, diverse, and were more on medical than surgical subjects.

Among his writings were: "Dissertatio Physiologia de Causis Catamensorum," Birmingham, 1794; "Treatise on Yellow Fever," Baltimore, 1798; "Nosologia

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Editor's Note: Dr. Harry C. Hull, M.D., professor clinical surgery, delivered this paper "The Professors of Surgery, The University of Maryland, School of Medicine 1807-1970," at the Medical Staff Meeting, March 18, 1971. Because of its historical interest and length, the paper will appear in a two-part series in this and a future issue of the Bulletin. Nine men have headed the Department of Surgery since 1807 and five of them are discussed in the first installment.

Methodica," Baltimore, 1812 and 1813; "Physical Sketches," two volumes, Baltimore, 1814 and 1816, and "Treatise on Amputation," Baltimore, 1818.

Many of his theoretical views were interesting: that phthisis pulmonalis was scrofula of the lungs; that hemorrhage was arrested by retraction of vessels and not contraction; that menstruation was a secretion of the uterus excited by ovarian irritation; that the speculum uteri should not be used, because it "smacked of immoral curiosity"; that yellow fever should not be treated by bleeding; that yellow fever was noncontagious but propagated by the atmosphere; and that black vomit was a morbid secretion derived chiefly from the liver.

Davidge was considered a much better speaker than writer. He was revered by his students and usually received special applause at the Commencements where he was acclaimed by all as the "Father of the University."

Described as a short stout man of florid complexion, homely features, small hands and feet and graceful carriage, his manners were grave, formal and dignified and his dress very neat. His influence throughout Maryland was considerable and he was popular with his colleagues.

As a surgical technician, he was slow and cautious. The most important operations he performed were: amputation at the shoulder joint, 1793; successful ligation of the gluteal artery for an aneurysm; ligation of the carotid artery for "fungus of the antrum" and extirpation of the parotid gland, 1823.

The doctor was still active in the medical school, teaching Anatomy at the age of 61. In January 1829 he developed a carcinoma of the antrum. The lesion progressed rapidly and was accompanied by excruiating pain, which was treated by hugh doses of laudanum He died at his home on Lexington St. August 23, 1829.

It is cogent to note that Cordell in Volume I, University of Maryland, 1907, stated: "it is a regrettable fact that his relations and services to the University have not suggested to his successors, some memorial in his honor in the institution which owes its existence and a large part of its success to him."

william gibson

William Gibson (tenure 1812-19) was born in Baltimore, March 14, 1788. Called by some the "academic vagabond," he was educated at St. John's and Princeton Colleges. He attended the University of Pennsylvania Medical School for a short time. He was not impressed with that medical school and was cocky enough to tell his fellow students that one day he would succeed Professor Physick in the Chair of Surgery at Pennsylvania. Later his boasting came true.

At the age of 18, Gibson went to Scotland and entered the University of Edinburgh, from which he received the M.D. degree in 1809 at the age of 21. His inaugural thesis about racial differences in the human skeleton brought him much credit. This work was done in the Munro Museum. After graduation he went to London and became a pupil of Sir Charles Bell. In 1810 he returned to Baltimore and at once became active in the profession. In 1812, at the early age of 24, he was made Professor of Surgery at the College of Medicine of Maryland.

During the summer of 1812, political riots occurred in Baltimore. One man who sustained a gunshot wound of the abdomen, was referred to Dr. Gibson, who litigated the right common iliac artery close to the aorta, and sutured several holes in the intestine. Although the patient died fifteen days later "from ulceration of the artery and peritoneal inflammation," this daring operation

established Dr. Gibson's reputation as a surgeon. During the war of 1812, he served as a surgeon with the Maryland troops. In 1814 he returned to Europe. He was present at the battle of Waterloo and was wounded at that battle.

Dr. Gibson, described as a rapid and dexterous operating surgeon, was ingenious and creative. He was first in the country to perform suprapubic lithotomy, and among the first to perform lithotripsy. He performed successfully a caesarean section on the same woman twice, saving the life of the woman and both children. Among his accomplishments were: inventing an apparatus for fractures of the lower jaw; creating a psuedoarthrosis of the knee joint for ankylosis and excised ribs; and dividing the recti muscles for strabismus as early as 1818. His reputation was enhanced when he successfully extracted a rifle ball from Gen. Winfield Scott, who was wounded at the Battle of Lundy's Lane.

A prolific writer, two years after accepting the Chair at Maryland, Gibson brought out an American edition of "Dr. Charles Bell's System of Dissection." The two volumes were "dedicated to the gentlemen attending the University of Maryland." His writings continued after he left Maryland and in addition, he kept a daily journal for over 60 years, which at death, amounted to 150 volumes.

Dr. Gibson was a clear and emphatic lecturer and his demonstrations of surgical anatomy were good, especially those relating to the neck, hernia and lithotomy. He had a large collection of models, casts, pictures, apparatus and surgical specimens which he used during his lectures and demonstrations.

Dr. Gibson, a large and powerful man, round faced with a ruddy complexion, was athletic — an expert boxer, horseman and trackman. He was vain of his personal appearance and proud of his reputation as a teacher and surgeon. An all around man, he played the violin; he was fond of botanizing and fishing; he was an ornithologist and amateur taxidermist, and he was vivacious and and possessed great stamina.

In 1819 he was offered the Chair in Anatomy at the University of Pennsylvania, which he declined. So great was his reputation, however, and so eager was the faculty at Pennsylvania to have him, that the great surgeon, Physick, was displaced and Gibson was offered the Chair to replace this famous surgeon. He accepted this appointment and left Maryland in 1819 — the boast of his student days had come true.

His good work and fame continued throughout his stay in Philadelphia. He retired from the Chair at Pennsylvania and moved to Newport, R.I. While on a visit to Savannah, Ga., he died, apparently of a heart attack, March 2, 1868, age 80.

granville s. pattison

Granville Sharp Pattison (tenure 1820-26) was born near Glasgow, Scotland in 1792, the son of John Pattison of Kelvin Grove. He was educated at Glasgow University where he was apparently a brilliant hard working student. At age 18 he was made assistant to Professor Allan Burns and upon his death was appointed his successor to the Chair of Anatomy, Physiology and Surgery in Anderson Institution, a recently organized but poorly endowed medical school at Glasgow. He became a licentiate of The Royal Faculty of Physicians and Surgeons of Glasgow in 1813.

At Anderson Institution he gained quite a reputation as a lecturer and particularly as an anatomist. In November 1818, charges were brought against him by Dr. Ure, one of his colleagues, of having committed adultery with his wife. Dr. Ure obtained a divorce. In December 1818, a letter arrived from Pattison's brother John, who lived in

Philadelphia, advising him that there was probably an opportunity for a man of his talents at the University of Pennsylvania, School of Medicine. The doctor arrived in New York from Liverpool July 7, 1819, but due to a shake up of the Pennsylvania faculty, did not get the Chair of Anatomy. The Chair was given to Dr. Philip Syng Physick.

At the University of Pennsylvania Dr. Nathaniel Chapman developed a marked dislike for Pattison and began a vendetta of maligning and debasement of him which lasted for years and eventually caused a duel. Because of Chapman's attacks, Pattison accepted no position at Pennsylvania and he also declined the offer of a professorship at Transylvania in Lexington, Ky.

In 1820 at age 28, he was elected to and accepted the Chair of Surgery at the University of Maryland. Cordell reports Pattison as infusing new life into the University of Maryland. He succeeded in disposing of his anatomical collection left to him by Professor Burns, to the University of Maryland for $8,000 and a year later persuaded the faculty to accommodate it in a new $30,000 hall, which later became a museum for over 1,000 selected morbid and healthy specimens.

He was a colorful teacher, with a Scottish burr, radiating enthusiasm and confidence that charmed the students and increased the enrollment. He was not a good surgeon nor did he write many articles while in Baltimore.

Pattison was a handsome, vain, well-dressed man, and quite a hit with the wives and debutantes of Baltimore, who pursued him with great success. Meanwhile, Chapman continued his attacks on Pattison's character, which eventually were more than Pattison would endure. He went to Philadelphia and challenged Chapman to a duel. Professor Pattison declined because of age. His brother-in-law, Gen. Thomas Cadwalader of Philadelphia, accepted the challenge. Pattison and Cadwalader met in Delaware April 5, 1823 and Dr. John B. Davidge was present as surgeon. Pattison shot the General in his "pistol arm," the ball traversing the entire length of the forearm, lodging in the ulna. Pattison escaped injury, the General's shot merely piercing the skirt of his coat.

Many articles have been written about this duel and the story is "old hat" to nearly all graduates of the University of Maryland School of Medicine.

Though Pattison may have been a roue, a rake, an adventurer and an infamous character, he did one important thing to his credit. He championed bedside clinical teaching, for which a hospital was needed. The Baltimore City Council and banks failed to extend more credit to the University. Pattison prevailed upon the faculty to extend their credit and build a hospital. The infirmary which was situated on Lombard Street diagonally across from the medical school was a four story brick building and contained 60 beds. Ready for patients and classes by the Fall term of 1823, it cost the faculty $14,609 for construction, plus $2,520 for beds and furnishings. At the rear of the hospital was a semi-circular operation theater.

Resident students could obtain room and board for $300 a year. The fee for patients for board, nurses and doctors was $3 per week. Pattison wrote to the Mother Superior of the Sisters of Charity at Emmitsburg, Md. October 11, 1823 offering to place the management of the institution under the Sisters. The Sisters arrived shortly thereafter and ran the hospital from November 1823 until 1876. This doubtless, thanks to Pattison, was the first "teaching hospital" in America.

In the Summer of 1826, Pattison went to Europe and never returned to Baltimore. In 1827 he accepted the Chair of Anatomy at the University of London. He never was a success and complaints of his inability as a teacher and surgeon increased to the point that in 1820-31 "his colleagues offered to pay him a certain stipend for a number of years if he would retire." He was literally "drummed out" of the University July 23, 1832.

The doctor returned to America in 1832 having been elected to the Chair of Anatomy at the new Jefferson Medical College in Philadelphia. He remained at Jefferson until 1841, when he resigned to join in the founding of the Medical Department of the University of New York. For the next ten years

he remained at the University of New York as Professor of Anatomy until his death November 12, 1851. His death was due to complications from obstruction of the common bile duct.

Granville S. Pattison, a truly attractive, colorful and tempestuous figure, about whom much is written, did little or nothing to advance the progress of surgery. He was a poor and unimaginative surgeon and not creative in that field. His writings were limited to the editing of several hundred anatomical volumes. Pattison's greatest contribution to medicine was his conception and implementation of a teaching hospital for medical students.

nathan r. smith

Nathan R. Smith (tenure 1827-69) the famous second son of a famous father, Dr. Nathan Smith, was born at Cornish, N.H., May 21, 1797. His elementary education was received from private tutors and at Dartmouth College. His father, Nathan Smith, the founder of Dartmouth Medical College in 1798, resigned from that institution in 1813 to head the faculty of the Yale Medical School at New Haven. Nathan Ryno left New Hampshire with his father and matriculated as a freshman at Yale in 1813. He received the A.B. degree in 1817, at the top of his class. Following graduation he spent 18 months as a tutor for the family of Thomas Turner, a Virginia gentleman of wealth and social eminence. During this short period he developed a strong attachment for the South, which lasted his entire life. (Much later in life at age 72, he wrote a short discourse "Legends of the South, by Somebody, who wishes to be considered nobody"). After this sojourn in Virginia, he entered Yale Medical School and received from Yale College the M.D. degree in 1820. His inaugural thesis defended the view, "that the effects of remedies and disease are the result of absorption from the blood stream and not an impression on the nervous system." His interest in this subject continued with experiments that were published in 1827.

Dr. Nathan Smith, a founder or co-founder of several medical schools, (Dartmouth, Yale, Bowdoin, Vermont, Jefferson) together with his son, Nathan Ryno, founded the University of Vermont at Burlington in 1820. Dr. N. R. Smith was appointed to the Chair of Anatomy and Surgery in 1824. Before taking over these positions, he took leave to attend lectures at the University of Pennsylvania, to better prepare himself. While in attendance, he met Dr. George McClellan and others, who were busily engaged in founding Jefferson Medical College. These men were impressed with young N. R. Smith and offered him the Chair of Anatomy, which he accepted. In 1827, after two years at Jefferson, he was offered the Chair of Anatomy at the University of Maryland. Dr. Davidge was then Acting Professor of Surgery, following Pattison's resignation. An exchange was effected whereby Smith became Professor of Surgery and Davidge returned to the Chair of Anatomy.

Dr. N. R. Smith, a good six feet tall, was a man of commanding, if not domineering presence. He was clean shaven, with a Grecian nose, piercing eyes, shaggy eyebrows and very erect posture. He usually dressed in a neat black frock coat. He was myopic and wore glasses. It was this young dignified gentleman of 30 years, that with great enthusiasm, industry and ability, took over the Chair where he was to remain over the next four decades.

Upon arrival at Maryland, he had but one competitor in Baltimore, a Dr. Jameson. Smith's efforts were so vigorous and noteworthy, however, that he soon had the surgical practice of Baltimore and Maryland at his disposal.

Smith prepared his lectures with great care and delivered them without

notes, in a slow deliberate fashion. He possessed and frequently indulged in humor and clean stories to the delight of the students. At times, he carried a pointer or teaching stick, which he snapped against his trousers. No wonder, with his regal carriage, deep set eyes and bushy brows, he was nicknamed "The Emperor." Such a stern countenance as he possessed, was sure to command the undivided attention of the audience. His lectures dealt with inflammation, wounds, burns, ulcers, kidney and bladder stones, aneurysms, amputations, tumors, and a great variety of subjects now claimed by the specialties. He had a creative and fertile mind, not shackled by dogma. His was the glamour course at the Medical School and many students opted to take it a second time, so impressed were they by the master. His demonstrations of pathological material at lectures was an outstanding attraction.

He continued to gain in stature over the years — locally and along the eastern seaboard. Overlooked by most of his biographers, is an outstanding surgical procedure he performed in 1835. A Mrs. M. Wells from Prince George's County, came to him for the third or fourth time, requesting him to operate for an ulcerating goiter. Together, with Dr. Potter and others, after having warned the patient repeatedly of the dangers, he decided to operate. The operation was performed in less than one hour through a vertical incision, without anesthesia. All of the structures encountered were minutely described in his operative note. Unfortunately, the patient died thirteen days after the operation from sepsis. This was the first operation for goiter ever performed in Maryland, and the second such operation performed in America. This undertaking is more evidence of his courage and ability as a surgeon, because doubtless he had no mentor to show him the way.

Several years after his appointment, there was much unrest in the University as to its administration, until finally in September 1837, the Board of Regents of the University, the governing body of the University, was dismissed and replaced by action of the State Legislature, by a Board of Trustees. Smith, siding with the Regents, withdrew from the University of Maryland and accepted a Chair of Practice of Medicine in Transylvania University at Lexington, Ky., which at that time, was the leading medical school of the West. Another famous surgeon of the era, Dr. Benjamin Dudley, was then Professor of Surgery at Transylvania. For three years he traveled west each fall, returning to Baltimore to his practice and family after the four month session. His salary was recorded at $3,000 a year for the session. The Transylvania catalogue of 1838 notes that he was touted as one of the outstanding surgeons of America.

During these three years the University of Maryland had recovered from its administrative difficulties, and Smith agreed to resume his Professorship of Surgery at Maryland, which he held until retirement in 1869. For this long period 1841-69 "The Emperor" continued to dominate the profession of Maryland. His fame was such that the illustrious Henry Clay was a guest in his home and he was an acquaintance of Daniel Webster.

As a surgeon he was gifted with "dexterity, speed, great acuteness of perception and an unusual power of adaptation to unusual circumstances." During his tenure, anesthesia was introduced and he was quick to adopt it, as he was other new techniques in surgery. Smith invented his own lithotome but regarded his anterior splint for fractures of the lower extremities, as his greatest medical contribution. This splint was perfected in 1860 and was so popular, it was adopted here and abroad. His thyroidectomy, it seems should have received more notice.

A prolific writer, he contributed many articles to the Journals in Maryland, Pennsylvania, Virginia and the American Journal of Medical Sciences. In 1832 he published a book on the "Surgical Anatomy of Arteries," which was republished as a second edition in 1835. In 1867 he published a small monograph on the "Anterior Suspensory Apparatus in the treatment of fractures of the lower extremity." He received acclaim from famous surgeons in Europe in 1867, including Sir James Paget and Spencer Wells. He received the degree of L.L.D. from Princeton in 1862.

Dr. Smith was truly one of the surgical giants of his era and did more than anyone on the faculty to give prestige to the Medical School. He retired from the Chair in 1869 and the following year was elected President of the Medical and Chirurgical Faculty. His last years were spent with office practice, reading and writing. Dr. Smith died at age 80, July 3, 1877 of bladder disease and the infirmities of old age.

christopher johnston

Christopher Johnston (tenure 1869-80) was born in Baltimore, September 27, 1822. He was educated at St. Mary's College in Baltimore and at St. Mary's College in Cincinnati, Ohio. He began the study of medicine under the preceptorship of Dr. John Buckler of Baltimore.

He spent a great deal of the time in his student days at the Baltimore Almshouse. He was awarded the M.D. degree from the University of Maryland School of Medicine in 1844. After graduation he went to Europe for further study. This was the first of five visits to that continent.

Upon return he and Dr. Frick founded the Maryland Medical Institute, a preparatory school for medicine. He left again for Europe in 1853 and remained two years, studying in the clinics of Paris and Vienna. During that time he acquired great skill in using microscopes and later became lecturer and demonstrator at the University on "Experimental Physiology and Microscopy." He relinquished this post two years later to become Professor of Anatomy at the Dental College, where he served for seven years. In 1864, he accepted the position of Professor of Anatomy and Physiology in the Medical School.

As a result of his excellent care of the Southern wounded at the Battle of Gettysburg, his fame and practice greatly increased among the people of Baltimore. It is of interest to note he became a friend of the celebrated actor, Edwin Booth. When Booth had his arm pierced in the fencing scene in Hamlet, Johnston was called to care for him. On the night following the injury, Booth played Richard III at Fords Grand Opera House with his arm in splints.

In 1869 at the age of 47 he succeeded Dr. N. R. Smith as Professor of Surgery and held the Chair for the next eleven years.

A slow and meticulous surgeon, Johnston was particularly sensitive to cosmetic effect. As a matter of fact, his longest paper was the section in Ashurts International Encyclopedia of Surgery on "Plastic Surgery." The scholarly paper of eighteen pages had a lengthy bibliography, but did not report any experience that the author had with this specialty.

Johnston was credited with being the first surgeon in Maryland to completely excise the upper jaw (1873) and the first to perform surgery for vesicle exstrophy (1876). He was active in the small medical and scientific societies and served as president to several.

At the age of 58 he resigned at Maryland but continued actively to practice surgery. After succeeding Dr. N. R. Smith, he was the acknowledged leader of the surgical profession in Baltimore from 1870 to 1890. He continued traveling in Europe and became master of the French and German languages.

When Johns Hopkins Hospital opened he was appointed Consulting Surgeon. He became enamored of this new institution, its laboratories, museums and libraries, so much that he forgot his alma mater. Despite the fact that he received his M.D. from Maryland, on his death, he left his instruments, microscopic apparatus, his cabinet of crystals and entire library to the Johns Hopkins University.

After some months of poor health, he died October 11, 1891 at age 69.

faculty news

buxton scholarship

The Senior Class, School of Medicine, has established a scholarship fund in memory of the late Dr. Robert W. Buxton, chairman, Department of Surgery.

Paul Rogers, class president, said, "Initially the Senior Class contributed $2,500 from the treasury to establish the medical school's new scholarship fund. In addition the class sent letters to faculty, parents and friends asking for contributions. Hopefully, other graduating classes as well as members of the 1971 class will make future contributions."

Donations will be put into a special account in the University's General Endowment Fund with the principle remaining in the Fund while the interest is used for an annual scholarship.

Dr. Frederick J. Ramsay, assistant dean, Student Affairs, will be responsible each year for selecting the recipient of the scholarship. He will also make an annual accounting of money used from the fund. The only restriction is that the scholarship must be given a student based on financial need.

Those wishing to contribute to the fund should make checks payable to the "Dr. Robert W. Buxton Scholarship Fund" and mailed to the Dean's Office, University of Maryland Medical School, Lombard and Greene Sts., Baltimore, Md. 21201.

outstanding faculty

Nine members of the School of Medicine faculty have been honored by the Student Council for demonstrating an outstanding quality of inspirational guidance and interest in teaching and practice of medicine.

Peter Vash, Student Council president, explained that each year the Council selects a single faculty member whom they felt to be most deserving and present him or her with a plaque at a dinner held in his or her honor.

"This year the Council altered the procedure," said Vash. "We felt that in any one year there is often several faculty members and house staff who have demonstrated an outstanding interest in the teaching and guidance of students. Moreover, we feel that there are many faculty or house staff whose diligent and conscientious teaching abilities all too frequently go unacknowledged."

The following were honored at a dinner held at the home of Dean John H. Moxley III: Marshall L. Rennels, Ph.D., assistant professor, Anatomy and Neurology; Charles C. C. O'Morchoe, M.D., Ph.D., associate professor, Anatomy; Mary E. Kirtley, Ph.D., associate professor, Biochemistry; David B. Ludlum, Ph.D., professor, Cell Biology and Pharmacology; Donald Pachuta, M.D., fellow, Infectious Diseases; William Holden, M.D., clinical assistant professor, Psychiatry; Robert L. Derbyshire, Ph.D., associate professor, Sociology in Psychiatry, and director, Division of Urban Studies and Group Process; William L. Stewart, M.D., associate professor and head, Division of Family Medicine; and Stuart H. Walker, M.D., professor, Pediatrics.

DR. ELIJAH ADAMS, professor of Biological Chemistry, has been awarded a Guggenheim Fellowship for 1971. The fellowship is for "Experimental Studies in Synthesis of Peptides." There were 2,363 applications for the fellowships of which 354 fellows were selected in the U.S. and Canada. Dr. Adams is currently on sabbatical leave at Weizmann Institute of Science at Rehovat, Israel.

DR. MARTIN HELRICH, professor and chairman of the Department of Anesthesiology, has been appointed chairman of the Advisory Committee of the Food and Drug Administration.

DR. MORRIS J. WIZENBERG, professor of Radiology and head of the Division of Radiation Therapy, has been elected president of the Maryland Division of the American Cancer Society.

DR. JONAS RAPPEPORT, associate clinical professor of Psychiatry, has been re-elected president of the American Academy of Psychiatry and the Law.

DR. MAXWELL WEISMAN, clinical instructor of Psychiatry, was appointed to serve on the National Advisory Committee on Alcoholism.

DR. ARTHUR L. HASKINS, professor and head of the Department of Obstetrics and Gynecology, has been elected president of the Association of Professors of Gynecology and Obstetrics.

DR. EDUARD ASCHER, associate clinical professor of Psychiatry, is the recipient of a special award by the American Group Psychotherapy Association for "meritorious contributions as an instructor to the Association's Institutes."

DR. LEONARD SCHERLIS, professor of Medicine and head of the Division of Cardiology, has received an award of merit from the American Heart Association. In citing Dr. Scherlis for his work Dr. William W. L. Glenn, president of the association, said the Maryland physician is "a godfather of our cardiopulmonary resuscitation program and of our heart sounds screening program. Few physician-volunteers have contributed more in time, effort and results to our community programs . . ."

DR. JAMES J. LYNCH, associate director of Psychiatry, has been named a consultant to the American Psychiatric Association's Task Force on Behavioral Therapy. The task force will analyze behavioral therapy and attempt to incorporate it into the medical curriculum.

DR. FRANK RAFFERTY has been appointed *director of the Institute for Juvenile Research and professor of Child Psychiatry,* University of Illinois School of Medicine, Chicago, effective in either July or September. Effective July 1, Dr. Taghi Modarressi assumed the position of acting director of Child Psychiatry.

DR. EUGENE B. BRODY and *DR. ARTHUR LAMB* have been appointed to the Advisory Committee to the Department of Psychiatry, Sinai Hospital.

DR. NATHAN SCHNAPER, associate clinical professor of Psychiatry, has been appointed by the State Board of Education as a member of the Medical Advisory Committee for the Division of Vocational Rehabilitation for a term of three years.

DR. ERLAND NELSON, professor and head of the Department of Neurology, has been awarded a $21,000 grant from the National Institute of Neurological Diseases and Stroke to continue his electron microscopic studies of the innervation of brain arteries. He was also appointed to the Editorial Board of the Journal of Neuropathology and Experimental Biology.

DR. ARLIE MANSBERGER, acting head of the Department of Surgery, has announced the following new appointments to the department: Dr. Lary Becker, Dr. Ranier M.E. Engel, Dr. Richard A. Currie, Dr. Liebe S. Diamond, Dr. Philip J. Ferris, Miss Madeline Fox, Dr. Magdi G. Henein, Dr. Sidney Marks, Dr. Gary L. Nobel, Dr. Ronald L. Paul, Dr. Herbert Schwarz and Dr. Gardner Smith.

LAWRENCE DONNER, Ph.D., assistant professor of Clinical Psychology, Department of Psychiatry, was elected Representative at Large by The Maryland Psychological Association, April, 1971.

Willem G. A. Bosma, M.D.

In 1968, the Maryland legislature passed the first comprehensive Alcoholism Rehabilitation Act in the whole country, and it now has the most advanced and imaginative statewide treatment program in the United States.

The law in Maryland hopes to effect three basic changes in the treatment of alcoholics. Implicit in it is the idea that alcoholism is a medical problem: alcoholics are sick people. The first major step then, is to take the care of alcoholics out of the hands of law-enforcement agencies.

Alcoholism has to be fully accepted as a public health problem and not, hitherto, primarily a law enforcement responsibility. Traditionally, across Maryland, some considerable percentages of alcoholics have been managed by law enforcement and correctional agencies and institutions. A study in 1965 showed that approximately one-eighth of the State's estimated alcoholics had been so managed. A positive alcoholism program must begin by replacing that old system of management by a different, more productive system under health and social service direction.

The second desired change in treatment is for the care of alcoholics to be taken out of state mental hospitals. For 30 years state mental hospitals have been the major, almost the only, treatment resource for Maryland's alcoholics, a patient load they are not equipped to handle.

Because alcoholism is a massive *community* problem, alcoholism programming must emphasize decentral-

Dr. Bosma, Director of Alcoholism Programs, University of Maryland School of Medicine, presented a paper "Alcoholism and Drug Dependence in Maryland" recently at the First British International Conference on Alcoholism and Drug Dependence. This is an excerpt from the paper.

ized, local, community service, and de-emphasize State control and institutionalization; the alcoholic must be treated where he lives and works, preferably as an out-patient.

