Mount Sinai School Of Medicine

LCME
2003
Self Study
Task Force
Report

Add
Corporate
Logo
Here

Prepared for the
Liaison Committee on Medical Education
2003

Table of Contents

I. Introduction……………………………………………………………………1
A) Major Changes Since 1996 LCME Reaccreditation. ………………………………1
B) Areas of Concern Cited in 1996 Ad Hoc Survey Team Report: Follow-up . ……3
C) Areas Identified in 1996 Self Study for Special Attention: Follow-up……………..4

II. Institutional Setting……………………………………………………..…….4
III. Educational Program for the MD Degree……………………………..9
IV. Medical Students……………………………………………….………16
V. Faculty……………………………………………………………….………… 21
VI. Educational Resources………………………………………..……..24
VII. Summary…………………………………………………………..……..28
VIII. Membership……..…………………………………………………..……..30

LCME 2003 SELF-STUDY REPORT

I. INTRODUCTION

Mount Sinai School of Medicine (MSSM) proudly celebrates its 35th anniversary in 2003. Over the years, we have endeavored to fulfill our multiple missions of education, research, patient care and community service with enthusiasm and distinction. Our School was created upon a foundation of clinical and research successes of the Mount Sinai Hospital, and we strive to build on the tradition of excellence.

The 2002-2003 Self Study brought together a diverse group of individuals with a variety of perspectives of and experiences at MSSM. Full time and voluntary faculty from clinical and basic science departments and from the clinical affiliates were represented. M.D., MSTP and Ph.D. students were surveyed and served on committees. Administrators from Deans to Directors were included. Trustees gave their time and expertise to the process. All activities were coordinated through the Department of Medical Education.

Six committees and one subcommittee were formed for the Self Study. Five focused on the major subject areas delineated by the LCME: Institutional Setting; Education Programs for the MD Degree; Medical Students; Faculty; Educational Resources. Within the Education Program Committee, an Outcomes Assessment subgroup was created because of our special interest in conducting extensive formative and summative evaluations of our students in the new curriculum. In addition, an Education in the Research Enterprise Committee was formed in reflection of the growing importance of research in our educational endeavors. A Steering Committee chaired by the Dean for Medical Education was appointed to oversee the entire process.

Following completion of the LCME database in the late autumn of 2002, the Committees began to meet. Most deliberated weekly from January through March or April, and all concluded with a written summary report. The Steering Committee met biweekly to review process and to assemble the individual committee work into a cohesive final report. The database responses, the committee reports and the Self Study Report have all been posted on the MSSM website for review and comment by the entire faculty and student body.

A. Major Changes Since 1996 LCME Reaccreditation

At the time of the 1996 LCME reaccreditation, Mount Sinai School of Medicine (MSSM) was

enjoying a period of unprecedented growth in all arenas. The self-study report conveyed both the quality and pace of accomplishments of our young School. MSSM continues to excel in the education, research and clinical arenas, yet in 2003 our environment is strikingly different and poses significant new challenges.

Three forces in particular have had a tremendous impact on MSSM in the past seven years: we are navigating an increasingly difficult financial terrain; we have experienced leadership turnover and governance changes; we have established an academic affiliation with New York University. Each is discussed briefly in this introduction, and then again as appropriate throughout the selfstudy
document.

1. Finances – The fiscal health of the Mount Sinai Hospital (MSH), and its impact on MSSM, are of great concern. Mount Sinai Hospital, along with all tertiary care teaching

hospitals, faces intense financial pressures from an increasingly competitive market and amidst diminishing government funding. In addition, the essentially failed hospital merger with NYU-Tisch Hospital exacerbated the problem. As a result, hospital support to MSSM has declined precipitously, and both School and Hospital have embarked on major initiatives to curtail spending and enhance revenue generation while maintaining an absolute commitment to our mission.

2. Governance/Leadership – In January 2003, Kenneth Davis, M.D. was appointed Dean of Mount Sinai School of Medicine. Two months into his Deanship, Dr. Davis was given the additional responsibilities of President and Chief Executive Officer of Mount Sinai Medical Center. The expanded role for Dr. Davis was part of a Medical Center restructuring by the Board of Trustees. Their decision to appoint a single leader to fill both the Dean and President/CEO positions represented the return to a governance structure that existed from the inception of the School until 1985. In light of the fiscal challenges facing both School and Hospital, our Trustees felt that placing overall responsibility with one individual who would strive for unified decision-making would be beneficial at all levels – School, Hospital and Medical Center.

The restructuring follows a period of leadership changes. Nathan Kase, M.D. stepped down as MSSM Dean in 1997 after serving with distinction for 12 years. His successor, Arthur Rubenstein, M.D., resigned in 2001, less than one year after the resignation of John Rowe, M.D. as President and CEO of Mount Sinai Medical Center. In August 2001 Dr. Kase was appointed Interim Dean for MSSM and Interim CEO for the Medical Center. In April, 2002 Kenneth Berns, M.D. became President and CEO of Mount Sinai Medical Center. Dr. Berns held that post for one year.

Dr. Davis has been heralded as a strong, decisive leader with an intimate knowledge of and commitment to Mount Sinai. He demonstrates a firm, even-handed approach to School and Hospital issues, insisting on solutions that satisfy the goals of both entities and the larger Medical Center. Davis has reaffirmed leadership of the educational enterprise under the authority of Lawrence Smith, M.D. Dr. Smith serves as Dean for Medical Education and Chairman of the Department of Medical Education. Dr. Smith is also Director of the free-standing Institute for Medical Education, which supports the development and advancement of teachers and encourages scholarship of teaching at MSSM.

3. Relationship with New York University – In 1995 and 1996, Mount Sinai Medical Center and New York University (NYU) began discussions on a possible merger of their hospitals and medical schools. The hospitals joined in the creation of Mount Sinai-NYU Health in 1998. The medical schools elected not to merge, but NYU did agree to an academic affiliation. In 1999, the New York State Department of Education approved a revised charter for the Mount Sinai School of Medicine of New York University, thus

ending MSSM's academic affiliation with City University of New York.
MSSM now functions as a separate, largely autonomous medical school under the auspices of NYU. Diplomas are conferred by NYU, and the Middle States Commission on Higher Education grants regional accreditation to MSSM as part of New York University. MSSM remains financially independent and is governed by its own Board of Trustees. Most policies relating to faculty and students are those established by MSSM. MSSM has entered into a variety of collaborative relationships with New York
3
University, in an ongoing process that has enriched all three academic bodies. (See Section I, Institutional Setting).

B. Areas of Concern Cited in 1996 Ad Hoc Survey Team Report: Follow-Up

While the survey team produced a highly favorable report, they did note three concerns:

1. Budgeting Process – The survey team felt that MSSM did not effectively integrate the planning, performance and budgeting processes.

Action Taken: MSSM has put enormous effort into adopting a budgeting process that accurately captures all aspects of our operations and allows for effective planning for the future. A new zero-based budget methodology known as CARTS ("Clinical/Administrative/Research/Teaching/Strategic") was implemented on July 1, 2002 in both School and Hospital. CARTS provides financial support for all components of our mission, including support specifically for teaching. It not only funds existing operations but also allows for strategic investment for programmatic initiatives. Budgets are carefully monitored on a monthly basis to ensure compliance.

2. Possible Loss of Elmhurst Hospital Teaching Affiliation – Both the Survey Report and the Self-Study Report raised concerns about the possible loss of Elmhurst City Hospital, a major teaching affiliate.

Action Taken: We are pleased to report that MSSM and Elmhurst Hospital have restored a collegial, forward-looking relationship in which Elmhurst continues to be a primary teaching site. Yet to reduce reliance on a single institution, MSSM has expanded our academic affiliations to include a number of additional area hospitals. This network of academic affiliates has broadened the experience of our students by offering access to diverse patient populations in a variety of settings.

3. Structure of Faculty Practice – The Site Report indicated concern that the existing structure of Mount Sinai's Faculty Practice Associates (FPA) was too decentralized and could not respond expeditiously to the changing health care services environment.

Action Taken: A strategic plan for the FPA was undertaken in 1998. Many steps have been taken since then to restructure the FPA from a loose confederation of practices into a more centralized, efficient, cost conscious organization. In 2002, Louis Russo, M.D., an experienced administratorclinician, was appointed CEO of the FPA. He is working closely with the Dean on fiscal accountability and organizational reform within the FPA. The FPA now negotiates as a single entity with insurers and is moving toward an integrated group practice model.

4. Problem Clerkships– Curricular weaknesses in the Ob-Gyn and Community Medicine clerkships were identified by the Survey Team and in the Self-Study process.

Action Taken: The Community Medicine clerkship was dissolved and parts successfully integrated into the curriculum with the development of a new Family Medicine clerkship. The OB-Gyn clerkship has been much improved by the appointment of a new Interim Chair and a new Clerkship Director, as well as by new clerkship sites.

C. Areas Identified in 1996 Self Study for Special Attention: Follow-Up

The 1996 MSSM Self Study cited two major areas that could benefit from special attention:

1. Curriculum – The Self-Study identified disparities between defined School objectives and existing educational programs. The report recommended a plan of action that would encompass course integration, more active learning, continuity care and correlated education, pedagogy and evaluation.

Action Taken: A major curriculum redesign by educators, students and administrators commenced in 1997, and a phased implementation began in 2000. The new MSSM curriculum emphasizes integration of factual, research and bedside knowledge, self-directed learning, cultural sensitivity and development of lifelong learning skills. Evaluations since its inception indicate that the new curriculum has been enormously successful in enhancing the quality and experience of education. (See Section II, Educational Program for the MD Degree.)

2. Class Size – At the time of the Self-Survey, the prevailing belief among experts was that there would be a significant physician surplus by 2000. The 1996 Steering Committee recommended a reduction in class size from 135 to 110 students in response to projections.

Action Taken: Over a period of three years, the class size was gradually reduced to 105 entering in students. However, recent national and world events have led to modified projections and a call for more American-trained physicians. Accordingly, beginning with the entering class of 2003, MSSM is targeting class size at 120 students, which can be accommodated by our existing educational resources and within the structure of the new curriculum.

II. INSTITUTIONAL SETTING

The Mount Sinai School of Medicine (MSSM) and the Mount Sinai Hospital (MSH) together comprise the Mount Sinai Medical Center (MSMC). Since our last LCME reaccreditation, all three entities have undergone leadership and governance changes at the highest level (see Introduction).

The MSSM bylaws state that "the activities of the School of Medicine shall be directed and controlled and its policies shall be adopted by the Board of Trustees." The MSSM Board of Trustees (BOT) shares many of its members and some of its committees with the separate but overlapping Boards of Trustees of the Mount Sinai Hospital and the Mount Sinai Medical Center. The overlap ensures integrated governance for all three Mount Sinai corporations under a single Chairman. This governance structure resembles the one that existed at the time of the 1996 LCME site visit, even though, in the intervening period, a different structure that reflected the formation of the Mount Sinai NYU Health System Organization was in place for several years.

Thirteen standing committees of the BOT focus on major functional areas and are designed both to enhance effectiveness and to facilitate integration as necessary with MSH and MSMC Board committees. Examples of major policies reviewed and approved by the BOT prior to implementation include: new faculty appointment, promotion and tenure methodology; financial turnaround plan; faculty recruitment; core research facility structure and function.

