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FOR
HEALTH AFFAIRS COMMITTEE**

Committee Meeting: 5/11/2016

Board Meeting: 5/12/2016
Austin, Texas

*Alex M. Cranberg, Chairman
Ernest Aliseda
David J. Beck
Jeffery D. Hildebrand
Sara Martinez Tucker*

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Convene	<i>11:15 a.m. Chairman Cranberg</i>		
1. U. T. System Board of Regents: Discussion and appropriate action regarding Consent Agenda items, if any, assigned for Committee consideration	<i>11:15 a.m. Discussion</i>	Action	122
2. U. T. Southwestern Medical Center: Report on the William P. Clements, Jr. University Hospital	<i>11:20 a.m. Report/Discussion President Podolsky Dr. John Warner, UTSWMC</i>	Not on Agenda	123
3. U. T. System: Approval of \$12.4 million from the Available University Fund to be deployed over four fiscal years to support a new U. T. System Clinical Data Network; finding that the expenditure is appropriate; and authority to substitute Permanent University Funds for Available University Funds	<i>11:30 a.m. Action Dr. Greenberg Dr. Elmer Bernstam, UTHSC-H</i>	Action	136
Adjourn	<i>12:00 p.m.</i>		

1. **U. T. System Board of Regents: Discussion and appropriate action regarding Consent Agenda items, if any, assigned for Committee consideration**

RECOMMENDATION

The proposed Consent Agenda is located at the back of the book. Consent Agenda items assigned to this Committee are on [Pages 299 - 316](#).

2. **U. T. Southwestern Medical Center: Report on the William P. Clements, Jr. University Hospital**

REPORT

President Podolsky will introduce John Warner, M.D., Vice President and Chief Executive Officer of U. T. Southwestern University Hospitals, who will report on the William P. Clements, Jr. University Hospital at U. T. Southwestern Medical Center. Dr. Warner's presentation is set forth on the following pages.

BACKGROUND INFORMATION

In 2009, former Texas Governor William P. Clements, Jr., made an unprecedented \$100 million gift to U. T. Southwestern Medical Center, the largest single gift in the institution's history. In the spirit of Governor Clements' intentions, the institution chose to use the funds to support construction of a new university hospital (approved by the Board on November 12, 2009) to replace the aging St. Paul University Hospital. The new university hospital broke ground in March 2011 on the West Campus, immediately northwest of the existing St. Paul Hospital building. The hospital is comprised of 460 patient beds, 24 operating rooms, 40 emergency rooms, endoscopy and catheterization/interventional rooms, and imaging services. The total cost for the hospital and related components was \$800 million.

On April 12, 2012, the Board of Regents approved the honorific naming of the new university hospital as the William P. Clements, Jr. University Hospital. President Podolsky briefly presented status reports of the project at the August 20, 2014 and November 5, 2015 meetings of the Board of Regents.

On December 6, 2014, the Clements University Hospital at U. T. Southwestern Medical Center opened its doors to the public, transforming medical care in North Texas and serving as a model for academic medical centers across the country. The goal of the new hospital was to bring together innovative hospital design, state-of-the-art technology, and industry best practices to create an environment that seamlessly integrates patient care with leading-edge research and medical education.

William P. Clements, Jr. University Hospital Expansion

Daniel K. Podolsky, M.D., President, U. T. Southwestern Medical Center
John Warner, M.D., Vice President and CEO, U. T. Southwestern
University Hospitals

U. T. System Board of Regents' Meeting
Health Affairs Committee
May 2016



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Clinical Strategic Plan Initiatives

- Grow faculty practice
 - Expansion of on-campus clinics
 - Develop off-campus multidisciplinary Clinical Centers
 - Initiate and grow U. T. Southwestern Clinically Affiliated Physicians (UTSCAP) as a primary care base of referral
- Expand inpatient capacity
- Develop partnership – Southwestern Health Resources
- Adapt to changing health care economics
 - Develop population health capabilities
 - Formation of U. T. Southwestern Accountable Care Network (ACN)
 - Engage in alternative payment models
 - Medicare Shared Savings Program (MSSP)
 - Medicare Advantage
 - Commercial risk-based contracts and bundles
- Explore development of a health plan

