



LCME Self Study
Institutional Setting
Subcommittee Report

I. INSTITUTIONAL SETTING

A. Governance and Administration

1. Describe how institutional priorities are set. Evaluate the success of institutional planning efforts and discuss how planning has contributed to the accomplishment of the school's academic purpose, research prospects, and goals of the clinical enterprise.

Institutional priorities are identified at all levels within the school. Topics are discussed and refined in an interactive fashion between the dean, UMSOM leaders, and the faculty through the various committee structures. The discussion and approval process includes both formal and informal mechanisms for communication as described below. Once a topic has been satisfactorily discussed and consensus reached, it goes through a formal approval mechanism that involves discussion at the SOM Executive Committee (MEC) and UMSOM Council. Their recommendations are forwarded to the dean, who balances these with the school's resources, missions and priorities, and makes a final decision. This decision is communicated through multiple mechanisms, including the minutes of the meetings, electronic distribution, and through the dean's Vision statements and UMSOM monthly newsletters.

A formal, school-wide strategic plan process addressing all missions in a single document was in place under the leadership of former Dean Wilson. With the arrival of Dean Reece, UMSOM adopted a process to create strategic roadmaps, with each roadmap focused around a specific mission and thus engaging faculty with interests in the particular mission. Each roadmap describes a strategic plan including a vision statement, priorities, objectives, targets, and metrics by which to measure success. One year into Dean Reece's tenure, the school has a very mature research roadmap, a moderately developed clinical roadmap, and an early phase educational roadmap.

A significant aspect of the planning process over the past five years has been a clear strategic initiative to increase financial strength and academic space to accommodate all planned objectives. Strong financial systems have been put in place to manage existing resources and to acquire new resources. This has allowed the school to invest in programs and people and has fueled growth in a number of mission areas. There has also been a clear plan to place space acquisition for all missions at a high priority because of the critical role space plays in the recruitment and retention of faculty and the ability to grow new programs. This planning process resulted in a very aggressive space reallocation program that rewards funded research and reduces unfunded space.

There are mature and longstanding structures and processes that address institutional priority setting and communication:

- The Strategic Plan processes for 1995-2000 and 2000-2005
- The Research Retreat in December 2005
- Several clinical mini-retreats
- The monthly SOM Executive Committee and UMSOM meetings
- Routine departmental chair and other leadership meetings with the dean

- The annual State of the School address
- The Curriculum Coordinating Committee (CCC), which is responsible for the medical student curriculum, but which also makes recommendations to the dean related to the educational mission.
- The Academic Advancement Committee (AAC), which reviews individual medical student progress relative to academic and professional behavior standards and makes related recommendations to the dean, but which also makes strategic recommendations to the dean relative to the educational mission and overall student quality.
- The Medical Education Advisory Committee (MEAC), which evaluates and provides advice to the dean on all aspects of the educational mission and student life.
- The vice dean's research meeting, which evaluates and provides advice to the dean on research infrastructure, the graduate and postdoctoral student programs and research faculty development.
- The Fiscal Affairs Advisory Committee (FAAC), which evaluates and provides advice to the dean on the financial health of and initiatives in departments and other academic entities.
- The Research Affairs Advisory Committee (RAAC), which evaluates and provides advice to the dean on research programs and infrastructure.
- The Clinical Affairs Advisory Committee (CAAC), which evaluates and provides advice to the dean on clinical operations and new departmental proposals.

Newly instituted structures and processes since Dean Reece's arrival:

- The dean's frequent meetings with senior leadership, chairs, and other senior staff
- The participation of the dean in scheduled departmental meetings
- The Research Retreat in December 2006 and many subsequent meetings to develop the research roadmap and research funding targets for each research program
- Two clinical visioning retreats in 2007 with the chairs and consultants to develop clinical magnet areas and a clinical roadmap
- Two joint UMSOM/UMMC retreats in 2007 to set shared clinical priorities
- A planned Educational Retreat in 2008
- Publication and distribution of the dean's Vision statements on education, research, clinical care, and financial and philanthropic development through open letters
- A Leadership Forum in September 2007 to define the qualities expected of UMSOM leaders at the departmental and divisional levels and to reaffirm the school's mission and vision statements
- Development of We Wills as part of the annual report for departments and other academic programs to describe the goals for the coming year and, in the future, to compare progress toward these goals

