



**TEXAS TECH UNIVERSITY**  
**HEALTH SCIENCES CENTER**  
**Paul L. Foster School of Medicine™**

**LCME Institutional Self-Study, 2011 – 12 Executive Summary**

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## HISTORICAL BACKGROUND

Texas Tech University School of Medicine in Lubbock was chartered in 1969 as a medical school with a distributed education model. El Paso was designated as a regional clinical campus and received its first cohort of third year students in 1973. The El Paso campus has provided clinical training to third and fourth year medical students ever since. Over the years, several studies have demonstrated that El Paso, and the US-Mexico border region, is severely underserved in virtually every medical specialty. The Texas Medical Association and the Texas Higher Education Coordinating Board affirmed the need for a medical school in the region. In 1999, the Texas Tech University Board of Regents authorized planning for a four-year medical school. The Texas Legislature allocated funds for the construction of a research building on the El Paso campus in 2001. Additional funding was authorized in 2003 for an education building. More funding was made available in 2007 to recruit faculty and staff. A major milestone in the school's history was reached in 2007 with the announcement that local philanthropist, Paul L. Foster, had donated \$50M to endow the new school, which now bears his name. In November 2007, an ad hoc survey team of the Liaison Committee on Medical Education conducted a three day site visit to evaluate institutional preparations for admitting a charter class. The LCME granted the Paul L. Foster School of Medicine (PLFSOM) preliminary accreditation in February 2008 authorizing the school to recruit its first class of 40. In February 2010, the LCME granted the school provisional accreditation status. PLFSOM has since seated two additional classes of 60 and 80 respectively and is preparing to matriculate a fourth class of 80 in July 2012. In the three years since officially opening its doors, PLFSOM has made tremendous strides in establishing productive research programs, expanding clinical services, and providing students an innovative education program that is being emulated by other medical schools.

## PROVISIONAL ACCREDITATION FINDINGS AND RESPONSIVE ACTIONS

On July 1, 2011, the LCME notified Texas Tech Health Sciences University (TTUHSC) President Tedd Mitchell that PLFSOM had been granted provisional accreditation. The committee commended the school for its progress in several areas, and identified 5 areas of "insufficient progress." It requested that we submit a progress report to the LCME in December, 2011 on two standards (MS31-A and MS-34) and indicated that the remaining standards would be addressed by the survey team at our site visit for full accreditation in October 2012.

### Citations addressed through progress report:

**MS-31-A: A medical education program must ensure that its learning environment promotes the development of explicit and appropriate professional attributes in its medical students (i.e., attitudes, behaviors, and identity).**

"Finding: The means by which the school of medicine and its affiliated institutions will regularly assess the medical student learning environment to identify and enhance positive influences and identify and mitigate negative influences on the development of medical student professional attributes and conduct are not adequately addressed in the database or described during the survey visit."

**Response:** Students are asked to complete anonymous surveys at the end of each instructional unit across the four year curriculum which includes items designed to elicit student perceptions of the learning environment. All students are encouraged to report instances of non-professional behavior to their college masters, clerkship directors, or the staff of the office of student affairs. The school also created a web-site where members of the PLFSOM community can submit "professionalism stories" documenting poor or exemplary professional conduct. The associate dean for student affairs met with medical school department chairs and faculty, and with the leadership of our clinical affiliates, to reiterate expectations regarding the learning environment and to confirm procedures for addressing concerns about the learning environment.

**MS-34. A medical education program must have a fair and formal process in place for taking any action that may affect the status of a medical student.**

“Finding: Current school policy has the dean making the initial decision of an adverse action regarding a student’s academic status and also serving as the arbiter of the student’s appeal of the decision. This policy does not meet due process requirements for decisions regarding student progress or dismissal.”

**Response:** We revised our grading and promotion policies. The new policy specifies that the Grading and Promotion Committee is authorized to make decisions about student progress. The student may then appeal the decision to the dean, who may decide to accept or reject the appeal or ask a faculty committee to review the case and make a recommendation for his consideration. The dean’s decision on a student’s appeal is final.

In a letter dated February 20, 2012, the LCME notified us that we had demonstrated compliance with these two standards and that no further action was required.

**Citations to be addressed by Ad Hoc Survey Team in October 9-12, 2012 site visit:**

**IS-16. Each medical school must have policies and practices to achieve appropriate diversity among its students, faculty, staff, and other members of the academic community and must engage in ongoing, systematic, and focused efforts to attract and retain students, faculty, staff, and others from demographically diverse backgrounds.**

“Finding: The school of medicine has not clearly defined or characterized “diversity” for its students, faculty or staff or described how these desired characteristics will be made evident in student selection and faculty and staff recruitment and hiring to meet the institution’s mission and goals.”

**Response:** We have now clearly defined diversity in terms of inclusion of students, faculty and staff who are from the US/Mexico border region, who are economically or educationally disadvantaged, and/or of Hispanic origin. We have policies and programs in place to promote the accomplishment of our diversity goals including pipeline programs to help prepare young people in our region for careers in medicine and the health sciences, and faculty development programs to enhance academic success. We have also created and funded an Office of Diversity to support diversity programming across the campus. These developments are described in detail in Section I of the database.

**ED-17-A. The curriculum of a medical education program must introduce medical students to the basic scientific and ethical principles of clinical and translational research; including the ways in which such research is conducted, evaluated, explained to patients, and applied to patient care.**

“Finding: While the school provides instruction in some of the tools of research such as epidemiology and biostatistics and addresses research ethics...a more structured curriculum on the basic principles of clinical and translational research awaits implementation, possibly as a component of the clerkship curriculum.”

**Response:** We have developed additional course offerings on the basic principles of clinical and translational research, including an introductory lecture on clinical and translational research, workshop sessions illustrating the applications of translational research, and participation in a longitudinal clinical research project on colorectal cancer screening that is part of the family medicine clerkship in year 3.

**FA-11. A medical education program must provide opportunities for professional development to each faculty member to enhance his or her skills and leadership abilities in education and research.**

“Finding: The team found an expectation at the school of medicine that the primary emphasis of faculty development for the faculty in the Department of Medical Education should be on the enhancement of faculty members’ medical education skills, with a distinctly secondary emphasis on the development of knowledge and skills in their individual disciplines. This approach to faculty development could, over time, adversely impact future career opportunities for faculty members and, ultimately, the quality of the medical education program.”

**Response:** Steps taken to remedy this citation include the following: 1) Faculty members in medical education need not limit their scholarly activities to education related scholarship and may continue scholarly pursuits in their scientific specialties; 2) Medical education faculty are encouraged to develop collaborations with basic scientists in the Department of Biomedical Sciences and to participate in research related faculty development programs sponsored by that department; 3) A 2700 sq ft BSL-2 laboratory in molecular medicine has been constructed in the medical education building for faculty and student research; 4) Medical education faculty members are eligible for secondary appointments in the department of biomedical sciences and the TTUHSC Graduate School in Biomedical Sciences; and 5) Medical education faculty members are funded to attend conferences in their areas of scientific expertise.

**SELF-STUDY METHODOLOGY**

The dean appointed David J. Steele, PhD, Senior Associate Dean for Medical Education, to lead the self-study process. Dr. Steele subsequently appointed an LCME Executive Committee (EC) consisting of the associate deans for student affairs, clinical affairs, research, graduate medical education, admissions, faculty affairs, and fiscal affairs. These individuals were assigned to chair sub-committees in their respective areas. The director of assessment and evaluation provided technical assistance. The EC met as a group to review LCME documents and guidelines for the preparation of the database and self-study. They also drew up a roster of potential sub-committee members to ensure broad participation and input. (See attached appendix for a list of participants.) Each sub-committee met on multiple occasions to complete the following tasks: 1) Gain familiarity with LCME standards; 2) Review and update database entries for their respective sections; 3) Identify institutional strengths and weaknesses and propose strategies for ameliorating weaknesses; and 4) Compile a sub-committee level self-study report for review by the EC. The EC then met on several occasions to review sub-committee reports and to identify and prioritize institutional strengths, challenges, and improvement strategies.

Two second year medical students serving on the Student Curriculum and Evaluation Committee coordinated the independent student analysis. Logistical support was provided by the director of academic support in the office of student affairs. The student leaders assembled their own student committee consisting of 31 members across the student body. The students developed their own survey questions, administered the survey, and independently analyzed and interpreted the results. They achieved an overall response rate of 93% (99% for class of 2015, 100% class of 2014, and 77% class of 2013). Upon completing their analysis, the students provided their results to the Self-Study Executive Committee so that it could incorporate the student perspective in its deliberations.

## SECTION I: INSTITUTIONAL SETTING

### A. Governance and Administration

#### 1. Institutional Planning and Priority Setting

The Paul L. Foster School of Medicine (PLFSOM) is one of seven health sciences schools in the Texas Tech University Health Sciences Center (TTUHSC). Institutional planning and priority setting is the responsibility of each school, but occurs in the context of broader institutional planning conducted at the TTUHSC level under the guidance of the president and his advisors.

PLFSOM priorities are guided by the mission, vision and goals established through a series of strategic planning initiatives. Planning and priority setting is a responsibility shared by the dean, associate deans, department chairs, and faculty members and made operational through the actions of three bodies: the Dean's Council (associate deans and department chairs), Faculty Council (elected faculty representatives from each department), and Academic Council (four members of the Dean's council, five members of the faculty council, chaired by the dean). The deans have primary responsibility for setting goals and priorities consistent with the school's mission, vision and goals; for monitoring institutional performance and initiating quality improvement efforts; and for making decisions about resource allocation.

Department chairs, working in collaboration with the dean and associate deans, set priorities within their individual departments. The chairs play pivotal roles in the daily operations of their departments and set policies related to departmental fiscal, academic, and clinical affairs. The chairs meet monthly with the dean, both individually and as a group, and they also meet monthly with the dean and associate deans. Faculty members provide input to their departments through interactions with their chairs and participation in departmental committees and faculty meetings. They provide input at the institutional level through participation in various standing committees, ad hoc task forces, and their votes. The elected Faculty Council sets policies and priorities related to faculty issues and reviews and comments on institutional policies and priorities. The Academic Council mediates administrative and faculty interests.

Strategic planning, initiated in 2010, resulted in the refinements to the institutional vision, mission and goals and in the development of a number of new initiatives including the following: 1) Increased emphasis on interprofessional education; 2) Development of new pipeline programs to enhance diversity; 3) Creation of a free-standing graduate program; and 4) Expansion of clinical services and training sites.

#### 2. Governance Structure and Institutional Bylaws.

**Overall Administrative Structure and Relationships.** TTUHSC is independently chartered and accredited as a university. It shares a chancellor and Board of Regents with Texas Tech University (TTU) and Angelo State University to form the TTU System. The governance structure of TTUHSC is functions well in meeting operational and planning needs. The TTU System has effective safeguards to prevent conflict of interest. The Regents' Rules set forth a general ethics policy and a general conflict of interest policy for the Board of Regents. There are specific policies addressing conflicts of interest related to investments and the oversight of such activities. This includes an audit committee and subcommittees of the regents for various tasks where conflict may arise. The audit committee oversees compliance and supervises internal and external audits. Each subcommittee has its own bylaws governing conflicts that are related to its area of responsibility (e.g., no member of the Investment Advisory Committee may have a financial interest in any organization providing investment services to the institution).

The TTU Board of Regents must approve actions having significant overall financial and/or academic and programmatic impact on the University and/or School. Such situations include: approval of academic promotions, granting of tenure, removal of a tenured faculty member, approval of fiscal year budget, approval to purchase buildings or property and to accept large "gifts."

**Administration and Institutional Planning.** The PLFSOM dean reports directly to the TTUHSC president. PLFSOM sets its own curriculum, establishes its own policies for promotion and tenure, establishes its own research agenda, and operates according to its own faculty bylaws.

**PLFSOM Bylaws.** PLFSOM’s governance structure promotes faculty participation and encourages communication among the leadership and faculty. Governance is shared among the dean, associate deans, departmental chairs, and faculty. The bylaws of PLFSOM are clear and comprehensive. In the past two years some sections have been amended to improve effectiveness. The bylaws were most recently amended to vest authority in the Committee on Student Grading and Promotion to *make decisions* regarding student promotion and to *direct* remediation or dismissal.

### **3. Relationship of the Medical School to the University and its Clinical Affiliates**

**University Relationships.** Communication between central leadership in Lubbock and the leadership of the medical school in El Paso is effective. The dean and president confer frequently. The dean serves on a Council of Deans (comprised of the deans of the TTUHSC schools) that advises the president on matters related to the functioning and success of the institution.