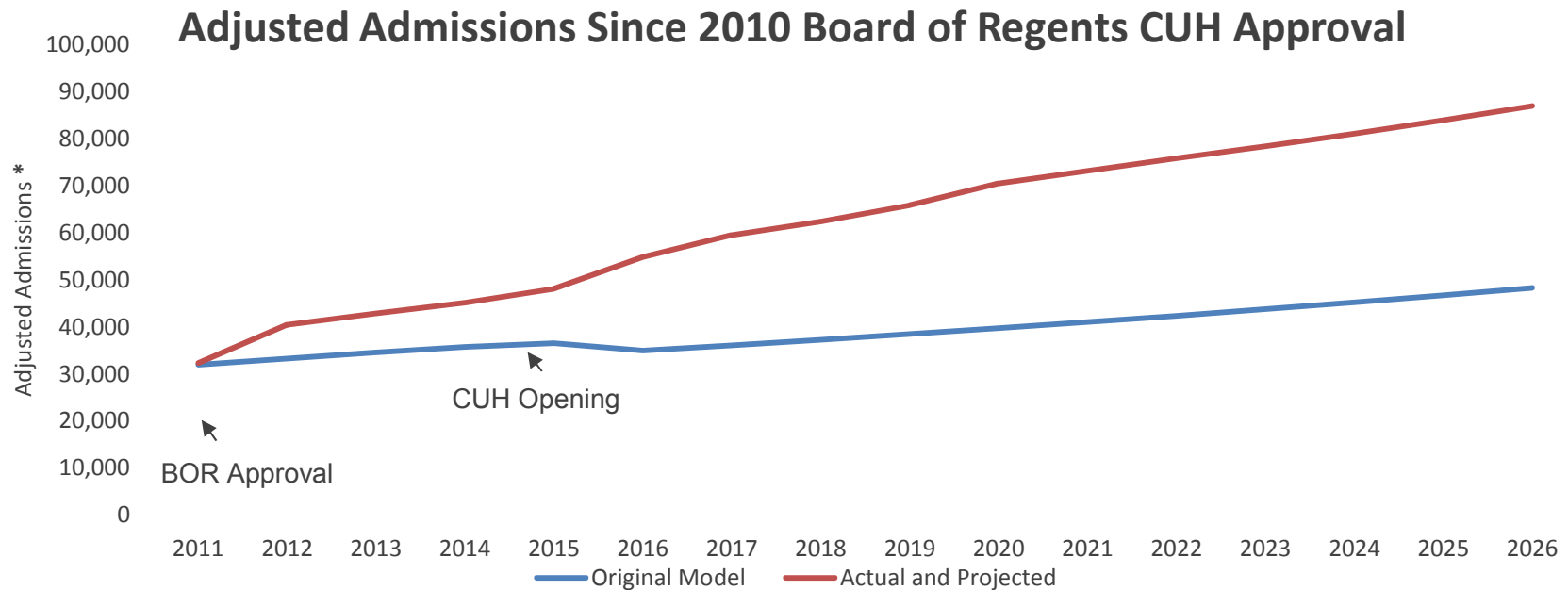


Our Current Situation: University Hospitals are Developing Capacity Constraints

- Opening of William P. Clements, Jr. University Hospital (CUH) has led to unprecedented growth across entire clinical platform
 - Community has embraced the new hospital
 - National recognition in quality and safety
- Growth being driven by increase in medical and surgical specialty care – cardiovascular disease and cancer
- Emergency Department volumes continue to grow – even after expected increase after opening
- Zale Lipshy University Hospital volume is increasing
 - Emphasis on Neuroscience programmatic growth
 - Rising tide across entire clinical enterprise



University Hospitals: Growth Has Outperformed Projections – Before and After CUH Opening

