Icahn School of Medicine at Mount Sinai

Self-Study

Evaluation Team Site Visit
June 2015

Prepared for the
Middle States Commission on Higher Education

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Appendix 6

Certification Statement: Compliance with MSCHE Requirements of Affiliation and Federal Title IV Requirements

An institution seeking **initial accreditation** or **reaffirmation of accreditation** must affirm by completing this certification statement that it meets or continues to meet established MSCHE Requirements of Affiliation and federal requirements relating to Title IV program participation, including relevant requirements under the Higher Education Opportunity Act of 2008 such as those on distance education and transfer of credit.

The signed statement should be attached to the executive summary of the institution's self-study report.

If it is not possible to certify compliance with all such requirements, the institution must attach specific details in a separate memorandum.

Icahn School of Medicine at Mount Sinai

_____ is seeking
(Name of Institution)

(Check one)   ___ Initial Accreditation   ✓ Reaffirmation of Accreditation
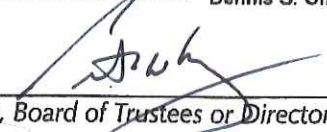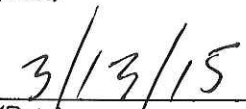
The undersigned hereby certify that the institution meets all established Requirements of Affiliation of the Middle States Commission on Higher Education and federal requirements relating to Title IV program participation, including relevant requirements under the Higher Education Opportunity Act of 2008 such as those on distance education and transfer of credit, and that it has complied with the MSCHE policy, "Related Entities."

___ Exceptions are noted in the attached memorandum *(check if applicable)*

_____   3/12/15
(Chief Executive Officer) Dennis S. Charney, M.D., Dean   (Date)

_____   3/13/15
(Chair, Board of Trustees or Directors) Mr. Peter W. May   (Date)

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Executive Summary

The Icahn School of Medicine at Mount Sinai (ISMMS) Self-Study is an essential step towards obtaining institutional reaccreditation from the Middle States Commission on Higher Education (MSCHE). ISMMS received initial five-year accreditation from MSCHE in 2010. The current reaccreditation process is the first since that initial accreditation.

The Self-Study Report reflects the work of many faculty, staff and students over a period of nearly two years. ISMMS Dean Dennis Charney, MD assigned David Muller, MD, Dean for Medical Education and John Morrison, PhD, Dean for the Graduate School of Biomedical Sciences, to lead the Self-Study effort. Under their direction, a Steering Committee was assembled to develop a Self-Study Design that was approved by MSCHE Vice President Sean McKitrick, PhD in 2013. As required of candidates for first reaccreditation, ISMMS followed MSCHE's Comprehensive Self-Study Model.

In accordance with the Self-Study Design, five Work Groups were formed to examine ISMMS compliance with thirteen MSCHE "Standards of Excellence." (A fourteenth standard is not relevant for ISMMS.) The Work Groups reviewed voluminous materials, invited consultants in as needed, and deliberated extensively. Each group concluded with a report that was then folded into a single Self-Study Report. Periodically, the Steering Committee checked progress and offered suggestions.

The draft Self-Study Report was posted on the ISMMS website for community input, and continues to be revised as additional feedback is received. The educational subcommittees of the Board of Trustees received status reports. Throughout the process, Dr. McKitrick has provided counsel and support.

The Self-Study has provided an extraordinary opportunity for ISMMS to consider all aspects of its educational programs and the people and other resources that support those programs. Spirited, insightful Work Group and Steering Committee discussions served not only to identify areas in which the School excels, but also to raise questions on areas in which we might do better. Without doubt, the Self-Study strengthened our sense of community and common purpose.

The Self-Study Report demonstrates that ISMMS readily meets or exceeds every MSCHE standard. Major strengths and challenges identified through the self-examination process are highlighted below.

Strengths

- ISMMS leverages its broad expertise in biomedical research, clinical care, and medical and scientific training to develop outstanding educational programs.
- ISMMS has a clearly defined system of governance with an active and committed Board of Trustees that supports all facets of the School's policy development and decision-making.
- The School's robust educational infrastructure, programs and services are continuously evaluated and improved through careful planning and resource allocation.

