1967

Scope: v. 1, no. 1-8

Schlang, Henry A.
Boston University

http://hdl.handle.net/2144/20900
Boston University
Muscle in Spasm.
and Valium (diazepam)

The ability of Valium to help relieve skeletal muscle spasm—as well as psychic tension—demonstrates its clinical value and versatility. The muscle-relaxant effect obtained with Valium, used adjunctively with other drugs or physiotherapy, favorably affects the entire cluster of spasm-related symptoms...helps accelerate return to normal activity. When skeletal muscle spasm and psychic tension coexist, the calming effect of Valium is an added therapeutic benefit that contributes to the total management of the patient.

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

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathologic spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Valium® (diazepam) 2-mg, 5-mg, 10-mg tablets
480 Broadway
Malden, Mass. 02148
(617) 324-5703

Your New England representative for:
Foregger
N. C. G.
Bird Respirator Products
Portex
Anesthesia Associates
Harris Calorific
Rusch

Anesthesia and exhalation equipment specialists

THOMAS W. REED CO.
DIVISION OF LITTON MEDICAL PRODUCTS

COORDINATED SERVICES FOR PATIENT CARE
Medical and Surgical Instrumentation & Supplies

Largest instrument showroom in New England
Free parking at our new building
66 Brainerd Road
Allston, Mass. 02134
(617) 731-5100

Special terms to physicians starting in practice

A BEAUTIFUL ADDITION TO YOUR HOME OR OFFICE

The traditional captain's chair is of rugged solid maple construction finished in ebony with walnut arms and gold trim. A 3” solid cast bronze medallion (not a decal) is recessed flush in the crown of the chair.

Price: $40.00
Mass. residents add 3% sales tax.
(All chairs shipped express collect)

Make checks payable to:
B.U.S.M. ALUMNI ASSOCIATION
THE OLD SCHOOL FALLS

The old School — just short of a century of service — has fallen to the wrecking crew.

Colorlessly known in their last decades as "Building B" and "Building C," neither of these structures has ever lacked for color or character.

Building B, the junior by twenty years or so, to its last day carried proudly, if almost unseen, the name of "The Boston University School of Medicine" graven deep in granite. Partially obscured by the erection of the Evans (later dubbed "A," as the new Evans rose), the name plaque lay also in the shadow of the bridge that linked the two buildings which in its twilight days framed a glimpse of the soaring new Instructional Building. A granite head of Esculapius, god of medicine, punctuated the rosy brick of Building B's entrance. Building C, of the mansard roof and middle-Charles Adams aura, was built in 1870 to last several lifetimes, and has nobly fulfilled its mission, adapting gracefully and to its last gasp, within its ivy colored walls, to the needs of "progress." To the last decibel of the swinging bell, Building C kept the secret of its "battle with the bulge." A slightly swollen end wall of brick had been a matter of concern to generations. It is said that it was a morning rite of Dean Begg's, during the '30's to site on the bulging wall. It may have bulged but it never budged, serving staunchly if mysteriously to its demise in rubble.

The two buildings fell together. But over the years a part of their architectural distinctiveness had already been sacrificed to the urgent demands for space. . . . Building B boasted a tower, and curving round this tower a fragile-seeming balcony which supported a flagpole, from which, sunrise and sunset, the stars and stripes were raised and lowered. (Within this tower for a while dwelt Dr. Matthew Derow and one thousand mice.) With the addition alongside of a metal-sheathed "penthouse" for an animal laboratory, the tower lost its character. . . . The original Building C, neat and square, its entry way approached by a brief flight of steps and crowned by the usual mansard "cupola effect," was expanded in the early 70's by an elongated building to the east that mellowed, and became one with it. This structure was admirably designed for its
proud function in the early days of medical education. As the old interior photographs show, the entire building above the ground floor was once divided in two, not four. A galleried amphitheatre, well-fitted for teaching and aesthetically pleasing, occupied floors one and two. The top two floors formed another functional and handsome unit, an anatomy laboratory, with staircases on either side that led to its own museum gallery.

Dr. Derow, Tory Lunetta and Dr. Ensio Ronka all testify to the excellence of this balcony display, a rare and unusual example of the importance of the museum to the development of medical education. Specimens were ranged in glass-enclosed cabinets, and formed an entity which was signaled out for special commendation in the history-making Flexner Report of 1909. “When this Report got around to us, in October of 1910,” according to history buff Derow, “there was particular mention of the well-thought out and superior museum of specimens housed in the School.”

Dr. Derow, by his own admission a “pack rat” and “attic poker” — of such are loving archivists made! — has rescued countless artifacts from the about-to-be demolished “B” and “C.” Better still, his mind is stored with precise and lively memories of the old School of Medicine, and these, from his modern but still unsettled quarters in the new Instructional Building, he freely shares.

“Let’s take the Deans,” says Dr. Derow. “I knew them all — or all but one. “Which one?”, asks the interviewer, belatedly answering her own question: “Israel Tisdale Talbot, of course.” Both Dr. Derow and Tory Lunetta, rich sources of sensitive rememberings, can reel them off: “Dr. Begg, Dr. Avery, Dr. Branch, Dr. Anderson, Dr. Keefer, Dr. Faulkner, Dr. Soutter, Dr. Gellis, Dr. Ebaugh.”

Dr. Ensio Ronka, aficionado of the old days and the old ways of the School; — he graduated in 1927, assisted in anatomy while still a student, and was in fact an instructor of Dr. Derow — feels with Dr. Derow and Mr. Lunetta that: “It had to go, I know. That’s modern progress. But my reaction is an emotional one. I was very much attached to the department in the old building.” Like his colleagues, including Dr. William Barrett, there was too much a feeling of home, too great an expenditure of affection over the years to relinquish the old surroundings dry-eyed.

Delightful vignettes of life and times on the old campus emerge from talks with these men. They all remember the charm of the little park, where on mild or sunny days, patients were wheeled out from Talbot, the original hospital (until 1929 still known as the Massachusetts Homeopathic Hospital) to sit within sight and sound of its fountain. A little path circled the fountain and from each corner wound a serpentine path. The East Concord Street side of the little plaza was framed by a beautiful fence of wrought iron, that “went to war” in the forties. The fountain was taken out in 1950.

At one time in the changing internal arrangements of “C,” the entire ground floor formed a spacious apartment for Mr. Thomas Cameron, Superintendent of Buildings and his family, who served the School for 30 years. The space most recently the students’ lounge was once, and up to World War II, the entire bacteriology laboratory. The two silver-thin Men’s and Ladies’ on the third floor made a cozy office for Dr. Derow, before the demand for co-educational plumbing (strongly urged by Dr. Alice Marston) was met.

And always the memories of physical changes evoke the spirit of a smaller staff and student body. Tory Lunetta says it simply: “Building C was a wonderful place to work. It was small and cozy. There were only 40 or so students in a class. Everyone knew everyone else’s capabilities and respected them. We were all a part and parcel of it.”

Dr. Ronka was right. “It had to go.” And we are well on the way to the magnificent new complex that will meet the educational urgencies of medicine today. But a “decent” period of tender mourning and respect is right and proper. The old School has earned it.
A Picture Album
The men who contributed their memories of Building C and Building B are all still with us, now headquartered in the new Instructional Building. Dr. Enio Ronka is Associate Professor of Applied Anatomy Emeritus, a former President of the Alumni Association, and last year, the recipient of the Distinguished Alumnus Award. Dr. Matthew A. Derow is Assistant Professor of Microbiology. Tory Lunetta is the top technician and “right-hand man” of the Department of Anatomy.
Anesthesiology in a University Hospital

by James L. Vanderveen, M.D.
Surgery involves cutting and it hurts to be cut. People today accept anesthesia as a matter of course. Few stop to think what it would be like to undergo an operation without it. That thought occupied the whole consciousness of a patient facing surgery in the days only 125 years ago, before anesthesia was available.

Surgeons then were presented with a truly difficult dilemma. The relief of suffering is the calling of all physicians; to effect such relief without anesthesia a surgeon was forced to inflict more suffering. And the agonizing pain of surgery while conscious was not the only suffering. The reaction to the pain and the emotional trauma of being fully alert while the cutting took place created such a state of stress that postsurgical healing was delayed in those patients who did survive. Many succumbed upon the operating table from sheer terror, or shortly after surgery from the metabolic derangements resulting from this excess of physical and psychologic stress.

Anesthesia, thus brought to the surgical scene not only relief of immediate suffering but a great increase in the safety of surgery. And so it is today. The casual observer sees the blessed freedom from pain which anesthesia can confer. The informed person now recognizes that an equal, if not greater goal of the modern anesthesiologist is that of safeguarding the surgical patient from harm of all kinds while he is in the operating room.

Observing and recording a patient's bodily functions and correcting life-threatening alterations to them have given today's anesthesiologists an experience and a broad view of medicine which has made their talents of value in many areas of medicine outside the operating room. This truth is well exemplified in the definition of anesthesiology listed in the Dictionary of Occupational Titles, compiled by the United States Department of Labor:

"Anesthesiology is a practice of medicine dealing with (1) the management of procedures for rendering a patient insensible to pain during surgical operations; (2) the support of life functions under the stress of anesthetic and surgical manipulations; (3) the clinical management of the patient unconscious from whatever cause; (4) the management of problems of pain relief; (5) the management of problems in cardiac and respiratory resuscitation; (6) the application of specific methods of inhalation therapy; (7) the clinical management of various fluid, electrolyte and metabolic disturbances."

Clinical knowledge and the skill to apply this expertise is an important part of the sum total of talent within a medical specialty. Of equal importance is the ability to pass on accumulated knowledge and skill, the educative function; and to increase the body of existent knowledge, the investigative function.

As Dr. William F. Maloney, Dean of Tufts Medical School, has phrased it, "an exquisite interdependence exists between research and education, between investigator and the university environment. Research is an important framework within which teaching and learning take place. It provides a practical frame of reference wherein the student develops objectivity and critical perception and judgment, and where scientific method is established as the main pathway for the individual's problem-solving processes."

At BUMC investigative efforts are under way to elucidate the effects of various anesthetics and similar drugs upon the function of the heart, particularly at the myofibrillar and cellular level. Clinically oriented research is currently progressing, or in the advanced planning stages, in respiratory physiology, in bio-electric monitoring, in the physiology and pharmacology of induced hypotension; and in the elucidation of the ability of hypnotic techniques to alter muscle-nerve interaction, and to effect recall of sensory input while a patient is under general anesthesia.