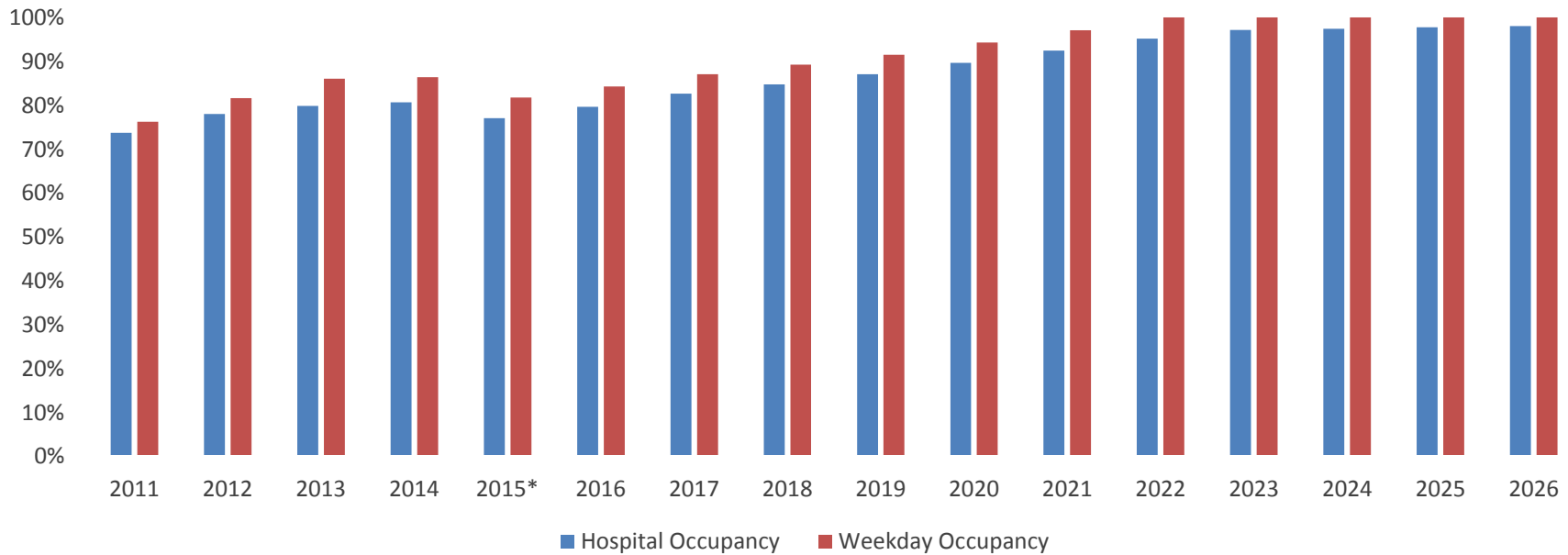


* admitted patients, patients seen for observation, and patients receiving outpatient services in the hospital



University Hospitals are Essentially Fully Occupied during Weekdays by FY 2018

University Hospitals Percent Occupancy by Fiscal Year



* CUH opened December 2014, 10 months prior to projected opening in University Hospital model



Continuing Our Growth – Proposed Expansion of Clements University Hospital

- Add third tower to existing two bed towers at CUH
- Expand CUH Emergency Department
- Add additional operating rooms and interventional suites to CUH
- Add space in existing CUH materials management building for supply chain support
- Build new CUH parking structure
- Move existing services at Zale Lipshy University Hospital to new CUH tower
- Explore alternative uses for Zale Lipshy University Hospital



The Benefits of a William P. Clements, Jr. University Hospital Expansion

- Consolidates inpatient services together in one facility, improving the quality of care, and both the patient and provider experience
- Improves operational efficiency by eliminating redundant infrastructure across two hospitals – lowers the cost of care
- Adds needed capacity to University Hospitals during a period of dynamic growth
- Establishes CUH as destination high-acuity quaternary care hospital
- Creates best-in-class multidisciplinary care models across all disciplines – located in a single facility



William P. Clements, Jr. University Hospital



Rendering of Possible Third Tower Expansion Produced During Original CUH Design Process