The Dean is the Chief Executive Officer and Chief Academic Officer of the Mount Sinai School of Medicine. Under the 2003 restructuring, the Dean also serves as President and Chief Operating Officer of the Mount Sinai Medical Center. The Dean has responsibility for all decisions that affect academic policies and administrative operations. He reports directly to the Board of Trustees.

Although eight standing committees officially report directly to the Dean, four -- Curriculum, Student Admissions, Student Promotions, and Student Disciplinary Tribunal -- are related to the

MD program and de facto report to the Dean for Medical Education. Similarly, the Graduate School functions with parallel committees for the PhD and Masters degree programs, and in practice report directly to the Dean of the Graduate School. A formal revision of these reporting structures will afford each program greater flexibility in defining the membership, organization, and charge of its respective committees to carry out their programmatic missions.
The Executive Faculty and the Faculty Council are the two main faculty governance bodies. The Executive Faculty, comprised of 25 Professors and Chairs representative of both the basic science and clinical departments, reviews all major policy and administrative proposals. It has one standing committee, the Committee on Appointments and Promotions. Faculty Council is an elected body broadly representative of the full-time and voluntary faculty in the clinical and basic science departments. Through its Steering Committee, the Faculty Council makes recommendations to the Executive Faculty and the Dean. While the Steering Committee and most other standing Committees of the Faculty Council work well, the larger Faculty Council structure does not function optimally; faculty participation has diminished over time, and elections are overdue. Discussions have begun on revitalizing this faculty governance group.
A network of Deans, Associate Deans and Assistant Deans oversee the educational, scientific, clinical and administrative activities of the School. In the last year some reporting relationships have changed; the Dean for Continuing Medical Education and all educational infrastructure now report to the Dean for Medical Education rather than to the MSSM Dean, bridging these areas and streamlining administrative structures. Associate and Assistant Deans report to the Deans in their functional areas.
Dr. Davis has created three new positions on his immediate staff -- Dean for Operations, Dean for Clinical Research and Special Advisor to the Dean -- and has appointed individuals with substantial knowledge of and experience at Mount Sinai to these posts. The Dean for Medical Education, Dr. Smith, has been in this role for 2 ½ years, following four years as Chair of the New Curriculum. Dr. Smith is also Chair of the Department of Medical Education and Director of the Institute for Medical Education. The Deans for Graduate Medical Education and Continuing Medical Education, and the newly consolidated support services for all students (Registrar, Bursar, Admissions, Financial Aid, Special Events) report to Dr. Smith. Dr. Logothetis, a long-time MSSM faculty member, was appointed Dean of the Graduate School in 2003. An area of expansion has been Medical Education, where Dr. Smith has assembled a multidisciplinary team to oversee the new M.D. program curriculum. Of special note is his creation of a new position, Associate Dean for Undergraduate Medical Education, which unifies the previously separate student affairs, academic affairs and clinical curriculum functions. The size of the administrative staff is appropriate for meeting the demands of the educational programs.

Thirty-six Department Chairs and Center Directors report directly to the MSSM Dean. Each is the leader of a discrete academic unit, and is responsible for pursuing departmental objectives within the larger context of the medical school and medical center missions.
The Student Council, an elected group of 20 representatives from the Medical School and the Graduate School, considers academic, financial, and other matters that relate to being a student at Mount Sinai. A seven-member Steering Committee meets monthly and serves as liaison to the Deans. Subcommittees focus on specific areas, e.g. community service, housing, library services. These groups are active and effective.
The relationship between Mount Sinai and New York University (NYU) continues to evolve. The Academic Affiliation Agreement between the two institutions is intended to promote close academic relationships. Towards this end, the Dean of MSSM has regular meetings with the Senior Vice President for Health at NYU.
MSSM students are admitted, evaluated, awarded financial aid and disciplined in accordance with MSSM policies and procedures. Degrees granted to MSSM students are awarded by NYU and

read “Mount Sinai School of Medicine of New York University.” All faculty appointments, promotions, compensation, benefits, discipline and grievance decisions are handled in accordance with MSSM policies and procedures.

The relationship between MSSM and NYU is collegial and offers tangible benefits to MSSM faculty and students. These include: partnership between MSSM’s Levy Library and NYU’s Bobst Library for joint licensing of on-line journals and databases, thus increasing student access; cross-registration opportunities for Mount Sinai Ph.D. students through the Inter-University Doctoral Consortium; secondary faculty appointments; joint research projects; proposals for new scientific collaborations. There is no formal relationship between MSSM and NYU School of Medicine.

Mount Sinai’s recent corporate restructuring has reinvigorated the relationship between MSSM and its primary teaching hospital, Mount Sinai Hospital (MSH). In his combined role as Dean of MSSM and President and Chief Executive Officer of Mount Sinai Medical Center, Dr. Davis is dedicated to running a more cohesive, efficient operation. His appointment of executives who hold senior administrative positions in both School and Hospital contributes to better communication and cooperation between the entities.

MSSM has an effective administrative structure for its affiliated teaching hospitals. Associate Deans assigned to the large affiliates serve in liaison roles. Our working relationship with Elmhurst Hospital Center/Queens Hospital Center, major integrated affiliates, has been greatly enhanced by new leadership at the Health and Hospitals Corporation (HHC), the New York City municipal hospital system that owns both hospitals. HHC has exhibited a strong commitment to meeting our mutual goals, and has expanded our affiliation contract to ensure an adequate presence of MSSM faculty, house staff and support staff at the hospitals. The current affiliation contract runs until 2006. Bronx Veteran’s Administration Medical Center, our other wholly integrated academic affiliate, shares with MSSM missions of excellence in research, education and clinical care. The BVA is an important training site for MSSM; we also have many collaborative research programs at the BVA, particularly in psychiatry, geriatrics, medicine and rehabilitation medicine.

Medical students benefit greatly from MSSM’s participation in the Consortium for Graduate Medical Education, chaired by our Dean for Graduate Medical Education. The Consortium is

comprised of thirteen hospitals in New York and New Jersey that together sponsor over 100 residency programs for 1,700 house staff. The Consortium’s mission is to enhance, centralize and monitor the quality of house staff education in participating programs; the Resident Teaching Development Program, run through the MSSM Institute for Medical Education, seeks to improve the teaching and leadership skills of residents at all consortium institutions.

Consortium hospitals provide an enormous number of clerkship opportunities for our medical school; the variety of patients served, and the settings in which care is delivered, immeasurably enrich the experiences of our students. Remarkable consistency in training programs has been achieved across sites. A committee reporting to the Dean for Medical Education ensures high quality student experiences at each affiliate by providing frequent feedback, including information about the curriculum goals, to site directors. The quality control initiatives of the Consortium, and the expectations of uniform excellence in the delivery of care across member institutions, benefit both house staff and medical students. Further, the Consortium’s commitment to house staff diversity creates a fine pool of mentors and role models for our students. No significant changes in the complement of residents or the training sites is anticipated.

Institutional priorities are set by the Dean upon consultation with the Board of Trustees. A standing Strategic Planning Committee of the Board addresses long range planning for the School. The Executive Vice President for Strategic Development is responsible for ensuring that appropriate planning and analysis are undertaken for all ventures. A strategic planning staff reviews proposals for new initiatives, taking into account programmatic needs, financial

projections and institutional directions.
The last major strategic planning initiative began in 1998, and focused on the period 2001 through 2007. Faculty, trustees, administrators and external consultants together developed recommendations that included: increasing capabilities in translational and analytical research; developing innovative educational programs; enhancing and maintaining excellent clinical programs; ensuring a self-sustaining, competitive, fiscally strong faculty practice plan; relating and aligning programs with those of Mount Sinai Hospital where appropriate; maintaining and fostering commitment to the community.
Although fiscal constraints have slowed the pace for implementing some of the more costly recommendations contained in the strategic plan, the broad themes of educational reform, translational research, interdisciplinary cooperation and fiscal strength nevertheless guide our ongoing activities. Examples include: implementation of major curricular revisions (see Education Program for MD Degree); revised faculty practice governance structure, with initiatives aimed at unification, resource rationalization and revenue capture; increasing interdisciplinary collaboration, as reflected in a 67% rise in program project grants awards from FY'99 to FY'02; creation of an Executive Vice President for Excellence in Patient Care position; appointment of an Executive Vice President for Hospital and Clinical Affairs.
The mission of Mount Sinai's Graduate School of Biological Sciences is to provide a rigorous educational experience in biomedical sciences that equips students with analytical skills fundamental to investigation along with the capacity to master new knowledge in a rapidly changing environment. Innovative multidisciplinary programs and courses foster the development of creative, independent investigators, including research-oriented physicianscientists.
Over 200 students are currently matriculated in the Graduate School; of these, approximately one-quarter are MSTP (Medical Scientist Training Program, MD/PhD Program) students. The mission and goals of the Graduate School are consistent with those of MSSM, and enhance MSSM's ability to offer diverse, high quality research experiences to medical students.

Ph.D. and MSTP education takes place in a vibrant research environment. All basic science departments are represented among the 200+ Graduate Faculty, along with many clinical departments. Faculty involvement in graduate education is intense. Training is organized around six Multidisciplinary Training Areas (MTAs), each overseen by two co-directors and a Steering Committee. Every Ph.D. student is assigned an initial faculty advisory committee that helps with coursework selection and provides guidance on first-year rotation choices. The research rotations facilitate identification of a preceptor and enhance exposure to different research problems and techniques. Once a student chooses a research laboratory in which to pursue his/her dissertation project, the research preceptor chairs a reconfigured committee with special expertise in the chosen area. Students meet with their advisory committee at regular intervals and present progress reports that allow identification of special opportunities and achievements, as well as early detection of technical or other problems.
The Graduate School conducts continuous reviews of its courses and programs. A standing Curriculum Committee composed of faculty and students guided the development of the new Graduate School core curriculum, implemented in 1998. Program Directors and individual steering committees oversee each of the six MTAs. The committees monitor the academic progress of students and ensure that the curriculum is preparing students for successful careers. Students provide feedback through anonymous surveys completed at the end of each course; student committee participation, exit surveys and exit interviews are additional sources of student input. Programmatic reviews are conducted as part of every training grant application. A process of surveying graduates is under development.
All matriculated PhD and MSTP students are offered a stipend for living expenses and comprehensive health coverage. The Graduate School pays the full cost of tuition, often through

training grants. Preceptors are expected to contribute stipend and tuition support for students not supported by training grants or individual fellowships. Some students compete successfully for extramural fellowships.

MSSM scientists have done a superb job of fulfilling the School's research mission. MSSM is currently ranked 22nd among medical schools in NIH funding, reflecting enormous growth in our research program in the last decade. Particular areas of strength include cancer research, neurosciences (including psychiatric disorders), cell biology, molecular biology, virology, immunobiology and biochemistry. Total extramural awards from federal and non-Federal sources exceeded $200M in 2002, and supported a broad spectrum of basic, clinical and translational research programs.

A supportive institutional infrastructure facilitates pursuit of extramural funding. The highly effective Grants and Contracts Office, Institutional Review Board and Institutional Animal Care and Use Committee assist faculty in applying for grants and obtaining necessary institutional approvals. The Interim Dean for Research and the Dean for Clinical Research are available to advise and assist with grant applications. The Committee on Special Awards and Grants identifies extramural funding opportunities and matches these opportunities with young faculty. Incentive programs to encourage research faculty to pursue grant funding are ongoing. For example, competitive intramural seed funding awards have enabled investigators to conduct pilot studies to generate data that might form the basis of extramural grant applications. A compensation incentive plan rewards faculty who succeed in obtaining new grant funding.

