

LEGISLATIVE APPROPRIATIONS REQUEST

FISCAL YEARS 2020-2021

Presented to

The Governor's Office of Budget and Policy

and

The Legislative Budget Board

Giuseppe N. Colasurdo, M.D.

President

September 25, 2018

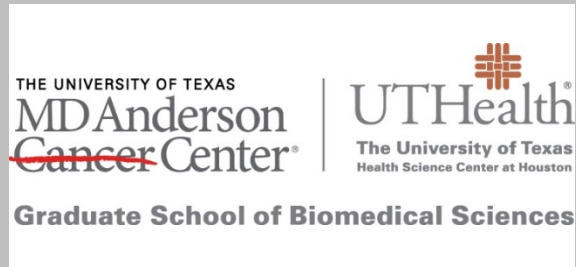


UTHealth: 16,000 people



Medicine

- 6th largest in the US
- One of the nation's best teaching hospitals
- Safety net for Harris County
- HCPC – “MD Anderson for Behavioral Health”



Biomedical Sciences

- Jointly-run with UT MD Anderson Cancer Center
- Highly-ranked programs including cancer biology and genetic counseling



Nursing

- Top 5% nationally
- Addressing Texas' nursing workforce shortage



Public Health

- Fourth largest in the U.S.
- Campuses across Texas
- NIH All of Us Research Program



Dentistry

- World class education
- First dental school in Texas



Biomedical Informatics

- Only school in the nation
- One of four National Centers for Strategic Health IT Advanced Research Projects (SHARP)
- Talent wars/new grants for Texas

Educating Texas' Health Care Workforce

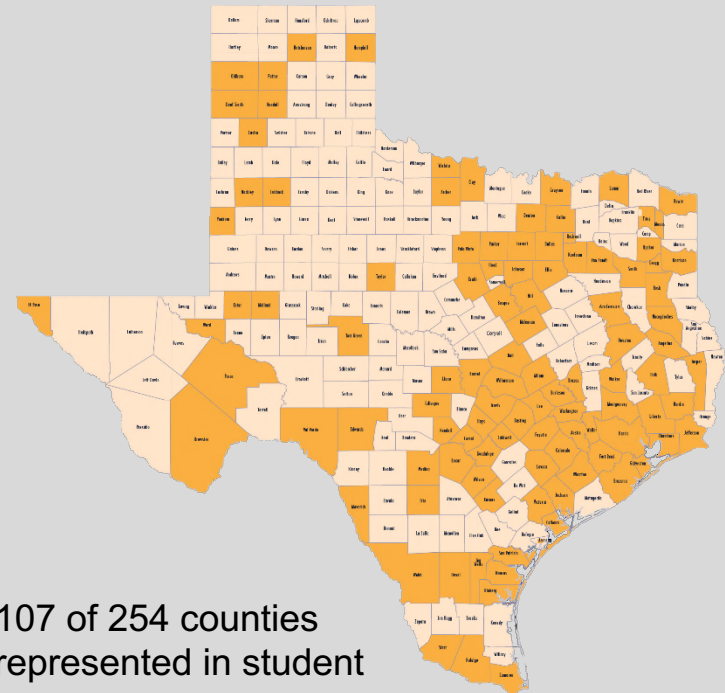
UTHealth has graduated more than 43,000 health care workers to date. Together, all UT System HRIs have graduated almost 150,000 students. UTHealth graduates rank among the lowest in the country for student debt.

UTHealth Graduates to Date by School

- School of Biomedical Informatics*: 2,398
- School of Dentistry: 11,370
- MDACC/UTHealth Graduate School of Biomedical Sciences: 2,815
- McGovern Medical School: 7,653
- Cizik School of Nursing: 11,279
- School of Public Health: 8,062
- **TOTAL: 43,577**

**Previously the School of Allied Health Sciences and the School of Health Information Sciences*

UTHealth Enrollment by County



Precision Medicine: Today and Tomorrow

Stroke Research & Treatment

- Only NIH Stroke Center of Excellence in Texas (total of 26 centers in the U.S.)
- First cellular therapy trials for stroke
- First joint commission certified integrated health care system in stroke in the U.S.

NIH *All of Us* Research Program

- Historic effort to gather data from 100 million+ people in the US
- \$3 billion investment over 10-12 years
- Three centers: Harvard/MIT, Wash U, **Hopkins/UTHealth/Baylor College of Medicine**
- **UTHealth School of Public Health** will be the sole call center for structural verification

UT Physicians Comprehensive Sickle Cell Center

- Only comprehensive sickle cell center in Houston
- Center is funded through NAIP
- Holistic approach and ownership by academic, multi-specialty teams



Centers for Disease Control Data:

One in 365 African Americans and one in 16,300 Hispanic Americans affected by Sickle Cell Disease

One in 13 African Americans are born with Sickle Cell Trait

Traditionally, patients with Sickle Cell Disease have less access to comprehensive care than those with similar genetic disorders such as hemophilia and cystic fibrosis

Education: Our Primary Mission

“...The physician shortage is real, it’s significant, and the nation must begin to train more doctors now if patients are going to be able to receive the care they need when they need it in the near future.” - Darrell G. Kirch, MD, AAMC