CUH Expansion Cost Assumptions

Project Budget Total – \$360 million

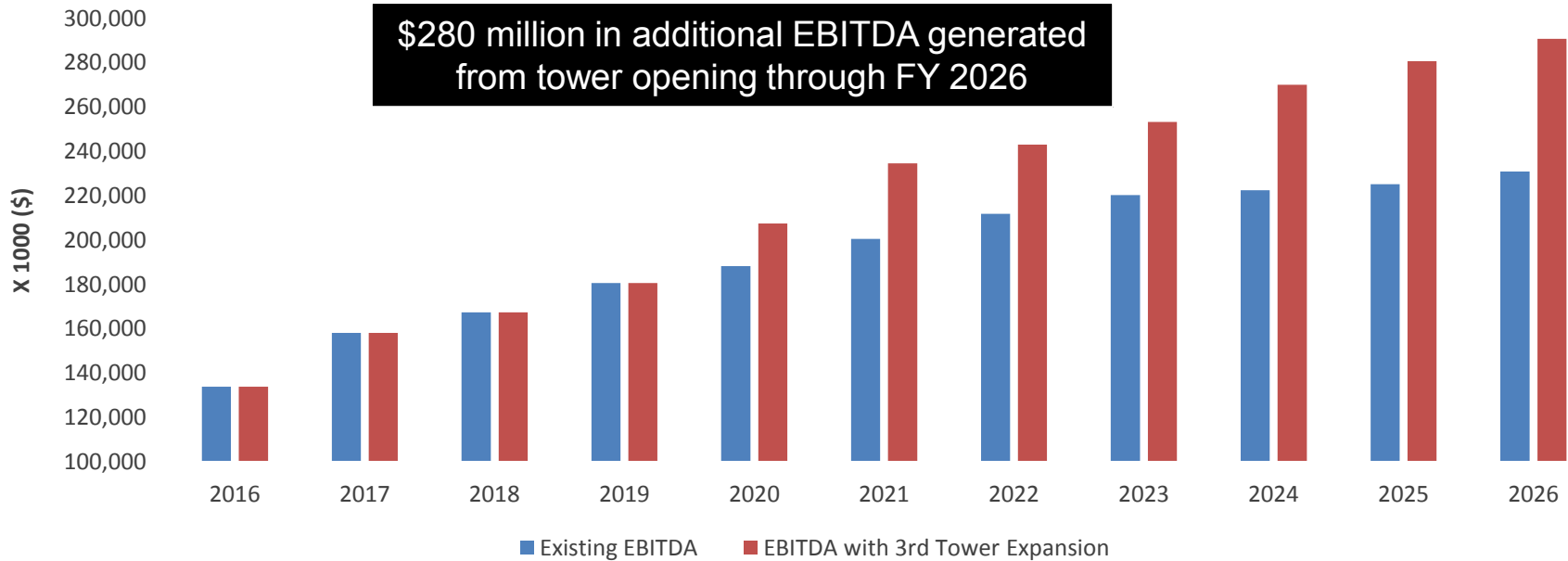
- Hospital expansion and site work – \$320 million
 - \$1.3 million estimated cost per bed (industry standard \$1.5 - \$2.0 million per bed)
 - Leverages investments made during original CUH construction to facilitate expansion at a lower cost, with minimal disruption to existing operations
- Parking structure – \$40 million
 - 1,870 parking spaces; 1,570 additional over existing surface parking
 - Budgeted at \$21,000 per space



Financial Impact – Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA)

University Hospitals EBITDA by Fiscal Year

\$280 million in additional EBITDA generated from tower opening through FY 2026



The Case for a William P. Clements, Jr. Hospital Expansion

- Improves the quality of hospital care and service
 - Having all providers in one facility improves collaboration and multidisciplinary care
 - Simpler patient experience – particularly for those admitted through the Emergency Department
- Lowers the cost of care
 - Eliminates redundancies in infrastructure, staffing, and inventory
- Positions UTSWMC as destination high-acuity hospital in region
- Prepares UTSWMC for future referrals from growth of Southwestern Health Resources network



3. U. T. System: Approval of \$12.4 million from the Available University Fund to be deployed over four fiscal years to support a new U. T. System Clinical Data Network; finding that the expenditure is appropriate; and authority to substitute Permanent University Funds for Available University Funds

RECOMMENDATION

The Chancellor concurs with the recommendation of the Deputy Chancellor, the Executive Vice Chancellor for Health Affairs, the Executive Vice Chancellor for Academic Affairs, and the Executive Vice Chancellor for Business Affairs that the U. T. System Board of Regents

- a. approve \$12.4 million from the Available University Fund (AUF) to be deployed over four fiscal years to support a new U. T. System Clinical Data Network;
- b. find that the expenditure of AUF for this purpose is appropriate in furtherance of the U. T. System's responsibility to provide oversight and coordination of the activities of the U. T. System and that benefit a broad number of the institutions of the System, in this case through a centralized clinical data network linking all U. T. System health care delivery entities into a collaborative health care enterprise model of centralized health care data; and
- c. authorize the U. T. System Associate Vice Chancellor, Controller, and Chief Budget Officer to substitute Permanent University Funds (PUF) for AUF after consultation with the Chancellor for appropriate capital expenditures.