Research resources are excellent. The completion of the East Building in 1996 added significant new research space -- including laboratories, shared research facilities and another animal facility

-- to Mount Sinai's campus. These first-rate facilities are complemented by the research space in the Annenberg Building. Clinical research is enhanced through the federally supported General Clinical Research Center. Efforts to link allocation of laboratory space to productivity and grant funding help ensure that appropriate space is available to our most productive and promising investigators. Ample grant funding allows for technical staff, graduate students and postdoctoral fellows who contribute to the success of each laboratory.

Opportunities for medical student research are abundant. The Medical Student Research Office (MSRO), led by Associate Dean for Medical Student Research, was established in 1996 to encourage students to engage in research. The MSRO acquaints students with the value of research, informs them of internal and external research opportunities and assists them in obtaining financial support for research. Research electives can be pursued throughout the four years of the curriculum, and the Bench to Bedside Research Selective at the end of Year 1 demonstrates the physician-scientist link and serves as a segue for those wishing to do summer research. On Medical Student Research Day, students share their research with the entire School community through posters and oral presentations. A special Matriculation in Research allows students to take a one-year leave of absence to pursue a more intensive research experience. Students interested in planning, carrying out and writing up an original research study can apply for the Distinction in Research Program; those who are accepted and publish a paper in a peer reviewed journal will graduate with "Distinction in Research."

81% of 2002 graduates reported that they had been involved in a research project, a rate that compares very favorably to the national mean of 54%. Similarly, 52% indicated that they were authors on a research paper submitted for publication, vs. a national mean of 33%. The New York State Board of Regents has approved a Masters in Clinical Research Program, which is an outgrowth of the NIH-funded K30 program. The Doris Duke Charitable Fund has selected MSSM as one of ten schools to receive a grant to establish a one-year Clinical Research Training Program for medical students. These developments are likely to further spur research interest and involvement among medical students.

III. EDUCATIONAL PROGRAM FOR THE M.D. DEGREE

The MSSM curriculum has undergone a major transformation since the last reaccreditation. During the 1995 self-study, it became evident that even the very best students, despite their wealth of medical knowledge, faced difficulties applying that knowledge at the bedside. A plan for reform was presented as an integral part of the 1996 LCME site visit, and served as the beginning of a seven-year endeavor that continues to evolve.

The new curriculum has four key objectives. It seeks to create physicians who can:

- Integrate factual, research and bedside knowledge
- Appreciate the context of medical care, including cultural diversity of their patients and the economic impediments to optimal care
- Self-direct their own learning and teach it to others
- Maintain lifelong learning skills

The pedagogical framework is active learning presented in a logical sequence. Although a strong factual foundation is essential, the emphasis is on concepts over rote memorization. Accomplishing our objectives has required changes both in the way that we teach and in what we teach. We have modified the content, pedagogy and assessment.

Traditional topics are covered in the core curriculum of each year. New materials and new disciplines are vertically integrated into the curriculum. Interdisciplinary courses and clerkships are common. Research is encouraged, and the "bench to bedside" relationship between research and clinical care is emphasized. Opportunities for elective and community-based experiences are abundant.

The most profound changes have occurred in Years 1, 2 and 3. Clinical experiences now permeate the first two years of study. At the same time, the traditional lecture format has been significantly replaced with case-based learning in small, interactive groups. Web-based materials and resources are emphasized.

During the 1st and 2nd years, students gain a rigorous grounding in the basic sciences. Three initiatives in particular are noteworthy. The new "Molecules and Cells" course is a model for integration of material previously taught in separate courses -- biochemistry, cell biology and molecular genetics--into a single, unified framework The course includes small group discussions co-taught by a clinician and a basic scientist who focus on disease models with a known molecular and/or biochemical basis. "Pathogenesis and Mechanisms for Host Defense" (PMHD) is comprised of immunology, microbiology and infectious disease materials previously taught separately. This complex course demands an independent, mature level of scholarship from its students. "Bench to Bedside" is an elective experience reserved for the end of Year 1. Students have a choice of research electives instead of bench to bedside; their abstracts are published and presented at Medical Student Research Day.

First and second year students also take the innovative "Art and Science of Medicine" (ASM) courses, which are taught primarily through small group instruction; site-based and home-based exercises comprise a significant component of each course. ASM I integrates many of the nonscience aspects of doctoring: basic communication; history taking; physical examination; bioethics; law; societal issues. ASM II teaches advanced history taking and physical examination skills, and introduces students to the social structure and the professional nature of practicing medicine. Students are evaluated by clinical preceptors, small-group leaders and with standardized patient exercises.

The earlier clinical introduction has eased the transition to Years 3 & 4. Year 3 now begins with a one-week primer in clinical skills prior to the first module in Year 3, reinforcing what was learned in the first two years. Other innovations in the new curriculum for Year 3, implemented in academic year 2001-2002, include: modular scheduling to enhance flexibility and choice; clerkship in Family Medicine to replace the old one in Primary Care; integration of Geriatrics into core Medicine clerkship; realignment of OB and Pediatrics clerkships; mandatory Intercession;

case-based integration across all clerkships.
Year 4 also uses a modular scheduling system. Implementation of the new Year 4 curriculum is still in progress. Innovations include: mandatory Critical Care/Advanced Physiology experience; longer Emergency Medicine clerkship emphasizing procedural skills competency; new integrated Anatomic Radiology requirement. These courses enable students to re-explore basic science concepts in a clinical context. Educational resources such as the Morchand Center for Clinical Competence and the Human Simulator are important enhancements to the overall experience.
In order to teach information that might otherwise be neglected and/or to transmit cutting edge knowledge, a vertically integrated program, “Course Without Walls” (CWW), has been adopted. CWW uses a matrix model and is deployed throughout the four years. Recent emphases in CWW

include medical ethics, infectious diseases, medical informatics, human sexuality, communication skills, palliative care and evidence-based medicine.
The process of curricular development and refinement has enjoyed broad participation and considerable prominence within the MSSM community. As a result, students, faculty and administrators are highly attuned to the overall program objectives. On a course-specific basis, our detailed annual curriculum review and evaluation identifies promulgation of clear objectives as a defining feature of our best courses and clerkships. Carefully delineated objectives assist students in focusing appropriately on the material that they must master, and are considered part of the “best practices” model that we strive for in both classrooms and clerkships.
The new curriculum is designed to furnish students with a vast body of scientific knowledge as well with the critical thinking skills, professionalism, sensitivity and ethical framework to undertake any career in medicine that they choose. Our increasing efforts to foster student exploration in the research arena stem from our belief that graduates must not only be knowledgeable and compassionate physicians, but must also be scientifically sophisticated at the bedside. Equipping our students to be excellent clinician-scientists immeasurably broadens their career options and potential contributions to the medical field.
Throughout the four years of study, and particularly during the clinical years, the MSSM curriculum encourages self-directed, active learning and critical thinking. Adoption of the new MSSM curriculum represents a dramatic shift from a paradigm based largely on rote learning to one that inextricably links absorption of factual information with development of first-rate problem solving skills. Using case-based materials and other tools, students learn to identify things that they do not know but need to find out in order to address specific clinical challenges. The melding of broad knowledge and keen analytic abilities creates a powerful foundation that will serve graduates throughout their careers. Assessments of critical thinking in Years 2, 3 and 4 confirm mastery of necessary learning and reasoning skills, and trigger remedial intervention for those in need of help.
Changes in the content of our courses and clerkships as well as in required teaching methods have necessitated considerable faculty training. It is no longer sufficient for a faculty member to be an expert in his or her field; proficiency in leading small, interactive student groups is now essential. The Art and Science of Medicine courses illustrate the demands generated by the new curriculum. Planning for the ASM courses required development of novel case materials and training of faculty to ensure that our both students and teachers would thrive in small, case-based group settings. The rapid assessment and improvement of unsuccessful curricular segments is essential to the success of this course.
MSSM is diligent in offering a curriculum that is comprehensive and covers all content areas required by our accreditors. The new curriculum was created, and continues to develop, with full awareness of the standards set forth by the LCME. The Self Study process has afforded an opportunity to review the requirements in order to confirm that our practices are consistent with accreditation guidelines.
Student workloads are demanding but manageable and carefully monitored. Early, continuing

patient interaction beginning in Years 1 and 2, and the one-week clinical primer prior to commencement of the first module of the 3rd year, pave the way for the more concentrated clinical phase of study. Hands-on clinical experiences during Years 3 and 4 are supplemented by continued coursework. In particular, the vertical integration of new materials and the wideranging topics covered in Courses Without Walls ensures on-going formal education in the

second half of medical school.

MSSM is fortunate in having an extensive hospital consortium for clinical teaching. The consortium is comprised of a variety of hospitals including our university hospital, multiple municipal hospitals, Veterans' Administration hospital and several large community-based hospitals, as well as long-term-care facilities and ambulatory clinics. As a result, not only are we able to handle all of our medical student clinical teaching needs, as well as those of visiting students, but in fact, our affiliates continuously ask us for the opportunity to do more teaching. An "educational consortium" ensures that all affiliates understand our curriculum and use uniform methods to deliver and evaluate the curriculum and students.

The use of ambulatory sites gives students early contact with patients with multiple levels of complexity of illness. Clinic programs in the Mount Sinai Hospital provide exposure to a culturally diverse patient population with a broad range of medical needs. Students also have training opportunities in the private practice settings of local physicians in a variety of specialties. Inpatient experiences are furnished through the Mount Sinai Hospital and our network of academic affiliates. Modular scheduling permits flexibility that allows more students to rotate through the strongest sites. Clerkship experiences at the affiliates are carefully designed to ensure appropriate volume and degree of responsibility for academic training. Considerable effort is devoted to creating comparable curricular experiences across affiliate sites. Off-site educators meet quarterly as a large consortium group with the senior Deans and Course Directors responsible for clinical curricular implementation. Students are evaluated using identical criteria at each site; further, the balance of inpatient and outpatient is identical, as are the core teaching materials and core cases discussed throughout each clerkship. Patients seen in clerkships are tracked to ensure that comparable experiences are maintained. Thus, as close as it can be approximated, there are virtually identical education experiences and evaluation processes at each of our affiliate sites. In addition, most clerkships include time at the Mount Sinai Hospital.

MSSM's oversight of affiliates includes serious requirements for curricular delivery, student oversight and supervision by attendings and house staff, as well as appropriate and consistent rules for numbers of patients, work hours, call schedule and other duties.

Each year of the MSSM curriculum also has elective opportunities for students. The experience has been carefully preserved in the new curriculum, and has even been expanded. Electives allow students to pursue individual areas in depth and to obtain a better understanding of career choices early in their education. In additional, there has been a continued effort to involve students in community service projects throughout medical school, with virtually all of our students engaging in such projects prior to graduation. International electives are also an option for interested students.

Students are evaluated on an on-going basis to ensure that they successfully acquire the knowledge and skills set forth in the educational objectives. Students in each year of study undergo multiple assessments aimed at evaluating mastery of five key objectives: core knowledge; clinical competence; critical thinking; life-long learning; professionalism. A sixth objective, community service, is not specifically assessed, but data is collected for each student for use in C.V.'s and in the Medical Student Performance Evaluation (MSPE). Subcommittee A, which conducted an in-depth review of assessment practices, concluded that the School's assessment plan is excellent. They recommended further refinements to allow continuous alignment of curricular goals with assessment.

