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Dauber, Thomas R.

Boston University

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Boston University
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A bit over a year ago, I announced in these pages that Boston University's trustees had officially approved the institution's new thrusts into health policy by establishing the Boston University Health Policy Center. Development of the Health Policy Center was to focus on three important issues: (1) health-care quality; (2) planning, financing and managing health-care delivery systems; and (3) methods to provide technical assistance to health policymakers, in both the public and private sectors. The Health Policy Center was to serve as an "umbrella" organization for projects that would be independently generated and operated but whose staff would cooperate synergistically to yield health-policy "products" greater than the sum of their parts.

The months since the announcement have witnessed important steps in the development of the Health Policy Center, and I should like to share three of these milestones with Centerscope's readers:

--Program on Public Policy for Quality Health Care:

Last April, the Robert Wood Johnson Foundation awarded Boston University a three-year, $520,000 grant to establish a program that would significantly address the issue of health-care quality and lay out the policy alternatives for the benefit of decision makers at various levels of government and in the nation's professional organizations. The approach we have taken is to organize two study conferences a year, to which a small number of opinion leaders and decision makers are invited. A number of background papers are generated prior to each conference; a brief "policy monograph" follows. Finally, the policy monograph itself will be evaluated for content, approach and effectiveness in assisting in policy change.

Our first conference looked at the issue of quality assurance in hospitals. The 11th background papers and the policy monograph will be published soon, as separate volumes, by major publishers in the health field. The recommendations will pinpoint basic problems involved in the definition, measurement and financing of "quality" patient care in hospitals, and will suggest solutions.

--Center for Health Planning:

In December, the federal government placed the mantle of health-planning leadership on this institution when it awarded a contract to establish the Center for Health Planning for New England here at Boston University. The activities and structure of the Center for Health Planning are discussed fully on page 11 of this issue, but suffice it to say here that the contract places Boston University in an important role as the massive National Health Planning and Resources Development Act is implemented in New England. The contract recognizes the expertise of Mathew J. Skinner, Larry Diamond and their colleagues in training and technical assistance in the health-planning field. Through its activities, the Center for Health Planning will help Boston University work closely with and, where requested, serve the needs of numerous agencies throughout our region, and it will keep us in close contact with other health institutions and consulting firms having their own important contributions to make in health planning.

--The Bridgeport Project:

The third milestone in the development of our Health Policy Center is our close involvement with a group of physicians in the Bridgeport, Conn. area. These physicians, all members of the Greater Bridgeport Medical Association, came to us last summer to inquire if we could be of assistance as they sought to restructure their practices to meet more effectively the health needs of their communities.

They had in mind, specifically, a foundation for medical care. After analyzing both their needs and our own capabilities, we organized a core group here at the Medical Center to assist the physicians in Bridgeport in going about the difficult process of establishing a foundation for medical care with capabilities of carrying out a broad range of health services.

As a result of the physicians' own dedication to the foundation idea and desire to go about it directly, and with our assistance, they have achieved extraordinary results in a brief time. In less than eight
weeks, nearly 200 physicians joined the foundation and paid an initial membership fee to "seed" fund the foundation's operation. The group has incorporated itself as the Greater Bridgeport Medical Foundation, Inc., under a Connecticut statute that will permit members to develop prepaid medical plans and, if they so choose, to market to subscriber groups directly.

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The Health Policy Center serves as an overall monitor for these diverse activities in that each project necessarily involves all three of the key issues around which the Health Policy Center is built—health quality, planning and technical assistance. The Center shows promise of steady, continual growth in the near future. We are now concluding arrangements with an agency of the Department of Health, Education, and Welfare to conduct policy seminars for decision makers on a broad range of issues. We are also discussing the possibility of helping other physician groups to structure themselves to meet contemporary delivery and financing needs.

Why are all these projects—and, indeed, the Health Policy Center itself—important to us at Boston University Medical Center? We are here to educate and train a broad range of health professionals, in addition to providing high quality patient care. Projects such as these keep us in the real world.

Richard H. Engdahl

UNIVERSITY HOSPITAL
John H. Betjemann, administrator

The Medical Center: The view from University Hospital

A compulsive organizationalist would say it violates all the rules of control, command and accountability. A management consultant would say it can't work. But the fact of the matter is that it does work! My remarks here offer a particular perspective of Boston University Medical Center—viewed not from the state house, the mayor's office, Washington, D.C. or other distant seats of power and influence, but from University Hospital itself, a member of the Medical Center. After all, BUMC was created with, by and for its members—University Hospital, Boston University School of Medicine and Boston University School of Graduate Dentistry. It is an organizational creature designed 14 years ago to serve the needs of two separate corporations (University Hospital and Boston University) and three organizational entities.

BUMC: What is it?

BUMC is not a separate corporate entity. It is an organism spawned by two professional schools and a hospital to govern and coordinate themselves.

BUMC is not an end in itself. It is a means to an end—that end being coordination and cooperation between and among the three component members.

BUMC is not a defined geographical area. It is a certain location in Boston's South End, as well as arrangements with affiliate institutions in Massachusetts, Rhode Island and New Hampshire.

BUMC is not a binding contract. It is an agreement, a compact, a covenant among its three members.

Essentially, BUMC is an agreement among two schools and a hospital that they will not compete unnecessarily clinically and educationally; that they will not plan separately; that they will not make independent institutional decisions to the possible detriment of the other members. It is an agreement that they will plan cooperatively; that they will share information and resources maximally; that they will seek compromise on individual institutional action that would otherwise work to the detriment of the other members of the Medical Center.

Why is Boston University Medical Center needed by its three members?

The ultimate destiny as well as the short-term goals and the day-to-day administration of the two schools and University Hospital is as a principal training ground for BUSM and BUSGD students. It is where many faculty members earn their livelihood as professional practitioners. The Hospital employs the interns and residents who supervise and train medical students in collaboration with faculty and attending physicians. Without quality house officers there would be no quality faculty; and without the faculty, there would be no students and no professional schools. Similarly, without the two schools we would not be a referral and specialty hospital: University Hospital would be an institution without a unique mission, a community hospital in Boston's South End located adjacent to another good community hospital.

Despite interdependencies, there is among the members an inherent—and healthy—competitiveness. The three insti-
tutions are competing for quality personnel, faculty, federal research dollars, community good will and the support and monies of persons and organizations with charitable intentions. Thus, the dilemma of three interdependent institutions spanning two separate corporations in the same geographical area but with organizational outreach throughout much of New England, yet potentially competitive to the point of institutional destruction. Like the storybook three tigers who chased each other around a tree so fast and so long that they melted into a pile of butter...so, too, the three members of BUMC decided that otherwise productive energies could be consumed running about in endless circles. And so they agreed in 1962 to establish the Medical Center.

What makes BUMC work?

Three factors make the Medical Center arrangement work: its trustee governing structure; the Director of BUMC; and the sure knowledge that any other alternative is institutional suicide.

The Trustee Council of BUMC is the creation of the trustee bodies of University Hospital and Boston University, and consists of roughly one-third membership from each of the two corporations and one-third from the community at large. Thus, there is a pooling of parent institutional trusteeship carefully blended with an element that is accountable to neither parent corporation but only to each other as representatives of the larger society.

The Director of Boston University Medical Center has two other titles—Executive Vice President of University Hospital and Academic Vice President for Health Affairs of Boston University. Dr. Richard Egdahl, our tripartite leader, holds all three titles for one reason: Without all three accountabilities, the parts simply could not—and would not—mesh. Although I, as Hospital Administrator, and Deans John Sandson and Henry Goldman of Medicine and Graduate Dentistry, respectively, have maximum flexibility to pursue our own institutions' needs and goals, it is healthy and absolutely necessary that we all wind up reporting to the same person—in whatever hat he happens to be wearing at the time.

What does BUMC do for its three members?

BUMC provides certain direct services that lend themselves to being centralized and which, if duplicated, would be more costly to the three members. These activities include informational services, fund-raising, area/programs development, com-

munity relations and others. This approach is not only cost-effective, but it also enables the three institutions to recruit and retain better talent than would otherwise be possible in three separate operations.

BUMC represents, coordinates and speaks for the component institutions in certain relationships with outside interests—i.e., other medical centers, state, local and federal governments and our various communities. In this important role, BUMC keeps all three institutions on the cutting edge of progress and innovation in health-care delivery, medical education and research. Its staff has and takes the time to engage itself in activities that, because of the demands of day-to-day management, are ordinarily out of reach of the executive officers of the two schools and University Hospital.

Most importantly, BUMC provides a forum for the sorting out and resolution of inter-institutional issues, differences and needs.

How is BUMC financed?

Most of the Medical Center's funding derives from direct budget support by the three members and Boston University. In addition, certain grant monies attracted by BUMC staff support certain specific activities.

Thus, without smothering the institutional uniqueness, identity and image of the three member institutions, Boston University Medical Center enhances the total effectiveness. It does project and market the uniqueness and individual identity of the two schools and University Hospital. This will be true to an even greater extent in the future. However, BUMC will still be responsible for making the whole greater than the sum of its parts. It's no mirage; it's just plain hard work.

John H. Betjeman
IN PRINT

RICHARD H. EGDAHL, M.D., director of the Medical Center, (with Anthony J. Edis, M.D., and Luis A. Ayala, M.D.), Manual of Endocrine Surgery. Springer-Verlag, 1975. 274 pp. $38.50. The first volume in a projected series, edited by Egdahl, entitled Comprehensive Manuals of Surgical Specialties, the Manual is a full-color guide to the diagnosis and management of endocrine diseases encountered by the general surgeon, illustrated with 242 color plates. Four sections deal systematically with the surgical anatomy, physiology, pathology, diagnosis and operative treatment of endocrine disease involving the parathyroids, thyroid, adrenals, and pancreas.

JOSEPH COCHIN, M.D., Ph.D., professor of pharmacology and psychiatry (with Louis Harris, Ph.D.), Synthetic Substitutes for Opiate Alkaloids: A Feasibility Study. Drug Abuse Council, 1975. 77 pp. A report prepared for the Committee on Problems of Drug Dependence of the National Academy of Sciences/National Research Council under a contract from the Drug Enforcement Agency. Among its conclusions: "It seems premature to consider removing drugs which the physician has used with skill and confidence for many years and to replace them with newer drugs whose addiction liability may be as great and whose effectiveness and side-effect liability are not as familiar or as fully explored." Drs. Cochin and Harris also served as consultants to the AMA Center for Health Services Research and Development in the preparation of a Survey of Analgesic Drug Prescribing Patterns, by Philip G. Seitner, Ph.D., assisted by Beverly C. Martin. Drug Abuse Council, 1975. 274 pp. $6 each book, $10 for both.


Among others from BUMC writing in recent issues of NEJM have been the following: JOHN D. BLUM, J.D., M.S.P.H., research associate, Health Care Research Section, "Due Process' in Hospital Peer Review," Jan. 1;
PETER E. POCHI, M.D., associate professor of dermatology, "Antibiotics in Acne," Jan. 1;
LOUIS VACHON, M.D., "The Smoke in Marijuana Smoking," Jan. 15;

BUMC has recently published a series of brochures designed to acquaint patients, visitors and others with the Medical Center. The brochures, which have similar formats but different colored covers, include "Facts"—information about the Medical Center and its affiliates; "Maps"—how to reach BUMC and how to get around inside the Medical Center once you are here; "Report"—the many dimensions of University Hospital; and "Guide"—general information about the Hospital for patients and their visitors. Copies of any of these may be obtained by writing to the Office of Informational Services, Boston University Medical Center, 720 Harrison Ave., Suite 300, Boston, MA 02118.

Centerscope would like to know about all recently published or soon-to-be-published books and monographs (and articles of unusual interest) by Medical Center staff, faculty or alumni. Please call Lorraine Loviglio at the Office of Informational Services, (617) 262-4200, ext. 6146.

Centrex is coming April 17th

Centrex II, a telephone system designed to allow callers to dial directly into a specific department of an institution without going through a switchboard, will be installed at the Medical Center April 16, 1976. Because the changeover will affect all 1,600 telephone units in the Center, plan—(Continued on Page 45)
Different views of pain emerge when six BUMC health professionals look at the problem from the vantage points of their respective disciplines. Page 21.
Commentary

A

Boston commercial television station, WNAC-Channel 7, recently carried out a journalistic foray at University Hospital and two other Greater Boston hospitals under the bright banner of the consumer's right of access to his medical records. The trouble with this televised show-and-tell was that it was based upon a faulty premise, employed questionable ethics and featured bad reporting. We pass this experience on to our readers as the sort of flawed journalism that may explain some of the layperson's increasing hostility toward the institutions that are central to his life.

On an otherwise routine November morning, the fifth floor of the Hospital's F Building was thrown into a tizzy by the sudden flowering of television equipment and strident voices at the nursing station. It seems that a television reporter from Channel 7 had appeared at the desk dressed in a doctor's white coat with an official-looking name plate and had requested a patient's record. The desk clerk had asked the "doctor" for her name, and, being given a name, had handed over the record, while asking what department the supposed physician was from. The white-coated person overrode this query by saying she would "bring the record back in five minutes." She took the record, turned around to face a television camera, which suddenly appeared from around the corner, and intoned in the name of consumers everywhere, "I have just obtained this medical record simply by asking for it."

The faulty premise. The television reporter, ringed minutes later with security, nursing and administrative personnel, said she was doing the report to "test a theory: A patient has to pay to see his records, while any person in a white coat has free access to them." We informed her then that she was wrong: that any patient can look at his or her record while in the Hospital, and must pay a reasonable fee only if he wants a copy of that record after leaving the Hospital. We also pointed out that in the best interests of patient care, the records have to be immediately available for health professionals. When the University Hospital television story was aired, the reporter did not clarify her confused premise.

The questionable ethics. The reporter, who had entered the Hospital through a side door that had been left open, saw nothing ethically wrong in wearing a doctor's coat while requesting a medical record. She was not at all impressed by the fact that what she was doing amounted to an impersonation on a patient floor where (1) clerks, nurses and physicians alike frequently have to act quickly and (2) where the hubbub of police, cameras and the like might have had an adverse effect on a patient.

The bad reporting. Both our consumer reporter and her 6 p.m. news anchorman set up their television viewing audience for an expose on the abuse of patients' records. The anchorman, introducing the story, solemnly warned, "If you have ever been a hospital patient, chances are that your medical records are still on file there" (with emphasis on the latter phrase). The consumer reporter said that one right that we might assume a patient has is access to his or her records for the payment of a reasonable fee. Little did the viewers realize that the "investigation" was not going to address in the slightest their right to get their medical records from the Hospital's Medical Records Department for a fee. Instead, it was going to be about how an impostor can go on to a patient floor and get her hands on a record for a few minutes. And the show was not going to tell those viewers that if they were a patient on that floor, they (1) would also be able to freely read their record and (2) would want very much to have the Hospital's health-care professionals have free access to the record.

So much for the "consumer reporter" and her faulty logic, ethics and reporting. Should University or any other hospital baton down the hatchets to make sure that no future reporter with a doctor's coat and official-looking name plate can go up to a patient floor and grab a patient's record?

The medical record does belong to the hospital, and the hospital does attempt, short of extraordinary means, to protect it, not only to keep its working records intact and usable at critical times, but also to protect the patient's right to privacy. We feel that we have an effective security system at University Hospital, but that is not to say absolutely that the security cannot be breached, or that deception will never succeed.

A question of access. But we would have nothing to gain — and a great deal to lose — if we were to devise an entire security system around the goal of keeping out one television reporter. To take such an action, we would be making access much more difficult for our health professionals, who have to have quick access to the record in order to carry out their important duty to the patients. Further, since University is a teaching hospital and a major New England referral center, and since our patients see more doctors and other specialists than they would at most other hospitals, we are determined to place no barriers in the path of consulting physicians, nurses, house staff and other health workers. One shoddy job of "investigative reporting" misleadingly carried out in the name of patients' rights, will not change our policy.

Quality patient care is the primary goal of University Hospital. If our legal, logical, ethical and — up to now — secure, records system can help one physician save the life of one patient, we feel that that system has repaid us richly.

The Editors

‘Robinson series exceptional …’

To the Editor:

The Joan Robinson series in Centerscope (Fall, 1975) … was exceptionally well done.

The fact that Centerscope elected to publish such a series on Joan Robinson is highly significant when given the many complex and controversial variables of institutional dynamics in University Hospital and your Medical Center.

In holding fast to its commitment to allow cameras to chronicle the Joan Robinson experience, the clinical and administrative leadership of University
Hospital has made an inestimable contribution to the delicate subject of patient understanding and to the broadest horizons of what’s so popularly called continuing medical education. Despite the short-term emotional and ethical questions, which perhaps are still felt at BUMC, I do believe the possibilities for long-range benefit are tremendous.

Your vision is appreciated.

Roland D. Wussow
Special Assistant
Program Liaison Branch
Office of Cancer Communications
National Cancer Institute

Centerscope seen favoring ‘more and bigger government’

To the Editor:

Please remove my name forthwith from the mailing list of Centerscope. If there are any other Boston University Medical Center publications, I would appreciate it if my name were also removed from those mailing lists.

Philosophically, intellectually and politically, your whole thrust is completely opposed to mine. I believe with Thomas Jefferson that that government governs best that governs least, while yours (philosophy) is (for) more and bigger government, loaded with stupid, exploiting, parasitic bureaucrats ensconced in their tight sinecures sucking our blood and harassing us at every turn.

Joseph M. Lebowich, M.D.
Saratoga Springs, N.Y.

(Rollins, your philosophy’s letter before our Fall, 1975, issue was published, we looked at our Summer and Spring numbers to find out what articles he objects to. In the Summer issue, one article discussed what medicine was like in 1775; another discussed the history of University Hospital’s Talbot Building, while the third described a major training program in primary care, financed at this point entirely by the private Robert Wood Johnson Foundation. The Spring, 1975, issue did carry an article about the economics of prepaid dental plans; but it stressed that the government is not now underwriting any such programs. And the major article in that issue, by Michael J. Haberstam, M.D., BUSM ’57, probably came very close to representing Dr. Lebowich’s viewpoint of government’s role in health care. Editor)

Robinson features ‘a magnificent job’

Rather than skimming your Fall 1975 issue, as I must do with others in order to keep up with the overwhelming number of publications that collect in the “to read” pile on my desk, I was captured by the cover page and went on to read every word of the Joan Robinson feature(s) (Fall/1975).

In words of one syllable, it’s a magnificent job!

“Hooked” by that story, I then went on to read the rest of the publication.

As one who once had the fun and satisfaction of creating and publishing two new medical center-type publications — one called the Tufts-New England Medical Center News and Scientific News when I was there — I found your magazine revived a lot of memories. It’s fun to have a winner; and yours is a winner!

Keep up the great work!

Edward M. Friedlander
Washington, D.C.
"There is a common tendency in our day, both on the part of professional psychologists and laymen, to look upon anxiety as a negative, destructive, "abnormal" experience, one which must be fought and if possible annihilated...."

O. H. Mowrer

Since 1950 the literature on anxiety, both professional and lay, has increased a thousandfold in the form of articles, symposia, reports and scientific exhibits. And virtually all of this output reflects a common presumption—that anxiety is a negative, nonproductive experience. This viewpoint leads naturally to a discussion of how to combat or eliminate anxiety.

But anxiety, as Mowrer implies, has its uses. It can play a positive and constructive role in human development. Without it neither an individual nor a society can grow.

Productive vs. nonproductive anxiety: a matter of degree

For the physician the difference is not an academic one. He must distinguish between productive and nonproductive anxiety. And the difference is often one of degree.