Research in anesthesiology in America and internationally lags far behind its potential. Dr. Frederick Stone, Director of the National Institutes of Health, has succinctly remarked, "Anesthesiology is rich in clinical skills, but starved for data." Recognizing the reason for this the NIH in the past four years has altered the ratio of its grant support within our specialty so that today slightly
more money is spent to support the training of prospective investigators than is earmarked for the support of the projects of the few established researchers.

More than a million dollars a year will be set aside during each of the next five years for the support of clinical training in anesthesiology. Our numbers are increasing, but at a rate insufficient to match population expansion, and to make up for the past shortage of training opportunities for anesthesiology specialists.

Anesthesiology here within the Medical Center stands as much at the crossroads as does the specialty nationally. We are undergoing a period of change, including rapid expansion in personnel and in our areas of function. This is appropriate, for throughout the country since 1947 anesthesiology has been the fastest growing medical specialty. Despite this real increase in the numbers of physicians devoting full-time to problems centering around the anesthetized patient, there is still a great lack of adequate numbers of people competent to administer anesthesiology, and of anesthesiologists well-trained and interested in teaching others.

We at Boston University Medical Center and particularly in the department at University Hospital are especially fortunate to have been able to attract a group of anesthesiologists with broad experience and real interest in teaching as well as in patient care.

Ten full-time anesthesiologists presently serve the needs of patients, students and residents at U.H. Our connections with the departments at the Providence and Boston Veterans Administration Hospitals, the Chelsea Naval Hospital and at the Boston City Hospital give our trainees in the specialty an additional group of highly competent and enthusiastic teachers upon whose talents they can draw.

Here at the Medical Center recent months have seen several additions to our previous nucleus of specialist staff. Five new, widely experienced anesthesiologists bring a diversity of strengths to the organization.

Dr. Esther E. Bartlett, formerly chief of anesthesia at the New England Hospital where she directed her own residency program, is a nationally recognized authority on hypnosis and its usefulness throughout medicine as well as in anesthesiology. She is the author of numerous papers on this subject and is a frequently invited participant in hypnosis seminars and refresher courses held across the country. In recent years Dr. Bartlett's interests have centered around the clinical use and the investigation of the effects of hypnosis in surgical patients, and upon the significance of personality traits and emotional attitudes as they affect the anesthetic and surgical course and convalescence.

Dr. N. Paul Schepis, who received a part of his training here and the remainder at The National Naval Medical Center, has been most recently chief of anesthesia at the Cambridge City Hospital and director of its anesthesiology residency program. He brings a great talent as a clinical teacher and widely experienced physician to the department and is currently responsible for all clinical residency training.

Dr. George B. Palmer, also a former resident, returns to us to strengthen the clinical area. His interest and talents in electronics will assist development in the area of bioelectric monitoring now gaining such prominence in the management of surgical patients.

Dr. Patrick W. Keane, recently of the departments of pharmacology and anesthesiology of the University of Galway, joins us to continue his studies on ganglionic blocking agents and the production of elective hypotension. His experience with the management of patients in shock adds strength to the clinical management of the kind of drastic surgery a teaching hospital is so often called upon to perform.

Dr. S. Thomas Lee, recently director of anesthesia at The Kaiser Foundation Hospital in Honolulu, trained in thoracic surgery as well as anesthesiology and is a former holder of University of Hawaii faculty appointments in pharmacology and surgery, in addition to anesthesiology brings a tremendously well-rounded preparation to the department, both administratively and medically.

These new arrivals complement the abili-
What does Charles River Park offer you?

A prestige address for medical offices!

• Professionally designed suites to fit your specifications
• Central heat and air conditioning
• Ample parking facilities available
• Right next to Mass. General Hospital
• Radiology, a laboratory, and a pharmacy on the premises
• Daily maintenance and cleaning service
• A short walk to MBTA subway station
• And much, much more!

Rental Office: 5 Whittier Place
weekdays 9-6

For information, please call:
Mr. Herzog 742-2925

Free brochure available upon request.
ties of Dr. Alan H. Goldberg, holder of a doctorate in physiology as well as medicine and an established, NIH-supported investigator; Dr. Murat Avadik, the Center's Inhalation Therapist; Dr. Samuel Schmidt, an accomplished medical student preceptor, whose superb clinical talents have been recognized by so many residents and medical students over the past twelve years; and of Dr. James L. Vanderveen, now chief of anesthesia, University Hospital, and departmental chairman within the medical school framework.

The existence of a teaching staff with these strengths has made it possible to set up new and promising arrangements for residency teaching. Both two- or three-year residency programs are available. The two-year program is largely clinical in emphasis but residents of this program are encouraged to spend a few months in the laboratory to gain experience in research techniques. Guidance is provided by the staff of the Anesthesia Research Laboratories, located on the fifth floor of the research building. Dr. Goldberg, Director of Laboratories, is a widely-experienced cardiovascular physiologist-anesthesiologist and especially welcomes house staff members with interests in this area. Third-year residents may spend half time in the laboratories and half with the cardiovascular perfusion team, or the entire year in respiratory physiology, cardiovascular physiology or investigative pharmacology.

An innovation in residency training, established here two years ago, has attracted much interest. With the blurring of the traditional boundaries between medical disciplines, anesthesiologists in particular have grasped avidly at emerging opportunities to participate in the activities of other departments. The acquisition of information and skills from certain of the classical "pre-clinical" sciences and, more lately, from the physical sciences has come to be regarded as very important in preparing individuals for meaningful participation in the continued development of the specialty. Few physicians today, aspiring to academic careers in anesthesia, would consider their preparation complete at the end of the traditional residency period. Laboratory experience, advanced training of various types, and the opportunity to interact with persons knowledgeable in pharmacology, physiology, engineering and many other fields whose boundaries border anesthesiology is considered almost mandatory if one looks forward to making significant contributions to either teaching or research.

Recognizing the value of these attitudes and seeking opportunities to put such learning experiences into at least a semi-formal curriculum which will avoid waste time and duplication for the resident, the anesthesiology department at BUMC has made advanced degree programs an integral part of the training effort.

Candidates are enrolled in combined curricula leading, within a three- to five-year period, to certification by the American Board of Anesthesiology and, simultaneously, to a master's degree or a doctorate in a basic medical science or in one of the physical sciences with direct application to anesthesia.

Course work and research experience may be arranged through the Boston University Graduate School, Division of Medical Sciences, or at a cooperating Boston institution, such as Harvard or the Massachusetts Institute of Technology. Current enrollees are working toward doctoral degrees in cardiovascular pharmacology, neurophysiology and electrical engineering. An individual's own interests guide the arrangement of these curricula. A number of persons with future plans for academic careers in anesthesiology have evinced interest in the extended advantages of this type of broad preparation.

If our specialty is to aspire to a position of leadership in times to come, anesthesiologists who are medical educators and those who are primarily clinical practitioners must both fully comprehend the significance of the changes now taking place in the milieu of undergraduate medical education. It is a time of vigorous and critical examination of what is to be taught to medical students, and of how this teaching should be done; a time when departmental barriers are rapidly becoming less formidable, and a time of healthy
innovation and diversification of programs. At the undergraduate level the program of summer preceptorships for medical students has exemplified this recent greater recognition of the individualization of experience. Aware that some students want more experience with anesthesiology than is possible in the brief time allotted by their formal curriculum and that in certain medical schools no contact with our specialty is available, the American Society of Anesthesiologists several years ago developed an arrangement which permits second- and third-year students to spend six to eight weeks of their free time as associates of practicing anesthesiologists. These preceptors have been selected from both teaching institutions and community hospitals. The need for this program, as well as its satisfactory design is attested to by the fact that, although more than three hundred places have been available to students in recent years, far more than another three hundred students have had to be turned away annually for lack of space and sufficient funds.

In addition to having several of these preceptees at University Hospital during the coming year we have been fortunate to make a place in our research laboratories for an occasional student with talent and liking for investigation. One student at the second-year level, for example, has this past year worked on a comparison of the effects of morphine, the established narcotic; and fentanyl, a potent new analgesic, upon cardiac muscle function.

Still another area of departmental effort is developed in conjunction with the School of Graduate Dentistry. Most members of the University Hospital anesthesiology staff hold faculty appointments in the School, and courses of lectures are provided yearly to its students. Additionally, one-year appointments in full-time clinical positions are open to oral surgeons and pedodontists who have completed or are now in training programs in these specialties. A certificate is conferred upon successful completion of these residency equivalent positions.

Extended programs of two, three or more years may be arranged individually for dentists registered with the School of Graduate Dentistry. These will include didactic teaching and laboratory experience as well as clinical training. Such curricula may be planned to lead to a doctorate granted by the School of Graduate Dentistry.

The tremendous recent acceptance by patients of general anesthesia for dentistry has served to point out the need for dentists with anesthesiology backgrounds who can develop training programs in anesthesia for dentistry elsewhere in the United States. Graduates of the Boston University programs will be prepared to accept these new challenges.

Through the addition of exceptionally talented people to the staff of the Center’s anesthesiology department, and the physical expansion of the Center, and with the strong support received at all levels from those on whom we depend for the cooperation essential to continued progress within an organizational framework, the Department of Anesthesiology — BUMC is certain to attain the goals we have set for ourselves. These goals are the provision of excellent service to patients requiring anesthesia, respiratory management or life support; and, of equal concern, the provision to each individual in training of the maximum opportunity for learning — but a learning experience always based upon the concept of constant and understanding patient contact and superior patient care.
Traumatic spinal cord injury in man resulting in paraplegia or quadriplegia has been known since antiquity.

The definition of paraplegia is paralysis of the lower extremities and all or a portion of the trunk. When the arms are also involved, the term quadriplegia is used to describe the impairment. The results of damage to the spinal cord will depend on the part of the spinal cord involved and the nature and extent of the damage. In the case of an individual who suffers a fracture dislocation with damage to the entire thickness of the cord, all function at and distal to the site of injury is lost. Thus, there is total "sensorimotor" loss in the area of the body supplied from the site of injury and below. The autonomic nervous system is also affected in the involved part of the body. Another factor, that of loss of respiratory reserve, plays a role in the cervical cord-injured patient, who in addition to extremity paralysis has loss of abdominal and intercostal function so that the diaphragm is the sole respiratory motor.

The earliest known documentary on spinal cord trauma and its sequelae is found in the Edwin Smith Surgical Papyrus, now in the collection of the New York Historical Society and estimated to have been written by an Egyptian physician between 2500 and 3000 B.C. This work vividly describes a man who had broken his neck and suffered spinal cord injury; the extremity paralysis, the excretory incontinence and the generalized wasting are described. In the portion of the work dealing with treatment there is recorded: "an ailment not to be treated." This same viewpoint persisted for many centuries.