A clinical skills assessment follows completion of the Art and Science of Medicine courses in

13

Years 1 and 2, using standardized patients in MSSM's Morchand Center. At the end of Year 2 students take the Comprehensive Skills Assessment and the Clinical Reasoning Assessment, designed to determine: ability to integrate and apply information from the first two years of study; knowledge of how to gather and interpret information to diagnose and manage patients; understanding of ethical issues and professional responsibility in patient communications; ability of students to identify what they do not know but need to know to care appropriately for each patient. At the end of Year 2, students take the USMLE Step I, a nationally standardized evaluation of proficiency.

Third year assessments capture students' ability to synthesize their core knowledge with their burgeoning clinical skills. Standardized patient exercises, faculty and resident evaluations, EBM in clerkships, case presentations and self evaluations are all used. Students receive ample feedback on their progress; when problems are identified, remedial intervention is provided through an organized, closely monitored program.

The Fourth Year Comprehensive Skills Assessment is a two-day exercise designed to assess history-taking, physical examination, interpersonal and communication skills. Critical thinking is evaluated using a written, evidence-based medicine exercise relating to a standardized patient case. An ethics component is being added to the assessment this year. Case presentations and faculty and resident assessments are done throughout the year. USMLE Step II provides a final, objective assessment of success in the application of medical and scientific knowledge to clinical care. Excellent student performance on these standardized tests confirms that we are meeting our curricular objectives.

Since academic year 2001-2002, the entire MSSM curriculum has been posted on a secure intranet site within which each course and clerkship has it own website. Students can access the site to monitor their grades in both course and clerkships. The website is also used to record and post evaluation of courses, course learning objectives and goals, and student skills.

The Department of Medical Education has developed a five-tier review system to carry out comprehensive planning, development and oversight of the new curriculum. Curricular review is a dynamic, iterative process in which improvements are implemented on an ongoing basis as problems or weaknesses are identified. Described below, the existing structure allows for translation of feedback into rapid, continual improvement of pedagogical approaches, refinement of case-based materials and integration of content across courses. All efforts are coordinated centrally through the Office of Curriculum Support.

Curricular oversight is the responsibility of the Executive Curriculum Committee (ECC), a committee of the Dean. The ECC examines all aspects of the curriculum and conducts ongoing review of curriculum design, course organization and teaching performance. It ensures that the curriculum is consistent with the School's educational objectives. It also reviews all course evaluations and student feedback. The EEC is chaired by a senior faculty member appointed by the Dean, and includes five additional faculty plus one student representative from each class.

The Curriculum Steering Committee (CSC) is responsible for incorporating institutional objectives into the curriculum. The CSC is Chaired by the Dean for Medical Education and includes Year Directors, the Deans for Curriculum and Undergraduate Medical Education and the Directors of Evaluation, Art and Science of Medicine, and Courses Without Walls. CSC members are active participants in the ECC, although they do not have voting status. The work of the various curriculum committees (see below) feeds up to the CSC.

14

There are separate Curriculum Committees for the First Year and the Second Year, as well as a Clinical Curriculum Committee. The charge of each is to oversee the content, sequence, scheduling, instructional format and assessment modalities of their particular year. The Year 1 Curriculum Committee membership is comprised of the Year 1 Director, the basic science course directors and relevant teaching faculty. The Year 2 Curriculum Committee includes all Year 2

course directors. Both Committees work closely with the Assistant Dean for Curricular Support. Years 3 and 4 together have their own Clinical Curriculum Committee under the leadership of the Associate Dean for Undergraduate Medical Education. This Committee is comprised of all clerkship directors, the faculty of the Art and Science of Medicine course, and Courses Without Walls faculty who are involved in vertical integration of clinical material throughout the four years. The Clinical Curriculum Committee plans, discusses and oversees the integration of clinical content across all four years. The Committee reviews outcome competencies and assessment methods and establishes uniform policies across clerkships and sites.

The School has been forthcoming with financial resources to support an infrastructure appropriate in size and scope for curricular oversight. The number of faculty with primary appointments in Medical Education and the number of Assistant and Associate Deans have grown with implementation of the new curriculum. In the past year alone, an Assistant Dean for Curriculum Support and Medical Education Research, and an Assistant Dean for Evaluation position were added to address our more intensive evaluation and Student Affairs needs. It should be noted that most Medical Education faculty and deans have multiple roles at MSSM, with responsibilities not only in teaching and administration, but also in research and/or clinical care. They are a highly committed and industrious group.

Feedback from both students and faculty is used to make adjustments to courses and clerkships. Students use an anonymous on-line evaluation system; their responses are summarized by the Assistant Dean for Evaluation and given to course directors. Course Directors, Co-Directors and Year Directors attend and monitor lectures in the courses that they supervise. At the end of a course, Course Directors and core faculty complete an evaluation template that addresses course strengths and weaknesses. Year Directors present this feedback to the relevant Year Committee, and these reviews are also included in a report an annual report to the ECC. In the case of negative reviews, the Year Director and/or the Assistant Dean for Curriculum Support may formally observe and evaluate lectures and small groups to provide Course Directors with focused feedback. Feedback on course performance is given to Course Directors, Chairs, Directors of Education at each affiliate hospital, Chiefs of Service at each affiliate hospital and Site Directors.

Other mechanisms to evaluate the curriculum include student focus groups, faculty exit interviews, student exit interviews, informal exchanges, student journals, intra-course meetings and working groups. Student performance on USMLE exams and on Comprehensive Assessments at the end of years 2 and 4 contribute important feedback on the success of the curriculum in meeting our educational objectives.

The annual review and evaluation process reveals that the strongest courses and clerkships share "best practices" that correlate strongly with MSSM's ongoing pedagogical reforms. Common features of these courses include: multiple-learning formats that complement and reinforce one another; small, interactive group format; case-based material that encourages clinical problem solving; clearly delineated objectives for each session; educational format structured consistently for each medium, e.g. objectives, web-based materials, lectures aligned to facilitate more efficient

study habits; reduced memorization and increased concept-building; self-assessment tools for students to gauge own progress; self directed learning; excellent teaching skills (rather than just teachers with content expertise); multi-formatted assessment tools to reinforce learning habits and underscore mastery of material. Such courses solicit greater student satisfaction and superior performance.

The best clerkships and subinternships also share common features: clear goals and objectives, clear schedules, clear communication to students, house staff and faculty about students' roles; mix of inpatient and outpatient experiences and diverse patient population; excellent web-based materials; responsive clerkship directory; excellent, enthusiastic faculty and house staff; excellent student: faculty ratio; adequate support (transportation, computers, space) at training site;

appropriate level of responsibility for students; fair evaluations and frequent, productive feedback.

Ongoing adjustments will be facilitated with the AAMC Curriculum Management and Information Tool (CurrMIT). CurrMit captures data on the curriculum and will aid course planners in tracking learning objectives, subject information, clinical content, learning formats and source information for every contact session of a course or clerkship in the core curriculum. CurrMIT will also assist the EEC in identifying and remedying significant gaps or redundancies in the curriculum.

The composite of longitudinal outcome data indicates that our students perform very well compared to their peers at other medical schools, and that MSSM graduates enjoy successful careers. A variety of measures are used to determine the effectiveness of our educational program.

USMLE Step I results for the Class of 2004 – the first class to complete the new curriculum for both Years 1 and 2 – are extremely positive. MSSM students performed well above the national mean, scoring 223 (+/-23) vs. a mean of 216 (+/-24) nationally. Results for the Class of 2003 are also favorable, with a mean of 223(+/-22) vs. a national mean of 215 (+/-24). The results in each discipline and organ system indicate that MSSM students are above the mean in all areas, with the exception of musculoskeletal, skin and connective tissue, where they are precisely at the mean. This data strongly indicates that our students have maintained a very high mean score with our substantially revised curriculum.

USMLE Step II results are equally encouraging. Mean scores for the Class of 2002 are 227 (+/-22) vs. 216(+/-23). For the Class of 2001, the MSSM mean was 224(+/-24) compared to 215(+/-24).

Step III data is available for 1998 graduates. The MSSM Class of 1998 had a pass rate of 91% vs. 95% nationally. These students were accepted to MSSM in 1994, when entry statistics were lower than they are now, and they received instruction under the old curriculum. We expect that the more rigorous admissions standards of recent years, combined with the better integration of factual, research and bedside knowledge in the new curriculum, will lead to a higher pass rate for subsequent classes. We will of course carefully monitor the post-graduation success of students schooled under the new curriculum. We also intend to track the long-term performance of graduates in the earlier cohorts. Longitudinal outcome measures are essential to ascertaining our success in meeting our educational objectives.

Match data, although difficult to quantify, suggests a qualitative improvement over the past few years. The caliber of institutions to which MSSM students are matching is improving, and

includes many top hospitals. The Class of 2003 boasts the best match experience in our history, with over half the class accepted for training programs at what we consider top hospitals, such as Hopkins, Brigham and Women's, UCSF, Columbia and Penn. We believe that many factors contribute to this success, including: higher caliber student body; increasingly supportive academic environment at MSSM; excellent USMLE Step 1 & 2 scores; shift in career counseling that encourages students more than ever to reach for best programs; better advising in clinical departments, with extra support from Chairs; growing reputation that MSSM students do well in their residencies.

Part of our ongoing evaluation is to solicit feedback from residency program directors as our graduates complete their internships. The most recent data collected pertains to the Class of 2000; internship directors gave high marks for clinical skills, and reported that our graduates met or exceeded expectations in nearly all attributes relating to knowledge and skills.

Our own alumni report positively on their general medical education and the preparation for residency. However, they were critical of their own diagnostic and procedural skill preparation. We anticipate that the increased emphasis on clinical skills in the new curriculum will improve actual performance as well as self-perceptions of proficiency.

A new format for the MSPE letter ("the Dean's letter") will facilitate tracking and documentation of students in the following areas: academic achievement; clinical skills (related to Morchand Center assessment after Year 3); research accomplishments; school leadership; community service. By creating a template that requires inclusion of specific kinds of information in all letters, we have been able to create final descriptors that reflect all the values of our school, as well as to compare performance during school with post-graduation success.

IV. MEDICAL STUDENTS

Many of the findings in this section were based on two extremely effective questionnaires designed and completed entirely by our students; one questionnaire was directed to all MD students, while the second focused specifically on M.D./Ph.D. students. The surveys were administered through e-value, an anonymous on-line evaluation program. The overall response rate of 93% was outstanding.

The MSSM Admissions Committee seeks a diverse student body with a broad range of attributes. Factors that are considered include: intellectual capability and academic achievement; motivation and potential for a career in medicine; community service; leadership abilities; significant success in a prior activity; personal maturity; enthusiasm for shaping one's own learning experience. These qualities help define the ability and potential of candidates to become physician-scholars dedicated to excellence. Applicants are evaluated based on their total qualifications rather than on any single criterion.

Currently, 80 members sit on the Admissions Committee: 60 full-time and voluntary faculty from both clinical and basic science departments, and 20 fourth-year students. The inclusion of students is extremely valuable, for they contribute a unique perspective based on their first-hand experiences. The admissions process consistently succeeds in selecting an academically strong, ethnically diverse, gender balanced, community-oriented student body from a wide variety of undergraduate institutions.