In low levels of anxiety, for example, the individual is alert and sensitive to threats and acquires an increased ability to cope. Performance is often improved.

But at higher levels of anxiety the opposite is true. The ability to distinguish between the dangerous and the trivial is reduced and often leads to inappropriate behavior. Apprehension becomes fear. And coping becomes difficult, if not impossible.

Crossing the anxiety threshold

The key question for the physician then becomes: Is the degree of anxiety experienced productive or nonproductive for the individual patient? And while some patients may require relatively large amounts of anxiety to perform optimally, for others lower levels of anxiety may prove unproductive.

Librium (chlordiazepoxide HCl): to help lower the level of anxiety

When anxiety has reached levels that seriously
impair performance, reassurance and counseling may be sufficient for the patient. If not, adjunctive antianxiety medication may be called for.

Librium (chlordiazepoxide HCl), by quickly and effectively calming the anxious patient, helps to lower the level of anxiety. When anxiety has been reduced to manageable levels, therapy with Librium should be discontinued.

Librium® (chlordiazepoxide HCl): an uncomplicated clinical course

To be truly effective, antianxiety medication must allay anxiety without complicating the clinical course. Librium meets this criterion. Librium, when used in proper dosage, rarely interferes with mental acuity. Side effects are seldom encountered. And Librium is used concomitantly with many primary medications.

For a more detailed discussion of the side effects, precautions and warnings, please consult the brief summary of product information on this page.


Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

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Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.
Legal Signs

The case of the simple, harmless, inexpensive and conclusive diagnostic test

by George J. Annas, J.D., M.P.H.

Who should be financially responsible if a specialist does not perform a simple, harmless, inexpensive and conclusive diagnostic test and the patient develops a permanently disabling condition that could have been diagnosed and arrested had the test been done?

In early 1974, the Supreme Court of the State of Washington decided that, in the case of failing to test routinely interocular pressure, the ophthalmologist should be held liable if the patient’s vision is impaired by glaucoma. The court arrived at this conclusion despite undisputed expert testimony that the current professional standards of ophthalmology do not require the routine use of a Schiotz tonometry test in patients under 40 years of age.

The impact on practice. The potential impact of this case on the practice of defensive medicine and malpractice insurance premiums is tremendous. The opinion has been described as an “audacious pronouncement” and the judges who wrote it as a “relatively uninformed group of jurists.” However, before reacting in unrestrained horror, it is worthwhile to examine the facts of the case.

The plaintiff, Barbara Helling, first consulted the defendant ophthalmologist (who were partners) for myopia in 1959. She later consulted them for irritation caused by contact lenses twice in 1963, three times in 1967, and five times in 1968. One defendant testified that it was not until one of the last visits in 1968 that any complaint was made that might indicate glaucoma, and that he diagnosed the condition as glaucoma within 30 days of this complaint. At the time of the diagnosis, intraocular pressure measured 46.9 in each eye (15 being normal); the patient had lost all peripheral vision, and her central vision was reduced to five degrees vertical by 10 degrees horizontal. It was conceded that the plaintiff, then 32 years old, had had the disease for approximately 10 years.

There was undisputed evidence that the standard practice for ophthalmologists did not require the routine administration of a pressure test to persons under the age of 40 because the incidence of the disease in this population was so low (estimated by one witness and the court as one in 25,000). Because following standard and accepted practice would not have provided an earlier diagnosis in this case, both a jury and an intermediate appellate court had found in favor of the defendants. The state’s supreme court, however, reversed and entered a judgment in favor of the plaintiff, saying that “one person . . . is entitled to the same protection as afforded persons over 40 essential for timely detection of the evidence of glaucoma where it can be arrested to avoid the grave and devastating result of this disease. The test is a simple pressure test, relatively inexpensive. There is no judgment factor involved and there is no doubt that by giving the test the evidence of glaucoma can be detected. The giving of the test is harmless if the physical condition of the eye permits.” (Emphasis supplied.)

Business cases cited. In order to disregard the standard practice of the profession in determining negligence, the majority of the court relied upon two business cases written by distinguished jurists. The first, by Justice Oliver Wendell Holmes, is a 1903 case involving the railroad industry; and the other, by Justice Learned Hand, is a classic 1932 case involving a tugboat firm’s negligence in not adopting new technology. The latter case was cited by an Illinois court in finding a hospital negligent for not requiring timely consultation even though it followed the practice of other hospitals. In commenting in 1932 on the failure of a tugboat to have onboard radio equipment, Justice Hand wrote:

In most cases reasonable prudence is in fact common prudence; but strictly it is never its measure; a whole calling may have unduly lagged in the adoption of new and available devices. It never may set its own tests, however persuasive be its usages. Courts must in the end say what is required; there are precautions so imperative that even their universal disregard will not excuse their omission. (Emphasis added by the Washington court in quoting this passage.)

After quoting this passage, the court then went on to hold that no matter what the current practice was, “as a matter of law” physicians should be required to perform routine glaucoma tests on patients under 40, and that therefore the defendants were negligent in not so doing.

Stigma of blame, an issue. While all nine judges agreed with this conclusion, three of them argued in a concurring opinion that no “stigma of moral blame” should attach to the defendants since their practice had been in accord with the standards of their profession. They would have preferred that liability be founded not on negligence, but on the theory of strict liability or liability without fault. This theory is generally applied to businesses that are inherently very dangerous (e.g., blasting) and where injuries are predictable and difficult to prevent. Their argument in this case was based on the fact that the doctors were in the best position to bear the financial loss suffered by the plaintiff, and could obtain the proper insurance to pay for such statistically predictable missed diagnoses. While this theory was not adopted by the court, there have been a number of recent proposals for some form of “no fault malpractice insurance” to replace the current tort system. The three concurring judges seem to have believed that such an approach would be appropriate at least in cases like this one.

What can be learned from this case? First, courts are likely to be more sympathetic to a young woman who has lost most of her vision than (Continued on pg. 16)
Kaleidoscope

Malpractice coverage rises 325 p.c. over '75

Latest estimates indicate that malpractice insurance will cost University Hospital $500,000 this year, an increase of $415,000, or about 325 percent over the 1975 figure.

Boston University also estimates it will pay 325 percent more for a blanket malpractice insurance policy to protect its medical and dental students and instructors, nursing students, law students who go out for field training, and students enrolled in Sargent College of the Allied Health Professions.

From $34,000 to $111,000. During the last fiscal year, the University paid $34,000 for malpractice insurance. This year it will pay at least $111,000.

The Hospital's 1976 policy, written by the state-mandated Joint Underwriting Association, insures the Hospital, its employees who are not physicians, and interns. The tab for covering the Hospital and its non-physician employees alone comes to $288,780. Coverage for each intern costs $450 above this amount.

Residents and fellows now must have individual policies, which accounts for the remaining $300,000 in premiums.

The Hospital switched this year from an "occurrence" policy to the less expensive "claims-made" system. Interns, residents and fellows will continue to be insured on an occurrence basis.

An occurrence policy defends all claims for the year in which the insurance is carried, regardless of the year the claim is made. A claims-made policy defends claims filed only the year the insurance is carried. When coverage overlaps, the occurrence policy defends the claim.

Salaried staff not covered. Unlike the $185,000 policy written last year by the Argonaut Insurance Co., the current policy does not cover the Hospital's salaried staff physicians. The Hospital now is identifying this group's need for coverage and is seeking the least expensive method of providing protection to physicians who also serve the Hospital in a supervisory capacity.

To give a better perspective on the astronomical increases in malpractice insurance, the Hospital paid $66,000 for coverage in 1974. Thus, the Hospital has witnessed virtually a tenfold increase in the cost of malpractice insurance in two years.

B.U. is designated N.E. Regional Center for Health Planning

Boston University has been selected as the regional Center for Health Planning for the six New England states. The award by the Department of Health, Education, and Welfare gives the University specific responsibilities in helping implement the new National Health Planning and Resources Development Act.

Under terms of the two-year, $450,000 contract, Center for Health Planning staff members will actively assist the health-planning process at local, state-wide and regional levels through technical assistance, consultation and continuing education.

Only academic institution. Nationally, five Centers for Health Planning have been established to date under the new health-planning law. Boston University is the only academic institution to have been designated.

Enactment a year ago of the federal health-planning law brought together several formerly separate HEW programs, including the Regional Medical Program, Hill-Burton facility construction activities and the Comprehensive Health Planning program.

According to Richard H. Egdahl, M.D., the University's academic vice president for health affairs and administrative officer in charge of the Center for Health Planning, "The new health-planning legislation promises to impact on virtually every health activity that is now underway and on all health efforts to be undertaken in the future. We are pleased that Boston University's broad resources in health-policy issues and experience — in technical assistance and continuing education in health planning have been recognized through the awarding of this contract."

The law gives local Health Systems Agencies (HSAs) responsibility for coordinating health-planning activities in specified health-service areas throughout the country. Health planning at the state level is to be the responsibility of State Health Planning and Development Agencies (SHPDAs), advised by State Health Coordinating Councils (SHCCs).

The University Center for Health Planning will provide technical assistance, consultation and continuing education for all 13 HSAs, six SHPDAs, and six SHCCs in the New England area, as well as for the health-planning staff of the HEW Region 1 (New England) office, based in Boston.

Skinner named director. Mathew J. Skinner has been appointed executive director of the Center for Health Planning.

Larry M. Diamond, the Center for Health Planning's director of field operations, will direct the efforts of the Center's state coordinators.

The Center will be advised by a board composed of HSA, SHPA and SHCC representatives from the six states. In addition, a technical advisory panel of health-planning consultants will advise the Center on available planning resources, strategies and methodologies.

Further information on the mission and programs of the Center for Health Planning can be obtained by writing the Office of the Academic Vice President for Health Affairs, 147 Bay State Rd., Boston, MA 02215, or by telephoning 617/353-3764.

Hospital trustees elect Dr. Goldman, Beatrice Sherman

School of Graduate Dentistry dean Henry M. Goldman, D.M.D., was elected a trustee of University Hospital at the Hospital's 121st annual meet-
ing, held in December at the Museum of Science, Boston.

"Henry Goldman was an obvious choice of trustee for University Hospital because of his long-time association with the Hospital by virtue of his post as dean of the School of Graduate Dentistry," said Jerome Preston, Jr., chairman of the nominating committee of the Board of Trustees.

"He is a man of great ability and knowledge," Preston said, "and we wanted to strengthen the already strong association of the Hospital and the School of Graduate Dentistry."

Move enhances communications. Having Goldman as trustee, Preston said, would "enhance communication between the Hospital and the School on matters of vital interest. His experience and judgment will be invaluable to the Hospital."

A member of Omicron Kappa Upsilon, the honorary dental society, Goldman is also associate director of the Medical Center and professor and chairman of the Department of Oral Pathology and Stomatology at SGD. He has also been a corporator of the Hospital.

Goldman has served as a consultant to numerous local and national organizations during his career, including the National Institutes of Health, the National Institute of Dental Research, the Surgeon General of the U.S. Army, the U.S. Public Health Service Hospital at Boston, and the now-closed U.S. Naval Hospital at Chelsea.

He is also a member of many professional organizations, including the American Dental Association, the American Academy of Oral Pathology, the American Academy of Periodontology and the New England Society of Pathologists.

Beatrice Sherman elected. Beatrice G. Sherman, who has been trustee by appointment of the governor for three years, was elected trustee for the first time.

The retirement of three other trustees was officially announced at the meeting. Stephen Paine, who was first elected in February, 1961, retired in November. While a trustee, he was a member of the Operations and the Audit Committees.

Also retiring was Elwood T. Dickinson, who was assistant treasurer of the Hospital for a number of years before becoming trustee in April, 1962. He was named treasurer in 1973 and served in that post until a year ago.

Paine and Dickinson have been named trustees emeriti by the Board of Trustees.

Ernest F. Stockwell, Jr., who was named a trustee in December, 1963, resigned in October. He has served the Hospital as vice president and as a member of the Executive Committee. He was also chairman of the Audit Committee and a member of both the Doctors' Office Building Planning and the Nominating Committees. Stockwell remains as corporator of the Hospital.

Harry N. Gorin, trustee since 1956, died in July, 1975. He was chairman of the Real Estate Committee.

University joins effort to upgrade African health care

Experience in helping urban American communities establish neighborhood health centers will soon be employed to assist 20 Central and West African nations organize their own health systems appropriate to local needs. Boston University professionals in disciplines ranging from community medicine and health-care management to geography and developmental economics will be playing an important role in this move to strengthen the African nations' health-delivery systems.

The project, part of an effort that may require up to seven years, results from a cooperative effort involving, in addition to Boston University, the International Health Division of the American Public Health Association (APHA), United States Agency for International Development (AID), and the World Health Organization (WHO).

The 20 African nations involved are Benin (formerly Dahomey), Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Mali, Mauritanie, Niger, Nigeria, Senegal, Sierra Leone, Togo and Upper Volta.

Focus on three areas. During the first two years of the project, experts from the University, the APHA and other institutions will focus on development in three areas of planning assistance to the 20 African nations:

- improving health planning and management capabilities of the nations' individual ministries of health;
- improving health-manpower training; and
- expanding disease-surveillance and health-information systems.

David M. French, M.D., M.P.H., the project director, noted that achieving all three goals will require a broad array of University talent. Dr. French, who came to Boston University School of Medicine in 1969 to head its Department of Community Medicine, also directed the University's participation with the Roxbury community in organizing the Roxbury Comprehensive Community Health Center, acknowledged to be one of the nation's model neighborhood health centers. Dr. French will direct the African project from headquarters in Abidjan, Ivory Coast.

Region's acute health problems cited. The project director noted that the 20 African nations include regions suffering from some of the world's most acute nutritional, communicable disease and maternal and child health problems.

French will be assisted in the two-year first phase of the project by the University's African Studies Center. The Center's director, John R. Harris, Ph.D., explained that health-policy and health-delivery efforts are an important part of the Center's activities. John Karefa-Smart, M.D., principal health consultant in the African Study Center and currently medical director of the Roxbury Comprehensive Community Health Center, will serve as program coordinator of the 20-nation African project, and will be based in Boston.

The current project is a direct outgrowth of the recent, totally successful worldwide WHO drive to eradicate smallpox. As part of the smallpox campaign, the health ministers of the 20 West and Central African nations organized a council to work on a regional basis.

Request for assistance. With the completion of the smallpox-eradication program, the 20-nation African council requested that WHO secure international expertise to help improve the overall health status of the region. In response to WHO's call for assistance, AID provided funds to the International Health Division of APHA, which, in turn, subcontracted with Bos-
ton University for the current effort.

Dr. French serves as project director for both Boston University and APHA.

The three program goals of the project will call upon many talents found at the University: health professionals in nutrition, community health and maternal and child health; public-health administrators, health managers and fiscal and economic managers; developmental economists, political scientists, geographic planners, socio-anthropologists and international-law specialists; and epidemiologists, demographers and data-system specialists.

In anticipating the five-year implementation phase, French explained that the ideal health-delivery system must be based at the village level. "In Africa, as in some areas of Southeast Asia and other developing areas, there tends to be a great gap between what goes on at the so-called 'university' level in the few large cities and the much more predominant village level. Thus," French continued, "we will be stressing the development of para-professionals, perhaps similar to the 'barefoot doctors' of China."

Headquarters in Ivory Coast.

French's office in the Ivory Coast will serve as the headquarters for a small core staff that will coordinate the African-based part of the program. Consultants from Boston University, APHA and other institutions will be coordinated by Drs. Karefa-Smart and Harris, based at the University's project office in Boston.

Much of the allied health-professional training will occur at two previously-existing WHO centers in Togo and Nigeria. Faculty members from the University's School of Nursing and Sargent College of the Allied Health Professions are expected to provide technical assistance at these centers.

Prior to his appointment as professor of community medicine and chairman of the department at the School of Medicine, French served on the faculty and administrative staff of Howard University School of Medicine.

Since resigning the chairmanship of the Department of Community Medicine in 1974, French has been director of community-health affairs at Boston University Medical Center. He has served frequently as a consultant to the U.S. Senate subcommittee on refugees of the Committee on the Judiciary, reporting on health conditions in Southeast Asia and Africa.

African Studies Center Director Harris, prior to his appointment at Boston University in 1975, was an associate professor of economics and urban studies at Massachusetts Institute of Technology.

Dr. Karefa-Smart is a former assistant director general of the World Health Organization. He also has served in the government of Sierra Leone, occupying posts as a member of Parliament and as minister of external affairs, minister of defense, minister of lands, mines and labor, and as acting prime minister.

McCahan, Williams appointed to BUSM administrative posts

The appointments of John F. McCahan, M.D., as associate dean, Stanford A. Roman, Jr., M.D., as assistant dean and director of the Office of Minority Affairs, and Lester F. Williams, Jr., M.D., as associate dean for the Department of Health and Hospitals are among the latest in a series of appointments and promotions affecting the administrative staff of the School of Medicine over the past 15 months.

Formerly director of the Department of Medicine at Lincoln Hospital in the Bronx, N.Y., McCahan joined BUSM in January, replacing Vincent Lanzoni, M.D., BUSM '60. Lanzoni left to become dean of the College of Medicine and Dentistry of New Jersey — New Jersey Medical School (Centerscope, Fall, 1975).

Prime responsibility is curriculum. Dean John I. Sandson said the new associate dean's principal responsibilities are in the area of curriculum — "especially in the development of a primary-care curriculum for medical students" — but added that McCahan's duties will extend beyond curriculum matters. "He will assist me in many different areas," Sandson said.
was an associate professor of medicine at Lincoln Hospital, he taught medicine at the University of Pennsylvania. While serving as chief of medicine at Lincoln Hospital, he was an associate professor of medicine at Albert Einstein College of Medicine in New York.

Lincoln Hospital is located in an area — the South Bronx — that McCahan describes as "probably the poorest area in New York, by almost any statistical measure of poverty." Much of his effort there was directed toward integrating the inpatient and outpatient services and emphasizing outpatient care in the training of house staff.

Roman, who is director of Ambulatory Care at Boston City Hospital, was named assistant dean and director of the Office of Minority Affairs last September. He replaces Edgar Smith, M.D., who is now associate dean for academic affairs and provost at the University of Massachusetts Medical School.

Roman is an assistant professor of both medicine and community medicine at the School, and has taught medicine at the University of North Carolina and Columbia University. He is a graduate of Dartmouth College, Columbia University College of Physicians and Surgeons, and the University of Michigan School of Public Health.

He has been director of clinical services for a private nonprofit ambulatory care facility in rural North Carolina and was associate director of ambulatory care and chief of professional services at Columbia University's Harlem Hospital Center, where he was also chief of the medical clinic.

The appointment last month of Williams, a BUSM alumnus, to the newly created position of associate dean for the Department of Health and Hospitals marks official recognition of a liaison function Williams has been performing for the past year and a half, Sandson said.

DHH appointment. "All professional activities at BCH and the other DHH facilities with which the School is involved will flow through him," Sandson said. The appointment was made concomitantly with Williams's appointment as executive director of the Medical and Dental Services of the Department of Health and Hospitals.

Williams's clinical responsibility is as director of the Division of Surgery at BCH. A professor of surgery at BUSM and chief of the gastrointestinal section of University Hospital, he is a graduate of Brown University and was a member of the class of 1956 at BUSM. He has served as program director of the Boston University Affiliated Hospitals Surgical Internship and Residency Program and as associate director of the surgical service at the Boston Veterans Administration Hospital.

Other recent Dean's Office appointments and promotions have included the following: William F. McNary, Jr., Ph.D., as associate dean for student affairs. McNary had been assistant dean for student affairs for five years before his Sept. 1 promotion. A popular figure with students, he has taught at the school for 22 years, and is an associate professor of anatomy.