2. **Evaluate the role of the governance structure in the administrative functioning of the medical school. Is the governance structure appropriate for an institution of this size and characteristics? Are there appropriate safeguards in place to prevent conflict of interest and do these safeguards work? Describe any situations that require review or approval of the governing board (board of trustees) of the school or university prior to taking action.**

As employees of the Executive Branch of Maryland state government, individuals who are part of the School of Medicine's governance structure, including deans, are subject to provisions of the Maryland Public Ethics Law, which is set forth in the Maryland Annotated Code, State Government, Title 15, Articles 101 through 1001. The Public Ethics Law is intended to assure the impartiality and independent judgment of officials, avoid improper influence or the appearance of improper influence, and require financial disclosure. The Law prohibits outright certain activities such as participation in matters in which the official has a financial, business or contractual interest. Financial disclosure is required annually and is made to the Ethics Commission. It includes financial information involving any entity doing business with the state of Maryland and, like the provisions of the Public Ethics Law itself, also pertains to members of the official's family. The President of the institution has limited authority to grant waivers of certain provisions of the Law. Disclosures by officials, and any waivers granted, are subject to public inspection.

3. Evaluate the relationship of the medical school to the university and clinical affiliates with respect to:

a. The effectiveness of the interactions between medical school administration and university administration.

The relationship between medical school administration (i.e. the Office of the Dean) and university administration (i.e. UMB campus administration) is positive and effective. As noted in our last self-study, the 1994 appointment by the Board of Regents of the University System of Maryland of David J. Ramsay, D.M., D.Phil., as president marked a significant turning point not only in the relationship with the Dean's Office but also the stability of the top leadership level of UMB. The previous Dean, Dr. Donald E. Wilson enjoyed an effective relationship with the President, and the appointment of Dr. E. Albert Reece as Dean and Vice President for Medical Affairs has continued this strong relationship. The Dean and President have worked closely together this year on a variety of major projects including: the transfer of the Institute of Human Virology from the University of Maryland Biotechnology Institute; plans and programs for a new Health Sciences Research Facility (III), and the establishment of a new Institute for Genome Sciences.

Following careers at Oxford and UCSF, Dr. Ramsay has now spent nearly 14 years at the helm of UMB. Under his leadership all six professional schools have grown and developed in excellence. This is due in part to a leadership style which explicitly recognizes the mission, talents and opportunities of the various schools, expects the central campus services to support the schools, and holds the schools and the campus services accountable for efficient and effective performance. The schools have significant autonomy, with each dean reporting directly to the President. Dr. Ramsay meets one-on-one with each dean and hosts regular meetings of the Council of Deans where issues of common interest, e.g. capital and operating budget, planning, legislative matters, are coordinated. The academic and administrative vice presidents meet regularly with associate/assistant deans from each school to discuss operational matters.

b. The cohesiveness of the leadership among medical school administration, health sciences center administration, and the administration of major clinical affiliates.

University of Maryland Medical System Corporation ("UMMS" or the "Health System") is a private, not-for-profit corporation founded in 1984 to provide health services to the citizens of Maryland. UMMS has approximately 11,000 full-time equivalent employees and had \$1.7 billion in operating revenue in fiscal year 2006.

UMMS owns and operates a 669-bed academic medical center located in downtown Baltimore and, together with its subsidiaries, owns and operates a health system which includes six additional hospitals located throughout Maryland. These hospitals include: University Specialty Hospital, Inc. ("University Specialty"), a 180-bed chronic care hospital; The James Lawrence Kernan Hospital, Inc. ("Kernan"), a 132-bed acute care rehabilitation hospital; Maryland General Hospital, Inc. ("Maryland General Hospital"), a 238-bed acute care community hospital; Baltimore Washington Medical Center, Inc. ("BWMC"), a 286-bed acute care community hospital; Memorial Hospital at Easton ("Easton Memorial"), a 153-bed acute care community hospital; and Dorchester General Hospital ("Dorchester General"), a 53-bed acute care community hospital. UMMS also owns a 50% interest in Mt. Washington Pediatric Hospital, Inc. ("MWP"), a 102-bed pediatric rehabilitation and specialty care hospital. These hospitals and related subsidiaries comprise a Health System ("Health System"), which offers a wide range of health services, including primary, secondary, tertiary and quaternary care, as well as rehabilitation, chronic care and sub-acute care.