MSSM participates in AMCAS. The number of applicants to MSSM has declined in recent years,

mirroring a national trend. Nevertheless, MSSM continues to attract a strong student body in which GPA and MCAT scores are increasing slightly each year -- in database year 2001-2002, the entering class average GPA was 3.67; average MCAT scores were 10.3 verbal, 11.1 physical and 10.9 biological. These scores are competitive with the top tier of medical schools.

Of 4,182 applications received in the database year, the Admissions Committee interviewed 703 candidates and accepted 266 for 105 slots. The high ratio of applicants to available spaces ensures that those accepted will meet MSSM's stringent admission requirements. Because of the large applicant pool, efforts are under way to create a more comprehensive and inclusive applicant screening process that will facilitate identification of the strongest candidates. The new system is intended to increase the number of applications examined in detail, and to reduce the number of interviews to about 550, which would allow us to conduct more personalized interviews of a smaller number of applicants.

Up to 20% of students are admitted through the Humanities and Medicine Program. This program targets highly motivated, high achieving college sophomores, and assures admission to MSSM upon graduation from their undergraduate institutions and completion of a summer study program at Mount Sinai. The Humanities and Medicine Program attracts excellent candidates who are successful both at MSSM and beyond. Two other early admissions programs that were offered at the time of the last reaccreditation are no longer available. The Engineering and Medicine Program ended last year because of diminished interest. The Hunter College Linkage Program ceased with MSSM's disaffiliation from City University of New York in 1999.

Some candidates are admitted to the elite Medical Scientist Training Program (MSTP), which offers a combined M.D./Ph.D. degree. Occasionally, medical students will apply to the MSTP during their first or second year at MSSM. A joint M.D./M.P.H. program is also offered; candidates must be accepted by the MSSM Admissions Committee in order to be considered.

The MSTP received strong accolades in a recent NIH review.
Our resources for teaching the first two years are easily sufficient in terms of teachers, facilities and sites for learning. MSSM is fortunate to have a very large consortium of teaching hospitals, nursing homes, and ambulatory sites that handle all of our students needs as well as visiting students from LCME and international schools. Control of access to clinical rotations by non-MSSM students is carefully controlled by the Dean's office with our own students' needs carefully safeguarded. All of our teaching hospitals have Residency programs that actively participate in the teaching and are part of our Resident-as-Teacher program.
While MSSM has been highly successful in attracting an extremely diverse student body, resident and faculty diversity has been more elusive. The Office for Multicultural Affairs was established in 1998 to support recruitment of students, house staff and faculty from underrepresented minority groups. An important goal is to increase URM presence among residents and faculty, thus providing more role models for our diverse student population. This NIH-funded office was recently designated a Center of Excellence.
The number of transfer students has declined since the last review. During MSSM's affiliation with City University, twenty third-year transfer students entered MSSM annually through the Sophie Davis Program. This arrangement ended shortly before our disaffiliation from City University, when MSSM curtailed transfer students as part of an effort to limit class size; in addition, the Sophie Davis students were weak academically and had difficulty integrating into our program. However, in light of recent projections of a nationwide physician shortage, transfer students of the highest caliber are accepted if spaces are available.

MSSM reaches out to applicants in many ways. A dedicated website provides prospective students with up-to-date information about Mount Sinai; in addition, the Humanities and Medicine Program has its own website geared to well-rounded humanities majors at top universities. The Office of Multicultural and Community Affairs has outreach programs to many undergraduate programs, summer programs at MSSM, re-visit days during the recruitment period and mentoring of applicants even prior to acceptance. On interview days, lists of schools represented are posted so that 1st and 2nd year students can meet and greet applicants from their own undergraduate institutions. Every applicant accepted for admission is contacted by an MSSM student who is an alumnus of the applicant's undergraduate institution. These informal exchanges add a personal touch to the "official" admissions process.
Academic counseling is centralized through the Office of Student Affairs, which is overseen by the Associate Dean for Undergraduate Medical Education. An "early warning system" identifies at-risk students before they experience academic difficulty. The Director for Student Affairs for Years 1 & 2 focuses on student success and well-being in the pre-clinical years. The Year Directors communicate regularly with the Student Affairs staff and the Associate Dean for Undergraduate Medical Education about student problems. The Student Promotions Committee typically meets once or twice annually to review student progress and to focus on students having serious academic difficulty. Course directors encourage students to meet with them regarding performance, whether good or bad, so that the students can review test questions and both get and give advice on improvements. One-on-one peer tutoring is given to any student in need. The student survey revealed that three-quarters of all students, and 90% of Year 1 students, are satisfied with the academic tutoring system.
A variety of professional and career counseling activities are coordinated through the Student Affairs Office. The Art and Science of Medicine course in Years 1 and 2 provides opportunities for informal academic and career counseling. Faculty advisors from each clinical department provide specialty-specific, up-to-date information to students as they finalize career choices, interview and match. The Medical Student Research Office provides specific help with planning for research projects, finding a mentor and securing funding. The Office for Multicultural and Community Affairs plays an advisory role for community service projects. A Professional

Development Fair during intercession focuses on practice and lifestyle options. Career nights and career retreats offer abundant information and ideas. An AAMC-derived Careers in Medicine program is under development by the Student Affairs Office.
Student-led initiatives provide less structured but extremely valuable peer mentoring. The student-run Big Sib program provides informal career counseling. Many student interest groups provide early, hands-on clinical experiences; they give students additional opportunities to meet faculty in their field of interest, and can serve as springboards for mentoring relationships.
A moderate satisfaction rate with career counseling suggests a need for additional services. More formal mentoring at critical junctures seems particularly desirable, and might include: implementation of a structured mentoring program for incoming students; introduction of formal mentoring for the transition from pre-clinical to clinical years; extension of the Big Sib buddy system into the clinical years; better mentoring when students research and select residency programs. Recruitment of additional faculty advisors, and creation of a web-based directory of advisors, would enhance mentoring overall.
MSSM offers many opportunities for electives and community service. Students in all years take electives. Over 100 established electives are offered in the 1st and 2nd years, and students may

alternatively design their own electives or do research to fulfill their elective requirement. Electives expose students to clinical settings and facilitate the formation of mentoring relationships with faculty. They also help students begin to recognize individual strengths, weaknesses, likes and dislikes in various specialties. The International Studies Program, established in 1999, increases student awareness of international health issues and helps plan for summer experiences and clinical electives abroad. Fourth year students have a modular schedule with allows them flexibility to juggle required courses, electives and residency interviews.
In academic year 2002, annual tuition and fees of $26,825 were well below the median for private medical schools in the United States. That year, total cost to MSSM students for tuition, fees, books, supplies and living expenses averaged $42,550. In academic year 2003, a graduated tuition increase plan was implemented; once fully rolled out, MSSM tuition and fees will be at the median for private medical schools.
Total indebtedness at the time of graduation averages $103,000 for MSSM students. While high indebtedness is a problem common to medical graduates nationwide, it is a source of ongoing concern for our School. We strive to keep student debt as low as possible in order to maximize graduates' flexibility in career options. Nearly three quarters of MSSM students receive financial assistance in the form of loans. Fifty-one percent receive scholarships with no repayment requirements. The actual amount of indebtedness varies by the type of loans offered; to the extent possible, MSSM prefers to arrange its own loans, which bear lower interest rates and have more favorable repayment terms than Federally sponsored loan programs.
In order to assist students and to help them understand and cope with their debt, the Financial Aid Office conducts entrance interviews, holds seminars throughout the four years of medical school, and gives exit interviews. Approximately two-thirds of students surveyed were satisfied or very satisfied with the adequacy of financial aid services, while only half were pleased with the debt counseling services. It appears that students may be unaware of the range of financial counseling that is available; posting of more information on the website would be helpful, as would a more active financial aid presence on the Student Council.
The Associate Dean for Student Services and the Dean for Medical Education are collaborating with the Development Office, the Alumni Association and the Board of Trustees to develop initiatives to increase the scholarship pool, particularly merit scholarships. They also aim to increase both the size and number of institutional revolving loan funds for medical students.
Comprehensive student health services are offered. The Student Health Center is staffed by a fulltime
nurse and two part-time Preventive Medicine-trained physicians. Students may enroll in

health insurance and long term disability plans. Dental coverage, currently limited to one free cleaning and some complimentary services through the dental clinic, could be better. A highly rated immunization program is offered, and a comprehensive needle stick protocol/prevention program is available across affiliate sites. The Medicine and Life Society, a popular program for discussing the challenges of balancing career and family, is led by a Student Health Center physician. The Pfizer Sexual Health Initiative, secured by a Student Health Center physician, has curricular, extracurricular and personal components. Students generally appear to be satisfied with the range and quality of health services.

In response to student concerns, several personal counseling changes are under development. A new initiative in academic year 2004 will dramatically expand the student mental health system. Voluntary psychiatry faculty have been enlisted to see students at a reduced fee; this program will be coordinated through the Student Health Services nurse.

MSSM's Harassment Grievance Board responds through both informal and formal mechanisms to matters of harassment and abuse involving faculty and trainees. The Board is comprised of faculty, students, house staff and postdoctoral fellows. Only a few hearings involving students have been conducted in the last few years, yet the student survey elicited multiple responses indicating denial of opportunities based on ethnicity, gender or sexual discrimination. Appropriate remediation will require ascertaining the reasons for this discrepancy: Do only a portion of negative experiences lead to formal complaints? Are students discouraged from coming forward? Are students unaware of the existence of the Harassment Grievance Board? Do they understand that there are multiple levels of response short of a formal grievance hearing? An Ombudsman Program was implemented recently, and a committee is examining these questions.

Three quarters of students surveyed felt positive about the relationships among students, faculty and administration, about access to administration and about student input to medical school committees. Eighty-five percent responded positively about faculty availability. Yet the survey suggests a small but increasing number of negative experiences as students move from the preclinical to the clinical years. Additional exploration is planned to identify and address the underlying issues. Recent initiatives to heighten educator sensitivity include the popular Resident as Teacher program, which guides house staff in their role as teachers and mentors, and the new White Coat Ceremony Faculty-Student Pledge, which highlights the importance of teaching and the teacher-learner relationship.

There is ample dissemination of information concerning academic policies and standards. The on-line Student Handbook is a compendium of policies and procedures including evaluation, promotion, graduation and misconduct. Three quarters of students surveyed perceived the advancement and graduation policies to be appropriate. Two-thirds of students were satisfied with communication by administration to students about policy changes; this satisfaction level might rise if implementation of changes were limited to once annually, and were announced at the start of the academic year.

Student grades are posted on-line using a secure WebED system. Students can see their grades, comments from instructors, standard deviations, histograms and other relevant course data. Fourth year students have mandatory meetings with the Associate Dean for Undergraduate Medical Education about their individual Medical Student Performance Evaluations, and have an opportunity to read the completed evaluation.

Every first and second year student is assigned an individual lab space that can be used for work, study and laboratory experiences. The Levy Library offers study space -- workstations, carrels, AV stations, small group study rooms and a computer classroom -- to all members of the Mount Sinai community. Although students would likely be pleased with an increase in study area options, space for all purposes is at a premium at this time.

The Aron Residence Hall is comprised of four and six-person suites occupied primarily by

students. The building contains a lounge area, a common space for studying, a laundry room and an excellent new gym; all rooms are wired for Internet access. The Levinson Lounge in the Annenberg Building lobby was constructed in 2000 as a large multipurpose area where students can study or relax; it is a popular meeting place, and is often used for parties and arts events. Students are encouraged to take advantage of Manhattan's cultural offerings through the Mount Sinai Recreation Office, which distributes heavily discounted to tickets to live theater, movies, sports events, art shows and even travel.