Leah M. Lowenstein, M.D., as assistant dean. An associate professor of medicine and associate professor of biochemistry, Lowenstein had been acting dean for women since 1972. In her present position, assumed in January, 1975, she continues to be responsible primarily for women faculty and students.

John F. O'Connor, M.D., as assistant dean for admissions. A 1957 alumnus of BUSM, O'Connor has long been active in the work of the Admissions Committee, serving as its vice-chairman since 1973. He is a pediatric radiologist at BCH, and holds fellowships at BUSM in radiology, pediatrics and anatomy. In his new post he works under the direction of Jacob Swartz, M.D., BUSM '43, who continues as associate dean for admissions.

Floyd Kemske, M.A., as financial aid officer. Kemske was assistant to the Dean of the College of Arts and Letters at Michigan State University before coming to BUSM last June to fill this new position. He is responsible for helping BUSM students — two-thirds of whom receive financial assistance — find their way through the complex system of financial aid sources to meet high tuition costs.

Phyllis Stevens, as coordinator of the Office of Minority Affairs. Stevens was formerly a secretary in the Office, and her appointment as coordinator, and the subsequent hiring of a new secretary to replace her, represent an expansion of the Office of Minority Affairs.

In addition to those recently appointed or promoted, the following members of the School's administrative staff continue in their positions: Jacob Swartz, M.D., associate dean for admissions; Daniel S. Bernstein, M.D., associate dean for hospital affiliations and director of continuing medical education; Dorothy Keeler, registrar; Constance MacDonald, administrative assistant; and Frances Devlin, administrative secretary. The retirement of Mary Whitehead, admissions officer, was announced in February.

The Admissions Office, formerly situated on the first floor of the Instructional Building, has been moved...
to the fourth floor of Building A. The space created by the move has allowed the offices of Student Affairs, Minority Affairs, Financial Aid, and the Registrar to be consolidated in one first-floor suite of offices.

Scotch is appointed to Alcoholism Council

Norman A. Scotch, Ph.D., chairman and professor of the Department of Socio-Medical Sciences at the School of Medicine, has been appointed to the National Advisory Council on Alcohol Abuse and Alcoholism, a 12-member panel of experts that recommends new federal policy, programs and activities as well as reviews and approves grant awards for the National Institute on Alcohol Abuse and Alcoholism.

The announcement of Scotch's appointment to the Council was made in Washington, D.C., by David Mathews, secretary of the Department of Health, Education, and Welfare. Mathews also announced the appointment to the Council of Stanford University law professor John Kaplan and David H. Knott, M.D., medical director of the Alcohol and Drug Dependence Clinic at the Tennessee Psychiatric Hospital and Institute.

Study shows earlier start helps cut orthodonture period

A study on bone movement during orthodonture, conducted at the School of Graduate Dentistry, has shown that the time necessary to correct partially certain gross dental malocclusions in children can be cut from the standard two years to a period of four to six months if orthodonture is initiated in children of a younger age than is customary. Additional time is usually required for correction to the optimal degree.

Findings aired at Dental Congress.

Leonard Bernstein, D.M.D., clinical professor of orthodontics at the School, presented his findings in January at the first annual Yankee Dental Congress, a forum for New England dentists. The congress, jointly sponsored by the dental societies of Massachusetts, Maine, New Hampshire and Vermont, was held in the Prudential Center, Boston.

A number of School of Graduate Dentistry faculty members participated in the forum.

Bernstein said the purpose of his study was "to see if there were any orthopedic influence in the correction of dental malocclusions." His work was limited to studying maxillary prognathic deformities in children — cases usually known as Class II malocclusions, in which the upper jaw extends beyond the lower jaw.

Patients receiving treatment in the study were 7 to 8 years of age; children are usually 10 to 13 when they begin orthodonture.

He said it had never been determined whether the correction of this type of dental deformity was solely orthopedic, that is, involving movement of the bones of the whole maxilla (upper jaw); orthodontic, involving movement of the teeth through the bone; or a combination of the two.

Gold implants record movement. To determine the source of the movement, Bernstein explained, he placed gold implants in the bone of the patient. Bernstein's study is the first to employ such gold implants in patients.

X-rays taken before, during and after orthodontic treatment show readily the position of the implants, which helps provide the researcher with an accurate record of the actual movement during treatment.


Also speaking were Murray Bernstein, D.M.D., assistant clinical professor of oral surgery; Eugene Sandler, D.D.S., associate professor of pedodontics; Gerald M. Kramer, M.D., D.M.D., chairman of the Department of Periodontology; Haskel Pierce, D.M.D., instructor in oral surgery; and Thomas Kilgoe, D.M.D., clinical instructor in oral surgery.

Other participants were Nicholas M. Dello Russo, D.M.D., assistant professor of periodontology; Gary M. Reiser, D.D.S., assistant clinical professor of periodontology; Myron Nevins, D.D.S., associate clinical professor of periodontology; George T. Gildea, D.M.D., clinical professor of orthodontics; and Martin J. Dunn, D.M.D., associate clinical professor of oral surgery.

The event also featured exhibits sponsored by national companies associated with dentistry.

Scientist Albert Szent-Gyorgyi (left) and BUMC's Benjamin Kaminer, M.D., listen to speakers during symposium organized by Kaminer in October. The event brought seven Nobel Prize winners and other distinguished researchers to BUMC to honor Szent-Gyorgyi.
Goldston grant aids research into MS

The genetic control and regulation of a possible animal model of multiple sclerosis are the focus of a research project at the School of Medicine. Michael J. Moore, M.D., an assistant professor of neurology and principal investigator of the project, received the Eli Goldston Memorial Grant for Research from the National Multiple Sclerosis Society.

The award, totaling $91,724 over a three-year period, is supported by a bequest from the late Mr. Goldston, who was president of Eastern Gas and Fuel Associates and a well-known Boston civic leader. The grant was announced by William J. Flynn, president and general manager of WSBK-Channel 38, Boston, and chairman of the Massachusetts chapter of the National Multiple Sclerosis Society.

Moore and R. Michael Williams, M.D., Ph.D., co-investigator, will continue their studies of the possible animal model for multiple sclerosis research. MS is a chronic, crippling disease of the human central nervous system, striking most often persons between the ages of 20 and 40. At present, half a million Americans are thought to suffer from MS and related neurological disorders.

Disease induced. The animal model used by Moore and his associates is called "experimental allergic encephalomyelitis," or EAE, for short. EAE is a disease that can be induced in experimental animals, such as rats and guinea pigs, by a single injection of myelin basic protein, a purified material derived from the myelin sheath covering nerve tissue. The resulting disease is characterized typically by hind-leg paralysis, a limp tail, and destruction of myelin, with an associated infuson of inflammatory cells.

In their studies of EAE to date, Moore and Williams have found evidence for a specific immune-response gene that established an individual animal's susceptibility to develop EAE in response to the challenge of a myelin basic protein injection. Special blood tests of different genetic strains of rats have shown that this immune-response gene in EAE, called the IR-EAE gene, is linked to other genes that control the ability of immune cells to recognize tissues as being either foreign or of the same organism. These latter genes are called "histocompatibility" genes.

Should linkage between disease and histocompatibility type be demonstrated in studies of familial MS, this connection would constitute strong evidence for the existence of an immune-response gene coding for susceptibility to the disease in the human. Such a demonstration would imply the participation of an autoimmune mechanism somewhere in the cause of MS.

The National Multiple Sclerosis Society, founded in 1946, is the only nationwide voluntary health agency seeking more effective methods of treatment and eventual prevention of multiple sclerosis.

PSRO Update named AAMC award winner

PSRO Update, a newsletter produced monthly by the Medical Center for a national audience of physicians, hospital administrators and other health professionals involved in medical cost and quality issues, was the 1975 winner of the Award for Excellence in Medical Education/Public Relations of the Association of American Medical Colleges. The award was conferred at the AAMC's annual meeting in Washington, D.C. by Dr. Leonard W. Cronkhite, Jr., president of Children's Hospital Medical Center, Boston, and new chairman of the AAMC.

The Medical Center's Office of Informational Services was given the award — one of only two citations by the AAMC Group on Public Relations — for its efforts to examine issues and recent developments in the expanding area of Professional Standards Review Organizations (PSROs), the mechanism enacted into law by the federal government in 1972 to control medical costs and quality.

The AAMC award cited PSRO Update for carrying out its medical-education mission with private initiative by converting a government grant-supported publication to paid-subscription and, at the same time, expanding its readership and news and analysis content.

Legal Signs (Continued from page 10)

to her ophthalmologists who could have prevented this loss. This may be true whether or not the court is aware of the physician's insurance coverage. Second, when complex medical facts are at issue and the court does not, at the trial level, appoint its own experts from a panel of well-recognized experts in the field, there is a danger that appellate courts may oversimplify those medical facts. At least one medical commentator has argued, for example, that the Washington court was wrong in concluding that the Schiotz tonometry test is always harmless, always conclusive or definitive, requires no judgment, and that all cases of visual loss can be arrested.

The court's formulation. The most important lesson of this case is not its potential specific effect on the practice of ophthalmology, but the general rule it espouses. If a specialist has a diagnostic test that is simple to administer, harmless to the patient, relatively inexpensive, and provides a conclusive diagnosis of a degenerative disease that can be arrested, he should routinely test all patients who might develop the disease. The test should be performed often enough to detect the disease before permanent impairment. The formulation of such general rules is properly a judicial function. The determination of whether or not any such diagnostic test exists, however, must remain a medical one.

5The T.J. Hooper, 60 F. 2d 737, 740 (2d Cir. 1932).
Behavioral Epidemiology:

Measuring psycho/social/cultural forces involved in coronary heart disease

by Sue Auceila

The hard-driving businessman: Restless and impatient, he seems always to be moving one step ahead of our fast-moving world. Because there are never enough hours in the day to reach the goals he has set for himself, he must go over papers as he dresses, read as he eats breakfast, make plans and decisions as he drives to work. We call him a success; cardiologists and psychologists call him a "Type A" personality. And since the publication of Type A Behavior and Your Heart in 1957, doctors have recognized the link between the businessman's (or woman's) competitive, aggressive behavior and coronary heart disease. The hard-driving businessman could be driving himself toward a heart attack.

Two BUMC psychologists have made a major contribution in recent years to the definition of type A behavior. They are members of the growing field of behavioral epidemiology, which attempts to relate behavioral factors to the more traditional concerns of epidemiology. Among the achievements of Professor of Psychiatry C. David Jenkins, Ph.D., and Associate Professor of Psychiatry Stephen J. Zyzanski, Ph.D., has been their development of the Jenkins Activity Survey (JAS), used in studies of cardiovascular disease. The survey, designed in collaboration with research groups throughout the country and overseas, is now being readied for clinical use.

The unknown causal forces. In his description of behavioral epidemiology as a specialized field, Jenkins writes that epidemiology is the traditional study of biological factors contributing to a disease, or of the natural history of disease in human groups. The newer study of behavioral epidemiology attempts to relate those biological variables to psychological and social causes.

"For 40 or 50 years now, the biological factors have been looked at," said Jenkins. "But 50 per cent of the causal forces are still unknown. Very little work has been done in the social-behavioral area."

The Department of Behavioral Epidemiology has been a part of the Division of Psychiatry at the Medical Center for three years, with Jenkins as the director of the department.

Jenkins said that cardiologists as early as 1957 suggested a relationship might exist between coronary heart disease (CHD) and the vague concept of stress. Behavioral epidemiology then "provided the methodology and technology" for a more precise definition and meas-

Sue Auceila wrote this article while serving as a journalism intern in the Medical Center's Office of Informational Services.
urement of this concept with the development of the Jenkins Activity Survey. Questions on the self-administered, computer-scored survey were based on the results of structured interviews conducted by researchers. These interviews, which were the only method of detecting stress before the JAS was introduced, provided “clinical insights you can’t get from a standard psychological test,” said Zyzanski. “The interviewer noted how people acted during the interview. The manner in which they responded is as important as their answers.”

**Clinical insights.** The psychologists attempted to incorporate these insights into the JAS as much as possible. For example, an interviewer noted that a patient seemed impatient during the questioning, questions designed to measure impatience were included in the survey. (One such question asks how the patient accepts waiting in line at a restaurant or the post office.) When interviewers reported patients’ physical reactions to being interviewed, Jenkins and Zyzanski “tried to include situations that would produce similar reactions,” explained Zyzanski. Although not all of the interviewers’ observations could be translated into a pencil-and-paper test, Zyzanski believes that many of their insights have been used successfully in the survey.

Zyzanski said the JAS measures psychological, social, and cultural factors. He explained that the psychological forces in CHD are “life-style” and coronary-prone, or “Type A,” behavior. Social forces are described as “environmental — for example, job, home, and income. Personality traits interact with the social framework in which a person is embedded so that he is changed and molded by his environment.” Cultural forces involve the same things at a time, such as working while eating, reading while dressing, figuring out problems while driving. The psychologists attempted to incorporate these insights into the JAS as much as possible. Jenkins and Zyzanski “tried to include situations that would produce similar reactions,” explained Zyzanski. Although not all of the interviewers’ observations could be translated into a pencil-and-paper test, Zyzanski believes that many of their insights have been used successfully in the survey.

**Four scales for scoring.** The survey is scored on four scales: Type A behavior; time urgency; job involvement; and hard-driving conscientiousness. While the Type A scale measures psychological and social influences, the other three scales are designed to “break down the Type A personality into its various components,” Zyzanski explained. “We want to know exactly what it is that makes the patient a Type A. Is it his speed and impatience, or his devotion to his job?”

The Type A personality is characterized by an “intensity of striving for achievement, taking life seriously, competitiveness, frustration,” explained Jenkins. Other Type A traits are aggressiveness, impatience, restlessness, and extreme dedication to a job. The time-urgency scale measures the patient’s speed and impatience; job involvement considers “how committed a worker feels to his career, his personal investment in it;” hard-driving conscientiousness involves a self-perception “as a serious and competitive person.” Jenkins noted that there are “a lot of work-related questions (in the survey) — it’s difficult to apply to those unemployed or self-employed.”

Typical of the multiple-choice questions in the Jenkins Activity Survey:

- Do you ever have trouble finding the time to get your hair cut or styled?
- How often do you find yourself doing more than one thing at a time, such as working while eating, reading while dressing, figuring out problems while driving?
- When you play games with children about 10 years old (or when you used to do so when your children were younger), how often do you let them win?

**Survey for Type A researchers.** The theory of Type A behavior was originally proposed by Murray Friedman, M.D., and Ray H. Rosenman, M.D., authors of *Type A Behavior and Your Heart*. Friedman is the director and Rosenman the associate director of cardiovascular research at Mount Zion Medical Center in San Francisco. Jenkins and Zyzanski, who were working together at the University of North Carolina in the School of Public Health, developed the survey; Friedman and Rosenman administered it to their CHD patients at Mount Zion in 1964. The questionnaires were then sent back to the two psychologists for computer scoring and analysis.

Findings over a period of years indicated that the high scorers, who were designated as Type As, were, in most cases, those who eventually developed CHD or experienced recurrences. Jenkins said that the JAS is particularly effective for projecting complications or a second event of the disease. The researchers’ original theory of a relationship between CHD and stress was verified, indicating that the JAS might be used to predict incidence of CHD. “This was the first time, to our knowledge,” said Jenkins, “that anybody had developed an objective psychological test to project a physical disease.”

**Taking survey apart.** However, the psychologists are further refining their survey before releasing it for clinical use. The original technique of structured interviews was inadequate, explained Zyzanski, because the results were subjective and could not be duplicated. The survey, Jenkins said, “firmly up the factors involved to be measured precisely. The results could be replicated. But before it can be used clinically, we have to require even higher standards of the questionnaire. We have to take it apart, examine the parts, and find out why it works.”

“The survey, developed from a theory and applied to cases that are followed up for a number of years, does work — statistically. But.” Zyzanski continued, “not all Type A’s get coronary heart disease. Perhaps there are other dimensions to be studied, such as job and life dissatisfaction. Before the survey can be used clinically, we need to learn just what are the critical components of Type A behavior that lead to CHD? We must check each individual item and find out if it’s valid.”

Research teams throughout the country are currently collaborating with the Department of Behavioral Epidemiology to complete the refinement process. When the results of the collaboration with Friedman and Rosenman were first published in 1966, the psychologists began to receive requests for the JAS. Among the earliest collaborators were Bridgeport (Conn.) Hospital and Duke...
University Medical Center. Cardiovascular studies using the JAS are also being conducted by Massachusetts General Hospital; University of California at Berkeley; Chicago Heart Association Screening Project in Industry; USAF School of Aerospace Medicine; University of Texas at Austin; National Aeronautics and Space Administration; University of Michigan; George Washington University; Rockefeller University; and the Societal-Analysis Department of General Motors Corporation.

**JAS going abroad.** In addition, the JAS has been translated for research use in Holland, Israel, Germany, Poland and Hawaii. "We are very interested to see if our findings hold up for different cultural groups," said Zyzanski. "Do different cultures create different demands and pressures?"

The department's collaborative efforts are not confined to cardiovascular studies, however. Jenkins and Zyzanski launch new studies monthly as research teams from all over the country request that questionnaires be designed for their projects. "When people write in with a need," said Jenkins, "we ask for specific information on their plan. If they can document why they need us, then we'll go ahead with it."

Clinicians are consulted for medical background as the psychologists design a new study. The group conducting the study will administer the particular survey to patients; Jenkins and Zyzanski rarely have direct contact with patients. The department employs a full-time computer programmer, who runs data through the computer and codes it as it is received from the collaborators, often as much as a year after the study was begun. Jenkins and Zyzanski then analyze the results. Their analysis is either sent back to the researchers or written into a manuscript for publication.

**BUMC projects studied.** Two BUMC projects are among the department's active studies. The Air Traffic Controller Study (ATC), directed by Robert M. Rose, M.D., a professor of psychiatry, is exploring the relation between a stressful occupation and changes in health. The Hypertension Program Project, supervised by Aram V. Chobanian, M.D., a professor of medicine and director of the University's Cardiovascular Institute, is studying the serious inner-city problem of high blood-pressure. Jenkins and Zyzanski are also working on surveys to measure the satisfaction of patients as consumers of health care, and patients' feelings about illness.

The Department of Behavioral Epidemiology has also participated in projects nationwide in scope. The coordinating center of the National Heart and Lung Institute's Multiple Risk Factor Intervention Trial (MR/FIT) was provided with a scoring system for the JAS, to be used in the 20 MR FIT centers nationally, including the one in Brockton, Mass., administered by BUMC. A short form of the JAS was developed for both the U.S. Public Health Service National Health Examination Survey, to be used in 1976, and the Department of Health and Welfare of

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**Hypertension research and the development of drugs to provide treatment, have long been a BUMC forte**

BUMC physicians and researchers have long been leaders in both basic hypertension research and development of many of the drugs currently in use for the treatment of the disease. The cardiovascular-hypertension research group, one of the strongest at the Medical Center, matured in the late 1940s under the direction of Robert Wilkins, former chairman of the Department of Medicine, and Reginald Smithwick, former chairman of the Department of Surgery. These two physicians trained a number of researchers at the Medical Center, some of whom have left to join other high-level cardiovascular research projects around the country.

