

news THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS

southwestern medical school - graduate school of biomedical sciences - school of allied health sciences

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DALLAS--Official dedication of The University of Texas Health Science Center's new building complex has been set for Sunday, April 27, according to Dr. Charles C. Sprague, president of the center.

The newly completed Phase One building program was designed to provide facilities for Southwestern Medical School's enrollment increase to 800 medical students. The 1974 school term marked the beginning of this expansion with the first 200-member freshman class. The present sophomore group has 150 participants, while juniors number 135 and seniors, 134.

Dedication ceremonies will feature Dr. Lewis Thomas, president of Memorial Sloan-Kettering ^{Cancer Center} Institute, who will be the main speaker. A tour of the complex for donors sponsored by the Southwestern Medical Foundation will be included in the activities, as well as an open house and tour for the public.

Exhibits at the Dallas Art Center and the Dallas Public Library downtown will be highlighted the week preceding the formal dedication day. A dinner party at the Dallas Art Center will be hosted by The University of Texas Board of Regents that Sunday night after the ceremonies.

The University of Texas Health Science Center at Dallas is comprised of three institutions dedicated to education, research and patient care of the highest caliber.

These three components, Southwestern Medical School, the Graduate School of Biomedical Sciences and the School of Allied Health Sciences, are entirely committed to the growth of medical knowledge through scientific investigation and communication.

Basis for the center began in 1943 when 17 faculty members of the Baylor University School of Medicine elected to remain in Dallas instead of moving to Houston with the Baylor school. Southwestern Medical College was then established by the Southwestern Medical Foundation. The college rapidly grew into its own position of leadership among the nation's medical schools.

By the 1960's, demands for change in the American health care system began to evoke a new kind of medical learning system--the health science center. This new entity endeavored not only to educate many more doctors than previously, but also to enhance all medical care by training new kinds of health professionals as well as nurses, therapists and technicians.

In 1972 the Board of Regents of The University of Texas System expanded the existing Dallas medical school into a health science center as a locus of knowledge. Included were the three facets grouping medical training, graduate biomedical science studies and allied health fields into one institution: The University of Texas Health Science Center at Dallas. Its purpose was to achieve health care goals by assembling the best of a diversity of complex areas, interacting research and teaching situations.

Southwestern Medical School is a four-year institution whose graduating doctors have ranked from first to seventh on national examinations among classes of other national medical schools. They have been first on two occasions.

The faculty of more than 400 not only teaches medical, graduate and allied health science students, but also conducts research in heart disease, cancer, arthritis, diabetes and numerous other diseases. Additionally these instructors provide medical care of patients and staff supervision of 400 interns and residents at Parkland Memorial Hospital and 17 other affiliated institutions, while regularly conducting courses and seminars for postgraduate education of physicians.

Of these faculty members, only the equivalent of 220 are paid solely by state appropriations. Research, development and training grants and contracts provide the remaining support.

The faculty has also assumed a position of leadership of eminent national medical societies and publications. Over 20 have headed national professional societies and organizations while more than 30 have been chairmen of important national and international professional organizations during the past several years.

The Graduate School of Biomedical Sciences, formerly part of the medical school's teaching program in basic sciences, today trains health scientists for advanced positions in biomedical research, service, consultation and teaching. Approximately 150 graduate students annually work toward master's or Ph.D. degrees in fields such as Microbiology, Physiology, Pharmacology, Biochemistry, Clinical Psychology and Cell Biology.

From the first graduate degree, a master's in Physiology awarded in 1947, the school has grown to now offer over a dozen programs in basic and behavioral sciences. Projected enrollment by the beginning of the next decade is 300 students.

The Graduate School is principally housed in the basic science buildings on campus. Faculty members regularly contribute to the vast store of scientific knowledge, relating research findings in publications and meetings designed to achieve quick application of health findings.

The School of Allied Health Sciences, newest segment of the center, trains health specialists such as physicians' assistants, dietitians, physical therapists, rehabilitation specialists, medical technologists and other professionals. Approximately 200 students are enrolled in nine programs.

In recognition of the crucial need for enlarged numbers of health care workers, a school for allied health professions was authorized by the State Coordinating Board in 1968, organized as a unit of Southwestern Medical School in 1969, then given separate status as the School of Allied Health Sciences in 1972 as part of the Health Science Center.

Rapid development has occurred since its initial courses in physical therapy and medical technology. Rehabilitation science and dietetic internships followed, then programs in instructional media technology, allied health education, training physicians' assistants, rehabilitation counseling and health care administration.

The Allied Health School has received important assistance from Baylor University Medical Center, Parkland Hospital and the Veterans Administration Hospital in conducting its training. Currently it has active clinical affiliations with almost 50 hospitals and health care agencies and maintains close educational relationships with the Dallas and Tarrant County Community College Districts, The University of Texas at Arlington and The University of Texas at Dallas. In addition to general accreditation by the Southern Association of Colleges and Schools, each allied health program is accredited by the appropriate professional agency.