- ISMMS employs rigorous financial budgeting and monitoring systems to ensure the availability of appropriate resources to support its educational programs and carry out its mission.
- The distinguished faculty at ISMMS are exceptionally qualified and dedicated to providing world-class educational experiences for students.
- ISMMS has policies and procedures that are fully transparent and easily accessible to students, faculty and staff on the School's website.
- The School's educational offerings are regularly assessed to confirm achievement of expected student learning outcomes.
- ISMMS students have ample opportunities to provide input through a strong student governance structure, access to leadership and participation in strategic initiatives.
- The large and diverse patient population served by the Mount Sinai Health System offers students new, unique and exciting training opportunities.

Challenges

- ISMMS must maintain strong fiscal controls in a challenging economic environment to support and grow its cutting-edge educational programs.
- The rapid expansion of the ISMMS faculty resulting from the creation of the Mount Sinai Health System requires new approaches for mentoring, career development, inclusion and communication, as well as methods for evaluating success in these areas.
- The successful pursuit of philanthropic support for educational scholarships and student debt relief will continue to be vital in attracting the finest candidates.
- Implementing appropriate, effective assessment methods for new degree-granting programs, particularly those delivered through a distance education format, will be critical.
- ISMMS must consider whether dual-degree programs would benefit from incremental assessment measures to capture unique learning outcomes.
- The School's commitment to build a significantly enhanced website will require enormous stakeholder effort to ensure that the final product is easily navigable and effectively serves its many constituencies.

In summary, the 2013-2014 Self-Study conducted by Icahn School of Medicine at Mount Sinai affirms our collective accomplishments in providing an outstanding educational experience for our students and fulfilling our mission in all arenas.

Introduction

Icahn School of Medicine at Mount Sinai (ISMMS) is a local, national and international leader in education, research and clinical care. A culture of innovation and discovery combined with tremendous individual and collective drive contribute to outstanding programs and a stimulating, energized environment.

ISMMS is ranked among the nation's top twenty medical schools by U.S. News and World Reports. Our position as #17 in NIH funding among U.S. medical schools is a testament to our vibrant, cutting edge research program.

The School's highly competitive educational programs attract an intelligent and diverse complement of students who are well prepared to undertake our rigorous curricula. In total, 1,060 students are currently enrolled in ISMMS degree-granting programs, which include:

- MD Degree -- Our renowned medical education program trains future physicians.
- PhD Degrees – The ISMMS Graduate School of Biomedical Sciences offers PhD degrees in biomedical sciences and in neuroscience.
- Master's Degrees – Master's level programs focus on biomedical sciences, clinical research, public health, genetic counseling, and health care delivery.

Students can earn dual degrees, e.g., our prestigious Medical Scientist Training Program (MSTP) confers joint MD and PhD degrees. There are also many options for cross registration beyond one's own program. In addition to the degree-granting programs, ISMMS offers postdoctoral research training to new scientists, graduate medical education training to new physicians, and continuing medical education programs for established physicians. The degree-granting programs are the major focus of this Self-Study.

ISMMS has a robust infrastructure to support its educational programs. A strong financial base allows for excellent facilities, a large teaching faculty, and a broad range of student services. Extensive planning and assessment mechanisms are employed to optimize the allocation and use of these resources, thus ensuring fulfillment of the School's mission and maintenance of a firm foundation for continued growth and success.

ISMMS was established in 1963 under a charter from the New York State Department of Education, and accepted its first students in 1968. Initially the School was affiliated with the City University of New York and in 1998 transitioned to an affiliation with New York University. Approximately five years ago the ISMMS Board of Trustees, Chief Executive Officer and Dean determined that the School's continued success would be enhanced by disengaging from its university affiliation and establishing our status as a free-standing medical school. In 2010 ISMMS gained approval from the New York State Board of Regents and the Middle States Commission on Higher Education (MSCHE) to move forward as an independent school.

Throughout its history ISSMS has maintained a close partnership with the highly acclaimed Mount Sinai Hospital, and together these two institutions were known for decades as the Mount

Sinai Medical Center. In 2013, the Mount Sinai Medical Center combined with Continuum Health Partners to create the Mount Sinai Health System, which is comprised of seven member hospitals and a single medical school, ISMMS. The School has retained its authority to conduct its own educational programs and operations, and to make decisions that are best for the School and allow it to fulfill its mission. Further, the School retains its own resources (e.g., employees, facilities, budgets, etc.) that are required for the conduct of business. The new corporate structure was memorialized through a charter amendment granted by the New York State Board of Regents, and was approved by the Middle States Commission on Higher Education through the Substantive Change review process. The exciting opportunities created for ISMMS and its students through the establishment of the Mount Sinai Health System are addressed in the Self-Study.

