INTRODUCTION:
The Ohio State University (OSU) College of Medicine traces its origins to the Willoughby University of Lake Erie in Chagrin, Ohio, established in 1834—the same year that the city of Columbus was chartered. Following multiple geographic moves and mergers with other medical colleges, the current college of medicine found its permanent home in Columbus as part of the Ohio State University in 1914. The current LCME Site Visit will, therefore, correspond with the 100th year anniversary of the admission of our first class.

PRIOR ACCREDITATION FINDINGS, PROGRESS AND MAJOR CHANGES:
The most recent LCME accreditation survey of the OSU College of Medicine occurred in 2006. After a site visit conducted between January 29 and February 1, 2006, and the meeting of the committee on June 5-6, 2006, the LCME voted to continue accreditation of the college for an 8 year term. Several areas of institutional strength were noted, including efforts to create an “effective multispecialty group practice,” “excellent clinical skills facilities,” and the “medical students’ initiative in the creation of Project Professionalism and the Professionalism Council.” Since that visit, the college has built upon these strengths, expanded its clinical and teaching facilities, created an integrated faculty practice group, and introduced an innovative new curriculum.

HISTORY OF PREVIOUS FINDINGS AND PROGRESS:
At the time of the 2006 visit, eight areas of noncompliance were noted. These involved the following standards and concerns: ED-1 (educational objectives not used clearly in designing courses, no routine review of courses/clerkships to assure congruence with objectives, lack of regular use of outcome measures to assess achievement of objectives); ED-2 (some clerkships did not quantify criteria for types of patients, inadequate definition of clinical settings and student responsibilities to achieve objectives, patient logs not used for mid-clerkship formative assessments); ED-33 (inadequate role of curriculum committee in curriculum management and in linking course objectives to institutional objectives); MS-24 (overdependence on loans for student financial support); MS-27 (student difficulty in accessing preventive and therapeutic health services); MS-34 (unfair process for adverse actions against students); FA-1 (faculty diversity does not reflect student body composition); and ER-9 (incomplete affiliation agreements with regard to exposure to infectious and environment hazards and occupational injuries). Two areas “in transition” were also noted: plans for a comprehensive program in student mentorship and academic counseling, and for institution of objective structured clinical exams (OSCEs) to assess student skills in social and behavioral science.

On December 13, 2007, the college submitted a progress report in which all these concerns were addressed, as follows: ED-1: The college developed a policy for regular review of all curricular components; documented mapping of curricular offerings and correlation with institutional objectives; and initiated a review of the extant institutional objectives. ED-2: The college noted the change in LCME policy which no longer required quantification of types of patients or clinical conditions students were expected to encounter. ED-33: The college reviewed and revised bylaws for the Executive Curriculum Committee (ECC), strengthening the role of the ECC and the dean in curriculum oversight and management, and provided minutes of meetings to document implementation of the new bylaws. MS-24: The college increased scholarship funds substantially and added resources to assist students with budgeting, financial planning, etc. MS-27: The college reported that hours for the Wilce Student Health Center had been expanded, and created a policy which permitted early dismissal from clinical responsibilities when students required time for preventive services or acquisition of prescription drugs within health center hours. MS-34: The college revised its guidelines for the Academic Review Board to clarify the participation of deans in the process. FA-1: The college reported improved inclusion of
underrepresented minorities in faculty positions. **ER-9**: The college documented the inclusion of specific guidelines for responsibility for treatment of students exposed to infectious or environmental hazards in the affiliated institutional agreements. **Transition 1**: The college documented enhanced efforts in student mentoring and academic counseling, including the new learning community program. **Transition 2**: The college documented the implementation of OSCEs in social and behavioral domains.

On February 28, 2008 the LCME reported action taken at its meeting February 5-7, 2008, in response to the college’s progress report. The committee affirmed full compliance with standards **ED-2**, **MS-34** and **ER-9**, and satisfactory resolution of the transition areas. However, the committee noted that full compliance had not been achieved in standards **ED-1** (incomplete use of objectives in determining content in courses and clerkships, in selecting educational methodologies, and in designing assessment and outcome measures); **ED-33** (inadequate role of curriculum committee in evaluating outcomes and use of objectives); **MS-24** (continued dependence on loans for students); **MS-27** (insufficient evidence of adequate student access to preventive and therapeutic health services); and **FA-1** (insufficient evidence of improved racial, ethnic and gender diversity).

On August 13, 2009, the college submitted a report addressing each of these concerns, as follows: **ED-1 and ED-33**: The college reported new core educational objectives and documented revision of course content and development of new course content utilizing the new objectives. **MS-24**: The college provided information about a slowing of the growth of the medical school’s tuition in relation to the other OSU professional colleges, and documented improved student satisfaction with administrative services and debt management counseling. **MS-27**: The college provided evidence from the annual student survey that indicated improved satisfaction of students with student health services. **FA-1**: The college reported the results of its efforts to enhance diversity among the faculty. On October 16, 2009, the LCME, reporting action taken at its meeting October 2-9, 2009, affirmed full compliance with standards **ED-1**, **ED-33** and **MS-27**. The committee continued its judgment that full compliance had not been achieved in standards **MS-24** (medical student debt) and **IS-16**, previously known as **FA-1**, (insufficient diversity).

On August 16, 2010, the college submitted a report addressing each recent area of concern, as follows: **MS-24**: The college reported continued efforts to increase scholarship dollars through new monies available from the State of Ohio and from increased philanthropy. **IS-16** (formerly **FA-1**): The college provided additional information regarding efforts resulting in increased diversity among the faculty. On October 21, 2010, the LCME reported action taken at its meeting October 5-7, 2010. The committee confirmed full compliance with standard **MS-24**, and concluded that progress had been made towards fulfilling standard **IS-16**. A progress report regarding **IS-16** (diversity) was requested. The college responded on August 4, 2011, as follows: **IS-16** was addressed by providing additional information regarding efforts to enhance diversity and inclusion among the faculty. The LCME response of October 24, 2011 determined that that the college now was in compliance with all standards cited in 2006, including standard **IS-16**, but that ongoing monitoring of **IS-16** would be undertaken as part of the next full site visit.

**SIGNIFICANT EVENTS SINCE LAST SITE VISIT:**

Since the last LCME site visit, these changes have taken place at the OSU College of Medicine:

1. The college instituted a major curricular redesign shortly after completion of the last LCME survey. The result was a new competency-based, integrated curriculum which we chose to call Lead.Serve.Inspire (LSI). The curriculum was constructed in three stages: 1) objective development; 2) creation of a curricular blueprint; 3) curricular implementation. Using the core educational objectives, the faculty constructed a curriculum which integrates foundational science and clinical science throughout all four years, including hands-on clinical experience beginning within the first two months. At the time of the site visit, we will have one class which has completed the first year of LSI and is at about the end-point of the second year; a second class will be in the LSI first year. The third and fourth year classes will still be enrolled in the old curriculum, which we have chosen to call the “2006 Curriculum” throughout the LCME documents. Data entries for the “index year” (2012-2013) will be based on a first year class in the
LSI curriculum and the remaining 3 classes in the “2006 Curriculum.” We believe that the LSI curriculum represents the “state of the art” of medical education in the 21st Century.

2. Leadership of the college has changed. At the time of the prior visit, a single individual (Dr. Fred Sanfilippo) held the positions of Dean of the College of Medicine, Senior Vice President for Health Sciences, and CEO of the hospital. Since that time, Dr. Steven Gabbe has been appointed Senior Vice President and CEO of the OSU Medical Center, and Dr. Charles Lockwood has been appointed dean.

3. A major change in the employment arrangement for full-time physicians has been accomplished. At the time of the previous visit, all clinicians were employed by Ohio State University Physicians, which was closely affiliated with (but not directly a part of) the university. In 2011, the Faculty Group Practice (FGP) was created to fully integrate physicians into the university and Wexner Medical Center. Now, virtually all full-time physicians are part of the FGP and are exclusively employed by OSU, permitting a more unified approach to teaching, research and clinical care and a more seamless transfer of monies to support the educational mission.

4. In December 2006, the college opened the Biomedical Research Tower (BRT), a new 10 story facility with approximately 403,000 square feet dedicated exclusively to research, greatly expanding our faculty and student research capabilities.

5. In January 2012, the college opened an expanded Clinical Skills Education and Assessment Center, with more than 26,000 square feet of instructional space.

6. The medical center embarked on a major expansion of its clinical facilities, adding the Eye and Ear Institute (138,000 sf) and the Comprehensive Breast Center (145,000 sf). The new Arthur G. James Cancer Hospital and Richard J. Solove Research Institute and Critical Care Tower will open in the fall of 2014. The latter facility will add 420 cancer and critical care beds, and incorporates designated teaching and research space (a large education center, plus multiple classrooms and labs on each floor). This project also includes a substantial expansion of the Emergency Department, opening additional floors in the BRT for research, and creation of urban parks around the medical center.

In the spring of 2011, the college recognized that several unforeseen factors had resulted in a significantly larger number of students being admitted to the class which was to start in August, 2011. Representatives from the college met with the LCME secretaries in Washington on June 20, 2011, to report and explain this unexpected circumstance. On August 4, 2011, the college followed up this meeting with a formal letter of notice to the LCME, detailing steps being taken to ensure the quality of education for this class. In the letter dated October 24, 2011 (see earlier paragraph), the LCME also acknowledged the college’s “unplanned, one-time-only event” of extra students in the first year class, and requested a progress report by April 15, 2012, to document the college’s efforts to ensure that the education of these students was not compromised. The requested report was submitted on April 6, 2012, documenting all of the efforts to address the potential problems created by the large class, including:

- reduction in size of the next entering class;
- measures taken to prevent the same problem in future classes;
- provision of adequate resources for both the basic science and clinical experiences for the extra students;
- allocation of supplemental scholarship dollars;
- increases in student support staff;
- and improvements in library and technology support.

On June 27, 2012, the LCME reported that the April 6 letter had been reviewed, and that no further responses regarding the larger class size were required. It should be noted that accommodation of the large size class in their core clerkships has necessitated a minor revision in the schedule for implementation of the new LSI curriculum. When fully implemented, the students in LSI Part 2 will begin their core clerkship experiences in May of their second year. However, in the 2013-2014 academic year, students will begin other components of LSI for two months, so that they do not “overlap” with the large class still finishing their third year experiences.

**OSU COLLEGE OF MEDICINE SELF-STUDY PROCESS:**

The college received notice of the site visit date in the spring of 2012, and immediately appointed the Faculty Accreditation Lead (Robert L. Ruberg, MD) and the Staff Visit Coordinator (Lorna Kenyon). In June, the LCME Task Force was appointed, and subgroup committee members were identified. Beginning in
July, 2012, the subcommittee members began populating the database. Between January and May 2013, the subcommittee members, divided into smaller groups, addressed the various self-study questions. In June and July, these responses were assembled into a narrative report for each of the 5 major areas of study. From August through October 2013, the final self study summary report was prepared under the leadership of the faculty lead. At each stage of the process, the question answers, the draft section reports and the final report were circulated to the subcommittee members and the task force for review, comment and approval. Participants in the process included: faculty members at all ranks, staff members, representatives of affiliated hospitals, deans/senior leadership, residents and medical students. The independent student analysis was initiated in October 2012, and completed in May 2013. The self study summary report and the independent student analysis were then presented to the College Assembly, the Executive Curriculum Committee and the Faculty Council in November 2013, and submitted to the LCME in December, 2013.

Because the college will be in the midst of implementing and assessing the new LSI curriculum at the time of the site visit, the college will not be looking to the self-study as part of overall institutional planning (which had just been completed, resulting in the new curriculum); instead the college intends to utilize the study for evaluation of its process of maintaining continued compliance with all LCME standards and of incorporating annual changes in the standards into its curricular and administrative structure. In addition, the college views the self-study as an opportunity to carry out an intensive assessment of the effectiveness of the new curriculum and to contrast this with the old.

I. INSTITUTIONAL SETTING

A. Governance and Administration

1. Strategic Planning: The OSU College of Medicine (including the Office of Health Sciences) is one of the 3 major components of the OSU Wexner Medical Center (OSUWMC). The other components are: the Faculty Group Practice and the OSU Health System and Hospitals. As a result of this integrated structure, the institutional priorities for the college are determined within this overarching framework, and not independently. Similarly, the strategic plan for the college is included as part of the overall institutional plan for the OSUWMC. After the most recent analysis of core capabilities and strategic opportunities (June 2012), the OSUWMC leadership reaffirmed three overarching goals to guide the OSUWMC’s strategic growth. The goals (originally stated in the Medical Center’s FY09 – FY13 Strategic Plan) are: 1) Become a high performance organization and workplace of choice; 2) Become a top 20 academic medical center and top 10 NCI-funded Comprehensive Cancer Center; and 3) Generate an investment fund for mission development.

The priorities set by this process and the resulting action plan have been effective in guiding the college as it works to meet its education, research and clinical service missions. From the education standpoint, the college continues to be considered in the top third of U.S. medical schools, as indicated by 38th position in the last U.S. News & World Report “Best Medical Schools” ranking overall, and 15th among public institutions. Major education-related changes since the previous site visit have included an expansion of the state-of-the-art Clinical Skills Education and Assessment Center with 18,000 additional square feet, the creation of the Center for Faculty Advancement, Mentoring and Engagement (FAME), and the establishment of the Office of Diversity and Inclusion. The continued success of the college can be attributed to its national reputation, faculty resources, and student quality. In addition, as noted, the new medical student curriculum promises to be among the most innovative in the country.

From a research standpoint, faculty members within the college hold more than $166 million in annual external research funding awards ($251.8 million in the Department of Pediatrics Nationwide Children’s Hospital grants are included). The NIH recently renewed the college’s Clinical and Translational Science Award (CTSA), and OSU is one of only 41 National Cancer Institute-designated Comprehensive Cancer Centers (CCCs) in the United States. In a partnership between the research and
education missions, the college’s MD/PhD program has been granted an NIH-supported Medical Scientist Training Program (MSTP) award.

From a clinical service perspective, the OSUWMC has 10 nationally ranked specialties, and has been named one of “America’s Best Hospitals” by *U.S. News & World Report* for 18 consecutive years. The hospital has recently fully implemented the Integrated Healthcare Information System (IHIS), a single, integrated and personalized health record (i.e., Epic) across the continuum of a patient’s interaction with the medical center. The medical center expansion project ($1.1 billion) will greatly expand our critical care and cancer treatment capacity, while allowing renovation of existing facilities and improvements to the surrounding infrastructure and environment. Institutional planning efforts have been successful in allowing the college to accomplish its educational, research and clinical services missions.

2. Accreditation: The OSU College of Medicine has consistently met and maintained the eligibility requirements for LCME accreditation since the initiation of the accreditation process. (See the introductory section of this self study summary for more details.)