A PowerPoint presentation is set forth on the following pages.

BACKGROUND INFORMATION

The U. T. System Clinical Data Network would benefit a broad number of U. T. System institutions. Funding for this initiative will be issued over a four-year time period and evaluated annually by the Executive Vice Chancellor for Health Affairs on the basis of high performance metrics, such as quality control reliability and low variability. Funds would be provided for technical support and capital purchases to implement this initiative.

Thirty full-time equivalent positions at the U. T. System institutions are expected to be supported by the requested funds to develop and launch the network.

At the February 10, 2016 meeting of the Board of Regents' Health Affairs Committee, Dr. Bernstam introduced a proposal to create a U. T. System Clinical Data Network.

Advance notice of this potential initiative was provided to the Legislative Budget Board as required by Rider 8, Page III-61 of the current *General Appropriations Act*.

The University of Texas System Clinical Data Network

Elmer Bernstam, M.D., M.S.E., Associate Dean for Research and Professor
U. T. Health Science Center - Houston, School of Biomedical Informatics

U. T. System Board of Regents' Meeting
Health Affairs Committee
May 2016



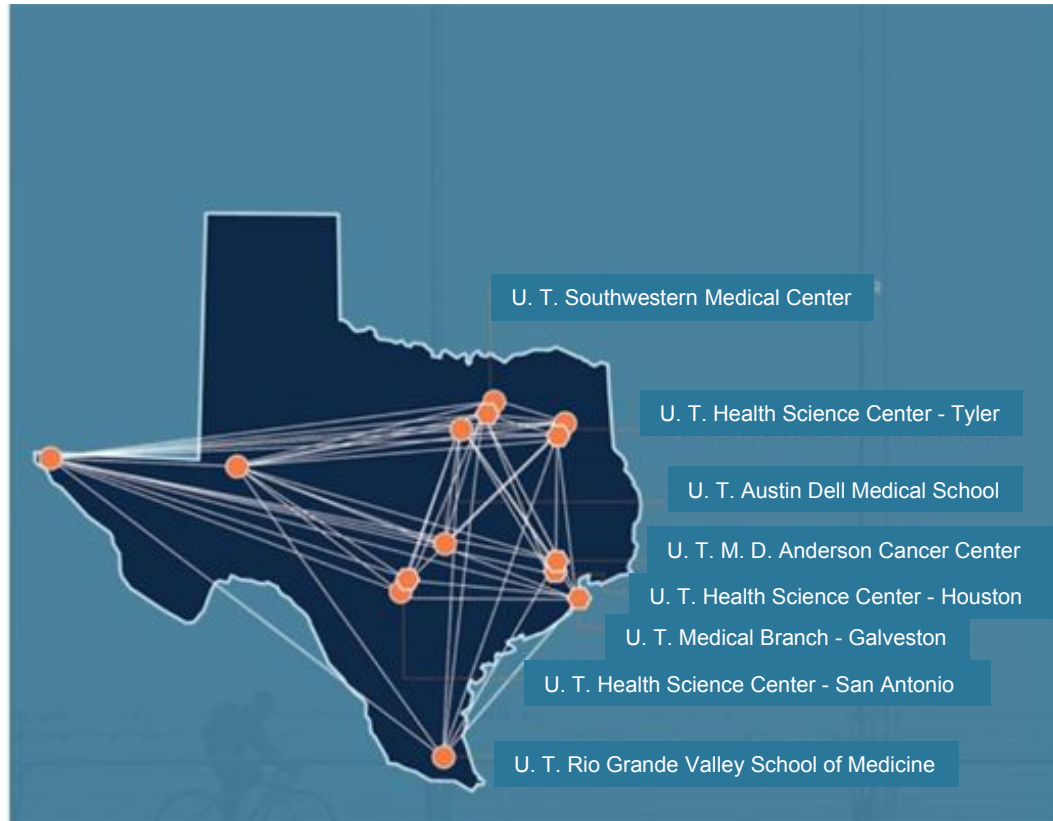
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THE U. T. SYSTEM HEALTH CARE ENTERPRISE

U. T. System will develop a collaborative health care enterprise that will leverage U. T. System's size and expertise and connect U. T. System's regional capabilities to provide Texas, the nation, and the world with the finest health care possible.