Alcoholics can and should be treated in the mainstream of health and social welfare, along with other sick and troubled people, and specialized services be limited to those not already provided by existing health and social agencies.

Leadership for alcoholism programming should properly be a function of the local health department, and full-time specialized personnel should be added to the local health department staff. In Maryland, every local health department except one has such specialized personnel. And, every health center should make its full range of services available to alcoholics, preferably by addition of alcoholism counselors to its staff.

Dedicated non-professional help to sick alcoholics and their families, services to alcoholics in both general and specialized agencies can and should be provided by non-professionals, with little or no drain on the professional personnel market.

However, public health programs are needed for certain functions that can't be achieved by other agencies: for case finding and early diagnosis, for example; for social management of alcoholics already totally bankrupt physically, mentally, spiritually, economically and socially; for medical and nursing care for the alcoholic in crisis; for professional training, and for research.

Thirdly, because it is clear that public and private "helping people" are *not* presently prepared to help alcoholics and their families, that most of them are indeed uninformed or misinformed about alcoholism and its victims, top priority in the Maryland program is given to (1) preparing them by educational programs to take on their respective responsibilities; and (2) introducing alcoholism content into the curricula of all professional schools.

In the history of almost every alcoholic are accounts of periodic searches for help, of desperate appeals to physicians, hospitals, clergymen, teachers, and others — and of meeting with rejection. To prevent such breakdown of understanding, alcoholism programs must work to correct the ignorance and prejudice of professional workers when dealing with alcoholics, and give them expert advice with which to aid alcoholics, so that the latter can find what they need when they need it.

If all the thousands of people, such as doctors, nurses, and social workers, who make their living in the helping professions were prepared to identify and help alcoholic individuals and families, there would be no "hidden alcoholics."

For the last year, work has been under way to develop an interdisciplinary curriculum on Alcoholism and Drug Abuse for the six post-graduate professional schools of the University of Maryland: the Schools of Medicine, Social Work, Law, Nursing, Dentistry and Pharmacy. This is the first major effort in the U.S. to introduce alcoholism content courses into professional schools. The attitude of the students to the seminars and field work has been most favorable, but some of the administrations have often been reluctant. The latter reflect all the attitudes of professional people and society at large — attitudes which we have to change if alcoholics are to get the care they deserve.

Such a turn-about in attitudes presents a major challenge to professional institutions. Much has been done since enactment of the 1968 law, but even more needs to be done. The difficulties have been compounded by the fact that only limited funds have been made avail-

able by the State of Maryland. The people of the Division of Alcoholism Control have had to concentrate on getting the cooperation of existing health and social facilities. When these have not been sufficient, limited new ones have been established, mainly a variety of residential facilities for alcoholics.

University Hospital illustrates how an existing health facility has been pressed into the service of providing treatment for alcoholics. The 600-bed facility which is not only a service but also a teaching hospital, contains patients from all walks of life.

The basic attitude at the hospital is that treatment processes with the highest incidence of success are those that tailor treatment to the individual needs and resources of the alcoholic patient. Thus, an alcoholic is met in the Emergency Room by a counselor who acts as a screening agent. Together with the doctor on call, he decides where the patient will go for treatment. Some need to go to medical, surgical, psychiatric or other specialized services, but while on these services, they are also seen by alcoholism counselors. If the patient does not require any service within the hospital, and has no home to go to, or is too sick to go home but not sick enough for the hospital itself, he can be referred to the Quarterway House. This resident facility is five minutes from the hospital and all the services of the hospital are available to it. Doctors make weekly rounds in this 20-bed facility. The average cost per alcoholic is $5 per day as opposed to $70 per day in a hospital.

In the Quarterway House, the alcoholic is first detoxified and if necessary, made comfortable with some mild tranquilizers. He is then actively involved in a program of education, personal and group counseling, therapy and vocational rehabilitation. Families and relatives are whenever possible, involved in the treatment program. The pros and cons of disulfiram, antabuse, are presented to him. Many choose this as an adjunct to staying sober.

The alcoholic stays two weeks in the Quarterway House. He is then referred to the Out-Patient Clinic at University Hospital, and if he is on antabuse to the Antabuse Group, which meets weekly in the Quarterway House. Two alcoholic counselors make regular home visits and help the patient avail himself of treatment facilities in his neighborhood.

If the patient is well enough after having been seen in the Emergency Room of the hospital, where he sometimes stays up to 24 hours, he can be sent home. From there an effort is made to involve him in the various treatment facilities in his neighborhood, such as open or closed groups, out-patient psychiatric services, personal counseling, after-care clinics, etc.

If a patient has nowhere to go he can be referred to the Shelter, a 120-bed facility. The Shelter takes Skid-Row alcoholics and provides them with a bed, a meal, and some counseling. They do not have to stop drinking, however, but it does seem to reduce the amount they drink. This facility, for what is referred to as the "chronic alcoholic," is a most helpful one. Previously, the chronic alcoholic had been referred to other agencies, where the assumption was that he would stop drinking. Neither party benefitted from this arrangement and this rather hopeless patient tended to "clog-up" the facilities so much needed for patients with better prospects.

The Half-way Houses are for recovered alcoholics with a job who need an interim supportive environment until they are able to go out on their own. Half-way Houses are self-supporting as the patient pays room and board.

It is clear that treatment facilities, and this goes for all large-scale programs in the United States, is still based on rather ineffective treatment modalities. Only 35 to 50 per cent of the patients benefit from it. Infact, there is still no definite treatment for alcoholism. Individual or group psychotherapy, counseling, antabuse and membership in Alcoholics Anonymous are still regarded as the only hope of cure.

In the meantime, many clinicians are desperately seeking more successful treatment methods, including conditioning and the use of L.S.D.; up until now, without success. It is clear that there is still a long way to go in the treatment of what is considered America's number one health problem.

alumni day 1971

Alumni Day activities this year began with registration in the entrance of Davidge Hall at 10 a.m. June 3 and was followed by a report to the Alumni.

Dr. Theodore Kardash, president of the Medical Alumni Association, welcomed this year's attendees.

Dean John H. Moxley III spoke to the Alumni about the assets of the School of Medicine and some of its problems. Following the Dean's presentation, Dr. Karl Weaver, associate dean for admissions, and Dr. Frederick J. Ramsay, assistant dean for student affairs, spoke on "Student Selection Policies," and "Curriculum Changes," respectively. Senior medical student, Robert Shannon, addressed the group on "Changing Medical Education."

A special guest speaker was Charles E. Hackett, vice president, Colonial Williamsburg, Williamsburg, Va. He commented on the "Davidge Hall Restoration Plan."

At noon the annual business meeting convened. Dr. Kardash opened the meeting with the presentation of the Gold Key award to Dr. W. Houston Toulson '13.

"This honor which you have been kind enough to bestow on me today has affected me deeply. I am gratified by this very fine touch and appreciate it immensely," said Dr. Toulson in accepting a plaque and the traditional gold key.

Dr. M. E. Shamer '10

Dr. Arlie Mansberger '47 presented the annual financial statement:

MEDICAL ALUMNI ASSOCIATION
FINANCIAL STATEMENT

April 30, 1971

* Assets in Bank Accounts	$25,532.27
* Assets in Investments	43,000.00
Assets in University of Maryland account	1,206.11
Assets in Petty Cash	40.34
	$69,778.72
Receipts April 1-30, 1971	1,406.99
	$71,185.71
Disbursements April 1-30, 1971	2,094.80
BALANCE	$69,090.91

* Includes Davidge Hall Fund

The annual election of officers followed and presentation of the slate recommended by the nomination committee was by Dr. Lewis P. Gundry'28.

The following were elected:

President: Dr. Edward F. Cotter '35

President-elect: Dr. Henry H. Startzman Jr. '50

Vice-president: Dr. John H. Hornbaker '30

Dr. Benjamin M. Stein '35

Dr. William S. Womack '48

Secretary: Dr. Robert B. Goldstein '54

Treasurer: Dr. Arlie Mansberger '47

Executive Director: Dr. William H. Triplett '11 BMC
Executive Administrator: Francis W. O'Brien
Executive Secretary: Louise P. Girken
Members of Board: Dr. William J. R. Dunseath '59
Dr. William H. Mosberg Jr. '44
Dr. Charles E. Shaw '44
Dr. Joan Raskin '55
Dr. Donald T. Lewers '64
Dr. Cliff Ratliff '43
Dr. Joseph S. McLaughlin '56
Dr. Aristides Alevizatos '60
Dr. John F. Strahan '49
Ex-officio Members of Board: Dr. Wilfred H. Townshend Jr. '40
Dr. Theodore Kardash '42
Dr. John H. Moxley III, M.D.
Elected to the Nominating Committee: Dr. Raymond Cunningham '39
Dr. Gibson Wells '36
Dr. J. Howard Franz '42

Dr. O. C. Mandry '21 & Dr. E. A. P. Peters '21

Dr. Raymond Cunningham submitted for consideration by the alumni group, an idea to have eight members on the nominating committee representing various hospitals in Baltimore who have alumni practicing in the institution plus the two past presidents, who are ex-officio. He also suggested that no one be considered for president or president-elect of the association unless he had served on the board of directors. Both of his suggestions will be taken up at a later date by the Alumni Board

As has been the custom in years past, the names of classmates who died during the past year were read by Dr. William H. Triplett '11 BMC and a moment of silence prevailed in honor of these deceased.

Dr. J. H. Hornbaker '30 & Dr. M. J. Skovron '31 register.

Dr. Kardash in reporting what had occurred during his year as president said that the current alumni active enrollment was approximately 2,300 and that "with these figures there's still room for more."

Two of the most important aspects of his term in office were the launching of the Davidge Hall restoration fund and reorganization of *The Bulletin.*

"Plans for the restoration of Davidge Hall went ahead under the direction of Dr. Sharrett with some $45,000 made in cash and pledges in the first six months. The goal is over $800,000 which we hope to reach by 1975 when the Alumni Association will be 100 years old," Dr. Kardash remarked.

In reference to the *Bulletin* reorganization he said, "For the first time great guidelines of responsibility have been established for the Editorial Board, the Editor and the Managing Editor. The Dean and the Alumni Association will

endeavor to keep the alumni well informed concerning the activities of the school, its faculty, its students and other alumni. We are looking forward to having a *Bulletin* that we all can be proud of which is a quality magazine that will be interesting, provocative, informative and inspiring."

Dr. Edward F. Cotter was then introduced as the new president of the Medical Alumni Association.

"It will be an honor and privilege for me to serve as your president next year. I hope that I can bring to the office the same dedication as Dr. Kardash and presidents who preceded him. As president, I will help preserve the many traditions of the school, but certainly not the rigidity that will prevent changes which we see in our social, political and economic structure as inevitable," said the new president.

Cotter then asked the alumni for increased participation and said he would always welcome suggestions.

There was no new business so the meeting adjourned and the alumni luncheon was held in the Psychiatric Institute gymnasium.

review

john h. moxley III

In general, I think that I can report a good year to you. It certainly has not been perfect, but I believe good. There are problems at this medical school, but none I believe are unique to Maryland. These problems are shared by all medical schools today. As a matter of fact, university medical centers are currently the focus of at least three irreconcilable forces; mainly, the student body, the faculty and the community.

Students are feeling the effects of growing up in an age of very rapid change; growing up in a period in which our society is being somewhat dehumanized by advances in technology and science.

The faculty is also trying to come to gripes with change. Again it's a change in our society which at least temporarily, is becoming less interested in the creation of new knowledge and more in the application of existing knowledge. This is a significant change in the ground rules under which we've lived for the past 20 years. Although it was a needed change, the dimensions of the change are unfortunate, because while I am service-oriented, I think that it is unfortunate to dismantle even in part, a medical research effort that has produced really fantastic amounts of new knowledge.

And, the final force that is bearing upon every medical school in the country is the community in which they reside. We reside in an urban community largely inhabited by poor people. Largely populated by black citizens who view us primarily as a purveyor of health services. They as a part of the consumer revolution are insisting that we provide more health services and better health services. And this gives rise to some problems. All of these forces are legitimate, but sometimes it seems almost impossible to get them going on the same track in the same direction.

Now, for discussion of several specific problem areas which are facing us and to bring you up to date on what has happened at the school in the last year. I will begin with the financial picture of the school.

Last year, I was able to report that the school had made a significant advance in the level of its state support. This year the results have not been so favorable. The budget was prepared with very carefully thought out askings, was approved on this campus and sent to College Park. Between then and its submission to the Legislature, it was decided that the University would be funded this year by a formula method. The same formula was applied to all schools within the University, and as you can imagine the results were disastrous. The Medical School budget was cut more than any other single school in the University—it was cut by over two-thirds.

There also has been a great change in the pattern of funding of medical education in this country. The Federal Government has been cutting back significantly on some of the grants that went to medical schools and individual faculty members. Dr. Rogers, the Dean at Hopkins, and I approached the Governor in mid-summer to inform him that this was reaching critical proportions and indeed both medical schools might be in danger if something wasn't done to correct this situation. The Governor submitted a special $2 million appropriation for medical education which was to be divided on a per capita basis. The University of Maryland would have gotten $1.2 million and Hopkins would have gotten $800,000.

Again changes were made before reaching the Legislature. It was decided that the Maryland portion would be removed from the special appropriation, increased to $1½ million and given as a special appropriation to the entire University, not just to the Medical School. Of that special appropriation, we netted a few hundred thousand dollars which brought us up to approximately 50 per cent of what we had initially asked.

Then the Legislature cut the Hopkins portion. The last day of the Legislative session, it was too late to add to our operating budget, the Governor and Sen. James did manage to get $400,000 into the capital budget earmarked for the medical school. Now we can remodel the fifth floor of Howard Hall which is essential to our expansion program. At the same time they managed

to get Hopkins' portion of the special appropriation re-instated. However, we are still significantly below what we thought was reasonable for the growth and expansion of this medical school.

In terms of expansion, we have expanded by some 37 places over the period of less than a decade. That may not seem like a great number, but in medical education with the expense and the resources necessary it is a fairly large number. Over two years ago, the medical faculty in a public report, made the commitment to go to an entering class size of 200 as soon as the resources were made available. We are anxious to meet that commitment, but we cannot expand this school on the basis of an inadequate budget for the number of students that we are currently teaching.

The resources have not been forthcoming for us to move ahead. We will need some further capital expansion and a significant increase in our operating budget. At the present time, we

re beginning to put together another expansion program which will probably be submitted to the Legislature next year. A detailed plan for expansion to 200 students per year will be submitted which will line up for them as many options as we can. These include where the Federal Government is liable to participate and where they won't participate, and what the delay may be if we wait for Federal funding rather than going straight forward with State funding.

I want to emphasize for you that the commitment to expand is here. I always seem to receive questions you haven't expanded in the last 20 years and that is not so. This school has expanded as rapidly as any other medical school in the country. It is one of the larger medical centers in the country and will become larger as soon as we receive funding necessary to do it in a reasonable way which will preserve quality of medical education.

The North Hospital should be completed some time late in 1972 with occupancy in January 1973. This will provide us with significant new clinical facilities, allow us to finally demolish the "old University Hospital" which has been used as an ambulatory facility for some years, and allow us to provide reasonable ambulatory services while expanding our bed services. It will also provide us with an Emergency Room, something that we have been without for the past several years, because I do not consider what we operate in the basement of the University Hospital an Emergency Room.

The Howard Hall addition, which is again extremely important for our expansion, will be a 14-story addition to the current building. Planning is under way and working drawings are just about completed. State funds are in hand and we have been approved by all the Federal agencies for funding. However, we are currently in a $600 million backlog for medical school, dental school, and schools of osteopathy construction. If the Congress' version of the medical school construction act goes through which will contain $225 million for medical school construction, we stand a good chance of being funded. But if the President's budget is kept, there is only $90 million for medical school construction and then our chances are not nearly so great.

During the past year we have been engaged with the V.A. in such things as site selection, and such things as trying to arrive at a price for the site for the new hospital to be built on our campus. However, things are moving slowly because V.A. funding has been tenuous in the past year. Fortunately for the school, about two months ago Sen. Mathias became interested in the need for the V.A. facility not only for improvement of health care for veterans in Maryland, but also because he is fully aware that it is absolutely critical that we get this facility if we are to increase class size to 200 students. He has been actively at work and I remain hopeful that in the near future this project will be kind of given the final shove and gain its own momentum and proceed.

In the area of curriculum, we made a significant change two years ago when we went to an elective senior year and put into the curriculum a required program and Ambulatory Care. This year the school has moved to adopt basically a pass-fail system for the medical school courses.

This past year has not been a good year for our Family Practice program. This is the program that was begun in 1960 through the efforts of Dr. Woodward in the Department of Medicine. At its formation the Division was in the Department of Medicine, did not have a defined budget, and was located in the ambulatory services building which was very crowded. In part the problems stem from the Division itself and there is no question that in part that they stem from the school. About a year and a half ago we defined the role of the Division more firmly so that it could have its own program and its own space.

The space problem concerned separation of the Evaluation Clinic where patients came in without appointments to be screened which several years ago had been combined with the Family Practice Clinic. It took over a year to get to the point where we were reorganized enough in that building to separate this function out, and that has now been done. There is a separate clinic for screening. The Family Prac-

tice Clinic and Family Practice area is now defined and is used only by Family Practice. Today the division has ties with both the Department of Medicine and the Department of Preventive Medicine. Steps also have been completed to define the budget for the Family Practice Program which is more than adequate to allow that program to grow. The American Academy of Family Practice sent a two-man survey team to the school to survey our program and make suggestions as to how we can further improve this program. That report is not yet to me and I will take it to the faculty for their consideration. This school has had a commitment to the program, it will continue to have a commitment to that program. The program will be allowed to grow along with other programs here on the campus so that the students can have the opportunity they desire to participate in various types of clinical training programs.

I would like to publicly recognize the great contributions of Dr. William Layman, a family practitioner from Hagerstown. Dr. Layman took a sabbatical from his practice and came to Baltimore and almost single-handedly kept the Family Practice program functioning through this difficult period. The school and the specialty of Family Practice are very much in his debt.

We have been making an effort to improve the ambulatory services and to make them more of a focus of teaching here on the campus. I don't know how far we can really go until the North Hospital is open. Last fall the Ambulatory Facility was officially condemned by the City of Baltimore. A temporary one-story building is being constructed immediately behind the Ambulatory Facility which will allow us to house Family Practice, Radiology services, and laboratory services. We should be able to make this transition in January. This will allow us to expand and to continue to reorganize as we prepare to move into the North Hospital.

One final point is that the University itself is undergoing an administrative change. It was decided that we would move from a central president, who acted essentially as the Chancellor of the College Park Campus, to a decentralized campus system with each campus having its own chancellor. Dr. Albin O. Kuhn who was the Chancellor of both the new Catonsville campus and this campus, has decided to move to this campus fulltime. As with any change in organization, this one has caused some difficulties but I continue to believe that the longterm benefit far outweighs the immediate difficulties we are having adjusting to this. This will be the first time in the history of this campus that we had someone speaking for us and for us alone and I can't help but believe that we will benefit from that voice.

I enjoy very much this opportunity every year to bring you up to date on the school. I attempt to do it in as straightforward a way as possible so that you will know precisely what some of the assets of the school are, and there are many, and also some of the problems that we face.

Thank you very much.

Mrs. F. W. O'Brien shows photographs of Davidge Hall to Dr. F. A. Reynolds '21, R. A. Young '46, J. H. Hornbaker '30 and O. C. Mandry '21.

Dr. S. V. Tompakov '40 with 1971 graduates, Mr. and Mrs. H. M. Tompakov, his son and daughter-in-law, and Mrs. Tompakov.

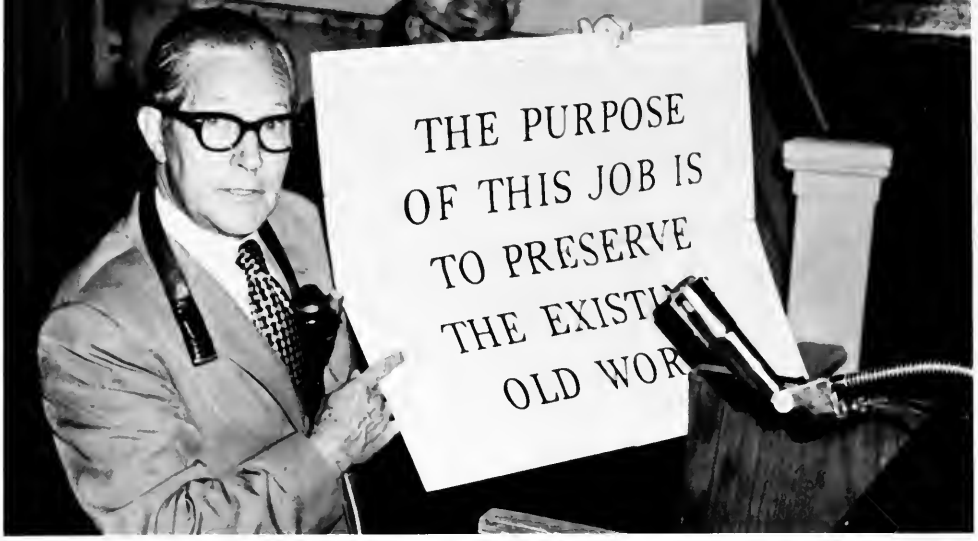
Dr. G. H. Brouillet '35 and son, George, Jr. '71 discuss graduation exercises.

Dr. D. Hope '40 gives his daughter, Diane, final words of advice before her graduation from the School of Nursing. Her mother is a 1939 Maryland Nursing graduate.

P. Rogers, senior class president, is congratulated by his wife, also a medical student, and his mother and father, Dr. W. B. Rogers '43.

Dr. D. J. Myers '51, W. J. Benavent '46 and Dr. A. Saavedra '51 chat before Alumni Day activities got under way.

Dr. Rachael K. Gundry '31, Dr. Elizabeth Acton '43, Dr. Ruth W. Baldwin '43 and Dr. Evangeline M. Poling '50 look at a plaque listing all past Gold Key recipients.



davidge hall

Charles Hackett

The State of Maryland, the City of Baltimore, the University, and you, have in your hands a symbol, and probably one of the most unique early nineteenth century buildings in the country. If not preserved it would be a tremendous loss to the history of this city.

Historical association with significant historical movements, great men, or important events is a basic reason for preserving historic buildings and sites. Early restorations evoked a feeling of nostalgia, a romantic and sentimental longing for the early days and old ways.

Today we emphasize the total picture much more. Most of the early restorations were concerned mainly with the exterior of the building and little was done to recreate an authenic interior or appropriate setting. The whole preservation movement is giving us new historical perspective on our lives and problems of today and furnishing us with historical inspiration.

You have a marvelous opportunity here at Davidge Hall. Its Anatomical Theatre and Chemical Hall can present convincingly the very interesting early history of medical education in this country. It can offer history of actual experience. This kind of social history has a satisfying unity. Historic buildings properly presented and including authenic exterior settings and carefully furnished rooms cause hundreds of details to fall into place.

Preservationists must seek living uses for landmarks — uses that are in keeping with the structures themselves and will not harm them. Your Davidge Hall can be much more than just a museum. It constitutes a living tradition, a highly visible link between the past and the ever-evolving present. Certainly your present and future teachers and students cannot help but be impressed and inspired to lecture and learn in classrooms of such historical significance.

For a proper restoration you will need an overall plan and a great diversity of skills, training, and talents. Architectural and historical research must be methodical and exact. Drawings and specifications must be prepared by experts experienced in this relatively new field of preservation architecture.

I recommend you require the services of an appropriately experienced historian, architect and curator — each of them liable to be temperamental and possessive, and together needing an overall director serving as coordinator, taskmaster, wet nurse and resident psychiatrist!

When the time comes for the actual construction work, the builder — and his representative on the job — must have sympathy and understanding of the objective and the ultimate results. The workmen, down through the lowest echelon, must be instructed.

I leave you with a piece of advise — try it. It's worth every penny.

Editors Note: Speeches of other participants in Alumni Day will be published in a subsequent *Bulletin* due to the lack of space in this issue.

precommencement and awards day

June 4, 1971

Precommencement and Awards ceremonies for the 1971 graduating class of the School of Medicine were held at 10 a.m. in the Baltimore Civic Center.

Following an academic procession, the convocation was given by the Rev. Carl H. Greenawald and Dr. John H. Moxley III, welcomed the graduates, their families and friends. Dean Moxley then presented the recognition awards to the following:

Faculty Gold Medal
Trenton K. Ruebush II

Certificates of Honor

Summa Cum Laude
Trenton K. Ruebush II

Magna Cum Laude
Alan L. Dubin
Lawrence A. Fleming
Brian M. Benson Jr.
Robert A. Schuman

Cum Laude
Michael Y. Faulkner
Gary A. Grosart
Richard A. Bordow
Walter H. Whitman Jr.
Robert L. Brenner
Donald M. Rocklin
Peter W. Beall
Elliott S. H. Bondi
Charles F. Hobelmann Jr.
Leslie B. Barnett
Lucienne A. Cahen
Daniel L. Cohen

Awards were presented as follows:

Balder Scholarship Award
For highest degree of academic achievement
Daniel L. Cohen

Dr. Wayne W. Babcock Award
For excellence in Surgery
Peter W. Beall

Dr. Jacob E. Finesinger Prize
For excellence in Psychiatry
Robert J. Neborsky

Dr. Leonard M. Hummel Memorial Award
Gold Medal—Outstanding qualifications in Internal Medicine
Walter Howard Whitman Jr.

Dr. J. Edmund Bradley Pediatric Award
For excellence in Pediatrics
Daniel L. Cohen

Dr. Milton S. Sacks Memorial Award
For excellence in Hematology
Michael Y. Faulkner

Dr. William Alexander Hammond Award
For excellency in Neurology
Leslie B. Barnett

Student Council Certificates
Michael J. Maloney
Paul T. Rogers
Rena V. Kay
Richard A. Bordow
Peter M. Hartmann

S.A.M.A. Golden Apple Award
For interest in medical education and excellence in Teaching
Clinical Years
John D. Young, M.D., professor and head, Division of Urology
Preclinical Years
David B. Ludlum, M.D., professor Cell Biology and Pharmacology
House Officer
Mark Applefeld, M.D., Department of Medicine

S.A.M.A. Service Awards
Jerry Herbst
Robert M. Shannon

The hooding of graduates and the Hippocratic Oath concluded the ceremonies.

OFFICERS

President
Edward F. Cotter '35, M.D.

President-elect
Henry H. Startzman Jr. '50, M.D.

Vice-presidents
John H. Hornbaker '30, M.D.
Benjamin M. Stein '35, M.D.
William S. Womack '48, M.D.