The Health System's academic medical center, known as the University of Maryland Medical Center or UMMC, is comprised of three operating divisions: University Hospital ("University Hospital"), an academic tertiary and quaternary care teaching hospital; The University of Maryland Marlene and Stewart Greenebaum Cancer Center (the "Greenebaum Cancer Center"), specializing in the treatment of cancer patients; and the R Adams Cowley Shock Trauma Center (the "Shock Trauma Center"), specializing in the emergency medical treatment of patients suffering from severe trauma. UMMC's facilities have served as the teaching hospital of the University of Maryland School of Medicine (the "School of Medicine") since 1823. Chartered in 1812, the School of Medicine is one of the oldest schools of medicine in the country. UMMC's medical staff are all members of the School of Medicine faculty.

Located eight blocks west of the Inner Harbor in Baltimore, Maryland, UMMC occupies several buildings on a site of approximately five acres in the heart of the University campus, where all of the health care related graduate schools of the University System of Maryland are located. In fiscal year 2006, UMMC provided approximately 186,325 days of care to 33,284 inpatients (excluding normal newborn patients) and handled approximately 165,468 outpatient, 62,980 emergency room, and 10,959 ambulatory surgery visits. UMMC provides a broad range of inpatient and outpatient services and functions as the primary teaching hospital for three graduate schools of the University System of Maryland: the School of Medicine, the University of Maryland School of Dentistry and the University of Maryland School of Pharmacy. It also functions as one of the teaching hospitals for the University of Maryland School of Nursing. As a regional, tertiary and quaternary referral center for transplant, trauma, oncology, the neurosciences, cardiac care, neonatology and high-risk obstetrics services, UMMC draws

patients from throughout the State. The Shock Trauma Center is the core element of the State's emergency medical system and serves as the State's primary adult trauma clinical resource center. The Maryland Institute for Emergency Medical Services Systems ("MIEMSS"), an independent state agency charged with organizing emergency care statewide, coordinates the State's emergency medical system.

From 1823 to 1984, UMMS' downtown facilities were state-owned, operated and financed as part of the University System of Maryland. Efforts to establish UMMS as a separately governed entity began in 1981 as part of a plan to improve fiscal management, efficiency and quality of care. In 1984, the Maryland General Assembly, with the support of the University System of Maryland's Board of Regents (the "Board of Regents"), adopted legislation (the "Governance Legislation") separating the major health care delivery components of the University of Maryland Baltimore (the "University") and mandating their transfer to UMMS, established under the Maryland General Corporation Law as a private, nonstock corporation. Pursuant to the Governance Legislation, UMMS and the University enter into an annual contract (the "Annual Contract") with respect to the financial obligations, exchanges of services and other agreed relationships between the parties.

UMMS is controlled by a Board of Directors appointed by the Governor of the State. The Board of Directors of UMMS consists of not less than 22 and not more than 27 voting members and six non-voting ex-officio members (the "Board"). Under UMMS' articles of incorporation, as required by the Governance Legislation, three voting members must be members of the Board of Regents. Two voting members must be members of the Maryland General Assembly. With the exception of the ex-officio members, Board members serve five-year terms and may not serve more than two consecutive full terms. The following represents some of the key UMMS Board members who hold other essential positions in the University System of Maryland.

Board Member	Principal Affiliation
David H. Nevins	Founder, Nevins & Associates; Chairman, Board of Regents, University System of Maryland
Robert L. Pevenstein	President, Princeville Partners LLC; Member, Board of Regents, University System of Maryland
William E. "Brit" Kirwan	Chancellor, University System of Maryland, Board of Regents
David J. Ramsay, D.M., D.Phil.	President, University of Maryland Baltimore
Hugh Mighty, M.D.	President, University of Maryland Medical System Medical Staff
E. Albert Reece, M.D., Ph.D., MBA	Dean, School of Medicine, University of Maryland Baltimore

The CEO of UMMS, Mr. Edmond F. Notebaert, and the CEO of UMMC, Mr. Jeffrey A. Rivest work collaborately with the Dean and Vice President of Medical Affairs for the University of Maryland School of Medicine, E. Albert Reece, MD., Ph.D., M.B.A. The strong partnership between these individuals and their institutions has provided focus and commitment to realizing the goals of shared missions.

While Dr. Reece serves as an ex-officio member of the UMMS Board, there is a wide variety of interaction among the leadership of the School of Medicine and UMMC. Dr. Reece meets

regularly with Mr. Notebaert regarding School, medical center and system initiatives. Routine meetings occur between Mr. Notebaert, Mr. Rivest and Dr. Reece which help to align the respective organizations' priorities. This collaborative approach to sharing information help guide the organizations and the respective administrative and clinical leaders in addressing financial, business, and programmatic plans and priorities. These discussions also help shape the strategic focus and alignment of the respective organizations.