Statistics about the spinal cord injured became available during World War I. Among American troops, 80 per cent of the 2324 men who received injury to the spinal cord died before they could be returned from the war zone. Of those who were successfully evacuated to this country, 10 per cent survived the first year and by 1946 when a survey to determine the "fate" of these World War I veterans was made, less than one per cent who survived the first year were still living. Most of the fatalities had been due to urinary tract infections and bed sores.

In 1946, after World War II, Major General Norman T. Kirk stated that there were at the time 1400 spinal cord-injured patients in service hospitals and that the results constituted a tribute to the professional competence of the Army doctors.

The Veterans Administration study of 5743 patients who survived the immediate care in service hospitals and were subsequently treated between 1946 and 1955 for
traumatic paraplegia or quadriplegia disclosed an overall mortality rate of 0.139. Stimulated by war experiences developments heretofore unknown were achieved during the fifties in the care of spinal cord injury. This decade marked the departure point for the results at midcentury.

As a result of newly developed understanding and techniques in the care of paraplegic casualties, it was recognized that these patients should best receive care in a specialized center where the particular problems associated with this complicated disorder could be treated and studied; and further, that provisions would have to be made for the care of civilian casualties.

In 1955, the predecessor of the Medical Center's Spinal Cord Unit of the Department of Rehabilitation Medicine was opened in the Haynes Memorial of the then Massachusetts Memorial Hospitals as the Neurosurgical Rehabilitation Service, with the support of the School of Medicine and the Liberty Mutual Insurance Company, and under the leadership of Dr. Donald Monro, medical pioneer in the treatment and investigation of patients with spinal cord trauma.

In 1959 the service was transferred to the newly-constructed seventh floor of the Robinson Building, where it now functions as the only spinal cord unit in the country within a general hospital, exclusive of the Veterans Administration or Service Hospital system. In this unique situation, it is possible to provide, without interruption, the immediate care in the acute stage and thence the uninterrupted ongoing care during which patients are helped to obtain their maximum function consistent with the physical impairment. Having received treatment from the outset in a specialized unit, properly staffed and equipped, the patient will do better medically by avoiding the complications, and will achieve independence sooner, thus allowing an early return to home and job.

In keeping with the goal of an ideal spinal cord injury center we have organized into a team of spinal cord injury specialists, both medical and coprofessional, who by interest, training and experience devote a significant portion of their time to, or can be summoned without delay for, care of our patients, 80 per cent of whom come to us from outside of Massachusetts.

One of the keystones in the early care of the paraplegic, nursing care for prevention of pressure sores, includes turning the patient every two hours, day and night, and assuring a clean skin and a smooth, dry bed, as well as careful positioning of the patient to prevent contractures. Later in the program, the nurse sees that every skill achieved by the patient in the training program is used in the everyday activities in the unit.

Careful consideration is given to prevention of urinary tract infection, bowel complications and undue emotional reaction to this catastrophic injury. Every avoided complication represents a decrease in rehabilitation time of four weeks to four months. The so-called "clean" paraplegic, the patient without complications, requires an estimated six months to achieve independence in self-care activities, a regulated bowel and bladder, and the added ability to function at home or work. This may represent an investment on the order of $25,000 for the initial period of care.

The provision of the comprehensive care requires the services of Doctors J. D. Keith Palmer, Lucille Anstine and this writer, who devote their medical efforts in the specialty of physical medicine and rehabilitation, but are joined in the care of the patient by the assistance of neurosurgeons — Doctors Edward Spatz and Walter Wegner; internists — Doctors Henry Bakst and Jay Coffman; orthopedist — Dr. Robert B. Brendze; urologist — Dr. George Austen, Jr.; plastic surgeon — Dr. Anthony Zovickian; and general surgeons — Doctors Richard D. Bush and Chester Howe.

Physical restoration is but a part of the rehabilitation process. Each individual patient's emotional reaction to this catastrophic injury must be understood by the staff, and the patient must be helped in adjusting himself to his new way of life, to his family, and
to the community at large. The process is incomplete if the patient cannot ultimately go through the door of the hospital to face his family, his work, or his schooling. We also recognize the contributions of Dr. Paul Kaufman on assignment from the Department of Psychiatry.

From the time of admission of the patient, the physical therapist, working under medical direction, administers a range of therapeutic exercises to strengthen muscles and maintain and improve joint range of motion. Training in sitting and standing balance and ambulation on the level and stairs become part of the activities.

The occupational therapist, another member of the professional team, teaches skills to improve muscle strength and to assure optimal joint range of motion, and assists the patient in achieving independence, and the self-sufficiency to cope with the physical demands of daily living: eating, dressing, hygiene activities, communication, and a host of other activities. The occupational therapist also trains the patient in the use of special devices for eating, shaving, typewriting or telephoning. In many instances these devices are fabricated of metal and plastics by the occupational therapist on the unit or are procured from an outside orthotic facility.

The department has its own social service section for case work and counseling. Thus it is possible to make help available at all times for the patient and his family, both with current needs and future plans. The family will have a better understanding of the patient's requirements when he ultimately returns home. The social worker also develops a liaison for much needed follow-up with agencies in the patient's home community.

Should the patient have a preexisting speech or hearing difficulty which compounds the impairment from the spinal cord injury, the department's Daniels Speech and Hearing Clinic provides evaluation and therapy. This is part of the overall goal of minimizing the disability.

Finally, with their own special understanding and skills the attendants, cooks, secretaries and technicians on Robinson 7 also contribute through their caring for the patient.

A service must not only provide first-rate care but must also make all attempts to perpetuate such care by training. To this end the Medical Center's Department of Rehabilitation Medicine in 1967 was awarded a five-year renewal of a teaching grant in the amount of $260,000 by the Rehabilitation Services Administration of the Department of Health, Education and Welfare. The grant is for the teaching of the rehabilitation techniques to undergraduate medical students, and to underwrite a fellowship program with a major emphasis on the care of spinal cord injury patients. The University Hospital — Boston Veterans Administration Hospital residency program in neurology includes a two-month rotation to provide the neurology resident with a first-hand experience in caring for the patient with spinal cord trauma through all phases of management.

Clinical experience is provided for Boston University students in undergraduate programs in nursing, physical therapy, occupational therapy and social work.

All of the investigation has been motivated by clinical experience and therapeutic needs. Inquiry in the department has demonstrated the liability of cardiac arrest in the spinal cord-injured patient during induction of general anesthesia in the period between five and nine weeks after the spinal cord injury. A study of 50 patients who were anesthetized for laminectomy by Dr. Spatz led to the conclusion that there may be a specific cardiovascular sensitivity to general anesthesia during the second month after injury. There were no such occurrences in his series during the second and third weeks after injury, nor after the ninth week. This knowledge has contributed to the saving of untold numbers of lives.

Pulmonary embolization, in spite of difficulty in its elucidation because of the sensory deprivation and altered local response, has been pointed out to be a strong possibility
during the initial period after injury. Inferior vena cava plication has been shown to be the treatment of choice, based on a decade of experience.

This writer has studied the effect of pharmacologic preparations in the suppression of troubling spasticity, while Dr. Palmer has been studying the relative effects of direct pressure and sheer stress in the genesis of bed sores in an attempt to develop methods of prevention of this complication. Dr. Palmer and this writer are currently studying the effect of spinal deprivation on peripheral nerves to clarify the peripheral changes resulting from spinal cord trauma as elucidated by nerve conduction studies.

What of the future? Despite the knowledge which has accumulated to provide not only increased longevity for the paraplegic or quadriplegic, but the ability to function in a competitive world, it is clear that these medical skills are not being made available to all those who require it in this country. The concept of regional centers for the comprehensive care of spinal cord injuries, rehabilitation, investigation and training is currently attracting wide attention. With almost a decade and a half of experience in this field, this Medical Center could well be in the forefront of such a plan.

It is conceivable that in the not-too-distant future, the spinal cord-injured patient will be brought from the site of injury to this Medical Center unit's greater physical plant and enlarged staff by helicopter ambulance to receive the most refined medical techniques and coprofessional care — until such time as spinal cord regeneration is more than a dream!

Dr. Freed (above), who is Professor and Chairman of the Department of Rehabilitation Medicine of the School of Medicine, graduated from BUSM in 1952.
The Medical Curriculum

by Henry J. Bakst, M.D.

The Six-Year Curriculum

In the academic year 1961-1962, Boston University pioneered in establishing what is now known as the Six-Year Curriculum after several years of joint study by the faculties of the School of Medicine and the College of Liberal Arts. The objectives were to evolve a combined liberal arts-medical curriculum for outstanding high school graduates leading to the degrees of A.B. and M.D. in six rather than eight years and to institute changes in the courses of study which would enhance the total educational process. The faculties of both schools labored arduously to restructure the course content in biology, chemistry, and physics; to provide adequate study in the humanities; and to develop bridging educational experiences between the College of Liberal Arts and the School of Medicine.

From the academic years 1963-1964 to 1967-1968, approximately half of each Medical School class of about 72 was made up of six-year students and half of traditional eight-year students. In September of 1968, the size of the entering class in the School of Medicine was increased to 88 and, in September, 1969, the entering class will be increased to 96. At this point, six-year students will constitute about a third of each class.

In 1964, Dr. Chester S. Keefer reviewed the first three years of experience with six-year students and pointed out that the first requisite for any reform in medical education is for the faculty to work together as a unit with vision, imagination, and well-defined objectives. The second requisite is a well-prepared, interested, and inquisitive student body; and the third ingredient is an approved curriculum consistent with the objectives to be attained.

The Ad Hoc Committee on Curriculum

In keeping with these views, the first step toward a review of the medical curriculum was taken in January, 1960, when an Ad Hoc Committee with Dr. Arnold S. Relman as Chairman was appointed to study and recommend appropriate changes in the existing four-year medical curriculum. The general objectives of medical education at Boston University were accepted as being to provide a sound basis for a career either in the practice of medicine or in research and teaching. This position required, therefore, that the curriculum encompass the basic elements of all the disciplines essential to the education of anyone who would qualify for the M.D. degree. It was believed that such a curriculum should not overemphasize either the theoretical or practical aspects of medicine but should be aimed at a judicious balance between these two goals.