PHYSICIAN TO POPULATION RATIO IN TEXAS

State	Population increase since 1990 (millions)	Physician increase since 1990 (thousands)	Physician Population per 100,000 1990	Physician Population per 100,000 Today	Today’s Rank of Physicians per 100,000	Med School Graduate Retention Rank	GME in State Retention Rank	Med School + GME Retention Rank
California	9.8 (33%)	26 (32%)	272	270	19	1	1	2
Florida	8.0 (62%)	22 (68%)	251	260	24	9	4	5
Illinois	1.4 (12%)	10 (37%)	229	281	16	35	18	33
Massachusetts	0.8 (14%)	9 (39%)	364	444	1	36	27	36
Mississippi	0.4 (16%)	2 (50%)	144	186	50	4	13	10
New York	1.9 (10%)	11 (19%)	339	365	3	27	25	35
Ohio	0.8 (7%)	11 (46%)	213	290	14	21	30	24
Pennsylvania	0.9 (8%)	10 (31%)	256	312	8	34	35	39
Texas	11.3 (67%)	30 (94%)	188	219	41	2	5	4

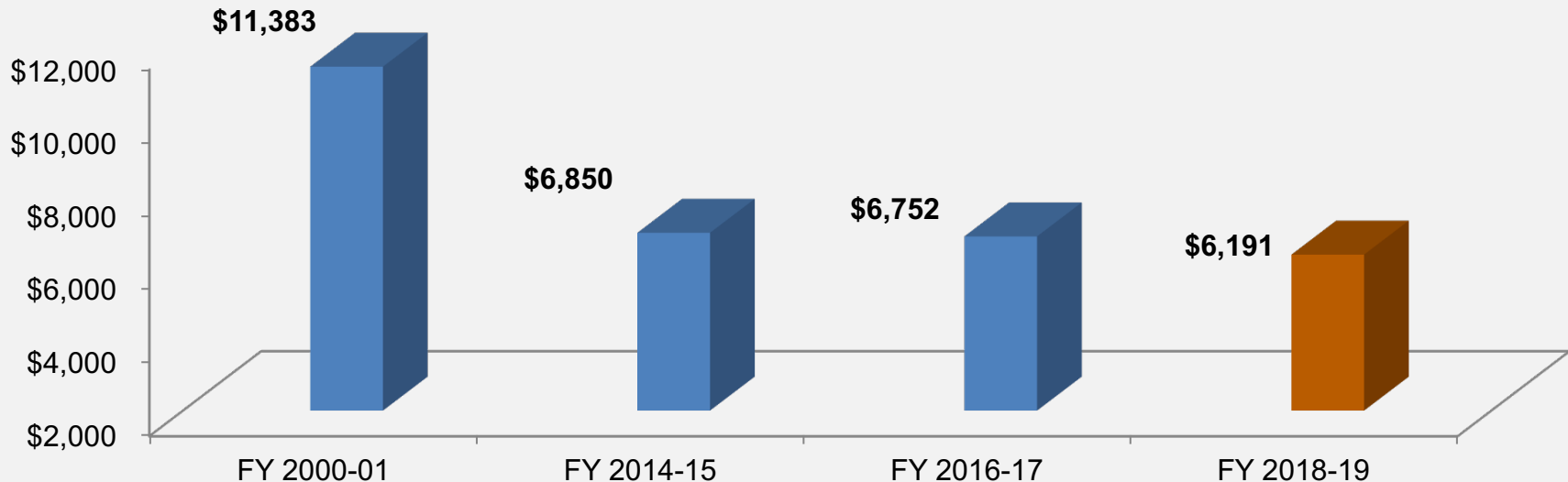
Texas Medical Schools rank 2nd among states in keeping its graduates but still ranks 41st in physician to population ratio due to population increases

Formula Funding for HRIs

55 Cents on the Dollar

“Given the cuts in per unit formula funding in recent biennia, institutions face the difficult task of maintaining quality programs and expanding programs to address these critical shortages and limitations [health care workforce].” THECB HRI Formula Advisory Committee, THECB Approved on December 15, 2017.

*EFFECTIVE LEVELS OF HRIS' PER STUDENT I&O FORMULA FUNDING
FY 2000-01 THROUGH FY 2018-19*



Lowest tuition in the U.S. coupled with the massive decline in formula funding will compromise our higher education system.

Legislative Appropriations Priorities

Formula Funding for Texas HRIs

Formula Funding. The THECB HRI Formula Advisory Committee recommendation to gradually restore HRIs to 2000-2001 funding rates is important to health education in Texas, our health care workforce, and biomedical discovery.

THECB HRI Formula Advisory Committee (HRIFAC) Recommendations (Statewide)

Fiscal Years:	2000-2001	2018-2019	(% Cut from FY16-17)	HRIFAC FY2020-21	HRIFAC Request \$
I&O:	\$11,383	\$9,431	(-4.1%)	\$10,731	+\$222.7 m
Infrastructure:	\$11.18	\$6.11	(-8.1%)	\$9.49	+\$171.7 m
Research:	2.85%	1.16%	(-5.7%)	2.29%	+\$50.2 m
GME:	n/a	\$5,824	(-7.1%)	\$6,653	<u>+\$16.9 m</u>
					<u>+\$461.6 m</u>

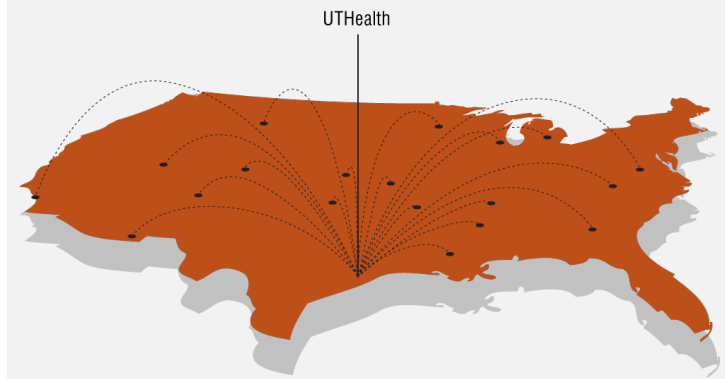
Note: Research formula is a base of \$1,412,500 + % of research expenditures
 THECB Formula Recommendations are 2/3s the way back to 2000-2001 levels, plus restoring last session formula cuts, and funding predicted growth.

