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FOR
HEALTH AFFAIRS COMMITTEE**

Committee Meeting: 11/4/2015

Board Meeting: 11/5/2015
Austin, Texas

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

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| Convene | 9:00 a.m. <i>Chairman Cranberg</i> | | |
| 1. U. T. System Board of Regents: Discussion and appropriate action regarding Consent Agenda items, if any, assigned for Committee consideration | 9:00 a.m. Discussion | Action | 241 |
| 2. U. T. Health Science Center - San Antonio: Request to retain the Master of Science in Immunology and Infection degree program | 9:05 a.m. Action <i>President Henrich Dr. Greenberg</i> | Action | 242 |
| 3. U. T. Health Science Center - San Antonio: Approval to establish a Doctorate of Occupational Therapy degree program in the School of Health Professions | 9:15 a.m. Action <i>President Henrich</i> | Action | 244 |
| 4. U. T. Health Science Center - Houston: Discussion and appropriate action regarding proposed change in tuition and fee rates for out-of-state students in the School of Biomedical Informatics online Master of Science degree program in Health Informatics | 9:25 a.m. Action <i>President Colasurdo Dr. Greenberg</i> | Action | 249 |
| 5. U. T. System: Report and appropriate action on telemedicine across Texas | 9:40 a.m. Report/Discussion <i>President Callender and Dr. Alexander Vo, UTMB</i> | Not on Agenda | 251 |
| Adjourn | 10:00 a.m. | | |

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 321 - 342.

2. **U. T. Health Science Center - San Antonio: Request to retain the Master of Science in Immunology and Infection degree program**

RECOMMENDATION

The Chancellor concurs in the recommendation of the Executive Vice Chancellor for Health Affairs and President Henrich that the Master of Science in Immunology and Infection, a formerly low-producing degree program in the Graduate School of Biomedical Sciences, be retained.

BACKGROUND INFORMATION

Senate Bill 215, passed into law by the 83rd Texas Legislature in 2013, shifted the authority to consolidate or eliminate a degree program from the Texas Higher Education Coordinating Board to the governing boards of Texas public institutions of higher education. However, the Coordinating Board may recommend such action for a program it identifies as a low-producing program for three or more consecutive years.

The Master of Science in Immunology and Infection (M.S. I and I) program at U. T. Health Science Center - San Antonio was recently identified by the Coordinating Board as a low-producing program because it had graduated fewer than 15 students over the previous five-year period. The M.S. I and I program was initially established in 1970 as an exit master's degree for students admitted to and enrolled in the doctorate program in immunology and infection, and the graduation numbers during the five-year period reviewed by the Coordinating Board reflect historical enrollment and completion trends. U. T. Health Science Center - San Antonio addressed the low-productivity of the M.S. I and I program before the program was recommended for closure by the Coordinating Board, and the newly redesigned program was approved by the Coordinating Board in July 2014.

The institution's Chief Academic Officer collaborated with the Dean and faculty of the Graduate School of Biomedical Sciences to obtain approval for the reinstatement of the M.S. I and I program, which had previously been included in a consolidation of biomedical science degree programs, as a stand-alone master's degree program that would provide classroom and laboratory training in fundamental science principles that link immunology and microbial infection. The action plan to ensure the M.S. I and I program remains sustainable is based on a fully revised and more relevant curriculum that encompasses targeted student recruitment, retention, and timely graduation strategies. The redesigned program is the only master's level microbiology and immunology program at a health science center in the State of Texas.

Active monitoring allowed the institution to address the program's student enrollment issues. With approval to implement the revised program, the Graduate School of Biomedical Sciences and the Department of Microbiology and Immunology in the School of Medicine successfully collaborated during the 2014-2015 academic year to generate high interest in the new curriculum, which enrolled a cohort of 26 students in August 2015.

The curriculum design in the reinstated program differs significantly from that of the former program, which had been created as a specialty evening program for public school teachers. The redesigned program integrates the fields of immunology and infectious disease, such as

microbiology, to provide a big-picture multidimensional view of host-pathogen relationships and will produce graduates who are prepared to contribute solutions to the challenges facing biotechnology research and development industries, health care infrastructure, and teaching needs. The revised program also has sustainable student appeal with a new curriculum designed to allow students to prepare for high demand jobs in the state's \$75 billion biotechnology industry.