**Pioneers in pairing drugs.** During the fifties the BUMC team emerged as leaders in the development of hypertension treatments. Their most significant contribution was their research on combinations of drugs. Since single drugs did not work effectively to lower blood pressure, they searched for drugs that could be paired. Dr. Wilkins noticed on a visit to India in the early 1950s that people sucking the rauwolia plant reported a feeling of tranquility. He became the first American investigator to study rauwolia's use in hypertension treatment. In collaboration with the late Dr. Fritz Yonkman, who had taught medicine at BUSM before becoming a researcher for CIBA laboratories, he combined rauwolia and reserpine into a new drug. CIBA marketed it under the brand name Serpasil. It earned Dr. Wilkins the Lasker Award, and Dr. Yonkman is credited with coining the word "tranquilizer" in his descriptions of it.

In 1957, Drs. Wilkins, Chobanian, and William Hollander were one of the first teams to use diuretic therapy in the treatment of hypertension. They found that diuretics supplemented the effectiveness of antihypertensive drugs by alleviating the salt and water retention they caused. Early diuretics were administered intravenously and could become toxic to the kidneys in long-term use. Their research laid the cornerstone for the use of chlorothiazide, which safely rid the body of salt and water. Oral diuretics are now relatively safe in prolonged use and have become a standard prescription in the treatment of high blood pressure. They are nearly 100 percent effective and sometimes combat hypertension by themselves; if not, they are prescribed in a regimen including a tranquilizing agent.

**The leaders 'caught hell'.** There are dramatic differences between modern antihypertensive treatment and methods of combating the condition before the Boston University physicians started their work. Dr. Wilkins remembers his early days of research, when many people rejected its importance. They believed antihypertensive treatment was dangerous, that hypertension was a symptom of atherosclerosis rather than a result, and that lowering the blood pressure restricted blood flow and damaged the arteries. "We were a leader, and we caught hell for it," he recalls. "But the mortality rates went down drastically, showing that we were right. The chances of surviving high blood pressure now are twice what they were in 1950."
Canada, which will conduct similar examinations nationwide.

**Emphasis on cardiovascular.** But cardiovascular studies continue to receive "primary emphasis" in the department because that is what is being funded, explained Jenkins. Zyzanski estimated that 85 to 90 per cent of the work is funded by an umbrella grant from the National Heart and Lung Institute.

While the JAS is being readied for clinical use, the department is working with Thomas J. Ryan, M.D., of University Hospital's Department of Clinical Cardiology, on a study of men undergoing coronary angiography. "We are trying to pinpoint the psychological mechanisms by which behavior is translated into pathological processes," said Zyzanski.

Another study of Type A behavior was conducted this past summer by Ingrid Waldron, Ph.D., on leave at the School of Medicine from the University of Pennsylvania. Dr. Waldron researched the nature of Type A behavior in women to learn if competing with men increases the risk of heart disease in women. Jenkins said that in recent years there has been an increase in heart disease in women under 50 years of age.

New projects may be initiated, but as long as their cardiovascular studies are funded, Jenkins and Zyzanski will continue working to make the Jenkins Activity Survey "more specific and more effective. We are making progress from one year to the next — we keep moving to a higher level." Jenkins feels the department has avoided the "danger of rushing out, shouting 'This is it!' — and then finding it doesn't work."

Jenkins finds the department's collaboration with national studies exciting; "It really opens up the field of cardiovascular research." There is a sense in the Department of Behavioral Epidemiology of both satisfaction with past accomplishments and confidence in those still ahead. "The next major contribution to the study of heart disease," Jenkins predicted, "will not be physical, but behavioral."

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**$4.46-million research center at BUMC probes causes, treatment of hypertension**

A Hypertension Center to investigate the causes, treatment and complications of high blood pressure has been established at the Medical Center under a $4.46 million grant from the National Heart and Lung Institute. The five-year research award — one of the largest ever received by BUMC — established what is known formally as a Specialized Center of Research (SCOR) on hypertension, according to Richard H. Egdahl, M.D., director of the Medical Center. It is one of four hypertension-research centers established nationally by the National Heart and Lung Institute, and the only one in New England, where hypertension afflicts more than one million persons.

(The other three hypertension-research centers are at Cornell University Medical Center, New York City; Vanderbilt University, Nashville, Tenn.; and the University of Indiana, Indianapolis.)

Aram V. Chobanian, M.D., director of the Cardiovascular Institute at BUMC, is director of the Hypertension Center and serves as principal investigator on the SCOR project. James C. Melby, M.D., is co-investigator on the program.

**Important New England resource.** The Hypertension Center is being developed as a major new clinical facility for the diagnosis and treatment of patients with high blood pressure. Egdahl said the Center will serve as an "important resource in the New England area for the referral of patients with complicated hypertension problems." The Center bases its clinical activities at both University Hospital and Boston City Hospital.

In addition, according to Chobanian, the Center plans to assist other professional and community groups and organizations in the development of programs "to help control the epidemic of hypertension now ravaging the United States."

The Specialized Center of Research draws on the skills of a team of senior staff members to attack the problem of hypertension from a number of perspectives, according to Chobanian. Clinical and research specialists are studying the role in the development of hypertension of such factors as hormones, the kidneys, the heart, the nervous system, behavior, and salt in the diet.

Chobanian said the study group hopes to develop new and more effective forms of prevention and treatment based on their findings about the causes of hypertension. The researchers will also attempt to discover why high blood pressure in combination with other so-called risk factors — like high cholesterol levels in the blood, obesity and diabetes — frequently results in damage to blood vessels and leads to serious complications of the disease, Chobanian said.

In addition to being director of the Cardiovascular Institute, Chobanian is also a professor of medicine at the School of Medicine. He has done extensive research on the causes and treatment of both hypertension and atherosclerosis and is considered an authority in his field. Melby is director of the Endocrinology Section of BUMC and is also a professor of medicine at the School. His work on the role of hormonal factors in hypertension is widely recognized.

**Many departments involved.** Other senior scientists involved in the work of the Hypertension Center include: Norman G. Levinsky, M.D., chairman, Division of Medicine; C. David Jenkins, Ph.D., chairman, Department of Behavioral Psychology; William Hood, M.D., chief of cardiology, Boston City Hospital; Charles Gavras, M.D., chief of hypertension, Boston City Hospital; Irene Gavras, M.D., associate professor of medicine; Carl Franzblau, M.D., professor of biochemistry; Dieter Kramsch, M.D., associate professor of medicine; Peter Brecher, M.D., assistant professor of medicine and biochemistry; Hershel Jick, M.D., director, Drug Surveillance Center; Edward Alexander, M.D., associate professor of medicine; and Ladislav Volcker, M.D., associate professor of pharmacology.

More than 60 persons — professionals and support staff — will be employed under the contract award.
Perceiving Pain

Six health professionals at the Medical Center discuss their roles in helping to alleviate human pain

by Lorraine Loviglio

A new ‘cognitive strategy’ may make you say, ‘So what?’ to normally painful stimuli

It is not necessary for a person to be in a special state of consciousness — such as a hypnotic trance — to have “a wide range of capabilities commonly regarded as outside the normal repertoire,” according to Theodore X. Barber, Ph.D., assistant clinical professor of psychiatry (psychology) at the School of Medicine.

Alternative to hypnosis. Barber and his co-workers — John Chaves, Ph.D., and Nicholas Spannos, Ph.D. — found while studying hypnosis and pain under federal grants at Medfield State Hospital that there is an alternative to the traditional model of hypnotic trance. They have published a book on their work entitled Hypnosis, Imagination and Human Potentialities (Pergamon Press, 1974).

“We are beginning to develop methods that might be useful in teaching people to tolerate pain,” Barber says. “Our concept of ‘cognitive strategy’ allows for a broader than usual conception of the capabilities and potentialities of normal human beings.” The ability to control pain without drugs or hypnosis is one such human potentiality, according to Barber.

Barber teaches the cognitive-strategy technique in a course called "Training in Human Potentialities," which he has been developing since 1969. He begins by telling his students — who are graduate students, undergraduates and student nurses — that they will learn “to tolerate a normally painful stimulus and not be bothered by it at all.”

Next he applies the Forgione-Barber pain stimulator (developed with Albert Forgione, Ph.D., in 1970) to the bony part of each student’s finger. He tells the student to concentrate on something else while vividly imagining that the finger is numb and insensitive; he then demonstrates the technique. “I explain that I am imagining Novocain has been injected into my finger, that it is becoming just a piece of matter without feelings or sensations.”

Can it be transferred to dentist’s chair? Twenty-five per cent of the subjects do very well, learning rather easily to reduce their experience of pain, Barber says. Another 50 per cent also learn the technique, but require more time and effort. “But now we have to determine if this learning can be transferred to situations outside the laboratory, such as the dentist’s chair.” Barber believes that it can be, and that anxiety, stress and fear can be controlled as well.

Pain affects us only when it is accompanied by anxiety and fear, Barber explains. Reaching a “higher level of

Lorraine Loviglio is a Centerscope staff writer. Preliminary research was done by Helene Jackson.
Nurses on oncology floor fight patients' pain in many ways, even with talk

KEEPING patients as free of pain as possible is one of the most important aspects of patient care on any floor of the Hospital, but perhaps especially on Collamore 5, the surgical oncology floor, where Cathy Beaupre is head nurse. ‘Pain medication is given with discretion, but often enough to keep the patient comfortable,’ Beaupre says. ‘In some patients, the pain is such that they need large doses every couple of hours, or even every hour.’

Minor discomfort can sometimes be relieved by merely turning the patient or giving him a backrub. Oral and intramuscular pain medication is given for mild to serious pain, and intravenous medication is usually reserved for the terminal stage of cancer, ‘when the pain is out of control,’ Beaupre explains.

The call light goes on. ‘Emotional pain enhances physical pain. A patient may put on his call light every half hour and say the pain medication is not working. So you get him to talk. We have learned to be pretty good listeners up here.’

The loneliness and fear that aggravate pain are greatly alleviated, Beaupre believes, by the system of primary nursing recently reintroduced on Collamore 5. Under this system, each patient has one nurse primarily responsible for his care. ‘It lets us know the patient and his family well,’ Beaupre explains, ‘and, knowing he has one nurse he can turn to, the patient talks more readily.’

She admits that repeated unsuccessful attempts to relieve a patient’s pain can leave the nurse feeling frustrated, and even, at times, irritated. ‘You’re frustrated because you can’t help them, not because you don’t like them,’ Beaupre explains.

This very human frustration explains, too, why some patients are brought to the hospital in the terminal stage of their illness instead of being kept at home to die. ‘Their families simply can’t cope with the pain.’

Some patients stoical. While some patients complain loudly, others are stoical. One lady in her seventies, who the staff was sure must be having pain, never asked for pain medication. ‘We had to go in and offer it,’ Beaupre remembers. ‘She didn’t want to be a bother.’

Others avoid medication because they are afraid of becoming addicted. The staff assures them they run less risk if, on the contrary, they take the medication at the first sign of discomfort, rather than wait until it no longer will have any effect.

When the suffering of a patient in the terminal stage becomes disturbing to other patients, the hospital staff is faced with a poignant conflict. While sympathizing with the patient’s roommate, whose morale is being undermined by the sound of groans, they nonetheless hesitate to put a dying patient into a private room. ‘You hate to isolate the patient when you know he or she is dying,’ Beaupre explains. ‘You don’t want to leave them alone to die.’

If it can, at times, be depressing, dealing with such issues of pain and death, Cathy Beaupre is sustained by what she describes as her own positive philosophy of life. ‘Still, it can be draining,’ she admits. ‘You shouldn’t get too emotionally involved. But sometimes, of course, you do anyway.’
Choice of anesthesia keyed to patient feelings and safety and nature of surgical procedure

To most patients, the operating room is a fearsome place, says Frederick W. Hehre, M.D., chairman of the Hospital’s Department of Anesthesiology. “The patient has seen it all on TV — EKGs that suddenly stop, all kinds of resuscitation activities. Of course, operating rooms aren’t that way at all. They’re really just repair places, like carpenters’ shops. But we are dealing with the human body, and the rules are very different.”

Some of the patient’s negative attitude toward operating rooms has changed, though, Hehre says, citing the delivery room as an example. “The emphasis over the last 20 years has been to see childbirth as an exciting time that should be remembered. Women today want to be awake when the baby is being born. Prepared, or natural, childbirth is a form of self-hypnosis. And local anesthetics, carefully placed to abolish pain completely, can help it to be an exciting time.”

Choosing the anesthesia. The emphasis at BUMC is on conventional nerve-block anesthesia, which is the application of a local anesthetic to a specific nerve, through a needle. However, Hehre explains, the anesthesiologist chooses what he considers the best form of anesthesia for the particular procedure, based on three considerations: the patient’s safety; the optimum operating conditions for the surgeon; and the patient’s desire to be asleep, awake or something in between.

“In a Caesarian section, for instance, we would use spinal anesthesia, because it itself doesn’t affect the baby,” Hehre explains. “If one gives the mother a general anesthetic, it also anesthetizes the baby, who must then be resuscitated as soon as it’s born.”

The anesthesiologist goes to see the patient — usually the evening before surgery — and explains his choice of anesthesia. He also attempts to prepare the patient psychologically for the experience of the operating room, describing in some detail what the patient can expect from the time he receives preoperative medication until he wakes up in the recovery room.

Anticipation and anxiety. Anxiety does not normally accompany pain until the pain becomes repetitive, according to Hehre. “Patients tend to react sooner, and to a greater degree, to the repetitive type of pain. It’s the anticipation. It’s the woman in labor saying, ‘Oh, God, here it comes again.’ Anxiety results in the tensing of muscles, and unquestionably makes pain worse,” Hehre says. He points to prepared childbirth training as an example of an effective approach to using education to allay anxiety.

“The breathing exercises of prepared childbirth are just another form of self-hypnosis,” says Hehre. “You focus your attention on something else, divert your attention from the pain. And it works.”

Pain and anxiety' training: A specific example of total change in dentistry

Some people, it is said, can fall asleep in the dentist’s chair without benefit of anesthesia. For others, every moment from the making of the appointment until the last rinse-and-spit is sheer Purgatory.

A variety of factors enters into such individual differences in the perception of pain, of course, but Donald F. Booth, D.M.D., sees one of the most important of these as being the patient’s past experiences of dental treatment.

‘Over-thirties’ more fearful. Booth, who is a professor and chairman of the Department of Oral and Maxillofacial Surgery at the School of Graduate Dentistry, says the patients he finds to be most fearful of dental procedures are those in their thirties and forties and above. “They have had experiences with dentists in the past that have not included the building of trust. We rarely find kids of 20 or younger with that fearful type of attitude.”
The difference is a result of what Booth describes as “a total change in the outlook of dentistry.” Gone is the dreaded upright chair in the middle of a gloomy room, gone the cumbersome, menacing equipment. They have been replaced by inviting lounge chairs, in which the patient reclines comfortably, by offices decorated in gay colors, and by streamlined equipment tactfully tucked out of sight until needed.

“Many dentists now wear colorful coats instead of white,” Booth points out. “The women dress colorfully, and, especially in pedodontics, they may not wear uniforms that are recognizable as such at all.”

Symptomatic of the change in the profession’s approach to pain is the course taught at SGD in “Pain and Anxiety Control.” In the second year, students are instructed in the administration of local anesthesia; the next year, they receive instruction in hypnotic techniques, as well as in the use of analgesics and intravenous sedation. Hypnosis, as it is understood at the School, is generally something quite different from the induction of the deep zombie-like trance usually conjured up by that word.

Trust-building. “A lot of hypnosis is just good patient-doctor relationship,” Booth explains. “When we refer to hypnotic suggestion, we mean something like the mental states in Zen or in yoga that allow the patient to have control over his mental processes.”

Booth emphasizes the importance of gaining the patient’s confidence and building a trusting relationship. He describes his own use of hypnotic suggestion as merely the use of positive statements and attitudes. “I say: ‘This is what I am going to do. This is not going to bother you. This is what you will feel, and this is all that you will feel.’”

In addition to suggestion, the modern dentist uses local anesthesia, intravenous sedation or intravenous general anesthesia, depending on the procedure to be done and the patient’s mental state. Booth cites as an example of what he calls “preventive pain control” SGD’s soon-to-be-opened new surgical day-care facility — a dental operating room where extensive dental treatments can be performed at one time, under general anesthesia, especially with patients for whom anxiety may be a major stumbling-block to treatment.

The search for a potent narcotic analgesic without dependence liability goes on

When a former heroin addict on a methadone maintenance program is injured in an automobile accident, how much medication should he be given for his pain? When questions like this arise at University Hospital, they are likely to be referred to Joseph Cochin, M.D., professor of pharmacology and psychiatry, who, in addition to teaching and doing research, serves as a consultant to the Hospital.

Cochin has been engaged in research on narcotic analgesics for 20 years. One of the problems he deals with in his research is why people become addicted to drugs. “Tolerance and physical dependency are in the drugs themselves,” he explains. “The drug hunger is not purely psychological. Of course, it is in some people’s makeup to be much more likely than other people to become dependent on drugs.”

Dependence liability the problem. Cochin prefers the term dependence to addiction, because of the pejorative connotations attached to the latter word. “There is no known drug that is a potent analgesic and that does not have tolerance and dependence liability. Codeine, which has practically no dependence liability, is good for moderate pain. But the analgesics used for severe pain, such as morphine, all have high dependence liability.”

The search for a narcotic analgesic with no dependence liability has not been without results, however, Cochin believes. “Right now we don’t have a drug as good as morphine with less addiction liability, but I think we will get there.

“I am not terribly sanguine about things like changing levels of consciousness to control pain,” he continues. “From the point of view of research, it’s all very interest-
ing. From the point of view of most people when confronted with real pain, however, it is of very little value.”

Experience with acupuncture indicates that much remains to be learned about pain pathways. Cochin says, “I would be delighted if we could get rid of drugs for most purposes, but I’ve yet to be convinced that chronic cancer pain can be treated with acupuncture. I think the pain of acute surgical procedures may very well be treated that way, however.”

The psychopharmacologist disagrees with colleagues who worry about the possibility of “addiction” in patients suffering severe pain in terminal illnesses. “Naturally, the physician must be careful. However, it is never ethically or morally justified to withhold these drugs on the basis that they may be addicting when, in the doctor’s judgment, the reasons for medication are solid. We are making a very serious mistake if we allow ourselves as physicians to be affected by the hysteria and propaganda against these drugs when their use is medically necessary.”

Looking behind the pain. “The psychiatrist must look for what is going on behind the pain. He must ask himself, ‘What does the patient think the pain means?’” When he takes advantage of this opportunity to learn more about the patient and his underlying concerns, Kahn says, the patient feels less abandoned, less alone. Of patients he sees on cancer floors, Kahn observes, “It is remarkable to witness the transformation that takes place when they receive this kind of attention.

“Sometimes, however, medical people see the expression of pain as a barrier, because we feel helpless to control the disease process that is causing the pain. Thus we sometimes miss the opportunity afforded us.”

Further, the psychiatrist points out, to explore the meaning behind the pain is to be drawn into a very intimate relationship. “It can be very painful because it can bring to the staff member’s awareness some of his own feelings and associations with loss, illness and death,” Kahn explains. “It makes the sickness a much more intimate experience. So we tend to avoid that, to become more mechanical in our dealings with patients.”

These observations have their greatest applicability, Kahn points out, in cases in which the patient is facing an illness so grave that he cannot express how afraid he is. “It is easier to say, ‘It hurts.’ And if someone comes in with a broken arm, it is a lot easier for the staff to deal with his fears than with those of a dying person.”

Kahn said he would like to see psychologists and psychiatrists perform as integral members of the treatment team instead of as occasional consultants. He also said he believes that medical students should be trained to bear the anxiety involved in sharing the patients’ fears. “The physician should be trained to participate in the treatment of people of whom he has an intimate — at times personal — understanding. He must feel that they really are people, not cases.”