What is a Clinical Data Network?

- Electronic Health Record (EHR)
 - Transactional system for clinical use
 - Single patient queries
- Clinical Data Network (CDN)
 - Data aggregation and reporting for:
 - Research
 - Administration (support Accountable Care Organization efforts)
 - Patient safety, quality, and bio-surveillance



Components of a Clinical Data Network

- Hardware and software infrastructure
 - Informatics for Integrating Biology and the Bedside (i2b2) (data models, user interface)
- Processes and procedures
 - Extract/Transform/Load
 - Regulatory/Political: How are data accessed? By whom?
 - Necessary agreements with assurances may vary depending on the CDN Model selected and the justification for data needs (e.g., Business Associate Agreement, Data Use Agreements, Interagency Agreements)
- Data
 - Vocabularies, standards, accuracy



Progressively harder



Overview of Activities of the U. T. System Clinical Data Network (UT-CDN)

- Established key institutional contacts
- Biweekly teleconferences
- Inventory of partner institutions, data sources, and current data warehouse capabilities and resources
- Review of other statewide efforts (e.g., California, South Carolina)
- Site visits and other key personnel meetings
 - Project Diabetes Obesity Control (Project DOC), Healthcare Information and Management Systems Society national meeting in February



Overview of Activities of the UT-CDN (cont.)

- Proposal development and refinements
 - Key contact pre-meetings for final reviews at American Medical Informatics Association and Texas Regional Clinical and Translational Science Awards Consortium
- Submission to the U. T. System Office of Health Affairs



Personnel Interviewed

U. T. M. D. Anderson Cancer Center:

- John Frenzel, M.D., Chief Medical Information Officer
- George Wilding, M.D., Vice Provost, Clinical and Interdisciplinary Research and Clinical Research
- J. Jack Lee, Ph.D., M.S., D.D.S., Associate Vice Provost, Quantitative Research
- Mark Wozny, Data Governance Manager

U. T. Health Science Center - San Antonio:

- Alfredo Tirado-Ramos, Ph.D., Chief, Clinical Informatics Research Division
- Alex F. Bokov, Ph.D., Deputy Chief, Clinical Informatics Research Department
- Daniel E. Hale, M.D., Chief, Division of Pediatric Endocrinology and Diabetes
- Angela Bos, Senior Software Engineer, Epidemiology and Biostatistics

U. T. Southwestern Medical Center:

- Dipti Ranganathan, Associate Vice President Academic and Administrative Information Systems
- Teresa Bosler, P.M.P., Project Manager
- Melody Bell, Assistant Vice President, Academic information Systems
- Jennifer Cai, Information Resources Manager, Academic Information Systems
- Phillip Reeder, Senior Database Analyst, Academic Information Systems

U. T. Medical Branch - Galveston:

- Jonathan Starkey, M.D., Ph.D., Assistant Professor, Director of Health Informatics, Institute for Translational Sciences
- Michael J. King, Director of Enterprise Information Security

U. T. Rio Grande Valley:

- Joseph B. McCormick, M.D., M.S., Regional Dean, James H. Steele Professor

U. T. Health Science Center - Tyler:

- John Yoder, Vice President of Technology & CIO
- Thomas Belt, M.D., Professor of Medicine and Co-Chief Medical Information Officer
- Michael Sammons, Database Analyst

U. T. Austin:

- William Tierney, M.D., Professor and Chair of Population Health (Interim)

U. T. System:

- Patricia D. Hurn, Ph.D., Vice Chancellor for Research and Innovation, Health Affairs
- Lynda Chin, M.D., Associate Vice Chancellor for Health Transformation and Chief Innovation Officer, Health Affairs