**Relationship with Clinical Affiliates.** Our longest standing clinical affiliation is with University Medical Center (UMC). The CEO works closely with PLFSOM administration. The Chief of the Medical Staff at UMC is a member of the full-time faculty at PLFSOM. On February 14, 2012, El Paso Children’s Hospital (EPCH) officially opened as the first separately licensed Children’s hospital in the region. EPCH is a major clinical affiliate. The chair of pediatrics at PLFSOM is Physician in Chief at EPCH. Overall, the relationship between the school and UMC and EPCH is truly a partnership.

In addition to these major affiliates, PLFSOM also has agreements with El Paso Psychiatric Center, William Beaumont Army Medical Center, Veterans Affairs Medical Center and other private hospitals in El Paso. We are in discussions with community affiliates to expand training capacity. These relationships are strong.

### **4. Organizational Stability and Administrative Effectiveness**

The medical school administrative structure is sound. The PLFSOM benefits from a cohesive leadership team led by the dean and vice president for academic affairs, J. Manuel de la Rosa. This team consists of eight associate deans. All have extensive academic and administrative experience. There has been no turnover among the associate deans in over three years. They work well together and share a sense of common purpose. The “protected” time available to each ranges from 60-100% and is appropriate to their roles and responsibilities.

Overall, departmental leadership is stable. Since our last accreditation visit in 2010, we recruited new chairs in Obstetrics–Gynecology and in Pediatrics. Each has embarked on an aggressive program of faculty recruitment. The department of neurology is the only department with an interim chair. A search for permanent chair is underway. Interviews are in progress for short-listed candidates.

## **B. Academic Environment**

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### **5. Graduate Programs**

**Graduate Programs in the Basic Sciences—**Medical students at PLFSOM are trained in an environment that supports research and scholarship. Most PLFSOM basic scientists are appointed to the Department of Biomedical Sciences or the Department of Medical Education; many also have appointments in the Graduate School of Biomedical Sciences (GSBS). The GSBS is one of the seven schools in the Texas Tech University Health Sciences Center, and a branch campus of the GSBS opened in El Paso in July 2012. Basic science faculty members in the Department of Medical Education devote 70-80% of their time to the design and implementation of the medical student curriculum, with the balance of their time

available for scholarly activity. Faculty members of the Department of Biomedical Sciences devote 50-80% of their time to research, with the balance allocated to teaching and university service. We recently received approval from the Texas Higher Education Coordinating Board to offer a Master's degree in Biomedical Sciences as part of our extension campus of the TTUHSC GSBS. We anticipate matriculating 5-10 full-time students in the fall of 2012. In addition to the GSBS program, faculty members supervise graduate students from neighboring University of Texas at El Paso (UTEP), and we have a grant from the US Department of Education's Fund for Improvement of Post-Secondary Education to support training of UTEP engineering graduate students at Texas Tech El Paso. We also have an affiliation with the University of Texas – Houston Clinical and Translational Science Award which provides competitively awarded career development funding for biomedical scientists and clinical scholars located in El Paso. These programs create exchange opportunities for students. Basic science faculty members are actively involved in mentoring of PLFSOM medical students in required and elective research activities.

**Interactions between Graduate Students and Medical Students**—Currently medical students have opportunities to interact with engineering graduate students from UTEP, graduate students in other programs rotating through PLFSOM laboratories, and graduate students in public health from the University of Texas Houston School of Public Health. These opportunities will expand in the fall of 2012 when we will be admitting graduate students for our own recently approved Masters program.

**Graduate Program Review and Quality**—Programs are evaluated by a two-part Graduate Academic Review process. The first is a formal review, which occurs every 5 years. The second is continuous, ongoing assessment of key program/concentration outcomes, as identified by the graduate faculty of each academic area. Data related to these outcomes, as well as resulting changes, are reported to the GSBS office annually. The formal review consists of five major components: a self-study prepared by the graduate faculty, an external assessment, the review committee's evaluative report recommendations, program/concentration faculty's response to that report, and an action plan resulting from a post-review meeting of the GSBS review committee chair, graduate advisor, department chairs and the GSBS associate dean. Biennially, the program/concentration reports to the GSBS on progress toward implementing the action plan formulated from the 5-year review. Complementing the formal review is continuous outcomes assessment focusing primarily on student learning and progress.

## **6. Role of Residents and Continuing Medical Education (CME) in Medical Student Education**

Currently PLFSOM has 10 ACGME accredited core residency programs enrolling approximately 215 residents. PLFSOM also has ACGME approved fellowships in medical toxicology, child and adolescent psychiatry, sports medicine, cardiology, and gastroenterology. In addition we have a Texas Medical Board approved fellowship in body imaging. Over the next 2-3 years we anticipate having over 230 residents and fellows. Medical students have ample opportunities to interact with residents and fellows during the third and fourth years. Students also have ample opportunities to participate in CME to learn about the full continuum of medical education. Students are required to document (cost-free) attendance at a minimum of 10 CME events during their MS 3 year.

## **7. Faculty Research Commitment**

PLFSOM is committed to developing world-leading research in areas significant to the Texas/Mexico border region. Participation in research and scholarship is expected of all faculty members to a level appropriate to their primary roles and responsibilities. Members of the Department of Biomedical Science are expected to devote most of their time to research. Several faculty members in various clinical departments also devote time to research. Between 2008 and 2012 research funding has grown from about \$1M per year to \$12M in peer reviewed grants from a variety of federal (NIH, HRSA), State (Cancer Prevention and Research Institute of Texas—CPRIT) and private sources. Researchers are generating approximately \$350 per square feet of laboratory space. Several members of the faculty serve as NIH study section members. The number of peer reviewed publications continues to grow.

We have identified four programmatic Centers of Excellence-- Cancer, Infectious Diseases, Neurosciences, and Diabetes & Obesity-- that address major public health issues in the El Paso region. Additional areas of research emphasis include community based participatory research related to cancer screening, behavioral health interventions in emergency department encounters, clinical trials research in oncology, and medical education research.

The associate dean for research is working to foster collaboration across departments and disciplines. In the past year his office hosted six “data blitz” sessions, attracting an average of 45 participants per session, in which researchers share information about projects and opportunities for collaboration. These sessions have led to the creation of several collaborative projects enabling more clinicians to participate in research.

Our successes in securing funding and recruiting researchers are putting a strain on research space. Laboratory space in the Medical Science Building 1 (MSB1) is at capacity, necessitating the renovation of laboratory space in the Academic and Education Center and the construction of a 5000 square foot modular laboratory facility. The school’s leadership is actively working with the state legislators to educate them about needed appropriations for the construction of a new research building.

### **8. Adequacy of Research Infrastructure, Intramural and Extramural Support**

Existing research facilities and infrastructure are outstanding and enable PLFSOM faculty to be highly productive. The institution has developed a line of state funding specifically for recruiting clinician-scientists, in an attempt to seed the clinical environment with funded basic and translational investigators. One of the goals of the clinician-scientist program is to promote diffusion of research and scholarly activity into the clinics through peer interactions, and to provide role models and mentorship for medical trainees. We have funding to create such positions in each of the Centers of Excellence.

The school maintains a Biostatistics and Epidemiology Consulting Laboratory (BECL), which is staffed by PhD biostatisticians, an MPH administrator, a statistical programmer, a database programmer and an office/grants manager. The BECL is housed in the Texas Tech clinic building so that the faculty can be close to campus clinical operations. This program represents a significant outreach to the clinicians on campus. A majority of the projects are unfunded local investigator-initiated projects. The ability of the laboratory to take on such projects without charge provides goodwill on behalf of the research administration, and helps to create a culture of inquiry in the clinical milieu.

We also sponsor a lecture series that brings regional and national academic partners to campus to assist in the formation of research collaborations. In academic year 2011-2012, we hosted nine regional seminar presenters, and three grant applications have arisen from these interactions. We support an annual Research Colloquium in which students, residents and faculty present their work and can see the research activity of peers. We will be continuing our seed grant program, after a one year hiatus, in the fall of 2012, by awarding up to five grants of \$20,000 to meritorious clinical or basic research projects.

### **9. Medical Student Participation in Research**

Students enrolled at the PLFSOM are required to complete a Scholarly Activity and Research Project (SARP). In addition to the SARP requirement, students have many other opportunities to participate in research. Several students have presented the results of their research at national scientific meetings and a few have published their work with faculty members in peer reviewed journals.

## 10. Service Learning Opportunities

PLFSOM strongly encourages and supports student participation in service learning. We introduce newly matriculated students to the concept of service learning during their three week intensive language, culture, and community on the border introduction session. Examples of service learning include: students have partnered with a local volunteer clinic to serve the medically indigent, volunteered at a local shelter for women and children who are victims of domestic violence, mentored middle school and high school age students at local schools, participated in community health fairs, and completed medical mission trips to Honduras. Student reflections about the learning derived through service are included in their individual e-portfolios. Two senior faculty members have been designated as primary faculty sponsors for service learning activities. They are developing contacts with various organizations and, in cooperation with student representatives, are also developing an on-line clearing house of information to facilitate contact between students and organizations desiring service. Additionally, students are informed of service learning opportunities through e-mail, class announcements, through their peers, and through a student community service committee. PLFSOM hosts an annual Service Learning Symposium in which students present their service projects and reflect on what they learned through this service. The first symposium was held in January 2011 and the second in March 2012.

## 11. Diversity Goals and Policies

In July 2010, the dean created a Diversity Committee, consisting of faculty, staff, residents, and students. This committee drafted the institution's definition of diversity which established broad goals to serve as guides for program development. Based on feedback provided at the time of our provisional accreditation visit, the Diversity Committee recently refined the school's diversity statement as follows:

*“Grounded in the compelling evidence that diversity of thought and perspective provides richer solutions to the complex challenges of meeting the health needs of our community, the Paul L Foster School of Medicine at Texas Tech University Health Sciences Center at El Paso promotes the recruitment, development and retention of a diverse body of students, residents, faculty and staff.*

*We are mindful of the population we serve here on the US/Mexico border, with the majority being Hispanic, many of whom are underserved and disadvantaged, and we are particularly committed to the inclusion of groups that are under-represented in medicine that will enhance our ability to provide optimal health care to this population. The Paul L Foster School of Medicine defines diversity as the inclusion of students who are from the US/Mexico border region, economically or educationally disadvantaged, and/or of Hispanic origin. We will also welcome and support students from other traditionally under-represented minorities.*

*For residents, faculty and staff, diversity will be defined as inclusion of those who are of Hispanic origin and those who are Spanish-speaking, as the majority of patients we serve in the region prefer to use Spanish. We will also welcome and support residents, faculty and staff from other traditionally under-represented minorities.”*

The following programs support our diversity goals:

**Pipeline and Admissions**—We have implemented recruitment and support programs to encourage and better prepare middle, high school, and college students for careers in the health professions. These programs are supported by our Hispanic Center of Excellence and coordinated through the Office for Promotion of Community Educational Achievement. We are developing a post-baccalaureate program for promising students to enhance their preparation and competitiveness for admission to PLFSOM. This program is slated to be implemented in the 2013-14 AY. Finally, PLFSOM participates in the Joint Admission Medical Program (JAMP) to support and encourage highly qualified, economically

disadvantaged Texas students to pursue medical education. Four JAMP students will matriculate in the class of 2016 as part of this program.

**Faculty Development**—The associate dean for faculty affairs has developed a number of programs to enhance faculty success. Minority faculty members are active participants. The associate dean for faculty affairs recently implemented a formal mentoring program pairing senior faculty members with junior and early mid-career faculty. This program, supported by the Hispanic Center of Excellence, is outcomes focused and requires mentor and mentee to document progress in the areas of scholarship, through peer reviewed publications and presentations, and progress in meeting the requirements for promotion and/or tenure. Two cohorts have participated in this program to date.

**Administrative Support**—The dean created an Office of Diversity and hired its first director to coordinate and support the efforts of the diversity committee and to monitor institutional progress in promoting diversity throughout the institution. In addition, the dean created a diversity lecture series and cultural competency conference in which experts on various aspects of diversity are brought to campus to give presentations and consult with different groups about diversity and how to optimize the success of diversity initiatives. The first such conference was held June 8, 2012, and the first lecture is scheduled for July 18, 2012.

**Curriculum**—The Society, Community, and the Individual course explicitly exposes students to the social, cultural, economic, and historical factors influencing health. The goal of this course is to provide students the knowledge, attitudes, and skills necessary for providing culturally appropriate care. Students complete community health assessments in the communities served by the clinics to which they are assigned for early clinical experiences. To our knowledge, PLFSOM is the first medical school in the US to include conversational and medical Spanish as required components of the curriculum

## SECTION II: EDUCATIONAL PROGRAM FOR THE M.D. DEGREE

### A. Educational Objectives

#### 1. Role of Institutional Learning Objectives in Program Planning and Student Assessment

Our institutional learning objectives serve as effective guides for program planning and student assessment. They are stated in behavioral terms describing the knowledge, attitudes, behaviors and skills we expect of our graduates. Course and clerkship directors are required to document how their programs contribute to meeting institutional learning goals and objectives.