UMMS/UMMC has improved in financial health since the last LCME Self Study. Thus the amount of financial support to the School of Medicine and clinical departments has increased to over \$72 million in fiscal year 2006. This support funds administration, supervision and teaching for clinical departments, clinical faculty recruitments, certain clinical department operating support, and modest research support.

Routine meetings, both monthly and quarterly, occur between various constituent groups of the School of Medicine and UMMC. Examples include, but are not limited to: a.) Clinical Chiefs and UMMC Senior Management, b.) Individual Clinical Chiefs and the CEO, c.) School of Medicine, University Physicians, Inc. (faculty practice plan of the School of Medicine), and UMMC for strategic planning purposes. There are also numerous informal planning sessions that occur between the Senior Management personnel of the School of Medicine, University Physicians, Inc. and UMMC. These interactions are highly effective and collegial.

The administrators and staff of the VAMHCS hospitals and clinics maintain a relationship with the University of Maryland School of Medicine which fosters the education of medical students. Many of our faculty carry volunteer or full faculty appointments in the University of Maryland School of Medicine. The emphasis on the education of students is evidenced by the participation of department Directors in weekly educational conferences and in Grand Rounds. Department Directors participate in inpatient and outpatient attending duties. In addition, the education of medical students is specifically discussed in the monthly orientation for Attending faculty on services such as the medical wards. This level of cooperation promotes the education and training of medical students.

There is a very strong, positive relationship between University Physicians, Inc. (UPI) and the School of Medicine (SOM). The strategic interests of the two organizations are intertwined by virtue of the UPI Board of Directors being designated as consisting of the Dean and Clinical Chairs of the SOM. In addition, the Dean has been elected to serve as President of UPI, as has been the case continuously since 1997.

While the two organizations are respectful of the legal separation between UPI, as a 501(c)3 corporation, and the SOM as state entity, there is on-going collaboration on a daily basis as UPI attempts to optimize clinical practice within the context of the teaching and research missions of the SOM. The Chief Corporate Officer of UPI is a member of the Dean's Executive Team, and at the regular meetings of this team, key issues and initiatives of UPI and the SOM are openly discussed and strategies and tactics are mutually developed. This excellent working relationship between UPI and the SOM has benefited and strengthened both organizations.

Additionally, there are major clinical affiliations for various educational purposes set up with the Veterans Administration, Medstar Health (a large regional hospital system), Sheppard Pratt

Health System (a large mental health provider) and Mercy Hospital (a Baltimore City community medical center.) There are also numerous smaller affiliations with various Maryland hospitals including, but limited to: managing the professional clinical services for several area emergency departments, radiation oncology joint ventures, a diagnostic imaging joint venture, and participation in community health centers.

4. Assess the organizational stability and effectiveness of the medical school administration (dean, dean's staff). Has personnel turnover affected medical school planning or operations? Are the number and types of medical school administrators (assistant/associate deans, other dean's staff) appropriate for efficient and effective medical school administration?

The medical school administration is extremely stable. Most senior administrators on the dean's staff were in place prior to the last accreditation cycle and remain after the transition to a new dean. Those currently serving in the following roles have all been in place prior to the last site visit:

Vice Dean for Clinical Affairs
Sr. Associate Dean for Resource Management
Associate Dean for Admissions
Associate Dean for Faculty Development
Associate Dean for Medical Education
Associate Dean for Policy & Planning
Assistant Dean for Administration
Assistant Dean for Operations and Human Services
Assistant Dean for Public Affairs
Assistant Dean for Student Affairs
Assistant Dean for Student Education & Research

Several positions have been newly created since the last accreditation cycle. All the new positions have been created in direct response to a defined need to expand or to maintain efficient and effective school administration. The Office of Development has grown from having just an Associate Dean to having both Associate and Assistant Dean. This signifies the added emphasis that has been placed on development to fully meet all the School's goals and missions by relieving dependence on other revenue sources.

The former Vice Dean for Academic Affairs position transitioned into the Vice Dean for Research and Academic Affairs with the departure of the Sr. Associate Dean for Research & Graduate Studies in 2004, and a number of newly created positions have been added to directly support the Vice Dean in managing the research administration of the institution. These include an Assistant Dean for Professional Development, Assistant Dean for Graduate Studies and Senior Research Administrator along with requisite staffs.