Legislative Appropriations Priorities

Women's Health Education and Research Center

To address the unique health issues of women, UTHealth proposes an Article III exceptional item of \$9 million per year for the UTHealth Women's Health Education and Research Center

- UTHealth is a national leader in service line structures (trauma, neurosciences) – we believe the women of Texas deserve more-coordinated and higher-quality care delivery
- Study, identify, and implement evidence-based strategies to improve maternal care and outcomes and maximize the quality and cost-effectiveness of care
- Multi-school collaboration leveraging relationships within the TMC, state agencies, and other higher education institutions



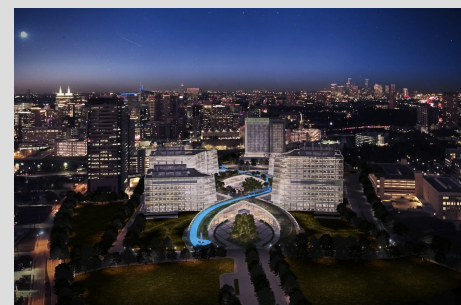
UTHealth maternal fetal medicine faculty members treat patients referred from 33 states



Legislative Appropriations Priorities

TRB Support for Joint UTHealth-MDACC Research Building

- Part of the new TMC3 campus – a collaborative project between UTHealth, MDACC, BCM, Texas A&M HSC and TMC
- Will be home to groundbreaking collaborative programs between UTHealth and MDACC
- Research to include:
 - Prevention and cures: cancer, neurosciences, cardiovascular, aging, behavioral health, women’s health
 - Innovative health care delivery: access, quality/safety, value, cost
- \$200M requested TRB for \$511 million, 692,750 square foot research building
- Debt service of \$8.72 million per year



Legislative Appropriations Priorities

Children's Learning Institute Restoration of Funds

- The Children's Learning Institute's Texas School Ready! Program provides professional development and evidence-based early childhood development innovation
- TSR now reaches 928 ISDs and charter schools, nearly 20,000 teachers and almost 250,000 at-risk children - up from 2014 (2,565 teachers and 48,097 students)
- CLI's funding in TEA Rider 42 was cut in half last session - request restoration of the funding back to \$7 million
- CLI, TEA and TWC, are exploring other early childhood education programs with the restoration of funding



CHILDREN'S
LEARNING
INSTITUTE



Legislative Appropriations Priorities

Create a Dental Clinical Operations Formula

To create a new funding mechanism for university-owned dental clinics based on the number of patient visits to students. This funding will support dental training and affordable dental care for underserved communities.

- Supported by all three state dental schools
- Funding will support clinical training for students and help ensure dental care remains affordable for underserved patients
- \$45 per patient visit to undergraduate dental students
- Cost to State: Approximately \$12M in addition to current funding
- Current line item:
 - UTHealth – Houston \$1.28M
 - UTHealth – San Antonio \$3.16M
 - TAMHSC – Dallas \$0.07M

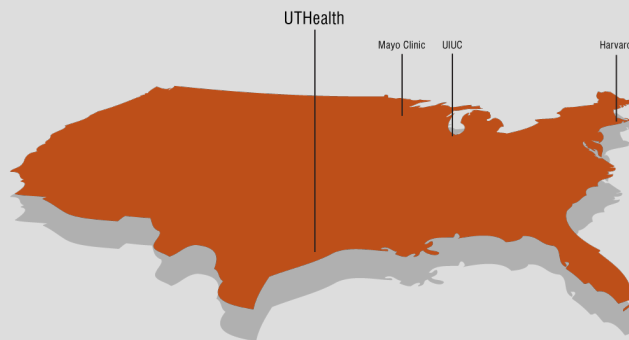
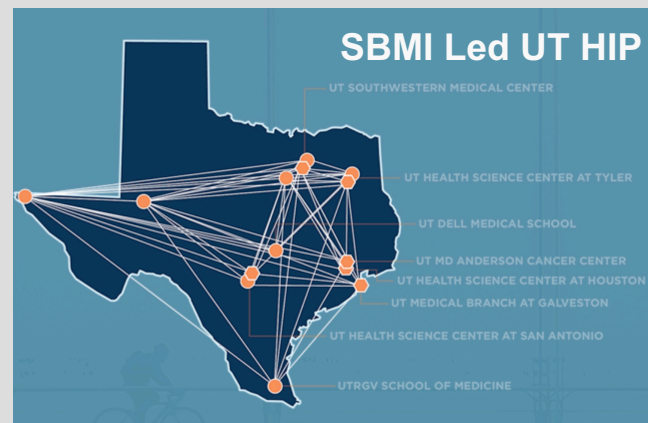


Legislative Appropriations Priorities

Increase Formula Weight for Biomedical Informatics to 1.75

“Big Data is the oil wealth of the 21st Century. No company or society can move forward without it.” – Eric Schmidt, executive chairman of Google’s parent company, Alphabet