U. T. Health Science Center - San Antonio anticipates that graduates from the two-year program will compete more effectively for entry-level, mid-level, and leadership positions in research and clinical laboratories, as well as in the teaching workforce. With the San Antonio and Austin areas representing a center of rapid growth in the Texas biotech industry, increased employment opportunities are expected to make the redesigned program attractive to a vast array of individuals wishing to become candidates for either research or clinical laboratory positions in Texas and nationwide. Alternatively, graduates will have the educational experiences, insights, and academic credentials that might encourage them to pursue degrees in doctoral or medical programs.

Faculty at U. T. Health Science Center - San Antonio are committed to recruiting highly qualified candidates to the program. Each year, more than 4,000 students graduate from Texas institutions with undergraduate degrees in the biological sciences. This healthy pool of potential candidates will help the program maintain annual enrollments of approximately 15 - 25 students and graduate 8 - 15 students per year through the life of the program.

The M.S. I and I program's inclusion on the Coordinating Board's roster of Low Producing Programs has resulted in desirable curricular examination and redesign and will incur only a time-limited period of enrollment and graduation metrics transition toward improved outcomes. Following action by the U. T. System Board of Regents, U. T. Health Science Center - San Antonio will see that the revised master's degree in immunology and infection remains sustainable.

3. **U. T. Health Science Center - San Antonio: Approval to establish a Doctorate of Occupational Therapy degree program in the School of Health Professions**

RECOMMENDATION

The Chancellor concurs in the recommendation of the Executive Vice Chancellor for Health Affairs and President Henrich that authorization, pursuant to the Regents' *Rules and Regulations*, Rule 40307, related to academic program approval standards, be granted to

- a. establish a Doctorate of Occupational Therapy degree program in the School of Health Professions at U. T. Health Science Center - San Antonio; and
- b. submit the proposal to the Texas Higher Education Coordinating Board for review and appropriate action.

BACKGROUND INFORMATION

Program Description

U. T. Health Science Center - San Antonio seeks approval to transition its current 30 month entry-level Master of Occupational Therapy (MOT) degree program, which will be phased out, to a 3-year entry-level Doctorate of Occupational Therapy (OTD) degree program starting in Summer 2017. Students enrolled in the MOT program will finish the MOT degree plan and will not transition to the OTD program. This entry-level professional doctorate program will provide in-depth and advanced doctoral level occupational therapy education so that graduates will have satisfied the prerequisites to apply for licensure as registered occupational therapists (OTs). The program will uniquely provide OTD graduates with the interprofessional, communication, clinical, technological, research, and leadership skills needed for advanced practice in the complex health care environment.

The OTD program will consist of 114 semester credit hours at the doctoral level to include all coursework, fieldwork, and doctoral experiential work taken over 36 months. All students graduating from the proposed OTD program will have 1,065 clock hours of embedded clinical experience. These clinical hours are contained with the fieldwork coursework.

Because this entry-level OTD program will not require completion of a MOT degree as an admission requirement, it will be more efficient and comprehensive for students as compared to completing an MOT degree and then a post-professional OTD degree. The total number of hours required for U. T. Health Science Center - San Antonio OTD will also be less than the total required for a typical MOT plus post-master's OTD track. There are no other entry-level OTD programs in Texas at this time, so there is no opportunity to make comparisons with peer programs in the state. However, a review of developing and accredited entry-level OTD programs across the country as listed by the Accreditation Council for Occupational Therapy Education indicate a range from 95 to 134 semester hours (total) for these entry-level OTD programs. Thus, the proposed program at U. T. Health Science Center - San Antonio is within the credit hour range seen at other entry-level OTD programs and less than seen when the master's degree in OT is combined with a post-master's OTD.

Transitioning U. T. Health Science Center - San Antonio's MOT degree program to an entry-level OTD program, where doctoral level education is expected at onset, will provide the needed specialized curricular content and more realistically reflect the level of training needed by the program graduates. The Occupational Therapy faculty members at U. T. Health Science Center - San Antonio have carefully evaluated curricular needs for the OTD program and have designed a program that is cost-efficient and unique for the needs of the state and South Texas communities. In terms of time to degree completion, implementation of the OTD at U. T. Health Science Center - San Antonio, using a wholly redesigned curriculum from the existing MOT, will only require students to spend one additional semester in training (as compared to the current MOT).