3. Governance Structure: The college has an effective governance structure which facilitates the day-to-day functioning of the medical college as an integral part of the university. The formal governance structure of the college mirrors that of the university, including the college’s basic documents—the Pattern of Administration and the Appointments, Promotion and Tenure (APT) document, which must conform to university-prescribed standards and outline. These college-level documents are clear and comprehensive. Each department is responsible for interpreting the bylaws, policies and procedures in a manner that is germane to that department’s discipline, provided it is generally in accordance with the college’s interpretation. Each new and reappointed chair is required to update or reaffirm the department’s policies and procedures. The policies and procedures must be created with substantial input from the departmental faculty, and must be approved by the college dean and by the university provost.

This structure is appropriate and functions effectively and efficiently. Departmental documents describe committee functions and membership opportunities, ensuring that the educational program is supported fully in compliance with college and institutional requirements. The self study task force concludes that, despite its apparent complexity, the governance process has allowed the college to achieve its own goals and maintain a leadership role in the university community.

The college has recently changed its internal governance structure to improve efficiency and increase the voice of all faculty members in the process. The old bicameral administrative structure (a Council of Chairs and a Faculty Council) has been replaced by a single entity, the College Assembly, which is the primary governing body of the college. The College Assembly is composed of the department chairs, center directors, representatives from the Faculty Council and members of the dean’s administration, including all of the vice deans. The Faculty Council, which now reports to the College Assembly through its elected representatives, is composed of 1 or 2 faculty members from each department. The voice of the individual faculty members is carried to the College Assembly through the ten elected Faculty Council representatives in the Assembly. The democratic process is supplemented by requiring that significant changes to bylaws or policies must be approved by majority vote of the College Assembly and then ratified by majority vote of the faculty of 2/3 of the departments. The education mission is effectively represented in this process through the various deans and department chairs, as well as individual faculty members, who are integral components of this leadership structure.

The college has a formal administrative structure led by the dean. Under the direction of the dean, the vice dean for Education is responsible for all educational programs within the college. There are several associate and assistant deans within the education enterprise, each of whom has a particular area of expertise and oversight. The college bylaws include multiple committees that are responsible for development and implementation of the curriculum, under the overall supervision of the Executive Curriculum Committee (ECC).
4. Governance Policies: To prevent conflicts of interest at the level of the governing board, university trustees are required to file an annual financial disclosure statement with the Ohio Ethics Commission. The Ethics Commission then compares the trustees’ interests against a list of current university vendors to identify any potential conflicts. The Trustees’ Statement of Expectations also requires that trustees disclose promptly and fully any potential or actual conflicts or dualities of interest. Minutes of the board meetings document multiple instances in which trustees have recused themselves from discussion of various topics based on possible conflict of interest. The trustees must approve all appointments of university center directors, deans, department chairs, endowed chairs, emeritus appointments, faculty professional leaves, faculty promotions and tenure, and clinical and research faculty contract reappointments. Lesser actions are delegated to the university for approval on the trustees’ behalf.

5. Cohesiveness of Leadership: As noted, since the last accreditation review, some key leadership positions in our organizational structure have changed to better support the missions of the college and medical center and to facilitate interaction with university administration. The senior vice president (SVP) for Health Sciences and the dean of the college are now separate positions. The SVP has a direct reporting relationship to the university president, and serves as CEO of the OSUWMC; the dean reports directly to the provost, as well as to the SVP, and is primarily responsible for the college of medicine. To maximize communication between the college and central administration, the dean meets quarterly with the provost and weekly with the SVP, and the SVP meets weekly with the university president. Within the OSUWMC there are several regular meetings that bring together the stakeholders of the various administrations, most notably the medical center’s Executive Cabinet. Furthermore, the dean sits on the board of the new Faculty Group Practice (FGP), the SVP and the dean sit on the board of Nationwide Children’s Hospital (NCH), and the past-president of the NCH board sits on the medical center board. This structure allows separation of the responsibilities for the medical center and the college where appropriate, yet still enables cohesiveness and inclusion for the entities that represent the educational and patient care objectives of the college and medical center through these regular joint meetings.

The new FGP, which employs the faculty physicians, is part of the medical center organization. The FGP is closely affiliated with the college, particularly relative to the recruitment and hiring of physician faculty members. The dean meets regularly with the other health sciences deans to discuss issues that are germane to the health science colleges. The college has excellent relationships with its major community affiliates (Mount Carmel Health System, OhioHealth – Grant Medical Center, and OhioHealth – Riverside Methodist Hospital). Each has an educational leader with an assistant dean title in the college; these individuals all serve as members of the college’s Executive Curriculum Committee.

6. Administrative Leadership: Dr. Charles Lockwood was appointed dean and vice president for Health Sciences at Ohio State in September, 2011. Dr. Lockwood came to OSU from Yale University, where he served as chair of the Department of Obstetrics, Gynecology and Reproductive Services. Dr. Lockwood also holds a Master of Science in Health Care Management degree from Harvard. In addition to his clinical expertise he has been a prolific researcher, with over 270 original research articles, 140 editorials, and has authored or edited multiple textbooks as well as textbook chapters and abstracts. He has received multiple NIH grants and his lab is currently funded by the March of Dimes. He is a member of the Institute of Medicine. Dr. Lockwood’s relationship with university leadership is strong and effective. (See section #5 above for details of his reporting relationships). The dean conducts the monthly College Assembly meeting. The dean’s staff includes a number of vice deans, associate and assistant deans, as well as additional support personnel. This group functions very collaboratively, with a schedule of daily and/or weekly meetings to address business-at-hand, and a series of monthly meetings for planning. New vice deans have been appointed for research, education and innovation. The current vice dean for Education, although just appointed in 2012, was consistently part of the development of the new curriculum in his role as associate dean for Medical Education.

Departmental leadership has been reasonably stable; occasional vacancies have been routinely filled in a timely manner. Recent important appointments in 2013 include new chairs in Surgery,
Emergency Medicine and Pediatrics. Searches are underway for chairs in Pathology and Orthopaedics. To maintain continuity of department functioning during vacancies, the college has filled interim positions quickly with a qualified internal candidate while a national search commences. The college has worked hard to achieve a balance of promoting from within to achieve consistency, and hiring from outside to enhance vitality. Relationships with clinical affiliates are discussed in section 5 above. Regular meetings between the college’s senior leadership and the education leaders of our affiliates help to promote cooperation and preservation of a healthy learning environment for our medical students.

B. Academic Environment

7. Graduate Programs: The graduate programs in the basic sciences at OSU College of Medicine are an important resource of the institution and make major contributions to the missions and the goals of the college, thus resulting in a very positive impact on medical student education. These programs promote scholarly excellence by successfully recruiting talented and highly diversified students, by recruiting high quality faculty educators for basic science instruction and research across a broad spectrum of biomedical disciplines, by the submission of training grants to the NIH, by the development of innovative cross-disciplinary training programs and by the development of, and participation in, interdisciplinary investigative opportunities and learning interactions. Graduate programs include: 1) the Biomedical Sciences Graduate Program (which is part of the college of medicine), and (among other functions) serves as the primary research locus for the MD/PhD program (MSTP—Medical Scientist Training Program); 2) four cross-campus interdisciplinary graduate programs, categorized as Life Sciences Graduate programs, which are taught in large part by college of medicine faculty members (65% of student mentors are college faculty), but which in fact are administered by the OSU Graduate School; and 3) graduate programs in the School of Health and Rehabilitation Sciences within the college of medicine.

Graduate school education at the OSU College of Medicine has grown significantly since 2006. The five PhD-granting programs available to our students enrolled in the Biomedical Sciences Graduate Program have 145 students and will matriculate 20 new students each year beginning in 2014. The program initially received external validation through receipt of a T32 NIH training grant with $1.0 million funding for 2005-10, and was re-funded in 2012 to support 6 positions per year. In 2011 the MD/PhD program garnered a very competitive NIH MSTP T32 award. The Biomedical Sciences Graduate Program has been evaluated both internally and externally in the last six years. The OSU Graduate School conducted a doctoral program assessment in 2007 following the appointment of the dean of the OSU Graduate School. The provost has now instituted a 4-5 year review cycle. The recent enhancement of the Biomedical Sciences Graduate Program curriculum was university-approved in 2012. This new graduate program curriculum has evolved to meet the needs of contemporary biomedical research. Computational biology and bioinformatics have become a major emphasis in recruiting and in the coursework. The college has completely separate coursework for medical students and graduate students; therefore, faculty members are able to target either medical students or graduate students when teaching, rather than mixing the disparate educational needs. Translational research tracts allow graduate students to formally interact with medical teams (that include medical students) in the clinical environment.

As noted, the Life Sciences graduate programs include faculty members from the college of medicine as well as other colleges. Its four programs include: 1) Biophysics; 2) Molecular, Cellular and Developmental Biology; 3) Neuroscience; and 4) Biochemistry. Because these programs reside in the graduate school, these students have very limited interaction with medical students. Graduate programs in the School of Health and Rehabilitation Sciences (SHRS) are within the college of medicine, and SHRS students have limited opportunities for interaction with medical students.

8. Residencies/Fellowships: OSU currently has approximately 770 residents and fellows (674 in ACGME-approved programs) in more than 50 different specialties. All programs that are eligible for accreditation are fully accredited. The number and diversity of graduate medical education (GME)
programs contribute enormously to the education of our medical students. Students are exposed to, and have access to, the full spectrum of medical practice in virtually every specialty and subspecialty; thus, they can make fully informed career path decisions. The high-quality residents at OSU serve as day-to-day, hour-to-hour educators of our students in almost all of their clinical experiences. From a continuing medical education standpoint, OSU medical students are given opportunities to participate in Regularly Scheduled Series (RSS) such as grand rounds and journal clubs. They may also attend live conferences and have access to enduring materials. OSU CME is fully accredited and programs are available to students at no cost. Students on 5 different core rotations at OSU and at Nationwide Children’s Hospital are required to attend Grand Rounds while on rotation. Each of the residency programs has its own specialty specific didactic programs, and medical students who are rotating through these areas are encouraged to attend these didactic sessions. Minor changes are expected in several of our GME programs, but the overall increase in numbers will be insignificant.

9. Faculty Research: Research productivity of the faculty is measured in many ways. Our analyses include a preference for metrics with opportunities for external benchmarks or internal longitudinal benchmarks, including total and NIH awards, comparisons of AAMC research metrics of salary support and expenditures, internal quarterly financial reports, and publications. Total awards in research to OSU have grown, albeit slowly, since 2009, from $161.9 million to $166 million while NIH funding increased from $90.7 million to $96.1 million (these numbers do not include Nationwide Children’s Hospital grants). Funding over this period peaked in FY11 due to American Recovery and Reinvestment Act (ARRA) awards and a $100 million HRSA construction grant. Total awards in FY13 exceeded FY12 by 4%, although the Federal government sequestration affected the dollar value of NIH awards reducing funding dollars by 5%. Fortunately, we experienced a 10% increase in new and competitive renewal NIH awards, despite the increasingly competitive grants environment (current rank: 21st among public universities). Publications by all college faculty members are tracked using Elsevier’s Scival Experts. The number of publications from our faculty increased from just over 2600 in 2010 to more than 2880 in 2012. AAMC metric reporting from FY2011 shows that sponsored programs salary support for all full-time college faculty members is at the median for public schools. Quarterly reports show that total salary recovery from the basic sciences departments is 26.65% with total effort at 32.61% and expenditures per PI at $189,378.

Ohio State has one of only 41 National Cancer Institute-designated Comprehensive Cancer Centers (CCCs) in the United States; the NCI named our CCC “exceptional” in its 2009 review – its highest ranking. As noted, our CTSA was recently renewed. Our college houses or co-manages more than 20 research centers and institutes and 25 core research laboratories. The college has received $76.7 million in multi-year “Third Frontier” research grants from the State of Ohio. Our university faculty currently includes eight members who have been elected to the Institute of Medicine of the National Academies. Major areas of research emphasis include cancer, neuroscience and cardiovascular studies, supported by clinical investments from our six signature programs in cancer, heart and vascular medicine, critical care, imaging, neuroscience, and transplant. Despite recent success, we anticipate that reductions in the NIH budget may affect our research enterprise.

10. Research Resources: The OSU College of Medicine includes more than 800,000 square feet devoted to research space and supports shared services with the CCC and the CTSA. Clinical research faculty, basic scientists and students all benefit from the shared cost of these resources, and the research environment at OSU benefits from the economies of scale that enable timely acquisition of new instrumentation and technologies. Also, the college’s Office of Research supports programs in faculty research career development, writing and editing to facilitate grant and manuscript preparation, and provides internal pilot grant and bridge funding (see below). Additional information about assistance to faculty members in securing extramural support is provided in the Faculty section. Although the quantity of research space is quite satisfactory, the quality of the space is variable. OSU considers about 75% of the currently available research space to be satisfactory or better (“satisfactory,” “good” or “premium”).

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However, approximately 25% of the research space (for example, space in Wiseman, Hamilton and Graves Halls) is considered less than satisfactory, and would benefit from replacement or improvement. Proposals for improvement in this space (e.g., in Graves and Hamilton Halls) are currently being prepared for submission to the university trustees for prioritization in the university’s long-term capital plan.

To address the Federal government research funding gap, the college has recently made a significant commitment to intramural support for research through the research investment funds that function to bring together research scientists in a shared equipment program, as well as in a biomedical shared resource core. In addition, Dean Lockwood established a Bridge Funding program that supports independent faculty research designed to enhance the likelihood that a principal investigator will be successful in securing NIH funding. These awards provide up to $75,000 and are intended to support laboratory personnel, supplies and other related research expenses. Finally, the Dean’s Discovery Grant program provides up to $30,000 for a single investigator to pursue novel research ideas.

11. Student Research: Students receive ample information about opportunities to participate in biomedical research during medical school. Students receive information about research opportunities through a variety of sources including e-mail, informational sessions facilitated by various college leaders and faculty, informational sessions highlighting student panels, the medical student research website, the medical student research newsletter, the OSU Landacre Research Honor Society student organization, information presented by the associate dean for Research Education during medical student orientation, discussion at student learning communities, and a variety of printed materials (such as brochures and information sheets). Students wishing to participate in research are able to do so as evidenced by data showing that approximately 50% of the medical school class participates in research experiences funded with institutional scholarships in the summer between years 1 and 2; additional students do research that is either funded by other sources or is unfunded, in the same period or at other times during their 4 years at the college. The 2013 AAMC GQ showed that approximately 72.2% (compared to 68.2% nationally) of students report participating in a “research project with a faculty member”. Students wishing in-depth research experiences receive funding to pursue year-long research leaves of absence. To further enhance student research opportunities, a variety of approaches are in progress to garner additional funding for student summer and year-long research experiences. In the independent student analysis, students described research opportunities as “a strength of OSUCOM.” For example, this analysis rated highly the amount of research funding for student projects (4.14). (Please note: Throughout this summary, data from the independent student analysis are reported on a scale of 1 to 5, 1=lowest, 5=highest).