As one of the preeminent research facilities in America, UTHSCD is seeking to understand and combat a number of disease states which probably will affect the vast majority of persons during their lifetimes.

A prime example is heart disease. As the greatest killer of mankind, this disease has largely eluded science, but at the Pauline and Adolph Weinberger Laboratories for Cardiopulmonary Research at Southwestern, careful tests are uncovering a large amount of information, including the effects of exercise on the heart and blood system.

With x-ray movies, doctors have evaluated the action of normal hearts and those subjected to drugs and simulated heart attacks. Investigation of heart problems has been substantially aided by gifts from the \$6 million Harry Moss Trust Fund, established by the will of the Dallas oilman and civic leader.

A major advance in heart attack diagnosis was made by the dean of Southwestern, Dr. Frederick J. Bonte. By injecting a patient with a harmless nuclear substance, the heart tissue damaged by a coronary heart attack can be made visible on a television-type monitor or can be photographed. This method enables direct diagnosis of coronary attacks and determines if the patient has had a true attack or pain from other sources. Knowledge of the size and position of the attack provides faster and more positive treatment.

Other research, conducted under grants from the American Heart Association, includes studies of drugs which control irregular heart rhythms, the effect of the nervous system on heart function, the role of heredity in electrocardiogram (EKG) patterns and production of proteins essential to heart contraction.

A recent discovery was that the "diving reflex," instinctively used by ducks and seals, when rummaging underwater for food, can be used by humans to slow runaway hearts, scientifically termed paroxysmal atrial tachycardia (PAT). Dr. Kern Wildenthal and associates found that when a PAT patient plunges his head in cold water, his heart-beat slows down 15 to 30 per cent.

Another recent finding was the biochemical genetic defect responsible for familial hypercholesterolemia, an inherited defect causing one out of every 500 Americans to have high levels of cholesterol in his blood. This discovery, by Dr. Joseph Goldstein and Dr. Michael Brown, opened new pathways for experimentation on the role of cholesterol in heart attacks and a class of heritable disorders arising from dominant genes. Further studies will include the possibilities of controlling cholesterol synthesis, thus lessening heart attacks in those persons with this defect.

The Ischemic Heart Disease Center is to be established by Southwestern under grants from the National Heart and Lung Institute (NHLI). Estimated to total more than \$2 million over a five-year period, it is one of eight such national centers designed by NHLI. Directed by Dr. James T. Willerson, the center is to serve a wide area of the Southwest. Ischemic heart disease is coronary artery disease in which blood vessels narrow with deposits of fatty materials, such as cholesterol. This narrowing blocks adequate oxygen supply to the heart and is one of the major heart problems today. Research at the center will aim at possible ways of forestalling heart attacks in persons with the disease and ways of limiting the amount of damage which occurs to those suffering attacks.

The Health Science Center is also becoming a nucleus for the many-faceted strike against cancer. In this concerted effort, numerous avenues of basic research are explored, a great amount of clinical treatment methods are under investigation and faculty members are devising new ways of rehabilitating the cancer patient. In particular, research is underway in cellular control and regulation, brain tumors, radiation, causes of cancer and various kinds of cancer, including leukemia. Researchers are also approaching the problems of cancer through mechanisms of immunology. The center's cancer program is designed to bring these latest cancer treatment advances to the community physician and his patient.

Considerable effort is now being made to extend consultation and educational services in the community. A variety of health care programs and application of latest medical care techniques, particularly for burn and emergency victims, have been initiated.

A surgery team, headed by Dr. Charles Baxter, has developed a burn center at Parkland, using new methods of burn treatment, including application of human skin. This has resulted in saving lives of otherwise doomed persons, including nine-year-old Sherry White who was burned over 92 per cent of her body. Because of the Dallas Skin Bank and the burn center treatment, Sherry is enjoying an active life.

The medical school also teamed with the Dallas Fire Department in augmenting the city's new ambulance service by training ambulance drivers in latest paramedic procedures. Each ambulance is equipped with a radio system connected to Parkland, enabling the paramedic to consult with an emergency room physician and apply emergency care to the patient while en route to the hospital.

Other center programs have served as models for health care delivery. One is the Children and Youth Project, operated by the medical school's Department of Pediatrics. For several years the program has provided four health care clinics for children of disadvantaged West Dallas areas, resulting in a significant decline in infant mortality and sickness.

The program's Carver Clinic, set up in cooperation with the Dallas Independent School District (DISD) is considered a supreme example of future health delivery mechanisms. A second program in conjunction with the DISD is the Research and Evaluation Center for Learning which aids the school district in evaluating and treating children with a wide range of learning disabilities.

Another major program is the Maternal Health project, operated by the Department of Obstetrics and Gynecology. Through eight clinics located at strategic points in Dallas, thousands of women are counseled in family planning.