The requirements to be met were that: (a) the medical curriculum should constitute the last four years of the six-year plan; (b) all summers except that between the fifth and sixth years should be kept free for non-medical subjects; (c) an appropriate time in the sixth year should be reserved for electives which might include full semester courses at the College of Liberal Arts; (d) adequate time be allotted for students to meet with tutors, to pursue outside reading interests, and to take at least one consecutive period of four weeks for vacation time each year. Finally, it was understood that the Committee would be able to con-
sider only general aspects of the curriculum and to make recommendations dealing primarily with form and organization rather than with the details of course content. It was agreed that, once the general recommendations were agreed upon, a number of inter- and intra-departmental committees would be required to deal with the details of revision and reorganization of specific course content.

The Committee met more than eighty times between February, 1960 and September, 1961. It considered each semester of the four years of medical school in order, dealing with one course at a time by interviewing the respective chairman and some senior faculty members of each department. Certain key members at Harvard University and Tufts University were consulted. In all, the Committee met with twenty-six consultants. The Committee believed that the scientific aspects of the curriculum should be strengthened; that some basic science should be introduced in the fourth year; and that there should be less separation between the preclinical and clinical portions of the curriculum, emphasizing thereby the intimate and inseparable links between human biology and the practice of medicine.

The Committee made a number of significant recommendations. These were to reduce the teaching of anatomy, biology, and physiology to a core content, to begin clinical orientation with surgical anatomy and radiological anatomy, and to emphasize the ultrastructure of cells as revealed by electron microscopy. The second half of the first year of medical school was to be reserved for integrated interdepartmental teaching devoted to the blood and cardiovascular systems, the respiratory and excretory systems, the muscular and nervous systems, and the gastrointestinal and endocrine systems. In addition, a series of one-hour lectures throughout the school year was to be devoted to the structure and function of the normal personality.

The second year was to begin with relatively short introductory "core" courses in general pathology and in bacteriology, virology, and immunology, with a somewhat longer course in pharmacology. These were to be followed by a new course, the Biology of Disease, which would be organized according to organ systems and disease mechanisms to be given jointly by the Departments of Pathology, Microbiology, and Pharmacology, as well as by the clinical departments. There would also be a course in biometrics and a course in psychiatry. The second year was to terminate with an intensive emphasis on physical diagnosis and history taking.

The final two years of the curriculum were to be devoted to clinical education, as in the past. It was believed that this would be the time to focus on disease as it presents itself in the patient. However, it was emphasized that this should not be an apprenticeship for the acquisition of practical skills but should be concerned with fundamentals and basic principles and the cultivation of critical and scientific methods of approach to clinical medicine. The purpose of the last two years was to be to provide students with a foundation upon which their postgraduate training in medicine could be structured.

It was believed that clinical education should be largely "formal" and should be concentrated on a few major areas rather than to consist of many specialized fragments. Also, it was emphasized that an effort should be made to develop a closer working relationship between the preclinical and clinical departments, particularly by reintroducing the basic sciences in the final year of the curriculum so that students could be kept abreast of important recent changes in the biological sciences and that they continue to be made aware of the scientific basis of medical practice.

The entire third year in the medical curriculum was to consist of six months in medicine and the medical specialties and five months in surgery and the surgical specialties. It was also recommended that the practice of requiring the completion of an acceptable thesis before graduation be continued. The final year was looked upon as a specialized extension of the third year and would include pediatrics, psychiatry, obstetrics and gynecology, and community medicine, as well as clinical pathology. A mini-
mum of three months was to be reserved for electives in the fourth year. It was suggested that appropriate scheduling and use of the month of vacation time would make it possible for students who desired to do so to elect course work at the College of Liberal Arts or the Graduate School.

Consequences of the Ad Hoc Committee Report

In addition to an excellent, well-organized, and forward-looking report, the Ad Hoc Committee on the Curriculum made three unanimous recommendations. These were:

1. The establishment of a joint College of Liberal Arts-Medical School Committee for the purpose of reaching a final understanding concerning the general direction and philosophy of the six-year plan.

2. The establishment of committees to consider in detail the desirability and feasibility of the major changes suggested by the Ad Hoc Committee.

Three committees were recommended, one for the first year of medical school, one for the second, and one for both clinical years.

3. The establishment of a number of committees to implement certain minor changes recommended by the Ad Hoc Committee (University lectures, basic science lectures, tutorial program, integrated basic science teaching in the first year of medical school, a trial in one area of the Biology of Disease).

During the subsequent period (1962-1966), a number of modifications were made in the curriculum. Some experience with integrated teaching in the neurosciences, gastroenterology, and endocrinology was obtained. The elective period in the last year of medical school was increased to five months. Some clinical clerkships were established in the third year. The course in Physical Diagnosis was strengthened considerably. An acceptable thesis was maintained as a requirement for graduation. The elective program was
Severe coughing subjects the delicate tissues of the lung to repeated trauma. While it is not certain that trauma propagates alveolar wall destruction, the histories given by patients strongly suggest that this is so. Coughing itself is an irritant and thus tends to lead to more coughing. Too few people realize that coughing is not a harmless privilege, but is in fact a source of irritation and damage to the bronchi and lungs.

For Effective Cough Control in...

Emphysema
Asthma
Pleurisy
Chronic Bronchitis
Tuberculosis
Acute Bronchitis
Influenza
Primary Atypical Pneumonia
Bronchopneumonia
Bronchiectasis
Pertussis
Acute Tracheobronchitis

Tussionex®
(Resin complexes of Hydrocodone and Phenyltoloxamine)

Probably the most effective antitussive prescription available today. A single low dose provides day-long or night-long relief in all grades of cough in all age groups without interfering with normal expectoration.
Tussionex Suspension/Tablets:
Each teaspoonful (5 cc.) or tablet of Tussionex contains 5 mg. hydrocodone (Warning: May be habit-forming) and 10 mg. phenyltoloxamine, both as cation exchange resin complexes of sulfonated polystyrene.

Class B narcotic—oral Rx where state laws permit.

Indications: Coughs associated with respiratory infections including chronic sinusitis, colds, influenza, bronchitis, and cough resulting from measles, pulmonary tuberculosis, bronchiectasis, and bronchogenic carcinoma.

Dosage: Adults: 1 teaspoonful (5 cc.) or tablet every 8-12 hours. Children: Under 1 year: 1/4 teaspoonful every 12 hours. From 1-5 years: 1/2 teaspoonful every 12 hours. Over 5 years: 1 teaspoonful every 12 hours.

Side Effects: May include mild constipation, nausea, facial pruritus, or drowsiness.

For complete detailed information, refer to package insert or official brochure.


The Curriculum Committee

From 1965 to 1967, the Curriculum Committee attempted to deal with the various curricular problems at two-hour meetings which were held about every two weeks. Finally, a point was reached at which it was believed that a three-day conference would enable the Committee to consolidate and formulate the framework which would make an appropriate revision of the medical school curriculum possible. The Committee held a three-day conference for this purpose on January 13-15, 1967.

At this conference, the medical school curriculum was viewed as part of a continuous experience which is preceded by preprofessional education at the collegiate level and is followed by postgraduate education at the internship and residency level after graduation from medical school. It was also emphasized that the exponential development of new knowledge required a program of continual lifetime learning if the physician's level of competence were not to be limited to that attained at the completion of his formal education and training. Within this context, the responsibilities of a medical school were considered to be to teach the art and science of medicine by:
1. Creating a flexible environment conducive to scholarly study in depth.
2. Stimulating a spirit of inquiry and inculcating an understanding of the scientific method.
3. Providing a sound core of appropriate information in the biological, natural, social, and behavioral sciences.
4. Providing the student with early, and progressively greater, supervised patient contact in the process of learning clinical medicine.
5. Developing an attitude toward the human problems of health and disease which would be critical, compassionate, and comprehensively understanding.

The conference was opened by Dean Ebaugh who reviewed a number of considerations of significance relative to the framework within which curriculum revision should be structured. These included:

1. The impact of postgraduate training on the structure of the undergraduate curriculum.
2. The increasing necessity for a career choice in medicine to be made before graduation from medical school.
3. A review of the curricular problems which the Curriculum Committee had under consideration, namely:
   a. development of appropriate attitudes of learning
   b. review of course sequence
   c. provision of patient contact early in the curriculum
   d. to foster and maintain increased strength in the basic sciences
   e. to view the increased demands for specialized training in relation to altering patterns of medical care
   f. to consider the implications of the physician as a member of a health team with increased responsibility for disease prevention and health maintenance

Dr. Relman also made some significant remarks to the Committee. He pointed out that the kind of student attracted to the School will be dependent to some extent on the nature of the curriculum and that the curriculum must be consonant with the resources and capabilities of the faculty. He emphasized five general principles. These were:

1. Good medical education now must be structured on principles rather than encompassing content.
2. The curriculum should provide for adequate elective time to permit diversification.
3. The curriculum should place greater emphasis on the social, behavioral, economic, and community aspects of medicine.
4. Integration of instruction should not be considered as invariably necessary but should be developed for appropriate situations.
5. Departmental responsibility should be concerned with core content and information which does not lend itself to integrated teaching.

In the formulation of its recommendations to the Executive Committee and the faculty as a whole, the Curriculum Committee gave careful attention to the report of the Ad Hoc Committee on the Curriculum, the recommendations of the departmental chairmen, and the thinking of the student body. Information from the tutorial program suggested also the need for reduction of the work overload during the first year and a de-emphasis on the memorization minutiae; the failure to relate effectively basic science information to clinical medicine, and a poor reaction to the lecture system.

The aim of the Committee was to revise the curriculum in a manner which would be consonant with the stated objectives of the School of Medicine. Accepted also was the fact that medical education is a sequential continuum, the successive stages of which are preprofessional, medical, postgraduate, and a lifetime of continuing education.

The changes which were recommended represented a general framework around which the details of course arrangement and con-
tent were to be structured by the individual divisions and departments. The Committee was also aware that changes in curriculum structure and content simply indicate direction and philosophy and do not necessarily influence either the quality of teaching or the capacity of the student to learn. These depend on a number of factors, most important of which are stimulating and dedicated teaching, effective student-teacher contact, and the maintenance of high educational standards. Finally, after a number of modifications by the faculty, the new curriculum was instituted in September of 1967 for the first-year class and proceeded to the second-year class for the academic year 1968-1969, with the clinical years to follow.

The New Curriculum

The first year was revised to begin with anatomy and biochemistry. These are followed by a conjoint course in neurosciences, which in turn followed by physiology, histology, and embryology and then a second conjoint course in endocrinology. At the end of the first year, three weeks have been set aside for in-depth study of a particular facet of anatomy, biochemistry, or physiology as elected by the students. In addition, patient-oriented clinics and lectures in medicine, community medicine, and psychiatry are given throughout the first year and a course in biometrics has been added to the second semester of the first year.