Need and Student Demand

Occupational Therapy is one of the most utilized allied health professions with 108,800 occupational therapists nationwide (*U.S. Bureau of Labor Statistics, 2012*). Occupational therapists help people of all ages participate in the things they want and need to do through the therapeutic use of everyday activities." The American Occupational Therapy Association uses this 2015 description for the field: "Unlike other professions, occupational therapy helps people function in all of their environments (e.g., home, work, school, community) and addresses the physical, psychological, and cognitive aspects of their well-being through engagement in occupation." Based on patients' needs and skills, OTs use evaluation and intervention to improve measurable functional outcomes. OTs provide services within hospitals, home health, outpatient clinics, extended care facilities, and in educational settings. They serve individuals with a variety of disabilities, including autism, traumatic brain injury, stroke, mental illness, spinal cord injuries, hand injuries, and developmental disabilities.

The market demand for occupational therapy is rising with a corresponding demand for occupational therapy graduates to have entry-level competencies and skills at a higher level than in the past. According to the U.S. Bureau of Labor Statistics' *Occupational Outlook Handbook 2013-14*, employment of OTs is anticipated to grow by 29% between 2012 and 2022. This increased need of 32,800 (from 113,200 to 146,100 OTs) identifies a growth rate above that of other professions and contributes to the shortage of OTs. Employment prospects for qualified OTs have increased in all settings (hospitals, nursing homes, private clinics, home health, schools, and specialized treatment settings); thus identifying a shortage in all employment settings (*U.S. Bureau of Labor Statistics, 2012*). By 2020, home health care jobs are expected to increase by 81%, and hospitals are expected to add new jobs at a rate of 17%, including occupational therapy (*Henry Kaiser Family Foundation, 2011*). Likewise, shortages of OTs in pediatric settings exist and more will be needed due to the increased number of children with disabilities needing occupational therapy intervention (*Bureau of Labor Statistics, 2010-2011; National Coalition on Personnel Shortages in Special Education and Related Services, 2006*).

Specifically, advanced training and education at the doctoral level is increasingly needed to prepare OTs with the knowledge, skills, and abilities needed to function in complex medical environments and to care for patients with serious physical, learning, language, or behavioral disabilities, such as neuromuscular disease (e.g., muscular dystrophy, cerebral palsy), cognitive disorders (e.g., Alzheimer's disease, brain injury), vision or hearing impairments, physical disorders (e.g., deformity, spinal cord injury, polytrauma) and chronic disease (e.g., stroke, cancer, heart disease). In particular, the South Texas health care environment requires that

OTs be equipped with these advanced skills needed for independent, unsupervised practice upon graduation, requiring skills and leadership beyond what can be provided in a traditional master's degree OT program. Current master's degree programs in occupational therapy are constrained by their curricular limits to add these content areas referenced above to their program design.

The recent and sustained history of student demand and enrollment indicates that there will be a continued high student demand for the proposed OTD program. Dr. Jane Case-Smith, from the Ohio State University, was an External Reviewer for the MOT graduate program review in February 2014. In her report she stated, "The program admits very high level students who appear motivated and perform well. The student outcomes are positive with very high success in fieldwork and employment. The students evaluate the program to be very good to excellent, particularly in important indicators. An important and somewhat unique asset of the San Antonio program is the diversity among the students and the number of men in the program. It is outstanding that the program has been able to consistently attract these high level students who represent the region, and upon graduation, practice in the communities of San Antonio."

Student interest in occupational therapy and the University's program is demonstrated by the number of applicants to the program. Over the last three (3) years, the average number of applicants has been over 350. The 2014 incoming class of 40 had an average prerequisite GPA of 3.6. Additionally, a 2014 survey of applicants to the University's MOT program revealed that 93% agreed to the benefits of having an OTD degree over an MOT degree. Similarly, 72% of applicants stated that they would select an OTD program (that is longer) over a MOT program.

The MOT program at U. T. Health Science Center - San Antonio has had a retention rate of 95% over the last three years. Between Academic Years 2011-2013, all graduates (100%) passed the National Board for Certification in Occupational Therapy Examination within 12 months of completing the program. A majority of the graduates chose to practice in Texas after graduation with 91% of 2013 graduates licensed in Texas.