Survey respondents noted a lack of personal storage space for 3rd and 4th year students at affiliate hospitals. This issue will be raised with affiliation administrators.

V. FACULTY

MSSM's thirteen basic science departments play a major role in fulfilling the School's educational mission. Basic science faculty serve as teachers, Course Directors, Co-Directors and Associate Directors of many Year 1 and 2 courses. They have been instrumental in developing and implementing the integrated basic science courses that are central to the new curriculum (see Educational Programs). They are also active participants in clerkships; of special note is the Anatomic Radiology course, which reintroduces 4th year students to the basic sciences within a clinical context. The Departments of Anatomy and Functional Morphology, Pharmacology and Biological Chemistry, Physiology and Biophysics, Molecular, Cell and Developmental Biology, and Neurobiology are especially invested in undergraduate (M.D.) education. Basic science faculty are also involved in house staff education courses, linking basic biology to clinical settings and teaching about advances in biomedicine.

Basic scientists comprise the core faculty of the Graduate School for Biological Sciences. Appointment to the Graduate Faculty requires an active relationship with one or more Multidisciplinary Training Areas (MTAs). Typically, Graduate Faculty are investigators with extramural funding whose own research programs mesh well with the training grants of the MTA, and whose laboratories offer attractive training opportunities. The caliber of students accepted into the Ph.D. program has been growing steadily, and graduates go on to attractive postdoctoral fellowships in excellent institutions.

Approximately 230 faculty at the rank of Instructor or higher hold primary appointments in basic science departments. The intensive manpower requirements of small group teaching place heavy demands on this relatively small basic science faculty. The introduction of compensation for teaching in the new CARTS methodology may serve as an incentive for faculty to participate in teaching programs.

Reorganization of the basic sciences since the 1996 Self Study reflects the shift from traditional, discrete departments to an increasingly interdisiciplinary framework. Changes include: merging of Pharmacology and Biochemistry; realignment of Cell Biology and Anatomy and of Molecular Biology to create a Department of Molecular, Cell and Developmental Biology and a Center for Anatomy and Functional Morphology; and creation of a Center for Immunobiology. Each change has been accompanied by new leadership appointments; in all cases, the new basic science Chairs have come from within the MSSM faculty, bringing institutional experience that has facilitated transitions.

The enormous success of investigators in securing extramural funding places the basic science departments in a fiscally sound position. Research facilities are excellent, providing a supportive work environment for investigators and an engaging learning environment for Ph.D. and MSTP students, M.D. students pursuing research interests, and postdoctoral research fellows.

Approximately 1,400 faculty hold full-time appointments in MSSM's 24 clinical departments; of these, two-thirds are based at MSSM, and the remainder at our academic affiliates. MSSM also has a large, active voluntary faculty. Our clinicians have a broad range of expertise that is recognized nationally and internationally.

Clinical departments are increasingly challenged to maintain and grow patient volume. The pressure on physicians to generate clinical revenues must be carefully managed to ensure that teaching, research and service responsibilities are protected. By allocating funding support specifically for teaching, clinical care and research, the CARTS methodology helps faculty to balance multiple roles.

There have been leadership changes in eight clinical departments since the last reaccreditation. New Chairs have been appointed in Medicine, Geriatrics, Dentistry, Radiation Oncology, Medical Education and Cardiothoracic Surgery. Interim Chairs are serving in Obstetrics, Gynecology and Reproductive Sciences as well as in Psychiatry. The new leaders are bringing innovation, expertise and enormous growth opportunities to their departments. At the divisional level, reorganization within the Department of Medicine has been accompanied by recruitment of world-class Chiefs of Hematology/ Oncology, Rheumatology, Pulmonary Medicine and Liver Disease. In Pediatrics, outstanding new division chiefs have been appointed in Allergy/ Immunology, Hematology/ Oncology, Nephrology and Infectious Diseases. An internationally prominent clinician now leads the Division of Laparoscopic/Minimally Invasive Surgery in the Department of Surgery.

Virtually every clinical department engages in research. Programs within Medicine, Psychiatry, Neurology and Ophthalmology are particularly robust. The initiation of an NIH K30 training program for clinical investigators provides a structured mentoring program for junior faculty interested in high quality clinical investigation. An institutional emphasis on translational research encourages collaboration between basic scientists and clinicians. Dual faculty appointments in both basic science and clinical departments are increasingly common, with productive new relationships forged between: Gene Therapy and Surgery and Urology; Geriatrics and Neurobiology of Aging; Medicine and the Cancer Center.

Clinical facilities for both inpatient and outpatient care are available throughout the campus (see Educational Resources). Regular cycles of maintenance and upgrade ensure that equipment and facilities function according to expectations. Recent initiatives to rationalize space allocation within the Faculty Practice building are creating more efficient use of ambulatory spaces. Both School and Hospital seek optimal use of all facilities in order to ensure that our missions are carried out on sound programmatic and financial platforms. Beyond the Mount Sinai campus, our academic affiliates offer an extraordinary network of clerkship opportunities. The Dean for Medical Education and the Dean for Graduate Medical Education, who also serves as head of the thirteen-hospital Consortium for Graduate Medical Education, oversee the uniform excellence of clinical resources available to both medical students and house staff.

Clinical faculty are heavily involved in medical student courses and clerkships, serving as teachers and Course Directors. They sit on permanent student committees, including the Executive Curriculum, Student Admissions, Student Promotions and the Student Disciplinary Tribunal. Clinical faculty assume mentoring roles as early as Year 1, when student exposure to clinical settings commences. Many clinicians with research programs serve on the Graduate Faculty and mentor MSTP and Ph.D. students in their laboratories.

The Dean gives prior approval for any faculty recruitment effort involving significant commitment of institutional resources. Once approved, a multidisciplinary committee is established to conduct a national search for the best candidates. MSSM's growing status as a leading medical school with an innovative curriculum, respected research programs and abundant clinical opportunities continues to attract excellent new faculty in both the basic science and

clinical departments. Faculty retention has been greatly facilitated by the new faculty appointment and promotion methodology, which is highly effective in recognizing and rewarding faculty achievements. The departure of senior faculty is commonly the result of enticing leadership opportunities elsewhere, underscoring MSSM's reputation as a medical school that both recruits and nurtures superb faculty. Recruitment and retention efforts have resulted in a

significant net gain in the size of the full-time faculty in the past seven years.
MSSM is committed to improving the gender and ethnic mosaic of the faculty. Gains are most apparent among women, with a rise in the number of promotions to Associate Professor and Professor, often tenured, in both clinical and basic science departments. Junior and senior women faculty are increasingly selected for institutional awards, including the coveted Faculty Council Awards for Academic Excellence. Women faculty have been appointed to senior management positions and deanships, although currently there are no female Department Chairs.
Faculty development takes many forms at MSSM. The Institute for Medical Education offers formal courses on teaching and leadership skills. In 2002, the "Focus on Educational Leadership Conference" concentrated on curriculum and leadership development and included a teaching skills workshop. "Evidence-Based Medicine Workshop for Clinical Educators" offered strategies to enhance teaching of EBM to students and residents. Some medical school courses have developed internal programs to guide faculty in the teaching of small groups, lecturing and in laboratory settings. The Women Faculty Group hosts monthly seminars open to all faculty on skill enhancement and career advancement. The Center for Multicultural and Community Affairs conducts a research seminar series and appointment/promotion seminars, supports mentored research and participates in the K30 training grant. A broad new faculty development program that will be rolled out in the autumn of 2003 will include faculty orientation sessions as well as skill development seminars. MSSM's School for Continuing Medical Education offers lifelong learning opportunities to medical professionals.
The revised faculty appointment and promotion methodology implemented in 2002 has been well received. It recognizes and rewards faculty contributions through three tracks — academic, clinician and/or educator, and research. Whereas the old system offered advancement to the Professor rank only in the tenure track, the new system offers Professor appointments as well as tenure in all three tracks. It also separates tenure decisions from appointment and promotion decisions. The methodology is contained in the Faculty Handbook, which is posted on the MSSM web site.
The new faculty tracks methodology is intended to function in an environment replete with feedback and mentoring. Many department chairs and division chiefs perform annual evaluations of their faculty, but there is variability across departments. The new appointment and promotion methodology and the CARTS budget allocation system make it essential for Chairs to be explicit about faculty responsibilities and expectations. Standardized review and evaluation mechanisms are under development by the Dean's Office to guide Chairs in this process.
Education of students and the support and development of their teachers are key to fulfillment of the MSSM mission. The new appointment and promotion methodology includes a faculty track specifically designed to recognize and reward educators. The new curriculum has placed heavy teaching demands on faculty, and the Institute for Medical Education reaches out to all departments and centers to support teachers. New faculty are encouraged to become part of the teaching corps. The CARTS budget formula specifically pays for teaching. In all of these ways, a clear message is being sent that teaching is one of the most important responsibilities of any faculty member.

Mount Sinai's policies on conflict of interest and conflict of interest in research are presented in the Faculty Handbook. They delineate the circumstances in which the private interests of faculty members or staff may be in conflict with their official responsibilities. A Compliance Officer provides information and advice when potential conflicts arise.
The School has a well-defined governance structure that provides for an active faculty role in decision-making. Formal faculty groups that are key to this process are the Faculty Council, Executive Faculty and the standing Committees of the Dean. Major policy recommendations are posted on the MSSM web site for comment from the MSSM community prior to review and approval by governance groups. Recently discussions have commenced on whether the existing

governance bodies, particularly the Faculty Council, can be reformulated in order to stimulate increased participation.
Communications with faculty have been enhanced by availability of the MSSM web site. Favored methods of electronic communication include “blast” e-mails, the Faculty Bulletin weekly newsletter and web postings. An on-going challenge is to improve distribution lists to reach as many faculty as possible, both on campus and off. Paper communications continue to be heavily used, including the weekly campus publication, “Inside Mount Sinai.” The Dean leads Town Hall meetings quarterly for the entire Mount Sinai community, and also holds large meetings specifically for faculty.