The Office of Student Affairs has established a new Assistant Dean position to meet the career counseling needs of medical students, and the Admissions Office has added two M.D. clinical faculty assistant directors to augment and support the efforts of the Associate Dean for Admissions. Other new positions created are the Associate Dean for Veterans Affairs, Associate

Dean for Hospital Networks. In addition to the established research support positions described above, the Dean is considering pursuing an additional dean for research and a Center Director for CTSA, but the positions have not yet been established.

The subcommittee believes that the administration is stable, efficient and effective, and is adaptive to changing and increasing demands.

B. Academic Environment

- 5. Evaluate the graduate programs in basic sciences, including involved departments, numbers and quality of graduate students, quality of course work, adequacy of financial support and overall contributions to the missions and goals of the medical school. Describe the mechanisms for reviewing the quality of the graduate programs and comment on their effectiveness.**

Graduate education in the basic sciences in the University of Maryland School of Medicine is administered primarily by the University of Maryland Graduate School Baltimore (UMGSB) through the office of Malinda Orlin, Vice President for Academic Affairs and Dean of the Graduate School, UMB.

Prior to 2005 there were 13 separate graduate programs of mixed departmental-based and independent design. Review of this structure was initiated by former Dean Wilson and executed by a faculty-based committee that recommended a reorganization into four free standing interdepartmental and cross school graduate programs and a cluster of programs relevant to public health. The previously existing departmental-based programs in Anatomy & Neurobiology, Biochemistry, Microbiology and Immunology, Pathology, Physiology, Pharmacology and Experimental Therapeutics, and the Program in Human Genetics, all continue to exist until the last student graduates but these programs no longer accept new students. Students in the extant Program in Molecular and Cell Biology were integrated into the new structure. Students in the Biomedical Sciences Program in the Dental School were invited to join the new structure and will be a part of it going forward. The Graduate Program in Life Sciences (GPILS) became operative July 1, 2005. The programs are (1) Program in Biochemistry and Molecular Biology, (2) Program in Molecular Medicine, (3) Program in Molecular Microbiology and Immunology, (4) Program in Neuroscience and (5) a Cluster in Public Health that consists of the Department of Epidemiology Graduate Program, the Program in Gerontology, the Department of Physical Therapy and Rehabilitation Sciences Graduate Program and the Program in Toxicology.

The current combination of previously existing departmental based programs and GPILS consists of a student population of 236 Doctoral and 16 M.S students in the basic sciences (excluding Epidemiology and Gerontology). This is a steady state from 2003-2004 when there were 238 Doctoral students and a modest increase from 2000-2001 when there were 210 Doctoral students. The growth in graduate students has not kept pace with the growth in R01's or other federally funded grants.

The stated goal of the formation of GPILS was to improve the quality of graduate education within SOM. This goal has been realized as evidence by a larger applicant pool (> 1,300 inquires, ~450 completed applications) from a wider geographic area, markedly improved standardized test scores and higher undergraduate GPA's of matriculates. Substantially improved and coordinated recruitment efforts resulted in a yield (# of offers accepted) of close to 60% for most programs, with only 10-20% non-US residents. Recruitment and retention of under represented minorities is ~30% for some programs and far exceeds the national average of ~13%.

One of the primary justifications for the reorganization was redundancy in the curriculum. The GPILS Curriculum Committee recommended, created and implemented a new core course, Mechanisms in Biomedical Sciences: From Genes to Disease. The course launched in Fall 2006 and is currently ongoing. This highly innovative unique course combines didactic lecturing to large groups of students from all programs, combined with the Socratic method for small specialized groups. There are over 50 faculty involved in the course in some guise and it has greatly increased the interactions between faculty and students, providing a creative energy and center to graduate education that has never before been achieved in SOM. An added benefit has been a substantial increase in interactions between faculty from different departments but similar disciplines. Effectiveness of the course was evaluated by a combination of student surveys conducted via the web, with greater than 90% participation, and a faculty-based evaluation committee that provided a written summary of the strengths and weaknesses of the course and recommendations for change during its second year, Fall of 2007.