Program Quality

The Department of Occupational Therapy has six full-time faculty members, three are tenured; five have earned doctorates; and one is enrolled in a doctoral program. All six faculty members are licensed OTs in the State of Texas. These six faculty members will be assigned exclusively to the OTD program, because it will replace the MOT program, which will be phased out. One additional faculty member will be requested to provide assistance with the increased curriculum requirements associated with a doctoral program.

When external reviewer Dr. Case-Smith evaluated the occupational therapy program at U. T. Health Science Center - San Antonio in 2014, she stated that "the Occupational Therapy faculty members are very strong; each is an expert in his or her teaching areas and each is an outstanding teacher. The faculty members also have accomplished scholarship and are active in service to the University and community. They have built positive relationships with other departments. They are invested in being a team and are supportive of each other. They appear to have a strong vision of how to serve the community. They have built and they deliver a very strong curriculum; they seem highly committed to the teaching mission. They appear to care deeply about education and about student outcomes and are highly dedicated to teaching."

The Occupational Therapy faculty members have the expertise and qualifications required to provide the theoretical and clinical basis to graduate qualified OTs and to provide evidence-based practice in South Texas, the State of Texas, and nationally. The faculty members' theoretical and clinical expertise is strong and covers diverse areas of practice, which supports excellence in student preparation. As noted, five faculty members are doctoral-trained and one is currently enrolled in a doctoral program. All have clinical experience in occupational therapy. The faculty members are highly collaborative in developing an educational vision to support a comprehensive OTD curriculum.

Specialization areas of the faculty support and are aligned with the proposed course offerings. Each faculty member has expertise in areas of occupational therapy, research, and practice that will support the mission of the OTD program and the respective scholarly and research activities. All have actively participated in publications and presentations.

Revenue and Expenses

| Projected Enrollment | 5-Year Total |
|--|---------------------|
| Number of Students Used for Formula Funding Calculation ¹ | 194 |
| Total Number of Students ² | 200 |
| Expenses | 5-Year Total |
| Faculty | |
| Salaries (reallocating all current faculty, one new hire) ³ | \$3,157,023 |
| Benefits | \$820,826 |
| Staff and Administration | |
| Administrative Staff Salaries (reallocation of current staff) ³ | \$251,725 |
| Staff Benefits | \$65,449 |
| Other Expenses | |
| Supplies, materials, and equipment | \$2,500 |
| Total Expenses | \$4,297,523 |
| Revenue | 5-Year Total |
| From Student Enrollment | |
| Formula Funding ⁴ | \$4,129,955 |
| Total Tuition and Fees ⁵ | \$8,111,361 |
| Total Revenue | \$12,241,316 |

¹Includes attrition.

²Includes all unduplicated headcount.

³While faculty and staff are being reallocated, their current funding source is not reallocated since it is based on MOT program income.

⁴Formula funding amounts are based on Program Y2 FTSE (2 full cohorts) of 136.6 for Y3-4. Program Y5 formula funding is based on the FTSE of 184.1 in Y4 (3 full cohorts, only up to 99 credits).

⁵Total Tuition and Fees include all tuition and fees charged to each student, including statutory, designated, differential, and deregulated differential tuition.

Coordinating Board Criteria

The proposed program meets all applicable Coordinating Board criteria for new doctoral degree programs.

4. **U. T. Health Science Center - Houston: Discussion and appropriate action regarding proposed change in tuition and fee rates for out-of-state students in the School of Biomedical Informatics online Master of Science degree program in Health Informatics**

RECOMMENDATION

The Chancellor concurs in the recommendation of the Executive Vice Chancellor for Health Affairs and President Colasurdo that the U. T. System Board of Regents approve the proposed change in tuition and fee rates for out-of-state students in the School of Biomedical Informatics online Master of Science degree in Health Informatics. More specifically, U. T. Health Science Center - Houston requests approval to transition from charging the current Alternate Delivery Fee (Fee) of \$750 per semester credit hour (SCH) flat fee to the currently approved nonresident tuition rate of \$736/SCH, effective Summer 2016.

