

3. IMPROVING HEALTH IN TEXAS

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The health institutions of The University of Texas System are committed to enhance the health of Texas, the nation, and the world through the creation of new knowledge and its applications, the education of a diverse population of health professionals of exemplary quality, the provision of the highest quality of health care and preventative services to its patients, and community service.

The overarching goals for the health institutions of The University of Texas System are to:

- Create new knowledge to improve health by continuing to grow a research enterprise of national and international quality and impact.
- Prepare a diverse group of high-quality health professionals to adequately serve the needs of Texas.
- Recruit, educate, train, and develop outstanding faculty members who will contribute to the increasing body of knowledge and provide excellent teaching and instruction.
- Provide the highest quality, state-of-the-art, preventative, and therapeutic measures for those who seek care.

- Facilitate the translation of research discoveries to appropriate applications for the health of all people, including the development of new products, devices, clinical practices, and the continuing education of health professionals.
- Manage the health institutions in an efficient, cost-effective manner, which provides net income adequate to maintain quality and invest in new programs.
- Achieve growth in philanthropic support to allow more effective fulfillment of the institutions' mission.
- Increase public awareness of the mission and contribution of the health institutions and make the expertise of those institutions available for rational and effective public policies.
- Encourage and support programs which will encourage and assist an increasing number of K-12 and college students to pursue careers in science and health.



Create new knowledge to improve health by continuing to grow a research enterprise of national and international quality and impact

Nationally, health science researchers have had a bicoastal view of career opportunities in the United States, often overlooking the rich opportunities available in Texas. Specific efforts to increase the visibility of Texas science, as well as specific areas of excellence and recruitment initiatives, will be required to compete effectively for outstanding faculty. It is particularly important to create critical masses of outstanding faculty around a specific research area, with whom a potential faculty member might interact. It is often these critical groups of scientists which make faculty positions on the two coasts so attractive. Additionally, it is important to foster an environment which strongly supports science, as well as emerging technologies and technology transfer.



The health institutions will continue to develop health science research programs which are nationally and internationally competitive.

With \$1.15 billion in sponsored research in 2005, the health institutions are well positioned to recruit and retain outstanding scientists, as well

as grow existing research programs. However, this will take place in an environment in which the budget of the National Institutes of Health (NIH) will be flat or reduced over the next three to five years. It will be necessary for the health institutions to be exceptionally competitive in this environment, with strong collaborative programs, strategic development of core research facilities, interdisciplinary and multidisciplinary research team development, philanthropic support of further research opportunities, and increases in state-of-the-art research base and equipment.

- The health institutions will increase research space by 30% over the next five years. This will require a combination of state, UT System, institutional, and philanthropic resources.
- The health institutions will achieve annual research growth of 3% or more above the growth rate of NIH funding. This will require continued growth of collaborations, partnerships, shared faculties, and effective faculty recruitment and retention.
- The health institutions will aspire to 5-8% annual increases in philanthropic support for research.
- The health institutions will increase the number of predoctoral research candidates for the Ph.D. by 15% over the next five years. Health institutions will increase the number of M.D./Ph.D.'s by 20% over the next five years.

Prepare diverse, high quality health professionals to adequately serve the needs of Texas

Texas is substantially below the national average in nurses, physicians, pharmacists, and other health professionals per capita. The shortfall will be exacerbated, as the population of the state increases rapidly and particular groups of health providers, for example nurses, retire at a relatively high rate. The UT System health institutions will:

- By 2012, increase the number of medical students enrolled by 20% over the baseline number in 2004;
- Increase the number of nursing students enrolled by 40% over the next nine years;
- Increase the number of dental students by 20% over the next seven years;
- Increase the number of public health professional graduates or those certified by 15% over the next five years;
- Increase the number of allied health students graduated by 20% over the next five years;

- Establish teaching academies at three additional health campuses in the next five years; and
- By 2010, expand the number of first-year residency position programs to a number that exceeds the number of medical students graduated each year by 10%.



Increasing graduation rates will require a substantial increase in faculty – particularly in schools of nursing and allied health – competitive salaries, and support of regulatory bodies. Additional financial aid will also be necessary to recruit and retain a diverse student body.