1. Architect a hybrid-federated model based on open standards

- Each site wants to retain ownership of locally-stored data
 - Federated model allows flexibility
 - May need a centralized index of all information depending on use case
- Use existing tools where possible
 - Supports open data standard mappings, which are EHR independent
 - i2b2, Shared Health Research Informatics Network (SHRINE), and Patient-Centered Outcomes Research Institute ontology

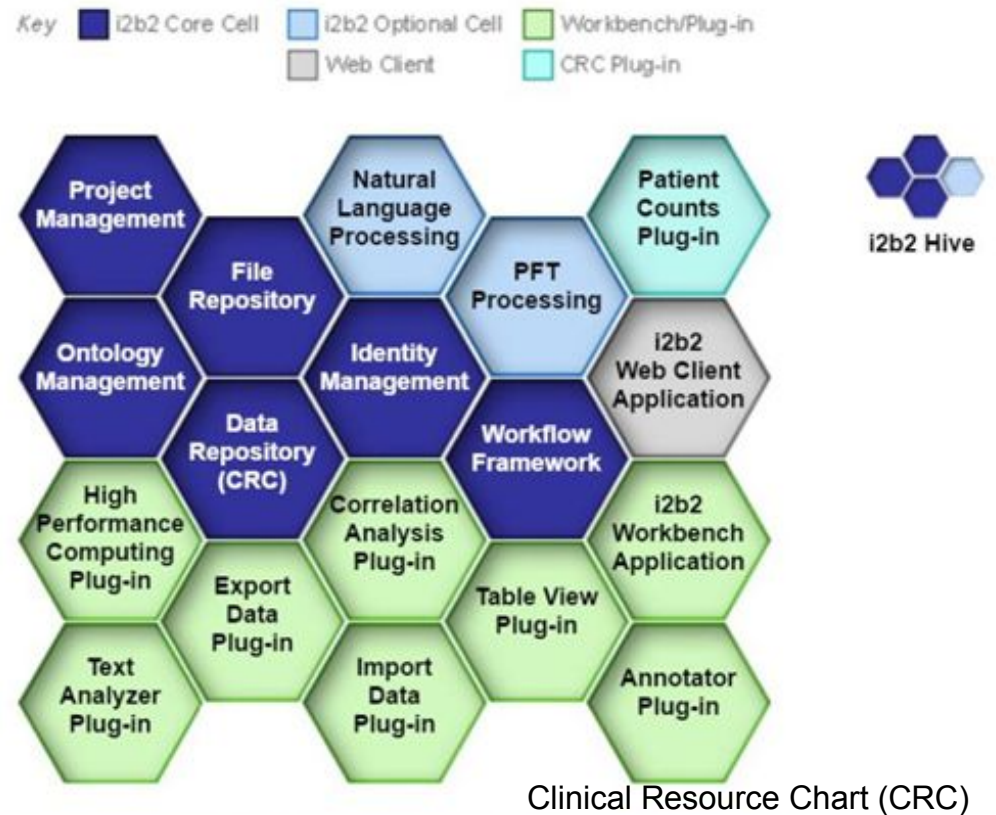


1. Architect a hybrid-federated model based on open standards (cont.)

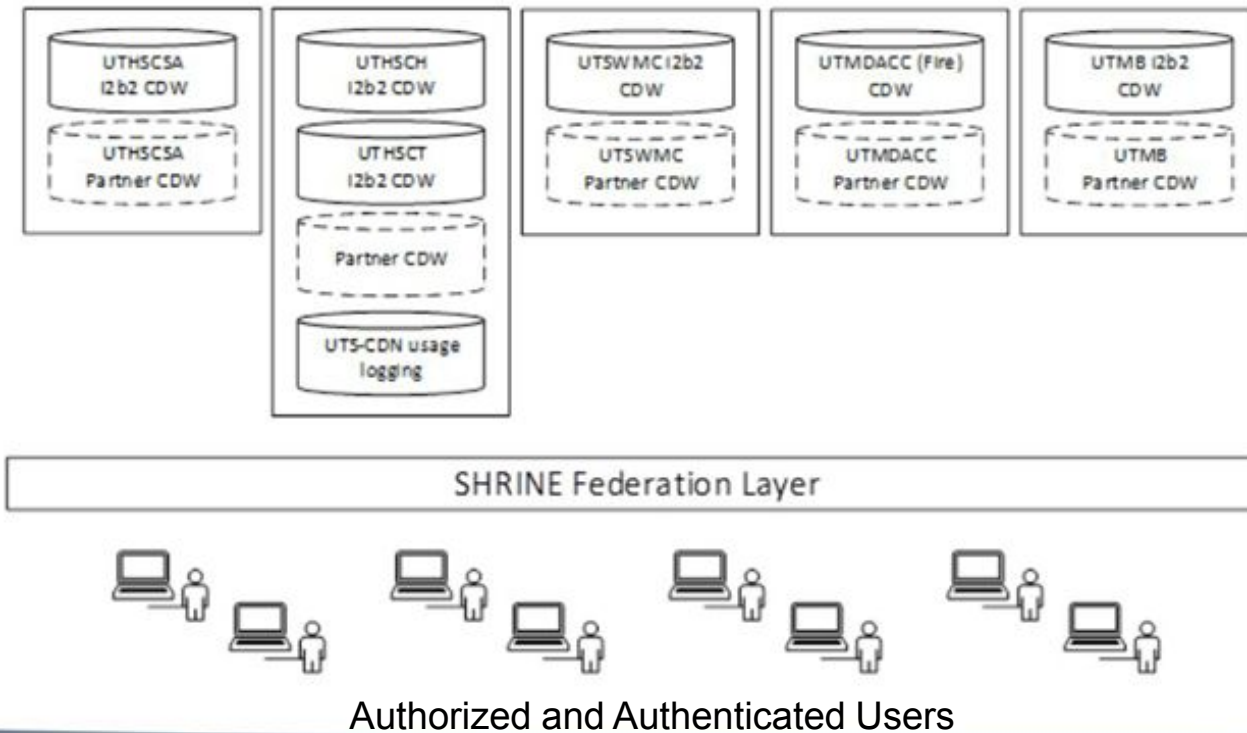
i2b2

- Exists at four Texas Clinical and Translational Science Awards institutions (UTSWMC, UTHSCH, UTHSCSA, UTMB)
- Basis for the University of California Research Exchange

<https://www.i2b2.org/software/index.html>
 Accessed 4/6/2016



1. Architect a hybrid-federated model based on open standards (cont.)



Clinical Data Warehouse (CDW)



2. Create governance with key leaders, including institutional partners

- Executive
- Clinical and technical operations
- Data standards and harmonization
- Analytics and research
- Regulatory/Compliance
- Security
- External advisory committee



3. Take a phased approach that prioritizes early utility

- Phase 1: Existing administrative data
- Phase 2: Additional structured data
- Phase 3: Expanded data



4. Pick one to three compelling use cases that leverage(s) the UT-CDN capabilities