Institutional learning objectives guide the development of specific content in all courses and clerkships. For example, the Society, Community, and Individual course was created to address content related to providing culturally competent care, practice-based learning and systems-based practice; “tank-side grand rounds” in the Scientific Principles of Medicine course was designed to provide students opportunities to further develop their skills in life-long learning; and EBM exercises have been included in a number of the clerkships to address institutional objectives in several domains.

We publicize institutional learning goals and objectives among students, faculty, and administration. These objectives are available in the student catalogue, the faculty e-handbook, and distributed in a laminated tri-fold pamphlet. Institutional learning objectives are provided to community faculty and to residents.

#### 2. Institutional Learning Objectives, Physician Competencies, and Outcome Assessment

The institutional learning objectives were initially developed by PLFSOM education leaders based on a review of the AAMC Medical Schools Objectives reports, the CanMeds framework of the Royal College of Physicians and Surgeons of Canada, the Accreditation Council for Graduate Medical Education

(ACGME) core competencies, and the published standards adopted by several LCME accredited medical schools. Proposed learning goals and objectives were subsequently subjected to review, discussion, and refinement by the Curriculum and Educational Policy Committee (CEPC). The CEPC also elected to assign each institutional learning objective to an appropriate ACGME core competency. Learning objectives drive decisions regarding assessment methods as described below.

Based on several measures our students are doing well. On USMLE Step 1, 97% of the charter class passed on their first attempt (national average is 94%) with an average score of 224. In all 6 required clerkships students are scoring at or above the national average on the shelf exam. Students are required to pass the comprehensive end of year 2 OSCE and all have done so with only a few requiring remediation. All students have passed clerkship OSCEs, and 97.5% passed the comprehensive end of year 3 OSCE on their first attempt.

### **3. Systems for Monitoring Student Clinical Encounters**

All required clerkships have identified the clinical conditions that students must encounter to meet clerkship objectives. Each has also specified the settings of care and student levels of participation. The clerkships have identified alternative means for meeting expectations in the event that a student does not encounter a patient with a required condition. Students document clinical encounters in an electronic patient encounter tracking system (Op-Log). Op-log entries are monitored weekly by the year 3-4 coordinator in the Office of Curriculum, Evaluation and Accreditation. She notifies individual clerkship coordinators if students fall behind in their entries so that appropriate action can be taken.

## **B. Structure of the Educational Program**

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### **4. Preparation of Students for All Career Options in Medicine**

The Department of Medical Education includes basic science faculty representing all “foundational” disciplines and physician faculty representing several clinical disciplines. Faculty in the clinical departments participate actively in the pre-clerkship and clerkship components of the curriculum ensuring that students have opportunities to learn from clinically active professors and mentors.

In years 3-4, students participate in clerkships in internal medicine, family medicine, psychiatry, surgery, obstetrics & gynecology, and pediatrics. During year 4, students are also required to complete a sub-internship in internal medicine, surgery, pediatrics, OB-GYN or family medicine; and clerkships in emergency medicine, neurology, and critical care. Finally, as part of the year 3-4 design process, the following topics were identified as “threads” to be woven throughout the curriculum—geriatrics, communication skills, professionalism, ethics, pain management, palliative care, clinical pathology, evidence-based medicine, patient safety, and diagnostic imaging. Content related to these threads can be tracked through our curriculum data base.

Thus far, the strongest evidence we have that we are succeeding in preparing students for success is their strong showing on USMLE Step 1, on the shelf examinations, and in their clinical performance as judged by supervising faculty and performance on OSCEs.

### **5. Opportunities for Active Learning and Independent Study**

During the first two years of the curriculum, students are given at least 12 hours per week (3-half days) for independent study. Several educational experiences provide students opportunities to engage in active learning and independent study. These include, but are not limited to the following:

- **Weekly formative quizzes** in years 1-2 enable students to identify areas of strength and weakness upon which to make decisions about how best to remedy knowledge deficits.

- Students complete **community health assessments** as part of the Society, Community, and Individual (SCI) course. Students identify issues they would like to explore in more detail and are required to present the results of this “exploration” at the end of the experience.
- **End of year 1 “tank-side grand rounds”**— students identify anomalies in their cadavers and through the application of self-directed learning skills seek out explanations for the observed abnormality and present their findings to the class.
- **Reflective and analytic essays**—students are required to write brief papers in the Masters Colloquium on topics related to ethics, personal experiences, and/or controversies in medicine. This gives them the opportunity to identify gaps in their knowledge and to seek out, interpret, and apply information gained through self-directed study.
- As part of the learning experience in the **internal medicine** and **emergency medicine** clerkships, students participate in a critical appraisal of the literature exercise. Based on a patient encounter, they formulate a clinical question, conduct a literature search, select an article that they feel best answers their question and then present the results of their search to their attending and peers. As part of that presentation they discuss the strengths and weaknesses of the selected article.
- Beginning in July 2012, all students completing the pediatrics clerkship will participate in a one week **independent study “rotation”** in which the student identifies a learning need, develops a learning plan, and demonstrates learning outcome to the teaching resident.
- The **Scholarly Activity and Research Project (SARP)** requires that students identify a question or problem, engage in mentored research designed to answer their question, and then present the results of their project as a poster presentation during a student SARP symposium.

Student skills in each of the components of active, life-long learning are assessed through the application of rubrics developed for the purpose.

### **7. Application of Scientific Method and Principles of Clinical and Translational Research**

Students apply the scientific method in their SARP Projects and they are exposed to the principles of clinical and translational research in a systematic manner across the four year curriculum. In SCI they are introduced to the principles of clinical and translational research, research design, epidemiology, and biostatistics; in Scientific Principles of Medicine they are exposed to the application of translational research in sessions dealing with genetics and the therapeutic use of stem cells; in the Masters Colloquium they address ethical issues in research. All students are required to complete training on the protection of human subjects and the principles governing IRBs. In years 3 and 4, issues related to clinical and translational research are routinely addressed in didactic session and bedside teaching; and in the Family Medicine clerkship, all students participate in a colorectal cancer screening study to observe the application of clinical research methods in an on-going funded project.

### **8. Content Coverage to Meet Accreditation Standards**

All content areas required by the LCME are incorporated into the 4 year curriculum. In developing the educational program the faculty reviewed national disciplinary guidelines (e.g., American Physiological Society, Committee on Medical Student Education in Pediatrics Curriculum, etc), the AAMC Medical School Objectives Project, and curriculum content from several established American and Canadian medical schools. Basic science faculty in the first two years also consulted the USMLE Step 1 content outline to be sure that there were no gaps in the content covered on this gateway examination. In developing required clerkship experiences, year 3-4 faculty consulted disciplinary guidelines to ensure that their respective programs met national standards. The design teams responsible for developing the PLFSOM clerkship curriculum also identified a number of “integration themes” that were to be threaded across clerkships (e.g., geriatrics, evidence-based medicine, ethics, etc).

Our curriculum management database (Ilios) enables us to track curricular content including session-level learning objectives, “Hot Topics” (ED-10), reading assignments, educational material, contact hours, discipline hours, and teaching and learning methods. The search functions of this resource enable us to run queries on curriculum content and thereby identify potential gaps and unplanned redundancies. Performance on Step 1 of the USMLE and on the NBME Shelf-Exams for the required clerkships give us confidence that the topics necessary for preparing medical student graduate medical education. An examination of the performance profile on NBME examinations reveals that the class average for each of the disciplines/organ systems clustered around that of the national average.

In the independent student analysis, third year students reported overall satisfaction with the preparation they received in biochemistry, genetics, immunology, pathology, physiology, and behavioral science. They were less satisfied with the preparation they received in anatomy (56.6%), microbiology (50.0%), and pharmacology (40.0%). The course and unit directors for the Scientific Principles of Medicine, the senior associate dean for medical education, and faculty responsible for these disciplines discussed student dissatisfaction. A number of changes are being planned for the delivery of content in these disciplines over the next year based on student feedback and faculty experience. We are also recruiting an additional pharmacologist to support this component of the curriculum.

### **9. Balance between In-Patient and Ambulatory Experiences.**

There is a good balance of inpatient and ambulatory experiences. About half of student clinical learning occurs in ambulatory settings. In addition to their in-patient rotations, students are assigned to faculty clinics in each of the required clerkships. The Family Medicine clerkship is entirely out-patient.

As class size expands to 100 students/year, we will need to expand the pool of ambulatory sites. We have been actively working to increase the number of volunteer community faculty members and have added over 100 new community faculty members in the last year bringing our total to over 300. In addition, discussions are underway with private hospitals in El Paso, with WBAMC, and the VA Medical Center, to expand clinical learning opportunities in these settings.

## **C. Teaching and Assessment**

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### **10. Supervision of Medical Students by Faculty and Residents**

In addition to the specific instruction provided by the clerkship directors, all residents are required to complete an on-line “Residents as Teachers” program that includes a post-test assessment. Successful completion of this program is required to be eligible for hire. Reaching volunteer community based faculty is more challenging. The associate dean for faculty affairs has adopted a multi-pronged approach to deliver faculty development to community faculty. This includes an eight module, 4 hour CME bearing program addressing such fundamental skills as orienting the learner to the setting, effective feedback, and the “one minute” preceptor model. This curriculum is loaded onto thumb drives and made available to community faculty. In addition, the office of faculty affairs and development and the department of Medical Education and Family Medicine recently hosted a 3 hour evening orientation and faculty development session for 27 community faculty members, and another for volunteer faculty from the VA Medical Center that was attended by 12 faculty. This program covers the same curricular content as outlined above. Finally, PLFSOM secured a multi-user site license for the Teaching Physician website developed by the Society for Teachers of Family Medicine. This site provides print and video materials and it also provides CME credits for satisfactorily completing designated modules.

During our self-study it became apparent that some physicians at William Beaumont Army Medical Center do not have PLFSOM appointments. As a military hospital, we face frequent turn-over due to deployment. Our faculty services staff is working with WBAMC to streamline the process of granting volunteer faculty status for federally employed faculty. The senior associate dean for medical education,

the chair of the Department of Medicine, the clerkship director for Internal Medicine, and the faculty affairs community liaison person met with the WBAMC representatives in February and again in June to review the status of attaining faculty appointments for their personnel and strategies for keeping the appointment process current. The WBAMC site coordinator is providing us a list of potential faculty in advance of each rotation so that we can verify appointment status and take appropriate action.

## **11. Methods for Assessing Student Attainment of Educational Objectives**

**Knowledge** objectives are assessed primarily through USMLE style clinical and laboratory vignette questions. Questions are linked to a corresponding session level learning objective and these in turn can be mapped to institutional learning objectives. We regularly review test item statistics and flawed items are either revised or removed from the pool. We developed a software application that enables us to track student cumulative performance *by discipline* in the first two years to determine areas of strength and weakness based on learning outcomes. We utilize the customized assessment service of the NBME, to develop and administer a comprehensive end of year 1 examination; and we administer the NBME Comprehensive Basic Science Examination (CBSE) during the second year of medical school.

**Clinical skills** are assessed primarily through student performance on OSCEs conducted at the end of each Medical Skills course unit, end of year 2 OSCE, end of clerkship OSCEs, and end of year 3 OSCE. In addition to OSCEs, students are also observed and given feedback on their performance of clinical skills in each of their required clerkships. Clinical faculty members also assess student performance via a rubric designed for this purpose.

**Critical thinking and problem solving** are assessed primarily through rubric based assessment strategies. Rubrics have been developed to assess student performance on a variety of active, self-directed learning activities including Tank-Side Grand Rounds, reflective and analytic papers in the Masters Colloquium, and the Scholarly Activity and Research Project.

**Interpersonal skills and professionalism** objectives are assessed primarily through faculty observation as recorded on small group behavior check-lists, by standardized patient checklists employed in OSCEs, and the clinical assessment forms that faculty and residents complete on students in their required clerkships.

Although satisfied with the variety and mix of assessment strategies we are aware of variability in the quality of items in the examination pool. We continue to cull and revise items that are not performing well based on psychometric analysis. This effort is beginning to show improvement in item quality as the number of items that need to be “thrown out” or keyed with more than one correct response is falling. Faculty compliance with completing the small group evaluation is variable. We continue to remind faculty of the importance of providing this feedback. We are also modifying small group assessment forms to highlight the importance of the narrative component of the evaluation. Nonetheless, in the first two years of the curriculum, students receive an average of 16.3 small group narratives.