12. Service Learning/Community Service: OSU medical students have multiple opportunities to engage in service learning and community service activities; all students are required to participate in designated service learning activities and the overwhelming majority of students also engage in voluntary community service. The “2006 Curriculum” included a mandatory community project as part of the Clinical Assessment and Problem Solving (CAPS) course. This activity required the students to visit, assess and provide services to a health care or social service organization within the community. Students were then required to reflect on this experience and present their thoughts in a small group session. In the new Lead.Serve.Inspire (LSI) curriculum, a similar Community Health Education project is included in Part 1. The students work as a team to assess the needs of a population and to develop a program for addressing the identified problems. They then implement their plan and assess the outcome. The experience concludes with reflection and discussion in a small group session with a facilitator. These activities are an integral part of the curriculum and are fully supported by college educational resources.

Students have multiple additional opportunities for voluntary participation in service learning and community service activities. Students participate in a wide variety of activities including service in one of the many free clinics in the community. The various opportunities are communicated to the students by the Student Council at the start of each academic year, and the opportunities are publicized on the Student Council website. Although we do not have precise data, we estimate that well over 50% of our
medical students participate in some form of volunteer service during their four years at the college in addition to their required service learning projects.

13. Diversity: The overarching document which guides the college in its diversity efforts is the university diversity action plan. In 2012, the college created an additional policy which endorsed more focused efforts in recruiting targeted groups of individuals to serve as a foundation for overall enhanced diversity and inclusion. The policy was based on the notion that these specific groups of individuals bring added value to the college. The groups included populations underrepresented in medicine (URM), with special focus on African-American and Latino students for medical student admissions and resident/fellow recruitment, and women for faculty recruitment. Although these three groups were previously included as part of the college and university diversity efforts, this specific focus was reinforced, with the intent that success would serve as a driver of our more global diversity effort. In support of this policy, the college has undertaken a variety of initiatives designed to increase the application, selection, hiring and retention of these specially-identified focus groups. The self study task force concludes that programs to achieve the diversity goals in medical student admissions have been vigorous and highly successful; programs to improve the percentage of women as faculty members (including those in leadership positions) have been modestly successful; and programs to achieve the diversity goals for residents (considered in the category of “staff”) have had limited success.

To achieve medical student objectives, multiple initiatives have been undertaken, including aggressive contacts by our admissions staff with applicants identified as URM, recruiting visits by admissions and Office of Diversity & Inclusion staff to conferences attended by potential minority applicants and to historically Black colleges and universities, and substantial enhancement of scholarship monies specifically available to support these applicants after enrollment. In addition, institution of a holistic admissions review contributed to this effort. The college has had a highly successful post-baccalaureate program (MEDPATH) since 1991 to prepare up to 15 underrepresented and/or disadvantaged students for admission to medical schools (especially our own college, where admission is guaranteed if certain parameters are met during the MEDPATH year). Between 2009 and 2013, the college experienced a 148% increase (419 to 1038) in the number of applications from URM students. The success in enticing URM candidates to accept admission offers from Ohio State steadily increased from 10% in 2008 to 20% in 2013, while at the same time our overall matriculating student MCAT score average increased from 33 to 34.

Programs to improve the percentage of women as faculty members and in college leadership positions received a substantial boost with the “Recruiting Women into Leadership Positions Task Force” report that was produced in 2010 and endorsed by Dr. Lockwood in his first month as dean. Since 2008, the percentage of female faculty members at OSU has increased from 33.86% to 38.60%. By contrast, programs to support the objective of increasing URM residents among our house staff (as noted previously) have so far met with limited success. We conclude that this is definitely an area for improvement.

The college believes strongly that institutional diversity is a contributor to excellence of all of our programs, and is very instrumental in preparing our students to meet the health care needs of a diverse society. Some of the many benefits of diversity include:

• a diverse faculty and student body improves climate and helps provide a welcoming environment to a diverse population of patients who may seek care at our institution.
• providing a supportive environment to patients when they are most vulnerable is core to our mission to improve patient’s lives through personalized health care.
• students underrepresented in medicine and biomedical sciences are more likely to serve minority and lower socioeconomic communities after completion of medical training; thereby improving health care access and diminishing health care disparities.

As evidence supporting the last statement, we cite the following: Our own published study (Academic Medicine 85:36-40; January 2010) showed that our MEDPATH graduates were more likely to be practicing medicine in a federally-designated underserved area or providing service where 40% or
more of the patients were medically indigent or poor. MEDPATH graduates were also more likely to be volunteering their services to indigent patients beyond their medical practice. To reinforce the importance of diversity throughout the school, our new LSI curriculum has a “diversity thread” which is woven throughout all four years of the students’ medical education. These actions and results are indicative of some of the benefits that we are expecting to see from our intensified efforts to enhance diversity at the OSU College of Medicine.

II. EDUCATIONAL PROGRAMS FOR THE M.D. DEGREE

A. Educational Objectives

1. Learning Objectives: The core educational objectives (CEOs) are given to students at orientation and available to them in their student handbook. Students are trained to think about the CEOs early in their first year through regular portfolio reflections with faculty coach feedback. All faculty and residents/fellows receive the CEOs during new faculty and resident/fellow orientation, respectively. Administrators and educational faculty members have regular contact with the CEOs in performance reports and through interactions with VITALS (our curriculum management system). Required clerkship directors either email or use campus mail to deliver CEOs to faculty teachers along with their specific clerkship objectives on an annual or semi-annual basis. The CEOs were written in a competency-based framework as learning outcomes, thus establishing a format that allows them to serve as effective guides for educational program planning, student assessment and program evaluation. The new LSI curriculum was created utilizing these objectives to direct curricular content, assessment components and program evaluation. Although the current CEOs were developed and approved after the implementation of the “2006 Curriculum,” the Executive Curriculum Committee (ECC) has delineated how each of these core educational objectives would be taught and assessed throughout the existing (“2006”) curriculum as well. All existing clerkship objectives were mapped back to the CEOs. In the LSI curriculum, all student evaluations are based on performance in the six core educational competencies; therefore, all assessments are provided in a competency-based framework.

2. Physician Competencies: The institutional competencies and CEOs were reviewed and revised in 2007 under the supervision of the ECC, with representation from patients and community physicians in addition to full time faculty, thus ensuring that competencies reflected the expectations of the public and the medical profession. Then multiple assessment measures were identified for application to the old curriculum as well as the new LSI, including both internal and external assessments of student proficiencies and depths of acquisition of the competencies. Internal tools include periodic written examinations, OSCEs, direct observations of competence, self assessments and peer evaluations. External tools include USMLE step examinations and our annual survey of residency program directors who are training OSU graduates. The OSU medical student USMLE scores have consistently been above national averages for more than 10 years. Similarly, our program directors’ survey results show that OSU graduates are consistently rated as slightly superior to the average medical graduate across a broad spectrum of disciplines. On the 2013 AAMC GQ, 95.6% of OSU respondents agreed or strongly agreed (vs. 89.4% nationally) that they had acquired the clinical skills required to begin a residency. Our own survey of graduates showed that they felt slightly or significantly better prepared than their colleagues from other schools to begin their residency programs.

3. Clinical Encounters: The college, under the supervision of the ECC, has developed a list of required clinical encounters and essential procedures (revised April-June 2012) to be mastered for each required clerkship. An alternative experience is also identified for each required activity. Monitoring takes place electronically (through MedSTAR). Completion rates for each required clerkship are reviewed centrally every 2 months to ensure that the majority of students (>80%) are seeing the required encounters. All clerkships monitor student completion during the clerkship, either during the mid-rotation feedback
and/or one week prior to the end of the rotation (depending on the length of the rotation). Any student who has not yet encountered a required condition is directed towards an alternative experience. In no setting are >20% of students required to complete an alternate experience to meet the requirements. Students who are approaching the end of a clerkship without completing all required encounters and procedures are given time to undertake the alternative experience to fulfill these expectations.

B. Structure of the Educational Program

4. General Professional Education/Career Options: The ECC monitors students’ mastery of the knowledge, skills, behaviors, and attitudes which prepare them for all career options in medicine. Mechanisms in place to monitor these key outcomes include annual reports from residency program directors noting the adequacy of preparation of OSU graduates (see paragraph #2 above). Our 2011 survey found 96% of respondents indicated they were pleased that they matched students from OSU. In addition, residency match program data indicate that OSU students can match into all chosen residency programs (match data from 2013 show OSU students went into 24 different specialties). In the current (“2006”) curriculum, students have 4 months of elective time and 3 months of “flex” time for additional electives or away rotations. In addition, several of the “selectives” in the 4th year can be taken in disciplines of particular interest to the student. Part 3 of the new LSI curriculum includes 3 months of electives in an advanced clinical track, one month of free elective and 3 months of “flex” time. On the 2013 AAMC GQ, a high percentage of OSU respondents indicated they were satisfied or very satisfied with opportunities during medical school to explore potential career choices (see section III. 9. of this report for more detailed information about GQ responses related to career planning).

5. Medical Problem Solving: Both the “2006” and LSI curricula are structured to assure that students develop skills in medical problem-solving and evidence-based clinical judgment. The Clinical Assessment and Problem Solving (CAPS) portion of the “2006 Curriculum” utilizes clinical cases that students work on independently and with their peers. The students must work as a group to determine the history, physical exam findings and laboratory data that they wish to assemble into a reasoned (tiered) differential diagnosis. Similarly, in the Differentiation of Care-2 selective in Med 4, students are assigned to work in a small group and then independently on an evidence-based medicine task that involves active learning. Additional opportunities for medical problem-solving and application of evidence-based clinical judgment occur through all of the core clerkships, especially during internal medicine. The LSI curriculum includes an Evidence Based Inquiry and Research (EBIR) “thread” which is woven throughout the 4 years of the program. Part 1 of LSI includes Longitudinal Groups, which use case-based clinical reasoning exercises; the students themselves first set group and individualized learning goals, then teach their peers in subsequent sessions. Faculty members serve to clarify and facilitate cases, but do not provide direct instruction. In the later years of LSI, similar active learning exercises are being planned. The development of problem-solving skills throughout both the “2006” and LSI curricula are measured by OSCEs, structured nursing calls, and oral examinations. The 2013 GQ shows that respondents believe that they receive adequate instruction in clinical reasoning (95.2%, versus 91.2% nationally), and they feel they received adequate instruction in decision analysis (93.4% versus 86.9% nationally). Both curricula include multiple opportunities for students to attain an understanding of societal needs and their impact on the organization and delivery of health care. In the “2006 Curriculum,” these issues are addressed in both the CAPS program and in core clerkships. Specific efforts include a lecture/discussion during the Family Medicine/Ambulatory Care Clerkship which is focused on the interplay of the Patient Centered Medical Home and Managed Care, and a guided learning module and quiz during the Differentiation of Care (DOC)-1 course that addresses the impact of Medicaid and the uninsured on healthcare delivery. These same opportunities have been expanded for LSI in the Longitudinal Projects and Longitudinal Group sessions. In the Health Systems, Informatics and Quality Project in LSI, students work in interdisciplinary teams on quality improvement projects under the guidance of a patient safety coach. Data from the 2013 GQ show that 88.6% of OSU respondents (versus 82.5% nationally) felt that
they had appropriate instruction in health and healthcare disparities, and 89.7% (versus 82.3% nationally) felt that they had appropriate instruction in health determinants. However, data from the 2012 survey (and reaffirmed in the 2013 survey) showed that only 56% of OSU respondents felt that they had appropriate instruction in health policy (versus 59.6% nationally), prompting the development of a stronger curriculum in health policy for the new LSI instructional program beginning in 2012. Dean Lockwood also addresses health policy issues in the quarterly dean’s dinner with the students.

6. Active Learning: There are multiple opportunities for students to engage in independent study, engaged learning and active learning, in both the “2006” and LSI curricula. The Independent Study Pathway of the “2006 Curriculum” is essentially a completely independent study curriculum. Students are provided with a defined course of study which they pursue at their own rate. Students also use this program to independently determine and pursue topics of interest that may be related to the overall subject being addressed. The CAPS portion of the “2006 Curriculum,” as described in section #5 above, provides multiple opportunities for students to engage in active learning. Similarly, in the Differentiation of Care-2 selective in the clinical years (also described in section #5), students work in small groups or independently in exercises which fulfill the expectation for active learning. Opportunities for independent, engaged and active learning have been greatly increased in the LSI curriculum, with each block of Part 1 using eLearning modules, independent projects, clinical case studies, and independent reading assignments. For example, the Longitudinal Group represents both active learning and independent study. These experiences are combined with required, recurrent reflection exercises and mandatory service learning experiences to strengthen active learning in the new curriculum. Student self-assessment of their learning needs takes place in the “2006 Curriculum” in CAPS and DOC-2. In the CAPS course, students complete a self-assessment of their performance and discuss this with their CAPS facilitators. Student self-assessment is extended into the CAPS-3 component as well as several clerkships that use student self-assessment in their mid-rotation feedback. Similar experiences are planned for Parts 2 and 3 of the LSI curriculum. In LSI, assessment of student progress in developing lifelong learning skills is part of the portfolio coaches’ review of the reflective assignments in which students assess their performance and develop action plans for self-improvement.

7. Multiple Clinical Sites: The college has a single campus, but utilizes multiple teaching sites for core and elective clerkships. All core experiences are in Franklin County; there is both a close geographic and philosophic association between these sites with the main campus. All faculty members are given the goals, objectives, course content and any needed faculty development for each course in which they teach students. The evaluation process information is also communicated to the faculty (at least annually). Student and faculty performance is assessed across the various core clerkship sites. Final grading is performed centrally, ensuring consistency of the grading process. Comparison of grades, student satisfaction and faculty performance is monitored; little variation between teaching sites has been noted (see #20 below). Performance data are shared at appropriate intervals with all teaching faculty at all sites.

8. Clinical and Translational Research: The “2006 Curriculum” includes many experiences for students to become familiar with basic principles of clinical and translational research and to apply the scientific method, although these were inserted in a nonintegrated fashion. On the other hand, in LSI, the Evidence Based Inquiry & Research (EBIR) “thread” is carefully woven through the curriculum to insure introduction of these principles at an early time and further reinforcement throughout the program until graduation. In Part 1 of LSI, students are taught to appreciate the importance of and resources for biomedical and clinical inquiry, to understand the importance and principles of scientific methods in clinical medicine, and to understand how to critically evaluate data from clinical and translational research. The EBIR skills and content are reinforced in Part 2 of LSI wherein students utilize their knowledge and skills to pursue epidemiology/biostatistics and research literacy, and learn to accurately assess patient medical conditions and the risk-benefit ratio of therapeutic options including ongoing clinical trials. Additional advanced EBIR content will be offered as an Advanced Competency in Part 3
of LSI starting in 2015. These experiences in both curricula dovetail with optional student opportunities to gain direct experience with the discovery process through multiple independent research opportunities at various stages of the educational process.