The second year begins with microbiology, pathology, and pharmacology and weekly sessions in epidemiology and psychiatry, as well as a weekly elective period of directed studies in microbiology, pathology, or pharmacology. The major portion of the second year is devoted to a new conjoint course, the Biology of Disease, with which Physical Diagnosis is integrated. In this course, which is organ and system oriented, appropriate emphasis is placed on the six basic sciences, which are closely interdigitated with the clinical sciences in a series of correlated units including diagnostic laboratory exercises.

The third year which will begin in 1969-1970 will consist of clinical clerkships in medicine, surgery, obstetrics and gynecology, pediatrics, and the clinical specialties.

The fourth year will consist of eight months of elective time, two months of clerkship in psychiatry, and one month of clerkship in an extramural program on family medicine.

A system of advisers has been established to insure the effective use of elective time, which will constitute a quarter of the total curriculum.

Conclusion

The new curriculum has evolved over a period of seven years and represents an initial effort to provide greater flexibility and choice during the four years of medical school education. It must be remembered, however, that the exponential growth of new knowledge and the changing needs in medical care will demand continuing change in the curriculum, which must continue to remain flexible and dynamic. The new curriculum, therefore, is looked upon as but the initial phase of what should be a continuing process of change in order to meet altering needs most effectively.

References

2. Report of the Ad Hoc Committee on the Curriculum, Boston University School of Medicine, October 18, 1961. (Relman, A. S., Chairman; Mann, J.; Pelikan, E. W.; and Ullrick, W. C.)

Dr. Bakst is Associate Dean of the School of Medicine and Chairman of the Curriculum Committee.
"I decided to be a Director of Nursing the day I entered nursing school."

The arresting quality of the voice, the almost fiercely-determined shine in the brown eyes leave no doubt in one’s mind. Miss Florence Flores, now in November retiring in a well-deserved dazzle of ceremony, set her goal early and drove straight to it. "Everything from that first day on was geared to my main ambition," Miss Flores says. "I'm a Capricorn, and we plan way ahead."

The Capricorn bit was added with a grin, in which the interviewer joined. It is hard to envisage a Florence Flores, born under any sign or at any conjunction of the planets, who could fail to achieve her aim with such a total commitment of heart and mind.

Miss Flores has presence. She is tall, but looks taller than she is. Her straight back and erect carriage contribute to a commanding appearance, whether in nurse's white-on-white or in the handsome suits and dresses she selects. "I do love good-looking clothes," she unnecessarily admits.

Relaxing in her Vose Hall office a few days before her official leave-taking from the Medical Center after 22 years of service, Miss Flores proved a spellbinder in the "this is your life" department.

"I was born in Fall River," she begins, "when it was a prosperous mill town . . . years before a combination of circumstances was to lay it low. The clackety-clack of the mills was a brisk rhythm I like to remember." As she spoke and as if in dramatic emphasis of those dynamic days in the town of her childhood, the staccato of a pile driver on Stoughton Street penetrated the room. She raised her low voice a tone.

"Both of my parents came here as children from the Azores. Mother was seven and my father was ten. There were two kinds of immigrants from these islands then, and my people on both sides were the kind that came to stay, to shape their lives as Americans. Not to save their money and go back to their Portuguese homeland . . . Whenever I don't dare to do something, I think of my father. He was ten when he took ship for America in care of the purser, with a silver dollar in his bundle and a letter to a farmer outside of Providence. He grew up there in Rehoboth, getting his board and room and his shoes when needed, and he followed a family tradition of becoming a stone mason. Some of the most beautiful buildings in Fall River are his."

"He courted my mother for two years. Always well-chaperoned, they met in her mother's parlor on Thursday and Sunday evenings, and he left at 9 o'clock. There
were four of us children — I was the oldest — two brothers and a sister and two foster brothers. Ours was a big comfortable house, and still is. The neighborhood is mostly unchanged today; my brothers and their families live there where we all were born."

“My mother was a very charitable woman, and very civic-minded. From the time I was a little girl, there was always someone being taken care of in our house. We had plenty of room; and when my mother, through her clubs or church, heard of a person who had fallen ill, and lived too far out in the country to afford a doctor’s visits, she took them in.”

“Do you think this is what started you on your plan to be a nurse, Miss Flores?”

“Well perhaps, but I believe that as a seven-year-old I was more impressed by the fact that the private duty nurse who stayed with us around the clock to take care of a woman very ill with pneumonia got a special dessert for dinner and supper.”

Pursuing more seriously the chronology of her career decision, Miss Flores continued. “First I wanted to be a doctor — but my father didn’t like that idea — he wanted me to be a lawyer or a schoolteacher. When we compromised on nursing, they didn’t fight it. They helped me. . . . After my second year in high school my father had sent me to secretarial school. (I also shared briefly as a youngster in the 1918 war effort, packaging flannel for gun wipes!) And then I entered, as I wanted to, the Union Hospital School of Nursing in Fall River. I graduated in 1926.”

Miss Flores’ experiences as a student nurse illumine the prevailing attitude towards the student of those days. Staff nurses were unknown. Students did all the nursing, except for a handful of supervisors. There was at this time, however, the beginning of a new trend, Miss Flores remembers: “Let’s not exploit the student!” But students were bedside nurses in every sense of the word.

“When I was on private duty, at 8 o’clock in the evening the orderly would bring me something to eat. I’d get into my kimono, with a braid down my back, go down the hall to brush my teeth, and then climb into a cot — in the room if the patient were seriously ill — or just outside his door.”

“When I was only 22, during the 11-month absence of the regular night supervisor at the Union Hospital, I took over her job — with full nursing responsibility for everything: the O.R., the emergency room, all the patients from 7 at night to 7 in the morning, 7 days a week. I got two evenings off a month. But I wasn’t afraid of the responsibility. I didn’t feel overworked. I was full of ginger and I loved every moment. It was fun. I’m a Flores, and the Flores love to be bosses.”

After the night supervisor’s return, young Florence went ahead with her long-range plans. To be a director of nursing meant experience in public health nursing. So for the next three years, until 1930, she became a school nurse, working on the staff of the Fall River Division of School Hygiene.

The depression had already hit Fall River, ahead of the general Great Depression. Labor unions had moved in. There were strikes. The mill owners said they would close if the strikes continued and they meant what they said. Two big textile mills shut down in 1928, starting the trend to the South. In the same year a disastrous fire further damaged the town’s economy, which has never fully recovered.

“The appalling conditions of the late twenties meant that the three-decker-house dwellers, often with families of at least eight children, had to try to exist on $17 a week. My own school hygiene district served 3200 children in eight schools, and our record of help was good. It had been common to send at least 50% of the children home from the first day of school with head lice. We practically eliminated this condition. And people used to say that the local undertakers hated the public health nurses because we cut down on the tragically commonplace infant deaths from ‘summer complaint.’ I have never forgotten the funeral processions I saw as a
child — the tiny white caskets, . . ."

In the next move towards her goal, Miss Flores went to Newport (R.I.) Hospital in 1930 as supervisor of medical surgical nursing, and stayed five years. (Newport was gay, she recalls; the gardens of the impressive estates on the Cliff Drive were open; Sir Thomas Lipton was gallantly losing the cup races.) In 1935, with years of supervisory experience already behind her, Miss Flores felt it was time to get her degree. But first she must finish high school!

A friend in the lovely little town of Amherst, New Hampshire (now Miss Flores’ home), welcomed her for the two-years-in-one plan that the nearby Milford High School agreed upon. And Simmons College, equally impressed and cooperative with such an unusual student, let her do four years of college in three. Majoring in science, she received her B.S. degree in 1938.

And so at last she was embarked on the educational aspects of nursing on which she had so long set her heart — largely because to her it seemed that the most effective patient care could only be brought about by a concentration of attention on the student nurse. She accepted a teaching post at the Newton-Wellesley Hospital as science instructor. When World War II struck, she was called upon, to her delight, to teach “every subject in the book.” From chemistry, microbiology, anatomy, physiology and psychology to psychiatric nursing, she sometimes had to keep one step ahead of her students. She is proud of these years, for they proved to her that her greatest joy and perhaps her greatest gift is teaching. Her students knew this.

During her eight years at Newton-Wellesley Miss Flores’ increasing responsibilities advanced on two fronts. She was educational director of the School of Nursing and she became assistant to the Director of Nursing of the hospital. In 1945 she had wanted to “go to war” but was persuaded that her highly-developed skills were needed on the home front.

1946 was a year of many administrative changes throughout the hospitals in the greater Boston area, Miss Flores recalls. She was offered the double post of Director of Nursing of the Massachusetts Memorial Hospitals and Director of its School of Nursing. She hesitated. It would not be an easy job.

“But why take only easy jobs?” a wise friend challenged her. Miss Flores said “yes” to MMH.

By 1950 the School of Nursing was fully accredited, and Miss Flores fully embarked on a vigorous and effective educational and administrative course. In 1962 — “the hard thing is the right thing” — recurring once more as a decisive theme in her career — Jerome Preston and the Trustees of the Hospital asked Miss Flores to recommend the fate of the school, a diploma program within the context of an increasing emphasis on the degree program. 1962 was also the year that the hospital had become a full partner with the School of Medicine in the creation of the Boston University Medical Center. The loyal alumnae backed Miss Flores to the hilt in her difficult decision to advise that a pioneering and distinguished three quarters of a century chapter in nursing education be brought to a close.

In her 22 years with the Hospital and Medical Center Florence Flores has collaborated in many innovative improvements in patient care, and helped to implement other changes in nursing care as broad medical and sociological trends made them necessary. The rehabilitation unit, the in-patient open psychiatric ward, the intensive care unit and new recovery room, the intensive coronary care and metabolic units, the closing of the Haynes, the closing of the obstetrical unit — most recently the addition of the MediCenter, our intermediate care facility.

“There is a pattern to these changes. The hospital itself is becoming an intensive care unit,” Miss Flores says. “And, as for the so-called shortage of nurses, I feel that there is no actual lack of nurses; the shortage exists because they are incorrectly used. In 1952 on Robinson 4, the MMH introduced a “first” — a unit manager system which was an extension of top administration, an arm of admin-
Two parties, two greeters: Dr. Chester Keefer greets Miss Flores in the Evans 9 Cafeteria; Jerome Preston and the guest of honor at the Sheraton Plaza reception.

istration which reaches right down to the patient unit. This system needs to be developed and extended.