## **12. Formative Feedback and Systems to Facilitate Frequent and Timely Feedback**

Policies and procedures are in place to ensure students receive timely feedback. Adherence to these policies is centrally monitored.

In **Scientific Principles of Medicine**, students take weekly 25 item on-line quizzes covering content from the previous week. Students automatically receive feedback on how many items they correctly answered. They then review a version of the quiz which indicates the correct answers along with an explanation. Learning objectives associated with incorrectly answered items are also sent to students. College Masters monitor the performance of students in their respective Colleges and meet with those having difficulty. The director of academic support meets with students to conduct error analysis, review study habits, and to offer counseling on test anxiety.

In **Medical Skills**, standardized patients (SP) and peers provide immediate feedback on student performance. Although an overwhelming majority of students responding to the independent student analysis gave satisfactory ratings to SP feedback, some students have indicated that they would like to have more direct feedback on their physical examination skills and opportunities to repeat procedures that were not properly executed. The course director has been made aware of this request and is considering ways to further improve feedback. In the past students were more dissatisfied with the amount and quality of feedback they received in this popular course. Changes made by the course director in response to these concerns have improved student ratings in this area considerably.

**Clerkship** directors provide mid-rotation formative assessments. The results are recorded in the student e-portfolio and are monitored by the Office of Curriculum, Evaluation, and Accreditation (OCEA) year 3-4 coordinator. She contacts both the clerkship director and coordinator if the mid-experience feedback session is not documented. In five of six clerkships students have consistently received mid-rotation formative feedback. Problems arose for one block of surgery when scheduling problems related to the clerkship director's clinical responsibilities resulted in the cancelation of scheduled feedback sessions. The senior associate dean discussed this with the clerkship director and department chair and they mutually agreed that a new clerkship director who had more time to devote to clerkship duties would be assigned. This individual was named clerkship director in March 2012.

Faculty compliance with completing frequent formative assessments has been variable. Some have expressed that the assessment process is cumbersome and that they do not always have sufficient contact with students to complete the form. In collaboration with the clerkship directors, the staff of OCEA is exploring options to make the assessment process less onerous and to make adjustments in expectations based on contact time. The senior associate dean for medical education met with each department to discuss the importance of providing frequent and timely feedback to all students. In 2011-12, students received an average of 7.7 (sd = 3.3) clinical evaluations per clerkship in the MS 3 year.

In the pre-clerkship components of the curriculum students typically receive examination results within 5-7 days of the exam and final grades within 7-10 days of the end of the semester. Our goal for the clerkships is to report final grades within 30 days of the end of the clerkship. We did not meet this goal in block 1 but did so in block 2. Block 3 grade calculations are currently in progress and are on-track to meeting the 30-day goal.

### **13. Systems for Ensuring that Students have Acquired Core Clinical Skills**

The longitudinal Medical Skills course lays the foundation for the acquisition of core clinical skills in the pre-clerkship years. Students are evaluated by trained standardized patients on their performance of the medical history and physical examination maneuvers. Students complete a 5-station OSCE at the end of each unit associated with SPM and are expected to achieve a minimum of 75% to pass. Students who do not meet this standard participate in individualized remediation. At the end of year 2, students are required to pass a comprehensive OSCE.

Core clinical skills are assessed in the clerkships as follows: faculty observation of student-patient encounters, performance on end of clerkship OSCEs, and performance on a multi-station comprehensive end of year 3 OSCE.

## **D. Curriculum Management**

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### **14. Curriculum Planning, Coordination, and Oversight**

Systems, including software applications and organizational structures, are in place to facilitate curriculum planning and management. Our curriculum management data base, Ilios, provides access to data related to broad institutional learning objectives, and more specific course and clerkship objectives. Locally developed examination items are tied to these objectives. Ilios also provides access to learning materials for review by students, faculty, and administration. Ilios supports the calendar/schedule system enabling us to monitor course contact time and faculty contributions to the educational program.

Courses are managed by course and unit committees consisting of faculty members responsible for the planning, implementation, and continuous quality improvement. These course committees, chaired by the course directors, meet frequently—weekly for Scientific Principles of Medicine (SPM) and the Masters Colloquium, and quarterly for Society, Community, and the Individual (SCI). For the Medical Skills course, the committee structure is more fluid as it consists of the Medical Skills course director and the SPM clinician unit directors of the particular unit that is being implemented at any given time. This ensures close coordination and integration across these two curricular components.

The structure is similar for year 3. Block committees consisting of the clerkship directors and coordinators of the two clerkships sharing a block meet to plan and coordinate block activities. All of the year 3-4 clerkship directors and coordinators meet monthly with the senior associate dean for medical education and the associate dean for student affairs to address issues relevant to all clerkships. The year 3-4 committee has addressed such issues as the development of a common clinical assessment instrument, grading policies, schedules, attendance policies, etc. This committee makes recommendations to the Curriculum and Educational Policy Committee (CEPC) for approval.

The CEPC provides oversight for curriculum planning and implementation. The CEPC includes representatives from basic science and clinical faculty, elected student representatives, and ex-officio representatives from IT, the library, student affairs, and the director of assessment and evaluation in the Office of Curriculum, Evaluation, and Accreditation (OCEA). The CEPC has been effective in establishing policies related to the role of the institutional learning objectives in course and clerkship planning, grading policies, setting limits on allowable contact time, defining procedures for accessing student information for educational research, and more. The CEPC reviews and approves plans for course and clerkship implementation and requires that courses (and units in the case of the Scientific Principles of Medicine Curriculum) report to the committee at least twice a year—at the beginning of the year prior to course implementation and then again following course administration to review strengths, weaknesses, and suggestions for change. The CEPC initiated comprehensive review of first and second year courses and units in the fall of 2011 and will complete that review in the fall of 2012.

### **15. Chief Academic Officer Authority and Access to Resources**

The dean of PLFSOM has full authority over the medical education program. He also has access to the resources needed to plan, implement, and evaluate the quality of the program.

## **16. Student Workload and Duty Hours**

The CEPC established a policy that students in years 1 and 2 have at least 3 half days per week (12 hours) of scheduled time for self-study and review. The CEPC, through its chair, reviews the calendar to ensure that this policy is followed. During the years 1-2, students average about 20 hours per week of scheduled curricular activities, including occasional “self-taught” sessions in which faculty provide learning modules or voice over power point sessions that students can access asynchronously.

In years 3-4 students may not be scheduled for more than 80 hours per week or more than 16 continuous hours. The clerkships determine their individual call schedules but may not schedule call more frequently than every 4<sup>th</sup> night. Most schedule less. Students must be given 1 full day off per week. Students are instructed to report duty hour violations to the clerkship director or to the associate dean for student affairs. As part of the end of block clerkship evaluation, students are asked to respond to an item on perceived adherence to duty hours expectations. They perceive that duty hours are largely adhered to in pediatrics (91%), psychiatry (97%), and family medicine (94%). The results were not as favorable in OBGYN (73%), internal medicine (56%), and surgery (74%). These findings are being reviewed by all of the clerkship directors and coordinators to develop strategies to improve compliance.

## **17 and 18. Comparability for Schools Operating Geographically Separate Campuses**

Paul L. Foster School of Medicine does not operate geographically separate campuses.

## **E. Evaluation of Program Effectiveness**

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### **19. Evidence that Program Objectives are being Achieved**

The evidence indicating medical education program effectiveness includes, but is not limited to:

1. Student performance on “in-house” examinations and OSCEs;
2. Student performance on NBME customized comprehensive end of year examination (CEYE);
3. Student performance on the NBME Comprehensive Basic Science Examination in year 2;
4. Student advancement and graduation rates--percentage of students who are “on-track” in their progression through medical school;
5. Performance on the USMLE Step 1;
6. Performance on NBME shelf examinations in required clerkships;
7. Clinical faculty assessment of student performance in required clerkships, including professionalism;
8. Student performance on USMLE Step 2 CK, and CS;
9. Results to a longitudinal survey assessing student beliefs and attitudes about the role of empathy in medicine, cultural issues, and psychosocial attitudes and beliefs.

To date the most compelling evidence of program effectiveness in the knowledge domain is performance on USMLE Step 1 and on the NBME shelf-examinations in the required clerkships described earlier. Students are also doing well on their OSCEs across the curriculum and clinical faculty in general report being impressed with students’ clinical performance as measured by the clerkship assessment from results. We have not yet conducted a detailed analysis of attitudinal data.

The educational program self-study committee concludes that we are collecting high quality and appropriate data. We would like to exploit this data even more fully for on-going quality improvement initiatives. The dean recently authorized hiring a senior analyst to assist the director of assessment and evaluation in data management and analysis. A search is in progress.

## **20. Program Quality Improvement Based on Data from Students and Graduates**

Student evaluations of the program, faculty judgment, and student performance data are used for quality improvement. Student evaluations and data from Ilios have been used to make a number of adjustments in years 1-2 of the curriculum. A notable example is the decision to revise the sequence of organ system units by shifting the central nervous system component of the (former) first year unit 2 on musculoskeletal and neurological systems to the second year unit on special senses, and to substitute the dermatological/integumentary system for the neurological in unit 2 creating a “skin and bones” unit. This change was made to decompress the volume of material which students were finding difficult to master, and to eliminate some redundancy. As part of this change, we used data on learning objectives to assure ourselves that all critical learning objectives were being addressed and had not “fallen through the cracks”. This information was thoroughly discussed with the CEPC which had to approve the change before it could be implemented. A second example is our Society, Community, and Individual Course. It is currently implementing CEPC approved changes based in large part on student evaluations.

We have identified many sources of information that we will collect on our graduates including match rate, specialty choice, residency location, feedback from program directors, practice location, etc.

## **SECTION III: MEDICAL STUDENTS**

### **A. Admissions**

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#### **1. Admissions Criteria, Recruitment, and Selection of Students**

Through the application of our recruitment processes, admission criteria, and holistic selection procedures, we have seated three classes that are performing well. In addition to their academic achievements, they have initiated a number of service-oriented groups and projects reflecting a continuing commitment to serving the community. To date, our total enrollment is not as diverse as intended. We have offered more acceptances to Hispanic students than have matriculated because many have elected to attend other more established medical schools. We are encouraged that 15% of the class matriculating in July, 2012 is Hispanic. We are also enrolling 4 students in the state’s Joint Admissions Medical Program (JAMP). This program is designed to facilitate the admission of students from disadvantaged backgrounds. These students will further enrich the diversity of our student body.

The size and quality of the applicant pool is more than adequate for seating a class of 80 and eventually 100 students. The applicant pool has increased 18% from 2500 in our first admission cycle to 2900 in the last cycle (class of 2016).

#### **2. Role of Faculty in Student Admissions**

All voting members of the admissions committee are members of the faculty. Interviewers and admissions committee members are PhD and physician faculty. They include junior and senior faculty and physician faculty from the community. The PLFSOM Faculty Bylaws (IX.C.I) solely empowers the admissions committee to select the entering class. Political and/or financial considerations play no role in admissions.

#### **3. Educational Resources and Trainee Numbers**

The medical school class is currently set at 80 students. We are authorized to expand to 100 students per class in 2013. Our first cohort of graduate students will be on campus in 2012. There are over 200 resident and fellow trainees at PLFSOM. Resources are adequate for clinical training for 80 students per year utilizing our current primary affiliates. To meet the educational needs of a larger class we need to

expand clinical affiliations, increase the size of our paid faculty, and recruit additional volunteer faculty. We are pursuing each of these strategies; discussions with private hospitals are in progress, 24 new faculty members will be joining us over the next several months, and 20 additional full time positions have been approved. Finally, we have expanded the size of our volunteer faculty by 100 in the past year for a total complement of over 300.

#### **4. Pipeline Programs and Diversity of Applicants**

We have implemented several pre-college and college pipeline programs to increase student diversity. These programs are functioning well with over 370 pre-college students and 176 college students participating. E-mail based tracking enabled us to reach 70% of the participants in these programs. A majority report continued interest in entering a health career. Thus far, of the participants we have been able to contact, 4 have been admitted to medical school; of these, 1 enrolled at PLFSOM. The average MCAT of applicants from the border region is much lower than other applicants in Texas (23.7 vs. 27.1) which may reflect their educationally disadvantaged backgrounds and account for the small number of students gaining admission to medical school. At present, the associate dean for admissions chairs a taskforce planning a post-baccalaureate program designed to further prepare promising students for admissions to the PLFSOM.