A new position, the Assistant Dean for Graduate Studies, was created and funded at 50% by the School of Medicine Dean's Office to provide coherent administrative oversight of all GPILS programs. Additional financial support from the Graduate School, School of Medicine and the Dental School has allowed for the hiring and retention of a Program Coordinator for each program and a Program Manager for all of GPILS. The number of GRA's (graduate research assistantships) has increased modestly. The provision of dedicated space for staff offices, teaching and student gathering areas has greatly improved the overall status of the graduate programs. An internal GPILS Bridging Fund is currently being established to assure continuity of financial support for students in laboratories in which the PI may have a lapse in funding.

In order to maintain our research momentum, it is essential that we continue to recruit the highest quality graduate students and that we be able to place them in the laboratories of both senior funded investigators and more junior faculty that do not yet have stable funding. Students provide an incalculable benefit to the research mission as a source of new ideas, energy, mobility (i.e. off campus collaborations) and commitment, all at a very reasonable price. They are also our ambassadors as they move to other prestigious Universities for postdoctoral training and to take faculty positions. Given the recent growth in basic science faculty, it is essential that we at the very least maintain the current number of students being recruited per year, and preferably increase.

The University System of Maryland requires review of all academic programs on a seven year cycle. At UMB the Graduate School conducts PhD program reviews, consisting of an internal self-study and a site visit by a three-person external team. Two SOM GPILS doctoral

programs are scheduled for review in 2007: Biochemistry & Molecular Biology and Physical Rehabilitation Science. These will be the first since the reorganization of graduate education in the SOM. Further, Molecular Microbiology and Immunology will be reviewed in 2008; Neuroscience in 2011; and Molecular Medicine in 2012. The outcome of the review is a written document highlighting the strengths and weaknesses of the program and recommendation for improvement. This is presented to the Vice Dean for Research and appropriate changes implemented in coordination with the Assistant Dean for Graduate Studies. In addition to this campus initiated review process, GPILS has a Steering Committee chaired by the Vice Dean for Research which monitors and evaluates progress in graduate education in the basic sciences.

6. Evaluate the impact of residency training programs and continued medical education activities on the education of medical students. Describe any anticipated changes in graduate medical education programs that may affect the education of medical students.

The University of Maryland Medical System is the sponsor of 54 ACGME-approved Graduate Medical Education Programs. The School of Medicine and UMMS are partners in the oversight of these educational programs and in the supervision and education of 750 residents and subspecialty fellows. All programs are currently fully accredited, and no major changes in sites used for training or in numbers of residents are anticipated.

Oversight of GME is provided by the Graduate Medical Education Committee, which is co-chaired by Dr. Tim Babineau, the Designated Institutional Official, and Dr. Nancy Lowitt, Associate Dean. The GME Committee conducts internal reviews of all programs, monitors duty hours compliance and resident satisfaction surveys, prepares and reviews materials for resident recruitment and employment, reviews and provides oversight of all GME policies, and monitors ACGME site visits of all programs. Dr. Lowitt and Dr. Babineau participate in all ACGME site visits and review program information forms prior to submission. Dr. Nancy Lowitt serves as the Institutional Representative for the National Residency Match Program, and collaborates with the NRMP, program directors and UMMS to implement Match deadlines and requirements.

Since the LCME site visit of 2000, UMMS and the School of Medicine have transformed clinical GME through a phased implementation of the ACGME Competency-Based Outcomes Project. The impact of this implementation on medical student education cannot be underestimated. All GME curricula have been revised, all evaluation tools and processes are competency-based, formative and summative evaluation strategies are employed at the learner and program level, and we have developed new methods to track duty hour limits for residents. Many of our medical student evaluations are now competency-based; our students have duty-hour limits similar to those which govern the residents' practices, and our residents are trained and experienced in giving and receiving timely feedback to one another and to their medical students. New emphases on patient safety and professionalism with the introduction of the Humanism Honor Society link faculty, residents and students in the study and practice of patient-centered care.

A substantial portion of the day-to-day teaching of medical students during their clinical rotations is performed by GME residents. The clinical clerkship directors and program directors

meet regularly to clarify which student learning objectives are to be addressed by residents as teachers. Residents are informed about the students' learning objectives, and participate in teaching and evaluation. Targeted workshops in teaching skills are offered either by departments or by the Dean's Office of Faculty Affairs and Professional Development (FAPD). The FAPD develops and presents workshops targeted according to needs identified by departments, and offers regular teaching skills workshops throughout the academic year where any faculty or resident is welcome.