VI. EDCUATIONAL RESOURCES

Mount Sinai School of Medicine revenues of approximately $674M in database year 2001-2002 represent 50% growth since the last accreditation. In 2002, grants/contracts and faculty practice income each accounted for one-third of revenues, while gifts and endowments comprised 11%. Tuition and fees were 2% of total revenues.
The distribution of revenue sources has changed over time. Most significantly, grant awards and contracts have grown nearly 52% in just seven years, with particularly large gains in the last three years. We project continued double-digit growth in grants and contracts for academic years 2003 and 2004, with 5% growth in 2005 as the doubling of NIH support for biomedical research ends. Philanthropic support has increased 70% since 1995 with the help of a dedicated Board of Trustees that has spearheaded successful fundraising campaigns. The School anticipates continued philanthropic growth.
While grants and philanthropy have escalated, Mount Sinai Hospital (MSH) support for the School is being phased out; future MSH funding will be based on actual services rendered. In addition, the spending rate for the endowment has been reduced from seven to five percent, and use of accumulated gains from the endowment has been curtailed. Faculty practice revenue growth has been about 3% annually. An increasing managed care presence in the marketplace and tightening Medicare and Medicaid reimbursement have constrained clinical income to both School and Hospital.
Tuition and fees represent less than 2% of total revenues. The additional income from phased tuition increases and a modest expansion in class size will not substantially alter tuition as a percentage of total revenues.
Significant revenue growth has been accompanied by increasing expenditures to support

education, research and patient care activities. An in-depth examination in FY’02 of all organizational and operational aspects of School and Hospital led to implementation in July 2003 of a mission-based budget model, CARTS (Clinical-Administrative-Research-Teaching-Strategic). This formulaic budget model calculates specific funds flow for each department of the School to support the educational, clinical and research missions. For the first time, direct support for teaching services is provided to departments. CARTS challenges faculty to maximize their productivity and income generation, and allows Chairs to tailor faculty work effort to take advantage of individual strengths and preferences. In addition to addressing the finances of MSSM and MSH programs through CARTS, senior administration has implemented a comprehensive financial turn-around plan.
Faculty Practice Associates (FPA) has undertaken major initiatives to enhance its position and performance in the shifting health care environment, including detailed review of faculty productivity, implementation of a new compensation model, creation of opportunities to accelerate cash collections, and restructuring of management services operations. These efforts to unify services and improve effectiveness and efficiency have been aided by the appointment in 2002 of a full-time physician-CEO for the FPA.
Over the past ten years MSSM has invested significantly in its facilities, including: undertaking major deferred maintenance projects in the Annenberg Building; renovating and improving

faculty practice space; constructing state-of-the-art research facilities in the East Building. New productivity expectations for both research and clinical faculty require that all institutional space be used optimally. For the foreseeable future, we will not require additional new construction on our campus. Adequate provisions for deferred renovations are included in the financial improvement plan. Money for significant capital projects will come from refinancing of real estate holdings and from philanthropy.

Teaching takes place in virtually every building on the Mount Sinai campus. Formal classrooms are located on the 12th and 13th floors of the Annenberg building, the 2nd floor of the Guggenheim Pavilion, and the 3rd and 4th floors of the East Building; each of these buildings also has an auditorium and smaller meeting rooms. MSSM has successfully accommodated the changing needs of the new curriculum within existing campus facilities. The Morchand Center for Clinical Competence remains an enormous resource for both teaching of doctor-patient skills and for evaluations. While financial constraints have not permitted the major redesign of educational space recommended in the MSSM strategic plan, renovation efforts are ongoing. Current plans for Annenberg, the oldest building, include: transformation of two laboratory classrooms into six group study rooms that can each accommodate 10-12 students; creation of a study hall within the student center to provide dedicated workstations with IT connectivity; renovation of lecture halls to improve seating and audio-visual/IT functions; construction of student lockers near the classrooms.

Abundant research space and resources offer an inviting environment for students to pursue biomedical research projects. The East Building, completed in 1996, contains seven floors of first-rate laboratories, excellent core facilities, ample meeting spaces and faculty offices. (The remaining floors house academic offices, meeting rooms and an inpatient psychiatric unit.) The Annenberg Building has 15 floors of well-equipped wet and dry laboratories. Both buildings contain animal facilities.

Our on-campus clinical resources also provide MSSM students with rich learning opportunities. The range of clinical facilities, patient case and age mix, cultural diversity and volume of inpatient and ambulatory patients present an enormous breadth of exposure. The 907-bed Mount

Sinai Hospital, which received high grades during a 2003 JCAHO site visit, offers inpatient care in many buildings: medical/surgical services are concentrated in the Guggenheim Pavilion, which is also the site of our emergency room; ob/gyn and pediatric care are centered in the Kravis Center for Women and Children; psychiatry services are provided in the East Building and the Klingenstein Clinical Center. Clinic patients are seen primarily in the Annenberg Building. General Medicine and Geriatrics outpatients are treated in the Primary Care Building. Faculty Practice Associates has a dedicated building.

Ongoing clinical renovation and construction projects enhance the learning environment of our students. In particular, the recent completion of the Anesthesiology HELPS (Human Emulation, Education and Evaluation Lab for Patient Safety and Professional Study) Center is an important new teaching resource. The Minimally Invasive Surgery Center, with state-of-the-art teleconferencing capabilities, also offers excellent clinical education opportunities. Advanced surgical training in the Center for Anatomy and Functional Morphology continues to evolve.

The variety of clinical experiences for trainees is further enhanced through the academic affiliations that MSSM has forged. Physicians who are active teachers at affiliate sites receive MSSM faculty appointments. Many clinicians practice both at MSH and at one or more affiliates, and serve as important links in the educational programs. Chiefs of Service at the affiliates work with MSSM Program Directors and Deans to ensure consistency across sites in meeting curricular objectives.

The educational consortium offers almost limitless inpatient and outpatient learning opportunities with very dedicated and talented faculty. The Institute for Medical Education, endowed by the Brookdale Foundation, offers support for teachers across the entire MSSM consortium. Faculty

and resident development of teaching skills, retreats, awards for teaching, advanced teacher training, education grants and scholarship are only some of the activities of the Institute. Membership is open to all faculty.

The administrative structures and leadership of the School, Hospital and Medical Center are closely intertwined. As both Dean of the School and CEO of the Medical Center, Dr. Davis sends a strong message of institutional cooperation. Dr. Hollier, President of the Hospital and Chair of Surgery, and Dr. Drayer, Chair of Radiology and Executive VP for Hospital and Clinical Affairs, are attuned to both academic and clinical interests. Each clinical department is a School-Hospital hybrid headed by a Chair who oversees teaching, research and clinical activities. Most Deans are also practicing physicians who are sensitive to both school and hospital needs. The multiple perspectives of these leaders are transmitted down through the ranks. Staff are well aware that every clinical unit is also an educational site, and that trainees must be accommodated, guided and supported.

The Medical Center Security Department is responsible for the safety of students, faculty, staff and patients throughout the campus on a 24 hour/day, 7 day/ week basis. Students can request security escorts after dark. Shuttle buses transport trainees to and from major affiliates, affording both safety and convenience. The Security Department maintains a close working relationship with the local police precinct.

The Levy Library is centrally located on the 10th and 11th floors of the Annenberg Building. It offers a 160,000 volume collection of books, journals, audiovisuals and computer software, including 1,200 print subscriptions and 4,000 on-line subscriptions. All resources can be accessed through the SIRSI Online Public Access Catalog. The library is committed to maintaining a collection that supports the research, education, patient care and administrative

missions of the Medical Center; however, in the last decade, the collection policy has been modified to place emphasis on acquiring material in electronic format whenever possible. Webbased
library resources can be accessed by students, faculty and staff both on-campus and offcampus. Through our affiliation with New York University, MSSM's Levy Library and NYU's Bobst Library maintain joint licensing agreements for on-line journals and databases. MSSM students may study in the Bobst Library at NYU, and can access its collections.

Levy Library contains study carrels, a small number of small-group and personal study rooms and a lounge area. 139 PCs are available to users. Within the next six months, rewiring will commence to provide network connections to many of the library seating areas. In addition, the entire library will be covered for wireless connectivity to the campus network to allow access to library resources and the Internet.

The highly regarded Academic Computing division within the Levy Library maintains the MSSM network, supports institutional servers, provides desktop support, does repairs and supports student systems including AMCAS and ERAS programs. The Library's Media Resource Center (MRC) contains an audiovisual center, a computer classroom and a microcomputer laboratory with applications that include student testing, computer assisted instruction (CAI) and database searching. The MRC manages School software licenses, coordinates remote access to library databases and arranges Internet access. A computer "HELP DESK" provides in-person and phone consultations to the entire Mount Sinai community. All students and full-time faculty working at affiliates have remote on-line access to Mount Sinai, and also have MSSM e-mail accounts.

Budget cuts in 2002 resulted in a reduction in the Levy Library's late-night and weekend hours of operation. Although the cuts were arranged to coincide with times when the library was used least, they nevertheless engendered dissatisfaction among students, as reflected in the 2002 survey; in response, some lost hours will be restored in September 2003. Satisfaction with the library is generally high -- 95% of students approve of the quality of library books, journals and

on-line subscriptions, and 79% are satisfied with computers, copy machines and media.
WebCT is the MSSM-licensed development platform for web-based education. All courses have a web presence and Web-Ed has become an important teaching and communication tool. Dedicated IT staff provide technology support, scan and post materials on the web, advise faculty on use of the web for teaching, assist Course Directors in creating and maintaining their course web sites, and identify and license materials for use in teaching. Web-Ed postings include: course schedules; class presentations; basic science course slides; online faculty office hours/chat sessions; course reading lists with links to Library licensed materials, courses quizzes for students; grades; grade comments. Course evaluations are channeled through the web-based E*value program. WebEd is popular among students and faculty because of its easy access, comprehensive content, and good integration of video and PowerPoint into courses. WebEd can be accessed both on campus or off.
Library staff are involved in formal education of medical student in each of the four years through Courses Without Walls. In the mandatory “Introduction to Library Resources and Services,” first-year students learn how to access information and use on-line services. “Introduction to PubMed” teaches students the scope, content, search and navigational features of MEDLINE using the PubMed interface**.** During Clinical Skills Week at the beginning of the 3rd year, library

staff review the differences between background and foreground clinical questions, and compare and contrast different resources including filtered EBM databases. Third Year Intercession includes training in Advanced EBM Searching Skills. The Library Director and Associate Director participate in meetings of the Executive Curriculum Committee and the Clinical Curriculum Committee to ensure that library services are coordinated with curricular needs.

VII. SUMMARY

The Mount Sinai School of Medicine is committed to sustaining its position as a premier American medical school. We take great pride in our record of providing highest quality patient care, conducting ground-breaking research, offering innovative educational programs, and serving our community, and look towards a future of continued successes. The dedication of our faculty, staff and Trustees, the outstanding quality of our trainees, and our excellent resources make possible the realization of our goals.
As is true for any medical school, MSSM’s students are our greatest asset. Although diverse in background, these talented young people share a commitment to medicine and a capacity for learning that are remarkable. Following years of careful planning, we have introduced a revised curriculum that we believe will prepare them to be among the finest physicians, clinicianscientists and researchers in the country. We aim to build upon our students’ lifelong academic accomplishments and nurture their intelligence, curiosity and innate compassion so that as professionals they will be notable for their technical proficiency, innovation, sensitivity and cognizance of the world around them. The roll-out of the new curriculum has gone smoothly, with both students and faculty responding favorably to the changes and taking an active role in evaluations; our initial assessments suggest that we have embarked on an extremely positive new course.
MSSM is fortunate to have an excellent infrastructure to support its academic goals. The unification of educational programs under the Dean for Medical Education allows for better planning, coordination and resource allocation. The unique melding of student affairs, academic affairs and clinical curriculum responsibilities under an Associate Dean for Undergraduate Education has greatly enhanced oversight of the MD program.
Our 1,700+ full-time faculty and 1,500+ voluntary faculty constitute a pool of teacher-mentors with an enormous range of experiences and breadth of knowledge that allow them to impart not only factual information but also the sensibilities that are essential to success in their profession. Excellent clinical and research facilities, including unique resources such as the General Clinical Research Center for translational research studies, a diverse patient population and multiple

outstanding sites for clinical training, combine to create an excellent learning environment.
The MSSM research program is thriving. A blend of accomplished senior scientists and promising young talent has enabled MSSM to build and sustain a highly productive research enterprise that has catapulted us into the top tier of medical schools. MSSM faculty include internationally recognized leaders in both basic science, clinical and translational research who are valuable resources for students wishing to pursue research interests. Generous NIH funding has allowed for the rapid expansion of research programs. The synergistic activities of our clinicians and researchers, as well as our growing corps of physician-scientists, reinforce the "bench to bedside" thrust advocated in the strategic plan.
Since the last survey visit, Mount Sinai has experienced major leadership and governance