Increased classroom capacity will be required for training of all health professionals.

Simulational laboratories, including extensive use of modern computerized mannequins, will be necessary and used by all health professional schools.

Distributive multimedia educational programs will be conducted across multiple campuses, which will increase educational efficiencies. Web-based curriculum will be increasingly shared among campuses to increase the cost-effectiveness of faculty effort across the UT System.

Innovative programs will expand to allow educational programs in which multiple health professionals learn together and develop the skills to operate in effective teams of healthcare providers.

Information technology will be employed to an increasing extent to assist in the educational process and to prepare students for lifelong learning.

Health science schools will expand and strengthen programs in continuing health education for health professionals in the state.

Increased opportunities will be available for students to obtain master's and Ph.D. degrees in collaboration with health professional degrees.

Increased class offerings in behavior, social sciences, economics, and computer sciences will be available to health science professionals in programs conducted in collaboration with academic campuses.

The UT System health institutions will continue to strive for increasing diversity among their graduates. This includes continued support for "pipeline" programs in high schools and colleges.

- UT medical schools in the aggregate will achieve diversity of their student bodies comparable to that found among the top quarter of allopathic medical schools by 2012. Similar goals will be sought by all health science schools.
- Among medical school and dental classes, a threefold increase in the percentage of African-Americans will be achieved by 2012.
- A twofold increase in the percentage of Latinos in medical and dental classes will be achieved by 2012.
- The number of students enrolled in integrated educational programs conducted by medical and dental schools in collaboration with undergraduate campuses will double by 2010. This includes expansion of the JAMP program.
- Health institutions will have valid programs in place to assure compliance with all research and regulatory requirements by June 30, 2008.

Achievement of diversity goals will require increased coordination with colleges and universities and expanded scholarship programs.

Distinctive Strengths
UT System Health Institutions

UT Southwestern Medical Center - Dallas

ONGOING

- Molecular and human genetics; genetic basis of disease
- Regulation of cholesterol/lipid metabolism; atherosclerosis, diabetes, obesity
- Basic and clinical neuroscience; anatomic and functional brain imaging
- Cell signaling; cell surface and nuclear receptors; drug development
- Molecular biophysics, x-ray crystallography and magnetic resonance spectroscopy
- Cardiovascular developmental biology; cardiovascular and pulmonary disease; heart and lung transplantation

UT Medical Branch - Galveston

TODAY

- Emerging Infectious Diseases/Biodefense
- Neurodegenerative Diseases/Spinal Cord Injury

TOMORROW

- Aging
- GI Cancer
- Maternal/Fetal Medicine
- Environmental Health

UT Health Science Center - Houston

TODAY

- Genetics of Cardiovascular Disease
- Early Childhood Development
- Molecular Basis of Learning and Memory

TOMORROW

- Structural Biology of Membrane Proteins
- Cardiovascular Application of Stem Cell Therapy
- Health Informatics

UT Health Science Center - San Antonio

TODAY

- Aging
- Diabetes
- Oral Health
- Solid Organ Transplantation

TOMORROW

- Neuroscience
- Woman's Health
- Cancer

UT M. D. Anderson Cancer Center

ONGOING

- Development of new therapies targeting the genes that cause cancer and the molecular pathways that promote proliferation, survival and metastasis of cancer cells (national leader)
- Clinical trials of novel therapies for cancer with molecules, radiation and surgery (national leader)
- Epidemiologic studies of interactions between genes and environmental factors in carcinogenesis (national leader)
- Cancer metastasis and the molecular interactions between malignant cells and surrounding normal tissues (national leader)
- Use of mouse models to investigate both embryonic differentiation and genetic causes of cancer
- Cancer immunotherapy and vaccines

UT Health Center - Tyler

ONGOING

- Lung Injury and Repair
- Tuberculosis
- Therapeutics for and Demographics of Atypical Mycobacterial Disease
- Coagulation
- Inflammation and the Complement System of Innate Immunity