- Use cases must have a strong individual leader (champions)
- Balance with administrative, clinical, and research examples
- Utilize proven change management approaches to ensure adoption



5. Leverage scarce expertise across institutions

- Utilize current expertise; develop recruitment and development plans for data scientists
- Coordinating center based at UTHSCH; resources will need to be mobile
- Develop methods to share common tools and processes



6. Establish administration and management structure with a Coordinating Center

- Executive – Associate Vice Chancellor of Health Analytics
- Coordinating Center
 - Director
 - Finance staff
 - Project Management staff
 - Operations staff
 - Technical staff



7. Develop a sustainability model based on improved clinical operations and research competitiveness

- Clinical operations
- Research operations
- Direct grant and philanthropy
- Commercial entities (possible)



UT-CDN Available University Funds (AUF) Initiative Budget 2016 – 2019

AUF Net Position per activity	FY 2016 estimated	FY 2017 estimated	FY 2018 estimated	FY 2019 estimated
Beginning Balance (AUF)	\$ -	\$ 11,282,241	\$ 6,920,333	\$ 2,919,184
Allocations (AUF)	\$ 12,400,000	\$ -	\$ -	\$ -
Less Expenses (AUF)	\$ (1,117,759)	\$ (4,361,908)	\$ (4,001,149)	\$ (2,919,184)
AUF Net Position – End of Year	\$ 11,282,241	\$ 6,920,333	\$ 2,919,184	\$ -