Secretary
Robert B. Goldstein '54, M.D.

Treasurer
Arlie Mansberger '47, M.D.

Executive Director
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Members of Board
William J. R. Dunseath '59, M.D.
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John F. Strahan '49, M.D.

Ex-officio Members of Board
Wilfred H. Townshend Jr. '40, M.D.
Theodore Kardash '42, M.D.
John H. Moxley III, M.D.

ALUMNI ASSOCIATION SECTION

President's Letter

Dear Fellow Alumni:

I wish to pay tribute to Dr. Theodore Kardash and express the appreciation of the Alumni Association for his resourceful leadership and wise council as President of the Alumni Association.

Reorganization of the "Bulletin" has been a major project this past year. A plan of organization has been developed and a newly appointed Editorial Board will approve and evolve a policy and format which will provide an interesting and informative publication for the alumni and others interested in the University of Maryland School of Medicine.

Plans to renovate and have Davidge Hall approved as a National Historic Shrine are proceeding. The Alumni are encouraged to contribute generously to this project which will be a major financial commitment.

The majority of the graduates of our school have established themselves as private practitioners in the various disciplines of Medicine. The Alumni Association is eager to see that this way of providing health care shall have continuing success. Unfortunately, segments of our society in densely populated urban areas remain outside this health delivery system. Although we are all involved to some extent with this problem through our local and State Medical Societies, the Medical Schools are particularly under great social and political pressure to be actively involved and supply leadership to solve the problem of delivery of health care to this low income group.

While we seek to have our school yield private practitioners of medicine to the community, we must recognize and support the endeavor of Dean John H. Moxley III and the faculty of the School of Medicine to rapidly advance the biomedical research potential of our school.

It is hoped that the "Bulletin" will be a medium of communication of different points of view as our school grows in prominence, providing practicing physicians, educators, scientists and scholars to the community and maintaining great concern for the problems and welfare of the community.

Please submit your suggestions regarding new activities and interests pertaining to the future role of the Alumni Association. Any information about alumni is desired to help complete our records regarding their activities, interests in medicine and civic affairs and professional achievement.

Sincerely,

Edward F. Cotter

Edward F. Cotter, M.D.
President

Alumni board action

Francis O'Brien

During the past fiscal year, a number of major problems confronted the Medical Alumni Association and were considered for action by the Board of Directors. Among these were the following areas which required the attention of the Board:

Reorganization of *The Bulletin,* School of Medicine. Selection of a fulltime Managing Editor and consideration as to what changes, if any, should be made in *The Bulletin* were of primary concern. A new Managing Editor was hired in January and proceeded to get out the January and April issues. The Board considered the first step in reorganization was to establish guidelines for the Editorial Board, the Chief Editor and the Managing Editor. These guidelines are being formulated and it is believed when crystallized will provide for a better publication from the School of Medicine and the Alumni Association. As you recall, your April issue arrived according to schedule as should future issues because of the reorganization and hiring of a fulltime Managing Editor. Problems in the reorganization still exist but close relations are maintained between the Dean's Office and the Alumni to resolve these as soon as possible.

Planning for Alumni Day 1971 was under discussion by the Board at each of its meetings. Early in the year an Alumni committee met with representatives of the Senior Class to obtain their views on how their classmates felt about attending the annual Alumni banquet. The representatives were of the opinion that the students would prefer that rather than attending the banquet that the Alumni donate a sum to their class fund for loans to future medical students. The Board feels that traditionally the graduating class is invited to the annual banquet and they offered to continue this practice. However, the Board said it is willing to consider the students' proposal if it could be shown this was the feeling of the majority of the class. It was decided that this year the graduating class would be invited to the banquet and the reception for the 50 year graduates, thereby establishing a new concept of honoring both classes. The Board approved loans to students in the amount of $1,000 and made a donation of $300 to the Student Microscope Fund.

Reunion Class Captains were assisted in contacting their classmates throughout the year through several letters sent out from the Alumni Office. In the interest of making Alumni Day evening shorter, a feature speaker was not planned so that all those attending the banquet would have a longer opportunity to be with their classmates and friends during that evening.

Another concern of the Board was to obtain adequate space for your Alumni Office. At one time it was considered that the Alumni Office would occupy the entire second floor of Davidge Hall. By this means an Alumni Lounge would be provided for visiting physicians and their friends along with adequate office space. However, it became apparent early in the year that this plan could not be visualized for at least two more years. Your Alumni Office did expand slightly on the second floor of Davidge Hall, but still requires more space to fully carry out its mission — to assist the School of Medicine and its graduates in any way possible. The subject of office space was discussed several times by President Kardash and Dean Moxley and the Board of Directors went on record to emphasize the desirability of more adequate office facilities if the Davidge Hall Restoration project is to succeed.

As you know, at the end of 1970, a brochure on the plan to restore Davidge Hall, was sent out to all graduates and other interested friends. Your Alumni Office has been receiving on almost a daily basis, donations for this worthy fund.

At each Board meeting the financial report of the Association was received and approved by the members of the Board. The Association has a fairly good financial standing.

Respectfully yours,

Francis W. O'Brien
Executive Administrator

alumni gold key award

Rolling up his sleeves and plowing in . . . that's how Dr. William Houston Toulson, professor Emeritus of Urology, remembers his part in the growth of the School of Medicine.

A native of Chestertown, Md., he is the recipient of the Alumni Honor Award and Gold Key for 1971.

Despite his lack of direct contact with the University today, the 1913 School of Medicine graduate is still very interested in his school, the students and changes being made in the field of medicine.

"I have very little contact with the school. I'm an Emeritus Professor and when I got out, I got out completely. There's nothing worse for a department than to have an old fellow around giving you new ideas that date back to the Civil War period," he says smiling. "Dr. Young (head of the Department of Urologic Surgery) is a very fine chap, a very personable fellow and very efficient with patients. I've given talks occasionally, but I'm up in my eighties, and I just haven't got the gumption to grind out papers like I use to do."

Dr. Toulson graduated from Chestertown High School and received his A.B. and master's degree with science honors from Washington College in 1908 and 1911, respectively.

"When I started work shortly after I graduated and when I was down at the clinics, I knew the students by their first name, where they were from and something about them. Towards the last I couldn't remember and it would embarrass me when I would go to medical conventions and some students would come up to me and say, 'Don't you recognize me? You taught me in 1947' or something like that. After you teach 100 of them every year for 34 years . . . it just got pretty well out of control," says the doctor, who retired as professor and head of Maryland's Urology Department in 1955.

What does he remember as the most dramatic change that occurred during his days at Maryland?

"I think the most dramatic was that during my student days and shortly after, the University of Maryland, then known as a proprietary school, underwent major changes in its growth to become part of a university."

"As a proprietary school it was owned by members of the faculty. Dr. Reichlove, Dr. Shipley, Dr. Garner and Dr. Low, a lot of names that are in the old books, really owned the medical school. They never really made any money out of it, but they thought it was their duty to keep the old place going. In 1910 the Rockefeller Foundation gave money to a commission to be headed by Dr. Simon Flexner of New York to make a nationwide survey of medical schools."

"At that time, there were nine medical schools in Baltimore City and they were almost diploma mills. You could register there and go on and work at nights as a streetcar conductor. In due time, you got your degree. The Flexner Committee came to examine this school and they found we were deficient in things like basic sciences and we didn't have enough hospital beds for the number of students being taught. We didn't have enough faculty, especially in basic science and above all, we had no University connection. Our monetary budget was terribly low for a medical school of our size.

"So in 1913, the University of Maryland, Medical School, merged with the old Baltimore Medical College. In 1915 they merged with the old College of Physicians and Surgeons on Saratoga and Calvert streets. About 1920, they merged with the old Maryland Line Agricultural College at College Park forming a university, at least a nucleus of it. Then the Law School came in, Pharmacy, Dentistry, Nursing and like."

"It was about 1920 when the University of Maryland really got off to a university status and then they started getting a little bit of money from the state. Year by year it has grown so that

ıe University of Maryland, Medical chool, now is accepted by everyone f the accrediting agencies and it ranks mong the finest schools in the ountry."

"So, I've watched all this during my fetime and am proud to be a part of . Of course, I felt as though I was roll-ıg up my sleeve and plowing into the hole business, but I hope I contrib-ted a little something anyhow."

And, indeed Dr. Toulson has con-ibuted greatly to his school through is student and teaching years.

Dr. and Mrs. Toulson, who live at 403 Falls Road Terrace, have three hildren: Mrs. J. Edward Johnston of altimore; Mrs. Kennon Jayne, New anaan, Conn. and William Houston oulson, Jr. of Washington, D.C. and 1 grandchildren.

The author of numerous monographs elating to urology and surgery, he is member of the Baltimore City Medical ociety, the Medical and Chirurgical aculty (president in 1949), the Ameri-an Urological Association (president id-Atlantic section in 1950), the Ameri-an Association Genito Urinary Sur-eons, Societe Internationale D'Uro-ogie and the American College of urgeons.

His military record includes two years ı France in World War I as a captain in the Medical Corps U.S.A. The first year with the British Expeditionary Forces and the second with Evacuation Hospital No. 8, American Expeditionary Forces. During World War II he was consultant to the Selective Service and Veterans Bureau.

Gold Key Awards have been given to the following doctors:

1948 — W. Wayne Babcock '93 P & S
1949 — Nolan D. C. Lewis '14
1950 — Arnold J. Tuttle '06
1951 — George E. Bennett '09
1952 — Louis A. Buie '15
1953 — Emil Novak '04
1954 — Fred W. Rankin '09
1955 — George W. Rice '16
1956 — Joseph Nataro '25
1957 — Charles Reid Edwards '13
1958 — Norman T. Kirk '10
1959 — Edgar B. Friedenwald '03
1960 — Stanley E. Bradley '38
1961 — Walter D. Wise '06
1962 — Arturo Raymond Casilli '14
1963 — Louis A. M. Krause '17
1964 — Hugh R. Spencer '10
1965 — Theodore McCann Davis '14
1966 — T. Nelson Carey '27
1967 — Eva F. Dodge '25
1968 — Thomas B. Turner '25
1969 — Frank Mason Sones '43
1970 — Abraham Harry Finkelstein '27

ılumni activities

'HE 20's AND 30's

DR. LEWIS M. OVERTON '29, asso-iate professor in the Department of)rthopaedics, University of New Mexico, as received a grant to study chronic steomyelitis (bone infection) from the Jpjohn Company. Dr. Overton was chief f the Orthopaedic Surgery Department f Lovelace Clinic from 1947 until he oined the medical school faculty at the Jniversity of New Mexico in 1968.

DR. HERBERT BERGER '32, Staten sland, New York, has been elected hairman of the section on medicine of ıe New York Academy of Medicine.

DR. MYRON L. KENLER '33, Miami, la., was licensed to practice in Florida ı 1969 and is employed fulltime on the taff of the University of Miami Student lealth Service, Coral Gables, Fla.

DR. LOUIS J. KOLODNER '36, assist-ant professor of surgery, Johns Hopkins University School of Medicine, delivered a paper at the Royal Thai Army Hospital in Bangkok, Thailand, during his world tour in October and November last year. The paper was entitled "Some Studies and Experience in Biliary Tract Surgery."

THE 40's

DR. R. M. N. CROSBY '43 and *ROBERT LISTON* have received the All America Features Award for an article "Dyslexia: What you can and can't do about it" which appeared in Grade Teacher, a publication with a large circulation among elementary school teachers. The award is presented by the Educational Press Association for excellence in scientific writing in an educational journal. Dr. Crosby has also been appointed to the National Advisory Committee on Handicapped Children

by the Secretary of Health, Education and Welfare Richardson. The committee will administer the new laws on the educationally handicapped.

DR. ROBERT E. WISE '43, of Boston, has been re-elected to another three-year term on the Board of Chancellors of the American College of Radiology. He is chairman of the Department of Diagnostic Radiology at Lahey Clinic, Boston. Dr. Wise has served as chairman of the ACR Commission on Public Relations for three years and will continue in this capacity until 1974. The ACR is a medical association representing physicians who specialize in the use of X-rays and other radioactive substances for diagnostic and therapeutic purposes.

THE 50's

DR. MORTON D. KRAMER '55, Baltimore, Md., has been appointed chief, Sections of Neurology and Electroencephalography and director of the Electroencephalography Laboratory in the Department of Medicine, St. Agnes Hospital, Baltimore.

THE 60's

DR. LAURENCE R. GALLAGER '62, Columbia City, Md., has been appointed associate director of Medical Education at St. Agnes Hospital, Baltimore. In his new capacity he is responsible for planning, developing and organizing methods of recruiting medical graduates for the hospital's intern and medical education program.

DR. GERSHON J. SPECTOR '64, 2255 Lenox Rd., Atlanta, Ga., will join the Washington University School of Medicine, Department of Otolaryngology, in St. Louis, Mo. effective August 1, 1971. He will be an assistant professor of Otolaryngology.

DR. EARL S. SHOPE '65, has recently moved to Alumbank, Pa. where he is working in hematology, clinical pathology and general medicine. He is associated with a clinic, Medical Associates, and a hospital, Wimber Hospital, in Alumbank. Prior to his move he was associated with the Armed Forces Institute of Pathology, Hematology Branch, Washington, D.C.

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alumni on other faculties

Medical schools list the following University of Maryland, School of Medicine, alumni on their 1970-71 faculty:

The 20's

Oscar Costa Mandry '21
University of Puerto Rico

Isadore E. Gerber '26
Mt. Sinai School of Medicine

The 30's

Abraham M. Kleinman '30
Mt. Sinai School of Medicine

Victor Montilla '30
University of Puerto Rico

Henry I. Berman '31
University of Louisville

Robert F. Rohm '31
University of Pittsburgh

Alexander Allan Krieger '32
University of Pittsburgh

Kermit E. Osserman '33
Mt. Sinai School of Medicine

Max Needleman '34
Mt. Sinai School of Medicine

Landon Timberlake '34
University of Alabama

Milton H. Adelman '35
Mt. Sinai School of Medicine

Maurice Nataro '37
University of Louisville

Ephraim Roseman '37
University of Louisville

Juan A. Rossello '38
University of Puerto Rico

Donald J. Silberman '38
University of Alabama

Aaron Stein '38
Mt. Sinai School of Medicine

David Kairys '39
Mt. Sinai School of Medicine

Joseph Edwin Schenthal '39
Tulane Medical Center

The 40's

Luis R. Guzman Lopez '40
University of Puerto Rico

Gulliermo Pico '40
University of Puerto Rico

William R. Platt '40
Washington University, St. Louis

Carl Eliot Rothschild '40
Mt. Sinai School of Medicine

Joseph W. Sloan '40
Mt. Sinai School of Medicine

William I. Wolff '40
Mt. Sinai School of Medicine

Carlos M. Chiques '41
University of Puerto Rico

Joshua M. Perman '41
Mt. Sinai School of Medicine

Robert A. Moses '42
Washington University, St. Louis

Otto C. Phillips '42
University of Pittsburgh

Ramon I. Almodovar '43
University of Puerto Rico

Sherman S. Brinton '43
University of Utah

Aaron N. Finegold '43
University of Pittsburgh

Jose M. Torres Gomez '43
University of Puerto Rico

Luis M. Isales '43
University of Puerto Rico

Francisco R. Raffucci '43
University of Puerto Rico

Enrique Perez Santiago '43
University of Puerto Rico

Dharma L. Vargas '43
University of Puerto Rico

Ernesto Colon Yordan '43
University of Puerto Rico

Eugene Hayward Conner '45
University of Louisville

J. Howard Latimer '46
University of Utah

Walter M. Wolfe '46
University of Louisville

Pascal D. Spino '47
University of Pittsburgh

George Winokur '47
Washington University, St. Louis

Joseph Aponte '48
University of Puerto Rico

Robert Chamovitz '48
University of Pittsburgh

Guy Donald Niswander '48
Dartmouth Medical School

William G. Thuss, Jr. '48
University of Alabama

Edward W. Stevenson '49
University of Alabama

The 50's

Frederick Shepherd '50
University of Louisville

Law Lamar Ager '51
University of Alabama

Ricardo Mendez Bryan '51
University of Puerto Rico

David M. Kipnis '51
Washington University, St. Louis

Mario R. Garcia Palmieri '51
University of Puerto Rico

Joseph John Noya '54
Tulane Medical Center

Henry B. Higman '55
University of Pittsburgh

Charles Benton Pratt, III '55
University of Tennessee

C. Clark Welling '55
University of Utah

Jerald H. Bennion '56
University of Utah

Paul V. Slater '56
University of Utah

Wilfred F. Holdefer, Jr. '57
University of Alabama

Francisco E. Oliveras '57
University of Puerto Rico

Lynn B. Robinson '57
University of Utah

Richard R. Flynn '58
University of Utah

Richard H. Keller '58
University of Utah

Gilbert Isaacs '59
University of Pittsburgh

The 60's

Franklin Ross Hayden '60
Tulane Medical Center

William E. Latimer '60
University of Utah

Morton Smith '60
Washington University, St. Louis

Andres Acosta '61
University of Puerto Rico

Joseph C. Battaile '61
University of Tennessee

Carlos Girod '61
University of Puerto Rico

David B. Paul '62
University of Pittsburgh

Verne Peterson '62
University of Utah

Hernan Padilla '63
University of Puerto Rico

Brian L. Rasmussen '63
University of Utah

Gustavo Alberto Colon '64
Tulane Medical Center

Sigmund L. Sattenspiel '65
Mt. Sinai School of Medicine

Dana H. Clark '66
University of Utah

W. Bryan Staufer '68
University of Pittsburgh

missing alumni

The following alumni are listed as missing by the Alumni Office since no address or record of death is on file. Alumni having any information about the following graduates should notify Col. Francis O'Brien, Medical Alumni Association, 201 Davidge Hall, Baltimore, Md. 21201

John Wirt Graham, M.D. '26
Hillard V. Staten, M.D. '27
Thomas P. Thompson, M.D. '27
Louis J. Levinson, M.D. '28
Paul F. Gersten, M.D. '30
T. H. Tomlinson, Jr., M.D. '32
Frank R. Stephenson, M.D. '32
Matthew M. Cox, M.D. '42
Maurice I. Shub, M.D. '42
H. Rellinger Stafford, M.D. '43
Daniel Bair Lemen, M.D. '45
Joseph Weintraub, M.D. '45
Michael J. Coffey, M.D. '47
James E. Anthony, Jr., M.D. '47
Jay Lewis Bisguyer, M.D. '50
Michael C. J. Sulka, M.D. '50
Martin Wm. Treiber, M.D. '53
Jules B. Edlow, M.D. '53
William R. Cohen, M.D. '56
Samuel J. Mangus, M.D. '56
Harry J. Fitch, M.D. '58
David A. Perras, M.D. '59
William E. Latimer, M.D. '60
William R. Fleming, Jr., M.D. '61
Mayer M. Katz, M.D. '62
Alfred S. C. Ling, M.D. '62
Richard J. Belinic, M.D. '63
Harry A. Spalt, M.D. '63
Mona B. S. Belinic, M.D. '64
John H. Axley, Jr., M.D. '65
Jeffrey L. Brown, M.D. '65
Robert N. Whitlock, M.D. '65
Richard S. Glass, M.D. '66
Augustin K. Gombart, M.D. '66
Thomas M. Hill, M.D. '66
James W. Spence, M.D. '66
Elizabeth A. Abel, M.D. '67
Larry B. Feldman, M.D. '67
George A. Lapes, M.D. '67
Howard R. Rosen, M.D. '67
Donald E. Novicki, M.D. '67
Robert Brull, M.D. '68
Michael J. Deegan, M.D. '68
Charles C. Edwards, M.D. '68
Frank A. Franklin, Jr., M.D. '68
William N. Goldstein, M.D. '68
Charles J. Lancelotta, M.D. '68
Steven F. Manekin, M.D. '68

necrology

Samuel Watson Page, '02 P & S, Greenwood, S.C., died February 10, 1971.
James G. Blower, 05 P & S, Akron, Ohio, has died.
Anthony W. Lamy, '08 P & S, Elizabeth, N.J., died February 1971.
Simon Wickline Hill, '09, Regent, N.D., died June 2, 1970.
J. D. Dinsmore, '09 P & S, Nova Scotia, Canada, has died.
Glen G. Haight, '10 BMC, Audubon, Minn., died March 27, 1971.
Manuel R. Janer, '12 P & S, New York, N.Y., has died.
Jesus Maria Buch, '13, Baltimore, Md., has died.
Arthur Casilli, '14, Elizabeth, N.J., died March 10, 1971
Manuel E. Pujadaz-Diaz, '14 P & S, Santurce, Puerto Rico, died January 5, 1971.
John Edward Davis, '19, Welch, W. Va., died April 19, 1970.

THE 20's AND 30's

Rhea Richardson, '20, Macon, Ga., died April 4, 1971.
George R. Joyner, '21, Suffolk, Va., has died.
Walter B. Parks, '24, Gastonia, N.C., has died.
Alexander A. Doerner, '35, Pacific Palisades, Calif., died May 16, 1970.

THE 40's

William Herbert Morrison, '41, Baltimore, Md., died February 13, 1971.
Granville Hampton Richards, Jr., '43, Port Deposit, Md., died March 7, 1971.
John B. Davis, '45, Frostburg, Md., died October 11, 1970.
John L. Rosenthal, '45, Norfolk, Va., has died.

BULLETIN

university of maryland school of medicine

Policy—The Bulletin of the School of Medicine University of Maryland contains scientific articles of general clinical interest, original scientific research in medical or related fields, reviews, editorials, and book reviews. A special section is devoted to news of Alumni of the School of Medicine, University of Maryland.

Manuscripts—All manuscripts for publications, news items, books and monographs for review, and correspondence relating to editorial policy should be addressed to Dr. John A. Wagner, *Editor,* Bulletin of the School of Medicine, University of Maryland, 31 S. Greene Street, Baltimore 1, Md. Manuscripts should be typewritten double spaced and accompanied by a bibliography conforming to the style established by the *American Medical Association Cumulative Index Medicus*. For example, the reference to an article should appear in the following order: author, title, name of journal, volume number, pages included, and date. Reference to books should appear as follows: author, title, edition, pages, publisher, and date published. A reasonable number of illustrations will be furnished free.

Reprints—At the time the galley proof is returned to the author, the publisher will insert an order form for reprints which are purchased directly from the publisher. Any delay in the return of this order form may result in considerable additional expense in obtaining reprints.

Alumni Association News—The Bulletin publishes as a separate section, Items concerning the University of Maryland Alumni and their Association. Members and friends are urged to contribute news items which should be sent to Dr. John A. Wagner, *Editor,* Bulletin of the School of Medicine, University of Maryland, 31 S. Greene Street, Baltimore, Md. 21201.

Subscriptions—The Bulletin is issued 4 times a year. Its subscription price per annum, post paid is $3.00; single copies, $.75, when available. Active members of the Medical Alumni Association receive the Bulletin in connection with the payment of annual membership dues. Non-Alumni subscriptions should be made payable to the University of Maryland and remitted through the office of Miss Jan K. Walker, *Managing Editor.*

Advertising—The Bulletin accepts a limited number of advertisements. Rates may be obtained upon application to Miss Jan K. Walker, Managing Editor, Davidge Hall, School of Medicine, 522 W. Lombard St., Baltimore, Md. 21201.

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Scott Schumaker and Philip Szczepanski.
Design: Bruce Laine

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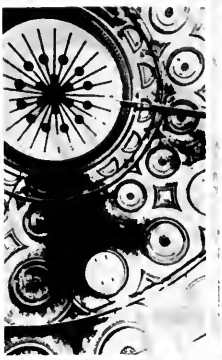
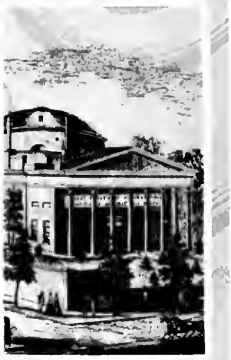
BULLETIN

university





Left — Ceiling of Anatomical Hall gives the illusion of being coffered by the decorative plasterwork which has rosettes of of anthemion, circles, semicircles and filler lozenges. Right — Ehler's woodcut of Davidge Hall as it appeared in 1873.

BULLETIN

PUBLISHED FOUR TIMES A YEAR, JANUARY, APRIL, JULY AND OCTOBER JOINTLY BY THE FACULTY OF THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF MARYLAND AND THE MEDICAL ALUMNI ASSOCIATION.

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KODAK TRI X PAN FILM

six minutes later

Francis Rackemann

The radio call was urgent. A motorist was trapped in a wrecked automobile on busy U.S. Route 40 near White Marsh.

Miles from the accident scene on a routine patrol was a Maryland State Police helicopter. Responding to the State Police dispatcher's call for help, the helicopter landed within minutes only 150 feet from the wreck on the highway which had been blocked to traffic by ground police.

The motorist, whom firemen had to extricate from the car which had hit a telegraph pole, was in deep shock.

The helicopter pilot and his observer-medic partner went to work. One converted the four-passenger helicopter into a flying ambulance and the other prepared the victim for removal from the scene by placing her on the aircraft's respirator.

Six minutes later the helicopter with its unconscious patient landed atop the multi-story parking garage adjacent to the University of Maryland Hospital. Waiting at the heliport were an ambulance and a medical team from the University's unique Center for the Study of Trauma.

As the ambulance sped down the ramp and towards the University Hospital's Emergency Room entrance, a doctor and a nurse from the shock treatment center were already administering aid and making preliminary evaluations which would help in making critical decisions about the patient's care.

At the ambulance entrance a bold red line painted on the floor guided the arriving team and victim to the special red brick building attached to the main hospital and up to the fourth floor recovery area which is the heart of the center.

The large room contains a raised island nursing station overlooking a dozen surrounding cubicles each equipped with modern breathing, suction, monitoring and other lifesaving devices. Three doctors, two nurses and a technician who were already checking other critically-ill patients in the unit gathered around the new admission.

Lifting the woman carefully onto a special bed, one doctor connected an automatic breathing machine to the woman's windpipe. Another inserted a long plastic tube in an artery to measure blood pressure, while a third person inserted a tube in a vein with its tip reaching the heart. Samples of blood and urine were taken for analysis in the laboratories operated around-the-clock for just such care.

Watching the teamwork was Dr. R. Adams Cowley, director of the nation's first fully-equipped shock trauma center.

"Violence is on the increase and getting worse. Injuries are becoming more serious and there's no end in sight," said Cowley adding: "With severe multiple injuries, you live or die depending on how rapidly you are picked up and transported to a facility where there are adequate personnel and equipment to care for you immediately on arrival."