Recruit, educate, train, and develop outstanding faculty members who will contribute to the increasing body of knowledge

Health institutions will seek to increase the national visibility and reputation of health science research throughout the United States through:

- Support of the Academy of Medicine, Engineering and Science of Texas;
- Statewide scientific symposia, with national representation, supported by UT System;
- Vigorous efforts to recruit and retain individuals who are members or strong candidates for the National Academies of Science and Engineering and the Institute of Medicine;
- Prudent application of money from regentally approved programs such as STARS and LERR in public health and nursing, which are designed to recruit outstanding faculty members;
- Recruitment and retention of outstanding educators through such organizations as The University of Texas Academy of Health Science Educators and individual campus academies;
- Construction and renovation of state-of-the-art laboratory facilities to attract and retain outstanding faculty;
- Expanded programs in leadership training and

faculty development throughout the health institutions;

- Continued development of resources which allow competitive salary and other benefits for faculty in the various health professions; and
- Strengthened programs to recruit the most outstanding graduate students, on whom faculty depend for conducting successful research programs. The Task Force on Graduate and Postdoctoral Education will develop additional goals and strategies over the next six to twelve months.



Provide the highest quality, state-of-the-art, preventative and therapeutic measures for those who seek care at our institutions

While providing outstanding clinical programs, the health institutions must improve the payor mix of those seeking care in order to minimize the negative financial impact of uncompensated care given to those who have no health insurance. This means attracting a higher percentage of patients with commercial insurance, managed care coverage, and Medicare.

- Through the combination of increasing core product lines to attract those who are insured, mechanisms to decrease emergency room use and hospitalization for those who could be managed on an ambulatory basis, and efforts

to improve funding for the uninsured, the health institutions will seek to improve their payor mix by limiting the rate of growth of uncompensated care to no more than 3% per year by 2010.

- Obtain more complete recovery of costs for physician services rendered to indigent patients for whom affiliated hospitals bear the funding responsibility, i.e., county and VA hospitals, by 2008.
- UT System health institutions will collaborate with other health institutions in the state to

increase resources and improve the efficiency of care for the 25.1% or more patients in Texas who have no health insurance.

- Each health institution will have computerized physician order entry for medications and routine hospital orders by 2010.
- All health institutions will have an electronic health record accessible by patients, and with proper security, available to referring physicians, by 2010.
- All health institutions will demonstrate significant achievements for improved quality of care in all of the domains of the 100,000 Lives Program relevant to their patient mix (this includes decreasing nosocomial infections, improved treatment for heart attacks, etc.).
- Through increased community-based ambulatory care programs and multidisciplinary teams/providers, health institutions will strive to diminish the number of uninsured chronically ill patients who use the emergency room or in-hospital care in their communities.

- In addition to the world-class cancer programs at UT M. D. Anderson Cancer Center, each institution will identify specific clinical care programs which will achieve regional and/or national prominence. Such programs are referred to as "Product Lines." Each health campus will identify two to five Product Lines and achieve significant recognition by 2011.
- Through expanded community-based ambulatory care programs, use of electronic health records, and disease management, increase the efficiency and effectiveness of care for the uninsured and medically indigent by 2009.

The health institutions recognize that the quality of graduate education is critically related to their educational, patient care, and research missions. They will actively participate in the Task Force on Graduate and Postdoctoral Education, which is part of the strategic plan.

Facilitate the translation of research discoveries to appropriate applications for the health of all people, including the development of new products, devices, and clinical practices and the continuing education of health professionals

The translation of research discoveries from the laboratory to the bedside requires people, infrastructure, and resources. The health institutions will continue to expand educational programs for clinical investigators, physician scientists, and Ph.D. researchers who are committed to translational research. They will strive to double the number of these investigators over the next five years.

A comprehensive emphasis on technology transfer currently exists in several of the health institutions. Within two years, effective offices of technology transfer will be in place at the majority of health institutions. For those institutions not large enough to sustain a separate effort, the UT System Office of Health Affairs, working with the UT System Office of Research and Technology Transfer, will assist in providing more resources for these institutions either at another institution or the UT System.