9. Content Areas for Accreditation: The content areas delineated in the LCME Educational Program standards are well covered in both the “2006 Curriculum” and LSI curricula. Each specific content area has been mapped to curricular component(s). Coverage of listed content is reviewed annually by the academic programs with ECC oversight. Within the “2006 Curriculum,” databases were created to retroactively map content coverage after the new CEOs were approved. The development of the new LSI curriculum allowed proactive mapping (later assisted by the new VITALS program) as the curriculum was being constructed. Ongoing assessment of student performance has assured our faculty and administration that all content is adequately covered in both the “2006” and LSI curricula. Student performances on Step 1 and Step 2 examinations are assessed and compared against performance in previous years and against national norms. Our students are consistently performing above national norms. The ECC reviews these content area performance measures annually, and mandates improvements when performance is below expected levels. The AAMC Graduation Questionnaire (GQ) information is reviewed by the ECC and by faculty involved in curriculum development and delivery, and is used to add new content or change/improve current content. Where areas in need of improvement are noted (e.g., the teaching of cost-effective medicine) a sub-committee is assigned by the ECC to address the deficiency. Finally, positive feedback from residency programs (discussed elsewhere in this report) regarding the performance of our learners provides a valuable measure of the completeness of our educational program.

10. Student Communication: The college has a rigorous, longitudinal approach to preparing students to communicate effectively with patients and others. Students in the “2006 Curriculum” had considerable instruction and exercises related to communication, although prior to the third academic year there was limited focus on specific population groups. As part of this process, students addressed their own biases in communication and undertook a thoughtful approach to written documentation skills. LSI now addresses the need for earlier and continuous focus on communication skills. Longitudinal focus “threads” are evident throughout, to expose students to communication with patients and others of varying social and economic diversity, ethnicity, gender, sexual orientation, disability and spirituality. Health literacy and disparities are also prioritized in the LSI curriculum that has enhanced opportunities for students to address their own biases in communicating with patients. The multiple hospitals and clinical settings that all OSU students are exposed to, offer students opportunities to interact with patients from diverse social, economic and ethnic backgrounds. On the 2013 AAMC GQ, 98.9% of OSU respondents (vs. 97.4% nationally) agreed/strongly agreed that they had the necessary communication skills; 98.9% of OSU respondents (vs. 95.3% nationally) agreed/strongly agreed that they were adequately prepared to care for patients from different backgrounds. Our residency program directors survey regarding OSU graduates also shows high scores for interpersonal communication.

11. Inpatient/Ambulatory Balance: Teaching sites for both ambulatory and inpatient education at OSU are carefully selected for the quality of the faculty, the number of patients, and the adequacy of the facility itself at each site. The ambulatory experience at OSU begins in the first year, in the outpatient preceptorship in the “2006 Curriculum” (total of 9 half days) and the longitudinal practice preceptorship in the LSI curriculum (total of 23 half days). Then, in the third year, students are assigned principally to inpatient services; however, they also work in the outpatient setting for a portion of their time in many of the core specialties. In the “2006 Curriculum,” students also do a full month of ambulatory care in the third year, two weeks of ambulatory care in Pediatrics and an Emergency Medicine (ambulatory) “selective” in the fourth year. Similar experiences are planned for LSI. We conclude that this program provides an appropriate broad, balanced exposure to a variety of clinical experiences in diverse, high quality settings.
C. Teaching and Assessment

12. Student Supervision: All medical students are directly or indirectly supervised by faculty members during required clinical experiences and are not allowed to perform any patient-related tasks without oversight. Student notes are reviewed for accuracy and no patient care decisions can be made by students without the approval of residents or faculty at each clinical site. Additionally, at OSU Wexner Medical Center the electronic medical record system is set up to facilitate oversight of student activities. Analyses from our annual clinical curriculum surveys regularly indicate that students in general feel that their level of supervision is appropriate. All physicians having ultimate responsibility for supervising medical students are required to hold faculty appointments at Ohio State. To simplify these appointments, the college recently initiated a new process in which each department is delegated the responsibility for determining the individuals who need clinical teaching appointments, and for verifying their credentials; appointments are then expedited. We believe that the college does an outstanding job of ensuring that faculty members and residents are prepared to teach and assess medical students through familiarity with teaching objectives and participation in development activities. Each faculty letter of offer provides the Medical Student Faculty Teaching Responsibilities Handbook, which includes the core educational objectives of the educational program and a guide for teaching students in the clinical setting. Course and clerkship specific learning objectives are regularly distributed to faculty members and residents in a variety of ways, as documented in other parts of this report.

The college offers monthly teaching skills training sessions for all faculty members, and encourages use of the faculty development portal (FD4ME). All OSU residents must complete two online training modules on clinical teaching and assessment. These same modules are available to residents and faculty at our community hospitals and practices through the FD4ME website; both OhioHealth and Mt. Carmel have their own faculty development activities as well. Review of objectives and completion of the required modules are reinforced by the vice dean for Education during intern/resident/fellow orientation. Attending faculty have the ultimate responsibility for the supervision of medical student experiences, including providing oversight and supervision of all health professionals working in that clinical setting, ensuring that all health professionals act within their scope of practice.

13. Methods of Assessment: In the preclinical portion of the “2006 Curriculum,” attainment of all CEOs is measured using a mix of in-house examinations, observed student performances, direct observation and external (NBME subject and Step) examinations. Also, the CAPS program and TBL (team-based learning) exercises evaluate professionalism, history taking skills, communication skills and clinical reasoning. Similar measures are in place for assessment of students in Part 1 LSI in the Longitudinal Group and Longitudinal Practice components. During the clinical years of the “2006 Curriculum,” all students are evaluated by both faculty and residents on clinical rotations. Standardized evaluation questions of professional behaviors and rotation specific clinical performance evaluations are mapped to clerkship objectives to assess clinical knowledge, professionalism, clinical reasoning, medical history taking, physical examination, presentation skills and documentation skills. Each core rotation ends with a NBME subject examination. Rotations also offer a mix of OSCE assessments, clinical skills labs, quizzes, self-reflection exercises, mid-month feedback and direct observation of competency to ensure students are meeting objectives of proficiency. The ultimate assessment is passage of Step 2CK and Step 2CS, which are required for graduation. Currently, in the “2006 Curriculum” there is an end of the 3rd year formative OSCE, some limited core rotation OSCEs, and some OSCEs in 4th year. OSCEs now included in Part 1 of LSI are more robust – many stations and more raters. We conclude that methods for assessing student achievement of objectives have been satisfactory in the past, and will be even better in the LSI program.

14. Effective and Timely Feedback: In the Med 1 and 2 years of the “2006 Curriculum,” students are provided with formative feedback in multiple settings. Regular periodic exams, team-based learning (TBL) scores, and quiz scores provide students with assessment of their progress toward achieving the
learning objectives. Exam and quiz scores are available quickly (generally same day) and always prior to the start of the next block. The component scores are maintained in a constant running tabulation in a computer database, so students are aware at any time of their progress towards successful completion of requirements. Final grades are posted within 1-2 days after the last required exam. Both the Med 1 and 2 Integrated Pathway and Independent Study Pathway in the “2006 Curriculum” have established policies regarding students’ professional behavior, which are components of the final grade. In addition, during the 12-week Anatomy course prior to students’ entering either IP or ISP, peer evaluations of professional behavior are conducted. In the “2006 Curriculum,” CAPS 1 and 2 small groups, students also receive scores for multiple aspects of professional behavior. Grades for CAPS 1 and 2 are available to students within 2-5 weeks after the end of the course. Similarly, in Part 1 of the LSI curriculum, there are multiple opportunities for formative and summative assessment of cognitive and non-cognitive development, often in narrative form. Professional behavior is included as a required competency in each block of the program and is assessed repeatedly. Ongoing peer and faculty assessments from Longitudinal Group and Longitudinal Practice give the student feedback on behaviors. The long-term relationship with the portfolio coach offers regular formative review and development of improvement plans. Grades are made immediately available at the completion of the prior block to ensure adequate student progress through the program.

All core clerkships require mid-rotation feedback, with documented written comments. Performance of the required feedback is monitored at mid-rotation by the clerkship directors, and compliance is reported to the ECC. In addition, a direct observation of competence exercise has been included in each clerkship with immediate narrative feedback required. A component of the annual curriculum survey is used to document the effectiveness of feedback. The timeliness of clinical rotation grades is tracked constantly in MedSTAR and monitored by the Med 3-4 Academic Program Committee through standing reports. Recent changes have resulted in improvement from previous years to current complete compliance (100% of core clerkship grades during the 2012-2013 academic year were submitted within the 6 week deadline). The use of an electronic evaluation system (MedSTAR) allows students access to the evaluations completed by faculty and house staff as soon as they are submitted.

15. Core Clinical Skills: Our institutional educational objectives clearly state the core clinical skills, behaviors and attitudes that our students must demonstrate by the time of graduation. In the “2006 Curriculum,” students undergo multiple formative and summative evaluations, and a year-end session which provides feedback on interpersonal group process and preparation skills. Preceptorships also provide comments on professionalism and student competency in clinical skills. In the clinical years, there are multiple evaluations of skills, behaviors and attitudes provided by faculty members in each clerkship. Students requiring remediation are provided with extra coaching to develop and strengthen their skills. There is also a 4th year summative OSCE designed to assess several specific skills taught during the Med 3 year. A formal mid-rotation assessment is performed in all required clerkships and differentiation of care selectives (DOCs). Direct observation of student performance with actual patients (history, examination, +/-communication, +/- procedure) is performed in each clerkship. Comprehensive evaluation of the acquisition of necessary knowledge is achieved through internal and external (e.g., NBME subject and Step) examinations as described elsewhere in this report.

In the 3rd year, all students complete a course focused on basic and advanced clinical procedures. However, the “2006 Curriculum” currently lacks a true assessment of the technical component of basic procedures expected of a new PGY-1. This issue has been addressed in the new LSI curriculum as follows: In Part 1 of LSI, students must demonstrate competency in basic, office-based procedures through performance assessments prior to beginning in their longitudinal practice. There are also several OSCEs that assess clinical skill development such as those dealing with interpersonal communication, professionalism, physical examination and patient care. These OSCEs include multiple stations and multiple raters to strengthen the reliability and validity. Students are given feedback on their performance along with a numerical score. Students are also assessed by their longitudinal practice preceptors. In Part 2 of LSI (starting in 2014), there will be OSCEs that assess clinical skill development after each “Ring.”
Part 3, which starts in 2015, will also have defined OSCEs that will assess these clinical skills. In addition to these OSCEs, faculty will observe students’ clinical and procedural skills during clinical rotations and will provide feedback both formally, through direct observation of competence, and informally. Feedback will be given every 4 weeks since each Ring is 16 weeks in duration. We anticipate that these more comprehensive evaluations in the new LSI curriculum will enhance our ability to ascertain a student’s mastery of all the required clinical and procedural skills.

D. Curriculum Management

16. Central Curriculum Management: The Executive Curriculum Committee (ECC) is responsible for the design, implementation, and evaluation of a coherent and coordinated curriculum, and works with the academic program committees (APC) and program directors to monitor the quality of curricular content, rectify problems as they arise, and maximize appropriate horizontal and vertical integration. Each component of the curriculum undergoes annual, systematic review; annual academic program reports are reviewed and discussed by the ECC. In addition, the ECC conducts periodic, more focused reviews of each academic program to help identify curricular issues that need to be addressed. ECC policy requires a formal review of the entire curriculum at the mid-point between LCME accreditation reviews. The most recent full review led ultimately to the creation of the new LSI curriculum; the ECC then charged the Curriculum Implementation Task Force with monitoring and overseeing the rollout of LSI.

Procedures are in place to identify and rectify problems in the curriculum at the level of the ECC, the APCs, and the clinical departments. A recent example of the effectiveness of the review process can be observed by the following vignette: direct observation of student performance in the Med 3-4 years was identified by the ECC as a significant deficiency in the curriculum. At the direction of the ECC, the Med 3-4 APC assigned a task force to address this problem and, through its efforts, action was taken that led to virtually complete correction of this problem. Specific issues are also identified by APCs, addressed internally by the programs, and then presented to the ECC via annual reports. Another example: for the past 3 years the Independent Study APC has identified at least one problem area which had been addressed and improved. An innovative curricular management system (VITALS) has been recently developed internally by the college to assist in the monitoring of appropriate curricular content, identification of unwanted redundancies, and creation of effective horizontal and vertical integration. The assistant deans, the associate dean for Education and the academic program directors also monitor content in VITALS and keep linkages current.

17. Academic Resources: The vice dean for Education has the resources and authority to monitor, plan, and implement the medical school curriculum. To support this role, he has associate and assistant deans who oversee all of these varying aspects of the educational mission (e.g., diversity/inclusion, admissions, student life). The vice dean for Education is provided by the college with sufficient budgetary resources ($13 million annual budget, with 68 FTEs), including a dedicated Office of Medical Education ($1.1 million annual budget, 18 FTEs). Recently (FY2013) the college allocated an additional budget of $3.5M (spread across 4 years) to cover the costs of implementing the new LSI program. In addition, a substantial proportion of the $39 million departmental permanent budget allocations (PBAs) is allocated to reimburse for teaching time by faculty.

18. Educational Workload: The ECC monitors the educational workload of students using a variety of measures. In the “2006 Curriculum,” students were expected to have no more the 8 hours of in-class time for the integrated pathway curriculum and no more than 40 hours of study time per week in the independent study program, including hours in the Clinical Assessment and Problem Solving program. The LSI academic programs closely monitor educational workload. Students are surveyed regularly with regard to time for learning in each particular unit. Based on student and faculty feedback, the ECC revisits the educational workload and makes modifications as needed. Student feedback early in the new LSI curriculum showed concern about time needed to master content in certain blocks; an immediate
adjustment was made to mandate no more than 20 hours of new curricular content in a week. The ECC also monitors time devoted to each individual topic within the context of the overall educational program in an annual, year-end review. Evidence that students have time to master the required material can also be derived from the outstanding OSU medical student scores on the NBME and Step exams. For duty hours, the college has adopted a modified version of the ACGME guidelines specifying an 80 hour work week maximum for all clerkships. At the conclusion of each clerkship experience, students are required to report whether this standard was met. Clerkship directors monitor these responses; when an individual clerkship identifies work hour violations, the clerkship director must report this information to the ECC and document how these violations were addressed. Duty hour violations have been extremely rare.