The 2014-2015 Self-Study marks our first application for reaccreditation since ISMMS received initial institutional accreditation from MSCHE in 2010. The current Self-Study adheres to all requirements set forth by MSCHE, and uses the Comprehensive Self-Study model to demonstrate that ISMMS continues to meet or exceed all Standards of Excellence set forth by the Commission.

The organization of the Self-Study included:

- Steering Committee – David Muller, MD, Dean for Medical Education and John Morrison, PhD, Dean for Basic Sciences and the Graduate School of Biomedical Sciences, were appointed by ISMMS Dean Dennis Charney to serve as Steering Committee Co-Chairs. Faculty and administrators representing the MD Program, the Graduate School, the academic departments and infrastructure offices were appointed to the Steering Committee for their breadth of perspectives and experience. Dean Charney charged the Committee with conducting a comprehensive Self-Study consistent with MSCHE expectations.

  The Self-Study Design prepared by the Steering Committee was approved by MSCHE liaison Sean McKitrick, PhD in March 2013. Consistent with the Design, five Work Groups were created and charged by the Steering Committee to review compliance with MSCHE standards. Steering Committee members assembled the Self-Study Report as described in the Work Products section below, and the entire Committee vetted the final product.   The Committee is coordinating both the Preliminary Chair Site Visit (January 2015) and the Team Visit (June 2015).

- Work Groups – Deans Morrison and Muller appointed Work Group Chairs -- often Department Chairs or Institute Directors -- based on relevant experience and knowledge. They also appointed an administrative Co-Chair to each Work Group to shepherd the meetings and work products along. Additional Work Group members were faculty, students and staff selected to ensure appropriate constituencies to contribute perspectives and expertise to address the standards thoroughly.

  The Work Group Chairs received voluminous information from the Steering Committee to assist in their deliberations, and were encouraged to collect additional information as needed. Work Groups were also free to invite faculty, staff or student "consultants" on an ad hoc

basis to address specific issues requiring supplemental input. Report preparation was an iterative process involving much discussion, writing and re-writing. Each Work Group report was reviewed by members of the Steering Committee to confirm that all standards had been sufficiently addressed and to confirm the value of proposed appendices as supporting documents. The Committee then melded the various Work Group reports into a final report that flows clearly and logically, adheres to a uniform format, and addresses all standards.

- <u>Community Input</u> – The draft Self-Study Report was posted on the School website for input from the entire ISMMS community. Self-Study progress reports and announcements of the draft report posting were provided at numerous large and small meetings, and feedback was encouraged.

- <u>Board of Trustees Approval</u> – The preliminary conclusions of the Self-Study Report were presented to the ISMMS Board of Trustees in December 2014. The final Self-Study Report will be submitted to the Board for endorsement in the Spring of 2015.

The following sections of the Self-Study Report address the many ways in which ISMMS meets or exceeds every MSCHE Standard of Excellence. Both achievements and challenges are identified and analyzed. Discussion of each Standard includes an appended grid pointing to various sections of the Self-Study report that address the Fundamental Elements relating to that Standard. We are proud to provide information and commentary about the invigorating environment and superb educational experience that ISMMS offers to its students, preparing them for successful careers in biomedicine.

Standard 1: Mission and Goals

The Icahn School of Medicine at Mount Sinai (ISMMS) has a clearly defined and broadly promulgated mission, with goals and objectives that flow directly from that mission.

The ISMMS mission statement (Appendix 1-A), approved by the Board of Trustees, expresses our commitment to learning, discovery and clinical care. It is posted in the [Faculty Handbook](#) and is easily accessible on the mssm.edu website. The mission is the driving force for all activities in the School, and underlies our ability to provide outstanding educational experiences for our students. The components of the mission are closely intertwined – conducting ground-breaking research, offering excellent care to patients, emphasizing scholarship, committing to serve the needs of the community and providing a satisfying workplace together translate into creating a superb environment in which our students can learn and thrive.   Appendix 1-B briefly addresses fulfillment of each of the six components of our mission.