BACKGROUND INFORMATION

The U. T. School of Biomedical Informatics at Houston (School), the only freestanding school of biomedical informatics in the country, seeks to expand enrollment of out-of-state students as part of its overall effort toward enhancing its national reputation and standing. The School's Master of Science degree in Health Informatics includes a fully online option. The online program offered to out-of-state students is self-supporting, and these students are not reported for purposes of State funding. The School has appropriately charged these students the approved Fee of \$750/SCH rather than tuition. This proposal will eliminate the Fee and apply the current nonresident tuition rate of \$736/SCH.

Proposal

Participation in the Southern Regional Education Board's (SREB) Academic Common Market (ACM) requires students be charged "tuition" rather than "fees." The School would like to participate in the SREB's ACM to expand out-of-state enrollment. The ACM is a tuition savings program within the 16 states served by the SREB that operates on the premise that if public institutions of higher education in a student's home state do not offer a degree program major (at the undergraduate or graduate level) that a student intends on pursuing, that student may attend a participating institution offering the degree of interest by applying through the ACM and be granted a waiver of out-of-state tuition charges. The SREB will not permit the School to participate in the ACM until the Fee has been replaced with charging tuition.

Out-of-state students in other SREB states who successfully petition to enroll in the School through the ACM would qualify for the waiver and be charged tuition at the currently approved resident rate of \$231/SCH. Out-of-state students from outside the SREB region who do not qualify for the ACM will benefit from a \$14/SCH savings (or a savings of approximately \$336 per year based on full-time student status).

The Fee of \$750/SCH will be deleted upon approval of this change effective Summer 2016.

Estimated Net Revenue from Proposed Changes

None

Intended Application of Additional Tuition Funds

Not applicable

Estimated Effect on the Affordability of Biomedical Informatics Education

The proposal will reduce tuition for affected students. This transition will provide a savings for out-of-state students who successfully apply for and receive a tuition waiver through the ACM of over \$12,000 per year (based on full-time status of 24 SCH per year). Out-of-state students who do not qualify for participation in the ACM through the SREB would save \$336 per year (based on full-time status of 24 SCH per year).

Evidence of Consultation with Students, Faculty, and Staff regarding Proposed Changes

These specific changes have not been discussed with the School's students. However, in prior discussions, any opportunity to maintain or decrease the current tuition rates has been met with favor.

Resident and Nonresident Comparison and Rationale

| TUITION | | RATIONALE |
|----------------------------------|---|--|
| SCHOOL OF BIOMEDICAL INFORMATICS | | Change from a flat fee to the currently approved nonresident rates will allow the School to attract more out-of-state students through participation in the ACM. |
| RESIDENT | NONRESIDENT | |
| Statutory Tuition: \$50 | Statutory Tuition: \$440 | |
| Designated Tuition: \$131 | Designated Tuition: \$46 | |
| Differential: \$50 | Differential Tuition: \$250 | |
| No Change to Tuition | Transitioning from a flat fee of \$750/SCH to the currently approved rates above reduces the cost by \$14/SCH No Change to Tuition | |

5. **U. T. System: Report and appropriate action on telemedicine across Texas**

REPORT

President Callender and Alexander Vo, Ph.D., Vice President for Telemedicine and Health Services Technology at U. T. Medical Branch - Galveston, will report on the status of telemedicine in Texas. A PowerPoint presentation is set forth on the following pages.

Breaking Down Barriers to Health: Telemedicine and Access to Care

David L. Callender, M.D., M.B.A., F.A.C.S.

President

Alexander Vo, Ph.D.

Vice President, Telemedicine and Health Services Technology

U. T. System Board of Regents' Meeting

Health Affairs Committee

November 2015



Health and Health Care 2025-2030

Major Elements:

- **Everywhere care:** Shifting care to lower-cost sites, including the home
- **Wellness and prevention:** Shifting the focus from disease management toward disease prevention
- **Personalized care:** Shifting from mass generalization to mass customization and precision
- **Technology-driven health solutions:** Shifting toward greater use of predictive analytics, smart health care devices, and novel healthcare networks based in social media applications to improve decision support for patients and providers