changes. As a result of careful involvement by our Board of Trustees and the selection of an extremely well qualified and committed Dean and CEO, supported by an excellent management team, we believe that we have now entered a period of organizational stability. During the last two years, Mount Sinai has come to recognize financial realities requiring intervention, and we have developed an energetic corrective plan. The new, unified governance structure facilitates joint School-Hospital strategies to improve finances by addressing such issues as staffing, productivity, supply chain and information systems. By implementing improved financial practices now, we are paving the way for a sound future.
The change in academic affiliation from City University of New York to New York University has been a positive one for MSSM. The relationship affords MSSM trainees access to resources heretofore unavailable, including the considerable holdings of the Bobst Library and the Inter-University Doctoral Consortium. Our faculty are pursuing collaborative relationships with scientists at NYU that show promise for expanding the scope of our research activities. We look forward to a continuing collegial relationship with this major university.
The ability of MSSM to continue to satisfy its teaching, research and clinical missions goals will be enhanced by realization of two important objectives:
1. Financial Turnaround – Over the past 18 months, the School, Hospital and Medical Center have adopted the CARTS budget methodology and implemented programs to contain costs expenditures and stimulate revenue generation. By imposing careful controls we aim to achieve a break-even operating budget that will allow for continued prosperity. This plan will create a Medical School no longer dependent on hospital funds transfer, and thus healthier for the future. It is imperative that we adhere to our financial plans so that we can continue to recruit excellent faculty, maintain facilities and grow programs. We are optimistic that under the capable leadership of Dr. Davis and our Board of Trustees, we will be able to maintain the timetable that has been set.
2. Educational Space – While the needs of the new curriculum are adequately accommodated within existing rooms and buildings, we would like to be able to bring formal classrooms and small group activities together in a single educational space. Modernization of teaching facilities will unify functions, improve ambiance and add flexibility. Intermediate plans are currently under development to remodel, reconfigure and upgrade some classrooms in the Annenberg Building. The timeframe for pursuing long-term plans for more comprehensive educational space renovations will hinge largely on our success in meeting our financial targets.
Even while we pursue these important objectives, the curricular evolution continues, research is expanding and our ability to offer patients the medicine of tomorrow is stronger than ever.

Steering Committee
Chair: Lawrence Smith, M.D. – Dean for Medical Education
Elvera Baron – MSTP Student

Robert Berne, Ph.D. – Vice President for Health, New York University
Benedict Ciferri – VP, Engineering & Facilities
Brandon Colby (2004) – MSSM IV
Kenneth Davis, M.D. – Dean, MSSM
Jeffrey Freed, M.D. – President, Alumni Assoc.
Samara Ginzberg, M.D. – PGY III
Luciana Guerra (2005) – MSSM II
Samuel Guillory, M.D. – Voluntary Attending
Gordon Keller, Ph.D. – Professor, Institute for Gene Therapy
Fred Klingenstein – Member, MSMC Board of Trustees
Paul Klotman, M.D. – Chair, Department of Medicine
Patrick Lento, M.D. – Assistant Professor, Department of Pathology
Tao Ma – Ph.D. Student
Jasmin Moshirpur, M.D. – Associate Dean for Education, Elmhurst Hospital Center
Miki Rifkin, Ph.D. – Dean for Academic Affairs
Michelle Sainte – Director of Administration, Dept. of Medical Education
Leslie Schneier – Associate Dean for Faculty Affairs
Alfred Stern – Member, MSMC Board of Trustees
Barry Stimmel, M.D. – Dean for GME

Committee I

Chair: Miki Rifkin, Ph.D – Dean for Academic Affairs
Ruth Abramson, M.D. – Professor, Dept. of Medicine
David Brook, M.D. – Professor, Dept. of Community Medicine
Victor Friedrich, Ph.D. – Associate Professor, Dept. of Molecular, Cellular & Developmental Biology
George Grumbach, Jr. – Member, MSMC Board of Trustees
Shaun Honig (2004) – MSSM III
Frank Hwang (2006) – MSSM I
Ravi Iyengar, Ph.D. – Dean for Research
Abby Jacobs – Director, Postdoctoral Fellowship Program
Debra Kaplan – Associate Director of External Affairs
John Morrison, Ph.D. – Director, Center for Neurobiology
Peter Rubin, M.D. – Associate Clinical Professor, Dept. of Medicine
Alan Schlechter (2004) – MSSM III
Jane Sisk, Ph.D. – Professor, Dept. of Health Policy
Barry Stimmel, M.D. – Dean for GME

Committee II

Chair: Suzanne Rose, MD, Associate Dean for UME
Cynthia Colin – Member, MSMC Board of Trustees
Shlomit Goldberg (2005) – MSSM II
Steven Itzkowitz, M.D. – Chief, Division of GI, Dept. of Medicine
Andrew Jagoda, M.D. – Professor, Emergency Medicine
Lewis Jones – Member, MSMC Board of Trustees
Nancy Kheck, Ph.D. – Assistant Dean for Curriculum
Thomas Kalb, M.D. – Clinical Associate Professor, Dept. of Pulmonary Disease
Danielle Laraque, M.D. – Chief, Division of General Peds., Dept. of Pediatrics
Phil Landrigan, M.D. – Chair, Community & Preventive Medicine
Margret Magid, M.D. – Associate Professor Pathology
Marilyn McGinnis, Ph.D. – Professor, Dept. of Anatomy & Functional Morphology
David Muller, M.D. – Assistant Professor, Dept. of Geriatrics

Steven Reichert, M.D. – Director of Education, Englewood Hospital Center
Alan Roth, M.D. – Director of Family Practice Residency, Jamaica Hospital Medical Ctr.
Matthew Rottnek (2004) – MSSM III
Alan Schiller, M.D. – Chair, Dept. of Pathology
Lawrence Smith, M.D. – Dean for Medical Education
Dempsey Springfield, M.D. – Chair, Dept. of Orthopaedics

Committee III

Chair: Thomas McGinn, M.D. – Vice Chair for Ambulatory Care
Scott Barnett, M.D. – Associate Dean for Admissions
Laurie Brown – Director, Student Affairs Years 1 and 2
Martin Evers (2004) – MSSM III
Daniel Fischberg, M.D. – Assistant Professor, Dept. of Geriatrics
Mark Francescone (2006) – MSSM I
Erica Friedman, M.D. – Assistant Professor, Dept. of Medicine
Elizabeth Garland, M.D. – Assistant Professor, Dept. of Community & Preventive Med.
Bruce Gelb, M.D. – Professor, Dept. of Pediatrics
Andrew Heineman – Member, MSMC Board of Trustees
Adesuwa Ighodaro (2005) – MSSM II
Jennifer Koestler, M.D. – Assistant Professor, Dept. of Pediatrics
Patricia Levinson – Member, MSMC Board of Trustees
Edward Ronan, Ph.D. – Assistant Dean for Academic Affairs
Randolph Steinhagen, M.D. – Associate Professor, Dept. of Surgery
Demian Szyld (2005) – MSSM II
Albert George Thomas, M.D. – Clinical Associate Professor, Dept. of OB/GYN
Gary Vaughn (2003) – MSSM IV
Aelaf Worku (2006) – MSSM I

Committee IV

Chair: Lisa Satlin, M.D. – Professor of Pediatrics
Gary Butts, M.D. – Associate Dean for Minority & Community Affairs
Avrom Caplan, Ph.D. – Dept. of Pharmacology
Arthur Figur, M.D. – Voluntary Attending
Paul Goldiner, M.D. – Chair, Dept. of Anesthesiology
Karina Gritsenko (2006) – MSSM I
Patrick Hof, Ph.D. – Associate Professor, Center for Neurobiology
William Innes – Director, MSSM Human Resources
Jeffrey Laitman, Ph.D. – Director, Center for Anatomy & Functional Morphology
Deborah Marin, M.D. – Dean for Clinical Research
Sandra Masur, Ph.D. – Professor, Dept. of Ophthalmology
Sierra Matula (2004) – MSSM II
Lynn Rescorl (2006) – MSSM I
Leslie Schneier – Associate Dean for Faculty Affairs
Anthony Squire, M.D. – President, AAS
Frederick Suchy, M.D. – Chair, Dept. of Pediatrics
Thomas Weber, Ph.D. – Assistant Professor, Intstitute for Gene Therapy

Committee V

Chair: Glenda Palmer – Associate Dean for Student Services
David Alge – Associate Dean for Operations
Kelliann Bailey – Educational Coordinator, Dept. of Surgery
Benedict Ciferri – VP, Engineering & Facilities

Lawrence Cicchiello (2003) – MSSM IV
Paul Contino – Director of Information Technology
Lynn Morgan – Associate Dean for Library & Academic Computing
Rosanne Leipzig, M.D. – Vice Chair, Dept. of Geriatrics
Adam Levine, M.D. – Clinical Assistant Professor, Dept. of Anesthesiology
Thomas Moran, Ph.D. – Associate Professor, Dept. of Microbiology
Daniel Perl, M.D. – Professor, Dept. of Pathology
Judith Quintana – Educational Director, Art & Science of Medicine
David Schaner (2006) – MSSM I
Phyllis Shaw, Ph.D. – Associate Professor, Center for Anatomy & Functional Morphology
Jerald Tedeschi – Director, MD Laboratories
Timothy Zagar (2006) – MSSM I

Committee VI

Chair: Karen Zier, Ph.D. – Associate Dean, Medical Student Research
Co-Chair: Savio Woo, Ph.D. – Director, Institute for Gene Therapy
Mark Babyatsky, M.D. – Assistant Professor, Dept. of Medicine.
Janice Gabrilove, M.D. – Chief, Division of Medical Oncology, Dept. of Medicine
Karl Jepsen, M.D. – Assistant Professor, Dept. of Orthopaedics
Thomas Klein – MSTP Student
Robert Krauss, Ph.D. – Associate Professor, Pharmacology & Biological Chemistry
Diomedes Logothetis, Ph.D. – Dean, Graduate School of Biological Science
Jonathan Licht, M.D. – Professor, Dept. of Medicine
Jotin Marango – MSTP Student
Lloyd Mayer, M.D. – Director, Center for Immunobiology
Cyrus Mintz – MSTP Student
Karen Sadock – Assistant Director of Scientific Integrity
Alison Schecter, M.D. – Assistant Professor, Dept. of Medicine
Thomas Smith, RN – VP, Nursing
Paul Wassarman, Ph.D. – Chair, Dept. of Molecular, Cellular & Developmental Biology

Subcommittee A

Chair: Mark Swartz, M.D. – Dean for CME
Karina Arbatova (2005) – MSSM II
Frederick Avery – Educational Program Coordinator, The Morchand Center
Mariza Clement (2005) – MSSM II
Devra Cohen – Assistant Professor, Dept. of Medical Education
Robert Fallar – Survey Center
Erica Friedman, M.D. – Assistant Professor, Dept. of Medicine
Roxanne Rapan (2004) – MSSM III
Barbara Richardson, M.D. – Associate Professor, Dept. of Emergency Medicine
Mitchell Schaffler, M.D. – Professor, Dept. of Orthopaedics
Lloyd Sherman, Ed.d – Associate Clinical Professor, Dept. of Medical Education
Randi Zinberg – Assistant Professor, Director of Genetic Counciling Program