The Self-Study has served as an opportunity to consider changes to the mission statement, a topic that had been raised previously but not pursued. Review of the current ISMMS statement triggered curiosity about the mission statements of other educational institutions and even corporations. The trend towards tightly worded statements is perceived as attractive, for such statements tend to be targeted and easy for all to remember, respect and follow. Based on the initial investigation and discussion, a small group of faculty-administrators within the medical education program developed an initial draft of a new mission statement; the Mission and Governance Work Group reviewed this draft and recommended some changes.

Revising the mission statement will require broad input from the ISMMS community, with many layers of discussion and approval.   Some of the groups that will be involved will include the Deans, Student Council, Faculty Council and Chairs and Directors; we will post the draft on our website to facilitate feedback from all constituencies. A final version will be brought to the Board of Trustees for approval.

We anticipate that a revised mission statement will not differ in spirit from the current version; our commitment to education, clinical care, research, scholarship and community are unquestioned, for they are the essence of the School's identity. The initial consensus is that an updated mission statement would bring value by clearly and succinctly expressing the School's purpose and direction. We will strive for a broadly inclusive effort that will result in a mission statement that is easily accessible and eminently reflective of the School.

The ISMMS mission statement is complemented by statements of purpose developed by some programs within the School. These statements, which are always consistent with the overarching School mission statement, lend additional strength and direction to specific programs. For example, the MD program promulgates a mission to "to produce physicians and scientists who are prepared to enter society as informed advocates and activists, able to advance clinical care and science, and capable of promoting change;" this statement is highly compatible with the School statement, but focuses specifically on the MD program and underscores its particular focus. Sometimes, as is the case with the MD program, the focused statement works in tandem with a set of guiding principles that enumerate program goals.

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The School's mission statement provides an overarching context for its activities. It is incumbent upon our leaders to develop goals that are consistent with the mission. The ISMMS Dean has promulgated an institutional theme of innovation and discovery that permeates all components of the mission and is reflected in all programs. Goals change over time in response to internal and external forces, and the School seeks to be nimble in recognizing and embracing change in order to ensure continued maximal achievement. As determined by particular circumstances, appropriate constituencies are drawn in. As described in Standards 4, the ISMMS Dean provides overall leadership in these efforts, but relies heavily on his deans, department chairs and institute directors to ensure that we stay abreast of the changing environment and needs and respond accordingly; proactive approaches are encouraged so that whenever possible we can anticipate, reflect and adjust in ways that maximally serve the needs of the School and its community. The Board of Trustees (Standard 5) is involved in major changes requiring its input and approval.

The School's mission is inextricably linked to goal development, planning, resource allocation and assessment. Standard 2 of this Self-Study report describes the strategic, shorter term and local planning efforts that uniformly take mission into consideration. Similarly, Standard 7, organized to a large degree by the different components of our mission, describes the extensive metrics that the ISMMS leaders use to evaluate success in meeting all components of the mission; these assessments in turn influence decision-making, planning and resource distribution. Virtually everything – from educational program development to scholarly achievements by students and faculty to space assignments – involve these interconnected processes, and ensure that we fulfill our mission and attain our goals. At all times, we strive to move forward in an environment that is equitable, respectful and transparent (see Standard 6).

Communication plays an important role in making all constituencies aware of the School's mission and goals as well as their attendant expectations. The mission statement is posted on the ISMMS website for easy access. The ISMMS Dean delivers a State of the School address each year at Convocation in which he summarizes accomplishments to date and also outlines challenges that lie ahead. The Dean teams up with the Health System CEO once or twice annually to host Town Hall meetings in which they update the audience on the School and Health System, answer questions and exchange ideas. Frequent blast emails from the Dean of the School and the education and research Deans also help apprise the School community of issues of importance. Frequent and timely communications remind and inform all constituencies of goals and objectives as well as accomplishments and challenges relating to our mission.

In summary, the ISMMS Mission Statement provides essential definition for the activities and purpose of the School. It is the driver for goal development that ensures our success as a premier educational institution and a world class leader in research and clinical care, all in an environment that strives to be both scholarly and compassionate. By interweaving the School mission with our planning, resource allocation and assessment processes, we create an environment of excellence and productivity that will serves us well now and will carry us well into the future. Appendix 1-C points to some of the sections of the Self-Study report that address the Middle States Fundamental Elements relating to mission and goals.