- To assist in the development of Biomedical Informatics, Big Data, Artificial Intelligence, and related industries in Texas, we propose changing the I&O formula weight from 1.0 to 1.75
- THECB HRI Formula Advisory Committee recommended a new biomedical informatics weight, concluding that **“the low formula funding weight puts Texas at a disadvantage in the international competition for biomedical informatics faculty and students”**





Appendix

Article II

Psychiatry and Behavioral Sciences

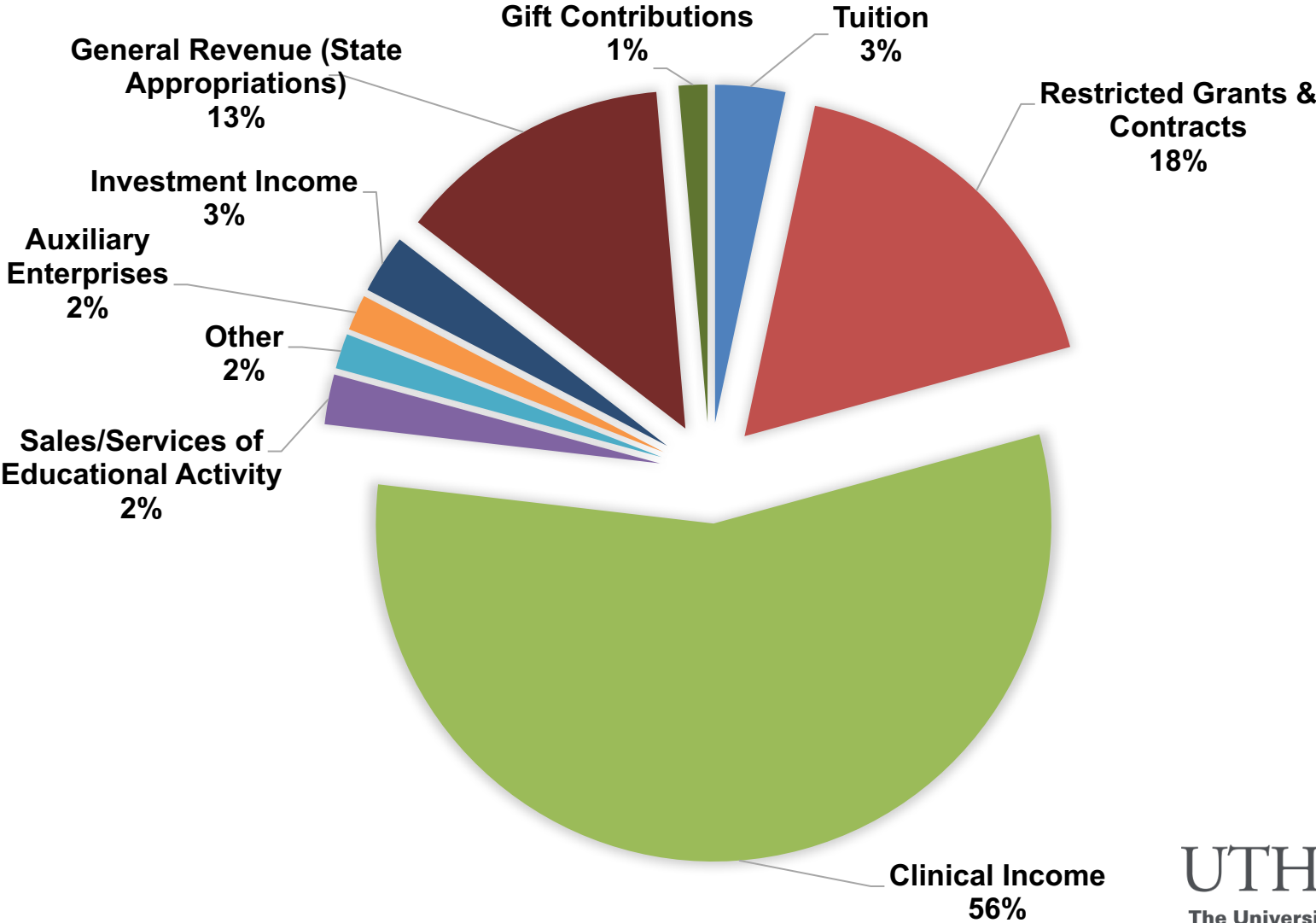
Increase in Bed Rate at HCPC, New Child Sex Trafficking Victims Unit, Design Continues of the New Continuum of Care Campus

- Increase Bed Rate per Day by Adding \$882,248 per year to HCPC to fund costs
- UTHHealth is working with the Child Sex Trafficking Victims' Office to:
 - Dedicate an inpatient unit to these victims
 - Provide outpatient treatment through the Trauma Resiliency Center
 - Research, outcomes and assistance to other communities
 - Workforce Development
 - \$11.9 million/biennium
- Architect's Layout of the Continuum of Care Campus