#### **5. Information for Applicants**

Information for prospective students is current, accurate, complete and easily accessible on the admissions page of the PLFSOM website. We review and update these electronic and print materials annually and include all relevant information about admissions criteria and technical standards.

#### **6-7. Transfer and Visiting Student Policies**

The office of student affairs and the office of the senior associate dean for medical education monitor space availability for transfer and/or visiting students and only accept these students if resources are sufficient. Students will only be considered for transfer in year 3 and they must document that they are in good standing in their current school and that their credentials, including a passing score on USMLE Step 1, meet PLFSOM requirements. Transfer students must be approved by the admissions committee.

PLFSOM accepts visiting medical students from LCME accredited schools as well as osteopathic students on a space available basis for elective experience. All students who apply for a visiting elective are reviewed using the AAMC VSAS (Visiting Student Application Service). Students must pass Step 1 and be in good standing as determined by their home school in order to participate in our electives. This system has been effective in verifying qualifications of transfer and visiting students.

### **B. Student Services**

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#### **8. Academic Difficulty, Remediation Systems, and Attrition**

Two students have been dismissed for academic reasons. Both were required to repeat the first year but then failed classes in the second year. Five percent of the classes of 2013 and 2014 were required to repeat their first year. One student in the class of 2013 had to repeat one semester of the second year. We compared the qualifications of students who have had to repeat with those making satisfactory progress and have been unable to detect variables that would predict which students would have difficulty.

We have programs for the early identification and remediation of students in academic difficulty. These include weekly formative examinations in years 1 and 2, providing a PhD level educational psychologist to work with students, and a “near peer” tutoring service. The associate dean for student affairs, senior

associate dean for medical education, director of academic support, and college masters meet monthly to review student performance and identify those needing assistance. We will continue to track students in an effort to identify predictors of academic difficulty and to evaluate the efficacy of intervention programs. Of the 168 students participating in the independent student analysis, only one respondent voiced dissatisfaction with academic counseling.

### **9. Career Counseling, Residency Selection, and Preparation of MSPE**

We have implemented several programs to assist students in their exploration of career options. These include the AAMC Careers in Medicine program introduced in year 1, a series of noon-time “Career Tasters” presentations to give students an opportunity to learn about different specialties, and an advising system tailored to individual student interests and needs. The associate dean for student affairs hosts required class meetings for MS III students to discuss elective policies and the importance of developing a schedule that will support their future career choice. The associate dean for student affairs reviews each student’s proposed schedule. If she has concerns, she confers with the Year 3-4 committee for recommendations. The associate dean also provides students information about the MSPE and how it is prepared, including student options to request that someone other than the student affairs dean generate that document. Students have access to all information that will be incorporated into the MSPE and can challenge information they feel is erroneous, or request inclusion of information they feel is missing. Finally, the student affairs dean meets with each third year student in the spring to discuss the preparation of their CV, personal statement and ERAS application. Once again, of the 168 students participating in the independent student analysis, only one voiced dissatisfaction with career counseling.

### **10-11. Tuition, Fees, Financial Aid, and Student Debt**

Tuition and fees at PLFSOM are currently \$15,500 per year as compared to the national average of \$26,400 for in-state tuition at US public medical schools. Nonetheless, we are committed to reducing debt burden. We sequestered resources from the endowment provided by Paul L. Foster for full four year tuition and fee scholarships for up to 20 students per year. We also identified other sources of scholarship funding for students from El Paso. A local foundation allocated over \$1 million for a loan forgiveness program for students willing to return to El Paso to practice following residency. As we have not yet graduated a class, we can only project levels of indebtedness based on current trends. These trends suggest that PLFSOM graduates will have a lower debt level than the national average. We anticipate that the class of 2013 will have \$92,454 of debt at graduation; the class of 2014 \$120,101; the class of 2015 \$123,684. Currently, the median for a graduate of a public medical school is \$155,000 (per AAMC). The increase in debt level reflects the increasing class size against a fixed pool of scholarship funds. Identification of additional sources of scholarship funds is a major task of our development officer.

The office of student affairs works closely with students in advising them about how to minimize debt. This includes mandatory fall and spring workshops on financial aid and budgeting. The financial aid advisor notifies students of available loans and scholarships, prior to matriculation and throughout the school year. The student affairs website has a link to the AAMC FIRST for the students to explore budgeting and financial aid. The independent student analysis reveals that 93% of respondents were satisfied with financial aid services.

PLFSOM has a fulltime financial aid advisor on campus. She is backed-up by financial aid advisors in Lubbock at the TTUHSC campus who are available by phone. Students are provided information about how to access these additional resources. Overall, 73% of the respondents indicated they were satisfied or very satisfied with debt management services, with the remainder selecting the neutral option. Many of these may have been students who have not needed to access these services due to low debt load.

## 12. Student Health

**Personal counseling and mental health services** are provided by eight community clinicians who have no role in instruction or assessment. All students have access to contact information for these providers and make their own appointments. The provider sends a de-identified bill to student affairs for payment. Data for the 2011-12 academic year is pending. TTUHSC also maintains a mental health hotline located in Lubbock. It came to our attention that some hotline personnel were unaware of the El Paso providers. The associate dean for student affairs rectified this situation and is keeping in close contact with the director of the Lubbock based hotline to ensure that their information is current and publicized among their staff. The independent student analysis reveals that 70% of the respondents are satisfied with mental health service arrangements with 29% selecting the neutral response option.

**Preventive and therapeutic health services** are provided by a designated physician in the Department of Family Medicine who does not have a role in medical student education. This physician is available 5 days a week during normal clinic hours. A back up is also available. After hours students may access the emergency room of their choosing. Students may also exercise the option of selecting their own physician in the community through their health insurance. Only one of the respondents to the independent student analysis reported being dissatisfied with health services.

**Immunizations** are provided through the office of occupational health at student expense. The student affairs office provides students information about opportunities for discounted immunizations through the public health department which is located adjacent to the campus. Ninety-one percent of students indicated they are satisfied with immunization policies and 88% reported being satisfied with access. Seven percent were neutral and the remaining 5% were dissatisfied.

Students are required to have **health insurance** through their own coverage or that of their parents if eligible. The students regard the plan offered by the school as being expensive and have requested options. TTUHSC has negotiated a group rate for all students and the current carrier has provided its best price. Past experience reveals that the carrier has been willing to work with students who have exceeded their coverage. For the class of 2016 we provided information on additional health insurance options. **Disability insurance** is adequate. Many students may not be aware that they have this coverage and we will emphasize this during orientation and in subsequent class meetings.

Students are provided annual instruction on how to avoid **bodily fluid contamination** and other environmental hazards and what to do if exposures occur. All students are provided a laminated card of instructions that is attached to their student identification badge. Students are well versed in this area.

## C. The Learning Environment

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### 13. Ensuring an Appropriate Learning Environment

PLFSOM and its clinical partners are committed to providing a positive learning environment consistent with the AAMC Compact between Teachers and Learners. The Compact is provided to students and faculty and is posted in prominent locations throughout the campus. The associate dean for student affairs meets annually with all departments and with community physician groups to discuss the importance of the learning environment and professionalism expectations for students, residents, faculty, and staff. Explicit language regarding the learning environment is incorporated in all affiliation agreements. Regardless of setting, students are instructed to report unacceptable behaviors to their clerkship directors who then consult with the associate dean for student affairs about appropriate next steps. The associate dean for student affairs is also developing an on-line module on appropriate student

interactions that will be available by the fall of 2012. All faculty and residents will be required to review this module annually.

#### **14. Policies for Addressing Allegations of Student Mistreatment**

The independent student analysis reveals they are generally satisfied with policies and procedures for promoting acceptable standards of conduct in the teacher-learner relationship. Ninety-five percent of the 168 respondents agreed that the educational environment fosters collegiality and respect and 89% agreed that policies were clear. Nonetheless, 13% reported that they had been mistreated at some point in their education and 19% reported having witnessed instances of mistreatment. The survey did not ask respondents to report on the nature of the mistreatment or on whether they sought relief and/or were satisfied with the outcome. Students did agree that they knew where to go for help (92%) and that they felt educational activities designed to prevent mistreatment were adequate (92%). In response to the student independent analysis, the associate dean for student affairs asked students to complete an anonymous open ended survey to describe instances of mistreatment. She is following this up with focus groups which recommended the creation of student advocacy group. This recommendation is under consideration by the Student Affairs Committee. We have also added an item to the end of clerkship evaluation that explicitly asks about mistreatment so that we monitor student perceptions and follow-up as appropriate with the clerkship directors.

#### **15. Advancement, Disciplinary Policies, Dismissal and Appeal**

Students are informed about policies governing advancement, disciplinary action, appeal, and dismissal. These policies are included in the Student Handbook and accessible through the student affairs website. These policies are discussed at length in first year orientation and reviewed annually with each class. In the few instances in which issues have arisen, the students have been well versed on policies, procedures, and their rights. The independent student survey reports that 87% of the respondents agreed that disciplinary policies were clear. Course and clerkship directors are also well acquainted with school policies and procedures. The associate dean for student affairs serves as a member of the Year 3-4 Committee, and is available to consult with clerkship directors on an as needed basis. She also interacts regularly with year 1-2 course directors who know that they can consult with her as needed.

#### **16. Student Space and Amenities**

The independent student analysis reveals that students in general are satisfied with study space (82%), relaxation space (89%), lounge and gym space (93%) and personal storage space (83%). There is an abundance of individual study carrels in the library and several small group study rooms located in the Medical Education Building (MEB). This study space must be shared with students in the nursing school, but thus far this has not resulted in any major problems. As class size in both schools increases, there will inevitably be more competition for study space. The construction of the new nursing building, adjacent to the MEB, in 2015 will ameliorate potential problems. Medical students have sole access to a sizeable lounge and well equipped gym facility. Each of the four colleges has its own "sitting" room area and locker space for college members. There is an attractive patio area attached to the MEB and a large open area between the MEB and the research building that is used for various sporting activities including volley-ball, touch football, softball and cricket!

## SECTION IV. FACULTY

### A. Number, Qualifications, and Functions

#### 1. Faculty Size, Qualifications, and Mix

The current size of the faculty at PLFSOM for basic science and clinical education is adequate to meet the educational needs of our current student body. Most instruction in the basic sciences is provided by the fulltime faculty members in the Department of Medical Education. Capacity in the basic sciences is further expanded by the members of the Department of Biomedical Sciences. The distribution of basic science faculty by discipline is adequate to address the necessary scientific content of the curriculum. We are confident that we have sufficient faculty resources in the basic sciences to meet current and future needs when class size expands to 100.

Current clinical faculty resources are sufficient for 80 students per class. We are taking the appropriate steps to increase full time and volunteer clinical faculty to support the expansion of our class. At present, the Department of Neurology is a concern. As previously noted, an active search is underway for a new chair. In the interim two neurology faculty members recently announced their decisions to leave the medical school—one to pursue professional opportunities in another city and the other to retire. Recruitment of replacements for these two faculty members has been approved. We have also contracted with two community faculty members to spend two half days a week at UMC doing clinical work and supervising students

Like many other academic medical centers, we have experienced an increase in clinical faculty attrition in the last two-three years particularly among junior faculty. Competition in the private sector and the demand for full time clinical practice in a region that is severely underserved contributes to this problem. We are doing our best to offer competitive salary packages. We also have data suggesting that early participation in our faculty development program enhances retention and we are redoubling our efforts to enroll junior clinical faculty in these programs.

#### 2. Faculty Development in Teaching and Assessment

Institutional-level faculty development programs include the following:

**Faculty Development Course (FDC)**—for the last 10 consecutive years, the institution has offered a 90 hour comprehensive faculty development course to its faculty members. Sixty-four hours are dedicated to teaching and assessment skills and the remaining time addresses research and scholarship. To date, 143 faculty members (55% of total faculty members at PLFSOM) have participated in this program. Our data shows that participation in this program is positively associated with retention and academic success.

**Faculty Mentoring Program**—in 2010, we initiated a formal, year-long mentoring program supported by our Hispanic Center of Excellence. This program pairs junior and early-mid career faculty members with senior faculty mentors. They meet monthly and are required to document progress in educational skills, scholarship, publication, and project preparation. The 18 mentees in the first cohort of this program produced 18 posters, 20 peer reviewed publications, and developed 11 new research projects. A second cohort of mentees is currently underway.

**Faculty Development Programs for Community Faculty**—we are adopting a variety of approaches to provide volunteer community faculty programs to enhance their skills as teachers. These include “just in time” preparation for specific activities; flash drive delivered curricula on teaching skills; face-to-face

workshops; and beginning in March 2012 access to the Society for Teachers of Family Medicine website—the Teaching Physician.