"In a university-related hospital," Miss Flores continued, "it is imperative to recognize the fact that three groups of workers with widely-divergent objectives work side by side under the same roof, and they are all working with the same people: the patients who come to get cured, or comforted. First are the students, from the trainees to the chief residents: education is their goal. Second, a group whose major objective is research. Third, the paid employees whose principal objective is patient care. These separate yet related goals add up to critical relationships within the university hospital. Interaction must be better among the three groups."

Miss Flores has been generous with her time and skills, both regionally and nationally; serving as President of the Massachusetts Nurses Association and Chairman of the Massachusetts Board of Registration in Nursing; as a member of the National Nursing Accrediting Service Board of Review; and as a member of two Governor's Commissions to study the nursing shortage. She has been an independent, and sought-after, consultant in nursing service administration.

And now? There is almost no end to the things that Florence Flores will now find time to do, with her austere, beautiful 1810 farmhouse in Amherst as a base. She has been a legal resident of New Hampshire since she bought her house ten years ago, and now is eager to become more active in church and community. "I am a good cook," she says, "not a fancy cook, but a good cook. I like to do it right. To have my vegetables just right, for example. And I like to make desserts. Also, I'm a compulsive housekeeper."

Gifted with the eye of a true artist for color and design, Miss Flores is noted for her exquisite crewel embroidery. She collects old dolls, and early American glass (particularly the Westward Ho made in Pittsburgh in the 1870's) as well as art glass, such as satin glass. "Antiquing" is a natural sport for a resident of southern New Hampshire, and Miss Flores indulges in it, restoring her finds as she comes upon them in attics, shops or auctions.

But apart from the "fun things", Miss Flores says, she is greatly enthusiastic about a project she will be carrying out at Boston University's Mugar Library. "At least once a week I shall probably be coming down to Boston to work on their nursing archives. Nursing as a profession is not even a hundred years old, you know. Much of its history has unrolled in my lifetime. There will be a lot of detail, for most of the papers are individual. But it is something I want to do. And I may also, if asked, do further consultation in nursing administration."

We are indebted for our title — Florence II — to Dr. Philip Bonnet, who in his moving tribute to Miss Flores on the occasion of her retirement dinner referred to her as "Florence, the Second." The comparison is just. And it has a regal ring to it that suits Florence Flores well.

Josephine Brayton
The Instructional Building and Library facility is still undergoing installation of internal equipment and is being occupied floor by floor.

All the functions that were previously housed in Buildings B and C have been removed and are now firmly ensconced in new locations.

The Instructional Building is presently occupied from the basement through to the sixth floor and in addition, the tenth floor, for Gross Anatomy. Student restaurant facilities are open in the basement of the Instructional Building and have proven to be an attraction to the entire neighborhood to include people from Medical School, University Hospital, City Hospital, and even some of the public-at-large. The dining facility has proven to be well received by all parties concerned.

A contract has been let, and work has started, on the removal of Buildings B and C. All occupants have been relocated either into the Instruct-
and rebuilds

Block #2.

Work is moving forward and approaching the final stages of completion in the Betatron facility and this unit will be probably ready for use by the end of the year.

We have completed the installation of major switching equipment in our Electric Load Center, a subterranean vault that will be under the entrance way to the New Evans. All schedules have been met, and power is now flowing from the Edison Company through the Load Center to the Instructional Building at 13.8 thousand volts. As soon as the New Evans Electric Switchgear Room is prepared, power will be introduced into and through that facility to the existing Hospital and Betatron units. Engineering plans are being prepared for this transition so that ultimately all Medical Center components will be fed electricity from this one central source. Each facility, whether it be School or Hospital, will have two (2) sources of power brought to it through separate lines; and in the event that there is a failure of both of these lines, each unit will have emergency generator equipment to handle critical areas in each facility. BUMC Personnel will be responsible for the entire electrical network and for the maintenance of said network.

The noise has finally stopped and piling has all been installed for the New Evans facility. Groups of piles are now being tied together into "pile caps" which will be the basic supporting structure for the entire building. Construction of this Hospital facility appears to be close to schedule. By the first of the year we expect to have the basement structure completed so that certain services previously mentioned above can be routed through this basement to Betatron and Hospital.

Block #3.

The School of Graduate Dentistry should be fairly well closed-in within the next three to four (3-4) weeks. Columns for the top floor are now being prepared and the next step, of course, is putting the roof on. If all goes well, work will soon start on erection of interior partitions. Mechanical services are being installed right through the course of the job and major utilities have been brought to the building in the form of water, steam and electricity.

A liquid oxygen storage tank has been installed adjacent to the Medicenter Parking Lot and will shortly be feeding oxygen to the Hospital facilities. Ultimately this tank is to be transferred to a location adjacent to the New Evans Building on Stoughton Street as its permanent home.

Work on the Doctor's Office Building is moving along rapidly, with the Parking Garage completed and approximately three floors of the main building now completed.

Rebuilding

Work is still in progress on two (2) new X-Ray Rooms on the main floor of the Collamore Building of the University Hospital as well as on a four (4) floor warehouse which is being prepared for Hospital use at 17 East Concord Street. A building which was the former rectory of St. Phillips Church on Harrison Avenue has been completely renovated and prepared for the department of Psychiatry. This facility contains approximately thirty (30) offices. Spaces in the Hospital and in the Medical Research Building have been newly prepared for cardiac surgery.

Off Campus

Ground was broken the last week in October for a new dog kennel located at the Medical School's Animal Farm in Holliston, Massachusetts. This property, which consists of thirty-one (31) acres, was specifically purchased for the housing of various animal facilities. The kennel building will have interior runs and will be basically used as a holding area for animals used for research here at the Medical Center. Construction of this facility will take approximately four (4) months with occupancy sometime in the early spring, 1969.
In connection with the opening of the new “MediCenter” at the Boston University Medical Center, a symposium was held May 9-10, 1968, at John Hancock Hall on the subject of extended or intermediate medical care. Speakers discussed various aspects of the problem of providing increased hospital beds. The present MediCenter represents the first such addition to a university teaching medical center. The participants appropriately called the attention of hospital administrators, medical educators and others concerned with these problems to a solution now available to them.

A report in the Wall Street Journal (July 5, 1968) reviewed current efforts by several private corporations to develop better “sick bed care” for less cost using “motel methods.” “MediCenter” is the term used by one private corporation for its extended care service which it builds and manages in connection with existing hospital facilities. Through this arrangement, hospitals needing beds may increase their capacity by the addition of such units. These units are prepared to provide for those patients no longer requiring the special care which can be given only within the confines of the existing hospital. Every hospital has many patients who could be just as well cared for in MediCenter units. Many institutions could in effect double their bed capacity by adding units of the MediCare type if immediately adjacent and physically attached to the hospital.

The benefits in costs are tremendous. There is no need to embark on a painful, unpopular fund raising drive to obtain the capital funds for building since these costs are assumed by the agency operating the unit. Once built, the charge per bed is much lower than for conventional hospital beds, $20 v. $60-$100 per day. The costs are even lower than they appear since they include the cost of amortization of the building over a 25-year period. Operating costs can be kept to a minimum by efficient management that includes mass purchasing of food and equipment.

At first glance, physicians and other interested persons are puzzled trying to understand how a private commercial firm can operate facilities for profit for one-third or less than can non-profit agencies. The promoters of MediCenters properly point out that they do not have to undertake the cost of operating-room units, emergency care facilities and recovery rooms. The lower building costs are attributed to building according to modern day principles. Rooms and other facilities are all alike in all MediCenters. As a result, the estimated architects’ fees thus amount to 1 percent of the cost instead of the usual 7 percent. Purchasing in bulk permits construction and furnishing at much lower cost.

The MediCenter promoters agree that their building is not constructed to last forever but point out the folly of attempting to build hospitals as if they were to last several hundred years. Experience has shown that most hospital buildings are outmoded in 50 years or less. Many of our hospitals have been constructed more as monuments to their architects, building committees and fund raisers than as functional units to serve the sick in the most efficient, comfortable and economic way possible.

Hospital expansion and new construction seem to be under way in almost every community in the Commonwealth. Those concerned with providing needed additional hospital beds should look into the feasibility of adding on units similar to Boston University’s MediCenter.

Congratulations to Boston University Medical Center and MediCenters of America, Inc. for joining forces to provide the public with better medical care facilities for less money.

“Think, Talk and ACT”

by James Robotham

Editor’s Note: Jim Robotham, a third-year student, who has just been elected to the Begg Society, gave this hard-hitting talk at the September 9 Hampshire House reception and party for members of the entering class.

Welcome to Boston University School of Medicine! I speak as an individual — as a local officer for SAMA (Student American Medical Associa-
The National average for neonatal death rate is approximately 25 per thousand live births. But do you know what this rate is in the block right next to our medical center — 75.8!

These are the facts, for I have personally seen every single ill I have listed. The actual list is disgusting longer. A person can be medically or clinically well, but his health state can be critical. Talk about this difference is all very well: you can always close your ears to talk. My plea to you, Faculty and Students, is simple: I'm asking you to get mad, furious, at the present state of affairs. Then ACT.

ACT with purpose. ACT with vision. Get involved in something, whatever your interest: the Vietnam war, the doctor and the draft, abortion, medical school curriculum, methods of delivering care, student activism, student power, investigating the reactionary policy of the AMA (are you proud of the fact that the largest professional group in the John Birch Society are physicians?), examining and defining the concept of community health. We can find problems in ghetto health care delivery by participating in it ourselves or by investigating social problems in the ghetto. We can help find black medical candidates and persuade medical schools to recruit and accept them. We can teach sex education to ghetto area high school kids. I'm not talking abstractions, for every single one of these problems and more are being actively tackled by students and professionals in the medical and allied health fields in Boston right now, and we all can participate.

Initially, if you are unfamiliar with Boston, learn about the people and their health problems at first hand. Walk some of the streets around here and talk with the people, even the alcoholics bumming that dime (or quarter now, inflation hits them too) can teach you about our health care system. There is a meeting for all of Boston scheduled by SHO in late September with specific kinds of activity available. I strongly urge you to attend. B. U. students, medical and nursing, and the B. U. Pediatric staff with the cooperation of other departments have been providing free medical and dental screening clinics right in the South End. They set up in a church in the evenings and as the word spread, more and more patients came. They also gathered data as part of a student health project for a federal grant to set up a bilingual clinic in the South End.