Editor's Note: Francis Rackemann is a staff writer for the Baltimore Evening Sun and has written several articles about the shock trauma unit at Maryland.

A buzzing noise sounded and a nurse went quickly to a patient whose lifesaving machine needed adjustment.

"Our first job," said the director, "is to keep the severely injured and critically ill alive. Then comes diagnosis and treatment."

Trauma is the medical term for injury caused by blows, cuts, blasts, suffocation, shock, poisons and burns. In severe cases, shock is accompanied by a sharp drop in blood pressure which leaves a victim pale and white or blue if the lungs are affected. Lack of sufficient oxygen in the bloodstream often leads to a breakdown of kidney, liver, lungs, brain, heart or other vital organ functions.

University Hospital's Center for the Study of Trauma is a four-story, red brick building attached to the main hospital which was designed by Cowley and his colleagues.

Equipment in the $2.5 million building ranges from a huge hyperbaric chamber in the basement for administering pure oxygen under pressure to patients with gangrene to equipment that automatically records respiration, blood pressure, pulse, temperature and the amount of oxygen consumed by the body among other physiological functions.

Research labs are on the third floor and the fourth is devoted to the shock-trauma recovering unit where critically ill emergency cases are treated. The building is so designed that at least three more floors can be added.

The center which is manned 24 hours per day has on its staff 71 doctors, nurses, laboratory and other technicians and researchers. Members of the staff often skip lunch and remain on duty beyond their regular hours just to keep their patients alive.

Miss Elizabeth Scanlan, an associate director of the nursing for the main hospital, is head of the center's nursing staff. She helped organize the center's program.

Of Miss Scanlan, one physician commented: "She has developed a staff of nurses who are devoted to the kind of care not often seen. Our nurses work hard and we cannot compensate them very well, but you can see the satisfaction of a job well done against overwhelming odds."

The center staff gives high praise to the Baltimore Fire Department ambulance service and to the Maryland State Police helicopter crews for their "fast, efficient and cooperative services."

Most of the more than 400 patients admitted to the unit during the past year were brought by ambulance, but Dr. Paul Hanashiro said that without the helicopter service "85 per cent of the 140 patients brought to us would have been dead in a general hospital environment."

Maryland State Police acquired its first helicopter in 1960. It was traded in 1968 for a Bel JetRanger. A second helicopter was purchased in January 1970 and a third went into operation in June 1971. The helicopters costing $100,000 each average 130 hours a month of flying time.

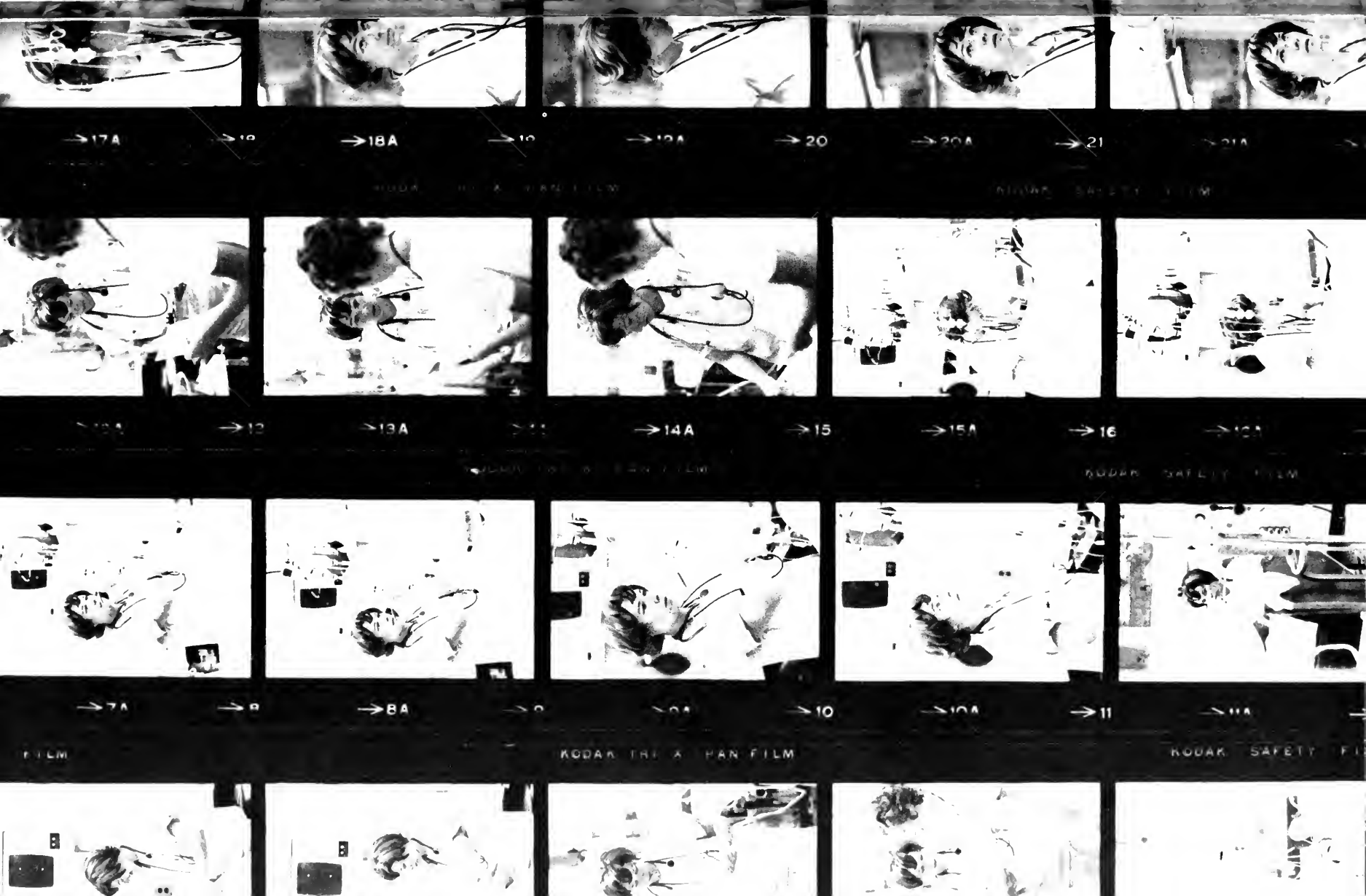
The unmarked aircraft are used also for tracking criminals and lost people, solving traffic jams, photographic missions, spotting lost boats, oil slicks, stolen vehicles, rescuing people, searching for underwater objects, bodies, making engineering studies and transporting emergency blood and organs as well as patients.

Patients remain at the shock-trauma center anywhere from three days to as long as three weeks. A man with lockjaw must be kept paralyzed with drugs to keep him for convulsing until his tetanus problem disappears.

Treatment with pure oxygen under pressure in the center's basement hyperbaric chamber saved a man's arm from amputation after gangrene set in stemming from a broken thumb.

Only the most severely injured or critically ill are admitted to the shock trauma center for treatment.

"Many of these patients would not be alive today if we didn't have this program," concluded Cowley.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shock trauma nursing

Judy Bobb, R.N.

Judy Bobb, dressed in a pink surgical gown, carefully reconstructed the actions of a shock trauma nurse during a shift in the intensive care unit when her thoughts were interrupted by a familiar sound . . .

That's one thing. You become extremely aware of any helicopter that is in the air. I've heard every helicopter that's flown over the unit since I came last October. I always wonder if he is bringing a patient; if he isn't, why isn't he?

It's fascinating. You learn to identify your own choppers and when you see them in the air, if it's the right color, the right kind and he's heading for the city, you figure he's been up to something, or he's going to get involved in something.

Sometimes we hear them from the unit and you can just imagine in your own mind what is going on. When you have to meet a helicopter at the helipad, that's exciting. It's the kind of thing that you'd like to have film footage of that you could show all your family—you crawling under the chopper. It often seems dramatic, but our actions are vital to the life of the victim.

Editor's Note: Miss Bobb received a bachelor of science in nursing from the University of Colorado. Before coming to University Hospital in October 1970 she worked in intensive care units at several Denver, Colo. hospitals.

For a brief moment the young nurse's speech quickened and became full of anticipation, but after the helicopter could no longer be heard she returned to her recitation.

As much experience as I have had in coronary care—two years in a very quiet, small intensive care unit—I was use to shock trauma and all the equipment. But here, the unit as a whole is overwhelming. You walk in and you don't know what to look at first; yet you're looking at everything and you see all of these people hanging in traction with lines all over their bodies and people scurrying about.

Admission is one of the hardest things about working in the unit because you have to satisfy everyone at the same time and still do the things you have to do. Most of the time you work on a one-to-one basis. One nurse is usually responsible for a single patient; whether you have more than one patient depends on the load. Sometimes it gets so busy that even two of you can't handle the load at one time.

After working in the unit a while you can tell when it's about time for an admission. It's a very nebulous feeling and it's not something that you can define by any means. But, you can almost predict what type of admission will be made. For instance, admissions for the hyperbaric chamber come in spurts and after a certain period of time everyone starts looking for another. Usually within the week we get one. It is very odd.

Sometimes when you go to work you just know that you aren't going to get anybody new—it's not the right weather, or the right kind of any number of things that you can't define . . . it's a sixth sense. Or, you know that the chopper is going to be flying that night and that he's going to bring somebody in. If one person gets the feeling, then everybody starts watching for an admission. One nurse in particular is good at predicting an arrival. If she says there is going to be a patient, we'll have an admission within 24 hours, you can guarantee it. If she says it's going to happen it will. She's never been wrong since I've known her.

Usually a resident, a nurse or a corpsman meet the incoming helicopter and take with them a box of emergency drugs and an oxygen tank. You meet the patient, make a fairly brief evaluation and then transport them to the ambulance. The ambulance then drives the victim, the resident and the nurse to the emergency room and from there the group goes up to the unit.

We've had as little as five minutes notice from the helicopter that they are coming. One unit is set up all the time. All the lines are there, everything that you need to admit the patient and take care of him, except his medicines and all of his intravenous (I.V.) solutions. If you suspect that another patient is coming, a second unit is readied so that you're one ahead. You always have to stay one jump ahead because it takes from five to ten minutes to get a unit ready. Working by yourself it could take as long as 20 minutes.

The patient is immediately transferred from the stretcher to a bed, and then comes a rapid period of evaluation where a lot of decisions are made in a very short period of time. After the initial crises you start doing the definitive things like giving blood, deciding if they need x-rays, surgery, cast or traction.

For example, we had one case with a stab wound in his chest. He was up in surgery within 40 minutes and within that time we cannulated him; but a venous line in; put an arterial line in; got all his blood samples; checked his blood maybe eight or ten times; hooked him up to the monitor; put another chest tube in; put a Foley catheter in; typed and crossed him for seven units of blood; gave him about four units and sent him up to surgery, with a couple of phone calls off and on. And, it took me, two corpsmen and a medical student to get all this done. When you get an admission everybody congregates in the same place and you end up with one unified action. Everyone is doing what is absolutely necessary to stabilize the patient immediately.

If during the evening you get a critical admission, you must juggle all of the patient assignments. If the new patient is fairly stable, then often this reassignment isn't necessary. Most admissions take a minimum of an hour out of your time, you can't leave the bedside. This often takes the remaining time left after your regular responsibilities. If you must be with a critical patient continually, another person will watch your patients along with their own.

During the first couple of hours you stay pretty close to the patient and everyone is monitored. The parameters of the monitor can be set at very close limits so that even a slight change will alert you. When the alarm goes off somebody checks. After you have worked there a while you can tell individual patients—the alarm is all the same sound—but you can tell whether it's an alarm that you have to run for because something bad has happened or whether somebody has just rolled over, scratched in the wrong place, pulled the lead off or whose temperature has gone up.

If the patient is very critical and extremely unstable you will probably spend the rest of the night there until relieved by the next shift. If the patient should have a cardiac arrest, again the whole team comes through.

The first time someone arrested on me there must have been four nurses and a doctor there; the minute the patient was stable everybody disappeared. There was blood all over the room, the patient needed to be turned, the bed needed to be made, and I had medicines to get, but everybody was gone. I can remember standing there saying, "Where did you all go? Come on, I'm not done yet, I need some more help." I didn't really, but the feelings of desertion were there and it was a strange experience.

Most of the rest of the time you can lose yourself by going off into a corner where you see no one except for the resident who is taking care of that patient for the evening. If you get a critical patient and there is an emergency, people emerge from all corners and focus on the one patient. The minute the emergency is over, they'll disappear again.

Each person adjusts to the unit at their own rate. It takes about six months before you can function without close supervision. You don't know everything, but you know where to find almost everything and you know how to find out about things. This is because of the extraordinary relationship that exists with the residents.

The typical nurse-doctor relationship is that the doctor is your boss, so to speak. You take his orders and you question them only when you are within your nursing rights to question them. But basically, you don't have very much to say about what goes on.

In shock trauma you are much more on an equal level. When you get new residents in who aren't familiar with the routines of what needs to be done, you end up being their teacher. This is an odd relationship for most nurses to be in —the role of being responsible for seeing that the resident does it right. The decisions are still his to make and his is the medical aspect of it. Sometimes you do question what he is doing and you are expected to be, not just one jump ahead of him, but at least on an even keel with him—to know some things that you do and some things that you don't do. You end up with a much greater responsibility for knowing what is going on with your patient. It's an odd relationship.

With attending men, generally you go to them with a question instead of giving them answers. However, after residents on the shock trauma unit have been around awhile you end up more on an equal par basis. He calls on you for information that he needs, and you do the same with him.

Medical students are generally unobtrusive since they are there to observe. However, on occasion you get involved in some of the conferences on patients. If you have the time you can sit down or go around with them as they look at the patient, look at the patient's lab work and evaluate all the things that have happened. I have learned more about what x-rays should look like since I have been there than ever before in my nursing experience.

You begin to pick up trends because the things you don't see frequently in other nursing services you get frequently because of the type of patient admitted in shock trauma. You begin to classify a certain group of symptoms and when a new patient comes into the unit you watch the course he's taking then decide among yourselves how long he is going to be in the unit, whether he's going to survive nicely, whether it's going to be a stormy course . . . things of this nature.

Another thing nurses get involved with is what they call intensive care psychosis. Some patients just don't react favorably to being confined in a unit where they don't get much sleep; somebody is always disturbing them for medications; they are full of holes where they have been stuck with needles; they put in a trachea for breathing and they can't talk and they sedate the patient. The patient loses all sense of time and place.

We also see people who withdraw because they cannot stand all of the noise and pressure, plus their own fears, their own worries . . . so they withdraw into themselves and then you don't know why they are doing that either. It is really a hard thing to care for.

Some patients leave the unit and their recovery is fantastic. It's as if immediately after they go out the door, they start getting better. With a new stimulation, a new environment and people to talk to, new sounds, new colors, new lights and shadows . . . One girl just recently was in a fairly deep coma and the minute she left us she started talking

again, started recognizing people and laughing. It was fantastic because she wasn't doing any of this when she was with us.

When we come on duty we are briefed on what has happened on the unit previously and then are assigned patients. Tests and other routine are usually established on an hourly basis. There are three categories of patients and they receive care accordingly. You just go around in a circle and finish one circuit then it's time to start another. Usually you have about ten minutes out of every hour to do a few of the nice things. The time varies tremendously with the patient load.

One of the major differences between medicine and nursing is in the approach to the patient. Nurses tend to get involved and they don't see patients as cases or diseases quite as much as doctors do. Very often, especially on grand rounds, the chief of the service and the residents talk about the patient, but they never talk to him. This is upsetting to me as a nurse because that person is a person. I may not like him, he may be a difficult patient, but he is a person nevertheless. How would you feel is somebody was talking about you, they don't ask you anything and they don't tell you anything. When they come around and you're asleep, they start poking and pricking you full of holes, testing your reflexes and taking off the dressings . . . I resent this for the patient's sake. However this is fairly typical of a teaching institution. It has always bothered me and I guess it always will.

Sometimes the strain gets bad . . . you see people die or just get worse . . . people that you don't really know but like as persons. There are times when you might lose four or five patients in a short period and you get very depressed. You wonder what the heck you are doing; who does everybody think they are, and you think you are not doing anything for anybody.

There are people you can accept will die because you can just look at their injuries and know they don't have much of a chance. Then there are some patients, who you think in the beginning were going to die, look like they are going to make it and you think maybe you could save this one . . . then something happens, it really hurts. You feel a personal loss and I think everyone feels a little sense of defeat. You know them as nice people . . . that's a nursing nice.

A nursing nice means people that smile, people who don't pull out of restraints and people that don't demand a lot of your time. It's somebody who doesn't get in your way, somebody who lets you do what you want to do and when you want to do it, according to your schedule, doesn't interfere and doesn't ask for anything special.

It's nursing with a uniqueness that can't be duplicated.

medical student's view

Clayton Raab

It's enough to scare you to death . . .

Clayton Raab, a sophomore medical student, had some intensive care exposure while a nursing assistant on the pediatrics intensive care unit during his freshman year, but he found quite a different situation when he had a summer position in the shock trauma unit.

Working in the pediatrics intensive care unit I was around many crises, but we only had maybe one intravenous (I.V.) line and a respirator. In shock trauma there are lines for I.V. and central venous pressure as well as arterial lines . . . it was just enough to scare me to death. There are tubes all over and you are expected to move around the patient and help change his bed.

The first day I felt very insecure especially with all the tubes. I was afraid that I would pull one out unintentionally. I was given a tour and then my training began. Now I'm working in the unit seven nights a week.

A special type of care is involved on the unit as well as having to work around a lot of complicated machines. The nursing procedures I learned on the pediatrics ward allowed me to concentrate on details and probably made it easier for me to learn faster than other medical students who don't have experience. Even after only a month, I was able to take a patient on my own. You aren't allowed to give medications but you can run I.V. fluids. Working the 11 p.m. to 7 a.m. shift is quieter than during the day and the nurses have taken an interest in helping me learn what is to be learned. My transition into the unit wasn't as bad as I originally thought it might be.

Your relationship with the nurses is unique. It depends upon how critically ill the patient assigned to you is and what is happening elsewhere in the unit. When times get very busy you are given a little more responsibility than originally because there is nobody else. I guess that is actually a way of growing in responsibility. You can't learn anything unless you've actually done it. You'll never learn about running fluids by being told and working under a nurse's supervision you actually can learn how to do things yourself.

Many of the patients come into the unit with trauma, but they are further traumatized by having people fill them full of needles . . . even the intensive care they are given creates problems. It's a matter of so much care constantly. You can't sleep because you are being turned or given medications and the lights are on. We turn them down at night so it helps the patient get some rest. Some of the patients aren't as critical as others but need supervision, so they are in the unit.

Editor's Note: The father of two, Clayton Raab is beginning his sophomore year in medical school. He received his B.S. in zoology from the University of Maryland, College Park.

Families of patients are discouraged from coming in the unit. To see all these tubes and wires, all the machines going . . . it just more or less intensifies the parent's anxiety. For instance, if a doctor told you that your son was fine after open heart surgery and you saw him with an intertracheal tube in his throat and wires all over him, you would think he was just about dead. It's a good idea to keep people out.

It is possible to get involved, but you can't allow yourself to become too involved with a patient. I have two children and have seen kids on the pediatrics intensive care unit die. I was surprised that it didn't upset me . . . it's rather a strange sensation. I thought I'd really feel something emotionally for these people and especially the kids, but you really don't. Can you really afford to?

Working in the unit also has made me sensitive to accidents. You wouldn't catch me on a motorcycle because of what I have seen on the ward. There are a number of automobile accident victims on the unit too. But we also have other patients like those who have had open heart surgery. You would picture the unit full of badly injured people, but often times there are those who just need intensive nursing care or they can't find room for them in another unit.

When word of an admission is received the cubicle is made ready and the team goes to meet the helicopter. It's an eerie feeling, early in the morning when it's twilight and you see the little light on the helicopter coming in out of the sky. Everybody is in their pink gowns and it all seems like something out of a science fiction movie. In terms of an emergency, things are handled quite calmly and efficiently.

This experience has vastly increased my appreciation of nurses. Because of my experiences in both units I have shaped some strong opinions about the type of nurses that I would like to have looking after my patients when I'm a physician.

Working every night as I do I have a chance to quiz the nurses about things as they rotate through the ward. During vacation nurses from other services work on the unit and I have learned many different aspects of nursing from them. You can appreciate the lack of knowledge and the amount of knowledge that some nurses do or don't have. And, you can see just how serious it could be unless you know what should be done and what is considered good care for the patient. The nurses are given a great amount of responsibility by physicians and know a fantastic amount of medicine. They certainly have taught me a lot.

It's a fascinating place to work and learn.

no better place to learn

Sonia Hughes

During my junior year I was working in a pediatric care study with a little boy who had transposition of the great vessels—his aorta and pulmonary artery were switched when he was born. He required a palliative repair and later had open heart surgery which I watched. Afterwards I visited him in the shock trauma unit.

Noting the care given patients in the unit, Sonia Hughes decided that perhaps this type of training would enhance her nursing experience. She is the first nursing student to work in the unit.

This is a valuable learning experience. Everyday I learn something new. However, everyday I become a little more frustrated at what I don't know, but people don't condemn you for your lack of knowledge. You can ask seemingly the dumbest questions and someone will take time to explain even if they must repeat themselves five times. And, there are extensive procedure manuals which explain what is to be done.

Certain procedures done in other parts of the hospital are done in the unit regularly and there is more opportunity to follow the status of a patient. Working in the emergency room you see the patient briefly and he goes to another floor. In the unit you deal with the patient on an emergency basis, he may go to surgery, but then he returns to the unit for care.

A very unique aspect of shock trauma nursing is learning to know the expectations and limitations of the equipment used. They teach you how to autoclave and clean the machinery as well as explain how it should function properly. You must know the workings of the equipment and be able to spot something faulty which may be critical to the patient. Before a respirator is used it is always checked by the nurse. It's important because a respirator can kill a patient if not used correctly.

One day an admission was made while I was there. Two medical students and I stood there and watched. I thought: I'll never be able to do anything, especially that quickly. But it takes time, and I'm able to do more each day.

Many of the people are young and in some ways I relate to them. It affects you no matter what age you are when a young child or person is injured or ill because he has not yet lived a full life. This is because of the value society places on youth. An older person, you may think probably has lived a good life, but you ask: 'Why did this happen to a child?' You also might think: 'I've been in that circumstance and it could have been me.'

For example, there are two patients lying in cubicles next to each other—one is a child and the other an adult. You feel for them both and you want to give them both good care. However, you see the child lying there attached to a respirator, he's in critical condition and his prognosis is questionable . . . it tears you up a little more.

Often times you think a patient is recovering and when you return to duty a few days later he has died. This happened to a patient I had. He was taken off the respirator and when I came back he was going back on it; he died the next day and I never expected that so soon.

Driving and riding in a car makes me aware more than ever to be cautious. I often convey my sensitivity to others by describing what I see in the unit. You really respect an automobile after seeing so many accident victims—people who aren't even dangerous drivers. It's the other fellow you must look out for. An automobile is a dangerous weapon, more so than I ever thought before.

Editor's Note: Miss Hughes is a senior nursing student. Her father, Dr. Lloyd Hughes, is an anesthesiologist in Prince George County.

Working service time on a service floor was frustrating because I wanted to become more involved with my patients and there wasn't time. I hardly knew their names. I was just doing a little bit here and a little bit there. I felt like I was spread so thin that I wasn't doing anything effectively. Working in the shock trauma unit is entirely different. There's the one-to-one relationship with your patient.

Working on the unit requires a desire to learn, because there is no way that you are not. In order to give good care you have to keep up, you have to be aware of what's going on with your patient. It's not something that you can do from 9-5 p.m. A knowledgeable nurse or a good nurse is aware of her patient's needs. She is not only aware of facts, but how they relate to him and she has a working knowledge of equipment as well as working physiology—how the patient feels, what is going to influence his recovery or his stay in the unit. She has to be thorough.

A nurse should always question and know why something is done for her patient. There is more rapport in the shock trauma unit then in any other unit. It's much more of a teaching situation and they are much more willing to teach you. They know that I'm a nursing student and they know that I don't have much knowledge of the subject. Most of the personnel have worked there for quite a while and have had quite a bit of experience. One day I asked a doctor what was wrong with a child who had open heart surgery. I wanted to know what the congenital defect was. He drew me a picture, diagrammed and explained the situation to me.

Because I am the first nursing student to work in the unit, many of my classmates question me about what happens there. They are curious who is being brought in by the helicopter. However, many of them comment that they wouldn't work in the unit.

Before beginning work in the unit I had certain apprehensions. After accepting the job, I thought perhaps I had taken a wrong step. I had done some procedures, but if you've done something a couple of times you concentrate on the procedure and not the patient and his reaction. I didn't have much experience.

I also thought that the nurses were superior and that they would not want to be bothered by a student. I was pleasantly surprised. They are good about teaching, they understand that I don't know much, and they are willing to teach and help me learn. They're great! I'm really glad I did it and I can't see why anyone would not want to come and work in the unit. Because, as far as nursing care, there's no better place to learn.

air-evac helicopters help save lives

Lt. Frank Hudson

R. A. Cowley, M.D.

"Since some accidents will always occur, steps must be taken to minimize human losses resulting from them. . . ."

Over the years, we have watched persons with life threatening injuries or illness die at the scene awaiting an ambulance, die on their way to the nearest hospital or die in that hospital due to inadequate facilities, personnel and equipment to offer the necessary immediate treatment and care for survival.

A study in which the deputy state medical examiner participated indicates that roughly 40 per cent of the persons killed in Maryland die in hospitals . . . and half of these could likely have been saved if promptly and properly diagnosed and treated. One concerned researcher's comment sums up the problem:

> *It is essential that we strive for a reasonable balance between the need for prompt treatment and the better treatment which may be possible if the injured are taken to trauma centers.*

Still, present policy seems to be to transport most injured, without regard for the severity of their injuries, to hospitals whose chief distinction is being nearest the scene. When or if the receiving doctor feels the injury is too severe to be treated in his facility, the patient is transported to another hospital (provided he has survived thus far). This adds up to an appalling waste of time, which can be ill-afforded by the person with the life threatening injury or illness.

To help overcome this problem, the University of Maryland Hospital developed the Center for the Study of Trauma thus providing critical patients the best immediate treatment available in the country. Treatment centers of this caliber are enormously expensive and difficult to staff. As a result one cannot expect rapid development of additional facilities of this type; therefore, it is imperative that safe, rapid transportation be provided persons with life threatening illness or injury so the services of the center are made available to them.