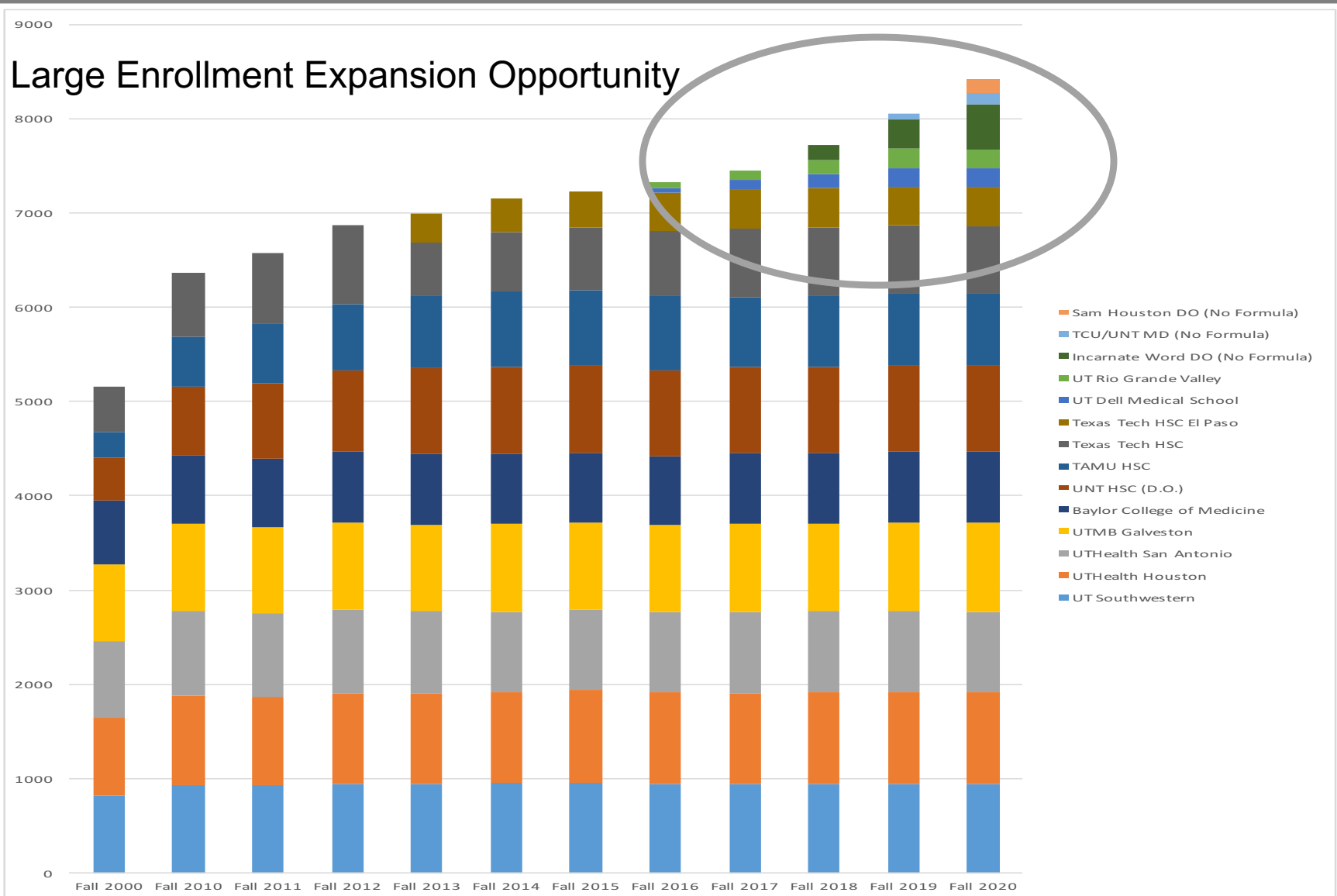
About UTHealth

UTHealth Revenues By Source FY17



Texas Medical School Enrollment

By 2020, Predicted 63% Increase in Enrollment Since 2000





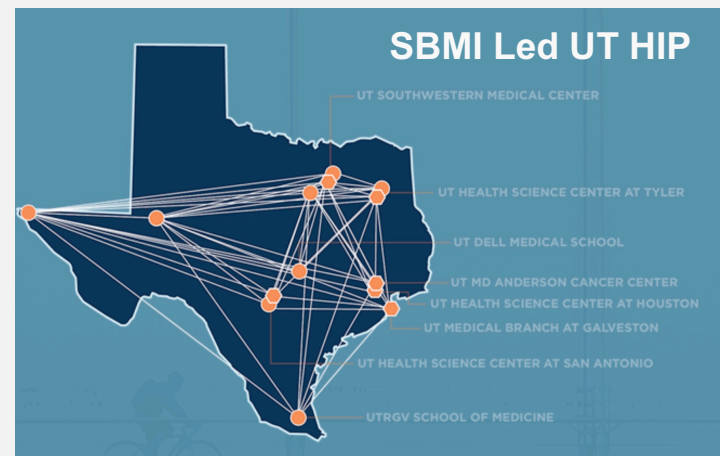
Non Formula Items

Non Formula Item

Biomedical Informatics Research

Recruit the nation's top scientists in biomedical informatics and health data sciences and lead the Big Data economy by converting data into meaningful information and knowledge to support health care and biomedical discoveries

- Created the Center for Precision Medicine jointly with School of Public Health with faculty recruited from Vanderbilt
- Created the Center for Computational Systems Medicine
- Created the Center for Data Security and Phenotyping
- Created the Center for Data Science and Informatics Core for Cancer Research
- Leads UT HIP (Health Information Platform) to network all UT Health Campuses
- The \$3.2M item cut last session by 8.8%, request restoration of the funding