The dying patient’s cry of pain a message of loneliness and fear sent from verge of oblivion

WHEN a very seriously ill patient complains of pain, says Richard J. Kahn, M.D., associate professor of psychiatry, that pain is not only a symptom, but a message.

“It is a call for help from a person who feels alone in the face of an overwhelming situation,” says Kahn. “He or she feels isolated on the verge of oblivion and death.”

The dying patient also faces the series of losses that accompany progressive illness, Kahn points out — “loss of loved ones, loss of functioning, and the loss of an opportunity to complete a life.” The patient uses the physiological situation to send his message of loneliness and fear. But the message is often received at the most superficial level by members of the hospital staff, who respond by giving medicine.
The Dr. Solomon Carter Fuller Mental Health Center, located adjacent to Boston University Medical Center, has been in the discussion and planning stages for a quarter of a century and under construction for more than five years. The Mental Health Center is a facility of the Commonwealth of Massachusetts — and its opening has been delayed for more than a year while the state confronted a series of severe fiscal problems. Finally, after all the trial, talk and tribulation, the building will begin a phased-in opening this spring, starting with the move of outpatient psychiatry from the Medical Center's oldest building, Talbot. University Hospital will continue to operate the ambulatory service in the new building.

The 10-story Fuller Mental Health Center is designed to provide facilities for adult and child clinical services, a department of psychosomatic medicine, a community consultation and education program, drug-addiction treatment programs and other services and research efforts. Many of the clinical, educational and research activities of the Mental Health Center involve the Division of Psychiatry of the Medical Center and other University health schools. The Commonwealth operates the building with close consultation with members of the community.

The building was named by an act of the Massachusetts legislature for Dr. Solomon Carter Fuller, an 1897 graduate of the School of Medicine, the country's first black psychiatrist and an eminent neurophysiologist. As the Fuller name begins now to symbolize a mental-health center building and program, Centerscope presents the story of the man Fuller himself. — Editors

Horatio Alger Jr., who came from Natick, Mass., wrote his stories just a few decades too early. If he had hung on until the 20th century, he would have found a subject to enliven his strained Strive and Succeed motif living just a few miles away, in Framingham. The young man in Framingham had indeed striven mightily — and was to succeed in a measure that would have stunned even Alger.

But Alger mightn't have been interested, at that: The Framingham strive-and-succeeder was not a poor boy to begin with; he did not win his maiden fair by foiling a villain, and he didn't inherit his father-in-law's business.

Solomon Carter Fuller was simply a young man who took a boat from Liberia to America because he

Owen J. McNamara is managing editor of this magazine.
Solomon Carter Fuller was a scientist, clinician, educator, scholar in the field of psychiatry and neuropathology, a man who gained his medical degree and training from Boston University School of Medicine and gave it back more than 30 years of devoted teaching and research. He did both.

Dr. Fuller had even more strings to his bow, as if those connected to his work in psychiatry were not enough to entangle and finally strangle even such a superior man. He was a rare gentleman, an industrious gardener, an accomplished photographer (a hobby happily married to science when he photographed brain cells), an enthusiastic musician, a master book-binder and possessor of mental equipment that allowed him to read any volume on any subject in a single sitting.

Pride. If brilliance was the lifeblood of Fuller’s amazing career, pride was its backbone — no, its entire skeleton.

The fact that Solomon Carter Fuller was black — the first of his race to become a psychiatrist in America — created an irony that ran through his whole life: He was proud to be black, but bitter and dismayed to find himself regarded as “an excellent colored psychiatrist.” Is there “black” psychiatry and “white” psychiatry? Is there some limit to the amount of accomplishment available to a black, so that one who is extraordinary must forever be modified by his blackness? Fuller worked to keep the bitterness in check, for he knew that it was a wasting and consuming emotion. One of Fuller’s sons, Solomon Jr., recalls that journalists used to come to his father’s house in Framingham seeking interviews and would be turned away. “Dad didn’t want to talk to writers, because he didn’t want to become known as ‘a colored psychiatrist.’” When someone would tell him his professional attainments should become known, he just said, “My work will tell (that) in the end.”

From the perspective of 1976, Dr. Fuller’s achievement in his field was a rare one, for he helped build two extremely vital bridges in the early 1900s. The first dealt with the shift in emphasis from neuropsychiatry, with its focus on the organic basis of physical conditions, to psychotherapy, treatment of psychological disease for which there appeared to be no organic cause. The second bridge role played by Fuller was in the shift of the center of psychiatric leadership and productivity from Europe to the United States, where it rests today.

Background. Fuller’s bridge-building from the United States to Europe and back involved spanning yet another continent: He was born in Africa. His father was a coffee planter and a government official in Monrovia, Liberia. The father, also named Solomon, was the son of a slave, John Lewis Fuller, who had been a maker of boots and shoes in Petersburg, Va. This unusual grandfather was such an excellent craftsman that his master had given him part of the profits of his boot and shoe business, so that John Lewis Fuller was eventually able to buy his emancipation and come to Africa, where the first Solomon and his elder brother Thomas grew up.

Dr. Fuller’s mother, Anna Ursala James, was the daughter of Mr. and Mrs. Benjamin Van Rensaler James, both physicians and missionaries. His father’s prosperity and his mother’s missionary and educational background led them to organize a school for young Solomon and a number of his friends from nearby plantations.

The education Solomon received in that school and at Monrovia College whetted his appetite for more: In 1889, when he was 17 years old, Solomon came to the United States and entered Livingstone College, Salisbury, N.C. Solomon was the only person in the class from Africa, but he seemed to get right into the stream of campus life — he did field study and tutoring, headed a fraternity and even did some entertaining with his not-yet conquered guitar. (A columnist in the school’s newspaper noted acidly, “I heard Sol Fuller play the guitar the other night while Harry Wood sang ‘Jesus Locked the Lion’s Jaw.’ I never want to hear it again. Sol! Why persecuteth me?”)

Fifty years after his graduation, in 1943, Livingstone College honored Fuller with an honorary doctor-of-science degree, proclaiming him one of the school’s outstanding graduates.

To BUSM. After Livingstone graduation, Fuller began medical training at Long Island College Hospital, but soon transferred to Boston University School of Medicine, where he was awarded the M.D. degree in 1897. Two years later, when he was 27, he was appointed to the BUSM medical faculty, beginning an association of 34 years as clinician and teacher.

Young Fuller, whose religious background had been formed by American Presbyterianism by virtue of his missionary mother’s influence, had been greatly disillusioned when he first came to America and felt its racial discrimination and weighed its moral standards. But he kept himself immersed in work, for in that way he felt he could make some contribution to a better society.
Just after graduation from the School of Medicine in 1897, Fuller had been appointed an intern at Westboro State Hospital. In 1899, at the same time he joined the School of Medicine faculty, he was named pathologist at Westboro, beginning a 45-year career there. For 22 years he was pathologist, and for 23 more he served the institution as a consultant.

Fuller found time to pursue advanced study under the guidance of Prof. Edward K. Dunham at the Carnegie Laboratory in New York. Then, in 1904, he went to Europe to study at the University of Munich’s psychiatric clinic under Profs. Emil Kraepelin and Alois Alzheimer and at the university’s pathological clinic with Profs. Otto von Bollinger and Hans Schmaus.

The young psychiatrist went everywhere there was something to be learned, some research that was expected to yield substantive information or some person who could give him a new insight. For instance, he told his sons that one of the best afternoons in his life was the day he was visiting Berlin and was strolling through the city’s streets. He decided to pass by the home of Nobel Prize-winner Paul Ehrlich. On impulse, he rang the front doorbell — and found that not only was Ehrlich home, but that he would be delighted to chat with the visiting American. The talk that the two scientists had that afternoon led to a lifelong friendship.

The pragmatists. Young scientists whom Fuller grew to know in Europe included men like Ernst Kretschmer and Fritz Schaudien, men who were giving a new thrust to medicine, delving into the biochemical causes of disease and using the new technology of chemistry to deal with them. The great accomplishment of this generation of scientists was that they made pure research the true handmaiden of treatment, a break from the past when pure science had existed too often in a vacuum. The new pragmatists changed all of that, and Solomon Carter Fuller was a part of it from the beginning.

Back in the United States, Fuller’s teaching and research at the School of Medicine and Westboro Hospital centered on the organic basis for the many forms of dementia, the deterioration or loss of intellectual faculties, the reasoning power, the memory and the will. He had to develop techniques for the study of brain tissue, and, at the same time, study the behavioral manifestations of various conditions in patients.

Dr. Fuller was particularly noted for his work on Alzheimer’s Disease, a condition of greatly impaired mental function that occurs unusually early in life — its victims, usually in early middle age, become prematurely senile, with memory changes, impairment of the intellect and vague neurological disorders.

Historic transition. Fuller’s focus on the organic basis for mental disorders led him into deep research on schizophrenia (then called dementia praecox), the manic-depressive psychosis, senility and dementias associated with chronic alcoholism and hereditary brain disease.

Despite his fundamental interest in the organic causes of these problems, Fuller was at the same time very much interested in those psychological problems that appeared to have no organic connection. Along with some others in his field, he began to make the historic transition being led by Sigmund Freud, like Fuller an organic expert grounded in neurological studies.

Through reading, attending lectures and corresponding with his contemporaries, Fuller began to explore functional psychological conditions and the effects that the new psychotherapy might have on such mental disorders as schizophrenia and the manic-depressive psychosis. He began to practice psychiatry with psychotherapy, and even kept at it years later, after he was retired and had become blind.

Dr. Charles A. Pinderhughes, now a professor of psychiatry at the School of Medicine, was a young resident in psychiatry when he first met Fuller. He recalls that the doctor, growing old but still acting like an eager young medical student, critically discussed with Pinderhughes and others the latest psychoanalytic concepts and methods.

The work that Fuller had accomplished at Westboro in the area of degenerative diseases of the brain was widely recognized in the field early in his career: In 1909, he was invited to participate in a landmark symposium held at Clark University in Worcester, Mass. on the occasion of Freud’s visit to the United States. A group photograph taken at the time shows Fuller with Freud and other outstanding American psychiatrists of that era. Fuller was later to meet and exchange theories with Carl Jung and Alfred Adler, two other key persons in the development of modern psychiatry.

To Tuskegee. The Westboro State Hospital Papers, a scientific publication devoted to mental disease, came under Fuller’s editorship in 1913. Fuller wrote widely on pathologic, neurologic and psychiatric subjects, and other contributions appeared in major medical books and journals.

In 1923, Fuller trained a group of four black medical graduates in neuropsychiatry. The four, three from
The new Solomon Carter Fuller Mental Health Center, latest addition to the BUMC complex.

Boston University School of Medicine and one from Harvard, went from Fuller's training program to join the psychiatric staff at Tuskegee Veterans Hospital, an institution that served black people from all over the South. The four remained there for years, becoming the backbone of the staff and attaining prominence on their own.

Because of the numerous interests Fuller kept before him and because his wife, Meta Warrick Fuller, was a sculptress of renown, the domestic scene at their Framingham home was at times dizzying to the boys, Solomon Jr., William Thomas and Perry. Into their home flowed a seemingly endless stream of "personalities" — doctors, philosophers, academicians, musicians and theater professionals and amateurs.

Solomon Jr., of Bourne, Mass., and recently retired from the professional staff at United Community Services in Boston, recalls coming home and meeting such persons as W.E.B. Du Bois, famed black philosopher and a founder of the NAACP. Du Bois stayed with the Fullers and did some of his writing there.

School marks. Meta Warrick Fuller, daughter of a well-to-do Philadelphia couple, was as dynamic as her husband in pursuit of her separate professional career. An extremely talented student in the Philadelphia public schools and the Philadelphia School of Industrial Arts, she had gone to Paris in 1899 to study sculpture under the major artists of that time who brought her to the master himself, Auguste Rodin. Rodin was so impressed by her work he arranged for a "one-woman" show by one of the chief exhibitors in Paris. Back in America, Mrs. Fuller received numerous commissions to create special symbolic pieces, for instance, for the 50th Anniversary of the Emancipation Proclamation, the Atlanta YMCA and the Making of America Exposition. Mrs. Fuller also found time for other artistic interests: She was one of the founders of the Framingham Dramatic Society and was involved in theater-set design, in addition to maintaining her own sculpting studio.

Solomon Fuller Jr. recalls with some distaste that the academicians visiting the Fuller house were so achievement-oriented that the first question most of
them asked the Fuller boys was, "How are your marks in school?" — usually following that up with, "Where are you going to college?" (Solomon Jr. and Tom — who died in Framingham in the fall of 1974 — went to Colby College, and Perry pursued his mother's interest in art).

Solomon Jr. feels that he and his brothers were denied a close personal relationship with their father because of the elder Fuller's busy professional life. In later years, however, Dr. Fuller was slowed by age, and, still later, when he became blind, he used to sit and talk, pulling on his pointed beard and recounting anecdotes about his forebears, life in Liberia and some of the brilliant and amusing characters he had met in medicine.

The blindness that afflicted Fuller had an extra dimension of tragedy, his family and friends note. He was never willing to stop work, despite his age and the great number of years he had already served. Charles Fenderhughes remembers going to Framingham to help Dr. Fuller in his practice of psychiatry: "I would give the patient his physical examination and Dr. Fuller, blind and aged, would do the rest."

His sons think back to the consuming interest Dr. Fuller had in reading ("He seemed to spend everything he had on books") and recall that when blindness struck, he was denied his greatest pleasure in life. He had to settle then for the hardly satisfactory alternative of having someone read to him.

**New recognition.** Fuller died in 1953. ("He even died with pride, reciting a farewell in flawless Latin to a dear family friend," says Solomon Jr.).

The work that Fuller did in Boston, work that has had international consequences, has been recognized in several ways in recent years. The School of Medicine's Division of Psychiatry convened a "Solomon Carter Fuller Day" during BUSM's Centennial in 1973, at which distinguished panelists discussed the status of modern psychiatry. Also, friends and modern-day admirers of Fuller's work and the meaning of his life endowed a Solomon Carter Fuller Award, to be given annually to the BUSM senior who best exemplifies some of the qualities that were characteristic of Dr. Fuller.

Finally, by act of the Massachusetts legislature, the Boston University-Commonwealth of Massachusetts mental-health facility has been named the "Dr. Solomon Carter Fuller Mental Health Center."

Like prophets who have gone before him, Solomon Carter Fuller of Boston was honored first elsewhere. Dr. and Mrs. Charles Prudhomme, friends of Fuller, presented a portrait of the physician to the American Psychiatric Association headquarters in Washington, with the participation of the Black Psychiatrists of America. And the Black Psychiatrists, recognizing Fuller as an inspiration to the more than 500 black professionals in their field, in 1972 established the Solomon Carter Fuller Institute. That Institute, whose executive director is Dr. Robert H. Sharpley of Harvard Medical School, is a private non-profit organization whose aim is to promote and develop education and research in psychiatry, especially with relation to minority persons.

With the commemoration of Dr. Fuller's work by the most distinguished professionals in the Boston medical community and their counterparts from all over America, Solomon Carter Fuller is at last receiving that long-denied recognition as "an excellent psychiatrist," rather than the appellation he so detested: "an excellent black psychiatrist."

But, after considering what he has done for medicine and, through that, what he has done for black people both as a trailblazer and a source of pride, it is difficult to consider how Solomon Carter Fuller could ever really be separated from his color.

The label he so bitterly disdained is a put-down no longer.

**Solomon Carter Fuller was indeed "an excellent psychiatrist."**

And yes, he was black.
What we can learn about the mind from damage to the brain

by Howard Gardner, Ph.D.

HOWARD Gardner, Ph.D., an assistant professor of neurology at BUMC, has worked with brain-damaged patients at the Boston Veterans Administration Hospital for the past three years as a neuropsychological researcher with the hospital's Aphasia Research Unit, a major activity of BUMC's Aphasia Research Center. Gardner also studies the development of artistic skills in young children as co-director of Project Zero at Harvard University. He is the author of The Shattered Mind: The Person After Brain Damage (Knopf, 1975).

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OVER the past decades our understanding of brain chemistry, of neural circuitry, of sensory and motor processes has so increased as to render obsolete the medical textbooks of an earlier generation. But how much have these lines of neurological investigation — usually conducted with "lower" animals and dependent upon microscopic preparations — revealed about the functioning of the human mind? Can we draw from studies at the cellular level insights about those intellectual, emotional, and social capacities of pivotal importance within human society? In truth it must be said: The gap between most work in the brain sciences and the elucidation of our own 'higher functions' remains enormous.

Uncovering important links. Accumulating over the past century, however, has been an unexpected but highly revealing set of insights, one which illuminates precisely those functions central in human intellectual activity. From the careful study of normal individuals whose brains have been injured, we receive penetrating insights into the nature of such cerebral activities as reading, writing, speaking, drawing, making mathematics or making music. We can uncover the links — and the distances — between such activities. And we can gain fertile clues about those enigmas that have long intrigued both philosophers and laymen. What is the nature of memory? Can one think without language? Are all art forms cut from a single cloth?

An uncomfortably large number of circumstances can produce injury to the adult brain; but by far the most common, and the most revealing, is the cerebral vascular accident, or stroke. Each year in this country alone, approximately 300,000 individuals suffer such destruction of brain tissue as the result of the occlusion by fat deposits of vessels to the brain, the bursting of an artery, or the lodging of a clot in an artery. Sometimes injury may be so slight that it remains undetected; on other occasions, death or total disability ensues. But a sizeable number of strokes each year prove of intermediate severity — insufficient to kill yet virulent enough to affect permanently the individual's mental functioning. By what they can (and cannot) do, these unfortunate victims yield invaluable information to the neurologists, psychologists, and other scientists involved in the study of the brain.

Some of the research described in this article was supported by a grant from the National Institute of Neurological Diseases and Stroke.
Were the destruction wrought by a stroke, tumor, or head trauma completely general, so that all mental abilities were reduced by an equivalent proportion, little knowledge could be gained about the nature and organization of intellectual skills. (The victim would simply be a 'dulled' normal individual; any insights gained from studying him might as readily be procured from the investigation of normal individuals.)

An opportunity is offered. In fact, however, brain damage is highly selective. The victim may lose some abilities completely, while others remain wholly or virtually unaffected. An individual with a lesion in his left hemisphere may be completely unable to speak, while remaining able to draw or hum with skill. An individual with a lesion in his right hemisphere may be unable to dress himself properly and may lose his way in the hospital, while reading and speaking just as before. As a result of these somewhat surprising circumstances the brain-damaged patient constitutes a unique experiment in nature. What could never be done experimentally occurs daily as a result of inexorable fate. The ravages of brain injury present the investigator with a unique opportunity to clarify the functioning of the normal mind; and at the same time they offer pregnant suggestions of how to aid or rehabilitate individuals who have become (or were born as) victims of brain injury.

As a neuropsychological researcher at the Aphasia Research Center of the Boston Veterans Administration Hospital, I have come to know several hundred victims of brain damage. Most of our patients are aphasic: Their language abilities have been disrupted as a result of damage to the brain, such injury implicating their left cerebral cortex in nearly all cases. About one-third of our patients suffer from other kinds of brain injury in other sites which, while sparing their language functions, vitiate other abilities. And so I have had the instructive opportunity to compare the functioning of two groups of patients — those whose language is impaired but who have retained other abilities, and those who, while losing other capacities, retain the abilities to express themselves verbally and to understand spoken language. In what follows, then, I shall sketch some of the insights that other researchers and I have obtained from probing the effects of various brain injuries that may befall the normal adult.