These and the other activities mentioned may be continued this winter. We need your help in
assuring that medical care is delivered to these families. You can directly help and see the living problem. Learn! Sit for a while with the patients at Boston City Hospital; it’s an education, and should be part of your medical education! Educate yourself to this massive complexity, then educate others. Dr. Bakst on Home Medicine will allow you to accompany 4th year students on visits into houses in this area. I urge you to take advantage of this on a free Wednesday or Saturday afternoon. The opportunities are there: just ask!

Medicine may be in the book but health is in the person. We are indeed narrow if we define ourselves as medical students: we should be students of the science and ART of health. Faculty can set an example for all students. I ask you to get involved. SAMA, SHO, MCHR are eager to help but you have to move first. It’s your decision. You can think and talk, or you can think, talk and ACT. If you don’t, any flicker of idealism which you harbor now may well be drowned in a sea of insensitivity.

A lot of people will be glad to encourage you once you start. There is a frightening frustrating feeling of impotence during the first two years here. Despite the need for test tubes, labs, etc. one feels strangely alienated from the people. Let us shatter this glass curtain of isolation and become involved with patients, with people, with the community.

Let us not permit a passive attitude to continue into the third or fourth year and onward. Let us not turn out doctors who are strangely alienated from people. Let us turn out the “compleat physician.” Let us weave an educational fabric patterned to blend both the science and art of medicine.

If you are still confused as to how to start, talk with those of us who are interested. After that it’s up to you!

News in Capsule

The late Rabbi Joshua Loth Liebman, known and loved throughout the world for his wise blend of religious and psychological truth, particularly as expressed in the 1946 best seller “Peace of Mind,” has left a large collection of papers to Boston University.

At a late afternoon reception, Sunday, October 27, in the Special Collections Room of the Mugar Memorial Library, these papers were formally presented, with Mrs. Fan Loth Liebman, Governor Saltonstall, friends of the library and guests in attendance.

Liebman was rabbi of Boston’s Temple Israel, and was given life tenure by the congregation in 1947, one year before his death at the age of 39.

“Peace of Mind” is now in its 42nd printing. It has been translated into many languages around the world.

Bluebird Special created a new physical link with the Charles River Campus, when it inaugurated a daily run between the Medical Center and the Sherman Union Building on October 1. The big blue bus departs from Building A at 12:30 each day and the return trip takes off from the Sherman Union at 1 p.m. All personnel with business at either campus are invited aboard.

The Hospital Employees’ Fund Drive, launched in support of Phase II of the Boston University Medical Center’s Development Program, has reached its goal, and passed it.

With John F. Mullett, Associate Administrator of University Hospital, as Chairman, and 45 active solicitors, the goal of $50,000 has been exceeded by $1,000. Totals have been pledged for more than $51,000 over a three-year period. New employees will be approached after six months of employment, so that they, too, may share in the long-range plans of the Medical Center.

Members of the 1969 Graduating Class of the Boston University School of Nursing were invited to a special get-acquainted luncheon, buffet style, in the newly decorated Evans 9 Dining Room of University Hospital to which leading staff members and officials of the Medical Center were also invited.

The informal affair was successful in its goal
of “getting to know you,” with Jerome Preston, Chairman of the Board of the Hospital, and Nelson Evans, University Hospital Administrator, speaking a few words of welcome and then mingling with the young guests, who also had the opportunity to chat with Dr. Robert Wilkins, Dr. Richard Egdahl, John F. Mullett, John Lewis, Martin Ames.

A November issue of the Journal of Nutrition, official publication of the American Institute of Nutrition, carries a detailed report by Dr. Louis Charles Fillios and Carolyn Shaw on the response of the liver cell to protein deprivation, the results of a study which may significantly advance our understanding and treatment of malnutrition.

The two biochemists carried out their research at the Boston University Medical Center. Dr. Fillios is Associate Professor of Biochemistry at the School of Medicine and Associate Professor of Nutrition at the School of Graduate Dentistry, and Carolyn Shaw, until recently, was Senior Research Assistant at the Center. She is now planning to study malnutrition in Africa and enter medical school in 1969. She was a Research Fellow at M.I.T. with Dr. Fillios before coming to Boston University in 1966.

Dr. Fillios served on the faculties of both Harvard University and M.I.T. before coming to the Boston University Medical Center.

Dr. Joseph Cochin, Department of Pharmacology, has been importantly honored by his appointment to the Committee on Drug Dependence of the Division of Medical Sciences of the National Academy of Sciences-National Research Council. This committee is one of several advisory committees organized by the National Research Council and the Academy, and through them will indirectly advise the Federal Government on matters of national public interest and policy.

The particular committee to which Dr. Cochin has been named also carries a unique responsibility — that of awarding and administering research support grants funded by the pharmaceutical industry. The committee comprises 13 members chosen country-wide for their expertise on matters of Drug Abuse.

In recognition of the growing importance of pulmonary diseases in cardiovascular research and training programs, the National Heart Institute and the National Advisory Heart Council have established the Cardiopulmonary Disease Advisory Committee. The Medical Center's Dr. Edward A. Gaensler is one of the eight members of this committee which is composed of medical authorities from all parts of the country who represent various basic science and clinical disciplines relevant to cardiopulmonary diseases.

Dr. Seymour Fisher, Research Professor of Psychology of the Boston University School of Medicine, chaired “A Forum on Brief Psychiatric Treatment,” which was presented on Friday, October 25, at Boston State Hospital. The conference was moderated by Dr. Milton Greenblatt, Commissioner of the State Department of Mental Health.

Dr. James Mann, Professor of Psychiatry of our School of Medicine, was one of the two principal speakers for the conference.

Martin Ames, Personnel Director of the Medical Center's University Hospital, is one of the leaders of a series of weekly “Jobs with a Future” Medical Employment Clinics, staffed by top personnel people from seven Boston hospitals, and dedicated to making the community aware of the
$18 ACROSS-THE-BOARD INCREASE IN HOSPITAL ROOM RATES ANNOUNCED

Has your Hospital-Surgical Expense Protection kept pace with reality?

Protection that takes over where basic hospital and surgical expense insurance plans leave off.

Versatility. Your coverage automatically adjusts and works in conjunction with any other plan that you may have.

Increased Benefits. A recent 50% extension of limits for you and each covered member of your family affords a realistic safeguard.

YOUR ASSOCIATION HAS PROVIDED THE ANSWER FOR MOST MEMBERS — AN EXTENDED PROTECTION MAJOR MEDICAL EXPENSE INSURANCE PLAN

Official Accident and Health Insurance Program of the Massachusetts Dental Society

Your Association's officially approved Major Medical Insurance Plan deserves your immediate attention.

MAIL THIS COUPON FOR INFORMATION WITHOUT OBLIGATION

LESTER L. BURDICK, INC.

PHONE 742-2740 20 CONGRESS ST., BOSTON, MASS. 02109

For my own personal security, please send complete information on low cost insurance.

Name__________________________ City____________

Street_________________________ City____________

Birth Date_______________________ Member________
specific jobs, available training programs and career employment futures in the health care industry.

The first of the successive Monday meetings was held on October 21, and the clinics, operated from 1 to 4 p.m. and held at the New Urban League headquarters on Washington Street, Roxbury, will continue through December 2.

Participating hospitals, according to Mr. Ames, in addition to University Hospital, are Massachusetts General Hospital, Beth Israel Hospital, Tufts-New England Medical Center, Children's Hospital Medical Center, Peter Bent Brigham Hospital and New England Deaconess Hospital. Members of the community are encouraged to visit the Job Clinic whether experienced or inexperienced workers, and they are provided counseling as well as information on employment possibilities.

Dr. J. D. Keith Palmer, named to the seven-man state Board on architectural barriers is greeted by the Governor of the Commonwealth, John A. Volpe.

A check for $2,234.32 was recently presented by the Boston University Medical Center-Community Educational Fund to Mrs. Joyce Grant, Principal of the New School for Children, to aid in its educational program.

Subscribed exclusively by members of the Boston University Medical Center, the fund is designed to help strengthen educational efforts in the Roxbury-South End-North Dorchester area, and symbolizes the Center's commitment to the community and its citizens as they continue to make progress.

The New School, now in its third year, was organized and is operated by parents in Roxbury. Consisting at present of 108 students and 12 faculty, the School was created to educate children of the poor and makes use of new methods and materials in pedagogy. A major goal is to emphasize the development of healthy interpersonal relations and to build a sense of self-respect.

Members of the joint BUMC-Community committee which made the award are Dr. Lewis Rohrbaugh; Dr. Edgar Smith; Dr. Allan F. Mirsky; Mr. Hubie Jones, Director of the Roxbury Multiservice Center; and Mrs. Jeannette Bowen of Operation Exodus. The committee also has had the guidance of the Reverend James P. Breeden, Executive Director of the Commission on Church and Race.

More details about the New School and its program will appear in a coming issue of SCOPE.

Gundersen Fund Luncheon

A history-making luncheon on October 23 honored Dr. Trygve Gundersen, internationally known eye specialist, and marked the establishment of a Fund in his name which will make possible the erection of an Eye Institute at the Boston University Medical Center.

More than 100 sponsors of the Gundersen Fund, community and medical leaders, met at the Sheraton-Plaza to discuss the purpose and scope of the Fund as it turns to the community for support. Initial pledges of $100,000 provide the cornerstone of the Institute, to be located in the projected Health Services Building of the Medical Center, for which construction will begin in 1969.

Dr. Ephraim Friedman, Ophthalmologist-in-Chief of the Medical Center, in his remarks to the luncheon guests described the Eye Institute as a comprehensive and major facility for all phases of our work in the care and study of the eye as well as in the training of ophthalmologists and paramedical personnel. He said that the Eye Institute, when completed, will have 30 in-patient beds, research and clinical laboratories, examining rooms and an emergency room. Establishment of the Eye Institute at the Medical Center will make possible an expansion of the activities of the Center's South End Eye Screening Program.

Dr. Gundersen, a 1926 graduate of Harvard Medical School, served on its faculty until he joined Boston University in 1952. Distinguished in his field, as former Ophthalmologist-in-Chief
at the Children's Medical Center, former Chairman of the Department of Ophthalmology at Boston University and now Professor Emeritus and Past President of the New England Ophthalmological Society, Dr. Gundersen is a staff member of many Greater Boston hospitals, and has served as Chairman of the Section on Ophthalmology of the American Medical Association. He is held in affectionate regard by patients from many countries of the world.

Chatting together at the October 23 luncheon which honored Dr. Trygve Gundersen are Dr. Ephraim Friedman, Dr. Gundersen and Sheldon Uttal. Ralph Lowell and Dr. Richard Egdahl hold a separate conversation.