Residents and Fellows with particular expertise are invited to teach in first and second medical student courses as well. Targeted faculty development programs have been developed for them so that they learn not only general teaching and evaluation skills, but also presentation skills. The Offices for Student Research and the FAPD have collaborated to develop and offer these programs.

The School of Medicine is recognized by the Accreditation Council on Continuing Medical Education as a fully-accredited sponsor of Continuing Medical Education for physicians. The School was last site-visited in January of 2004 and was found to be in full compliance without citations. The CME Program is overseen by the FAPD. In 2006 the School sponsored 75 live programs and enduring materials which served 25,436 physician participants.

Students are found in many of our on-site rounds and conferences, and are welcomed as learners in these settings. Students are exposed to and have become familiar with the high quality of CME programs and the features of fully-compliant CME programs, including: need-based educational offerings, evidence-based reviews and recommendations, identification and management of industry relationships with faculty, and assessment of educational outcomes of our programs. Quality improvement and patient safety are well-integrated in our CME programs.

Students benefit from the high quality of teaching performed by residents at our major academic affiliates, and are invited to attend offsite CME Grand Rounds and other educational programs that are conducted by our faculty but certified for CME by our State Medical Society Med Chi or other arrangement. A noteworthy collaboration exists between the School of Medicine and the major clinical sites of the Veterans Administration Hospital, MedStar Health, and Mercy Hospital. Curricula for teaching and evaluation of medical students are offered at each site, and offsite faculty regularly participate in programs or educational committee work at the School of Medicine. Workshops describing the collaborations between sites have been presented at the Association of Program Directors in Internal Medicine (Ferguson, McCue and Wolfsthal 2004) and referenced at AAMC (Lowitt 2004, 2005).

Partnerships between the School and UMMS and between the School, UMMS and affiliate sites, have resulted in high quality GME and CME and undergraduate medical education programs. The competency-based curriculum of the ACGME, the MSOP objectives project and LCME requirements, and the refinements of ACCME requirements serve to support a dynamic educational environment at multiple sites with shared resources and commitment to excellence.

7. Evaluate research activities of the faculty as a whole, including areas of emphasis, level of commitment, quality and quantity, in the context of the school's missions and goals.

The research productivity of faculty at the School of Medicine continues to show impressive gains. UMB has recently moved into 25th place as reported in NIH awards to medical schools by rank, FY2005. This is a significant achievement and places us in a highly respected position in the biomedical research community. The increase in funding is a combination of increased productivity by the existing faculty and new recruitments in both the clinical and basic science departments. Some of this growth has come about by major recruitments, such as 20 investigators from the Holland Labs at the Red Cross, and other growth has been incremental within departments. Additional growth was experienced with the acquisition of transfer of the Institute of Human Virology from the University of Maryland Biotechnology Institute to the School and the recruitment of several well-funded investigators from The Institute of Genomic Research (TIGR) in Rockville. The level of funding in the basic science departments is relatively cyclical (some increasing, some decreasing) but with a slightly upward trend over time. The majority of research funding in the clinical departments has increased in recent years due in large part to major awards from philanthropic sources.

Areas of research emphasis and commitment to excellence are highlighted by the Organized Research Centers, Programs and Institutes within the School of Medicine. All of these entities have physical space and staff support, and consist of a coalition of faculty united around a common scientific theme. They differ in the degree and duration of resources allocated from the Dean's Office, and in whether they have faculty appointments. All faculty still retain an appointment in an academic department in the SOM. The ORC's are campus wide and receive a small amount of funding for a restricted period after which the center is evaluated for continued funding. Programs are intended to be long term areas of research excellence with stable funding. These are designed to coordinate research around particular themes and complement the existing departmental organization.

Organized Research Centers (ORC's)

Health Policy
Integrative Medicine
Mucosal Biology
Research on Aging
Vaccine Development
Vascular and Inflammatory Diseases.

Programs

Program in Comparative Medicine
Program in Genetics and Genomic Medicine
Program in Complementary Medicine
Program in Minority Health and Health Disparities
Program in Neuroscience
Program in Oncology
Program in Trauma.

There are currently only two institutes, both of which are new to the School of Medicine:

Institute of Human Virology (Director Dr. Robert Gallo)

Institute of Genome Sciences (Director Dr. Claire Fraser-Liggett).

New initiatives in research include a major contractual agreement between the Maryland Psychiatric Research Center and the National Institutes of Health - National Institute of Drug Addiction.