19. Regional Campuses: Not applicable to Ohio State.

20. Promotion Standards: The college has only a single campus, but utilizes multiple clinical teaching sites for both core and elective experiences. Promotion standards are centrally implemented and thus are uniform across all sites. Patterns of grades across the various sites are monitored regularly, and show some variation among disciplines, but are remarkably consistent within each discipline. Recently, evaluations for one site in a core clerkship (Ob/Gyn) showed moderate deviation from the results of other sites. The clerkship director promptly addressed the issue with the faculty at the clerkship site and implemented a correction strategy. Grades are issued centrally by the clerkship director so variations can be identified and corrected before the final grade is issued.

E. Evaluation of Program Effectiveness

21. Achievement of Objectives: The overall medical education program objectives (i.e., core educational objectives - CEOs), are measured internally using the criteria set forth by the Executive Curriculum Committee (ECC) and individual academic programs. Annual academic reports include data on aggregate achievement of outcome measures (e.g., exam scores, OSCE scores, etc.) and indicate that students are achieving objectives at an appropriate rate. To validate our internal assessments, student performance is also assessed using USMLE Step exam scores and NBME subject exams. Our students regularly score at levels above the national average on these externally validated outcome measures. Supplemental information comes from our annual survey of program directors receiving OSU College of Medicine graduates, using questions keyed to college competencies and CEOs; annual results (critically reviewed by the ECC) demonstrate that our students are rated above average at achieving those competencies by the program directors.

22. Evaluation and Improvement: Supplementing the information collected about students as described in the previous sections, we regularly use additional performance measures for each competency domain to direct improvements in our educational programs. For example, quiz performance and team-based learning (TBL) exercises are used to adjust curriculum coverage and focus periodic review sessions; student performance on communication and patient care skills is used to adjust teaching materials for clinical clerkships; longitudinal and discipline-specific performance in the integrated curriculum is assessed by detailed reports facilitated by item coding. Clinical performance assessments and OSCE performances are also regularly reviewed. Periodic aggregate assessments of student performance are reported by competency domain. Faculty educators (block, clerkship, and program directors) review both the range and distribution of performance. The AAMC Graduation Questionnaire (GQ) provides both cumulative and end-of-program information. USMLE performance on Step 2CK and Step 2CS also provides end-of-program measures of knowledge acquisition.

We collect information from students to evaluate and improve the educational program both during and after completion of the next phase in training. Each academic program reviews student course evaluation results in a timely manner and actively makes changes to improve quality. The clinical curriculum survey serves as the end-of-year evaluation for the Med 3 clerkships, and as a delayed
evaluation of the Med 1-2 programs. An annual survey of graduates (and their training program directors), as cited elsewhere in this report, provides information from the next phase of training.

One recent area of concern has been the Ob/Gyn clerkship, which for several consecutive years was rated by the students less favorably than all the other required rotations. To correct this problem, a new clerkship director has been appointed and the structure of the program has been revised, with definite improvement now documented in the most recent student evaluations.

An essential component of our evaluation and improvement process has been a planned detailed assessment of the effectiveness of the new LSI curriculum. Overall we are very pleased with the outcomes of the first year of LSI Part 1. At the end of year one of Part 1 of the LSI curriculum a comprehensive review identified four key successes: 1) Overall, the blocks were rated good or very good; 2) The specific teaching and learning sessions (TLMs) were rated as good; 3) Faculty reviews of content in Longitudinal Group (LG) and Longitudinal Practice (LP) were good to excellent; and 4) Portfolio Coach experiences were viewed as an important component of meeting educational goals. Areas for improvement correlate well with the Independent Student Analysis and show the following areas requiring consideration: 1) Improving clarity of objectives for Medical Practice and Patient Care, Neurological Disorders and LP; 2) Revisiting time allotments for e-learning teaching methods; 3) Revisiting the Community Health Education project clarity of purpose and logistics; 4) Improving clarity of student expectations within LP. The ECC considered these results and instituted an action plan to ensure that the areas for improvement were addressed. This plan included the following: 1) Adjust the Medical Practice and Patient Care and Neurological Disorders block in accordance with the newly revised guidelines for student workload; 2) Enhance the faculty peer-review process for objectives and TLM’s; 3) Restructure the Community Health Education project to assure that students understand the relevance, and fully integrate the rest of the content for this project within the block; 4) Enhance the current faculty development for the longitudinal practices.

III. MEDICAL STUDENTS

A. Admissions

1. Admission Policies/Procedures: The Ohio State University College of Medicine’s (OSUCOM) Admissions vision statement reads: “The OSUCOM seeks to recruit self-directed learners who are driven to become empathetic physicians providing evidence-based, compassionate medical care. The Admissions Committee will assemble a class that displays diversity in background and thought, strong intellect, and the potential to improve people’s lives through innovation in research, education, and community service.” The self study task force concludes that the school’s criteria for admission and the process of selecting students have resulted in classes which conform to this vision. The 5,700 applications in 2013 provide ample opportunity for us to select students who have high potential to become excellent physicians and further our mission. For the entering class of 2013, total MCAT average was 34, mean GPA was 3.70, and diversity metrics were excellent – 48% overall minority, 19.6% underrepresented minority (URM). Our implementation of a “holistic review” process in 2010 further enhanced our ability to attract and enroll individuals who have the characteristics that we value the most: compassionate students with inquisitive minds, strong intellect and diversity in “background and thought.” Attributes considered are communication skills, ability to respond positively to critical feedback, enthusiasm, integrity and collegiality. The student’s academic potential is evaluated by reviewing science and overall GPA, grade trends throughout college, and scores on the MCAT. The ultimate validation of the admissions process is the graduation of a high percentage of the students who have been admitted and a very high rate of passage on the USMLE examinations on the first try.

2. Admissions Committee: All aspects of the admissions process are under the supervision of the college’s Admission Committee. The committee consists of 150 to 200 members, about half of whom are faculty members and half are medical students. All actions of the committee, including the selection of
candidates for interview, the ranking of applicants, and the final offers of admission are done in group
actions where faculty members constitute a clear majority of those voting (the students have no role in the
final admissions decision). Conflict of interest policies are spelled out in the Admissions manual. Final
decisions regarding admission are always made without consideration of political or financial factors.

3. Teaching Resources: OSU College of Medicine and the Wexner Medical Center (OSUWMC) have
primary responsibility for approximately 890 medical students, 150 students enrolled in the Biomedical
Sciences Graduate Program, 770 residents and fellows (both accredited and un-accredited), and (in an
average month) 15 visiting medical students. Faculty numbers are more than adequate for supervision of
this significant number of trainees: OSU has approximately 1700 full time faculty members,
supplemented by approximately 1700 part-time and volunteer faculty members. Teaching space in the
college and medical center is satisfactory. The opening of the addition to our Clinical Skills Education
and Assessment Center in 2012, combined with the imminent opening of the new medical center hospital
facility which has multiple educational spaces on each patient floor, should enhance scheduling of
educational rooms. Since 2000, the college has greatly expanded its research space resulting in more than
adequate access to laboratory facilities for our faculty and trainees. With 9 different affiliated hospitals in
Franklin County, there are more than adequate numbers of patients of all types for comprehensive clinical
education. These facilities have a total of approximately 4200 beds, with a daily occupancy of about
2900.

Substantial funding ($37,713,875) is allocated for the various teaching activities (including
research oversight), and student services (health care, counseling, debt management, study space, library
and IT resources, etc.); all these services receive above-average ratings by our students on the AAMC
GQ. Through our own internal resources, we provide academic counseling, mental health counseling,
debt management, and career guidance. We conclude that our current facilities and resources are entirely
satisfactory to fulfill our obligations, allowing us to produce highly qualified and successful “graduates.”

4. Applicant Diversity: As noted in other sections of this report, the college has undertaken a major
effort to improve diversity in multiple areas, including medical students, residents, faculty, and staff. The
most intense focus has been on medical students, with a goal of increasing admissions of URM students,
especially African/American and Latino students. The college itself provides funds for these initiatives.
The college has created multiple “pipeline” programs to support the efforts to improve diversity through
the admissions process. The most established of these is the aforementioned MEDPATH post-
baccalaureate program. Other programs, including MD Camp, SUCCESS (Summer Undergraduate
Course Creating Excellence in Scientific Study), and the Columbus State Community College Pipeline to
Health Science Careers, are in their early stages, although tracking recent students is now underway.

5. Technical Standards: The college has clearly-defined technical standards for admission, retention
and graduation. These are described in detail in the student handbook, which is easily accessible at all
times to any interested party, on the college’s website. The Admissions section of the website is regularly
updated with information about admission requirements (including prerequisites and technical standards),
processes for application, diversity and inclusion policies, etc.

6. Transfers and Visiting Students: The college accepts advanced standing transfer into the third year
only for compelling and compassionate reasons; on this basis, only very limited numbers of students have
been accepted in the past three years, with minimal impact on existing students. Similarly, the college
allows only a limited number of students from other institutions to rotate on OSU services, and never on
core clerkships. With the large number of elective opportunities throughout our hospitals, these students
have minimal impact on the enrolled students. OSU medical students always have priority over visiting
students for available spots on elective rotations.
7. **Student Credentials:** The college has effective policies in place to verify credentials of transfer and visiting students. Applications for advanced standing transfer are reviewed for approval by the associate dean for Medical Education. Students transferring into the third year must pass Step 1 before officially starting in clerkships and must have equivalent academic credentials to the class they will be joining. Now that the new LSI curriculum is in place, with integrated basic and clinical science experiences and longitudinal projects throughout the full four years, transfers are expected to be rare. Visiting students are carefully screened before their rotations are approved by the college. OSU only accepts students who apply through VSAS (the Visiting Student Application Service of the AAMC). Some departments also enforce additional qualifications for visiting students.

B. **Student Services**

8. **Academic Counseling:** The college strives to minimize student attrition and has created multiple mechanisms to identify and support students in academic difficulty. The Admissions Consortium was established in 2011 to review and coordinate admissions policies with results of student performance after admission. The consortium recommended to the admissions committee an increase in MCAT score threshold for admission to 24. The consortium also recommended that students entering medical school with an MCAT score of 24-26, or who are returning as repeat students, or are MEDPATH graduates, are invited to participate in a special pre-entry program the summer before they start medical school. Once all students start classes, there are several academic resources that are available to them, particularly those in academic difficulty. In 2010, the college added a full-time (40 hrs/week) academic counselor position to the Student Life team. This counselor works with students on test taking skills, time management, board preparation, study skills and other academic concerns. Students can refer themselves to academic counseling, or be referred by individual faculty members and staff, or by Level 1 or Level 2 academic review committees that have specific concerns about a student’s academic progress. Students are also contacted by a counselor after they fail an exam, or if they have a marked decline in academic performance. The academic counselor coordinates a team of faculty and peer tutors, including a full-time (40 hrs/week) physician, and 4 part-time faculty physicians.

The Student Progress Committee (SPC) serves as an *ad hoc* group to facilitate early recognition of students facing challenges. This team works to identify and contact students who would benefit from assistance. In the Lead.Serve.Inspire (LSI) curriculum, first and second year students are required to meet with their portfolio coaches every 8-12 weeks to discuss their progress. The portfolio coaches may refer students to the counselors if indicated. Additionally, Part 1 of the LSI curriculum employs 6 expert educators who meet weekly with the counseling team to discuss students who are at risk and provide academic support. Confidentiality about student performance is carefully maintained at all times.

The self study task force concludes that the identification and remediation systems that are in place are very effective in reducing student academic difficulty in recent years. The 2011 USMLE Step 1 score average for OSU was 227, rising to 233 in 2012. The entering class of 2011 had 10 students repeating the curriculum during the 2012-13 academic year. Of these 10 students, only 1 continues to have academic difficulty. The overall graduation rate at the college is now 94%. For any given entering class, about 3% of students either withdraw or are dismissed for academic reasons. We continue to seek additional ways to reduce the number of students experiencing academic difficulty to increase our 4 year graduation rate. Students overall are satisfied with the level of attentiveness of the faculty and staff to student concerns. On the 2013 GQ, OSU respondents reported satisfaction scores well above national averages for “accessibility,” “awareness of student concerns,” and “responsiveness to student problems” on the part of both the dean for Student Life and the dean for Education. The OSU independent student analysis also gave high marks to virtually all student academic services, and praised the “supportive environment” at the college. Of particular note were high ratings for faculty accessibility (4.40), for responsiveness to requests for assistance with academic problems (4.24), for academic counseling (4.19) and for tutorial help (4.04). We regard counseling services and student support as a major strength of our medical education program.
9. Career Counseling: Based on data in the 2013 GQ and evidence from the most recent (2013) NRMP match, the college’s system for career counseling, residency preparation and creation of the Medical Student Performance Evaluation (MSPE) have been quite effective. All responses related to career planning services on the 2013 GQ show OSU students as satisfied or very satisfied at rates well above the national figures. For “career preference assessment activities,” OSU students were satisfied/very satisfied 77.8% of the time (vs. national average, 62.2%); for “information about specialties,” satisfied/very satisfied 84.7% (vs. national average, 68.5%); for “information about alternative medical careers,” satisfied/very satisfied 60.1% (vs. national average, 41.7%); for “overall satisfaction with career planning services,” satisfied/very satisfied 80.1% (national average 62.6%). In the new LSI curriculum, earlier emphasis is being placed on career choices, with 3 weeks entirely devoted to career exploration interspersed over the 18 months of Part 1, in addition to efforts comparable to the current plan in subsequent years. OSU students were very successful in the NRMP match, supporting the value of the career planning efforts and the efforts directed at effectively structuring the MSPE. In the 2013 NRMP match, 95% of OSU students matched initially (nationally, 93.7%), and 97.6% overall entered residencies (nationally, 96%). Data from our own survey of residency program directors (cited elsewhere in this report) who matched OSU students show that our students on average are better prepared than their colleagues from other schools for their selected residency experiences in multiple different disciplines. In 2013, OSU received the first Careers in Medicine Excellence in Medical Student Career Advising Program Award from the AAMC.