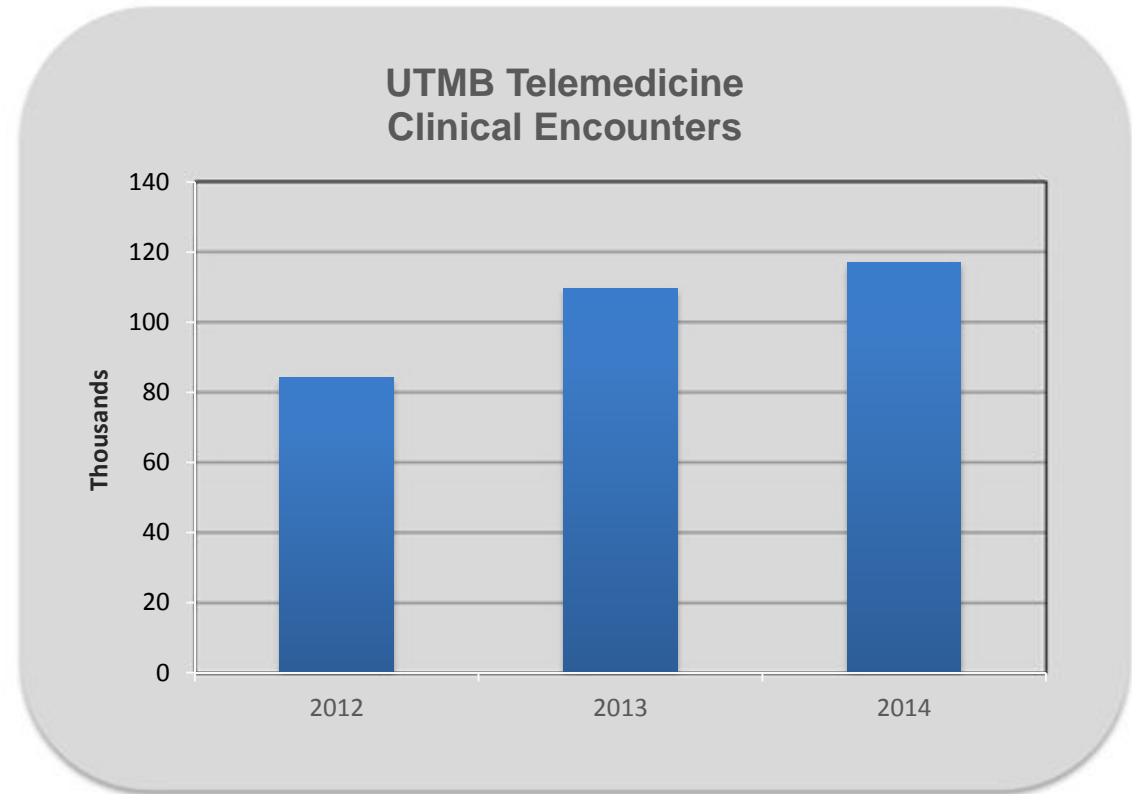
Major Outcome:

- Health care will become connected to daily life through improved application of health technologies (Telehealth)



U. T. Medical Branch - Galveston Telemedicine Today

- Piloted in 1994 in Correctional Managed Care (CMC)
- Increased access, improved outcomes, and reduced costs
- Expanded to rural areas, schools, underserved populations, Antarctic operations, cruise and offshore industries, and corporate health
- In FY14, more than 119,000 encounters
- Vision: Telemedicine as part of a comprehensive care system that provides a medical “home” for all, despite circumstance or location



Where Can We Go From Here?