Some invalid notions. One of the first lessons gleaned from work with brain-damaged patients is that commonsense notions of the relationships among abilities may be invalid. Take, for example, the set of symptoms encountered in a bizarre but not infrequent condition called pure alexia without agraphia. Patients afflicted with this disorder are unable to read text (they are alexic), yet remain able to write (they are not agraphic). One's immediate thought is that they must be in some sense blind; but in fact the patients can copy or trace out the very letters and words they fail to read. To complicate the matter even further, the same patients are often able to read numbers. They may even read DIX as 509, while proving incapable of reading it as "diks." They are able to name objects but are frequently unable to name samples of colors shown to them.

On its own, this syndrome confounds a raft of intuitive notions. Reading can be separated from writing; verbal symbols differ from numerical symbols; objects are named in a way different from colors. No one completely understands pure alexia but the major facts of the syndrome described above have been repeatedly described and are widely accepted. Some researchers hold that the individual's visual powers and his verbal-language capacities are reasonably intact but the connections between them have been disrupted. As a result, purely visual configurations — like letters or colors — cannot be named (or read). But those visual configurations that arise sensory or tactile associations (like objects or numbers) can be satisfactorily processed. Evidently, such findings not only undermine common sense; they also challenge the researcher to devise a model of mind that can account for this bizarre blend of abilities and disabilities.

Relationships revealed. Pure alexia demonstrates that symbols that might have been thought similar (numbers and words) are processed in different ways by the brain. Other syndromes demonstrate precisely the reverse situation: skills usually thought independent of one another, in fact, turn out to be closely related. In a condition that accompanies injury to the parietal and occipital lobes of the left hemisphere, patients can understand single words and declarative sentences but fail in decoding utterances which employ prepositional phrases like "on top of," or "next to," possessive constructions ("my brother's wife") or the passive voice ("the lion was killed by the tiger"). Further investigations with these patients reveal difficulties in carrying out mathematical operations and in analyzing a spatial array. These disabilities co-occur with sufficient regularity to suggest that the same underlying "mental operations" may be drawn upon in understanding certain linguistic structures, in performing arithmetic, and in comprehending a spatial layout. And so, in this instance, the modeler of mental processes (or the schoolteacher) is challenged to unite skills that, on intuitive grounds, might appear quite unrelated.

In most cases the deficits exhibited by brain-damaged patients are only too apparent to the victim as well as to those who know him. Sometimes, however, a victim may be completely unaware of his deficits, which may even escape the notice of the casual observer. An instructive example of this is Korsakoff's disease, a syndrome resulting from damage to the midbrain, and often the pathetic climax of many years of alcoholism.

The Korsakoff patient exhibits no evident physical disabilities. He may perform at an average or above average level on an intelligence test. He can solve a variety of problems posed to him; he can converse in an intelligent manner for hours. And yet, once his deficit has been revealed, it becomes painfully obvious. For a victim of Korsakoff's disease can neither remember anything that is told to him or recall anything that has happened to him since the onset of his disease.

A powerful demonstration. Few medical demonstrations are as powerful (and memorable) as that of Korsakoff's disease: One tells an apparently normal patient one's name, engages him in distracting conversation for a few moments, and then hears the patient not only claim ig-
nornance of that name but also deny that it has ever been told to him. Yet, if all memory were of a single piece, the mechanisms underlying this process would not be illuminated by Korsakoff’s disease.

In fact, however, the Korsakoff patient is able to learn things providing only that one does not accept his testimony concerning what he knows. For instance, one can teach such a patient to play a new piece on the piano; the next day he will deny ever having learned the piece, but, once given the opening bars, he (or his fingers) will play the piece perfectly. One can teach a Korsakoff patient a complex new motor skill, say solving a maze, or copying an intricate pattern; once again despite his sincere protestations of ignorance, the patient (or his hands) will reveal mastery of this new skill. And most surprisingly of all, one can even teach such a patient a new line of verse, a nonsense slogan, or a series of answers to questions. While denying the possession of this information, the Korsakoff will say the requested words as long as the correct linguistic context (for instance, a verbal cue) is provided.

Such findings document at least two forms of memory. Given sufficient drill, the brain of the Korsakoff patient can learn new kinds of patterns — motor, musical, even verbal — and can spew these patterns back under appropriate eliciting circumstances. But the Korsakoff patient has largely lost the ability to learn something new — particularly if it is verbal. And he is completely incapable of knowing what he has learned or of drawing upon such new skills in the voluntary way available to normal individuals.

A record lost. With disrespect to neither, the Korsakoff patient can be compared to a clever animal. Obviously the animal lacks verbal knowledge of what he knows, and yet he can demonstrate his learning whenever placed in the appropriate circumstances. The Korsakoff patient has lost what the animal has never had: a kind of historical record of what has happened to him since the onset of his illness; and the ability to consult such a record at will.

STUDY of the brain-damaged individual can not only illuminate the ordinary mental processes of ordinary persons; it can also help to unravel highly developed skills possessed by talented individuals. Among those who have proved extremely difficult to study under ordinary conditions are artists; such creative persons are few, often unsympathetic to empirical investigators, and usually possess skills of such fluency that they defy dissection and analysis. Here again, the accidents of brain damage offer a unique investigative opportunity.

Only on rare occasions has an artistically knowledgeable neurologist encountered an accomplished artist whose brain has been damaged. But from such rare happenings considerable insights have been gained into the operations of the artistic mind. Typically, painters can continue to create significant works after their language powers have been seriously disturbed; indeed, more than one researcher has claimed that visual artistry actually improves as a result of aphasia! But interestingly enough, painters with right hemisphere disease — whose language has remained unaffected — often exhibit bizarre patterns in their paintings. They may neglect the left side of the canvas; they may distort the external form of objects; and they may portray emotionally bizarre or even repulsive subject matter. Apparently painting and linguistic capacities can exist in happy independence of one another.

A more complex question. On the other hand, the relationship between linguistic and musical skills seems more complex. Some aphasic musicians prove able to compose or perform; some (among them, the composer Maurice Ravel) have lost the ability to create musically even though their critical powers seem to be intact. Still other musicians have been completely disabled by aphasia.

The striking individual differences found among brain-damaged musicians suggest that musical capacities may be organized in idiosyncratic ways across individuals. Perhaps most persons learn in similar ways to speak and to draw; but the organization of music in the brain may differ dramatically depending on whether one has learned an instrument, what instrument one favors, whether one plays by ear, the extent to which one sings, and so on.

Of the diverse conundrums that abound in the area of human neuropsychology, none is more persistent and more endlessly fascinating than the relationship between language and thought. Opinions on this issue vary enormously. Some investigators (for example, those influenced by the American linguist Benjamin Lee Whorf) view all thought processes as shaped by language, and consider aphasia the death of cognition. Other researchers (for instance those influenced by the Swiss psychologist Jean Piaget) see language and thought as separate streams; they believe that thought can proceed in a virtually unimpaired manner despite a pronounced aphasia.

Dozens of studies inspired by this vexed question reveal quite clearly the inadequacy of both extreme positions. Unquestionably certain cognitive and intellectual abilities depend quite heavily on linguistic intactness: the ability to reason about abstract issues, the capacity to solve scientific problems, and, in most cases, skill at mathematics. However, an equally impressive list details reasoning powers that may be well preserved despite a severe aphasia: the ability to solve spatial problems, sensitivity to fine differences in patterns or configurations, and alertness to the emotional contours of a situation. And, though this area has not been much studied, it seems probable that an individual’s sense of himself is not noticeably affected by linguistic impairment — even as “the self” can be decimated while linguistic powers remain completely unaffected.

WITH every passing year, new neuropsychological laboratories are opened; virtually every issue of the leading journals documents fascinating new cases and pivotal experimental discoveries. Our knowledge of the skills detailed above, as well as many others not alluded to here, is certain to increase and to change. And yet it is already possible, on the basis of well-documented findings, to posit reasonably convincing models of human...
mental processes, particularly in the area of language. Moreover, it should be possible within the next decade to begin integrating what is known about relatively discrete cognitive functions—like reading, memory or visual recognition—with insights concerning such subtle and elusive aspects as the individual's emotional life, his preferences and fears, his relations with other people, and most intriguing of all, his consciousness of his own experiences and of the world about him.

**Avenues of promise.** Understanding the brain-damaged individual, and extrapolating to the normal person, is a worthwhile scientific endeavor in its own right. I do not at all wish to detract from it. However, work with the victims of brain damage provides both an opportunity and a challenge to aid these often hapless individuals. It is therefore encouraging to report that in the area of aphasia, the increased understanding obtained from neuropsychological investigations has suggested some promising avenues to rehabilitation.

Once it had been established that skills in musical and visual tasks could be at least partially dissociated from linguistic skills, the possibility arose that such spared capacities might be marshalled to aid patients in communicating with others. At our own unit, we have recognized the need for novel forms of aphasia therapy for use with patients who have not been helped by traditional language therapy. The most successful of these new therapies, one devised by Martin Albert, Nancy Helm and Robert Sparks, involves the use of singing (or melodic intonation) to aid the patient who is unable to express himself orally. A still-experimental therapy, developed in association with Edgar Zurif and several other investigators, involves using visual symbols drawn on index cards. Patients learn to associate these symbols with objects and actions in the world and then communicate their wishes and thoughts by manipulating series of cards. Still other therapies, designed with the aphasia patient's strengths and limitations in mind, draw on sign language and on manipulation of an artificial-speech synthesizer. It is still too early to pass final judgment on the efficacy of these therapies, but they at least offer hope that those areas of the brain that have been spared may to some extent be placed in the service of apparently destroyed functions.

**Because** the patient ordinarily studied by neuropsychologists was once normal, those parts of his brain that still function are presumed to reflect the way in which mental capacities are typically organized in the intact individual. In this respect, he differs from the young child whose brain is much less differentiated into specific zones and, at the same time, much more flexible. The adult with even a relatively small lesion may suffer permanent damage of major skills; the toddler can lose as much as half of his brain (via the removal of a hemisphere) and yet remain able to function quite effectively in intellectual matters, presumably because spared areas "take over" function.

Despite these telling differences in brain organization and potential, knowledge about children's learning abilities and disabilities can be obtained from a study of the brain-damaged adult. In my view, the kinds of brain injury that befall adults often seem to yield conditions found, perhaps in somewhat less clear-cut form, in school children with learning disabilities. For instance, individuals with acquired alexias (or reading disorders) often resemble children with dyslexia (otherwise competent children exhibiting special difficulties in reading). Similarly, adult patients with selective disorders in calculation often resemble children who experience special difficulties in learning arithmetic. (Selective sparing may also prove illuminating: Patients who can decode written symbols or who can repeat language without understanding resemble certain hyperlexic, autistic, or retarded youngsters.)

**The rehabilitative clue.** These clinical findings suggest that some children may be born with neurological abnormalities that yield the behavioral pattern found in certain normal adults whose brains have been injured. The rehabilitative clue here arises from the fact that the brain-damaged adult could once perform the now disrupted function. Should we succeed in devising a way to "reactivate" this skill, using a channel that is yet unimpaired, we may accomplish two goals. Even while aiding the adult in recovering an ability of importance, we would have developed methods that may facilitate the acquisition of these same skills by the learning-disabled child. Thus, we would have developed an alternative training regime which, while unnecessary for the completely normal child, may prove highly serviceable for the child with a slightly abnormal brain.

Returning to our original example of pure alexia without agraphia, we find further applications of this procedure. Studies with alexic patients have documented that, if given three-dimensional letters to palpate, they can read with greater skill. And, most intriguingly, studies of alexic patients in the Orient have revealed they may be able to read ideographic characters while failing with phonetic characters. Just these insights have recently been drawn upon in the education of American children with selective disabilities in reading. Thus, Paul Rozin and his colleagues at the University of Pennsylvania have developed an ideographic system effective with inner-city dyslexic children. And Jay Isgur, working with learning-disabled youngsters in Pensacola, Fla., has reported marked success in a program that builds upon the use of three-dimensional "object-like" letters.

**Applying the knowledge.** Whether such rehabilitative measures prove to be of only marginal assistance, or emerge as potent prosthetics, remains to be clearly determined. Once destroyed, brain tissue cannot be regenerated, and the loss of this precious substance almost invariably produces serious effects. Yet, given that some brain damage is inevitable, and that transplants of neural protoplasm will not soon be with us, efforts to assist the injured child or adult must certainly be encouraged. And indeed, such efforts constitute one of the most rewarding portions of research on brain damage. Even as insights into our own minds, and into mental processes, generally, have been coming forth rapidly, it has proved possible to apply what has been learned to those patients who, willingly or inadvertently, have contributed to our understanding.
Effects of diabetes on test mice are illustrated by this photo of three mice, taken during the study. The mouse at lower left is non-diabetic and shows normal weight and size. The mouse at center appears normal but carries a recessive trait for diabetes (heterozygous for diabetes). The diabetic mouse at right (homozygous for diabetes), which was allowed to eat as much as it desired, became abnormally heavy.

Research team’s findings are seen as step to determining diabetes trigger

by Nancy Haslam

RECENT research findings linking a viral infection to the onset of diabetes in genetically susceptible test mice may be an instrumental step in determining what triggers diabetes in humans. The research, based at the School of Medicine, involves a team working in Boston and Richmond, Va.

According to principal investigator Sidney Kibrick, M.D., a professor of pediatrics and microbiology at BUSM, the researchers’ work is a solid move toward understanding diabetes in humans. He said if the virus that precipitates the disease in the mouse is found to be an important causal factor in man, development of a protective vaccine would be possible.

Because the virus that induces diabetes, coxsackievirus B, is related to the polio-virus group, the same principles used to prepare the polio vaccine could also be used to develop a vaccine against this virus, Kibrick said.

However, he stressed, “since the importance of this particular virus as a precipitating factor in human dia-

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A relationship suspected. The coxsackievirus strain the research team used (coxsackie B4) is known to cause pancreatic damage in both humans and mice. Because of this characteristic, both they and other researchers have suspected coxsackie B4 might have some relationship to diabetes, Kibrick explained.

In 1965, researchers at the Jackson Laboratory at Bar Harbor, Maine, observed that diabetes was occurring spontaneously in one of their mouse strains. Upon further study, they found that the mouse disease was genetically associated with a gene for diabetes. Mice receiving such a gene from each parent (and therefore having two genes) spontaneously developed diabetes. They were called “homozygous” for the gene. Those mice receiving this gene from only one parent looked and acted normal and showed no signs of diabetes in laboratory tests. However, when these mice with only one gene were mated with other mice having a similar gene, Kibrick said, some of the offspring developed overt diabetes. Kibrick said this result confirmed that each parent had been carrying one gene, that is, they were called “heterozygous” for diabetes.

Based upon these studies, the researchers at BUSM and Virginia Commonwealth University developed the hypothesis that genetic background for predisposition to diabetes might be correlated with the susceptibility of mice to group B coxsackievirus strains that were known to affect the pancreas of these animals.

Gene makeup the key. In their study, the researchers used mice homozygous for the gene, as well as both heterozygous and normal mice. They found that the response of each genetic variant to the coxsackie B4 infection was directly dependent upon its gene makeup, thus confirming the relationship between genetic predisposition to diabetes and susceptibility to the virus. While the homozygous mice all died, only half of the heterozygous mice died, and most of the survivors developed diabetes during the next six months. The normal mice also survived but did not develop the disease.

Loria said that several other viruses have also been shown to affect the pancreas of the mouse, but these viruses, unlike the coxsackieviruses, do not normally cause disease in humans.

Loria said that work on this particular mouse is much simpler than research with humans, since diabetes in this mouse involves only one gene on one chromosome, while the disease in humans probably concerns many genes on many chromosomes.

Kibrick said the team is currently trying to determine, first in the mouse and subsequently in humans, how important this virus may be as an overall cause in inducing the disease.

Webb said that another goal of their research is to study how this specific virus exerts its effect on the underlying genetic susceptibility for diabetes. Such studies may help in understanding how viruses may generally influence genetic factors.

Loria, who has worked with Kibrick on a number of projects since 1968, is an assistant professor of microbiology at Virginia Commonwealth University, Medical College of Virginia, and holds an appointment as a research associate at Boston University School of Medicine. He is also a career fellow of the American Diabetes Association. Webb, who joined Loria on the project a year and a half ago, is also a research associate at Boston University School of Medicine. The fourth member of the research group, Gordon E. Madge, is associate professor of academic pathology at VCU.
Profile:

Job Fuchs

Career is in transition, but ‘helping people’ remains his primary aim

There is a standing story among University Hospital house officers that says if you are on the floor at 2:30 in the morning and feel a reassuring hand on your shoulder, it will probably be the hand of Job Fuchs.

Job E. Fuchs, M.D., BUSM ’44, always seems to be where he is needed most. Eric Robinson, reflecting in the Fall 1975 Centerscope on the care that his late wife, cancer patient Joan Robinson, received from UH professionals, wrote, “We once, for example, received a house-call. Who from? Who else but Job Fuchs, a doctor whom one can meet any moment of the day or night in almost any part of the Hospital.”

For this dedication, Fuchs was honored at University Hospital’s annual dinner in December as “the doctors’ doctor.”

Fuchs, who recently left private practice to become chief health officer for Northeastern University, talked about his career in medicine while sitting beneath an acrylic by his wife, artist Betsy Fuchs, in his new Boston office.

The satisfaction of caring. Fuchs said he has received the most satisfaction from “caring for people, taking care of their problems, getting to know them, getting to be part of their lives and getting to know their families.”

Not surprisingly, Fuchs, who is secretary of the BUSM Alumni Association and an assistant clinical professor of medicine, also enjoys watching developments in medicine and following the progress of house officers.

All this takes time, and time is Fuchs’s most precious commodity. As internist and teacher, he needs time to heal, instruct, learn, live, and fulfill what has become the Fuchs trademark — treatment of the whole patient.

William E. R. Greer, M.D., an associate with Fuchs in practice and a friend since they were both students at BUSM, said, “I’ll bet he’s saved more lives than any doctor around . . . .

He’s always available to handle emergencies. He has always been like that; even as an intern and resident, he seemed to function without sleep.”

‘Personal involvement’ cited. Even more than for his superhuman schedule, Fuchs is respected by his colleagues for his devotion to his patients. Norman G. Levinsky, M.D., UH physician-in-chief and chairman of the Division of Medicine, cites Fuchs’s “overwhelming personal dedication to his patients” and “continuous personal involvement with patients over the decades.”

Noting a shift over the years in med-

Susan Gertman is a Centerscope staff writer.
Boston University Journal

IN THE CURRENT ISSUE

Informed Consent: Should Doctors Tell the Truth?
Leonard L. Riskin

David Porter
Emily Dickinson’s Worksheets

Dore Ashton
Lewis Mumford

Michael Zuckerman
Dr. Spock’s “Adjusted” Children

Maxwell Geismar
Life as a Critic

Also Dada/Graffiti; On the Jencks and Coleman Reports; Art

POETRY: Blount, Brownjohn, Hamburger, Levertof, Sissman, Tate, Updike, Wilbur

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Fuchs, was at one time the owner of the old Boston Braves baseball team.

Each year Fuchs and his brother, Atty. Robert Fuchs, present the Judge Emil Fuchs Award at the Boston Baseball Writers banquet.

Job Fuchs became interested in the Northeastern University work when he was a house officer, and George M. Lane, M.D., formerly Northeastern’s chief health officer and visiting physician at UH, referred some patients here. Fuchs helped Lane with some of his student cases, and Lane encouraged Fuchs to work part-time at the University when he finished his training.