**Research Faculty Development**--the office of the associate dean for research sponsors a number of speakers, seminars, and workshops on different topics related to basic, clinical and translational research. Through a faculty development needs assessment we learned that clinical faculty identified the lack of collaborators as a factor limiting research productivity. In response, the associate dean implemented periodic “data blitz” sessions in which researchers shared ongoing or planned research in one slide “data blitz” presentations. Thus far 6 sessions have been held attracting an average of 45 participants per session and producing 8 new collaborations.

In addition to institution-wide faculty development, several departments support faculty development by offering programs within their respective departments or by supporting faculty to attend specialty conferences and workshops to enhance educational skills and scholarship.

### **3. Scholarly Activity and Support**

Many faculty members are actively engaged in a variety of scholarly activities. Between January 1<sup>st</sup> and December 31<sup>st</sup>, 2011 the faculty of the PLFSOM published 185 peer reviewed articles and 101 book chapters. 22 faculty members are current members of study sections or committees and 23 serve as editors or associate editors of professional and scientific journals. Forty-four faculty members are principal investigators on extramural grants. PLFSOM has initiated a formal mentoring program that is facilitating the scholarly productivity of participants. The associate dean for research sponsors a number of research related presentations, seminars, and workshops to better prepare faculty members for success in research and scholarship. A seed grant program of up to \$20,000 per project is also available.

## **B. Personnel Policies**

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### **4. Policies for Appointment, Renewal of Appointment, Promotion and Tenure**

Policies and procedures governing appointments, promotion, tenure, and dismissal are established by the Board of Regents and described in the faculty handbook which is available on line (see <http://www.ttuhsoc.edu/foster/facultyaffairs/ebook.aspx>). PLFSOM established its own policies in accordance with those required by the board.

The Committee on Faculty Appointments, Promotion and Tenure, and Performance Assessment (CFAPTA) reviews all applications for initial faculty appointment, promotion, tenure and comprehensive post-tenure review. CFAPTA recommends action to the dean for review, recommendation, and transmittal to the TTUHSC president and BOR. The self-study committee concludes that policies and procedures governing appointments, renewal of appointments and dismissal of faculty members are clear, accessible, and consistent with BOR policies. During the course of the self-study, two areas were identified as requiring action:

1) Some applications for promotion in the most recent cycle had to be withdrawn due to a lack of compliance with documentation requirements, despite the fact that the associate dean for faculty affairs conducts pre-promotion and review workshops each year and is available for assistance. To avoid such problems in the future, the associate dean for faculty affairs developed a series of check-lists for faculty applicants, chairs, departmental promotion committee members, and CFAPTA members to ensure that appropriate documentation is available and that required procedures have been followed.

2) The PLFSOM promotion and tenure requirement that a faculty member demonstrate a national reputation in order to be promoted from associate to full professor may be difficult to meet by faculty whose primary area is clinical medicine, teaching, or educational leadership. To address this issue, the dean appointed a task force to develop a proposal for a new track that recognizes the unique contributions of clinician educators and those whose primary role is teaching or academic administration.

## **5. Conflict of Interest Policies**

Institutional conflict of interest policies are set by the Regents' Rules and TTUHSC operating policies. Departmental rules must be consistent with broader institutional policies. The institutional and departmental conflict of interest policies relating to faculty members performance of their academic responsibilities are comprehensive, detailed and well delineated.

## **6. Faculty Performance Expectations and Feedback**

Each faculty member is required to submit an annual report to his/her department chair describing accomplishments in the preceding year and outlining goals for the next year. Goals, objectives and accomplishments should reflect the alignment of the faculty member's assigned responsibilities and their primary areas of emphasis (i.e., research and scholarship, teaching, clinical service, and/or academic service). The chair's assessment of the faculty member's accomplishments is expected to be mission-guided, objectives-directed and promotion-oriented. The chair is expected to indicate whether the faculty member is on-track for promotion and/or tenure and to include recommendations for improvement. Some faculty members observe that chairs vary in their skills of providing effective feedback and guidance. The faculty self-study sub-committee recommended that the department chairs participate in an intensive workshop on performance appraisal and feedback. Discussions have been initiated with the University of Texas at El Paso College of Business to develop an Executive Leadership program for PLFSOM department chairs and associate deans to be implemented in the 2012-13 academic year.

In addition to the annual performance review by the chair, the associate dean for faculty affairs and development conducts pre-promotion and/or tenure review for faculty who are at the mid-point (3 years after initial hire date). This review is mandatory for tenure track faculty but only recommended for those who are not on the tenure track. The LCME faculty sub-committee recommended that this review be mandatory for all faculty members who are preparing for promotion. This recommendation has been forwarded to the Faculty Council for consideration.

Education is valued at PLFSOM and all faculty members are expected to document participation in the educational program in some capacity. Evidence of national prominence in scholarship can qualify a faculty member for promotion to professor for those whose primary area of responsibility is education. Further, PLFSOM is one of the few medical schools in the US that has an academic Department of Medical Education.

## **C. Governance**

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### **7-8. Organizational Decision-Making and Faculty Role in Governance**

The mechanisms for organizational decision-making are effective and promote shared governance. Three major councils have been created to govern the institution. The Dean's Council consists of associate deans and department chairs and has primary responsibility for broad policy and resource issues. The Faculty Council is made up of elected faculty representatives from each department and concerns itself with issues of importance to the faculty at large. These two councils are brought together by the Academic Council which is made up of representatives from each of the other two.

The timeliness of decision-making varies depending on the issue and appropriate mechanism for faculty input. Issues requiring considerable faculty input and or data (for example, bylaws changes or the development of the Educational Value Unit [EVU] system for the allocation of “teaching dollars”) require more time for consensus building. Decision-making for matters concerning student affairs, admissions, curriculum, and student promotion are efficient and timely because the respective committees have decision-making authority in their domains. All committees required by the faculty bylaws are operational. The dean has the prerogative of establishing ad hoc committees to deal with time-sensitive issues that may cut across the interests and responsibilities of varying standing committees. Similarly, the associate deans are empowered to create their own ad hoc committees to deal with issues within their areas of responsibility.

Effort is made to ensure that faculty members are informed about important issues and that they have opportunities to make their voices heard by the dean and institutional leaders. This includes biannual all campus faculty meetings, quarterly dean’s forums and weekly electronic dean’s messages in the TechView. The Faculty Council is the primary locus of information sharing with faculty. It meets monthly and the dean reports on administrative matters and responds to faculty council members’ questions and concerns. The Academic Council meets quarterly to address issues requiring both faculty and administrative input. The dean meets annually with each department to provide faculty with another opportunity to share information and concerns in a town hall format. In January 2012, the Faculty Council conducted a campus-wide survey of faculty to assess their perceptions about how well they were informed about important institutional issues. This survey revealed that most faculty were aware of multiple avenues for sharing information.

## SECTION V: EDUCATIONAL RESOURCES

### A. Finances

#### 1. Financial Support: Stability, Sources, Adequacy and Trends

**State Appropriations:** The school receives state funding through legislative special line items, which is expected to continue for the foreseeable future. Total direct state funding to the school is approximately \$37M in FY2012. We have not been informed of any reduction but we are preparing for that possibility. Approximately \$15M of state funding in FY2012 supports undergraduate medical education. Additional funds are available for graduate medical education.

**Endowment:** The \$50M gift from Paul L. Foster was placed into an endowment and a significant portion of the endowment income is allocated to support scholarships. The spendable balance in this fund is currently greater than \$5M. In addition, a local foundation gave \$1.2M to support tuition and fees for students who agree to practice in El Paso for each year of support they receive. Modest endowment funds have been raised from other sources to support scholarships. We provide four year tuition and fees scholarships for at least 20 students per year. The remaining endowment funds are primarily for the support of named “Chairs.” An important component of the current strategic planning process is to develop strategies to expand our endowment program.

**Tuition:** Tuition and fees are currently \$15,500/year. Tuition revenue is offset against the special line item funding. All student fees are passed through to the school and allocated to the office responsible for the program.

**Patient Care Income:** In 2011, we changed the reporting process for our clinical practice and hospital income. Previously clinical practice income included some hospital income. In 2010, medical practice income was noted at \$78M with hospital income at \$17M for a total of \$95M. In 2011, we realigned

these two revenue sources. Medical practice income was approximately \$51M and hospital income was almost \$50M for a total of \$101M. This is the largest source of funding for the school and has been growing. We expect a significant increase in this source of income with the recent opening of El Paso Children's Hospital (EPCH). UMC transferred its pediatrics related programs to EPCH and is in the process of backfilling vacated space with new revenue generating programs. In the current fiscal year, approximately \$880,000 was allocated to support medical education from patient care income.

**Hospital Income:** Hospital income is growing as UMC continues to expand and support its \$11M commitment to the medical school for the recruitment of new faculty members. The establishment of EPCH increases the need for primary and specialty pediatric care. EPCH has made a commitment to support the salary and fringe benefits for three years per faculty for the recruitment of an additional 20 pediatric subspecialties and pediatric related faculty members. In addition, the medical school is expanding its relationships with other hospitals and clinical settings in the community. These relationships will generate additional income. Hospital income supports approximately 184 residents and six fellows. UMC continues to support growth in resident and fellowship programs.

**Research Income:** Prior to the establishment of the four year medical school, research was not a significant source of revenue for the El Paso campus. However, with increased state support, the opening of the Medical Science Building 1 and the expansion of faculty members with funded research programs, research income is growing in importance as a source of revenue for the institution. Research Centers of Excellence and research infrastructure have been created and provided startup funding from the state totaling about \$12 M in FY 2012. As noted in the section on grants and contracts, Part I-A of the Annual Financial Questionnaire, approximately \$2M (2009) in revenue were derived from direct and indirect expenditures from federal funding. This grew to approximately \$6.5M in federal funding, with overall funding of \$10.7M in FY 2011. We project that overall research funding will continue to grow from \$12M in FY 2012, to \$16M by the end of FY 2014.

**Changes in Funding Sources:** Based on state economic projections, we anticipate modest reductions in state funding over the next few years. We also anticipate that these reductions will be off-set by increases in clinical revenue, hospital support, and research funding. Our optimism is fueled by a growing health care market tied to population growth, the expansion of UMC and EPCH, and the positive trajectory of our research programs.

**Systems to Address Departmental Financial Difficulties:** No department is in financial deficit. Systems are in place to deal effectively with departmental financial difficulties. We provide all clinical departments a monthly summary of each department's revenues, expenses, changes in fund balance, etc. For non-clinical departments, expenses are reviewed monthly by the finance office. A Budget Advisory Committee representing the clinical, research, and educational missions of the school review all budget requests and submits recommendations to the dean. The associate dean for finance and administration, who is also the school's CFO, meets monthly with each department administrator to review current or projected changes which may require action from either his office or from the dean. If a significant financial issue arises in a clinical department, the chairman of the medical practice group and the associate dean for clinical affairs are informed and their advice is solicited. In the event a department is facing a financial challenge that cannot be resolved by the chair, the dean's office has several options ranging from eliminating the expenses causing the problem, granting additional support, directing the department chair to request support of the clinical practice plan, or the dean may request support from the Office of the President of TTUHSC.

Except for payroll, the Health Science Centers' financial system will not allow transactions to occur if an account shows a negative balance. If an account has a negative balance of \$100,000 or more, the

associate dean for finance and administration and the dean are required to submit an action plan to the EVP for finance and administration of the Texas Tech University Health Sciences Center for submission to the Board of Regents. This plan is monitored by the Office of the EVP to ensure corrective action.

## **2. Support for the Educational Mission and Pressures to Generate Revenue**

To protect the accomplishment of the educational mission, the senior associate dean for medical education tracks faculty participation in medical student education. Problems with the level of participation can be brought to the chairs, Dean's Council, Academic Council, Faculty Council or the dean for resolution. If necessary, the dean has access to resources that can be used to rectify such problems until permanent solutions can be implemented.

PLFSOM benefits from significant startup funding provided by the state, which continues for several years. This provides the latitude necessary to undergird academic programs and related infrastructure. Our strategy for maintaining the commitment to teaching is to protect the time of a core teaching faculty. The cornerstone of this strategy is our free-standing Department of Medical Education consisting of 26 FTE faculty state line item positions. Further, with state line item supports 15 FTE course/clerkship coordinators, 3 FTE audio-visual personnel, 4 FTE programmers and 3 FTE analysts.

Physicians from clinical departments account for approximately 29% of student contact time in years 1 and 2, and the other 71% of instructional contact time comes from the medical education department. The majority of the support for the physician's time comes from state funding. The senior faculty has developed a formula based Educational Value Units System to compensate clinical departments for education time. This formula will allocate approximately \$6.5M in State funding for educational purposes in FY 2013. Funding for the department of medical education is not included in this \$6.5M allocation.