The center's fight against disease and disability is far ranging. Results of discoveries of the nature of cholera toxin helped pave the way for immunization tests in Asia. Biochemistry research is investigating substances in cigarette smoke and in some insecticides which may block vital processes of waste removal in the body. Scientists in Pharmacology are carefully examining the effects of a number of new drugs, including some which show promise for the ulcer patient.

Physiology is exploring with powerful hormones, called gonadotropins, which may have a great deal to do with human behavior. Researchers in Medicine are studying genetic origins of some human ills, immunity mechanisms in arthritis, early indicators of diabetes and fundamental questions of chemical and fluid balances in the body.

New evidence is emerging that mothers' milk contains millions of white blood cells which transmit immunity against certain early childhood diseases and protects the infant in various other ways, possibly including Sudden Infant Death Syndrome.

The Clinical Research Center, involved in investigating the pathogenesis, or beginning, of a disease, the development of new techniques for diagnosis, treatment and utilization of new drugs, was established by the medical school at Parkland. The unit provides a setting for medical scientists to confront unusual or difficult patient ailments, using clinical applications of promising drugs in a carefully controlled environment.

One of 84 centers in major medical centers in the country, the clinic is under the direction of Dr. Charles Y.C. Pak. Patients profit directly by often receiving evaluation or new drugs not available elsewhere. They also indirectly contribute to the understanding of their conditions. Experiments are vigorously controlled, sometimes obtaining precise measurements of all physiological intake and output.

The building and educational expansion of The University of Texas Health Science Center were made possible by Southwestern Medical Foundation and the Dallas community from which it raised over \$8.5 million in local support. Without this continuing community commitment, many of the center's programs would not have been possible.

Physically the center increased its space from roughly one-half million gross square feet to 1.2 million gross square feet with completion of the \$40 million Phase One building project. Addition of a new clinical science building will mean another 145,000 square feet. Chronologically the center occupied a Basic Sciences Research Center in the summer of 1972. In 1974 the center moved into the new buildings of its Phase One program.

Four major structures comprise the new complex, named for principal donors. The Eugene McDermott Academic Administration Building is a 12-story office tower overlooking the entire Phase One area. Consisting of 57,526 gross square feet, it contains offices of the president, vice-president, deans and other administrative officials, as well as academic, business and service offices. First occupancy of the tower was in April, 1974.

The Tom and Lula Gooch Auditorium is a structure seating 1,200 persons, characterized by a large lobby display area. Facilities include rear projection devices surmounting a stage with speakers' platform. The area of 29,966 square feet is located above the Gallery cafeteria which seats 500. Included in the cafeteria area are four small seminar dining rooms, seating 20 each. The school's bookstore is next door. Total area is 20,383 square feet.

The Fred F. Florence Bioinformation Center houses the 200,000-volume capacity medical library and a special area containing the medical school's historical book collection. The five-story structure also contains the departments of Medical Illustration, the Medical Computing Resources Center, Instructional Communications, Bioinformation Science and Regional Medical Library Program, scientific journal editorial offices and a faculty center. This encompasses 162,225 gross square feet.

The Cecil H. and Ida Green Science Building, made up of five levels, hold laboratories and offices for the departments of Cell Biology, Biochemistry, Microbiology, Pharmacology, Physiology, Neurology, Cancer Center, Radiology and Bioengineering.

One of the most important features of this building is multi-purpose student laboratories, giving each student in his first and second year of medical school a laboratory "home base" as well as study cubicle available 24 hours a day, seven days a week. The structure also contains seven seminar rooms with student lounges and four lecture rooms (two seating 275 each and two seating 225) built under the main plaza. Arranged in pie-slice fashion, all four areas are served by a central core equipped with rear projection and other audiovisual devices.

The plaza which serves as a connecting level for all the new buildings is attractively landscaped with various flora provided by Erik and Margaret Jonsson. It has a raised dias and reflecting pool, plus a sunken area with a fountain. Permanent planting of oak and holly, accented by jasmine, azaleas, youpon and a variety of other plants, are included, as well as dramatic floral scences designed for several patio and plaza areas surrounding the cafeteria and buildings.

The new complex has enabled the center to enrich its research commitment both in terms of projects and people. Its total dollar flow per year now stands at around \$30 million, nearly \$10 million representing research and training grants or contracts funded through both government and private sources, such as the Southwestern Medical Foundation.

Dr. Sprague said the total physical worth of the center is well over \$100 million. This includes up to \$50 million for the older buildings, equipment, land and other improvements, plus over \$50 million in recently completed construction.

Currently another major structure is under construction, designated the Harry Moss Clinical Science Building. Dr. Sprague said the total estimated \$9.3 million cost of the nine-level building will be borne by The University of Texas System.

This new building will house much-needed research animal facilities on its first and second floors and the departments of Neurology, Psychiatry, Internal Medicine, Obstetrics and Gynecology and Surgery which will be located on other floors.