Architectural Barriers

The majority of buildings, both public and private, are architecturally designed with man as the measure. Architects are guided by average figures for human height, weight, length of pace, reach and strength when they design the machines for living which we call houses, schools, offices and institutions.

However, the members of a large minority group of the population suffer from physical disability of ambulation, manipulation, and exercise tolerance, quite apart from losses of special sense, which produce discrepancy with the common standards used by architects in designing buildings. For instance, a paraplegic in a wheelchair may not be able to negotiate a door opening onto a narrow corridor, may not be able to make use of a small toilet compartment. A person on crutches or with a prosthetic leg, may have difficulty with sudden changes of level, steep ramps, or even stairways, and an ordinary stairway would be a complete bar to a person in a wheelchair. A rheumatoid arthritic with a weak painful grip might be "locked in" by the door latch with a smooth ordinary knob.

The total number of persons with such disabilities now approaches 28 million. An estimate for Massachusetts is 70,000, with some 45,000 living in the Greater Boston area.

Activity in making architects aware of the needs of this considerable minority has been increasing on a world scale. We have reports from a large number of countries in Europe and Asia on legislation to compel conformity with suitable architectural standards; the United States Standards Association has published a code, and a number of states of the union have established acts to implement codes of this type.

The Massachusetts approach to the problem is unusual, and is the first of its kind in the United States. The legislative act calls for the writing of a code for public buildings, which would insure their accessibility to and usability by the physically handicapped. However, the on-going, seven-man Board is also charged with keeping the building code under constant review in the light of technical progress, and of acting as an appeal board for the safeguarding of the interest of those who wish to construct public buildings.

It is expected that the Board will produce a trend to compliance of a voluntary nature with this architectural approach among those who are constructing buildings for use by the public on a purely private basis; this would include theaters, restaurants, museums, art galleries and the like. It is possible that at a later date public transport may also be modified for better use by the handicapped.

The medical member of the seven-man State Board is Boston University Medical Center's Dr. J. D. Keith Palmer, of the Department of Rehabilitation Medicine. Dr. Palmer has been in-
Head table guests and speakers take their seats at the November 4th reception and dinner to honor the retirement of Nursing Director Florence Flores. Scene: the Oval Room of the Sheraton Plaza Hotel, Boston. From far left to right: Mrs. Nelson Evans, Ann Gough, Chaplain Leicester Potter, Eleanor Tenney, Florence Flores, Dr. Philip Bonnet, Mrs. John Mullett, Jerome Preston and Nelson Evans.

The designer of prosthetic devices needs to be familiar with "Teflon's" useful qualities.
BUMC Dines in Style

Medical center personnel are faced with the pleasant possibility of varying their “luncheon spot,” with the recent addition of the handsome new cafeteria on the ground floor of the Instructional Building and the elegant dining room of the MediCenter. The compact food-vending center shown here adjoins the cafeteria of the new classroom building. Almost unrecognizable is the Evans 9 double dining room and cafeteria area. Soft rugs, attractive draperies, new lighting, brand new tables and chairs have converted it to a far more soothing setting for the noontime break.
terested in architectural barriers for the disabled since he directed the Lakehead Rehabilitation Center in Canada in 1958 and cooperated with the architects in the design of that new building. He subsequently chaired the Health Section of the Social Planning Council of Hamilton, Canada, when that body moved for legislation to avoid architectural barriers in public buildings. Certified in Physical Medicine and Rehabilitation in U.S.A., Canada, and Britain, Dr. Palmer is now Associate Professor of Rehabilitation Medicine and associate to Dr. Murray M. Freed, Professor and Chairman of Rehabilitation Medicine.

Paradoxically, SCOPE needs more space!
With the next issue the format of this publication will be changed to 8½” x 11” page size, effecting production savings as well as an opportunity to add to the editorial content as we can accommodate a wider range of advertisers.

Getting to Know You

Getting to know you! Members of the graduating class of the Boston University School of Nursing chat with Medical Center Staff (see NEWS in capsule). Shown with them are Dr. Robert Wilkins, Dr. John Mannick, Dr. Thomas Silva.
Contraindications: Increased Intracranial Pressure, Head Injury, or Pathologic Brain Conditions in which clouding of sensorium is undesirable. Talwin (brand of pentazocine) should not be administered in these cases, since drug-induced sedation, dizziness, nausea, or respiratory depression could be misleading.

Precautions: Pregnancy. No teratogenic or embryotoxic effects attributable to the use of Talwin have been seen in extensive reproductive studies in animals; however, like all new drugs, Talwin should be given with caution to pregnant women. A large number of patients in labor have received the drug with no adverse reactions other than those that occur with commonly used strong analgesics. However, in certain patients, Talwin should be used with caution in women delivering premature infants.

Ambulatory Patients. Since sedation, dizziness, and occasional euphoria have been noted, ambulatory patients should be warned not to operate machinery, drive cars, or unnecessarily expose themselves to hazards.

Certain Respiratory Conditions. The possibility that Talwin (brand of pentazocine) may cause respiratory depression should be considered in treatment of patients with bronchial asthma. Talwin (brand of pentazocine) should be administered only with caution and in low dosage to patients with respiratory depression (e.g., from other medication, uremia, or severe infection), obstructive respiratory conditions, or cyanosis.

Patients Dependent on Narcotics. Because Talwin is a narcotic-antagonist, patients dependent on narcotics and receiving Talwin may occasionally experience certain withdrawal symptoms. Talwin should be given with special caution to such patients. It has been observed that some patients previously given narcotic-analgesics for one month or longer had mild withdrawal symptoms when the drug was replaced with the analgesic, Talwin. After a short period of adjustment the subjects were usually able and willing to continue taking Talwin, and relief of pain was satisfactory.

Nonaddicted Patients Receiving Narcotics. Symptoms believed to be indicative of antagonism to the opiate may be observed rarely with administration of Talwin to patients receiving opiates for a short time. Intolerance or untoward reactions are seldom observed after administration of Talwin to patients who have received single doses or who have had limited exposure to narcotics.

Impaired Renal or Hepatic Function. Although laboratory tests have not indicated that Talwin causes or increases renal or hepatic impairment, the drug should be administered with caution to patients with such impairment. Extensive liver disease appears to predispose to greater side effects (e.g., marked apprehension, anxiety, dizziness, sleepiness) from the usual clinical dose, and may be the result of decreased metabolism of the drug by the liver.

Myocardial Infarction. As with all drugs, Talwin (brand of pentazocine) should be used with caution in patients with myocardial infarction who have nausea or vomiting.

Biliary Surgery. Until further experience is gained with the effects of Talwin on the sphincter of Oddi, the drug should be used with caution in patients about to undergo surgery of the biliary tract.

Adverse Effects: Talwin is relatively free from the undesirable side effects associated with morphine, such as constipation, urinary retention, or severe respiratory depression. Furthermore, Talwin produces less nausea, vomiting, and diaphoresis than meperidine. In over 12,000 patients who received Talwin intramuscularly, subcutaneously, or intravenously, nausea, the most frequent adverse effect, occurred in approximately 5.0 per cent. In decreasing order of occurrence were vertigo, dizziness or lightheadedness; vomiting; and euphoria. Respiratory depression was reported as an adverse reaction in 1.0 per cent.

The incidence of each of the other adverse effects was well below 1.0 per cent: constipation, circulatory depression, diaphoresis, urinary retention, alteration in mood (nervousness, apprehension, depression, floating feeling), hypertension, sting on injection, headache, dry mouth, flushed skin including plethora, altered urination,
WHATEVER the intensity of the pain
the cause of the pain
the site of the pain
the duration of the pain
the chronicity of the pain
the age of the patient

Talwin should not be used for patients with increased intracranial pressure, head injury or pathologic brain conditions.

Until sufficient experience is gained, it should not be administered to children under 12 years of age.

Talwin (brand of pentazocine) has not produced severe respiratory embarrassment in adults (rarely apnea), even with large amounts. A small number of newborn infants whose mothers received Talwin during labor had transient apnea. The incidence of temporary diminution in the rate or strength of uterine contractions is low after administration of Talwin, similar to that following meperidine hydrochloride. (In reporting no interference with normal labor in patients receiving Talwin, one investigator further stated that the drug may increase uterine activity.) Generally, no significant fetal heart rate change occurs.

Laboratory tests of blood and of liver and kidney functions have revealed no significant abnormalities. A minor and probably insignificant increase in the per cent of eosinophils in peripheral blood counts and bone marrow occurred occasionally.

Talwin is well tolerated by patients with diabetes mellitus, and no changes in insulin requirements have been observed.

Dosage and Administration: Adults, Excluding Patients in Labor. Average recommended single parenteral dose is 30 mg., by intramuscular, subcutaneous, or intravenous route; may be repeated every three to four hours. Pain has been relieved in most patients with not more than three doses daily. Infrequently, selected patients have received single doses as high as 60 mg.

Patients in Labor. A single, intramuscular 30 mg. dose has been most commonly administered. An intravenous 20 mg. dose has given adequate pain relief to some patients in labor when contractions become regular, and this dose may be given two or three times at two to three-hour intervals, as needed.

Children Under 12 Years of Age. Since clinical experience in children under twelve years of age is limited, the use of Talwin (brand of pentazocine) in this age group is not recommended.

Duration of Therapy. Patients with chronic pain who received Talwin for prolonged periods (e.g., over 300 days) experienced no withdrawal symptoms even when administration was stopped abruptly; furthermore, there was no tolerance to the analgesic effect.

CAUTION. Talwin should not be mixed in the same syringe with soluble barbiturates because precipitation will occur.

Treatment of Overdosage or Respiratory Depression. Talwin has not produced apnea or severe respiratory embarrassment in adults, even in large doses. Occasionally, however, moderate respiratory depression may occur. Means of maintaining proper oxygenation should be available in case of overdosage or respiratory depression, and methylphenidate (Ritalin®) should be administered parenterally. The usual narcotic-antagonists, such as nalorphine, are not effective respiratory stimulants for depression due to Talwin.

How Supplied: Ampuls of 1 ml., containing Talwin® (pentazocine) as lactate equivalent to 30 mg. base and 2.8 mg. sodium chloride, in Water for Injection. Boxes of 10, 25, and 100.

Multiple dose vials of 10 ml., each 1 ml., containing Talwin® (pentazocine) as lactate equivalent to 30 mg. base and 2.8 mg. sodium chloride, in Water for Injection. Boxes of 1.

The pH of Talwin solutions is adjusted between 3.4 and 5 with lactic acid and sodium hydroxide.

Winthrop Laboratories
New York, N.Y. 10016