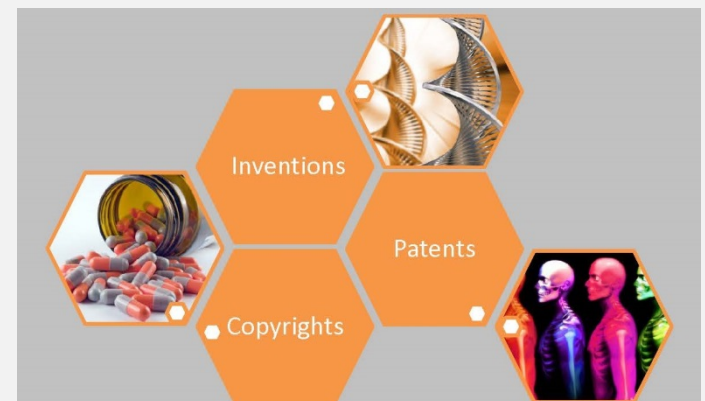


Non Formula Item

Biotechnology Program

Promote the formation of cross-disciplinary projects related to biotechnology innovation, the creation of public-private partnerships and the commercialization of UTHHealth biotechnology research and discovery

- 498 license or option agreements, 1,725 patent applications filed and 48 portfolio startup companies founded since this special item was funded in 2002
- Four new start up companies this year alone
- New Office of Strategic Industry Initiatives has executed 25 industry collaborative agreements
- UTHHealth Biotechnology Commercialization Center incubator – nine current tenant companies and 25 companies have used the incubator
- The \$1.52M item cut last session by 8.8%, request restoration of the funding



Non Formula Item

Harris County Hospital District

Provide much-needed health care to underserved patients in Harris County—where one million residents are uninsured and an additional 500,000 residents are underinsured—and support medical education efforts at Lyndon B. Johnson General Hospital (LBJ)

- LBJ is Texas’s Busiest Level III Trauma Center
- Important training ground for primary and specialty care
- Faculty have participated in 124 research studies in HCHD facilities
- Per the Thompson-Reuters Solucient database, LBJ operates with lower mortality, fewer complications, and lower cost than comparative hospitals
- The \$6.6M item cut last session by 8.8%, request restoration of the funding



Non Formula Item

Heart Disease and Stroke

Apply new techniques of genomic and proteomic research to advance the understanding of the causes, treatments and cures of common and complex diseases including cardiovascular diseases, stroke and neurodegenerative diseases

- Identified genes and gene mutations, including those that predispose patients to stroke
- Recruited/retained more than 50 faculty members
- Developed or enhanced nine research centers, including:
 - Texas Therapeutics Institute
 - Centers for Proteomics and Systems Biology
 - Center for Regenerative Medicine
- The \$8.36M item cut last session by 8.8%, request restoration of the funding



Non Formula Item

Improving Public Health in Texas Communities

Address Texas' critical health and public safety needs and reduce the incidence of poor health outcomes through population health programs aimed at preventing injury and disease, reducing health hazards, preparing for disasters and promoting health lifestyles

- School of Public Health has six campuses across Texas
- Due to collaborations, SPH has more MD/MPH than any school in the nation
- Significant response to Hurricane Harvey public health threats
- SPH faculty are part of a team to secure a \$500M federal contract to identify the genetic and biologic underpinnings of heart, blood and lung diseases
- The \$7m item was cut last session by 13.6%, request restoration of the funding

HOUSTON CHRONICLE

Houston geneticist makes heart-risk discovery

Kinks in DNA increase risk of heart disease in whites

To a Houston geneticist who's devoted his life to the quest, the finding is a boon



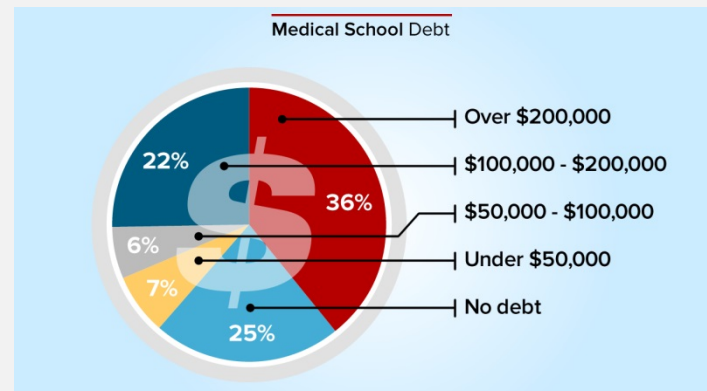
Non Formula Item

Institutional Enhancement

Supports the core mission of health related institutions across the state by funding leading edge and innovative research and education programs

- Provides significant funding for student services, academic programs, research infrastructure support and other critical needs
- Help UTHealth's six schools maintain some of the lowest tuition and student debt rates in the country – McGovern Medical School is one of the nation's 10 most affordable medical schools for in-state students*
- The \$1.2M item was cut last session by 4%, request restoration of the funding

*Source: U.S. News and World Report



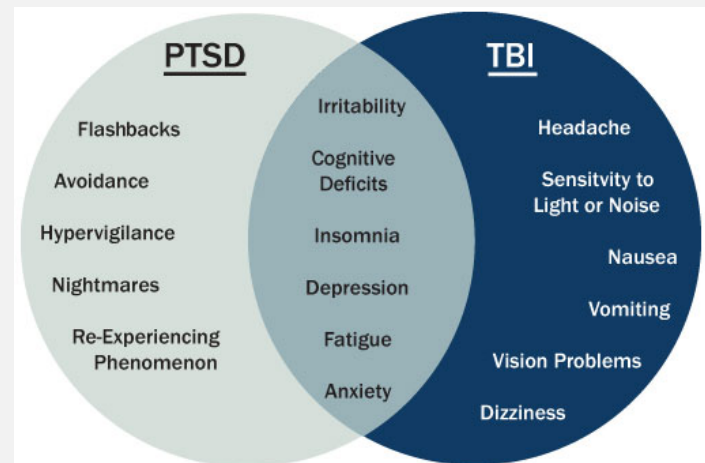
HOUSTON CHRONICLE
HoustonChronicle.com

Non Formula Item

Integrated PTSD Care and Research

This special item will support integrated mental health services to veterans and others with Post Traumatic Stress Disorder (PTSD) and a longitudinal research study involving different care practices and novel treatments and therapies