## **3. Role of the Clinical Enterprise**

A single medical practice income plan supports the TTUHSC. The two medical schools alternate leadership on an annual basis. Generally, each school manages its funds independently, subject to overall supervision by the president of TTUHSC. The Medical Practice Income Plan (MPIP) is an integral part of PLFSOM. MPIP represents the largest medical practice group in our geographic area. MPIP's budgeting, expense control, productivity, practice sites and income are under the direct control of the dean. MPIP's budget is part of the school's annual budgeting process. Each clinical department's budget is reviewed as one budget including clinical, research, state and endowment/gift funding and is compared to proposed expenses. Through our strategic planning process, we have recently instituted key policy decisions to maintain the fiscal viability of the practice plan. We re-evaluated indigent care and self-pay access programs and put in place minimum payments requirements to access care on campus. We have also committed to expanding our outpatient presence off campus to areas with better payor demographics.

The leadership of PLFSOM, including MPIP, meets individually with the leadership of UMC and the El Paso Children's Hospital biweekly. There is also a monthly joint meeting with the leadership of the Medical School, UMC and El Paso Children's Hospital. These meetings focus primarily on educational/clinical programs, facilities, on- and off- campus challenges, faculty recruitment, program expansion, residency issues and medical student programs. The leadership of the school also meets monthly with the VA, and semi-annually with WBAMC and El Paso Psychiatry Center. The medical school leadership also meets frequently with the leaders of Las Palmas and Del Sol Hospitals, both part of the HCA network. These meetings are focused on expanding our clinical teaching opportunities for medical students and residents and expanding our clinical programs.

Medical school-hospital issues are discussed with the chairs at Dean's Council or the Chair's meeting to assure appropriate participation, input, and feedback. Annually, the dean, associate deans, and chairs meet in a 2-3 day retreat. Issues related to the clinical enterprise are extensively discussed.

#### **4. Meeting Current and Future Capital Needs**

Capital needs are requested through state appropriations. The request is submitted through the executive offices of TTUHSC and the board of regents. If approved at this level the request is then submitted to the legislature. If approved by the legislature, the funding of the facility is through state bonds (Tuition Revenue Bonds or TRBs). Other capital needs, such as major facility maintenance or renovations, are also requested using the same process but supported through the state's Higher Education Assistance Fund (HEAF). To date the legislature has been supportive of the school and its fiscal requests. At the school level, our primary charge is to identify and justify space or other major capital needs. As part of our strategic planning process, we identified future space needs and have requested support for these facilities through our budgeting process. Thus far, TTUHSC BOR and the state have been supportive of the new school recognizing the need for capital investment to ensure its success.

### **B. General Facilities**

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#### **5. General Facilities for Teaching, Research, and Service**

**Education:** Teaching space is of high quality and well equipped. This is exemplified by our 10,000 square foot state-of-the-art clinical simulation facility in the new Medical Education Building (MEB), which opened in 2008. Library facilities are centrally located. In addition to lecture halls that can accommodate over 100 people, we have an abundance of small group rooms, flexible use space that can be adjusted to accommodate specific needs (e.g., breakout group discussion), and case-study rooms modeled after those employed by the Harvard Business School. We recently remodeled a major area in the MEB to create space that can accommodate an entire class to participate in team-based-learning type sessions. In the last year, we completed the renovation of laboratory space in the MEB to create a Laboratory for Education in Molecular Medicine (LEMM) that permits basic science faculty members and students to collaborate on basic and translational research projects.

**Research:** Laboratory space for research, of which approximately 90% is new, is now completely committed to externally funded research programs. In addition to well designed and equipped laboratories, the enterprise is supported by Core labs providing advanced equipment and staff expertise in genomics, proteomics, flow cytometry, histology, electron microscopy, and crystallography. We have recently expanded our animal facility, with a 5,000 sq. ft addition. The Division of Biostatistics and Epidemiology provides essential support to both laboratory research and the growth of scholarship in the clinical departments. As noted earlier, our success in recruiting research groups for the Centers of Excellence in Infectious Diseases, Neuroscience and Cancer will potentially place a strain on their research space, which may limit our ability to expand in these areas. The space that is available is specifically earmarked for the development of the fourth Center of Excellence in Diabetes and Obesity. We are awaiting approval from the State of Texas for a second major research building of approximately 227,000 sq. ft. In the interim we have added a modular laboratory for Infectious Disease, and have plans for an integral addition to Medical Science Building 1 (MSB 1). Finally, a new Graduate School of Biomedical Sciences will begin during the next academic year and enroll 5-10 students per class. Adequate lecture room and small seminar space is available within the MSB1 research building for these students.

**Clinical Services:** Clinical service facilities are in good condition and provide adequate space for patient care. Expansion of academic clinical departments and increasing demands for clinical services has caused localized space shortages, but the future prospects for on- and off-campus facilities are excellent. Major expansion of clinical space is provided by the new El Paso Children's Hospital and Women's Pavilion. This provides new inpatient space for the departments of Pediatrics and OB-GYN. Renovation of vacated space in UMC provides substantially increased inpatient space for other programs. The school is acquiring additional space and practices and is building partnerships with other hospitals in the area.

## **6. Security**

Measures to ensure campus safety include 24 hour guards and police who rotate through the facilities, bicycle patrols, an on-call security escort service, the installation of "blue lights", security cameras, and campus police training with the local, state and federal law enforcement agencies. All campus entrances are secured at the close of the business day. Entry is then restricted to a single entrance, which is secured by a role-based card access control. PLFSOM has the only Animal Biosafety Level 3 (ABSL3) research laboratory within the TTU – TTUHSC System. Security and safety of this facility are of utmost importance. Access to MSB 1 is controlled by card access given only to those working in this building.

Our affiliated clinical inpatient sites meet Joint Commission standards and have many of the same protective programs as the medical school. Affiliated outpatient facilities (off site), in most cases, do not have the same protective programs as the campus. These facilities are open primarily during the daylight hours and have safe track records.

The TTU System recently purchased and implemented a Text Blast IT system (STAT alert) which can be used for all campuses or limited to one campus. To date, the Text Blast IT system has been used only for major weather events. In addition to the Text Blast IT System, we also use a "blast" email to all employees, students and faculty along with placing an electronic emergency notice on the flat screen TV monitors located inside public areas throughout the campus. Security in conjunction with our Safety Office is reviewing other modes of communication in the event of local or regional power blackout which may impact cell towers or other standard forms of communication.

## **C. Clinical Teaching Facilities**

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### **7. Clinical Teaching Resources**

The numbers and mix of patients is more than adequate to provide the clinical experiences needed to prepare students for residencies in their chosen fields. The medical school's expanding patient population is driven in part by the growth of UMC and the opening of EPCH. We have the faculty and clinical space needed to adequately meet the needs of 80 students. In anticipation of expanding class size to 100, we are recruiting additional paid and volunteer faculty and expanding affiliations.

### **8. Resources for Exemplary Patient Care; Role of Residents in Third-Year Clerkships**

The on-campus ambulatory clinics are appropriate for training students, but at times they are crowded due to patient volumes on specific days. We addressed this issue by modifying schedules. Our off-site clinics are newer facilities and their design facilitates patient flow and student training. We recently expanded the Family Medicine Clinic through the acquisition of an additional 5000 sq feet of space. Our primary inpatient affiliated institution recently completed significant renovations. These renovations updated the facility, allowed smoother patient flow from ER to a floor, increased patient beds and allowed for expansion of the ancillary diagnostic labs. The 122 bed EPCH includes a dedicated Pediatric Emergency Department, radiology suites, NICU, PICU, general pediatric beds and a floor dedicated to hematology – oncology patients. Space vacated at UMC is planned for extensive renovations including creation of an Acute Care for Elders program, expanded endoscopy services, and additional inpatient general medicine beds. Our current on- and off-campus clinics draw a major portion of the population of El Paso and

expose students to the full range of conditions needed for an excellent clinical education. Resident physicians are present in every setting where students complete required third and fourth year rotations.

#### **9-10. Medical School-Clinical Affiliates Relationships**

The relationship between medical faculty and our teaching affiliates is strong. At UMC, the hospital bylaws specify that each Chief of Service is the corresponding PLFSOM Department Chair unless a specific alternative selection is made by the dean. At EPCH, the Physician in Chief is, by bylaws, the Chair of the Department of Pediatrics. He also serves as an ex officio member of the EPCH Board. All clerkship directors are paid PLFSOM faculty. Hospital medical staff members who are not employed by PLFSOM have volunteer faculty appointments so that they can teach and supervise medical students. Across all of our affiliates, there is a shared understanding that medical student education is a priority and that PLFSOM faculty is responsible for the educational activities taking place at the affiliated site.

In general, the working relationship between the administrators of our major clinical affiliates and the Medical School leadership is very good. PLFSOM and UMC recently concluded negotiations on a new Master Services Agreement with significantly increased funding to PLFSOM, reflecting the significant clinical and administrative services provided by PLFSOM to UMC. While there are disagreements from time to time, these have always been resolved. Our affiliates frequently ask us to expand our relationship with them and they understand clinical expansion always includes a teaching component. All required components are included in the affiliation agreements.

#### **D. Information Resources and Library Services**

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##### **11-12. Library Resources**

Library holdings and services are excellent. The TTUHSC Libraries of the Health Sciences serves PLFSOM along with the other schools and campuses in the TTUHSC system. Collections are in place to support the needs of the four-year program, residency program, and faculty and researchers. The libraries' holdings include more than 165,000 book titles, nearly 49,000 electronic books and over 25,500 electronic journals. The library also provides access to 599 electronic databases. The library system collectively serves as a Resource Library for the National Network of Libraries of Medicine and has held Association of Research Libraries status since 1998.

TTUHSC faculty, staff, and students are able to access research materials 24 /7through the Libraries webpage. The online library catalog may be searched from any Internet access computer. Materials can also be requested around the clock through an electronic interlibrary loan form on the Libraries webpage.

Our library is housed in two campus locations within two blocks of each other. This arrangement provides availability to the clinical literature for faculty who are located in the Academic Education Center Building and the adjacent Texas Tech Medical Center. The basic science and medical education collections in the MEB facility are readily available to medical students and faculty. Library staff members regularly transfer materials between libraries to address patron needs.

The library is open a total of 100.5 hours per week between the two sites. Scheduled hours are: AEC--Monday through Friday 7:30 a.m.–10:00 p.m.; Saturday 10:00 a.m.–10:00 p.m.; Sunday 1:00 p.m.–10:00 p.m. MEB--Monday through Friday 7:30 a.m.–11:00 p.m.; Saturday 10:00 a.m.-11:00 p.m.; And Sunday 1:00 p.m.-11:00 p.m. Hours are extended as needed prior to examinations. Some students have expressed the need for more study space. In 2011, the library added 32 additional study carrels and supplemental seating for 30 at the MEB location. The combined library locations include 30 computer workstations as well as six study rooms with ample seating and equipped with audiovisual equipment. In 2012, the AEC location is adding 48 study carrels.

Library personnel play an important role in the educational mission of the campus by collaborating with faculty to incorporate library and information skills into the curriculum. Librarians regularly conduct workshops on the use of biomedical electronic databases to introduce students to the resources available through the TTUHSC Libraries. Librarians are available for one-on-one instruction and consultation. In addition, the TTUHSC librarians participate in collection development activities in concert with the faculty. The library staff welcomes faculty input and suggestions regarding materials to purchase that will complement the curriculum. Librarians can request the purchase of materials for the library collection.

We provide students a broad overview of library resources during orientation. The library staff provides instruction and feedback to students in years 3 and 4 of the curriculum in the areas of evidence based medicine, particularly during the Internal Medicine clerkship in year 3 and Emergency Medicine Clerkship in year 4. They also conduct a fourth year elective on medical informatics. The associate director of the library is an ex officio member of the Curriculum and Educational Policy Committee (CEPC). This enables them to anticipate library needs for the execution of the curriculum and to advise the faculty on new library and information resources.

### **13. Information Technology and Educational Technology**

Information technology (IT) support at the PLFSOM is adequate. The staff is knowledgeable and service focused. The IT department has developed an information technology master plan to provide resources and services to support the needs of the four year educational program. This plan organizes the department into several areas to provide support including information services support, PC support, audio visual support and network infrastructure support.

IT has four full-time software application developers and an educational technology area with three full-time analysts and a section manager. The section manager is an ex officio member of the CEPC. PLFSOM purchased the code for the Ilios curriculum management system from the UCSF School of Medicine and has developed a number of enhancements to meet PLFSOM needs.