Medical authorities tell us that we should strive to have the severely injured in a well-equipped and staffed medical facility soon after they have been injured if complications from their injuries are to be reduced and their lives saved. Indications are that 30 minutes from the injury to definitive medical treatment is usually acceptable with one hour being the outside practical limit. With the surface traffic congestion of today and insufficient medical facilities equipped to handle the severely injured, the lightweight high-speed helicopter is the most effective and economical way to avoid congestion, cover the distances involved and assure that highway injured receive needed treatment in time.

The State Police are duty bound to assure that the lives and safety of all persons in the state are safe-guarded and when injured or ill come under their care, they receive the best handling possible under existing conditions. Their helicopters provide for transport of critical persons as an extension of normal police helicopter operations. This provides a sound fiscal base as existing know-how, facilities, equipment and personnel are utilized to the maximum.

Editor's Note: Lt. Frank D. Hudson is chief of the aviation section in the Maryland State Police.

The troopers assigned to the helicopters have completed the Red Cross advanced first aid course, receive advanced ambulance attendant training from the Fire Service Extension, University of Maryland, and receive an intensive week of training in the Shock Trauma Unit.

Our cooperative program, one of the few successful programs of this type in the country, has been a simple matter of developing community resources between the university, State Police and the city Fire Department Ambulance Service.

State Police records show that 58,672 persons were injured in Maryland from automobile accidents last year. Of the 787 killed in these accidents, many could have been saved by fast, efficient helicopter service to University Hospital's Shock Trauma Center.

When persons are injured in an automobile accident, volunteer fire company ambulance crews sometimes decide incorrectly to take the most serious to the nearest hospital, even though a helicopter is available.

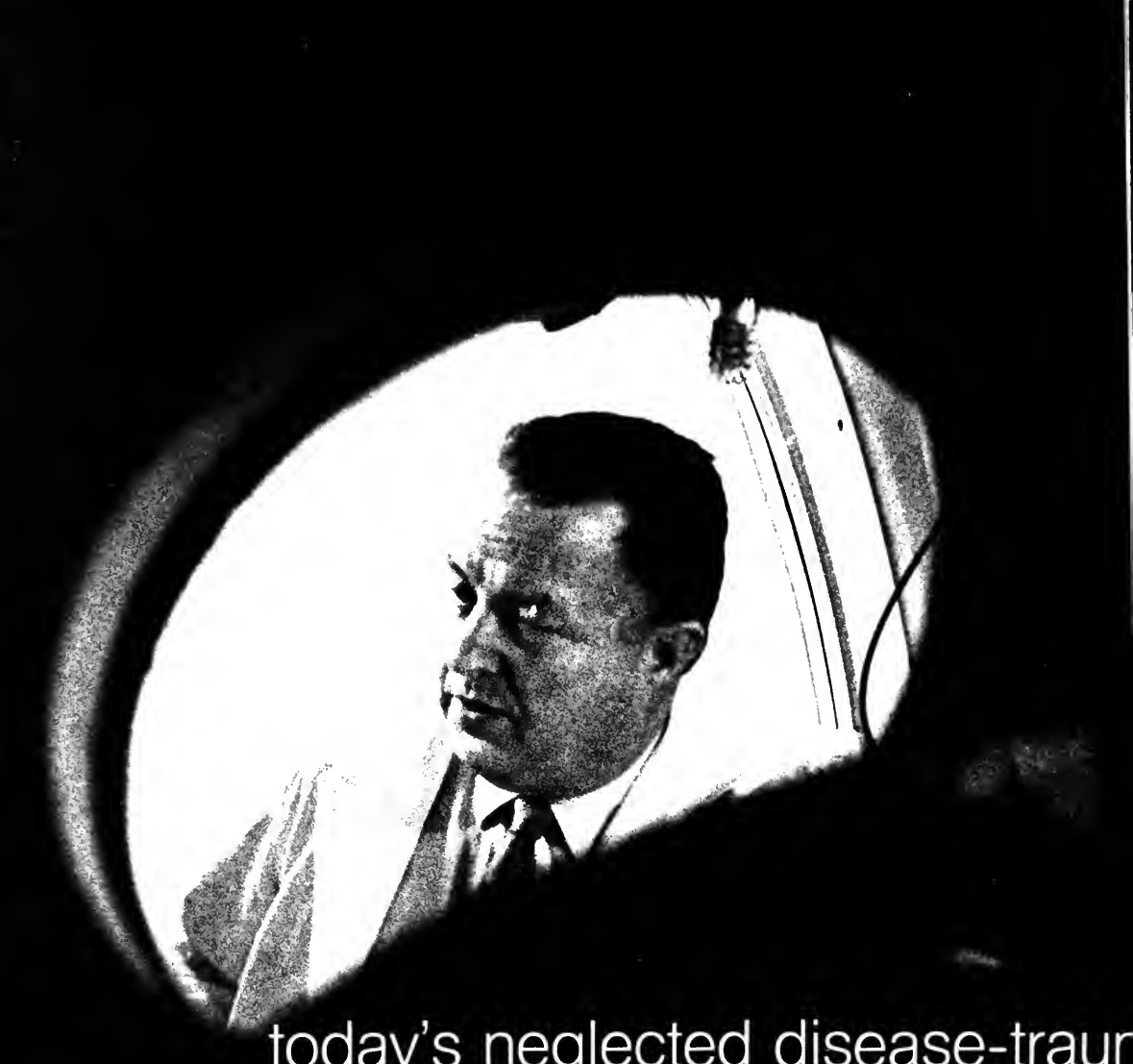
Such a case happened earlier this year when the helicopter landed near the scene of an accident. The ambulance crew decided to take the most serious case to the nearest hospital. When the State Police helicopter crew delivered the less severely injured victim to University Hospital, the county hospital where the other victim was taken called for the helicopter because they did not have the necessary life-saving equipment. But it was too late.

With a top speed of 150 miles per hour, helicopters can fly from the Maryland-Pennsylvania line to University Hospital in less than 15 minutes and less than an hour from the Eastern Shore. An ambulance, even with wide-open siren, would require at least twice as much time because of traffic congestion especially on weekends when most accidents occur. An emergency in Cumberland would take only an hour to reach University Hospital by helicopter.

Better service can be provided. The most obvious area that needs strengthening is the education of and acceptance by police, ambulance and medical authorities to the fact that the best interest of the patient must be served. Some units are still guarding what they believe are their prerogatives, thus causing some critical patients to be taken to an outlying hospital (and often held there) instead of going directly to a major trauma unit. Accreditation and categorization of hospital emergency departments could go a long way toward solving this problem. This approach has long been advocated by the National Research Council's committee on trauma and shock.

While we learn to better utilize equipment, personnel and systems, more high-quality emergency facilities with trauma units will be needed. Quick response helicopter service will also be needed statewide. Tentative studies indicate that as few as seven fully-manned helicopters are needed for definitive statewide service.

Why not police helicopters in ambulance service? They complement not threaten surface units. The safety of the few victims demanding helicopter transport is compromised when handled routinely. The police helicopter has been here for years, their crews are vastly experienced in applying helicopter support to civil public service operations. Required communications also have been here for years, the police communications net is one of the finest designated for rapid emergency communications. This is an excellent opportunity for the public to realize a greater return for their investment in government.



today's neglected disease-traur

R. Adams Cowley, M.D.
Benjamin F. Trump, M.D.

Trauma, a killer of 115,000 persons annually roams American society virtually unchecked, picking its victims democratically; without regard to age, race, color, or economic status; and except for the havoc left behind, very little is known about it. The name comes from the Latin or Greek for wound or injury.

While trauma has been with us always, its effect is one of the least recognized and explored problems facing the physician today. Because of the increased tempo of living, it is rapidly changing from endemic to epidemic proportions and the National Research Council now calls it "the neglected disease of modern society."

Every fourth person will have some type of accident this year. Every eighth hospital bed will be occupied by an accident victim. The most pathetic factor is that between the ages of 1 and 37 years, accidents are first in the cause of death, between the ages of 1 and 48 it is second, and if one looks at the overall picture for all ages, it is fourth. In 1970 the National Safety Council estimates that over 49 million Americans were injured in all types of accidents. They also estimate injuries cost the nation $25 billion due to loss of wages, time at work, medical and property expenses.

THE PROBLEM

Severely traumatized individuals are constantly present in large general hospitals, particularly those associated with medical schools such as ours. While we do our best to treat these people, many deteriorate and die. Unlike most patients, who are hospitalized for acute or chronic disease and for whom some type of definitive therapy and care is planned, the accident or emergency ill victim becomes on admission an unwelcome patient since the hospital family is neither prepared nor geared to handle his emergency. He is most likely to be seen by the least experienced house staff physician, the intern, during a period when time is of the essence and ripe clinical judgment is essential for his survival. Perhaps even worse, he is taken from the scene of the accident to the nearest hospital emergency room where there may not be a physician on duty and one must be called.

Today, shock and trauma therapy is often self-defeating for a number of reasons. Good care seems less than aggressive because young physicians who staff emergency rooms are ill prepared to make even the first decisions that may be life-saving. Decisions are often compounded by a compromise with inadequate treatment facilities, by harassment and pressure on a busy Saturday night with the intern, alone "on call," and by the impossibility of consultation because the senior staff member is busy in the operation room or treating another emergency on another floor, perhaps busy in another hospital.

Editor's Note: R. Adams Cowley is professor of thoracic and cardiovascular surgery, chairman of the Division of Trauma, and program director, Center for the Study of Trauma. He received his M.D. from the University of Maryland. He is on the National Research Council committee on hyperbaric oxygenation and shock, member of all major surgery and and thoracic surgery societies and author of over 200 articles pertaining to shock-trauma and thoracic-cardiovascular problems. Benjamin F. Trump received his M.D. from the University of Kansas School of Medicine. He is a member of many professional societies including the International Academy of Pathology and is the author of numerous articles and abstracts in the field.

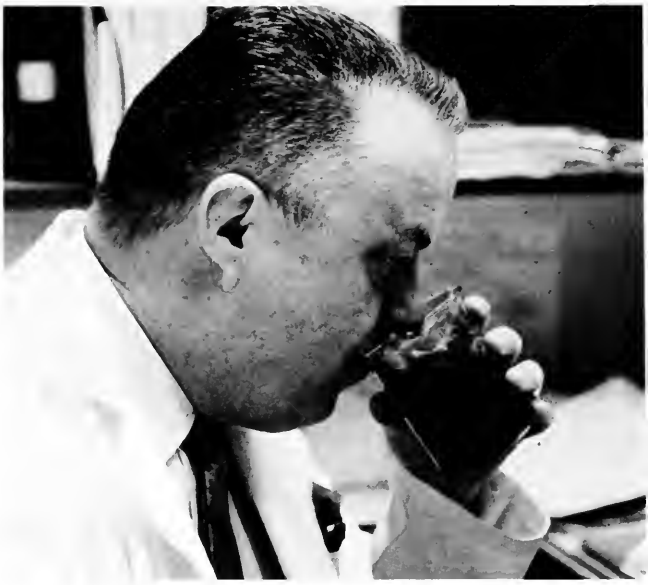
This present dilemma of emergency care can be expected because most medical schools have done little to teach trauma beyond minimal first aid and have structured trauma education at the house staff level. Trauma and shock, as areas of special interest, have attracted few supporters.

The hospital attitude toward this problem is one of apathy in failing to provide the ancillary support so essential for proper care of the severely ill. In most hospitals, the emergency room has become the overburdened community outpatient clinic on nights, weekends, and holidays making good trauma care an impossibility. Chemistry and blood gas laboratories so essential for critical care are seldom available at night and on weekends when the incidence of accidental injury is greatest. Unavailability of proper x-rays, inadequate blood bank service, and the skeletal staffing of physicians and nurses on holidays, nights and weekends, further handicap the experienced as well as the inexperienced physician.

These factors and many others perpetuate the same inadequate teaching, training and therapy experience year after year. It is little wonder, then, that young physicians who are so well trained in most other aspects of medicine are poorly equipped to make proper decisions for resuscitation and emergency care. In the event of disaster or war, their inexperience in this area could have a calamitous effect.

The public attitude toward trauma is one of indifference because in the experience of the layman the physical injuries that are seen are usually sudden, mutilating, distasteful, gruesome and indicative of unlikely survival. As a result, to the layman perfunctory treatment is acceptable! Many people are thus allowed to die by general consent since the physician, the hospital and the public have not accepted their responsibilities in trying to improve this desperate situation.

The total treatment of injured people on the basis of existing information is also inadequate in most situations. Therapy continues to fall into a pattern of guesswork because the physician is unable to study the trauma patient who fails to respond to treatment. Scientific study and observation, along with good care, are synonymous with good therapy and the right of every patient. Inability to collect scientific information on what is taking place under conditions of therapy can only result in mediocre patient care. If scientific observations are not made during this period, the experience is lost and the physician is really not accepting his responsibility to the patient for he cannot otherwise guide therapy in the direction of decreasing mortality and morbidity due to accidental injury.



BACKGROUND

Awareness at the University of Maryland of these problems has resulted in the establishment of a Center for the Study of Trauma, an emergency and acute care facility designed to combine the highest development of patient care and teaching with research facilities that permit investigation in support of therapy for the emergency critically ill.

Since 1956 the program has developed in six major stages:

1. Initially, the project was limited to the animal experimental laboratory. As the studies progressed, two important factors became evident: a) Although animal experimental work was necessary for many baseline and model studies, variance in response of different species indicated the necessity to study injury in man more directly; b) In order to understand the overall structural pathophysiology and biochemical alterations occurring in the organism, it was necessary to expand the program to include multidisciplinary support in order to effectively explore phenomena occurring at the cellular level.

2. On January 1, 1961 an Army pilot Clinical Shock Trauma Unit program enabled a clinical shock-trauma team to develop and make primary investigations into the mechanism and treatment of shock and trauma victims. A two bed C.S.T.U. for emergency care and resuscitation was established and systematized collection of pertinent data on trauma and shock patients on a 24-hour basis was made for the first time anywhere. Experimental data on animals was used for support of observations in humans. A large amount of previously unavailable clinical, physiological and biochemical data on patients in various types and stages of shock and trauma were collected and analyzed which was invaluable in developing treatment and care regimes.

3. A cooperative, rapid transportation system with the Maryland State Police utilizing helicopters for emergency evacuation of the critically ill was established with the completion of our FAA approved all-weather heliport which has been functional since June 1, 1970. A communication system has also been developed to monitor the helicopter in flight, the Shock Trauma Recovery Unit and the Baltimore City Fire Department ambulance service. The latter transports the patients from the heliport to the center. This has resulted in the development of an interhospital transferral system for the severe multiple trauma patient whose problems overwhelm the resources of the small community hospital. As a result, we have become the accident receiving center for the State of Maryland and surrounding areas for patients who demand immediate multidiscipline resuscitation and care. Thus, every severely injured citizen in the state is within one hour of the center. So far, 261 patients have been brought to the center by this modality.

4. By 1963, the development of a background in shock and trauma enabled us to obtain a $800,000 National Institute of Health Research Facility Grant for a Center for the Study of Trauma. A matching sum of $1.2 million for construction of the center was successfully negotiated with the State Legislature. This center was completed in June, 1969 creating a complete self-contained integrated treatment and study unit for severely injured patients.

5. By our acquisition and installation of an IBM 1620 computer to assist in patient care, we have implemented a low cost, on-line automated system for acquisition and management of physiological data from patients in the Shock Trauma Recovery Unit. This system frees the nursing staff from much of the time-consuming record keeping which is necessary for both patient care and research. We have also developed a data storage and retrieval system, utilizing disk files on the IBM 1620 computer. This aides the investigators in selecting and organizing patient data collected from 1962 to the present. The information is used to perform data analysis and to test hypotheses concerning the phenomena involved in shock and trauma. The ultimate goal is to use this modality for total automated patient care and is under continuous development.

6. The trauma program has long been aware that before therapy can advance further, more knowledge must be obtained at the cellular level which means that there must be a study of not only the cell but also of its components. We have been remarkably fortunate in obtaining the interest and support of Dr. Benjamin F. Trump, our new chairman of the Department of Pathology, who plans to develop the Department of Pathology with cell injury as the principle focus of study.

CLINICAL PROGRAM

Our new 12-bed facility, the Shock Trauma Recovery Unit, has completed its first full year of operation. Since its opening, we have demonstrated that we could increase our functional capacity from a two-bed unit to a multi-bed facility without altering our competence to handle critically ill patients. This simultaneously provides a training and educational programs for personnel at all levels—the medical student, the house officer, the nurse, and the visiting staff—and finally, research continues in order to update our current understanding and management of the critically-ill patient.

Although our patient load increased, our overall mortality decreased from 34 per cent to 22 per cent. During the first five months of 1971, we have further increased our patient load and average 40 patients a month with a 20 per cent mortality rate. Admission to the center is restricted to patients with severe multiple injuries, head trauma, overwhelming septicemia, refractory shock, gas gangrene infections, scuba diving accidents or life threatening trauma. Most of these patients die in the general hospital setting. In patients with head injuries alone, we have decreased the mortality rate over 1968 from 79 per cent to 22 per cent.

We are, therefore, meeting our program goals to:

—*Extend knowledge on the severely injured.*

—*Standardize resuscitation measures by: a) making results more predictable since knowledgeable people are not always available to give treatment, b) formulate rules for the care of the emergency ill by taking the newly acquired knowledge and restructuring it for use by other groups working in hospitals that have less advanced facilities and personnel, c) demonstrate the advantages and usefulness of a specialized facility in the care of the emergency critically ill.*

—*Clinical testing of therapy under standard conditions.*

RESEARCH

Under the best of circumstances wherein we are providing rapid transportation from the scene of the accident, rapid diagnosis and treatment and expert multidisciplinary care in a facility built for this purpose, many of our patients still die. Why? To some day answer this question, the central theme of the research program is to understand the pathophysiology of shock and trauma in the human, with the hope of thereby improving patient care. Generally, the treatment of trauma in man has been directed to the local injury, its cause and correction. Treatment has seldom been aimed at the total problem involved; namely, the reaction of body to trauma and the maintenance of life and repair of injury. We have found that in addition to local damage, the systematic injury resulting from the breakdown of normal protective barriers leads to liver, pulmonary and renal complications. Thus infection, hemorrhage and other lesions of stress supervenes and the local lesion has now become a phenomena of general deterioration and death.

To improve the treatment of the critically injured, the search to understand the cause and effect of shock resulting from trauma which leads to deterioration of so many body processes has constituted the basis for our study of injury; namely, inadequate perfusion induced by injury produces two major effects at the organ and cellular level. Subnormal supplies of oxygen and cellular nutrients caused profound changes in organ and cellular metabolism, incompatible with normal function; and failure to remove certain metabolic products produced by these changes in metabolism at an adequate rate induce further deterioration.

We have found that the changes in metabolism and deterioration of tissues at the cellular level are usually manifested by increased acidosis, by the change of various enzyme levels in blood and tissues and by other hypoxic changes in the body chemistry. In addition, there is a disruption of the body defense mechanisms which, in turn, affect auto-regulatory mechanisms in the cell resulting in further deterioration and death.

At the present time the important questions regarding pathophysiology seem to be at the cellular and subcellular level and much of the research is directed toward understanding the cellular response to injury. Changes at the cellular level are reflected by changes at the organ level; for example, alterations in kidney cells are associated with alterations in kidney function. The kidney is an important target organ in shock and renal failure often results. Improved methods of treatment are needed to prevent renal failure from becoming a limiting factor in patient survival.

Since many of the cellular alterations result from hypoxia, the total respiratory function of the patient is extremely important. We are monitoring respiratory function using on-line computer analyzed data in order to learn more about total oxygenation from the whole body to the cell level. Efforts are being directed to improve diagnosis of tissue hypoxia and to, thereby, improve treatment. Changes in the lung in shock, sometimes referred to as the "shocked lung" are poorly understood but may be important in producing tissue hypoxia. The liver is also an important site of alteration in shock and increased lysosome formation in death of cells in the parts of the liver lobule seem to be responsible for alterations in liver function, often manifested by jaundice

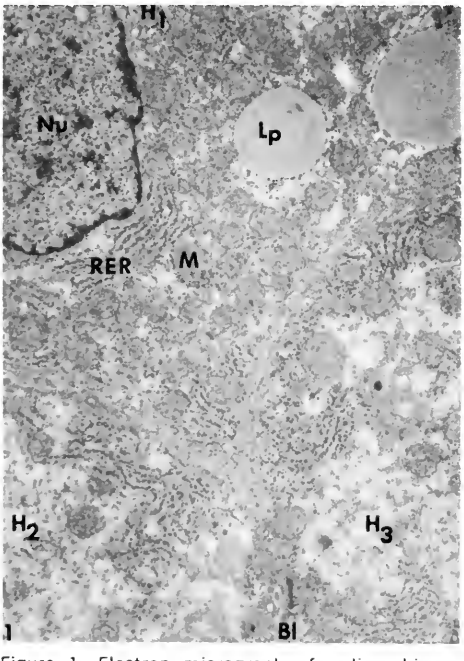


Figure 1. Electron micrograph of a liver biopsy from a patient suffering from a head injury. Portions of three hepatocytes (H_1, H_2, H_3) can be seen. The liver morphology is relatively normal. The bile canaliculus (Bl) is located at the lower border of the micrograph and shows microvilli protuding into the lumen. Occasional lipid droplets (L_p) are seen. The nucleus (Nu) of hepatocyte 1 is seen at the upper left. Stacks of rough surfaced endoplasmic reticulum (RER) and mitochondria (M) are seen throughout the cytoplasm.

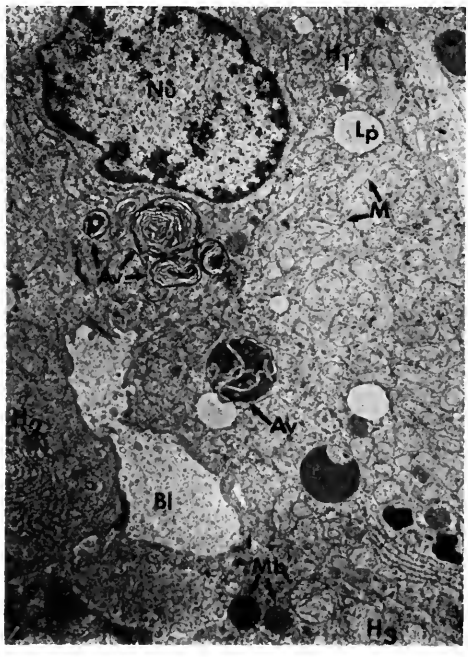


Figure 2. Electron micrograph of a sample of liver from a patient who had experienced several episodes of shock. The chronic nature of the cellular injury is evidenced here by the large numbers of autophagic vacuoles (Av), which can also be referred to as lysosomes or residual bodies. Note the bile canaliculus (Bl) is distended, and there is loss of microvilli. The nucleus of hepatocyte 1 (H_1) is seen at the upper left, and lipid droplets (L_p), mitochondria (M), and microbodies (Mb) are seen in the cytoplasm.

and by presence of abnormal enzymes in the blood stream. Using serial biopsies and autopsy material, we are trying to further the understanding of liver alterations in shock.

Research on head injury constitutes an important feature of many kinds of trauma, since brain death can occur even if the remaining portions of the body are functioning normally. Specifically, efforts are being directed toward understanding the role of cerebral edema in producing brain death. It is possible that some patients may be saved by preventing extension of brain damage to other regions.

Thus, the concept of a multidisciplinary clinical study of trauma as it relates to the severity of the injury and its time duration has not been previously attempted until the Maryland program was established. Also prior to this program, no attempt had been made to study injury with emphasis on an examination of the biochemical, bacteriological, physiological, microvascular and structural alterations produced by tissue perfusion deficits in order to develop newer concepts in therapy. As a result, a trained group of shock research investigators and clinicians have come together to study and treat shock and trauma in man without interferring with the resuscitation; in fact, our studies improved resuscitation.

Basic fundamental information has been gleaned from the study of over 1,100 patients. The results obtained from these data and the experience derived from a study of a large population has done much to assist in the formulation of new concepts of therapy and research.

FUTURE

The aim of the trauma program is to expand the first major trauma program in the country by further developing the present, already established trauma center into an eight floor building and to further implement the concept of the multidisciplinary team wherein the neurosurgeon, the orthopedic surgeon, the chest surgeon, the internist, and the anesthesiologist all meet the critically ill on arrival and use their individual expertise to engage this killer.

In the future the staff will continue to provide the best care available for the emergency critically injured patient and to further develop research techniques to standardize and improve patient care. This includes expanding multidisciplinary research investigations at the total body, organ and tissue level. A teaching and training program will be structured at the medical school, graduate training and community physician level. And, in addition, paramedical training programs will be established for those personnel who are directly involved with the accident, such as amublance, state and local police personnel.

Additional goals for the future are the orientation of the medical profession towards the urgency of the trauma problem and the development and modification of the rapid transportation system utilizing helicopter support.

Public apathy to the mounting toll from accidents must be transformed into an action program, continuing research and formating emergency facilities to provide the emergency critically injured with the best treatment available, immediately.

potpourri
surgery head

George Robert Mason has become the tenth surgeon to head the Department of Surgery, School of Medicine, since its beginning in 1807.

In announcing this appointment which was effective July 1, Dean John H. Moxley III commented:

"We are really thrilled that Dr. Mason has accepted our offer to become professor and head of the Department of Surgery. He is not only a distinguished surgeon but an active teacher and investigator. These attributes combined with an interest in the broad problems facing medical education and medical service make him a natural for the job of building the best Department of Surgery for our school."

Dr. Roy Cohn, acting chairman of surgery at Stanford, in a letter regarding Mason's appointment called him "one of the finest young men I have ever seen in the program. Aside from his personal attractiveness, he has a very broad interest in the general problems of medicine, as well as in his own field of abdominal surgery and thoracic surgery." He also predicted that Mason will be "one of the leading men in the country."

Mason said his plans include "continuing the fine tradition of clinical teaching and care presently being offered; developing research in areas of interest to myself and others in the department; exploring different methods of teaching, and expanding the staff as the hospital expands."

His interest in medical education has been evidenced by his work on the elective curriculum which recently went into effect at Stanford. "My interest in medical education is not limited to the student; I am also interested in graduate and postgraduate study," he stated.

The Rochester, N.Y. native received his B.A. from Oberlin College, his M.D. with honors from the University of Chicago, and his Ph.D. in physiology from Stanford.

He completed the residency program in general and thoracic surgery at Stanford and joined the faculty rising to the rank of associate professor. While at Stanford he pursued research in gastrointestinal physiology. He was a member of committees in charge of surgical curriculum and also in establishing the elective curriculum currently being used at Stanford. Other committee work involved selection of students, surgical interns and residents and the medical dean.

Prior to Stanford he served his internship at the University of Chicago clinics and served as flight surgeon in the U.S. Air Force.