10. Electives: Students wishing to take extramural electives apply through VSAS and may take electives offered by LCME member institutions only. At the conclusion of the rotation, the student submits an evaluation of the experience via MedSTAR; unfavorable evaluations are maintained in the program office, and also forwarded to the responsible department office for use in consideration of approval of subsequent away elective requests. All students’ elective schedules are reviewed and approved centrally by the Med 3-4 academic program. International rotation sites are reviewed by the OSU Office of Global Health Education (OGHE). Students are provided with appropriate reference materials to prepare them for their international experience, including “A Study Abroad Handbook” which details emergency protocols. If students experience an unsafe situation while on an away rotation, they are instructed to remove themselves from the situation and contact the OGHE immediately. Students must complete an evaluation on MedSTAR of their experience in which they comment on all aspects of the elective. This information is reviewed by the Global Health Elective program manager, and maintained on file for the benefit of future students. Assessments for student performance on domestic electives are collected by the approving department which then enters the grade in MedSTAR. On the 2013 GQ, 75% of our students were satisfied/very satisfied with the guidance that they received in selection of electives (vs. 59.2% nationally), although only 70.2% said they were satisfied/very satisfied with elective time (vs. 76.5% nationally). The 2013 graduating class “lost” one elective month when the university converted from quarters to semesters. This month has now been restored through restructuring.

11. Student Debt: The college has undertaken a vigorous approach to address student debt through comprehensive financial aid and debt management counseling. The college has its own internal staff of financial advisors whose only role is assisting our medical students. We offer individual counseling, group sessions and web resources to help our students manage their finances. In the 2013 AAMC GQ, 92.2% of OSU respondents were satisfied/very satisfied, vs. 79.9% nationally, with financial counseling services. The 2013 graduates also rated us above the national mean in “debt management education” and “senior loan exit interviews.” The OSU independent student analysis described students as “very pleased with their access to financial aid” (4.47). Students also gave high marks to help with debt management (4.34) and to help with overall financial needs (4.40).

The college’s primary approach to indebtedness has been to maintain tuition as low as possible (recognizing the university constraints—see paragraph below) while simultaneously increasing
scholarship funding. Our goals are to increase the average scholarship aid per student to approximately $9,350 by the year 2016 and to work toward limiting any annual increase in average indebtedness to 1.6%. Ohio State students saw their tuition and fees increase at a rate of 7.38% over the course of three years compared to the national rate of 14.72% for public institutions over the same timeframe. These percentages are calculated using data from 2009 through 2011. We excluded 2012 from this calculation because of our institution’s conversion from quarters to semesters, which creates misleading results. Our current average level of student debt is slightly above the mean for public medical schools, and we are aiming to reduce our level of debt to this mean within the next several years.

12. Tuition and Scholarships: The college has only limited ability to influence the cost of attending OSU. The university Board of Trustees is responsible for setting tuition, which is indexed to the OSU Graduate School tuition level. We do have the option to pursue an additional “differential tuition” increase above the graduate school level. No differential increase has been requested for the past 2 years, and none is contemplated in the foreseeable future. The college has its own Office of Development, which has embarked on an aggressive campaign under the leadership of the new dean to increase overall contributions to the college, with special focus on dollars earmarked exclusively for scholarships. In FY2011, prior to the arrival of the new dean, total giving to the college equaled $6,211,330, with $2,261,978 designated for scholarships; by FY2013, total donations had increased to $9,158,333, with $3,915,463 for scholarships. The college has also been diligent in assisting our students in applying for new external sources of scholarship monies. The recently-instituted Choose Ohio First (State of Ohio) and the MEDTAPP (Medicaid) scholarship programs have provided funding for students interested in primary care fields from previously unavailable sources. As a result of all of these efforts, we have seen notable improvements in our available scholarship funding, and we expect to continue making gains.

The policy for refund of tuition and fees is clear and equitable. It follows the policy of the university. All refund calculations are processed in the central university Student Financial Aid Office, and are overseen by the policy analysts in the OSU Office of Compliance.

13A. Student Support Services: The college has its own internal counseling and mental health services team. For several years the college has employed a full-time mental health counselor. Beginning in autumn of 2010, a full-time academic counselor was added (see paragraph 8 in this section). The counselors have flexibility for “after-business hours” visits. Most students can be seen within 24-48 hours; if needed, arrangements are made for an immediate evaluation. The counselors can also refer to other university-based counseling/mental health resources. Counseling services provided to medical students are confidential as stipulated under the Family Educational Rights and Privacy Act. Counselors do not provide any academic assessments of medical students, thus protecting the privacy of the counselor-student relationship from conflict of interest. The 2013 GQ reported that 84% of students were satisfied/very satisfied with mental health services (national average 75.1%). The independent student analysis was consistent with this finding, with virtually all counseling and mental health services questions receiving above 4.0 ratings.

Students requiring preventive and therapeutic health services, including immunizations, are able to access the Wilce Student Health Center, located on campus close to the college of medicine. The center has recently extended its regular hours to 6:00 pm Monday through Thursday to help in accommodating the schedules of medical students on clinical rotations. For emergencies, the OSUWMC Emergency Department is open on campus 24 hours a day. In 2010, the OSUWMC network opened additional clinics for non-life-threatening problems. Students on required (outpatient) rotations or electives within the state of Ohio are provided a list of emergency care centers convenient to the geographic rotation site.

Students are expected to use their allowed, excused absence time to visit the health center if they must be seen during business hours. Regular communication is sent to clinical faculty members asking that students be allowed time for medical appointments when needed. The 2013 GQ shows student satisfaction with health services and health insurance at levels well above the national averages. For
health services, 87.5% of our students were satisfied/very satisfied (vs. 75.7% nationally); for health insurance, 75% were satisfied/very satisfied (vs. 58.6% nationally). On the independent student analysis, questions related to student health services received slightly above satisfactory ratings (above 3.0).

All students are required to carry health insurance at least comparable to the student insurance offered by the university. Health insurance is included with university fees unless a student proves other coverage. The college provides a disability insurance policy (sponsored by the AMA) at no additional cost for all students. See previous paragraph for student satisfaction rates. Students receive education in universal precautions by completing computer-based learning modules beginning in their first year of medical school as well as during the Introduction to Clinical Medicine orientation prior to entering their third year. This information can also be found in the Medical Student Handbook. Visiting students receive explicit information upon their arrival at OSU about where to find information regarding occupational exposures/needle sticks.

C. The Learning Environment

13B. Professionalism and Learning Environment: The college, under the leadership of the Executive Curriculum Committee (ECC), undertook a complete reassessment of the core educational objectives for the medical education program in 2007, ultimately resulting in the creation of the new LSI curriculum. The professionalism attributes described in these core objectives were then woven throughout all three parts of the new curriculum. These same professionalism attributes are also applied to the existing “2006 Curriculum,” although not in as thoroughly integrated a fashion as in the new curriculum. All students are introduced to the expected professional attributes and behaviors in the first days of medical school. These professional expectations are included in all course handbooks, and then reiterated at subsequent points in the curriculum including in clerkship introduction sessions. Students are evaluated by the faculty using clearly-defined standards that are specific for each level of the curriculum, with both formative and summative assessments. The students, in turn, are provided multiple opportunities to assess faculty members for similar behaviors, particularly in the clinical setting. Programs to assist faculty members in teaching and evaluating appropriate student professional behaviors are available through multiple sources (including the Center for Faculty Advancement, Mentoring and Engagement – FAME – lecture series and the Faculty Development for Medical Educators – FD4ME program).

The college and its clinical partners work very closely to create a learning environment which promotes the maximal educational benefit for students. Activities at each major teaching site are overseen by a local assistant dean for medical education, who sits on the college’s ECC. The core clerkship directors maintain constant communication with faculty members at the affiliated hospitals through these assistant deans, and regularly review the learning environment at these locations. Student clerkship evaluations include specific questions directed at their experiences at each learning site. OSU has made its faculty development tools, including the on-line FD4ME, available free of charge (with CME credits) to clinicians in these affiliated institutions. The ECC reassesses the overall learning environment at all sites as part of its annual review process of all clerkships. The college has formally established the shared responsibility for an appropriate learning environment in each of its affiliated hospitals through the required affiliation agreements. The medical center’s Professionalism Council, co-chaired by a physician and a nurse, is responsible for oversight of the professional environment for all individuals, not just medical students, in the patient care setting. One area of concern may be that a significant percentage of OSU medical students (22.2% as reported in the 2013 GQ) indicate that the college has too much emphasis on professionalism. However, we conclude that this degree of emphasis, although perhaps not always appreciated by the students, is needed to achieve the professional environment that we believe is most appropriate in an academic medical center. The independent student analysis notes that student responses to multiple questions about the administration’s “performance and professionalism” were “resoundingly positive overall.”
14. Standards of Conduct: The college has a clear policy that defines the standards of conduct in the teacher/learner relationship and serves as an effective guide for students and faculty. Faculty members are informed about the policy at the new faculty orientation, and it is published in the Medical Student Teaching Handbook as well as the faculty affairs website. The policy is explained during orientation week for matriculating students and is published in the Medical Student Handbook. The policy is also reviewed during the orientation session for every inpatient clerkship. The 2013 GQ documents that 92.4% of our students report awareness that our school has policies regarding student mistreatment (vs. national average of 88.2%). Of concern to the college, however, is the fact that, despite our efforts, 24.5% of students (less than the national average of 28.3% but still an unacceptably high number) report that they are not aware of the institutional procedures applicable in these situations. Therefore, the college is increasing its efforts to reiterate and disseminate the policies and procedures regarding student mistreatment, and we now have a physical mailbox in Meiling Hall so that students may drop off anonymous reports of student mistreatment. We are currently exploring the feasibility of establishing an electronic route for reporting of student mistreatment.

Our 2013 GQ results show average or better rates for the vast majority of student mistreatment negative behaviors compared to the national averages. We have recently focused on improving communication of our mistreatment policies to faculty and residents by adding presentations on student mistreatment to the College Assembly and the GME Program Directors committee. We now address student mistreatment at the resident/intern orientation sessions each year. The independent student analysis showed that 18% of students experienced personal incidents of “maltreatment.” On the surface, this would appear to show improvement over the 33.9% figure (vs. 42.1% nationally) in the 2013 GQ, but differences in how questions were worded in the two different surveys make meaningful comparison impossible. The 18% figure was still regarded as unacceptable by the college, and served to further reinforce efforts that were already underway to address this critical issue. Of note, the student analysis identified a group of “offenders” which had never been identified before – operating room “scrub techs” – and the college immediately initiated an effort to address this newly-identified problem.

15. Student Advancement: Students are introduced to all policies for advancement, graduation, disciplinary action, appeals and dismissal during the first week of school. All policies are clearly delineated in the student handbook, which is easily accessible on line. When a student is scheduled for review for unsatisfactory performance or other disciplinary action, relevant policies are communicated as part of the notice of a hearing or a disciplinary appointment. Course and clerkship directors are familiar with the relevant policies through recurring discussions at grading sessions, Med 3-4 committee meetings, and faculty meetings. Clerkship directors communicate grading and advancement policies to the students at the course orientation. These policies are easily available to all faculty members through the Faculty Teaching Handbook. Disciplinary action for students requires three successive levels of review before final action is taken by the dean. This multi-level process ensures that students are given ample opportunity to receive fair treatment, present their own views and remediate deficiencies if possible. At the final level (Academic Review Board) before a recommendation for dismissal is made to the dean, a careful review of the entire disciplinary action (including an interview with the student) is undertaken to verify that all required procedures were performed and due process was followed.

16. Student Records: The college has policies and practices in place that are effective in protecting the students’ sensitive information while also providing a minimally burdensome process by which the student(s) can access the information. Students are granted access to their records on-line no later than one business day after a request. Students have constant and protected access to their scores and grades as soon as they are officially posted. The information system has layers of access which are assigned to staff and program directors only on a “need-to-know” basis. Information regarding student educational records is released only with the written authorization of the student. A student may challenge information in the student record through a written statement submitted to the Office of Student Records. Within one business day, the written document will be submitted to the appropriate dean for review.
Policies for appeal of exam scores, course and clerkship grades, and narrative summaries are detailed in the Medical Student Handbook and provide fair and effective mechanisms for students to challenge this information.

17. **Student Study Space:** Students have access to a variety of study and leisure spaces, plus suitable storage facilities, at the main campus and at each of the facilities included in their learning programs. The study space in the Health Sciences Library is open to all health science students. There are 622 seats, 7 large study rooms and individual carrels in that facility. The library completed an expansion in 2012 that added 3900 square feet of quiet study space for medical students only. In addition to the library, students may use all of the classrooms and 68 quiet study carrels and 8 computer carrels in Graves Hall and conference rooms and lounge-style study space in Meiling Hall 24/7. All of these spaces have wireless internet available. Students also have access to excellent study and relaxation space at each of the 3 main teaching affiliates, including library, lecture and conference rooms, quiet study space and lounge areas, plus lockers. The independent student analysis showed an above-average level of satisfaction on the part of the students with all library facilities. The survey also stated that the “computer and technical support centers garnered a high positive response.” The students’ only complaint was the lack of 24 hour access to the Health Sciences Library, even though they do have 24 hour access to conference rooms and study spaces in Meiling and Graves Hall, both of which are immediately adjacent to the library.

Meiling Hall has lockers for all students, plus leisure options for students which include a lounge with 24/7 keypad access. Students also have access to all university recreational facilities. The independent student analysis restated an ongoing complaint from the students: dissatisfaction with campus parking facilities for students. This is partially related to the recent privatization of campus parking, and multiple construction projects. During the 2012-2013 academic year the college was able to negotiate 50 parking spaces for Med 3-4 students on off-hour clinical shifts, which (along with completion of the parking construction) should help alleviate some of the student concerns about parking.

IV. FACULTY

A. **Number, Qualifications, and Functions**

1. **Faculty Size and Qualifications:** The OSU College of Medicine faculty now has approximately 1700 full-time members, and is supplemented by approximately 1700 part-time and volunteer faculty members, numbers more than sufficient for fulfilling the educational, research and service missions of the college. Since the previous site visit, we have added greater depth of expertise, introduced new clinical practice sites, and increased our number of faculty members working in primary care. We conduct national searches for important faculty positions, assuring access to a broad, diversified pool of highly qualified teachers, scholars, and clinicians. Eight OSU faculty members (7 with college of medicine appointments) have been elected to the Institute of Medicine of the National Academy of Sciences in 2013. Ohio State has been first or second in the nation for 10 years in a row in the number of faculty members elected to the American Association for the Advancement of Science. The OSU Wexner Medical Center (WMC) is currently recognized in the U.S. News and World Report rankings for expertise in 10 specialty areas. More than 170 of our faculty members are listed among the “Best Doctors in America,” representing 80% of all listed physicians in Columbus. The OSUWMC also received a 2013 University HealthSystem Consortium (UHC) Quality Leadership Award. This award is given to the top 10 of 101 AMCs for demonstrated superior performance in delivering high-quality patient care.