- Patents resulting from research performed at the six health institutions will increase 10% a year over the next eight years until all potential intellectual property which is analyzed to be commercializable is being patented.
- Licenses from patented intellectual property will increase 8% annually over the next ten years.
- Health institutions will continue to seek innovative funding mechanisms for closing the gap between creative discoveries and products and opportunities for commercialization. These will include participation with venture capitalists and/or venture capital funds, pursuit of philanthropic support to fund these efforts, enhanced private sector and academic collaborations, and state or federal funding which will allow the creation of programs that will advance the commercialization of innovative technologies.

Manage our health institutions in an efficient, cost-effective manner, which provides net income adequate to maintain quality and invest in new programs



- By 2011, make each UT System health science center an “employer of choice” in the community where it is located.
- By December 31, 2007, complete programs to substantially increase efficiency in reimbursement for patient care throughout the entire billing cycle.
- By June 30, 2007, have in place a framework that is supported by mechanisms for purchasing of equipment, services, and supplies (e.g., research supplies and equipment, office supplies and equipment, and clinical materials for ambulatory programs) in order to maximize the overall purchasing power of the UT System health institutions. This will include UT System supply chain activities as well as purchasing by specific institutions to serve multiple campuses, when cost effective.
- By December 31, 2007, complete analysis of potential business services, such as payroll, which might be conducted in a more cost-effective manner and include potential for central services.
- By July 31, 2007, complete a strategic plan for managing deferred maintenance and equipment replacement, especially focused on fire and life safety, for each health campus.

Achieve growth in philanthropic support to allow more effective fulfillment of the institutions’ missions

- By December 31, 2007, the six health institutions will have fully comprehensive fund-raising programs including annual giving, alumni giving, planned giving, major gifts acquisition, corporate giving, donor cultivation, and donor databanks available to all the health institutions. It is likely that all or most of these comprehensive services will be available at five health institutions, while UT Health Center - Tyler participates in a program which receives support from other institutions or the UT System.
- By 2012, achieve annual philanthropic growth of 8% per year overall for the health institutions.
- By December 31, 2006, in collaboration with the UT System Office of Development, establish institution goals in specific areas of fund raising, such as alumni giving, annual giving, major gifts, etc.
- By December 31, 2007, achieve a program of stewardship for endowment monies which eliminates any inappropriate expenditures of specific endowment accounts.
- By December 31, 2007, in collaboration with the UT System Office of Development and the health institutions, identify at least two new innovative fund-raising strategies which might be organizational, for example, corporate roundtables, or programmatic, for example unique forms of matching funds or challenge grants.
- Continue technology programs such as the Chancellor’s Health Fellows with support from the Chancellor’s Council and other philanthropy to enhance the identity of UT System programs with these fund-raising groups.

Increase public awareness of the mission and contribution of the health institutions and make the expertise of those institutions available for rational and effective public policies

There is abundant evidence that the overall impact of the health institutions within the UT System is not well appreciated by the people of Texas or policymakers.

- In collaboration with the UT System Office of External Relations, implement a communications plan for the health institutions over the next three to five years, which will



increase the general awareness of the health institutions. These include a range of media activities which are detailed in the communications plan for UT System.

- By December 31, 2008, substantially strengthen the overall health policy analytical capability of the UT System and its campuses. Facilitate the coordination of health policy research in a manner that appropriately informs the academic community, health providers, the public, and policymakers. This will especially include efforts to strengthen research in health economics at academic campuses and in the School of Public Health. This research should provide expanded analysis of workforce, health services, and research and science policies within and for the state of Texas.
- Through programs such as the Chancellor's Health Fellows Program, facilitate the interactions between various campuses to maximize their impact on educational research, patient care, and public policy.

Encourage and support programs which will assist an increasing number of K-12 and college students to pursue careers in science and health

- Raise additional public and private funds for the Joint Admissions Medical Program (JAMP) by July 1, 2007.
- Continue to expand and extend campus outreach programs to high schools and colleges.
- Support the 2006-2007 effort by the Texas Academy of Medicine, Engineering and Science to enhance K-12 math and science in Texas.