Taking care of students. “Students are a hard group to take care of,” said Fuchs, who is now in charge of the health care of Northeastern’s 16,000 students. “They have a lot of reserve and often do not show symptoms until they are pretty far along.” When they do come to the infirmary, he said, they expect “an instant cure.”

While his goal at Northeastern is “to continue to improve the quality of student care,” he said his major thrust will be to increase psychiatric services for students.

Fuchs, who received the Army Commendation Medal in 1947, practiced psychiatry while serving as a captain in the Army Medical Corps. All internists practice psychiatry to some extent, said fellow internist Greer, adding, “Job was always better at it than most.”

Having devoted himself to medicine and his patients for the past 32 years, Fuchs said, “I don’t think any other career brings the satisfaction that a medical career does... I can’t visualize anything else as fascinating.”

Fuchs said he went into medicine “to help people — and things haven’t changed.”
Dear School of Medicine alumni:

I have been Dean at Boston University School of Medicine for a little over a year. The deanship, as expected, has been hard work, but has also been exciting and challenging. Many of my initial impressions of BUSM have been confirmed. This is a School with a distinguished faculty, a gifted student body, and appreciative alumni.

One of my major priorities has been to further develop the public image and self-image of Boston University School of Medicine to the high level it deserves. Although there has been substantial progress to date in improving our public image, further gains will require the support of the faculty, students and alumni.

Another major concern during the past year has been the financing of medical-student education. The average cost of a year of medical education is $12,000 to $15,000 per student. The tuition at Boston University School of Medicine is now $4,900 a year. Our tuition, while only one-third of the average cost of medical-student education, is relatively high, because we receive no state support and have an extremely small endowment. There is little likelihood of receiving state support in the near future, and federal support of medical-student education is likely to decrease; BUSM must therefore increase its support from the private sector, including foundations, corporations, the alumni, and other individual donors.

I have worked closely with the officers of the Alumni Association and have gotten to know them — and many of you — well. Your commitment to BUSM has been great. The response to the Dean’s Club this year has been particularly gratifying. We hope the Alumni Association will be able to provide considerable support to the Revolving Student Loan Fund. This Fund provides loans with very low interest rates. The Fund has been of great help to our students during this past year, and increased demand will undoubtedly be placed on it in the future. Your contributions to this Fund are very much appreciated.

I want to thank you for all the help and support you have given to me and to BUSM. I hope to meet more of you during the coming months. If you come to Boston, come by and see me. My door is open to you.

John I. Sandson, M.D.
Dean
BUSM Annual Fund draws strong response

THE BUSM Alumni Office reports that the 1975-1976 Annual Fund has now reached its half-way point, and the response of the School’s alumni "is very encouraging to date." Alumni Association Development Director Richard King says, "Under the able leadership of Bernard Tolnick, M.D., '43-A, Alumni Fund chairman, and Barry Manuel, M.D., '58, Dean's Club membership chairman, our campaign had yielded $58,894 in cash and pledges as of Dec. 31, 1975."

The Dean's Club seeks to recognize in a fitting manner those alumni who provide the leadership in the Annual Fund through a significant level of support.

Several purposes will be served by this newly formed alumni organization. First, the administration of the School of Medicine, the students, the faculty, and the alumni body itself will have the reassurance of the ongoing support of a loyal group of alumni through annual gifts. Second, members of the Dean's Club will become involved more closely with the School of Medicine, its progress and development, through regular meetings with the Dean. Third, the Dean's Club, growing steadily in numbers, will demonstrate to others that BUSM graduates are firmly united in support of their own School and are dedicated to continuing the tradition of providing high-quality medical education at the School of Medicine. Membership will be offered for one year at a time. It is hoped that members will renew their qualifying gift in succeeding years.

Any alumna or alumnus who makes a minimum gift of $1,000 to the Annual Fund in any one fiscal year will become a member for that year, and a gift of $500 or more in each succeeding year will sustain membership. An alumna or alumnus who makes a gift of $1,000 or more before June 30, 1976, will become a Charter Member of the Dean's Club. Lifetime membership will be conferred on all eligible persons who contribute $10,000 or more, either as an outright gift immediately, or by the accumulation of their initial and annual membership contributions.

As a part of the Annual Fund, the Dean's Club will have a special appeal for those looking toward class reunions. Gifts to the Annual Fund at the level of $1,000 or more will qualify an individual for membership in the Dean's Club and will also be credited in full to the gift of the reunion class.

Listed below are the names of BUSM alumni who have become charter members of the newly formed Dean's Club. (Any BUSM graduate who is interested in joining this club is encouraged to contact the Alumni Office at the School of Medicine, 80 East Concord St., Boston, MA 02118.)

DEAN'S CLUB MEMBERS

Louis J. Aiello '35
Minoru Araki '53
Jeanne F. Arnold '61
Arnold L. Berenberg '46
Walter J. Brodzinski '64
Rachel Hardwick Burgess '25
Harry A. Caplan '48
Leonard J. Cibley '52
Andrew B. Crummy, Jr. '55
Timothy L. Curran '39
Norman W. Elton '26
William Franklin '46
Murray M. Freed '52
Charles E. Gilpatrick '46
Philip T. Goldenberg '46
Gene I. Gordon '46
Theodore B. Greenfield '44
Jeffrey H. Harris '50
Peter F. Jeffries '60
David S. Johnson '49
Martin B. Levene '50
Julian Mandell '48
Barry M. Manuel '58
Herbert Mescon '42
Helen A. Papaiananou '53
P. Anthony Penta '51
Arnold R. Perlman '50
Anthony V. Porcelli '55
Frank Ratner '47
Lester Rich '47
Stephen Russell '55
Steven P. Shearing '64
Sarah Fong Sung '25
Jacob Swartz '46
Bernard Tolnick '43-A
Jerome D. Waye '58
Robert F. Wright '46

Bernard Tolnick, M.D.
The following list contains the names of alumni who have joined the Century Club. Membership in this group is open to all BUSM graduates who contribute $100 or more during a fiscal year to the Alumni Association’s Annual Fund.

**CENTURY CLUB MEMBERS**

George H. Abbot '60
Crawford W. Adams '42
Dwight M. Akers '53
Stephen J. Alphas '55
Donald L. Anderson '40
Dorothy S. Anderson '40
Guy B. Atonna '33
Thomas C. Bagnoli '64
Arnold J. Bajek '53
G. Robert Baler '50
Bryan A. Barber '62
Donald B. Barkan '45
Howard 0. Beane '57
John H. Bechtel '50
Fred W. Benton '45
Jeffrey L. Berenberg '68
Abraham I. Binder '40
Herbert N. Blanchard '42
Robert E. Block '40
Mortimer J. Blumenthal '45
Charles D. Bonner '44
George K. Boyd '55
Martin L. Bradford '42
Leonard S. Bushnell '62
Alexander S. Butkiewicz '60
George E. Casaubon '43-B
Marion Macdonald Castagno '43-A
William J. Cates '58
Jose Chaves-Estrada '26
Raymond Y.W. Chock '61
Otto L. Churney '28
Adolph B. Cichak '51
John P. Cloherty '62
Charles T. Cloutier '65
Samuel Clive Cohen '35
Robert L. Conrad '60
Menahem Cooperstein '41
Norman D. Corwin '57
Mildred P. Davis '60
Frank P. delaCruz '33
Melvin R. Dixon '53
Marion Wier Elliott '55
Richard O. Elliott '56
Michael J. Esposito '49
Joseph Factor '31
Jacob Felderman '35
Geoge Ferré '31
James E. Fitzgerald, Jr. '54
Barbara J. Herman Fleming '69
Francis X. Foley '34
Beverly A. Foss '54
George E. Garcia '61
Antonio R. Gasset '66
Richard W. Gillies '59
Nicholas Giosa '52
Harry S. Goldsmith '56
Sydney Grace '36
Edward V. Grayson '67
Michael A. Greenwald '68
Manuel Guzman Acosta '46
Michael G. Hirsh '63
Waclaw Hojnoski, Jr. '55
H. Carlton Howard '48
Harry M. Iannotti '66
Anthony A. Iavazzo '31
Don E. Ingham '51
Hideo H. Itabashi '54
Sarkis J. Kechejian '83
Thomas A. Kelley, Jr. '61
Francis C. Kennedy '34
Patricia J. Kennedy '61
James D. Kenney '56
Stanley H. Konen '47
Phyllis H. Koteen '42
David H. Kramer '60
Edward E. Krukonis '63
John M. Kurijan '58
Vincent Lanzoni '60
Jeffrey A. Lempert '69
Henry H. Lerner '34
Arthur H. Levere '52
Melvin S. Levine '52
Louis Lavovsky '63
Harold D. Levy '59
Jerome A. L'Heureux '34
Olga A. G. Little '35
Robert H. Lofgren '56
Stephen R. LoVerme '46
Ernest W. Lowe '53
Edward W. Luka '58
Constance Macdonald '60
Paul Maltkien '44
Edward H. Malone '43-A
Samuel R. Manelli '40
Bernard F. Mann, Jr., '40
John R. Marcaccio '64
Ralph C. Marcove '54
Harold Marcus '39
Herbert L. Martin '50
John F. McGinn '58
Robert W. McLean '49
Francis J. McMahon '42
John F. McManus '36
Valerian S. Michalowski '29
Arthur J. Neiterman '61
Roy W. Nelson '38
O. Arthur Nereo '42
Morton B. Newman '56
George H. Nip '45
Juan A. Noguera '52
Chuk Nwokedi '56
Q. William Osborne '52
Harold L. Osher '47
Paul I. Ossen '43-B
Nicholas Padis '31
Anthony R. Palma '37
Clement E. Papazian '57
Simon C. Parisier '61
Harry L. Pine '57
Peter E. Pochi '55
Joseph E. Porter '34
Jerilynn C. Prior '69
Francesca M. Racioppi '41
Robert C. Rainie '43-B
Joel Rankin '57
E. Arthur Robinson '54
Cynthia P. Rose '63
Henry N. Rosenberg '30
Herbert L. Rothman '66
Maurice R. Ruben '39
Lucy Russo '43-A
Enid K. Rutledge '29
Louis M. Sales '35
Philip E. Sartwell '32
Francis P. Saunders '58
Lucian A. Sawicki '48
Rosario A. Scandura '54
Harold S. Schell '70
John H. Selby '44
Priscilla Sellman '36
Charles J. Shagoury '43-B
William J. Shapiro '52
Richard L. Simmons '59

**AN INVITATION**

All members of the School of Medicine Alumni Association are invited to attend the Association’s annual dinner meeting on Saturday evening, May 1, 1976, at the 57 Restaurant, Park Square, Boston. Contact the BUSM Alumni Office, 80 East Concord St., Boston, MA, 02118, for tickets.
NOTES

1925
NICHOLAS J. CAPECE, a resident of Melford, Mass., has completed 50 years in medicine and surgery and is still going strong.

1926
JOSE CHAVES ESTRADA, who retired from the Veterans Administration Center for Puerto Rico and the Virgin Islands in 1969, has received the Distinguished Career Award.

1927
GRACE BLAUVELT WELLES writes, "We are living in this small community (Orient, N.Y.) where we retired about 10 years ago. The nearest hospital is just five miles away in space, but ah! how the practice of medicine and attitude between doctor and patient has changed."

1929
VALERIAN S. MICHALOWSKI, living in Kensington, Conn., writes, "Good health and good luck."

1931
MATTHEW N. DE PASQUALE retired from active practice of rheumatology in Fort Myers, Fla., in October and is now a staff physician, outpatient service, Veterans Administration Hospital in Tuskegee, Ala.

1934
JOSEPH E. PORTER is now retired as chief of the Department of Pathology at the Maine Medical Center, where he is now a consultant.

1935
OLGA A. G. LITTLE writes, "I still find practice rewarding and exciting as does my husband, Mervyn (Harvard '35). Our son, Dr. George A. Little, a neonatologist at Beth Israel Hospital, has been promoted to captain in the U.S. Navy Medical Corps. He is assistant to the chairman of the Department of Pediatrics and to the chairman of the Department of Surgery."

1936
SYDNEY GRACE resigned a few years ago as chief of obstetrics and gynecology at the Cambridge, Mass., Hospital, but is still active. He received a 25-year pin from the Beth Israel Hospital for his years of service.

1937
SAMUEL E. PAUL writes that he is "now working at Metropolitan State Hospital, Norwalk, Calif., Adolescent Program 40 hours a week and doing 20 hours a week as an associate clinical professor in family medicine at the College of Medicine, University of California - Irvine Campus, supervising the family practice residents in the new program in Orange County."

1939
RICHARD C. TAYLOR writes from Skowhegan, Maine, that "semi-retirement has grown to a full partnership and double medical staffs of two hospitals."

1940
SIDNEY R. WILKER has been appointed head of the Department of Otolaryngology at the Jewish Memorial Hospital, Boston. He is a senior surgeon at Massachusetts Eye and Ear Infirmary and also holds staff appointments at Brookline and Beth Israel Hospitals.

1943-B
JACOB B. DANA is the chief of the medical service at the Veterans Administration Hospital in Togus, Maine.

1944
JOB E. FUCHS writes, "I have accepted the position of director of the Northeastern University Health Services, Boston. This will be a full-time job and has required giving up my private practice. Dr. RALPH GANICK (BUSM '67), board certified in internal medicine and hematology, will be practicing in Suite 306 at the Medical Center's Doctors' Office Building, 720 Harrison Ave."

1952
NICHOLAS GIOSA writes: BUDDHA'S SONG

Learn to sit and wait,
To attenuate your anger,
The earth's too large a ball to seize—
Even such as Hercules
Were pulled on railing knees.

Bide the hour, as stars
In constant glimmering desperate
Reaches of indifferent eyes,
Blare their unheard trumpeting.

1953
ARNOLD J. BAJEK has one daughter, Paula, in Boston University's premedical program.

1960
GEORGE H. ABBOT is currently serving as chief of the rehabilitation medicine service at the Brockton, Mass., Veterans Administration Hospital.

1961
GEORGE E. GARCIA has a practice in Boston and Plymouth, Mass., and is on the staff of Massachusetts Eye and Ear Infirmary, teaches at Harvard Medical School and is the president of the Massachusetts Ophthalmological Society.

1963
ROBERT W. RUGGERI began orthopedic practice in Walla Walla, Wash., in July.

1964
JOHN P. COCCIARELLA writes that his third child, Nancy, was born in June. He is in private practice in pediatrics in Milford, Mass., and enjoys occasional precepting in the pediatric clinic at Boston City Hospital.

1966
ANTONIO R. GASSET has been promoted to associate professor in the Department of Ophthalmology at the University of Florida.

1967
ROBERT W. RUGGERI began orthopedic practice in Walla Walla, Wash., in July.

1968
SYDNEY GRACE resigned a few months ago. Her husband retired in 1969.

1969
OLGA A. G. LITTLE writes, "I still find practice rewarding and exciting as does my husband, Mervyn (Harvard '35). Our son, Dr. George A. Little, a neonatologist at Beth Israel Hospital, has been promoted to captain in the U.S. Navy Medical Corps. He is assistant to the chairman of the Department of Pediatrics and to the chairman of the Department of Surgery."

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1975
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1976
RICHARD C. TAYLOR writes from Skowhegan, Maine, that "semi-retirement has grown to a full partnership and double medical staffs of two hospitals."
planning to stay in the Army for two more years.

EDWARD FINEBERG is enjoying the challenge of developing the retina program at the Medical College of Georgia. His wife, JUDITH (BUSM '69), plans to continue her radiology residency at the same college starting in July. Shoshannah is 3. Jonathan is 1½, and both are thriving. They all thoroughly enjoy the climate, beauty and hospitality of the Southeast.

LEONARD SHARER is on a plastic-surgery fellowship in Glasgow, Scotland. His second daughter, Rebecca, was born in June. He was scheduled to return to Norfolk, Va., in January, 1976.

MARC E. COLMER has joined Dr. Emanuel Abraham in Ocean Township, N.J., in the practice of internal medicine and cardiology. Their office is located at the Neptune Professional Plaza, 71 Davis Ave., Asbury Park, N.J. Marc and his wife, Marcelle, have a 2-year-old daughter, Amy.

STEVEN R. KOHN became a diplomate of the American Board of Dermatology and was appointed to the staff of the Presbyterian Hospital in New York City.

GERALD H. MARGOLIS reports that his daughter, Elizabeth, was born May 3, 1974. He is currently completing his second year of a child-psychiatry fellowship at Boston University Medical Center.

EDWARD J. GLINSKI is now practicing otolaryngology in Marshfield, Mass., and with the Harvard Community Health Plan. His staff privileges include the Jordan Hospital, Plymouth, and the Massachusetts Eye and Ear Infirmary, Boston.

ELLIOTT D. ROSS has completed a postgraduate year in psychiatry at the University of California — Davis Affiliated Program, Merced Community Medical Center, Calif.

Kathleen Williams, who is doing a fellowship in psychopharmacology, writes, "I have just finished a first year of solo general internal medicine and need an associate! Am working hard with preventive medicine — think we're getting somewhere, but too early to tell."

LOUIS E. ROSENTHALL, while he was still in the U.S. Army last fall, was assigned to Ft. Chaffee, Ark., to help care for the Vietnamese refugees. "It was a very interesting and rewarding experience. In February, Mary and I are expecting the birth of our second child, and in August, I plan to enter private practice in Concord, N.H., after completing a two-year tour in the U.S. Army.

GREGORY G. CHEUNG completed two years with the U.S. Navy in August. He is currently a second-year resident in family practice at University of California — Davis Affiliated Program, Merced Community Medical Center, Calif.

JOEL R. SCHULMAN is currently a pulmonary fellow at Bellevue Hospital in New York. He writes, "PHILIP THIELHELM is also in the pulmonary program at Bellevue. ERIC HONIG is a pulmonary fellow at Emory in Atlanta, and MICHAEL BOYARS is a pulmonary fellow at D.C. General in Washington."

BRUCE K. PALMERO has completed pediatric training and is now doing a fellowship in developmental pediatrics at the University of California — San Francisco.

JAMES WEINER has completed pediatric training at Mt. Sinai Hospital in New York and has been appointed assistant director of ambulatory pediatrics at New England Medical Center, Boston. He and his wife, Sally, and their son, Bradford Allan, live in Norwood, Mass.

ALLEN C. WALTMAN is doing a two-year residency in primary care under the departments of internal medicine and pediatrics at George Washington University Medical Center in Washington, D.C., after completing two years of internal medicine at Pennsylvania Hospital, Philadelphia.

LATE ITEMS

1934

EDWIN Y. STANTON has been active in the practice of otolaryngology for the past 42 years. He lives in Great Neck, N.Y. His son GARY, is in the class of 1977 at BUSM.

1942

FRANCIS J. MCMahON writes he is "still director of laboratories at Vassar Brothers Hospital, Poughkeepsie, N.Y. The children are all grown, and I'll be a grandfather for the first time in 1976."

1934-B

ROBERT C. RAINIE writes about his family in Concord, N.H.: "Dora Rainie, R.N., president of the NH Medical Society Auxiliary, is active in chorale, golf, tennis and family. Scott, age 17, is a 1971 graduate of UVM. Robin, age 25, and a 1972 graduate of Smith College, is married to John Wilson, D.M.D., and lives in New London. She and John presented us with our first grandchild in January. Jiffi, age 14, keeps us busy."

1944

FRANKLIN A. MUNSEY writes from Pago Pago, American Samoa, with an observation on the weather: "Isolated showers about the hills; otherwise, fine. Slight northeast wind. Sea slight."

1952

MELVIN S. LEVINE has been appointed assistant professor of clinical psychiatry at Stony Brook Medical School in New York. He has also been elected president of the Rockaway Medical Society for the 1976 term.