Since the time of the prior site visit, the college has quantified the requirement for teaching for each faculty member, and introduced newly-created metrics for assessing quality and quantity of teaching into the formula for determining annual departmental appropriations which will be a component of a new mission-based budget beginning in FY15. As a result of this process, all faculty members will be rewarded for the time they spend teaching through appropriate supplements to departmental income. As a baseline, each faculty member is required to spend 10% of his/her time in teaching medical students. To
achieve this goal, the department must protect that time of its members, or face penalties in the
distribution of the annual college budget allocations. All of the specific education leadership roles in both
the “2006” and the new LSI curricula were carefully assessed for required level of effort, and are
supported by designated college funds appropriate to the effort required for the assigned educational duty
in addition to the general college budget allocation to departments described above. Well over 100
different individual faculty members receive varying degrees of support (“release time”) for their defined
roles in medical student education. Program and clerkship directors are considered an integral part of this
process and are supported by the college.

2. Faculty Feedback: All faculty members are provided with many opportunities to receive feedback
regarding their educational skills and to participate in exercises designed to improve their abilities in
teaching and assessment. At the time of the prior site visit, there was no central college vehicle for
accomplishing these vital activities. The creation of the new Center for Faculty Advancement, Mentoring
and Engagement (FAME) and the expansion of the Office of Evaluation, Curricular Research and
Development (OECRD) have been invaluable additions to the college’s educational resources for faculty
members. FAME conducts workshops and provides resources dedicated to the advancement of all faculty
members in all aspects of their careers. The first hour of the monthly meeting of the Faculty Teaching
Scholars Program is open to all faculty members and provides instruction in a wide variety of topics for
development of education skills. On average, 20 faculty members (in addition to the Faculty Scholars) attend this monthly offering. During the 2011-2012 academic year, the college conducted a total of 283 faculty development sessions, with 1042 participants.

Members of OECRD have been responsible for the creation of the Faculty Development for
Medical Educators (FD4ME) program, which offers on-line modules (available for CME credit) relating
to a wide variety of teaching competencies. Since the initiation of FD4ME (as of May, 2013), there have
been a total of 354 users. The Center for FAME and the OECRD jointly sponsor a biannual campus-wide
education conference that provides teaching skills education through invited speakers, research
presentations, and workshops provided by local experts. All faculty members participating in the
teaching of students throughout the curriculum receive regular feedback regarding the effectiveness of
their efforts through a variety of modalities. Faculty teachers undergo routine assessment of their
teaching effectiveness by the students in each course or clerkship. The module leader for each medical
school program observes the faculty members teaching and provides feedback, especially if concerns are
noted. If required, exercises and goals for advancement of teaching skills are provided. The college
mandates annual peer review of teaching, which is a required component of promotion and/or tenure
reviews. In the “2006 Curriculum” Clinical Assessment and Problem Solving (CAPS) program and in the
LSI curriculum’s Longitudinal Group, an education expert observes faculty and meets individually with
them to provide an assessment and plans for advancement of teaching skills. The new LSI curriculum
provides multiple opportunities for faculty members who are involved in medical student teaching to
participate in workshops and training sessions that are designed to improve skills that are specific for the
new curriculum. For example, new portfolio leaders and coaches are required to participate in faculty
development sessions specifically directed at mastering skills needed for these activities.

3. Faculty Scholarship: All faculty members at the college are required to engage in scholarly activities
as a condition of their faculty appointment. The self study task force concludes that the OSU faculty
members fulfill this requirement in a satisfactory fashion. For 2012 (the most recent full year available),
faculty members published more than 2880 articles in peer reviewed journals, and more than 770 book
chapters. Approximately 500 faculty members are members of NIH or other granting agency study
sections or governmental or professional society committees, 440 are journal editors or members of
editorial boards, and more than 500 are principal investigators (PI) on extramural grants. In fiscal year
2013, external awards totaled almost $166 million, for an average of $431,000 per PI. Total research
funding, including faculty members at Nationwide Children’s Hospital, is now almost $220 million, an
increase of almost 65% since 2005, with an increase in NIH funding being the principal driver of this improvement; all occurring in one of the most challenging funding periods in modern academic medicine.

Faculty members are supported and mentored in their scholarly activities through multiple mechanisms in the college. As noted above, the establishment of FAME has provided a unique central resource for all faculty members seeking to improve upon their educational activities, research, and administrative skill set or those desiring more general mentorship. FAME’s Faculty Teaching Scholars Program includes specific instruction on research methods, statistical analysis, and data reporting. FAME’s on-line FD4ME program also includes modules related to research topics. Another major FAME platform is its mentorship program (designed to assure that all departments have effective mentorship programs) with a variety of tools, including sample mentorship agreements, outlines of five year career development plans, and a mentorship best practices document. Additional resources are available through the Center for Clinical and Translational Science (CCTS), funded by a recently renewed NIH Clinical and Translational Science Award (CTSA), and through the university-level Office of Research.

B. Personnel Policies

4. Appointment/Promotion/Tenure Policies: The self study task force concludes that the college of medicine has clearly-defined, fair and equitable policies for appointment, renewal of appointment, promotion, granting of tenure and dismissal of faculty members. These policies and procedures are all described in the Rules of the University Faculty (available on-line) and are re-stated in the college’s and each department’s Appointment, Promotion and Tenure (APT) document. The college website has an easily-accessed Faculty section which includes an outline of standards for promotion and reappointment, a listing of all documents needed for the process, a description of each faculty track, college and departmental APT documents, etc. The departmental policies are created by each department with significant input from the faculty. The departments are fully participatory in the process of promoting and reappointing faculty, as active, in-person discussion is required of those defined as eligible to vote on the candidates. The policies are clear, understood, and followed carefully by department administration. Faculty members are well informed about the policies so that they may take advantage of the flexibility of the university’s promotion and tenure policies. For faculty on the clinical track, there is not a set date by which promotion must occur, thus allowing faculty with significant clinical commitments ample time to meet the standards required for promotion.

Faculty members are made aware of the requirements for retention and advancement at the time of hire through their letter of offer and at new faculty orientation sessions. Faculty members are required to participate in the education of students as a condition of their employment at the Ohio State University, except for individuals hired in the research track. A required component of every faculty member’s annual review is an analysis of academic and teaching performance, and a discussion of expected future accomplishments that will lead to retention, promotion and/or tenure. The college recently approved a new Appointment, Promotion and Tenure document which adds both more objective standards as well as greater flexibility to the promotion process through the addition of a “Clinical Excellence” path for individuals who are outstanding clinicians but are lacking in the more traditional accomplishments for promotion, such as papers, presentations and grants. At the same time, the new document also tightened the requirements for promotion in the tenure track in the effort to encourage more sustained scholarly output of the faculty. Even with our rigorous standards, we are able to promote between 60-80 faculty members each year.

5. Conflict of Interest Policies: The college maintains vigorous policies for conflict of interest (COI) in research, conflict of private interests of faculty/staff with academic teaching responsibilities, and commercial support of continuing medical education. University and college websites detail the various policies as well as the Medical Center Vendor Interactions Policy. All faculty members are required to sign the university’s comprehensive COI policy annually. Educational resources are widely available to
the faculty to assure understanding of these COI policies. Training modules relevant to research ethics, scientific misconduct, COI and human subject protection are available at the university and college of medicine websites. All faculty members are required to complete on-line training regarding the ethical conduct of research, and to renew this training every three years. All faculty members annually complete five computer-based learning modules addressing the topics of HIPAA Privacy and Research, COI, Regulation of Fraud and Abuse, Physician at Teaching Hospital Guidelines, and Understanding Clinical Trials, to maintain their clinical privileges at the OSUWMC. OSU recently established a new Office of University Compliance and Integrity, with responsibility for oversight of all aspects of university compliance. The role and activities of this new office have not yet been defined.

6. Faculty Promotion Policies: The university requires that all faculty members have an annual face-to-face review with their department chair, resulting in a written document assessing teaching, scholarship, and service. The evaluation must include an assessment of the faculty member’s progress towards promotion, and must discuss career goals mutually beneficial to the faculty member and their academic unit, plus steps that must be taken in the next year to make progress towards promotion. At present, departments are given some flexibility in annual reviews, as long as minimum requirements of the college are met. One area for improvement in this process might be the establishment of a more formal template for review to be used by every department, such as the one employed in the Department of Medicine. In addition to the annual chair’s review, all tenure track faculty members undergo more formal, periodic college-level reviews to assess progress towards promotion and tenure. These reviews occur in the 4th year (for all faculty members), and again in the 8th year (for faculty members with significant clinical responsibilities). Clinical faculty members have term appointments and undergo a similar review to determine suitability for reappointment. To assist faculty members in navigating the promotion and tenure process, FAME provides faculty career consultation including career review and assessment of progress towards promotion.

C. Governance

7. Faculty Role in Decision-making: The College Assembly is the primary decision-making body of the OSU College of Medicine, and represents the major vehicle for faculty participation in governance. The Assembly meets monthly and is chaired by the dean. (For additional details of the College Assembly and the Faculty Council, see section IS.3.) In addition to service on the Assembly and Council, individual faculty members have an opportunity to participate in the college’s governance process through membership on committees at multiple levels: department committees, college committees, medical center committees, and university committees (including the Faculty Senate). OSU has a strong culture of vetting decisions through stakeholders and obtaining buy-in prior to implementation, especially when decisions are impactful to action.

8. Faculty Communication: The size and wide geographic distribution of our faculty make it difficult for all of our faculty members to meet for a general faculty meeting. To address this issue, the college utilizes multiple different modalities of communication. We use a combination of traditional and emerging technologies, print and voice modalities, central and peripheral information sources. Central efforts are overseen by the college of medicine Communications Department. Print communications (usually delivered by email) include the following biweekly updates: FAME publishes “Faculty Matters,” with information about the education mission, faculty development as well as academic news and events of the college; and the college’s Office of Research publishes “Research Update,” which reports recent publications and awards, describes core facilities, highlights promising college research and researchers, and calls for grant applications. The medical center’s web site also has clinical, research, and education-oriented material which is updated regularly. Most departments also have their own regular email communication instruments, and all hold regular faculty meetings. Finally, major actions of
interest to the faculty (e.g., major appointments and faculty accomplishments) are communicated to all faculty members through special email announcements from the dean or the senior vice president.

Communication includes an annual State of the College address presented by the dean and an annual State of the Medical Center address presented by the senior vice president. To reach the widest audience possible, these addresses are webcast throughout the college campus. There are bi-annual meetings of the medical staff (which are focused on the physician faculty during which practice-related issues and medical staff bylaws are discussed), periodic senior leader retreats, and a monthly blog from the senior vice president. The college makes liberal use of "town hall" meetings where the college and WMC leadership meet with large groups of faculty members and staff. These meetings are held at different hospital locations to provide a more convenient opportunity for all faculty and staff to participate. All departments conduct grand rounds and hold other conferences where communication among all members is encouraged and facilitated.

The self study task force believes that faculty members have ample opportunities to learn about issues at the institution and to receive communication about policy or procedure changes in a timely manner. The faculty members in general also believe that there are sufficient opportunities for their concerns to be voiced, particularly at venues such as the town hall meetings, and at four annual medical center retreats. The medical center also conducts an annual communications survey. The only issue that many faculty members might have with regard to communication is a sense that they are given the opportunity to voice concerns, but they are not convinced that leadership is actually listening to them. With the arrival of the new dean in 2011, a major effort to address this issue has been instituted, including the establishment of the newsletters described previously and the creation of operations councils in many clinical settings designed to incorporate all levels of constituency in the decision-making process.

V. EDUCATIONAL RESOURCES

A. Finances

1. Financial Resources: There are pressures on nearly all of the sources of the college’s financial support, including: state appropriations, tuition, direct and indirect funding from research grants. The state budget for 2013-2014 provided a small increase in the state medical subsidy (although OSU as an institution actually received less due to relative weighting differences in undergrad distance learning), but unfortunately, the budget also included a decrease in the clinical teaching subsidy. Governor Kasich, through the state Board of Regents, is shifting education support at the graduate and undergraduate level to incent graduation rates over credit hours taken (we believe this will favor our college’s programs). Endowment and development income is projected to increase as a result of a university-wide campaign currently underway – “But for Ohio State.” The OSU president has announced an undergraduate tuition freeze for the coming year and that will put downward pressure on tuition/fee levels in the professional programs as well. Government funded research has become an increasing challenge with a larger number of faculty members trying to access a shrinking pool of available dollars and grant budgets being slashed after an award is made. Medical center revenues are stable at present but at risk from downward pressure on reimbursements as a result of patients transitioning from commercial payers to public and private exchanges. The State of Ohio recently accepted Medicaid expansion, though court challenges are planned by opponents.

To address these financial challenges, the OSUWMC and College of Medicine have embarked on several initiatives to maintain and even strengthen our financial position over the next several years. The college has been centralizing and consolidating certain transactional items into a shared services center for the past several years, resulting in the elimination of some positions primarily through attrition. The Office of Health Sciences has disbanded one center and consolidated another into an existing basic science department, creating some operating efficiencies. A larger realignment of the basic sciences group has been under discussion and is expected to result in further consolidation and additional administrative efficiencies beginning in FY15. The college is developing the capacity to manage and
reallocate research space based on an expected metric ($ per sq ft) to increase the efficiency of the current labs. A budget reallocation model is being modified to redirect the distributions from the college to the departments based on teaching and research productivity metrics (i.e., mission based budgeting). In addition, we will be maintaining a lower class size going from our historical base of 215-220 new medical students per year down to approximately 200 beginning with the fall 2013 entering class. This change is the result of several factors, but principally reflects our strategic desire to insure the optimal teaching environment within the new LSI curriculum. All of the activities described above, coupled with a relatively strong current patient volume, greater than 10% operating margin, and added income anticipated when the medical center expansion project is completed in the fall of 2014, should ensure a level of stability in the financial prospects for the medical school at least in the near term.

At any given point in time, there may be a small number of departments in “financial difficulty,” but the college monitors the financial position of each department on a quarterly basis (or more frequently depending on the department) and manages any deficit situations as they arise. The college is required to report annually to the university any individual fund in any department with a deficit >$100,000 and to report on the resulting deficit reduction plan until the deficit is eliminated.

2. Revenue Generation: The pressure to generate revenue from tuition, patient care, or research has heretofore been nominal and has not had a significant direct impact on the balance of activities for faculty members. However, we recognize that this favorable situation is likely to be put under stress as health care financing becomes more challenging. The college is currently reviewing both clinical and research productivity among faculty members with a view toward increasing efficiency and effectiveness in those areas. We have clearly defined the faculty’s responsibility for participation in teaching (see Faculty section paragraph #1), and are developing useful metrics to reward individuals and departments fulfilling those requirements starting in the 2013-2014 academic year, thus protecting education service time in the coming years. In addition, by creating financial rewards for multiple individuals with defined leadership responsibilities in our new curriculum, and subsidies for community practices willing to assume responsibility for some of our students, we are able to protect these critical individuals and practices to some extent from the pressure to generate revenue.