His honors include membership in Alpha Omega Alpha; diplomate, American Board of Surgery; diplomate, Board of Thoracic Surgery; the Giannini Fellowship, and the John and Mary R. Markle scholarship in academic medicine.

In California, he was affiliated with the Stanford University Hospital, the Palo Alto Veterans Administration Hospital and the Santa Clara Valley Medical Center. His professional memberships include: the Stanford Chapter, Sigma Xi; the Association for Academic Surgery; the California Medical Association; the American Medical Association; the Santa Clara County Medical Society; the American College of Surgeons; the Society for Surgery of Alimentary Tract; the American College of Chest Physicians; the San Francisco Surgical Society; the Bay Area Vascular Society and the Pacific Coast Surgical Society.

Dr. and Mrs. Mason attended Oberlin College together and are the parents of three children, Douglas, Marcia and David.

continuing education

The in-service program for 1971-72 has been announced by Dr. Ephraim T. Lisansky, chairman and director, Committee on Continuing Education.

The purpose of the program, which is designed for each enrollee individually, is to expose the practicing physician to the most current concepts in the practice of medicine, surgery and their various specialties.

Physicians will participate in the department's routine scheduled program of rounds, clinics and conferences. He will be the guest of the division or department with which he affiliates. Ample allowance will be made for collateral reading in the library and for attendance at chief of service rounds, resident rounds and grand rounds, if desired.

This program also allows for cross-disciplinary visiting, or the entire period may be allocated to one specific subject.

Minimum enrollment is for five days and the training is not available during June-September. Longer periods may be arranged with approval of the Committee on Continuing Medical Education and the department head involved.

Further information about applications may be obtained from the Committee on Continuing Education, 201 Davidge Hall, 522 W. Lombard St., Baltimore, Md., 21201.

admissions and curriculum
changing medical education

Robert Shannon, M.D.

There are many differences between the way we in my generation view the world and the way you and your generation view the world. Many of these differences are not so much experimental as they are trying, at this point in time, to live up to the ideals which you have made for us and yet you are unable to fulfill.

The alumni is probably one of the most important parts in changing the curriculum. Many of the queries students are making are related to wondering what will happen once they get in practice as compared to what they are being taught. And, you are the only people who can help answer that question because you are working in the community. You provide the community's needs and work on its problems as well as deliver medicine. You are the ones who see 90 per cent of the patients that are seen in this country, very few of whom end up in a hospital. For that reason, you are important in changing the curriculum of this school.

How do others view Maryland? When asking what people know about Maryland School of Medicine they reply that we have a reputation of being an average quality clinical school. Much of this is due to the fact that few of our graduates go outside the state, most remain at the school or in the state.

Also, the faculty as a whole has made no decision as to what they are here to do other than "educate doctors."

In this day and age most of my colleagues and myself find this an inadequate answer. Most importantly the question that has to be answered is, "What are our graduates to be trained for?" Are they to be trained for the medicine of Flexner and his time? Are they to be trained for the medicine of the 50's? Or are they to be trained for the medicine of the 70's, 80's, 90's and even into the next century. Frankly, realizing that I will spend the next 40 years in medical practice, I would prefer to be trained for that longer period of time rather than in what others before me have been taught.

What then does this mean? After making the decision about what we have to be trained for then we must find out how we accomplish this goal. We don't do that by saying, "Well, what is everybody else doing and how does that apply to us?" We are different. We are Marylanders. Most of the students come from inside the state although their educational experience in college is diversified. But, we are different as each school is different. No one procedure in medical education will suffice for all schools.

Therefore, we must experiment. Many schools have used special programs affecting a small amount of medical students to try new teaching methods rather than moving ahead on a full scale. Some questions should be asked: What do we want students to learn? How can we bring students to learn faster and more efficiently?

Editor's Note: Drs. Shannon, Ramsay and Weaver delivered their views on admissions and curriculum during Alumni Day activities. June 3, 1971. Shannon is currently an intern at Montefiore Hospital, Bronx, N.Y. Ramsay is assistant dean for student affairs and Weaver is associate dean for admissions.

There are kinds of experiments we must conduct. The elective system which was started this year in the senior year is an experiment and its value won't be known for several years. We are behind in our willingness to experiment. Other schools have been using the elective system for as much as four years. They have solidified their program and found it does work. I have seen other educational systems, particularly in Colorado, and have seen other ways of teaching medical students. I have also met other students at my level who had experienced other methods of learning.

Many of the stalwarts of medical education—Western Reserve, Harvard and others—already know that for their type of people in their type of institution many of the new methods don't work. We again still do not know and we cannot apply their data to what we are talking about.

You and your colleagues have said that some of the things you experienced or were taught in medical school, many of the same things we are experiencing, were useless in the real world. This is a critical factor and the question of relevance to practical day to day practice must be examined in each one of the courses. That is one of the major concerns of the student and we need your help.

No longer can we say that what was good enough for me will be good enough for those who come after me. You don't want that for your children. And we don't want it for the graduates of the University of Maryland. We must continue moving toward some better method of educating those who come behind us.

Generally, we find the faculty, with notable exceptions, slow to change, irritated by challenge, unwilling to experiment and whose teaching is secondary to all else. And rewards such as tenure, position, etc. from what we have observed place teaching quality far behind other criteria. This is one of the most perplexing things to us as students.

We have grave questions about the competency of the graduates—about our own competency and it's not related to the elective system. It is related very much to the teaching we've received. This is not the classroom teaching, but the one-to-one contact which we all know is the most valuable experience one can

have. This is the opportunity to compare that one-to-one contact, that clinical impression or clinical method that we read about in textbooks to actuality.

Many, many of my class, about 34 graduates, are not going out to find out what else is going on in the world because they are remaining here. One of the faculty called this a severe tragedy in the commentary on education at this school since this represents a type of inbreeding. Those who stay will continue to believe that they have something good without ever questioning and asking: "Is what we have the best that we can offer to the students as an educational process and to the people of Maryland as a major hospital?"

What possibilities do we have in the way of curriculum models?

There are certain options that can be taken. One which could come out of the curriculum meeting (June 13-15) due to a lack of consensus is that we continue the same procedures that we have used over the last several years. This answer is totally untenable to us as students in relation to today and the 20th century and tomorrow and the 20th century.

The systems process requires a tremendous commitment of the faculty and I question whether we have that commitment from our faculty. This means teaching in a near disciplinary fashion which requires a lot of time, a great deal of commitment and a lot of interdisciplinary meetings to provide the best education to students.

The elective system is possibly an option and certainly a problem. There is something to be gained in moving to an elective system—freedom for an individual to make decisions about his further education. However, if good counseling is given students or even bad counseling for that matter, you most often will find them (students) unwilling to break with traditional lines. They take the traditional courses because they feel that this is what they need.

Credentials for admission are another important factor to be considered. Everyone has to use credentials for something. I would ask you very seriously to examine what those credentials set for admittance mean. It has already been well proven that credentials obtained before medical school make no guarantee of performance in medical school outside of being able to say that a person can generally handle the workload.

Many of my classmates kiddingly comment that under the present system you could take a monkey and train him for the first two years. If one of you would come with us for a day of classes or maybe a week of classes and sit for 40 hours you can see for yourself what happens. Often times the lights are out with the projector going and having stayed up until midnight studying, you can't stay awake under those conditions. Assimilation of facts usually occurs the night before the exam.

Then, what do our credentials mean? They mean little in the sense of whether we are going to turn out good physicians or not. They mean only that we have people who can assimilate material rapidly, have done an excellent job of it and have been selected for it in the education system up to that point in time.

Students have been trained well in memorizing and we do not need to reinforce it. What we need to reinforce is something that all you gentlemen took years in learning—how to approach a patient who walks in your office with a complaint without lab data, without having him hospitalized and without having the confinement you need for examination . . . how do you determine whether he is ill or not? Not how do you diagnose the untreatable disease, but how do you make sure that somebody knows how to diagnose the treatable disease?

Therefore, you must begin to emphasize how to use your brains and senses, all five senses and even the sixth sense that said: "This is a patient in trouble, and I can't let him walk out of here." We are not presently training people for that. We are training people to see patients as they come into a hospital most often a severely-ill patient. Many of my colleagues, including myself, have missed many diagnosable, treatable diseases that we should not have missed. I do not blame entirely the teaching system at the University of Maryland, but I also blame myself because some place along the way I missed something. The question of competency here is not so much my fear of internship, which is very real, but I wonder if I have received the best education available. And I think that is the question that all of us have to ask ourselves with respect to this school.

Secondly, are we willing to experiment to find out better ways of teaching the incoming professional and to prepare him to use his brain since the facts will change and probably be obsolete by the time he's five years out of his first two years and even after three years of medical school? Those are the things we have to handle—obsolete facts. Are we training a man to use those faculties which he will carry with him for the next 40 years in practice?

And finally, are you gentlemen going to become involved? I sincerely hope you will because you are the ones that have at hand many of the answers to questions that we as undergraduate medical students are asking.

curriculum changes

Frederick J. Ramsay, Ph.D.

The responsibility of providing a better education is one that falls on the faculty of this school. This does not take away from the education that the present students' predecessors had, but there are a number of things going on in society, in the profession and in the educational establishment which conspire to bring about a need for change.

Some of these changes come from the sociological media in which we operate: a requirement for better health care; a requirement for more availability of physicians, which may mean more numbers of the same number of physicians, but more available, and systematic changes in the delivery of health care. People are asking for the best of available procedures and techniques in the area of health care. From a technological point of view we have more therapeutic agents, new procedures and new techniques which must be included in our educational process.

On the other hand, in the business of educating there are new ways to teach, new ways to do things, new ways to use computers and programmed instruction of various sorts including television. From the profession itself come pressures to change with the eventual loss of the internship as a part of postgraduate education and changes in postgraduate education. Finally, but not unimportantly, are the students' needs. We have a different brand of student coming to school today who views the world and his education in a different way.

All of these things work together to produce about four major trends. These four major trends seem to be paradoxical, but yet we must deal with them all.

The first trend is the increasing number of students that we are going to have to educate, sooner or later. Secondly, there is going to be an increase in the content with shifts in emphasis of what we teach. Also, there is going to have to be a shift in how we view a teaching patient. A patient in our service area is teaching material, but he is also a patient. With the construction of a high-class delivery system, he's a patient first and teaching material secondarily. And, finally there is going to be a relative shortening of the time for training.

Now the first three problems seem to require more time, more effort and the last means we're going to have to compact time and effort. This means that we are going to have to find new, more efficient ways to teach.

In 1966 the first curriculum modification was introduced in the freshman year. The organizing principle for that year was temporal correlation. We hoped to achieve more efficiency by having those areas which covered the same kind of material in anatomy, physiology, biochemistry and other basic science courses taught concurrently.

The following year systems teaching was included in the second semester of the sophomore year. Then in 1969 we changed the third and fourth year, so that the junior year is now clerkships and medicine, surgery, obstetrics and gynecology, psychiatry and pediatrics. The senior year has a 12-week block in ambulatory care and anesthesiology, radiology and ophthalmology and then 24 weeks of free electives that the students can choose in whatever specialty they are interested in and wherever they like to take it.

Some of our changes did not endure.

The first year the method of temporal correlation simply didn't work very well. That is not to say we lost it all; we did retain some of the good things that came out of it—we've reduced laboratories considerably and introduced new material.

The second year with its systems teaching in the second semester is holding up, but is under severe pressure for change. The third and fourth year seem to be pretty solid.

For the last two years the curriculum committee has been studying the first two years—the so-called basic science years. It has attempted to find some way in which we can make that block of time meet some of the requirements mentioned previously. It is an extremely difficult job to do.

The curriculum committee has recommended setting up three model curricula.

The first of the three models is a systems approach: for the first two years everything would be taught in an orientation around a central core which may be pathophysiology or some other organizer. That means that anatomy, biochemistry, pharmacology, all first and second year subjects would be combined together to produce a single unit in a systems approach.

The second model offered is called the "basic science, clinical science mix." It proposes a first year of highly compressed basic science courses. The second year puts the students immediately into clinical areas where they will perform tasks that they are capable of conducting while they learn the rest of their basic science. Then the third and fourth year will be pretty much as they are now.

The final model is an elective model. Three or four prerequisite courses that everyone must take will be established and then the students will select the courses and build their own curriculum. This could be done either of two ways: alternative tracks to a single goal or alternative tracks to alternative goals. A basic decision that must be made is: Are we going to produce different kinds of M.D.'s, but allow the student to arrive at that point his own way or shall there be one "product" at the end of our training program?

My one regret is that we really haven't had a chance to tap the alumni. Those of you who are in the practice of medicine could give us some very valuable insights as to what students need in the general practice of medicine. We sometimes, I'm afraid, get a little parochial here because we are so wrapped up in our own system.

I will try to keep you posted as to what's happening and where we are going with the curriculum. It's an exciting time but it also carries with it some anxieties. Your profession is a very complicated profession and the training for it is even more complicated.

admissions

Karl H. Weaver, M.D.

Admissions, not only at this school, but at every medical school in the country, probably can best be described in the words "increasing competition." This is true both for the numbers of individuals who are applying to medical schools and the strength of the credentials that they present in support of their application.

There is no question that the number of individuals who want a career in medicine far exceeds the number of places available in today's medical school classes in the United States. This is a very sad and tragic situation and certainly represents a tragic loss of human resources. What has happened nationally in that ten year period can be seen below:

First Year

Year	No. Persons Applying	Places Available	Applications
1961	14,381	8,483	53,832
1966	18,250	8,991	87,627
1971	26,000*	11,800*	165,000*

* estimated
Source: Association of American Medical Colleges.

From 1961 to 1966 there has been a fairly large increase in the number of individuals applying to medical schools. They generated an increasing number of applications, but during that period there was a relatively minor increase in the number of first year places. We have made a much better progress across the country in the past five years, but again, for 1971, 26,000 individuals are applying for 11,800 places and these 26,000 people are generating 165,000 applications. That is the national picture.

What has happened here at the School of Medicine?

First Year

Year	Total No. Applicants	Applicants	Resident Class Size	No. Residents In Class	Total No. Requests To Apply
1961	456	173	100	N.A.	1,000
1966	621	270	128	100	1,785
1971	1,080	508	137	134	2,268

As shown above, here again at Maryland it is a case of increasing numbers of individuals applying. In 1961 we had 1,000 people who requested an initial application. Maryland uses a two-stage application process. For the second stage, 456 applicants generated a final application. In the second stage group are all Maryland residents and all individuals who identify themselves as legacies. A legacy is defined as sons or daughters of graduates of this school. Of the 456 second stage applicants, 173 were Maryland residents. At that time (1961) there were 100 places in the first year class at the School of Medicine.

Five years later, the figures had grown —1,785 requests to apply were received and that group was reduced to 621 final applications. In that final application group were 270 Maryland residents. The first year class at that time was 128 of which 100 were residents. This year over a thousand people generated a final application of which 508 were Maryland residents. There has been an unbelievable increase in the Maryland resident pool in the past five years. This year the class size will be 137 and there will be three non-residents in the class.

Even though the number of applicants is increasing, the strength of the credentials that they present is increasing also. So it's not a case of more people diluting the strength of the credentials which are submitted in behalf of their application. This year was an exceptionally keen and competitive year and it will most likely continue to grow keener each year.

The objective data of the applicant pool applying to enter in 1968 and 1971 is shown below. MCAT stands for Medical College Admissions Test and GPA is the over-all grade-point-average calculated on a 4.0 basis (A is 4.0, B is 3.0, etc.)

Application Pool

MCAT Scores	1971 Resident	1971 Non-resident	1968 Resident
Verbal	549	576	540
Quantitative	586	611	569
General Information	550	576	561
Science	535	565	540
GPA	2.93	3.24	2.82

This increase in numbers has not represented individuals with less competitive credentials. In 1968, 323 Maryland residents applied and 508 applied in 1971. For 1971 the residents who applied have essentially the same MCAT scores, but a higher GPA, and there are 200 more peo-

ple in this pool. Thus, a great segment of those have very strong credentials. For comparison, the data of the non-resident pool for 1971 is also listed.

Because of the increasing strength of the applicants' credentials it is obvious that the objective data of the classes which have been selected would be changed somewhat as is indicated:

	Objective Data Entering Class		
MCAT Scores	*1962*	*1966*	*1971**
Verbal	534	542	570
Quantitative	517	580	627
General Information	528	568	566
Science	521	540	567
GPA	2.80	2.93	3.31

* as of June 4, 1971

Over the past ten years, there has been a rather marked increase in the objective data of the first year class.

As an interesting sidelight, look at the class that was *admitted* in 1966 and compare that data with the objective data of the resident applicant *pool* for 1971. This gives you an idea of what has happened over a five-year-period. The class that was admitted in 1966 had virtually the same credentials as the total resident Maryland pool does for this year.

These data represent the background within which the Committee on Admissions must make their selections. The committee is composed of twelve individuals, eight of whom have primary teaching responsibilities in the clinical sciences and four of whom have primary teaching responsibilities in the preclinical sciences. The group as a whole reviews all the credentials that are submitted by the applicant, paying particular attention to the academic record; the MCAT scores; letter of evaluation—which are usually received from the undergraduate college premedical committee; the interview, and all other credentials which include whether a person has an advanced degree, their job experiences, their activities at school and their contributions to their college community. Sometimes age, and whether they are a legacy are factors.

Applicants selected from the second stage are interviewed by one member of the committee and one member of a pool comprised of approximately 50 faculty members, 20 senior students and about 10 house officers who have been selected to conduct interviews. All of these are individuals who have indicated their willingness to participate in the admissions process. They submit a written report of the interview as does the committee member himself. The entire committee meets once a week during the application season, which now runs from early September through March and sometimes April.

I can't stress the amount of time that the individual members devote to this. They devote at least a full day a week and probably more. Certainly they have my undying appreciation for the work that they have done.

All decisions are made by the entire committee, meeting and reviewing the particular applicant's credentials at one time. All of the factors within the application are taken into consideration, a full discussion ensues and then, at some point in time, the committee makes a yes or no decision. Essentially what they have to do is take a pool of about 2,200 applicants, make a yes or no decision and come up with a class of 137.

The decisions can be alikened to a clinical decision as much as anything. The committee examines all of the data presented and then makes a final decision in light of that data. As we have seen, strong competition exists and the committee must make their decisions in light of that competition.

One of the problems that exists in all state universities, all state supported schools, is the same one we are facing at Maryland. That is, that as the number of Maryland residents increase—the number of people applying in the applicant pool from the state of Maryland—and certainly as their credentials remain at a very high level, there will be no question that the Committee on Admissions will be able to select fewer and fewer out-of-state students. Unfortunately this means that legacies who are from out-of-state are going to have to compete in the out-of-state pool. I would predict that over the next several years, until there is a significant increase in the class size of medical schools all over the country, that the ability of admissions committees to admit non-state residents to state schools will be limited.

What has been the number of legacies who have applied in the past few years? Figures for the past three years available are:

Legacy Data

	1969	*1970*	*1971*
No. Applying	26	35	34
No. of Residents	12	15	20
No. Sent Offer	14	15	11
No. Withdrawing	1	2	5

In 1969, 26 legacies applied; 35 in 1970 and 34 in 1971. The number of Maryland residents, those sent offers and those who withdrew, is indicated.

The legacy situation is one of which the Committee on Admissions is aware and they are very much concerned. But again, we have to view it in light of the background of the competition which exists among the increasing number of applicants with extremely strong credentials.

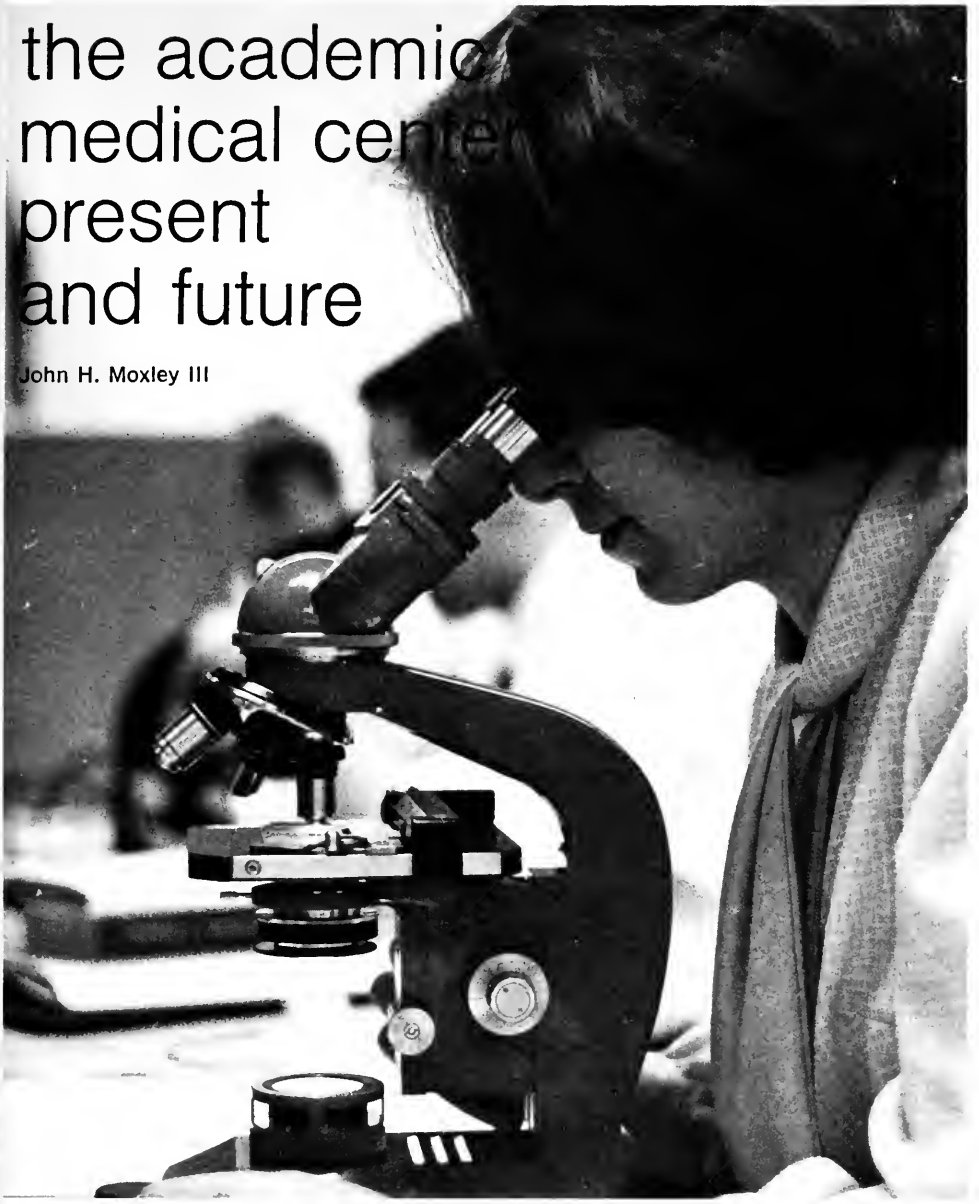
What is the prospect for the future?

In 1962, the school increased its class size from 100 to 128 and in 1968 the class size expanded to 137. Upon completion of the North Hospital now under construction, the class will go to 155 and when the addition to Howard Hall is complete the entering class will number 163. Data is currently being collected as to the facilities and resources necessary to expand the class size to 200. I hope that day comes much sooner rather than later.

My plea is that all of us who have a special interest in medicine, combine our energies and our individual talents with a goal to provide the facilities and the resources necessary for the continued expansion of the School of Medicine and to allow it to continue to provide a high quality educational experience.

the academic medical center present and future

John H. Moxley III



It is difficult for many people in our society to understand the academic medical center. It is even difficult for many people who are within the academic medical center to understand it. What happens is that observers look and at first glance note that medical schools are spending large sums of money in educating a relatively small student body. Assuming a national medical student body of 38,000 students, an observer finds that the total cost per year per medical student approaches $40,000. Furthermore he notes in return for such large expenditures, society is receiving only 9,000-10,000 graduating physicians annually.

Unfortunately observers usually do not go any further and therefore do not realize that the analysis above is simplistic and very misleading. The reason it is misleading is that the undergraduate medical education program—the most apparent element of the academic medical center—is also one of the smallest parts. What you are looking at is an iceberg with the medical school being the only visible part, but where almost all of the activity takes place underneath. I refer here to the teaching hospital, to the

Editor's Note: Dean Moxley's remarks are excerpted from a talk delivered to a curriculum meeting held June 13-15 at College Park.

graduate program that is producing Ph.D. candidates in the biological sciences, to the ambulatory services, to basic and clinical research, and to the clinical laboratories.

Allow me to expand on the concept of the academic medical center. What are its responsibilities? First of all in terms of education we have undergraduate medical students, graduate medical students (interns and residents), graduate students in the biological sciences, and several types of postdoctoral students in both preclinical and clinical departments. In addition most academic medical centers are also charged directly or indirectly with the education of various types of allied health personnel. We at Maryland are specifically charged with the education of physical therapists, medical technologists and radiology technicians. Academic medical centers also provide continuing education for a large number of health professionals. All of these educational services are provided by a single faculty—the medical school faculty.

In terms of patient care it is a fact that one out of every nine hospitalized patients is in a university teaching hospital, that one out of every seven babies born is delivered in a university teaching hospital, and that these same hospitals provide one out of every seven ambulatory visits. It has been said that Maryland and Hopkins jointly account for approximately 50 per cent of the daily physician-patient contacts in the city of Baltimore. Again let me emphasize that the patient care is provided or supervised by the medical school faculty.

What about research? Without recounting all of the incredible benefits of the biomedical revolution let me simply point out that as long ago as 1967-68 medical schools were charged with the spending of over $473 million for sponsored research. If you add the research effort of teaching hospitals, you must add another $150 million. The fruits of this research have benefited our entire society. Once again the medical school faculty has shouldered the responsibility.

Extramural services are a new and rapidly growing responsibility of academic medical centers. These services include participation in the organization and operation of community health centers of which our prime example is the Community Pediatric Center. Also included, however, is participation in regional planning efforts where medical faculty are viewed as important members of the various committees and as consultants at both the local and national level.

Participation in public health programs is yet another important function of the medical faculty. Local participation can be seen in the Inner-City Community Mental Health Program, which literally would not have gotten off the ground had it not been for our Department of Psychiatry.

To recapitulate, the activities of the academic medical center in the United States can be set forth in the following terms: education and training for about 275,000 health professionals and technologists, of whom about 65,000 are physicians at some stage of their training; continuing education of over 100,000 practicing physicians; the provision of over 46 million patient days of hospital care per year for over 3.5 million patients; the delivery and care of about 450,000 newborns; the provision of some 17 million ambulatory visits annually; conduct of over $600 million worth of biomedical research; and the provision of about $60 million of extramural services. Total expenditures range somewhere in excess of $4 billion per year.