- No evidence-based interventions for PTSD with co-occurring disorders exist (80 percent of PTSD patients have at least one co-occurring psychiatric diagnosis)
- Trauma is often associated with military combat and veteran populations, but also storm survivors (Harvey), sex trafficking victims
- HB 3404 by Rep. Senfronia Thompson established the item in the 84th Session
- UTHHealth will coordinate with HHSC
- Created the UTHHealth Trauma and Resiliency Center

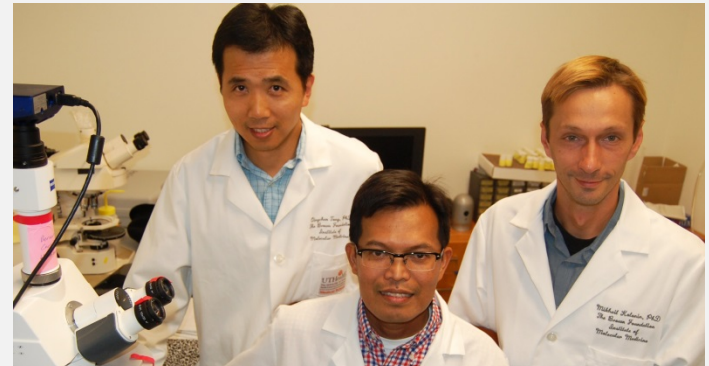


Non Formula Item

Molecular and Precision Health Research

Recruit leading researchers to advance understanding of the causes, treatments and cures of common and complex diseases including cardiovascular disease and stroke, neurodegenerative diseases, lung disease, cancer, autoimmune diseases and metabolic disorders (Formerly World's Greatest Scientists)

- 50 leading faculty members recruited from prestigious institutions around the country
- Nine Research Centers
- Important discoveries include a common gene variant associated with aortic dissection, a set of protein biomarkers that can identify pre-term false labor, and completion of the world's first genome-wide analyses of diabetes, coronary artery disease and hypertension
- The \$3.8M item cut last session by 8.8%, request restoration of the funding



UTHealth researchers Qingchun Tong, Ph.D., Alexes Daquinag, Ph.D., and Mikhail Kolonin, Ph.D. are working on the origins of metabolic disease



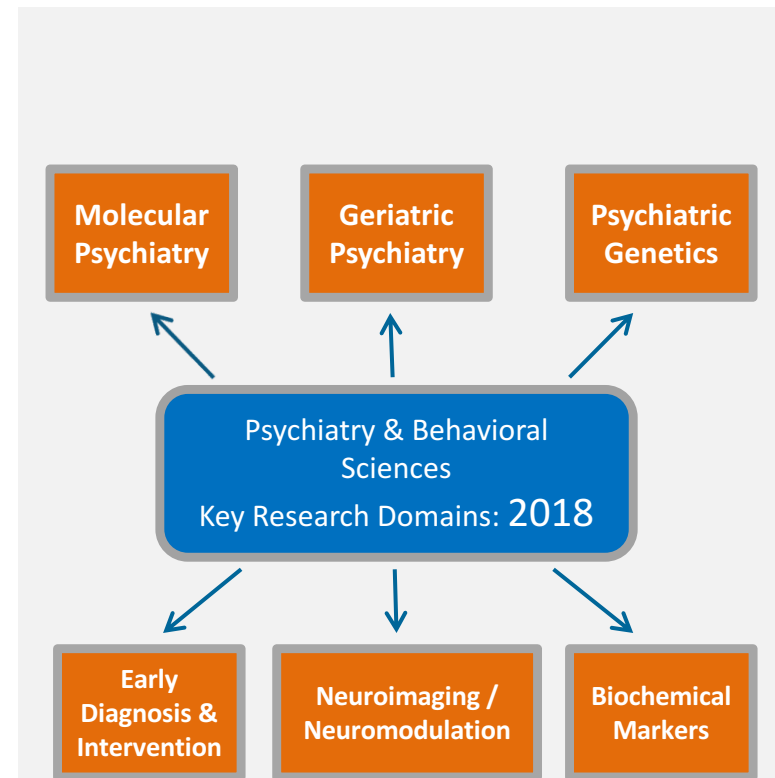
UTHealth's Zhiqiang An, Ph.D., center front, was recently awarded \$5.3 million to fast-track anticancer antibody research

Non Formula Item

Psychiatry and Behavioral Sciences Research

Expand clinical research and intervention to better serve our community, and improve identification and treatment of individuals with mental illnesses
Conduct evidence-based research with long-term patient follow-up in order to validate and refine treatment protocols

- Recruited 22 clinician/scientist faculty, 17 post docs and six research coordinators
- 811 articles and submitted 52 grants awarded
- Pioneering research in deep brain stimulation and psychiatric genetics and innovative programs in trauma/grief and diagnosis and treatment of psychosis
- Established numerous new programs including:
 - Early Psychosis Research Program
 - fMRI Laboratory
 - Psychologists Intervention Research Program for Mood Spectrum Disorders
 - Center for Molecular Psychiatry