3. The Clinical Enterprise: The OSU College of Medicine, working as an integral component of OSUWMC, has done an effective job of maintaining the financial viability and profitability of the faculty practice and the university’s healthcare system. Our local (Franklin County) healthcare environment includes only three significant adult hospital systems with each controlling approximately one-third of the market share. The Faculty Group Practice (FGP) overall continues to be successful, and the medical center has been able to maintain profitability in the face of a challenging healthcare environment. The WMC has a well-developed strategic planning function which includes the college, and ensures that the clinical mission is closely aligned with the needs of the education and research missions. Bringing a large new $1.1 billion hospital facility online (in 2014) will involve a different set of challenges, but will also provide us with an opportunity to determine how to best re-deploy the space vacated. We have already leveraged the new facility through debt issued at the university level and continue to evaluate other financial mechanisms including leasing and partnering with collaborating organizations to meet our capital needs. The OSU Health System, utilizing the principles outlined above, has consistently invested in excess of $100 million per year into the clinical departments of the college. We project continued financial viability for the foreseeable future, and anticipate continuation of this investment policy.

4. Addressing Capital Needs: The OSUWMC and the college are preparing for the coming fiscal challenges, including reduction in hospital and physician reimbursement as a result of health care reform. We have embarked on several initiatives to maintain and even strengthen our financial position and meet our current and future capital needs over the next several years. Many of the initiatives to preserve our financial viability are outlined in section V.A.1 of this summary. Also, a new initiative to cut medical center expenses is underway and should give us additional financial protections for the near-term future.
B. General Facilities

5. Adequacy of Facilities: The college has facilities that are entirely adequate to accommodate the teaching, research, and service activities of the faculty and students. Teaching facilities, especially the auditoria in Meiling Hall, were recently upgraded to accommodate the challenge of the larger-than-normal size class which entered in 2011. The class entering in 2012 was reduced in size; sustained reductions are planned for future years as well. The timely addition to the Clinical Skills Education and Assessment Center (CSEAC) (18,000 additional sq ft), which opened in early 2012, has allowed much more flexibility in classroom scheduling. The opening of the new Critical Care/Cancer Tower will add 20 new small classrooms reserved for medical student use (a total of 5,940 sq ft). Space is, therefore, adequate to accommodate all required educational activities of the “2006” and the LSI curricula. While the amount of teaching space is adequate, some of our older spaces, particularly in Graves Hall require ongoing improvements and upgrades. The independent student survey states, “overall, students responded favorably to the vast majority of survey questions regarding support services and facilities, and all of the academic facilities assessed by this survey were praised.” At the time of the 2006 site visit, research space was described as “at a premium.” The subsequent opening of the 10-story Biomedical Research Tower (BRT) with its approximately 194,000 sq ft of available research space has substantially improved faculty access to research space, and will be supplemented by additional space in the new hospital.

6. Security and Disaster Preparedness: The self study task force concludes that adequate security systems and disaster preparedness are in place at the college, the OSUWMC, and at all of the major affiliated institutions. The college and the medical center are within the boundaries of the university campus, and are thus overseen by campus security services. A second layer of protection exists within the medical center, which maintains its own internal security service. The university and the college maintain disaster/emergency plans for all sites that involve teaching of students. All medical students on campus are explicitly instructed to move to the basement of Meiling Hall in the event of an emergency, and await instructions from faculty at that location. Recently, Security Magazine ranked OSU and WMC number 11 of the top 500 most secure in education and healthcare in the country. Each of the affiliated clinical entities has similar policies and procedures to address emergencies, disasters, and student safety.

C. Clinical Teaching Facilities

7. Clinical Resources: The long-standing affiliation of the OSU College of Medicine with three major hospital systems (Nationwide Children’s Hospital, Mt. Carmel Health System and OhioHealth) in Columbus has continuously provided the college with excellent sites for the comprehensive clinical experience of our students. The majority of these experiences are inpatient on required rotations. Each of these institutions has high quality faculty (many of whom are OSU graduates). The OSUWMC and OSU East Hospital have a total of 1158 beds, with an average occupancy of greater than 75%. Nationwide Children’s Hospital, recognized as a top ten children’s hospital nationally, has 460 beds. The other two major hospital systems have an additional 2323 beds. Although the total number of medical students now is about 10% higher than at the time of the prior site visit, the number of beds at the primary teaching institutions has increased by 20% over that same period of time. These various facilities provide continuous access to a large number of patients from diverse backgrounds, with a full spectrum of medical problems, all within 15 miles of the college. In light of the larger than normal number of students entering the Med 3 portion of the “2006 Curriculum” in July, 2013, and the increased demands of the LSI curriculum for ambulatory sites for the Longitudinal Practice component, the self study Educational Resources subcommittee performed a detailed analysis of inpatient and ambulatory sites needed for the next several years. This study showed that the larger class will be fully accommodated on inpatient rotations through expansion of current rotation capacity at the already existing teaching sites,
rather than at new locations. To meet the new ambulatory requirements, we are expanding our primary care network, hiring additional primary care faculty, and establishing closer collaboration with our community affiliates. Strategic rearrangements of some of the experiences of the students who are in the new LSI curriculum (e.g., switching the timing of some of the Part 2 and Part 3 components) will be done for the next several years to allow the 2011 entering class to complete all of its required clinical experiences before the next class of students begins Part 2. We are confident that the clinical education of all of our students for the years that the larger class is enrolled will not be compromised.

8. Clinical Facilities and Resident Participation: Medical students on all core clerkship inpatient rotations at the nine affiliated institutions have easy access to appropriate support services, including library, conference rooms, study areas, computers, call rooms, shower/changing areas, and lockers with one exception: one student at a time is assigned to a Psychiatry clerkship at a facility which does not have a library, call room, or shower; however, students do not stay overnight on this rotation. All of these facilities are fully approved for resident education in the disciplines through which our students rotate. Students interact with residents on a daily basis on almost every one of their required clinical clerkships. Residents are expected to contribute an essential component of the teaching and evaluation of students on these services. Only two core inpatient experiences (involving a total of 3 students at any point in time) are partially conducted at sites where students do not interact with residents.

9. Cooperation with Affiliates: The level of cooperation between the clinical education affiliates and the college department leadership and faculty is very high, with a deep understanding of the mutual benefit to all parties. Quarterly meetings between the OSU educational leadership and the leadership at the affiliated institutions (alternating meeting sites between OSU and the affiliate) permit regular review of the quality of the student educational experience and encourage enhancements in the teaching program at each site. Institutional agreements which address all of the required elements required in the latest LCME standards have been recently reaffirmed. The leadership in each of the affiliated institutions remains fully committed to the clinical education of the OSU medical students, as it has for many years. One minor concern exists with regard to the current affiliation with OhioHealth: A branch campus of the Ohio University osteopathic medical school will be opening in Franklin County in the near future; the major clinical teaching site for this branch will be several OhioHealth hospitals. Fortunately, the educational leadership at OhioHealth has reaffirmed its commitment to continuing the education of OSU medical students at the current level of effort. However, at least in part because of concerns about the relationship with OhioHealth, the WMC signed a new cooperative agreement with Mt. Carmel Health System in July, 2013; enhancement of joint educational efforts is a component of this new agreement.

10. Interaction with Affiliated Staff: The cooperative interaction of the college with the leadership and the staff members at the affiliated institutions is anchored principally in the relationship of the clerkship directors to the clerkship leaders at these institutions, with department chair interactions playing a lesser role. The regular participation of the affiliated clerkship leaders in the various education committees at OSU (including the Executive Curriculum Committee—ECC) solidifies the engagement of the affiliated hospitals and their staff members with the OSU medical teaching enterprise.

D. Information Resources and Library Services

11. Library Resources: The Health Sciences Library (HSL) works collaboratively with the college to provide resources and services that meet the medical student, resident, graduate student, faculty, and staff needs. The HSL’s current collections are extensive and new purchases are predominately electronic. Today the HSL maintains 22 print journals, but over 6,300 e-journals, more than 6,000 e-books, 80 clinical and life sciences databases, and numerous mobile resources. All are readily available on campus and remotely from home or affiliated hospitals 24 hours/day via EZProxy. Since the 2006 LCME visit, much of the HSL public space has been refreshed and two floors have been added to Prior Hall.
Expanded seating options, now numbering more than 780, include group study tables, single seats, more than 100 public computing stations available all hours, small group study rooms that may now be reserved on-line, a large quiet study space, and a variety of comfortable furnishings for mobile computing. The library is open, on average, 99 hours per week and the website maximizes the use of resources outside of those hours. The first floor main services desk is staffed during all hours by experienced library staff, and patrons may schedule consultation appointments with librarians at their convenience. Student satisfaction with the library, as reported on the 2013 GQ, was 90.6% satisfied/very satisfied (compared with 85.8% nationally). The independent student analysis gave reasonable (above 3.0) grades to HSL services, facilities, and computer and technical support. The main (ongoing) student complaint was that the HSL did not offer 24 hour access, even though the students do have 24 hour access to adjacent classrooms and conference rooms in Meiling and Graves Halls.

12. Library and IT Professionals: Librarians and information technology professionals are well-integrated into the college through teaching, curriculum development and assessment, and student and resident advising. Two librarians provide targeted support to college faculty and students and others serve residents in clinical settings. Specific activities include:

- Librarians introduce students to specific library skills, including instruction in computer usage and bibliographic research, starting with student orientation. They also participate in numerous courses as part of the overall evidence-based practice program.
- Librarians regularly participate in a variety of medical school courses to assist students in mastering the skills of retrieving and managing information. Also, librarians regularly provide students with one-on-one and small group literature searching consultations.
- Four librarians were an integral part of the development of the new LSI curriculum. Librarians also create resource portals for all courses in Carmen, the OSU course management system. The library director sits on the College Education Leadership Team (which meets twice a month) and is, therefore, directly involved on a regular basis in curricular planning and evaluation.

13. IT Resources: Since 2006, our information technology (IT) team has worked to continuously improve IT services to keep pace with the evolving curricular demands. The IT governance structure has allowed college leaders to guarantee that the technical requirements of our medical students, residents, and faculty are considered when selecting and prioritizing IT projects. Examples of successful IT projects for education include: the early adoption of Apple iPod Touch / iPhones for medical students and residents; a pervasive medical grade network throughout the college with extensive wireless coverage; an educational electronic medical record that mirrors our production environment but allows students a safe environment to learn; and a lecture capture solution that provides all faculty members the ability to record lectures or design specific, interactive learning modules that students can review from anywhere in the world. In addition, the college is now providing iPads to all incoming students.

The creation of the new LSI curriculum required a major revision of existing IT systems. A custom curriculum management/student information system (VITALS) was developed to handle the competency-based curriculum and provide data analytics necessary for ongoing comprehensive assessment. VITALS has been effective, although ongoing modifications have been required. Through regular (monthly) meetings of the Education Information Systems Steering Team (co-chaired by the vice dean for Education and the IT director), we are constantly evaluating our IT needs and planning upgrades prospectively. The college and the medical center have provided adequate resources to fund all of these important undertakings. On the 2013 GQ, 89.7% of respondents were satisfied/very satisfied with the Computer Resource Center (compared to 85.6% nationally). Currently all IT solutions are effectively serving all of the educational and clinical care missions of the college.

CONCLUSIONS
The Ohio State University College of Medicine has undertaken a comprehensive evaluation of the OSU medical education program in preparation for review by the LCME. This process has engaged faculty members, administrators, staff, students, residents, and clinical affiliates in a cooperative process, resulting in a clearer understanding of our current state and a more focused vision for future development and improvement. We conclude that our current program is sound and effective, and results in graduates who are fully prepared to meet the clinical, research, and public service needs of our patients and our society. During the self-study process, we have identified the following areas which we consider to be “strengths” and “areas for improvement” in the Ohio State medical education program:

**STRENGTHS:**

- **New competency-based, “state-of-the-art” curriculum:** The new Lead.Serve.Inspire (LSI) curriculum is carefully mapped to our core educational objectives, and allows focus on: 1) problem solving and “active” learning; 2) communication skills; 3) self-assessment and preparation for life-long learning; and 4) understanding of evidence-based medicine.

- **Internal resources for academic, career, and personal counseling:** In-house counselors and a new career advisory thread provide outstanding student support through all 4 years.

- **New strategies to improve diversity:** Extensive outreach to undergraduates from groups underrepresented in medicine (URM), and a nationally-recognized holistic review process have resulted in substantial increases in URM applicants and a 2013 entering class with 20% URM students. A measurable increase in the percentage of women faculty members has also been achieved. Efforts to improve resident staff diversity are now underway.

- **Enhanced Resources for Faculty Development:** The new Center for Faculty Advancement, Mentoring and Engagement represents a single, focused, funded entity that consolidates and reinforces the college’s faculty development efforts.

- **State-of-the art teaching and clinical facilities:** A major addition to the Clinical Skills Education and Assessment Center opened in 2012, and a large new hospital facility with expanded clinical care and teaching sites will be added to the medical center complex in 2014.

- **Consistent success of the educational program:** OSU scores on USMLE Step 1, Step 2 CS and CK have been above the national mean for more than 10 consecutive years.

- **A very positive learning environment:** Students consistently report satisfaction with virtually all aspects of the educational program, reflecting our strong student-centered approach.

**AREAS FOR IMPROVEMENT:**

- **Institutional facilities:** The addition of new teaching and clinical space contributes to more-than-adequate facilities. However, the quality of some of the research space is less than optimal and improvements in this space remain a challenge.

- **Student debt:** Intensive efforts to increase scholarships and control tuition have kept student debt levels reasonably stable, but still slightly above the mean for public universities. New initiatives to further increase scholarship dollars should allow us to reach the national mean within the next several years.

- **Treatment of students:** OSU numbers for student mistreatment are below national averages, but still represent a concern for the college and thus, multiple efforts to address this issue are underway.

- **Continuous improvement in the Ob/Gyn clerkship quality:** Recent changes in the structure and leadership of the Ob/Gyn clerkship have resulted in significantly improved student evaluations; ongoing monitoring is planned.

- **Maintenance of adequate clinical sites:** Current clinic sites are able to accommodate even our larger-than-expected class. However, the imminent opening of an osteopathic medical campus in the Columbus area will likely increase pressure on our clinical sites despite long-standing excellent community affiliations. Efforts are underway to further strengthen some of the existing arrangements and add new affiliations.
APPENDIX A

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Ex Officio: Charles E. Lockwood, MD, MHCM--Dean, College of Medicine; Vice President, Health Sciences

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- Daniel Clinchot, MD, Vice Dean for Education
- Edward Funai, MD, Chief Operating Officer, Health System
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APPENDIX B

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