With biomedical research in a state of crisis, with the great deal of activism at all levels of the educational process, with the organization and delivery of health care in ferment, with inflation rampant and appropriations being reduced and

with almost no money being appropriated at the federal level directly for undergraduate medical education, is there any wonder that medical schools are in the throes of a very major identity crisis?

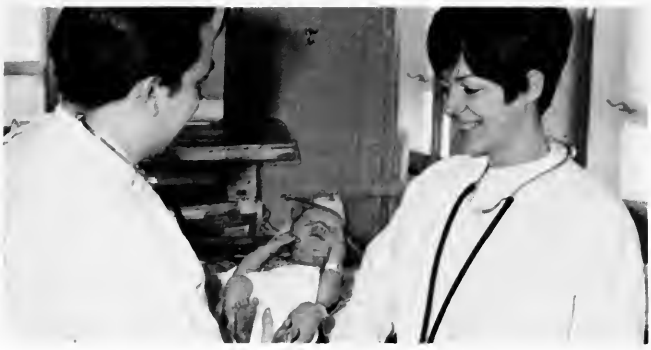
So much for the present; what can we say about the future? Despite the current ferment I think there are some characteristics of the future that we can define and I will now attempt to do so.

First, it is perfectly obvious that the multiple roles of the academic medical center will continue. I, for one, do not see us abandoning any of our current roles and am equally certain that they will each continue to grow.

Secondly, the academic medical centers of this country will increasingly be viewed as a national resource and will continue to get a portion of their funds from the federal government. Despite a probable growth in support from Washington, state support will continue to be critical; the state provides our core support without which we could not continue to function. Furthermore, expansion of the medical center either in terms of student body or service to society will be dependent upon financing by the State of Maryland. We will therefore remain accountable to the University of Maryland, the State of Maryland, and to the federal government. I am also convinced that the undergraduate medical education program will receive increasing attention by all of our funding sources. No matter what other changes occur in the health field, our society is determined to increase the production of physicians.

In terms of planning for the academic medical center, I have to say that we no longer have the capability to significantly alter our total mission. I am often asked what is the mission of the medical school? What specific type of physician are we attempting to produce? As I have recounted for you, we have many missions and we are going to have more. There will have to be many different types of doctors produced in the future and they will be produced at academic medical centers. Increasingly our society has become dependent upon our total mission and this dependence is at the same time important and restrictive.

I do feel strongly, however, that we have the capability to reorder the priorities within the academic medical center and I believe they need reordering. I



would like to see us reorder our priorities and place undergraduate medical education at the pinnacle of our activities, orient all of our other activities around it. Every activity cannot be directly related to the undergraduate medical school program but we can specifically recognize undergraduate education as having the highest call on our resources. We must demonstrate our renewed interest in the undergraduate medical education program by developing quality control mechanisms that will constantly monitor our progress and assure faculty, students and society that teaching is our primary concern and that it is constantly being upgraded wherever and however possible. As a first step I strongly urge that we immediately develop a peer review of all of our curricular programs. I am not a naive individual and I realize that there will be difficulty in elevating the medical student program to primacy, much less develop quality controls for it. I am, however, convinced of the great importance of the changes proposed and encourage rapid action. Change is never easy, but it is desperately needed.

As we move to reorder our priorities and as we move to reassess our program within the academic medical center I would put forth to you that our ultimate goal should be the creation of a medical university. In capsule, what I mean by a medical university is the development of multiple curricula leading to the M.D. degree. These curricula would have their origins in the undergraduate years and progression through them would be dependent upon a system of prerequisites; in other words, there would be no specific time scale and there would be no lock-step. Simultaneously we must move toward opening the majority of our medical school courses to undergraduate collegiate students who do not intend to proceed to the M.D. degree.

What is the rationale for such a development?

At the present time medical students are introduced to the medical curriculum at an exceedingly bad time. They are a very highly selected, indeed too highly selected, group who have worked extremely long and hard before coming to us. They have worked hard in secondary school to compete for college entrance. They have then had to turn around and compete at even a higher level for entrance into medical school. They come to medical school in a somewhat exhausted state and immediately find that they have to begin the academic competition all over again to prepare to compete for an internship and residency.

In summary, medical students today are victims of a highly compartmentalized, highly competitive educational system and by the time they reach medical school the effects of that system upon them are quite apparent. Their unhappiness has been labeled as antiintellectualism. I reject this label. In fact I do not detect any great difference in the medical school problems concerning today's medical student as compared to previous generations. Today's student is, however, more willing to express his or her concern. What is expressed is the fact that they feel overwhelmed by the intensive exposure to the science of medicine in the first two years of medical school. The response of medical faculties has been to pare down the exposure. I do not believe that restricting exposure to the science of medicine is wise for all indications are that we are going to be increasingly dependent upon it in the future. Why not, therefore, spread the science of medicine over a longer time scale and simultaneously attempt to individualize the exposure as far as possible.

One of the first questions usually raised when the concept of the medical university is introduced is whether or not it would interfere with the American ideal of a liberal education. I think not, for several reasons. First, the liberal education concept used to be applied only to the collegiate years. Now, however, the concept and indeed much of the course material is presented in secondary school. Second is the fact that students of the liberal arts are expected to concentrate in a special area for approximately two of the four collegiate years. I contend that concentration in human biology is just as legitimate as concentration in economics, chemistry, political science, etc. For some reason it has always been assumed that human biology was somehow less relevant to the human condition. I reject that assumption and make a plea for a human biology major at the collegiate level open to all students, whether or not they are planning to continue on to a health professional education. The basic science courses in such an environment just might become more exciting to the students. The majority of the courses in this new major should be either closely supervised by or actually taught by a medical school faculty.

The concept of a medical university would allow for greater flexibility in medical education than we have now, or that will result from any specific curriculum change that is being proposed here or elsewhere. It would allow for a shortening or a lengthening of the high school to M.D. degree depending upon the desires of the student, his capability, the quality of his preparation, and last but not least his ultimate goal. It would readily permit the development of specific tracks leading to the M.D. degree in a specialized area. This could easily be accomplished by allowing the medical student and the collegiate student to move back and forth across the collegiate-medical school interface which has been a fantastic artificial barrier in the past. For example, a student particularly interested in psychiatry could begin to pick up early or go back for courses in the social and behavioral sciences, or do the same in the rapidly developing field of neuroscience. One of the things that worries me about programs with a special interest is that increasingly as I look around the country

an M.D. with a special interest means that you spend more of your time with a certain clinical department while you are in medical school. I seriously question the merit of such programs. If a student is desirous of becoming an internist, is it best for him to spend four years with the faculty of internal medicine? No, is my answer. I believe that there are certain prerequisites within the large body of medical science that such a student should concentrate on, but these are not necessarily taught best by the Department of Internal Medicine. I'm not singling out the Department of Internal Medicine since the same would be true for any clinical department. The medical university concept would allow the student to range over the entire spectrum of university offerings to best prepare himself for his career. It would provide us with opportunities to broaden and not constrict the scientific base of medicine.

I believe that there will also be clear-cut advantages for the preclinical departments. I am worried over the fate of the basic sciences in medical school. Almost all curriculum revisions that have occurred over the last ten years have restricted them. They have restricted them in time and they have restricted them in creativity. Up to a point there is merit in constricting, but then you reach a point of diminishing returns. I am not certain that we have reached that point in our own medical school at the present time, but I believe that there are some schools that have done so and that we will reach it soon.

Because of the changes that have occurred in the preclinical departments at medical schools, there has been a strong current of feeling that they should move to general university campuses. In my opinion the medical school environment would suffer, and suffer greatly, if this were to transpire because I believe we would lose our primary measurement of excellence. This primary measurement is generated by the preclinical faculty and it applies not only to them but also to the clinical departments and our clinical activities. Without the preclinical departments in our environment I think we would run a significant risk of becoming a trade school. There would also be disadvantages to preclinical departments if they moved to general university campuses because they would lose their

medical, their human, orientation which is one of their unique characteristics and one that is extremely important not only to the medical school but to our society.

The medical university concept would allow preclinical departments to continue their identity with medicine and would also allow them to maintain the integrity of their discipline. It would in addition open up to them a wider range of students. It would widen their educational role both in the medical school and in the undergraduate years and would provide the stimulation of allowing their course offerings to be introduced earlier in the educational continuum from high school to the M.D. degree.

Now I would like to make a few comments about clinical teaching. One of the few specifics that I will deal with in terms of the current curricula that you are going to be dealing with within the next few days is that I believe very strongly that there must be an earlier introduction of clinical content.

In talking with students a word that continues to come up is "disaffection". I've not heard a satisfactory definition of disaffection but as I begin to listen and put it together one of the things that comes through is that it is increasingly difficult for students in the first and second years to keep in mind what they are really here for. What is the goal of their medical education? I think that this anxiety could be relieved significantly if students did have contact with patients quite early. It also just might stimulate their interest in science of medicine, although this is not a 100 per cent guarantee. It would, however, allow them to be introduced to the social problems of medicine at a very early stage, and the social problems of medicine are with us now and will be with us increasingly in

the future. It is difficult for a student who is on a busy university inpatient service to become involved in the social problems presented by his patients. If, however, he was introduced early, when he did not have the total burden of responsibility for the care of the patient, he might gain a lot of insight into these very important problems.

We must also begin to combine our educational program with the other health professional schools on our campus. Although some progress has been made in this regard, more effort must be devoted to bringing our students into joint educational experiences with students in the schools of nursing, pharmacy, social work and community planning, and dentistry. In the future a team approach to health care will be essential if we are to meet the needs of society. Nobody, particularly the students, gains any benefit from the strict educational isolation currently practiced. There is more than a touch of irony in the fact that invariably at commencement the statement is made that we expect the various graduates to work closely together after they graduate.

The teaching and general importance of ambulatory care has been systematically shunned by medical faculties since time immemorial. This downgrading cannot be allowed to continue when every indication is that more and more health care can and should be supplied on an ambulatory basis. For the past two years the school has been making a major effort to improve our ambulatory care programs and an experience in ambulatory care is now required of all students. Despite our efforts, progress in our ambulatory care programs has been insufficient. In part the problem rests in the inadequacy of our facilities, but the major problem here and elsewhere is a very real resistance to accept the provision and teaching of ambulatory care as a full partner of inpatient care in medical education. The major thrust in ambulatory care will continue.

Another development that we are going to have to come to grips with is the integration of the undergraduate with the graduate medical education program. Graduate medical educational programs throughout our history have been an extra-university function. By extra-university I mean that these programs have been

exclusively controlled by the specialty boards and not by the faculty. A change in thinking is now occurring and increasingly efforts are being made to bring house staff education into a continuum with undergraduate medical education. The Council of Medical Education of the American Medical Association is making every effort to catalyze the development of the continuum of education. Specifically the internship as an isolated year is to be abolished in 1975. Medical students will match into a program of graduate medical education of several years duration rather than into an isolated year between medical school and residency. The senior year of medical school will become a transitional year both in terms of focus and clinical responsibility. The focus will be increasingly on a defined area of medicine.

There is a movement at the present time, and one that I think is important, to develop a corporate responsibility for graduate medical education. By corporate responsibility I mean that no longer will an individual clinical chief be totally responsible for developing his own individual program. There is going to have to be evidence for accreditation purposes that the chiefs of the clinical departments as a group are looking at the entire spectrum of graduate medical education as it occurs in the medical center. There are very obvious possibilities in regard to quality control here. For instance a program in surgery is more apt to be a strong program if there is proven interest on the part of the chief of pediatrics, the chief of internal medicine, and so forth in devising that program. Furthermore it is highly likely that in the future only complete graduate medical education programs will be accerdited. Fragmented one and two-year partial programs will no longer qualify.

Additionally there is going to be a very hard look at free-standing graduate medical education programs. To again take a surgical example, many people are beginning to question whether there should be a free-standing residency program in any surgical subspecialty in any hospital. I believe that the direction we are going to go is to say if there is going to be, for example, a neurosurgical training program in a hospital there must also be a general surgery training program in the same hospital, and if there is going to be a general surgery training program in a hospital there will also have to be a program in internal medicine in that same hospital. There will probably be at least one exception in terms of free-standing programs and that will be in family practice. In my view these changes in graduate medical education are long overdue. I am convinced that they will improve the quality of graduate medical education significantly. As a matter of fact the cocept of corporate responsibility should immediately be applied to undergraduate clinical education. The clinical department heads should, as a group, look at the total range of clinical clerkships that we offer in our medical school rather than in isolation defining and worrying about their own.

Tonight I have presented some thoughts about where we are now and some directions for the immediate future. I have emphasized the need for a renewed thrust in undergraduate medical education, the need for quality control of medical education, and the concept of the medical university. By moving forward in conquest of these goals we have the opportunity to develop one of the most important medical education programs in the country.

professors of surgery 1807-1907
(part two)

Harry C. Hull, M.D.

There have been some outstanding professors of surgery during the University of Maryland School of Medicine's existence. Although the Flexner report of 1910 suggested that the school be discontinued, its survival was due to some of these strong men occupying the chair of surgery, who gained local, state and national prominence.

louis mclane tiffany

Louis McLane Tiffany (tenure 1880-1902) was born October 10, 1844 in Baltimore, Md. The son of affluent parents, he received his early education in private schools in New England and Paris. His maternal grandfather was a member of President Jackson's cabinet and was twice minister to Great Britain under Presidents Jackson and Polk. After preliminary schooling in Paris, he entered the University of Cambridge, England, where he received a B.A. in 1866 and later earned his M.A. While at Cambridge, he was a noted athlete, particularly in track and field events and always cherished the large silver bowl awarded him for his prowess as an athlete.

When he returned to Baltimore in 1866, he entered the University of Maryland School of Medicine and received his M.D. in 1868. During these two years he was also the office pupil of Dr. Nathan R. Smith. Following graduation, he served as resident physician at the Bay View Asylum (now Baltimore City Hospital). After completion of the residency, he was appointed demonstrator in anatomy, both normal and morbid at the medical school, and acted in that capacity until 1874. Undoubtedly, this thorough familiarity with gross and morbid anatomy was of the greatest importance to his eventual surgical brilliance.

After finishing residency at Bay View Asylum, he began the private practice of surgery in Baltimore. At this time medical schooling was only for two years with five and a half months each year. He was the first physician in Baltimore to limit his practice to surgery.

Naturally strong in fitness, physique and temperament by education, cultivation and training, he was admirably suited for the early surgical success which he obtained. He was said to have magnetic personality, charming manners and a wonderful sense of humor. He was delightful with children, had a great love for animals, and enjoyed hunting, fishing and physical fitness.

In 1874 at age 36, he was appointed professor of operative surgery and six years later he was appointed professor of surgery to succeed Dr. Christopher Johnston. He became one of the more outstanding professors of surgery at the university.

As a lecturer, he was simple, direct, graphic, never oratorical or rambling. As a student of that era said, "his manner was all his own, and in a peculiar way his lectures were effective, easy to follow, difficult to forget." This same simplicity marked his bedside teaching. He had a high regard for the patient's story, and was a gentle and excellent clinician, always inspiring confidence in patients and students alike.

Editor's Note: The first part of Dr. Hull's article appeared in the July **Bulletin.**

As an operating surgeon, he was described as slow, gentle, deliberate and purposeful, with profound respect for tissues. He early introduced the newer antiseptic methods, was meticulously clean and exacting. He admitted to the value of the new chemical disinfectants and carbolic sprays, but always insisted on the use of soap and water. He constantly stressed the danger of tension in wound closure; was noted for draining nearly all wounds; and was ambidextrous, switching the knife from one hand to the other, lending quite a flourish to his operations.

Tiffany published over 70 papers in addition to contributing chapters to Dennis System of Surgery, The International Text Book of Surgery, The International Magazine of Surgery and the Reference Handbook of Medical Sciences. Among these were papers on appendicitis, breast tumors, surgery of blood vessels, surgery of the cranium, jaws and teeth, cancer of the rectum, tracheotomy, kidney and bladder stones, nerve tumors, osteosarcomas, intussusception, splenectomy, esophagotomy, hernias, gall bladder disease, to mention a few. He took an active interest in medical societies and was an ardent reader of current journals and reports.

Some of his operations are worth noting. In 1878 he performed a temporary depression of both maxillae for angiosarcoma of both nares, preceded by tracheotomy. The patient survived and this feat received national notice. In 1885 he is reported as having performed the first successful nephrolithotomy in America. In 1886 he performed a successful esophagotomy. In 1893, speaking to the American Surgical Association, he reported four cases of complete excision of the gasserian ganglion—three cases were cured. He was credited with the first successful gastroenterostomy performed in Baltimore in 1892. These reports indicate his courageous, self-confident, and at times, original approach to the surgery of his era.

The doctor's ability as a surgeon and as a man, was further attested by his election to the presidency of the American Surgical Association and the Southern Surgical Association, as well as to the Baltimore Medical Association, the Clinical Society and the Medical and Chirurgical Faculty. He was consulting surgeon to the Johns Hopkins, St. Joseph Hospital and the Church Home and Infirmary.

In 1902 at age 58, after a tenure of 12 years, he resigned the chair of surgery at Maryland because of ill health.

Among the testimonials to the surgeon was a portrait of him to be placed at the Medical and Chirurgical Faculty building.

A man of means, he continued his active interests in medicine and a limited surgical practice. He spent a good part of each year at his summer home, Mount Custis, Accomac County, Va., where he died suddenly of a heart attack on October 23, 1916.

randolph winslow

Randolph Winslow (tenure 1902-20) was born at Hertford, N.C., October 23, 1852. He was the son of Dr. Caleb Winslow, a surgeon of note, and his uncle was Dr. John R. Winslow, a prominent physician of Baltimore. His early education began in North Carolina during the Civil War. In October 1865 his father moved the family to Baltimore and placed Randolph in Rugby Academy. In 1867 he entered Haverford College and received his A.B. in 1871. Three years later he received an A.M. (in Greek) from the same college. He received his M.D. from the University of Maryland School of Medicine in 1873, standing at the head of his class of 46.

After receiving his M.D., he began practice in Baltimore and also immediately joined the teaching staff at the University of Maryland. He served successively as assistant demonstrator of anatomy (1873-80), demonstrator of

anatomy (1880-86), lecturer on clinical surgery (1886-91), professor of anatomy and clinical surgery (1891-1902), and on the resignation of Dr. Louis Tiffany, he was appointed professor of surgery at age 50.

During the 29 years before his appointment to the chair at Maryland, he was quite active in medical affairs of the city. One of the founders of the Woman's Medical College of Baltimore, he served as professor of surgery there from 1882-93. He was on the surgical staff of Baltimore City Hospital (Bay View), Sinai and others, and served as surgical consultant to the Maryland Training School for Boys for a quarter of a century.

Winslow went abroad in 1883 and again in 1906, after accepting the chair, for postgraduate studies in Vienna, Berlin and Paris.

In addition to his teaching and practice, he found time to be unusually active in medical societies, nationally and locally. He was a member of the University of Maryland Board of Regents for nearly 30 years (1891-1920), and president of the Medical and Chirurgical Faculty (1914). A founder of the Association of American Medical College, he served on its executive council for 20 years. Winslow was also one of the founders of the American College of Surgeons (1913). He held membership in the International Surgical Association, the Southern Medical Association, the American Surgical Association and the Southern Surgical Association; served as president of the Southern Surgical Association (1921); regularly attended the American Medical Association meetings and was an active member of the Maryland Historical Society.

The University of Maryland is in his debt for his constant devotion to its medical school. Revered by his students they established the Randolph Surgical Society in 1911 in his honor. This was an honorary society, limited to 30 seniors and stayed in existence for over 20 years. During his tenure he was influential in the building of what is now the "old" University Hospital (1896-97). Too, he was largely responsible for the merger of the Baltimore Medical College and the College of Physicians and Surgeons into the present School of Medicine of the University of Maryland (1913-15).

As a founding member of the Association of American Medical Colleges, and a member of its executive council for two decades, he was in a position to upgrade the school as to requirements for admission and extending its curriculum to four years. In 1892, three years were required for graduation and in 1895 it took four years, but the premedical requirements were practically nil. In 1903, graduation from a four-year high school was required for entrance. In 1914, a year of college work in chemistry, physics, biology and either French or German was part of the entrance requirements. By 1918, students needed two years of college for entrance.

Winslow, in a testimonial acceptance speech in 1916, remarked that two years of premedical training was enough because the length of time was already burdensome and should not be extended. Today some schools are going back to the two years premedical plan for exceptional students to shorten the long period of training.

The surgeon was portly, of modest height and a conservative dresser. But seriously bent, he was a real believer in scholarship and diligent application on the part of students. His lectures ripened through years of practice and were given with clarity, fluency and force. Instruction from his European masters such as Lorenz, Woelfler, Von Hacker and Billroth was passed on to his classes with authority. His earnestness and desire to help students with surgery earned their highest respect.

As a surgeon, he was thorough, precise and not spectacular or hasty. He was among the first surgeons in the state to practice antiseptic surgery as known today. Winslow is credited with many first in Maryland surgical practices: a pyloric resection for cancer (1885) only four years after Billroth performed the first such operation; a vaginal hysterectomy (1888); shortening the uterine ligaments (1884), and operating successfully for gunshot wounds of the intestine (1893). He subsequently published several papers on the latter subject and on intestinal obstruction. He gave special attention to the thyroid gland and was one of the early operators for goiter.

His bibliography lists 73 publications on a variety of subjects which were published in national, state and local jour-

nals. Winslow received an honorary L.L.D. from St. John's College in 1909 and from the University of Maryland in 1924.

Married at age 25 to Miss Rebecca Leiper, he sired thirteen children, twelve of whom survived; three daughters and nine sons. As busy as he was, his delight was his home and family. Three of the nine sons became doctors.

Dr. Winslow retired in 1920, and as professor emeritus he continued to attend meetings, give lectures and travel. He died of acute myocardial infarction at age 85 February 27, 1937.

arthur m. shipley

Arthur M. Shipley (tenure 1920-48) was born at Harmans in Anne Arundel County, Md., January 8, 1878. His initial education was obtained at neighborhood schools and supplemented by attendance at Friends Preparatory School in Baltimore. Without further premedical education he entered the University of Maryland School of Medicine and graduated in 1902 as honor man. The following two years he served as intern and resident for Drs. Tiffany and Martin. In 1904 he journeyed to Europe to study pathology under Professor Chiari at the University of Strasburg accompanied by Dr. Gordon Wilson, who later became professor of medicine at Maryland.

Upon his return, Shipley was appointed medical superintendent of University Hospital, where he served four years until 1908. He had complete control of all admissions and could perform surgery on the patients he selected. This situation gave Shipley the opportunity to meet and know referring physicians, which later was the great source of patient referral. In 1907 he was apopinted associate professor of surgery and in 1914 professor of clinical surgery. During these years he was busy with his practice and teaching in the medical school.

During World War I, he served in the United States Army Medical Corps (1917-19) as chief of the surgical service of the 8th Evacuation Hospital. Over 14,000 wounded from the battles of Chateau Thierry, Belleau Woods and the Argonne, are reported to have been treated at his hospital. In recognition of his fine war record, he was awarded the Distinguished Service Medal.

In 1920, at age 42, he was appointed professor of surgery at Maryland. The medical school following the faculty depletion in World War I was at a low ebb. The buildings were old, the laboratories ill-equipped, the bed capacity in the old hospital was inadequate, the hospital was outdated and the financial support from the State was parsimonious. Large freshmen classes were admitted (130-150) and shaved down (90-100) for the second year. There was no committee on admissions. Though many of the faculty members were good teachers and excellent clinicians few had ever attended college. There were few, if any, faculty members engaged in research for lack of background and facilities. The education received was almost entirely clinical.

By 1922 there was a move in high places to discontinue the medical school. The surgeon and others lobbied in Annapolis for many years to save the school and finally their battles were fruitful. A new hospital and new nurses' home were built, and with a legacy from Dr. Frank C. Bressler, a new science and research building was possible as was reequipment of laboratories and strengthening of the faculty. Of greatest importance was a greatly increased annual support from the Maryland Legislature. Shipley's ability as an administrator was well-recognized, and in 1915 he became acting dean of the medical school.

In 1907, five years after receiving his M.D., he wrote a paper in the *Hospital Bulletin* entitled "Clinical Teaching." In it he deplored the many and needless hours required of students "peering down the barrels" of microscopes in pathology. He inquired whether anyone practicing medicine cut, stained and

mounted tissues in their office. He thought freshmen students, along with basic science courses, should quickly be introduced to bedside teaching and become acquainted with illness. Today this is finally being done.

As a teacher, whether at didactic lectures, the operation room or bedside, he was outstanding. His Thursday noon clinics were always crowded to capacity. A striking figure of a man over 6 feet 3 inches in height, his entrance always commanded immediate silence and attention. His sobriquet "King Arthur" was apt. Though essentially a kindly person, he would stand for no foolishness. His were the days when the chief of surgery was held in awe and immediate obedience was expected.

The surgeon did not attend college. He married in 1909, and having no children educated himself by constant study at home. In his conference, it was not unusual for him to quote at length from the literary masters. He was a great mimic of pathological states of joints. His lectures were clear and exceptionally well-organized. Students looked at him, listened and then bowed to take notes. He appeared almost as if leading an orchestra.

In the operation room, "wet clinics" were the custom of that time, students sat gowned and masked watching surgeons operate for hours each morning. While operating, he would give a well-organized talk on the subject at hand. He even fired questions at the students in the gallery, and few, if any ever slept. He was fond of being challenged by case presentations at his Thursday conference, particularly masses located anywhere. He would challenge the audience with four "W's"—Where is it? What is it? What of it? and What is to be done about it? Then he would proceed with an excellent differential diagnosis—by "calling the roll of the anatomical structures in the related area."

He served for over two decades as chief of surgery at Baltimore City Hospital. Dr. Thomas Boggs of Johns Hopkins, who served as chief of medicine at the Baltimore City Hospital, and Shipley gave unstintingly of their time to make the Baltimore City Hospital a valuable teaching arm for both of the medical schools in the city.

During his tenure, teachers as a whole received no salary. He enlisted support of able young men and assigned them duties on the ward and dispensary. He was a tyrant to those who, regardless of reason missed a class, and he never missed a class unless he was away. Not often did he compliment his staff and he was quick to call them on the mat for tardiness or absenteeism. "King Arthur" ruled the department as well as the operating suites. There were no committees for this and that, but he was approachable and reasonable. Once a problem arose and he was informed of the pros and cons, he made a decision and it stuck.