1955

RICHARD B. MARSHALL has been appointed professor of pathology and director of anatomic pathology at the Bowman Gray School of Medicine of Wake Forest University in Winston-Salem, N.C. He and his wife, Dorothy, have five children.

1956

MARY AMBLER continues as medical director of the Franklin Wylie Home in Providence and is a clinical assistant professor of pathology at Brown University School of Medical Sciences. She has two boys — Tom, age 10, and Scott, age 8.

1959

MICHAEL D. SULKIN is in the private practice of general, vascular and transplantation surgery in Silver Springs, Md. He and his wife, Linda, have one daughter, Julie.

1970

MARK A. WENTWORTH is now stationed in Hawaii and writes, "I will be finishing up my tour with the Army in August and then we will be going into practice in Waima, Kauai, Hawaii.

1972

JAMES BRASIC writes, "I am psychiatric resident at Barnes and Renard Hospitals, St. Louis, Mo."
Deaths

Paul M. Runge, BUSM '37, died Aug. 21, 1975. He was a practicing ophthalmologist in the Brockton, Mass., area for many years.

Runge was an ophthalmologist at Good- dard Memorial Hospital in Stoughton, Mass.; an associate ophthalmologist at the Brockton Hospital; a visiting surgeon at University Hospital, Boston; staff surgeon at the Massachusetts Eye and Ear Infirmary; and a member of the Department of Ophthalmology at BUSM.

He was a member of the American Medical Association, the Brockton Medical Association and the Plymouth County Medical Association. He is survived by his wife, Alice (Hicks), and a daughter.

John J. Federer, BUSM '32, died May 5, 1975, in Weehawken, N.J. He was a general practitioner for 41 years and chief of medicine at St. Mary Hospital in Hoboken, N.J. During World War II, he served for five years in the U.S. Army Medical Corps.

He was a member of the Hudson County Medical Society and the Medical Society of New Jersey, and a fellow of the American Academy of Family Practice, the American Geriatric Society, and the North Hudson Physicians Society. He leaves his wife, Mary, and two children.

Norman E. Cobb, BUSM '27, died Sept. 19, 1975, in Waterville, Maine. Cobb was a general practitioner and surgeon in Maine for more than 50 years.

Cobb was a member of the Maine Medical Association, the American Academy of General Practitioners and was a fellow of the American College of Surgeons. He was also a member of the Masonic Bodies and a member and founder of the Belfast Curling Club in Belfast, Maine. Cobb served in the Navy during World War II.

He leaves his wife, Gladys, three daughters and a sister.

You Chang Yang, BUSM '22, died Oct. 30, 1975, in Washington, D.C., of cancer. He was the ambassador-at-large for the Republic of Korea and the former Korean ambassador to the United States. A lengthy obituary in the Washington Star reported that Yang and his parents, natives of South Korea, came to Hawaii in 1903 to join other Korean exiles. It was there, as a student, that he came under the influence of the late Syngman Rhee, who later became president of the Republic of Korea.

Yang traveled to the mainland United States for his education, but returned to Hawaii to practice medicine. He was one of the first physicians in Hawaii to use insulin for the treatment of diabetes.

The Star article reports that when Rhee left Hawaii in 1939, Yang became leader of the Korean colony in the Islands. Following the Japanese attack on Pearl Harbor, Yang began what he termed, "the shortest military career in history."

"I enlisted as a private, a week later I was made a lieutenant, in another week I was a captain, and in another week I was discharged as an alien," Yang added. "That proved to be a blessing in disguise. I was a doctor, not a soldier. The Army put me in charge of a GI clinic and gave me the rank of major."

In the early '50s, Rhee, president of the newly established Republic of Korea, called Yang to Seoul and instructed that he represent Korea as ambassador in Washington, D.C., and at the United Nations.

He retained that position for most of the Korean war. Yang resigned as an ambassador in 1960, shortly after the fall of the Rhee regime.

He and his wife, Pauline (Tai), decided to remain in Washington, D.C. For a time he was a registered representative with the stock brokerage firm of Jones, Kreeger and Co.

Yang was a member of the Metropolitan Club, the Chevy Chase Club and the University Club. His philanthropic endeavors included the American Korean Foundation, which he helped to found, the Korean Cultural and Freedom Foundation and several orphanages in Korea.

He leaves his wife, a son, two daughters, three brothers, four sisters, seven grandchildren and five great-grandchildren.

Harry N. Ginsburg, BUSM '16, died Oct. 23, 1975. He was a general practitioner in the greater Lowell, Mass., area for 57 years and a member of the medical staff of St. Joseph's and St. John's Hospitals in Lowell.

Ginsburg was a member of the 50 Year Club of American Medicine, the Massachusetts Medical Society, and the Lowell Catholic Charities Bureau. He leaves his wife, Anne, two sons and three grandchildren.

Word has been received at the Centere scope editorial office of several recent deaths for which very little information is available. Readers who can provide further information should send the material to: Editor, Centerscope, Suite 300, 720 Harrison Ave., Boston, MA 02118.

Charles S. Crummy, BUSM '64, died during the summer of 1975.

David G. Wallin, BUSM '53, died March 10, 1975, in Seattle, Wash.


Florence Mentzer Compson, BUSM '20, recently died.

Centerscope has also been informed of the death of Marion A. Reid, Ph.D., a BUSM instructor in physiology from 1929 until 1946. She died Nov. 16, 1975, at Marlboro (Mass.) Hospital. A 1925 graduate of BU College of Liberal Arts, she received her M.A. and her Ph.D. from the Graduate School of Arts and Sciences. From 1946 until 1969 she was an associate professor of physiology in the Biological Sciences Department of Douglas College in New Brunswick, N.J. She leaves a sister and a brother.

Relicensure now required in Massachusetts

School of Medicine graduates who practice outside the Commonwealth of Massachusetts and are interested in returning to practice in this state should be aware of a new Massachusetts law that requires renewal of license every two years. The green renewal application form required for this application may be obtained by writing to the Board of Registration and Discipline in Medicine, 100 Cambridge St., Room 1511, Boston, 02202. The fee for relicensure is $50. The Board comes under the Commonwealth's Executive Office of Consumer Affairs.
ning for the switch began late last fall. Callers may obtain the telephone number of other staff members or departments by dialing the Medical Center's new central number, (617) 427-5000, which will also become effective April 16.

Grants and Contracts

July, 1975

School of Graduate Dentistry

- Start-up assistance. H. Goldman. NIH. $209,561. 6/27/75-6/26/76.
- School program. A. Jong. Town of Brookline. $58,400. 7/1/75-6/30/76.

School of Medicine

- Arthritis drug fund. A. Cohen. BCH. $12,000. 7/1/75-6/30/76.
- Psychiatry special areas. S. Fisher. NIH. $40,400. 7/1/75-6/30/76.
- Drug addiction program. S. Cohen. Commonwealth of Massachusetts. $314,830. 7/1/75-6/30/76.
- Drug addiction flexible contract. F. Hardwick. Commonwealth of Massachusetts. $16,000. 7/1/75-6/30/76.
- Evaluation unit. N. Scotch. BCH. $65,235. 7/1/75-6/30/76.
- Lipid abnormalities and atherogenesis in chronic renal failure. L. Lowenstein. NIH. $75,914. 6/14/75-6/30/76.
- A study of monzygous and dizygous twins to ascertain possible neurophysiologic factors for the sudden death syndrome. J. Gould. $37,145. 8/1/75-10/31/75.
- Training minority group students. J. Seymour. NIH. $106,750. 7/1/75-6/30/76.
- Drug addiction program. S. Cohen. Commonwealth of Massachusetts. $44,044. 7/1/75-6/30/76.
- Health change in air traffic controllers. R. Rose. DOT. $106,537. 1/1/75-12/31/75.
- Immunogenetic regulation of autoimmune brain disease. M. Moore. NIH. $29,522. 9/1/75-8/31/76.
- Drug addiction program. S. Cohen. Commonwealth of Massachusetts. $44,044. 7/1/75-6/30/76.
- Training of mental health personnel. D. Sabin. Roxbury Multi-Service Center. $21,240. 7/1/75-6/30/76.
- End-organ specific anti-fertility agents. H. Wotiz. University of Minnesota. $29,416. 7/1/75-12/31/75.
- Neuropsychopharmacological studies of attention. C. Kornetsky. NIH. $149,747. 9/1/75-8/31/76.
- Investigation of HbS tactoid formation. E. Simons. NIH. $31,760. 9/1/75-10/31/76.
- Physical chemistry of biologically active lipids. D. Small. NIH. $195,000. 9/1/75-8/31/76.
- Role of arterial wall in atherosclerosis. W. Hollander. NIH. $467,816. 9/1/75-8/31/76.
- Mechanism of angiotensin action on target tissues. P. Brecher. NSF. $19,639. 9/1/75-8/31/76.
- Effects of centrophenoxine on lipofuscin pigment. K. Nandy. NIH. $33,480. 9/1/75-8/31/76.
- Methodology of outpatient drug research. S. Fisher. NIH. $152,521. 9/1/75-8/31/76.
- Immunogenetic regulation in autoimmune brain disease. M. Moore. NIH. $39,685. 9/1/75-8/31/76.

September, 1975

School of Medicine

- Energy expenditure for active transport in bacteria. E. Kashket. NSF. $64,300. 9/15/75-2/28/76.
- Fetal cardiovascular response to asphyxia. R. Jackson. NEMCH. $17,453. 6/1/75-8/31/76.
- Chemistry of human proteins and glycoproteins. K. Schmid. NIH. $76,365. 9/1/75-6/30/76.
- Lipid biophysics of normal and pathological membranes. B. Small. NIH. $79,488. 9/1/75-6/30/76.

Contractile and elastic properties of cardiac muscle. R. McLaughlin. NIH.
Lymphocyte proliferation inhibitory factor (PIF). S. Cooperband. NIH. $63,334. 10/1/75-9/30/76.

B.U. aphasia research center. H. Goodglass. NIH. $142,224. 10/1/75-9/30/76.

Iodine metabolism of the thyroid gland. I. Rosenberg. NIH. $29,058. 9/1/75-8/31/76.

Antimicrobial agents and the cell surface. D. Feingold. NIH. $46,875. 9/1/75-8/31/76.

Indirect cost awards. NIH. $278,983. 10/1/75-9/30/76.

Salary for Dr. Carpenter. R. Jordan. NIH. $26,875. 9/1/75-8/31/76.

Career teacher in narcotic and alcohol dependency. S. Cohen. NIH. $20,874. 8/1/75-7/31/76.

Indirect cost awards. NIH. $391,083. October, 1975

School of Medicine

Penetration of macromolecules into mammalian cells. H. Ryser. NIH. $56,950. 12/1/75-11/30/76.

Immunologic mechanism of glomerular injury. W. Couser. NIH. $10,639. 6/1/75-5/31/76.

Indirect cost awards. NIH. $278,983. November, 1975

School of Medicine

Evaluation of Timolol Maleate in Treatment of Patients With Severe Hypertension. L. Volcic. Merck, Sharp, & Dohme Research Labs. $22,600. 9/1/75-8/31/76.

A Study of Monozygous & Dizygous Twins to Ascertain Possible Neurophysiologic Factors for the Sudden Infant Death Syndrome. J. Gould. NIH. $157,161. 11/1/75-10/31/76.

Exploratory Studies for Cancer Research. S. Cooperband. NIH. $11,083. 6/1/74-12/31/75.

Biochemical Factors Involved in Tumor Cell Metastasis. R. Niles. American Cancer Society. $13,004. 12/1/75-11/30/76.

Clinical & Laboratory Studies in Cellular Immunity. J. Mannick. NIH. $143,358. 11/16/75-10/31/76.

SOOR Diffuse Infiltrative Lung Disease. E. Gaensler. NIH. $323,312. 12/1/75-11/30/76.

Pathogenesis and Complications of Hypertension. A. Chobanian. NIH. $786,505. 12/1/75-11/30/76.

December, 1975

School of Graduate Dentistry

Clinical caries research study. S. Frankl. Colgate-Palmolive. $153,400. 10/1/75-9/30/76.

School of Medicine


Research career award--applied pulmonary physiology. E. Gaensler. NIH. $31,860. 1/76-12/31/76.

Endocrine & pulmonary response to hemorrhagic shock. R. Egdaahl. Dept. of the Army. $62,240. 11/1/75-6/30/76.

Molecular mechanisms of platinum and ruthenium drugs. A. Kelman. NIH. $56,872. 12/1/75-11/30/76.


New approaches to tumor immunotherapy. S. Cooperband. NIH. $115,066. 11/75-10/31/76.

Health changes in air traffic controllers. R. Rose. FAA. $603,244. 1/1/76-12/31/76.

Measurement of the cost of cancer cure (c). R. Friedman. ABT Associates. $50,000. Indefinite.

Exploratory studies for cancer research. S. Cooperband. NIH. $108,704. 1/1/76-12/31/76.

Steroid hormones on sebaceous gland secretion. P. Pochi. NIH. $100,761. 1/76-12/31/76.

Indirect cost awards. NIH. $206,303. 1/76.

Fellowship allowance--Dr. Epstein. W. Hood. The Medical Foundation. $12,500. 9/1/75-8/31/76.

Fellowship allowance--Dr. Kumar. S. Robbins. The Medical Foundation. $12,500. 9/1/75-8/31/76.

Optical study of membrane permeability and energetics. A. Essig. NIH. $25,537. 9/1/75-8/31/76.

Health professions scholarship and student loan. HEW. $99,441.

Communication in aphasia: mechanisms and rehabilitation. E. Zurif. HEW. $99,705. 9/1/75-8/31/76.

Indirect cost awards. NIH. $25,592.

University Hospital

Drug treatment of atherosclerosis, W. Hollander. NIH. $37,337. 1/1/76-12/31/76.

Primate model for coronary heart
1/1/76-12/31/76.

Changes in title
(effective July 1, 1975, unless otherwise noted)

School of Medicine
Joseph A. Baron, Jr.: To Instructor in Urology.
Jerome E. Brody: To Associate Professor of Medicine and Biochemistry, effective January 1, 1976.
Nelson M. Butters: To Professor of Neurology.
Chava Chapman: To Instructor in Medicine, effective January 1, 1976.
Phool Chandra: To Assistant Professor of Anesthesiology, effective January 1, 1976.
James M. Dalrymple: To Clinical Instructor in Neurology, effective January 1, 1976.
Daniel Deykin: To Professor of Medicine and Biochemistry, effective January 1, 1976.
Donald T. Downing: To Research Professor of Dermatology and Professor of Biochemistry.
Nelson M. Butters: To Professor of Neurology.

School of Graduate Dentistry
Robert Matusow: To Clinical Associate Professor, effective August 1, 1975.
Sydell Shaw: To Clinical Assistant Professor, effective September 1, 1975.

Appointments
(effective July 1, 1975 unless otherwise noted)

School of Medicine
Howard D. McIntyre, Jr.: To Clinical Instructor in Neurology, effective January 1, 1976.
Robert J. McLaughlin: To Associate Professor of Biomedical Engineering and Physiology, effective January 1, 1976.
William McHenry: To Associate Dean for Student Affairs.
Farouk A. Prizada: To Assistant Professor of Medicine.
Thomas D. Sabin: To Associate Professor of Neurology.
Tom D. Sellers: To Research Associate in Psychiatry, effective January 1, 1976.
Gordon L. Schneider: To Professor of Medicine and Associate Professor of Biochemistry, effective January 1, 1976.
Louis W. Sullivan: To Lecturer on Medicine, effective January 1, 1976.
William B. Warr: To Associate Professor of Anatomy.
Milton Wolf: To Assistant Clinical Professor of Orthopedic Surgery.

School of Graduate Dentistry
William H. Adams: Assistant Professor of Medicine.
Joseph Albert: Clinical Instructor in Dermatology.
Miguel R. Alday: Professor of Surgery.
Judith Kossoff: To Assistant Professor of Radiology, effective January 1, 1976.
William E. Boutelle, Jr.: Assistant Professor of Psychiatry, effective January 1, 1976.
Edwin Busch: Assistant Clinical Professor of Pediatrics, effective January 1, 1976.

Harold Cantor: Clinical Instructor in Medicine, effective January 1, 1976.


Richard J. Cleveland: Lecturer on Surgery, effective January 1, 1976.


Henry E. Fidocki: Lecturer on Rehabilitation Medicine.

Ralph B. Freidin: Assistant Professor of Medicine.

Om P. Ganda: Clinical Instructor in Medicine.

Haralambos Gavras: Associate Professor of Medicine.

Irene Gavras: Assistant Clinical Professor of Medicine, effective January 1, 1976.

Donald L. Goldenberg: Assistant Professor of Medicine.

Philip R. Gordon: Assistant Professor of Pathology, effective January 1, 1976.

Peter P. Gudas: Clinical Instructor in Ophthalmology, effective January 1, 1976.

Margaret K. Hayes: Clinical Instructor in Neurology, effective January 1, 1976.

Waun Ki Hong: Assistant Professor of Medicine, effective January 1, 1976.


Asher Kelman: Associate Professor of Microbiology, effective January 1, 1976.

Thomas L. Kemper: Associate Professor of Neurology and Anatomy, effective November 1, 1975.

Samuel Lewis: Lecturer on Neurology.

Ronnie S. Mannos: Clinical Instructor in Rehabilitation Medicine (Speech Pathology).

James L. Mason: Instructor in Community Medicine.

Manorama Mathur: Clinical Instructor in Pediatrics, effective January 1, 1976.

John McCahan: Associate Dean, effective January 1, 1976.


J. Calvin Nafziger: Instructor in Psychiatry.

Paul M. O'Bryan: Assistant Professor of Physiology, effective September 1, 1975.

Thomas O'Gorman: Assistant Professor of Medicine.

Marshall J. Palmowski: Assistant Research Professor of Medicine.


Elaine B. Pinderhughes: Associate Professor of Psychiatry (Social Work).

Marilyn Fires: Clinical Instructor in Rehabilitation Medicine (Rehabilitation Nursing).

Anna Pomfret: Lecturer on Rehabilitation Medicine.

Michael W. Pozen: Assistant Professor of Medicine.

B. Andre Quamina: Clinical Instructor in Ophthalmology, effective January 1, 1976.

Ermelinda V. Rausa: Assistant Clinical Professor of Anesthesiology, effective January 1, 1976.

Sanford M. Reder: Assistant Clinical Professor of Medicine, effective January 1, 1976.

Jonathan Reynolds: Instructor in Radiology.

Stanford Roman: Assistant Dean and Director of the Office of Minority Affairs, effective September 1, 1975.

Charles J. Schwartz: Assistant Professor of Medicine.


David Segal: Assistant Professor of Orthopedic Surgery.

Benjamin S. Siegel: Assistant Professor of Pediatrics.

Magda M. Stilmant: Assistant Professor of Pathology, effective January 1, 1976.


Peter A. Tutschka: Instructor in Radiology.

Ladislav Volcic: Associate Professor of Pharmacology and Assistant Professor of Medicine.


Alfred F. Weitzman: Instructor in Radiology.

Paul I. Yakovlev: Lecturer on Neurology.

School of Graduate Dentistry

Stephanie L. Dort: Assistant Professor, effective August 1, 1975.

Paul Epstein: Clinical Instructor, effective September 1, 1975.

Ralph R. Gary: Clinical Instructor, effective September 1, 1975.

Charles J. Garzaik: Assistant Professor, effective August 1, 1975.

Joseph Vitale: Professor, effective September 1, 1975.
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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; symptomatic relief of 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; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

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 (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). 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; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. 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.

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