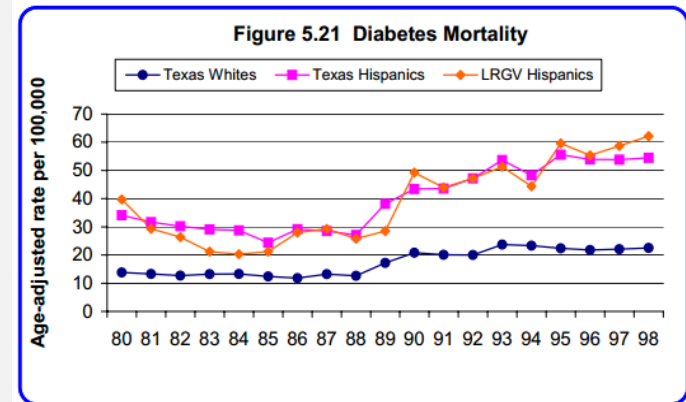


Non Formula Item

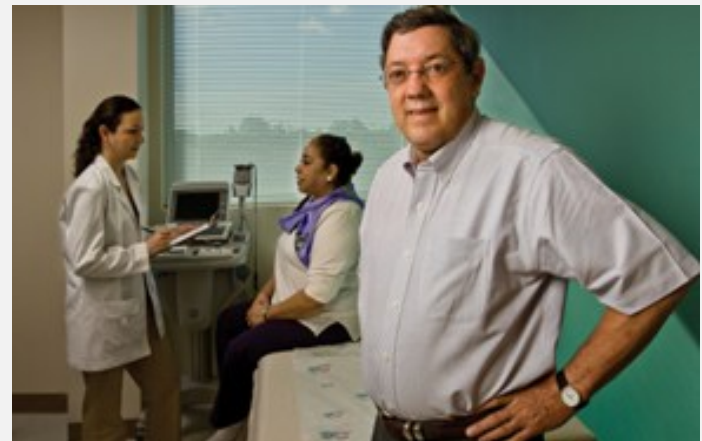
Regional Academic Health Center – Public Health

Provide population health resources to the Lower Rio Grande Valley – a region of Texas that is economically depressed with higher disease rates and fewer health care providers than the state average

- Region-wide population health research and intervention program that ranges from Brownsville to Laredo and includes three clinical research units
- Targeting region-specific health issues, including high rates of obesity and diabetes, through research and intervention programs
 - Nearly \$250M/year in lost wages due to diabetes in LRGV
 - Funding cuts will increase lost wages and health care costs (~\$8000 per patient/year)
- Integrated relationship with UT Rio Grande Valley's medical school
- The \$1.14M item was cut last session by 17.9%, request restoration of the funding



Source: Texas Department of Health, Epigram System



Non Formula Item

Service Delivery in the Valley/Border Region

Maintain successful academic programs in the Lower Rio Grande Valley/Border Region of Texas and provide this underserved population with access to educational and clinical services, including a mobile clinic

- Mobile Clinic treated 2,021 uninsured patients in 2017 and numerous well woman exams and pediatric and adult vaccinations and flu shots
- Training site for medical, public health, and nursing students – exposure to medically underserved populations
- *Frontera de salud* chapter takes quarterly outreach trips with the mobile van staff
- Conduct important research with this large and often over-looked patient population - goal of minimizing healthcare disparities
- Through telemedicine, provides patients with access to Texas Medical Center expertise at no cost
- The \$861,000 item was cut last session by 8.8%, request restoration of the funding

TMC | NEWS Mobile Medicine on the Border



HOUSTON★CHRONICLE

Houston doctors determined to reduce cervical cancer deaths in Rio Grande Valley

Non Formula Item

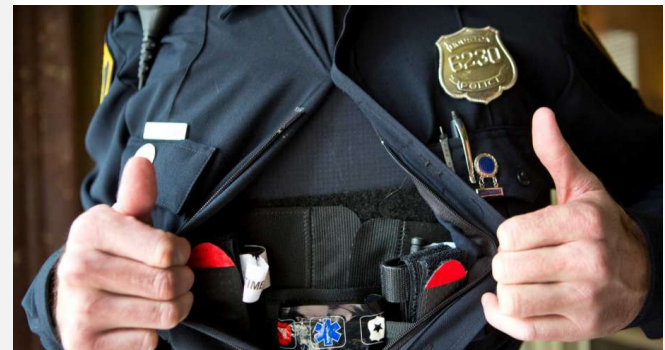
Trauma Care Research

Serve the Houston region and beyond by staffing the nation's busiest trauma center, Memorial Hermann-Texas Medical Center. Reduce the number of injury-related deaths statewide through the development of treatments and practices at the Center for Translational Injury Research, one of the nation's leading trauma care research centers

- Significantly increased trauma services (trauma volume up 30% in recent years)
- Decrease the diversion rate from 40% to 5%
- Reduced trauma mortality by 20% and laparotomy patient mortality by 62%
- 65 funded studies and clinical trials, published more than 700 unique manuscripts, submitted 19 invention disclosures resulting in two license agreements and one spin-off company
- Developed new treatments and procedures that are being adopted across the country, including a new protocol for tourniquet deployment that has resulted in a significant decrease in death from extremity bleeding
- The \$1 million item was cut last session by 8.8%, request restoration of the funding



HOUSTON★CHRONICLE
Police being armed with combat
tourniquets





**The University of Texas
Health Science Center at Houston**