Over the years his reputation as teacher and surgeon grew and he was in popular demand over the southeastern seaboard as a speaker. Students long remembered his as one of, if not the, outstanding course in the school. He held membership in the American Surgical Association, the Southern Surgical Association, the Society of Clinical Surgeons, the American Association of Thoracic Surgery. Most important, he insisted his junior members write and publish papers, and he was instrumental in gaining their election to the same top medical organizations. He served as president of the Medical and Chirurgical Faculty and as a regent of the American College of Surgeons.

In addition to his teaching, to which he was ever faithful, he had a very busy private practice. He usually operated upon two or three patients daily, six days a week, as well as handling nighttime emergencies two or three times a week. It was not uncommon for him to have 35 to 60 patients in the hospital concurrently. He was autocratic as to use of the operation rooms and one room was his at any and all times. He demanded and got top service above the rest of the staff. As a surgeon he was an unusually slow but careful technician. Plagued most of his life by an intention tremor, he was aware of his slowness and made up for it down to and including the dressing, by exceedingly painstaking work. (I think the fastest appendectomy I helped him perform took 55 minutes.) Shipley talked and taught while he worked which in great measure compensated the assistant for his long hours at the operation table. He was an indefatigable worker, strong physically and worked long hours most of his life.

He had little time for non-professional activities, but did enjoy his trips to New Brunswick and Canada for fishing. His only other avocation was his rose and dahlia gardens.

During his years as professor, he published alone and with others over 80 papers, all of a clinical nature. These contributions were on varied subjects—pericarditis, lung abscess, empyema abdominable surgery and fractures of various types. Along with Dr. M. Pincoffs, professor of medicine, he published a paper on the earliest planned removal of a pheochromocytoma for hypertension with resultant cure of the patient.

It was during his tenure that subsections of surgery were planned and implemented with the appointment of heads of urology, neurosurgery, otolaryngology, orthopedics and finally anesthesiology.

Shipley resigned in 1948, many changes and improvements having taken place in the medical school and its faculty during his tenure. He found time to write, teach, lecture and operate, and he gained local, statewide and national recognition. It is a tribute to Dr. Shipley's industry and tenacity that he, without any college education, became an outstanding figure in the surgical world. A great deal of his time after retirement was spent in caring for his bedridden wife. He died in his sleep, apparently from a cerebral accident, October 16, 1955, at age 77.

charles r. edwards

Charles Reid Edwards (acting professor 1948-55) was born in Medley, W. Va., September 19, 1888. His early education was received at a small country high school in Frederick County, Md. After working a year or two, he applied for admission to the University of Maryland Medical School where he received his M.D. in 1913 as an honor student.

Following graduation he served as intern and resident surgeon at the University Hospital under Drs. Winslow and Sproul. From 1915 to 1917 he was resident surgeon at the Kernan Hospital for Crippled Children under Dr. R. Tunstall Taylor. His first appointment on the Maryland faculty was as assistant in orthopedic surgery. In 1917 he entered the Army as a first lieutenant and served overseas with the French in Belfort, France. He was made a captain upon discharge.

Returning to Baltimore in 1918 he began the practice of general surgery and rose through the different ranks to that of clinical professor of surgery in 1931. Upon retirement of Dr. Arthur Shipley in 1948, he became acting head of the department and served in this capacity until 1955.

A man of average stature, handsome, dignified, always impeccably dressed, he was the epitome of what a surgeon should look like and what a surgeon should be. Though not a particularly good lecturer, he was an excellent teacher at the bedside and in the operation room. He was doubtless the most dexterous surgeon at the University Hospital during his time—smooth, composed, rapid and an almost faultless technician. At University Hospital he was the first to perform a number of operations. Though none were original with him, he at times made it appear by the ease of performance that he invented them. He was first to perform the modern type of gastrectomy, first to remove the gallbladder below-upward, first to perform the Bancroft operation, the Devine procedure and the Whipple (pancreatico-duodenectomy). He was first to perform lumbar ganglionectomy for a number of diseases. He was a strong believer in aseptic anastomoses for gastrointestinal lesions.

He possessed great stamina for work and in later years enjoyed a large practice. Edwards was well-known throughout Maryland and a great many doctors and their families became his patients. It is recalled that he was an artist as a surgical consultant to other surgeons, truth-

ful, tactful, leaving the patient and surgeon both feeling very well indeed.

Because of his clinical training, the 15 papers he published dealt extensively with clinical subjects. He enjoyed memberships in a number of societies including the American Surgical Association, the Southern Surgical Association, the Society of Clinical Surgeons, the American College of Surgeons (serving as a governor from Maryland for some years), the Society for Surgery of Trauma as well as local and state societies. He served as president of the Baltimore Medical Society and the Medical and Chirurgical Faculty of Maryland and vice-president of the Southern Surgical Association.

As a student he was a member of the Nu Sigma Nu medical fraternity and was keenly interested for decades in the affairs of this organization—he was the "Consultant Father" of Nu Sigma Nu.

He traveled extensively to medical meetings, and took holiday trips in the United States and Europe. His favorite hobby was golf.

Dr. Edwards is another example of a man with a minimum of premedical education, who became a surgeon and teacher of renown. He resigned as acting professor of surgery in 1955 and continued with private practice until several years before his death. He became ill in 1963 and died February 1, 1965 of carcinomatosis originating from cancer of the prostrate gland.

robert w. buxton

Robert William Buxton (tenure 1955-70) a native of Joplin, Mo., was born October 3, 1909, the son of Cora (nee Comer) and Warren Buxton. After preliminary education at the local schools he matriculated at the University of Kansas where he received a B.S. in 1931 and his M.D. in 1936.

Following his graduation from Kansas, he interned at the Strong Memorial Hospital, Rochester, N.Y., and was an assistant resident in pathology and an assistant resident in surgery. In 1940 he was appointed resident surgeon at the Genesee Hospital in Rochester, N.Y., and the following year returned to Strong Memorial as resident surgeon.

After completion of a general surgical residency in New York, he was appointed resident in thoracic surgery at the University of Michigan. In 1943 the doctor received an M.S. from Michigan. He remained at the University of Michigan from 1942 until 1955 serving as an instructor in surgery, an assistant professor of surgery and later as an associate professor of surgery.

In 1955 at age 46, Buxton was appointed as the ninth professor of surgery at the University of Maryland School of Medicine. He was the first fulltime professor appointed to the chair of surgery at Maryland.

The school since its founding and until almost Civil War era, was theoretical in its teaching. After the Civil War, following the French, the teaching was almost entirely clinical. This dominant clinical approach lasted until after World War II. In the early fifties following the general trend throughout the nation, the school went "fulltime." Great increase in funds from the state, grants from the federal government and private sources, proved a great largess to a school which had been wanting for funds or was nearly impoverished during most of its existence. Now the school was geared to add to its excellent clinical record, research and experimental work. Rapidly all department heads became fulltime as did most of the section heads and their staffs. Nearly all appointments were with a salary and ceiling—overages returning to the various departments. Curriculum was diligently studied and changes instituted. Gradually, most of the parttime staff, who had carried on the teaching load faithfully for years, moved to other hospitals.

Into this changed environment Buxton became the new department head. For the first time there was a fulltime profes-

sor to devote his entire time to teaching and the administrative affairs of the department unencumbered by the necessity of earning a livelihood by practicing his profession. The surgeon, well-trained in experimental as well as clinical medicine, had a new approach and quickly a more academic atmosphere prevailed. Fulltime devotion to the teaching of students and training of house officers was the object.

The budget for the department of surgery and its sections was around $60,000 when he arrived. In 1970 the budget for the department of general surgery and its specialties was $1.8 million. The Maryland Legislature of decades past could not have dreamed of such grants to the university. Much of these funds were necessary for salaries for the slowly increasing fulltime faculty and steadily increasing salaries for house officers, laboratories and expensive equipment with the necessary paramedical help.

Buxton brought a great deal of enthusiasm and energy to his new task. He was portly, above average height, a conservative dresser, of good posture, of very regular and moderate habits. As a person he was a warm, courteous, friendly, industrious man of great stamina. Never vindictive, he was perhaps too kind on many occasions and not forceful enough to run the "tight ship," previously so strongly exemplified by the many professors who were martinets. However, he possessed such a great amount of integrity and seemed to have such faith in man, that it was hard for him to think ill of anyone. He was not so naive as not to recognize poor performance, but was reluctant to chastise and chose instead to correct by exemplary methods.

Teaching was the forte of Dr. Buxton, at any level of training, and it seemed equally enjoyable to him whether at the bedside, conference room or auditorium. He was a frequent visitor and speaker at other medical schools throughout the country as well as at national and local societies. At open conferences he possessed the remarkable ability of comprehensive recall on a great variety of subjects.

Probably his most singular contribution to the many house officers he trained was his teaching of physiology and pathological physiology. He was insistent that his trainees think constantly in this field in their approach to the correction of disease. His constant query as regards diagnosis, choice of procedure or medication advised was, "Why?" His grasp of the general field of medicine was extraordinary, and superior to that of most surgeons. His knowledge of diabetes, cardio-respiratory problems, hematologic and other medical disorders was certainly more than superficial as became readily apparent at rounds or at conferences. (Personally, I know of no other professor of surgery in the country who actually and constantly spent so many hours teaching.)

He was always available to consult, to operate, or to assist his resident staff with surgical problems. Whether the problem involved surgery of the thorax, abdomen or periphery, he was equally adept and masterly. His technical finesse was such that difficult and complicated problems in surgery were made to appear routine. The operations he performed were neat, precise and rapid. As an assistant to the residents, he was a superb instructor, and as patient and tolerant to the beginner as a master of the art could be. No surgical procedure regardless of its magnitude seemed outwardly to disturb him. Yet, he was no prima donna and his manners in the operation room were impeccable. He strived to make each procedure a perfect demonstration of the most proper methods of performance.

Though his main vocation as well as avocation was surgery, he did have other interests. He was a bibliophile and over the years had invested heavily in a fine collection of books which included a number of first editions. He was also quite a philatelist and quite a gourmet. He thoroughly enjoyed his planned menus at the Maryland Club or elsewhere when entertaining a group of friends. His yearly trips to Europe stimulated his interest in wines and he became a connoisseur. He enjoyed fine music and in lighter moments admitted to playing the cello in his youth.

Buxton was a member of over twenty surgical societies including: the American Surgical Association, the Society of University Surgeons, Southern Surgical Association, Central Surgical Association, Society of Vascular Surgery, International Society of Angiology, American College of

Surgeons (he later was governor to the College from the state of Maryland). The Fred Coller Surgical Society, in which he served as president in 1969, was of particular interest to him.

The 80-odd publications by the doctor alone and with other authors revealed his broad interest in the discipline of surgery.

Dr. Buxton, aged 60, died August 14, 1970 in Timisoara, Rumania, from injuries he received in an automobile accident August 10, 1970 near that city. He was vacationing in Europe when the accident occurred. Memorial services were held and his remains placed in a vault at a Baltimore Mausoleum.

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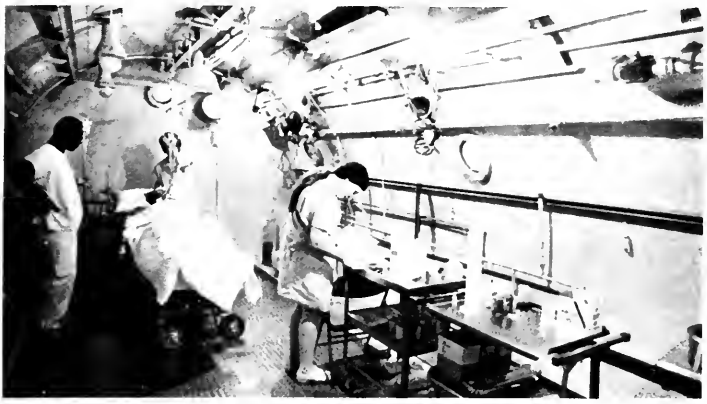
hyperbaric chamber care



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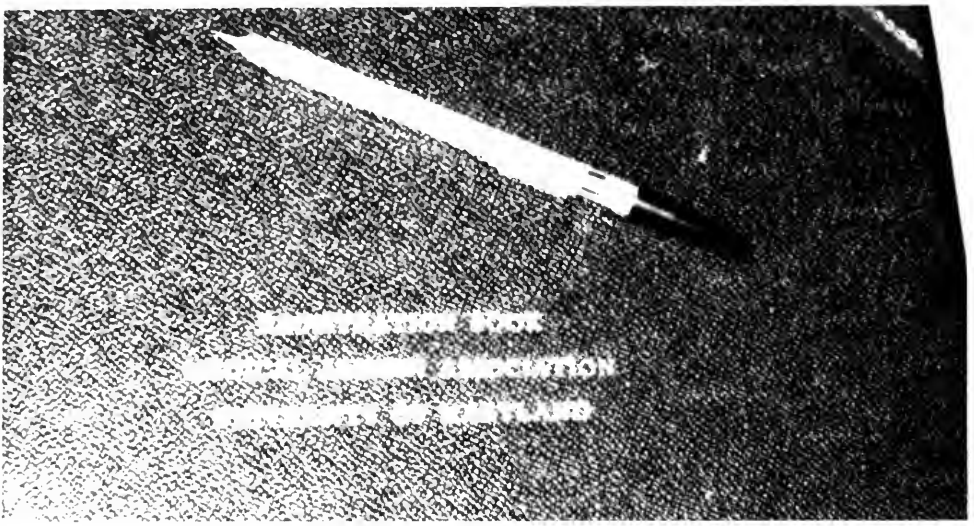

Over 50 physicians and graduates of the School of Medicine attended the American Medical Association convention in Atlantic City, June 20-24.

Dr. Edward F. Cotter, president Medical Alumni Association, discusses physician data with Robert J. Atkins, president, Fisher-Stevens Inc. Atkins' firm secures data on graduates which will be used by alumni association in keeping in touch with its alumni.

Dr. John C. Dumler Sr., center, Dr. Theodore Kardash, past president, Medical Alumni Assn., talk to a guest during a reception given by the Maryland alumni group.

The following School of Medicine graduates attended the AMA convention in Atlantic City, June 20-24.

John F. Cadden '27
Bernard J. Cohen '27
Bernard Friedman '28
Lewis P. Gundry '28
Abraham A. Silver '28
Fred S. Weintraub '28
Herman Cohen '29
John J. Haney '29
Meyer M. Baylus '30
Melvin B. Davis '31
Emmanuel A. Schimunek '31
Arthur G. Siwinski '31
John C. Dumler '32
Joseph W. Grosh '32
Arthur Karfgin '32
Lauriston L. Keown '33
Hyman Schiff '33
Lawrence J. Cohen '34
Robert H. Dreher '34
William L. Howard '34
Emanuel M. Satulsky '34
Benjamin I. Siegel '34
John Snyder '34
S. Jack Sugar '34
Edward F. Cotter '35
William G. Helfrich '35
D. McClelland Dixon '36
Thomas G. Abbott '37
William A. Dodd '38
Sylvan C. Goodman '38
Raymond M. Cunningham '39
Herbert Lapinsky '39
Leland B. Stevens '39
T. Edgie Russell Jr. '40
Theodore Kardash '42
E. Roderick Shipley '42
John M. Bloxon III '44
Charles F. O'Donnell '44
George W. Knabe Jr. '49
Max Miller '49
Frederick L. Hatem '51
Harry L. Knipp '51
Leonard H. Flax '53
Albert B. Bradley '55
Peter Thorpe '55
William Dunseath '59
Paul G. Koukoulas '59
Julieta D. Grosh '69
Ali H. Afrookteh

Dr. and Mrs. Lauriston L. Keown '33 enjoy the reception which over 100 physicians and their wives attended.

alumni activities

Dr. William H. Triplett BMC '11 was married September 4 to Mrs. Nola Banks.

Mrs. Banks, born and raised in North Carolina, and Dr. Triplett were married in a country church built by his father in West Virginia. The grounds and the building were presented to the Presbyterian Church by the Triplett family and Dr. Triplett's name is on the cradle roll there.

John W. Robertson '09, Onancock, Va., has been honored for his devoted and outstanding service to the Eastern Shore community of Virginia. He was presented a silver bowl to Onancock Mayor A. B. Hartman in recognition for his 60 years of general practice in the Virginia community.

the 30's

Isadore Kaplan '37, director of medical services for the Chesapeake and Ohio and Baltimore and Ohio Railroads, has been elected chairman of the medical section of the Association of American Railroads.

John F. Schaefer '38, general practitioner from Catonsville, Md., is the president of the Maryland State Medical Society, formally known as the Medical and Chirurgical Faculty.

the 40's

Charles Herman Williams '42, Pasadena, Md., has passed his Diplomatic American Board of Family Practice.

Capt. Ralph K. Brooks '43, Medical Corps, U.S. Navy, has retired after 28 years of active duty and is now serving as director of medical services for the Maryland Division of Corrections.

R. V. Rangle '43, who holds a degree of Juris Doctor from the University of Baltimore, was recently admitted to the Maryland Bar.

the 50's

James D. Shepperd Jr. '58 has been named medical director of the East Baltimore Medical Plan and assistant professor of medicine at the Johns Hopkins University School of Medicine.

the 60's

Stanley I. Music '66, Jacksonville, Fla., is currently an officer with the Epidemiologic Intelligence Service, U.S. Public Health Service for two years.

Robert S. Widmeyer II '68 is an orthopaedics resident at Charlotte Memorial Hospital, Charlotte, N.C.

102 and counting . . .

One hundred years of life is difficult to realize. Start with the reconstruction days of the South to Montana in the 1890's, Pancho Villa and the Mexican campaign, General "Blackjack" Pershing and World War I, and capsulize the happenings from the Depression to the moon exploits of the present era.

Sounds fantastic to imagine that an individual has lived through such momentous times and changes, but it's true.

And, Col. William A. Wickline, M.D., who celebrated his 102nd birthday on August 27, "is still practicing" and participating in his second century of activity

"He makes the rounds at the Plum Tree Convalescent Hospital in San Jose where he is a patient checking on the others there," said one of his daughters, Mrs. Edith Kennedy of Saratoga, Calif. "My father has a lifetime license; I guess they never thought he'd live to be 102."

Mrs. Kennedy said that he first day her father was at Plum Tree he wrote himself a prescription and asked the nurse to have it filled. The nurse, confused, called Col. Wickline's physician and asked what she should do. The physician replied, "He's a doctor, so I guess you'd better fill it."

The retired Army Colonel, who was born August 27, 1869 in Sweet Chalybeate Springs, Va., began his life on a farm and he paints a verbal picture of days in the South, after the Civil War, by remembering a large house and the self-sustaining aspect of life then.

"One room of the house was what you would call a utility room now, except our appliances were of a different sort. We had a loom for weaving material using yarn processed from wool sheared from our own sheep. There was an area set aside for the traveling cobbler to work, whenever he came to make our shoes. We raised or grew everything we needed to live, to clothe and feed ourselves. We even had maple sugar trees and made our own syrup," he said.

He graduated from Concord College in West Virginia and in 1895 from the College of Physicians and Surgeons in Baltimore which is now the University of Maryland School of Medicine. Wickline is the oldest living graduate of the medical school.

He then joined in the exodus to settle the West and opened his first medical practice in Montana. Wanting to become acquainted with the world around him, he joined the Army in 1900 and was immediately assigned to duty in the Philippine Campaign.

On the island of Panay, with the 44th Regiment of Volunteers, for a year, was the beginning of an Army medical career that lasted until Aug. 31, 1933. He is now the oldest living medical officer in the United States.

Another daughter, Marian E. Wickline of Danville, Calif., said her father drove a car until he was 95 and filled out his own income tax until about a year ago. He still enjoys keeping up with his own financial business.

"He visits us on weekends," said Mrs. Kennedy, "or we take him to Danville to visit there. He stands perfectly erect, has a perfect sense of balance and is quite a great man. At this rate he'll out live us all."

The agile and alert Wickline speaks these days of visiting his relatives in Virginia around the Richmond area, but no one is sure he will be able to go back. A third daughter, Mrs. Kenneth Bradshaw, lives in Manson, Wash.

When asked the standard question put forth to anyone over 80 as to what he attributed his longevity to he replied: "A good active life and no bad habits. I don't smoke, I will have an occasional glass of wine and I do enjoy my coffee. My main recreation is reading and playing cards. I am a baseball fan and a rooter for the 49er's."

In an interview on his hundredth birthday he expressed pride over the technological advancements he has witnessed in his lifetime. He still evidenced his love for travel and adventure when he commented, "We will receive many dividends from our moon explorations. Wouldn't mind going myself but I don't know if I'd live long enough to make it back."

Two years and several moon launches later, Col. Wickline is very much alive and active . . . perhaps he could have made a moon trip too.

ALUMNI ASSOCIATION SECTION

Dear Fellow Alumni:

How to make the Alumni Association more helpful and useful to the members and indeed to all graduates of the medical school, has been a chronic question repeatedly deliberated by the officers and members of the board. Alumni Day and the *Bulletin* have been our main efforts with student loans an important consideration within our financial resources.

Receptions and cocktail parties at the annual meetings of the American Medican Association and the Southern Medical Association have been held in recent years. I can report favorably about the reception at the AMA meeting in Atlantic City this past June. More on the meeting is covered elsewhere with photographs by Francis W. O'Brien, executive administrator.

As part of the Medical and Chirurgical Faculty of Maryland's semiannual meeting Sept. 15-19 in Puerto Rico, we at the time this goes to press, are planning a luncheon or reception for Sept. 17 for those attending from Maryland. Again this year in response to an invitation from Dr. Benjamin M. Stein '35 a group from Maryland will participate in a meeting Oct. 16 at the Brunswick Hospital Center, Amityville, N.Y.

The Southern Medical Association will meet in Miami Nov. 1-4 and a reception will be held Nov. 1 at the Hotel Fontainebleau. I hope all who are in Florida at this time will be able to attend.

Alumni in the Washington, D.C. area held their annual luncheon Sept. 14 at the Statler Hilton.

A number of favorable comments about recent changes in the *Bulletin* can be attributed largely to the efforts of Miss Jan Walker, who was appointed managing editor, January 1971. The *Bulletin* is a joint effort of the Alumni Association and the medical school. The first *Bulletin* in this series was published June 1916 as *Bulletin of the University of Maryland School of Medicine and College of Physicians and Surgeons*. It was a successor to the *Hospital Bulletin* of the University of Maryland, Baltimore Medical College *News* and the *Journal* of the Alumni Association of the College of Physicians and Surgeons. The first issue was dedicated to Randolph Winslow, M.D., LL.D., professor of surgery, University of Maryland. As time progressed the *Bulletin* emphasized the publication of scientific articles in addition to general news about the medical school and the alumni, but the number of scientific journals increased so that the need for this as a scientific publication has diminished.

In the future, the *Bulletin* will include articles of general interest regarding activities of the medical school, the faculty and alumni, although scientific articles will continue to be published. The recently appointed Editorial Board consists of Dr. George Entwisle, Dr. Robert B. Goldstein, Dr. Donald T. Lewers, Dr. Arlie R. Mansberger, Dr. Frederick J. Ramsay, Dr. Edwin H. Stewart Jr., Dr. Wilfred H. Townshend Jr. and Dr. W. Douglas Weir.

I hope there will be a good response to the letter received from the Executive Administrator requesting personal information which will be of great future assistance. Plans are under way to change your mail become more personalized.

With best wishes,

Edward F. Cotter

Edward F. Cotter, M.D.
President

students return

necrology

Thomas P. Lloyd '96, Shreveport, La., has died.
Frederick V. Beitler '06, Baltimore, Md., died July 1, 1971.
Clarence V. Latimer '07, Deposit, N.Y., died October 29, 1970.
Charles I. Shaffer '07, Somerset, Pa., died March 28, 1971.
Joseph W. Ricketts '09, Ormond Beach, Fla., died November 4, 1970.

teens

John J. H. Powers '10, Leominster, Mass., has died.
Gustave A. Gorisse '11, Dayton Ohio, has died.
Walter S. Niblett '11, Baltimore, Md., died May 21, 1971.
W. Frank Gemmill '13, York, Pa., has died.
Mark V. Ziegler '15, Olney, Md., died July 24, 1971.
Harry Goldmann '16, Baltimore, Md., died June 7, 1971.
Maurice C. Wentz '16, York, Pa., died January 28, 1971.

the 20's and 30's

Theodore Wollak '27, Scottsdale, Pa., has died.
James A. Miller '30, Baltimore, Md., died June 1, 1971.
Clyde M. Stutzman '34, Muncy, Pa., has died.
Ferdinand Fader '35, East Orange, N.J., died April 20, 1971.
James B. Moran '36, Providence, R.I., has died.
Harry F. White '38, Salinas, Calif., died April 12, 1971.

the 50's

Thomas W. Skaggs '53, Miami, Fla., has died.

BULLETIN

university of maryland school of medicine

Policy—The Bulletin of the School of Medicine University of Maryland contains scientific articles of general clinical interest, original scientific research in medical or related fields, reviews, editorials, and book reviews. A special section is devoted to news of Alumni of the School of Medicine, University of Maryland.

Manuscripts—All manuscripts for publications, news items, books and monographs for review, and correspondence relating to editorial policy should be addressed to Dr. John A. Wagner, *Editor,* Bulletin of the School of Medicine, University of Maryland, 31 S. Greene Street, Baltimore 1, Md. Manuscripts should be typewritten double spaced and accompanied by a bibliography conforming to the style established by the *American Medical Association Cumulative Index Medicus*. For example, the reference to an article should appear in the following order: author, title, name of journal, volume number, pages included, and date. Reference to books should appear as follows: author, title, edition, pages, publisher, and date published. A reasonable number of illustrations will be furnished free.

Reprints—At the time the galley proof is returned to the author, the publisher will insert an order form for reprints which are purchased directly from the publisher. Any delay in the return of this order form may result in considerable additional expense in obtaining reprints.

Alumni Association News—The Bulletin publishes as a separate section, items concerning the University of Maryland Alumni and their Association. Members and friends are urged to contribute news items which should be sent to Dr. John A. Wagner, *Editor,* Bulletin of the School of Medicine, University of Maryland, 31 S. Greene Street, Baltimore, Md. 21201.

Subscriptions—The Bulletin is issued 4 times a year. Its subscription price per annum, post paid is $3.00; single copies, $.75, when available. Active members of the Medical Alumni Association receive the Bulletin in connection with the payment of annual membership dues. Non-Alumni subscriptions should be made payable to the University of Maryland and remitted through the office of Miss Jan K. Walker, *Managing Editor.*

Advertising—The Bulletin accepts a limited number of advertisements. Rates may be obtained upon application to Miss Jan K. Walker, Managing Editor, Davidge Hall, School of Medicine, 522 W. Lombard St., Baltimore, Md. 21201.

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