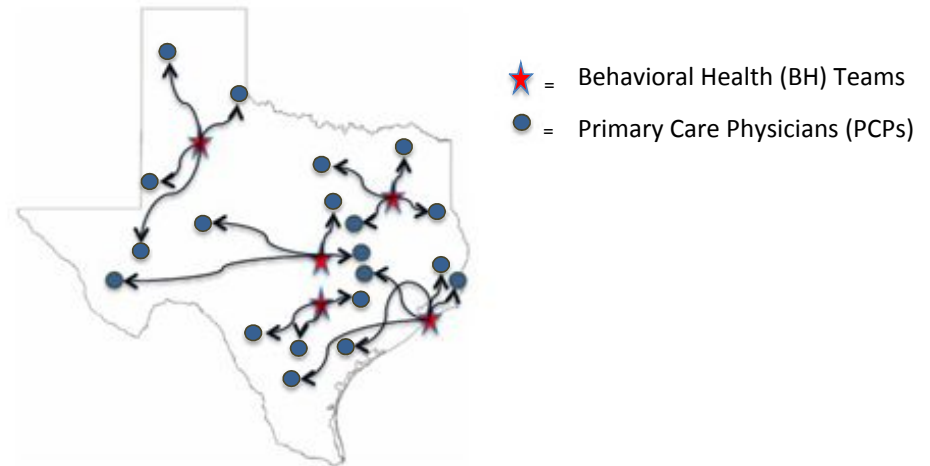
Telemedicine Models

Clinical delivery models:

- Employer-based
- School-based
- Insurer-based
 - Per member per month
 - Per employee per month or per beneficiary per month
- Concierge
 - Providers to consumers – in homes
 - Selected populations
 - Your wellness
- Community integrated care
- Urgent care/Emergency Department (stroke, trauma)

Telehealth Models

Care management
Patient monitoring
Population health management



Opportunity for Integrated Community Care: Concept

Basic premise: Virtual embedment/co-location of BH provider team to support PCPs who provide services to patients with complex medical and BH issues using telemedicine

Two distinct evidence-based models of care:

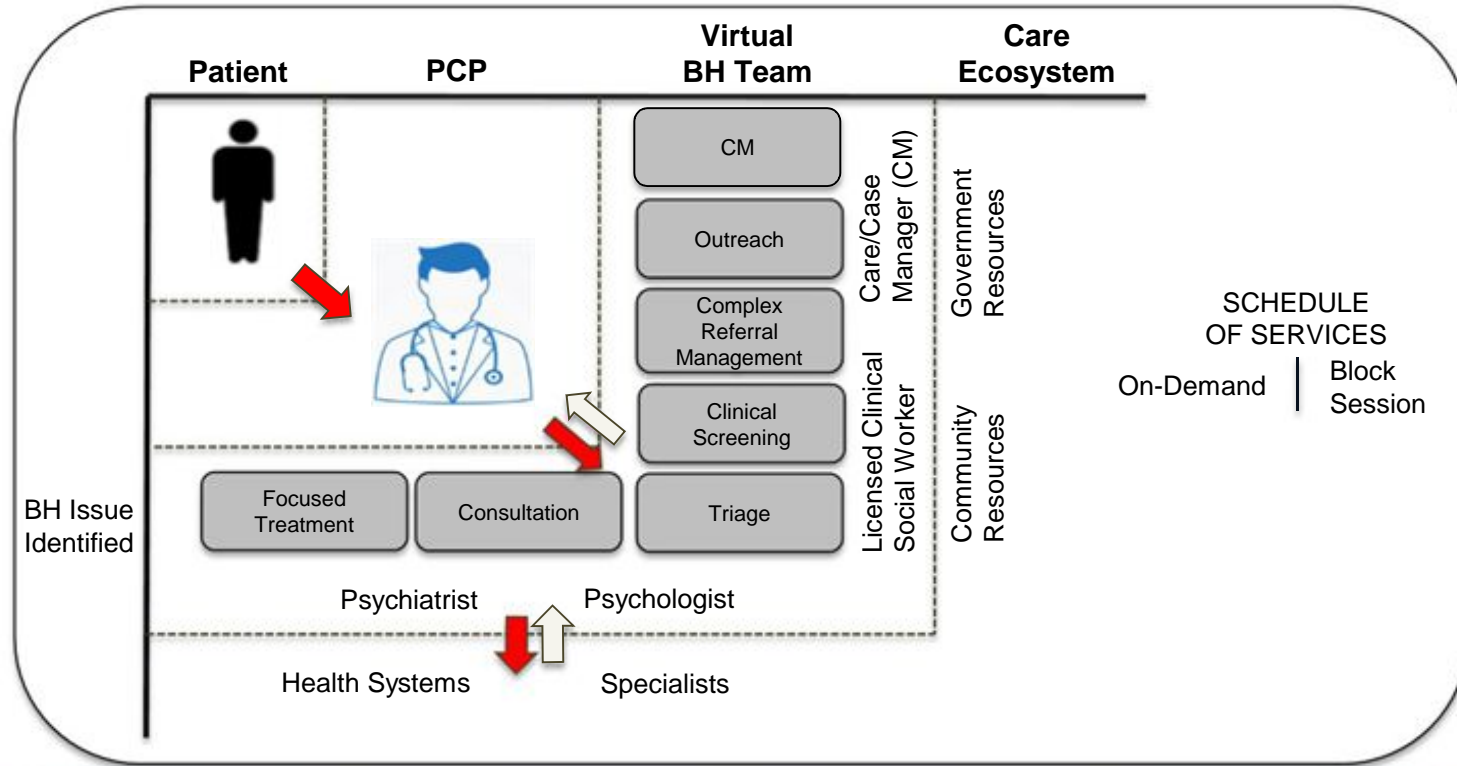
- 1) BH treatments integrated within primary care settings
 - Increased access, improved quality, decreased costs, improved disease specific conditions (depression), and general functional outcomes
- 2) BH treatments via telemedicine
 - Has shown equivalency to “in-person” for outcomes