Audio visual support consists of four full-time technicians who provide classroom support for medical education. Students are provided laptop computers on matriculation. IT provides students and faculty with PC technical support through the services of four full time PC technicians.

IT continues to work towards integration of its associated information systems at PLFSOM and its affiliated clinics. All PLFSOM clinics have network access to the information systems provided by the school. We have made a significant investment to establish redundancy in network connectivity. While connectivity problems have been minimal, the IT department has developed a contingency plan to provide redundancy to clinics in the case of any disruption. The information systems are housed and maintained within the El Paso Campus Data Center. This data center consists of state-of-the-art data storage systems and application servers. These systems are configured with redundancy technology to minimize disruption in delivery of data to the users. The TTUHSC El Paso campus and UMC have also developed an integrated solution within their network infrastructures to provide accessibility to each other's information systems. Both institutions' IT departments meet periodically to discuss network connectivity and contingency plans in the case of network disruptions.

## SUMMARY

### Strengths, Challenges, and Action Steps

PLFSOM continues to make remarkable progress as a new medical school. In the 18 months since our last LCME ad hoc survey team visit, we have completed a new, comprehensive strategic plan that will guide institutional development for the next several years; we have implemented a new integrated approach to clerkship education; and we have reformulated our definition of diversity to serve as a guide for the continued development and implementation of policies and programs designed to enable us to meet diversity goals.

Through our self-study process we identified the following major **strengths**:

1. A stable, experienced, cohesive leadership team that is committed to the continued success of the institution;
2. A high level of financial stability and continuing state support for the educational enterprise;
3. Rapidly expanding and highly productive research programs focused on issues of concern to the Texas/Mexico border and beyond;
4. A proactive commitment to long-range planning and development;
5. A highly integrated, innovative, and clinically relevant curriculum; and
6. A high level of commitment to, and participation in, faculty development and mentoring.

We have also identified **challenges** and are implementing **action steps** to address these challenges:

1. Our expanding class size requires sustained efforts to increase clinical faculty. This challenge is exacerbated by recent faculty attrition, particularly in the junior ranks. To meet this challenge:
  - We have embarked on an aggressive program of faculty recruitment;
  - We are actively negotiating with private hospitals and William Beaumont Army Medical Center to create and expand clinical learning opportunities for our students;
  - We have dramatically increased the pool of volunteer community faculty members.
  - We are positioning our extensive faculty development efforts to enhance faculty retention, particularly among junior level clinical faculty.
2. Our promotion and tenure policies require adjustments to better recognize faculty members who are primarily clinicians, clinician –educators, and those engaged primarily in educational leadership. To meet this challenge:
  - The dean has appointed a task force to review promotion and tenure guidelines and to develop a proposal for the creation of tracks for clinician educators and educational leaders;
  - We are expanding and enhancing our already robust faculty development and mentoring programs to maximize faculty success;
  - We are recruiting an assistant dean for faculty development to provide leadership and assistance across the campus in the development of innovative approaches to faculty development and success.

3. Our continued success in expanding the numbers of community volunteer faculty members will require that we develop flexible methods for delivering faculty development programs to busy clinicians. To meet this challenge:
  - We are implementing a variety of approaches for volunteer faculty development including individual face to face sessions, dinner meetings, and asynchronous electronic modes of delivery;
  - We are providing all faculty—paid and volunteer—subscriptions to the on line “The Teaching Physician” faculty development site sponsored by the Society for Teachers of Family Medicine;
  - We hired a full-time community faculty liaison staff person to assist community faculty with the credentialing process and to assist them in meeting faculty development expectations.
  - As noted above, we are also recruiting an assistant dean for faculty development who will play an important role in preparing community faculty for their roles as educators.
4. We are working to achieve a higher level of diversity in our student body consistent with our recently adopted diversity goals and policies. To meet this challenge:
  - We have implemented pre-college and college pipeline programs designed to increase interest in the health professions and to help students acquire the knowledge, attitudes, and skills that will prepare them for the rigors of medical education and enhance their chances of being admitted to medical school;
  - We participate in the Texas Joint Admissions Medical Program (JAMP) guaranteeing medical school admission of deserving students from economically disadvantaged background, and admitted four JAMP students in the class of 2016;
  - We are developing a post-baccalaureate program to enhance the preparation of promising applicants for matriculation into our medical school.

**APPENDIX: SELF-STUDY PARTICIPANTS**

<b><u>Institutional Setting Sub-Committee</u></b>		
<b>Name</b>	<b>Department</b>	<b>Rank/Position</b>
Charles Miller, PhD (Chair)	Biomedical Sciences	Professor/Associate Dean for Research
Theresa Byrd, DrPH	Medical Education	Professor/Director, Society, Community and Individual Course
German Hernandez, MD	Internal Medicine	Assistant Professor/Nephrology
Rajkumar Lakshmanaswamy, PhD	Biomedical Science	Associate Professor/Cancer Center
Armando Meza, MD (Co-chair)	Internal Medicine	Associate Professor/Associate Dean for Graduate Medical Education
Angel Morales-Gonzalez, MD	Surgery	Assistant Professor/Chair, Diversity Committee
Frank Stout	Dean's Office	Associate Dean for Finance and Administration/CFO
Susan Watts, PhD	Emergency Medicine	Assistant Professor/Chair-elect, Faculty Council

<b><u>Educational Program Sub-Committee</u></b>		
<b>Name</b>	<b>Name</b>	<b>Name</b>
David Steele, PhD (Chair)	Family and Community Medicine	Professor/Senior Associate Dean for Medical Education
Elmus Beale, PhD	Medical Education	Professor (Anatomy)/Member, Curriculum and Educational Policy Committee
Debra Bramblett, PhD	Medical Education	Assistant Professor (Microbiology)/Member, Curriculum and Educational Policy Committee
Richard Brower, MD	Medical Education	Associate Professor/Chair, Department of Medical Education
Theresa Byrd, DrPH	Medical Education	Professor/Director, Society, Community and Individual Course

<b>Educational Program Sub-Committee Continued</b>		
<b>Name</b>	<b>Name</b>	<b>Name</b>
Martine Coue, PhD	Medical Education	Associate Professor (Genetics)/College Master
Rafael Gonzalez-Ayala, MD	Internal Medicine	Assistant Professor/Internal Medicine Clerkship Director
Tanis Hogg, PhD	Medical Education	Professor (Biochemistry)/Member, Curriculum and Educational Policy Committee, Year 1 Scientific Principles of Medicine Course Director
Jay Jackson, MSI		Student Member, Curriculum and Educational Policy Committee
Herb Janssen, PhD	Medical Education	Professor (Physiology)
Naomi Lacy, PhD (Co-chair)	Office of Curriculum, Evaluation, and Accreditation	Associate Professor/Director of Assessment and Evaluation
Michael Osborn, MSII		Student Member, Curriculum and Educational Policy Committee
David Osborne, PhD	Medical Education	Professor (Physiology)/Chair, Grading and Promotion Committee
Michael Parsa, MD	Emergency Medicine	Assistant Professor/Emergency Medicine Clerkship Director, Member, Curriculum and Educational Policy Committee
Curt Pfarr, PhD	Medical Education	Associate Professor (Histology)/Year 2 Scientific Principles of Medicine Course Director
Janet Piskurich, PhD	Medical Education	Associate Professor (Immunology)/Member, Curriculum and Educational Policy Committee
Monica Rettenmier, MSII		Student Member, Curriculum and Educational Policy Committee
Tammy Salazar, PhD	Student Affairs	Assistant Professor/Director, Academic Support
Vani Shukla, MD	Internal Medicine	Assistant Professor/Member, Curriculum and Educational Policy Committee
Amy Trott, PhD	Medical Education	Assistant Professor (Biochemistry)
Cathy Tsin, MSI		Student Member, Curriculum and Educational Policy Committee

<b>Medical Student Sub-Committee</b>		
<b>Name</b>	<b>Department</b>	<b>Ranks/Position</b>
Kathryn Horn, MD (Chair)	Family and Community Medicine	Associate Professor/Associate Dean for Student Affairs
Diana Andrade	Student Affairs	Financial Advisor
Martine Coue, PhD	Medical Education	Associate Professor (Genetics)/Member, Admissions Committee
Maureen Francis, MD	Internal Medicine/Medical Education	Associate Professor/College Master (January 2012)
Brandon Fuqua, MSIII		Medical Student
Alex Garcia	Student Affairs	Director of Student Affairs
Lorraine James	Admissions	Assistant Director of Admissions
Charmaine Martin, MD	Family and Community Medicine	Assistant Professor/Member Admissions Committee
David Osborne, PhD	Medical Education	Professor (Physiology)
Tammy Salazar, PhD	Student Affairs	Assistant Professor/Director of Academic Support
Manuel Schydlower, MD	Pediatrics	Associate Professor/Associate Dean for Admissions
John Snelling	Admissions	Director of Admissions
Jonathan Thornton, MSII		Medical Student

<b>Faculty Sub-Committee</b>		
<b>Name</b>	<b>Department</b>	<b>Ranks/Position</b>
Hoi Ho, MD	Internal Medicine	Professor/Associate Dean for Faculty Affairs and Development
Lorenzo Aragon, MD	Family and Community Medicine	Associate Professor/President, Faculty Council
Elmus Beale, PhD	Medical Education	Professor (Anatomy)/Member, Curriculum and Educational Policy Committee
Richard Brower, MD	Medical Education	Associate Professor/Chair, Department of Medical Education
Melanie Flores, MD	Radiology	Resident
Rajkumar Lakshmanaswamy, PhD	Biomedical Science	Associate Professor/Cancer Center/Member, Faculty Council
Omosalewa Lalude, MD	Internal Medicine	Assistant Professor/Member, Faculty Council
Armando Meza, MD	Internal Medicine	Associate Professor/Associate Dean for Graduate Medical Education
Angel Morales-Gonzalez, MD	Surgery	Assistant Professor/Chair, Diversity Committee
Gurjeet Shokar, MD	Family and Community Medicine	Professor/Chair, Family and Community Medicine
Susan Watts, PhD	Emergency Medicine	Assistant Professor/Chair-elect, Faculty Council

<b>Educational Resources Sub-Committee</b>		
<b>Name</b>	<b>Department</b>	<b>Rank/Title</b>
Frank Stout (Chair)	Dean's Office	Associate Dean for Academic Affairs and Administration/CFO
Corina Bustillos	Library	Assistant Director
Albert Campos	Family and Community Medicine	Administrator
Andrea Cancellare	Library	Associate Director
Jessica Fisher	Fiscal Affairs	Assistant Director/Interim Managing Director
Alicia Gacharna	Pediatrics	Administrator
Alex Garcia	Student Affairs	Director of Student Affairs
Kathryn Horn, MD	Family and Community Medicine	Associate Professor/Associate Dean for Student Affairs
Jose Melchor	Safety Services	Unit Manager
Tony Quintela	TTUHSC Police	Lieutenant
Leo Pereyra	Building Maintenance and Operations	Director
Jerry Rodriguez	Information Technology	Assistant Vice President
Michael Romano, MD	Pediatrics	Associate Professor/Associate Dean for Academic Services
Mary Spalding, MD	Family and Community Medicine	Associate Professor
Olof Sundin, PhD	Biomedical Sciences	Associate Professor/Center for Excellence in Neuroscience

<b>Medical Student Independent Analysis</b>	
<b>Name</b>	<b>Medical School Year (at time of preparation)</b>
Michael Osborn (Co-Director)	MS II
Joshua Reber (Co-Director)	MS II
Kallie Appleton	MS III
Grace Cruz	MS II
Christian Eccles	MS I
Lowell Ellerbrook	MS I
Joshua Gaines	MS III
Laura Hahn	MS I
Nadine Haykal	MS I
Saadi Imam	MS II
Jay Jackson	MS I
Amanda Jenson	MS I
Jillian Junkes-Sanford	MS III
Danby Kang	MS I
Jonathan Lavezo	MS I
Rica Mauricio	MS I
Jeffrey Mohlman	MS I
Lisa Montgomery	MS III
Grace Ng	MS III
Chetna Pande	MS I
Jarad Peranteau	MS II
Cory Rasmussen	MS I
Monica Rettenmier	MS II
Jessica Schancupp	MS II
Michael Sippel	MS I

<b><u>Medical Student Independent Analysis Continued</u></b>	
<b>Name</b>	<b>Medical School Year (at time of preparation)</b>
Iris Tomas	MS II
Cathy Tsin	MS I
Bailey Wilson	MS III
Jessica White	MS II
Laura Wise	MS II
Tammy Salazar, PhD	Director of Academic Support: Advisor