The writing and successful funding of a CTSA is a major goal and the effort is ongoing. If successful, the CTSA would form a third institute structure within the School. The School of Medicine strives to increase support for multi-investigator research and to develop new approaches to research problems. Commitment for this effort was evident in an intramural grant competition held last year for multi-disciplinary multi-investigator awards. Over 100 completed applications were received, representing the participation of close to 300 individual faculty members. Also, increased outreach and collaboration is occurring across the schools and within the University of Maryland System (i.e. with College Park and Baltimore County campuses).

8. Assess the adequacy of the resources for research. Evaluate any trends in the amount of intramural support for research and the level of assistance available to faculty members in securing extramural support.

Space - Positive steps have been taken and progress toward acquiring or reclaiming much needed space is actively ongoing. Progress includes reallocations, moves, dialogue on new centers and institutes, the second bio-park availability, renovations in the Bressler building, imaging space in the Medical School, and ongoing discussions on Epidemiology space. Net assigned square footage continues to grow since 2002, and it remains a priority for the future. Further efforts to enhance the research environment as well as research opportunities and collaboration are being realized, but many require further attention and nurturing to reach their goals. There are plans for construction of a Health Sciences III research building and discussions have been initiated with the Governor.

Intramural funding - An evaluation of the intramural grant program in the School of Medicine indicated that funds were not being optimally utilized to further the research mission of the school. At the recommendation of the Research Affairs Advisory Committee, some funds were reallocated for the support of a critical Transgenic Mouse Core Facility, but the bulk of the funds were used in a newly formatted grant competition that substantially increased the size of individual awards and consisted of three components: 1) Young Investigator Award, 2) Integrative Multidisciplinary Award and 3) Mentored Clinical Science Award. It was the strong opinion of all parties participating in this newly structured competition that it was a substantial improvement from previous years. A new initiative in intramural grants is a cross campus collaboration with the University of Maryland College Park and the first competition is being held Spring of '07.

The Office of Faculty Affairs and Professional Development expanded its scope recently to include new curricula in Biomedical Communications through the recruitment of a new Assistant Dean for Faculty Affairs and Professional Development, who has developed and teaches several faculty development workshops. These curricula are designed to support the research goals of new and junior faculty by offering a range of courses, workshops, and individual assistance in subjects including, but not limited to, the following: grant writing, writing a biomedical research paper, and giving a research talk. The office also provides a consultation service to assist SOM faculty identify non-NIH sources of research funding. To date, this curricula has provided faculty development courses/workshops to approximately 323 junior faculty and post-doc participants. To date, we have learned of five grants awarded to participants thus far.

9. Assess the impact of research activities on the education of medical students, including opportunities for medical students to participate in research.

The vast majority of basic science and clinical faculty who teach the students in the pre-clinical years are actively involved in funded research activities in the School of Medicine. Such faculty are well apprised of current developments in their areas of expertise and this material influences course content (lectures and small groups) as well as topics to be taught within each of the seven major courses that occur in Y1/Y2. As an example of changes that have occurred, faculty have adjusted courses in the last five years to reflect concerns about 1) bioterrorism as reflected in course content on biological and chemical warfare as well as emerging diseases; 2) pharmacogenomics and implications for development of individual treatment modalities; and 3) chemotherapy and immunobiologic/stem cell approaches to cancer treatment.

The Dean's Office maintains an Office of Student Research (OSR) headed by an Assistant Dean with a staff of three coordinators positioned to make medical students aware of research opportunities in the medical school beginning with the admissions process through the senior year. The office supports student research with faculty who have recognized research support through internal funds and by P60, R25, T32 and T37 education and training grants. In addition, the OSR website maintains a list of organizations (service and professional) that support medical student research both at the School of Medicine and elsewhere (nationally and internationally) and including the Global Health Resource Center of UMD. The office advises students on both basic and clinical research opportunities on campus, with collaborating institutions (e.g., UMH) and internationally (e.g., CVD Chile; UFRJ, Brazil; Erasmus University, Netherlands) through collaborative arrangements. A summer research program in existence for more than 20 years provides an introduction to and certification for HIPAA, IACUC, IRB and a summer course on 'Ethical and Responsible Conduct of Research.' Summer activities include weekly research seminars to broaden student knowledge, workshops on combined degree programs, retreats and a research forum for all participants. Instruction on abstract, poster and manuscript preparation are also provided during the summer. Opportunities for research are matched on the basis of subject, time available and location.