Unique advantage:

- Workforce multiplier
- Physical health - Behavioral health integration
- Team-based approach to treatment
- Establishes true medical home with PCP
- Agility (adding other services)



Integrated Community Care: Design



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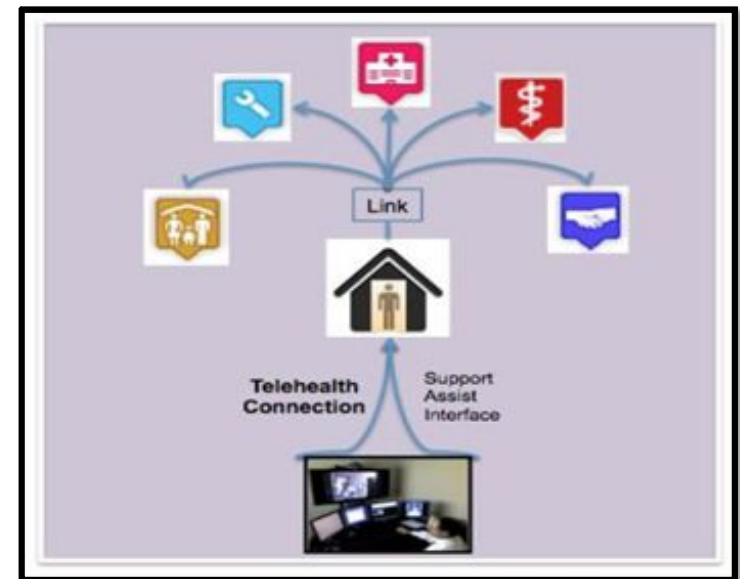
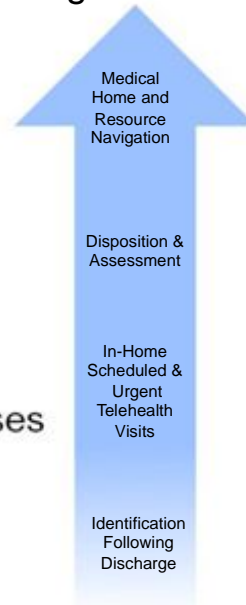
Opportunity for Telehealth Care Management

Telehealth Care Management Model: Virtual Approach

Basic premise: Use of low-to-mid-level care management to support clinical providers to manage patients with complex medical issues using telehealth

Unique advantages:

- Optimizes clinical resources
- Enhances maintenance
- Diverts Emergency Department / readmissions
- Manages high utilizers
- Can be adapted for long-term care
- Assists with managing chronic diseases
- Lowers costs



Tasks and Investments Ahead for Next Steps

Technology infrastructure: Identify tools to modernize legacy infrastructure

- Challenge: Hardwired technology infrastructure
- Opportunity to utilize more cost-effective and “light footprint” cloud-based telemedicine technologies

Process: Community and commercially-based telemedicine programs will require new operational workflows and payment structures

- Challenge: Regulatory and reimbursement
- Opportunity to establish novel care delivery systems and innovative non-fee-for-service business models while working closely with state and federal agencies

Clinical capacity: Assessment of and investment in building clinical resources

- Challenge: Medical workforce shortages
- Opportunities for collaborative partnerships with sister U. T. System institutions, use of mid-levels/teams, and preventive care in the homes