Standard 2: Planning, Resource Allocation, and Institutional Renewal

Icahn School of Medicine at Mount Sinai (ISMMS) takes a methodical, practical and productive approach to developing programs and services, distributing resources and assessing outcomes in order to ensure maximal attainment of its mission and goals. Planning at all levels – from a Strategic Plan that guides the overall directions of the School, to localized and shorter-range planning by departments and programs – are complementary and steer resource allocation decisions. Institutional assessment in turn provides ongoing confirmation of the effectiveness of these plans and of mission and goal fulfillment. Together, careful planning, resource allocation and performance assessment are central drivers for the School's success. Appendix 2-A highlights some key sections of the Self-Study report that address the Middle States Fundamental Elements relating to Standard 2.

The Dean is responsible overall for directing and overseeing ISMMS planning, resource allocation, institutional renewal and performance assessment (Standard 7). In turn, a cadre of deans, chairs and directors (Standard 5) are held accountable – through routine informal feedback and a formal annual performance evaluation – for carrying out robust planning and assessment activities that drive sound resource allocation decisions and promote institutional health. Frequent meetings within and across management levels, and in settings ranging from large group meetings to intimate 1:1 encounters, are an essential component of communicating,, collaborating, and moving forward together. Examples include: monthly meetings of the Dean with his academic department leaders, alternating clinical and research chairs and occasionally convening all for a single meeting; weekly group meetings of the ISMMS Dean with all Deans and select Senior Associate Deans; and Deans' meetings with the Faculty Council and the Student Council. Such meetings solicit input from many constituencies, encourage exchange of ideas and ensure that goals and expectations are widely known. Some, such as the Dean-Chair meetings, provide a forum for formal votes on major policy decisions affecting the school. The face-to-face meetings that facilitate planning and decision-making are complemented by frequent broadcast e-mails. Publications such as the recently issued "Defining Creativity," disseminate information of School directions and goals. Some departments and institutes also publish their own newsletters, annually or at other intervals, showcasing the achievements resulting from their careful planning efforts.

A 10-year Strategic Plan implemented by the School in 2005-2006 has provided a roadmap for growth and success. That plan was developed under the direction of the Dean of the School, with over 100 faculty, administrators and Trustees working collaboratively to compile recommendations that were subsequently reviewed and refined by a senior leadership team and ultimately approved by our Board of Trustees. The Strategic Plan addresses the three main components of the ISMMS mission – education, research and clinical care – and provides direction for each. It emphasizes translational medicine and research that will facilitate the application, or translation, of laboratory bench discoveries to patient care improvements.

The Strategic Plan is a living document that is amended to accommodate both internal and external circumstances. Institutional performance assessments are integral to shaping the evolution of the plan. For example, the original complement of multidisciplinary institutes envisioned in the Plan has now grown to 22 in the face of internal assessment of strengths and

weaknesses coupled with changes in the biomedical environment that could not have been anticipated in 2006. A striking case is the ascendancy of big data as a tool for unlocking the mysteries of science; leadership analysis of the rapid growth in scientific computing capabilities led to the recruitment in 2011 of a leading international genomics expert and the establishment of an Institute for Genomics and Multiscale Biology. In three short years, this Institute has injected enormous momentum in furthering our institutional mission, as manifested by collaborative research projects, incorporation of genomics into the educational curriculum and application to clinical diagnosis and treatment. Similarly, the recently established Global Health Institute recognizes the rapid expansion of the School's expertise in and commitment to global health and related issues, in tandem with growing international need for medical education, clinical care and scientific knowledge; the interest among Mount Sinai students and faculty is quite high, with over 50 students and 40 residents engaging in international public health and research projects to over 20 countries in a single year.

Strategic planning relating to the educational, research and clinical care components of the mission is described below, and is followed by summaries of resource-related planning efforts.

Educational Strategic Planning

Ongoing planning and assessment are integral to all of our educational programs.

Graduate School of Biomedical Sciences Strategic Planning

In 2014, under the direction of the ISMMS Dean and the Dean for the Graduate School, development of a five-year strategic plan was undertaken. The objective is to analyze all facets of the PhD program, including core curriculum, qualifying exams, internships and options for thesis projects. A series of steps have been identified for the strategic planning process:

- External Advisory Board Review and Comprehensive Critique – In June 2014, an External Advisory Board (EAB) comprised of four preeminent scientists and educators visited ISMMS for several days to evaluate the PhD and MD/PhD programs from every perspective: quality of programs; faculty and leadership; alignment of Dean Charney's vision for groundbreaking translational research with Graduate School programs; and opportunities for growth. The EAB's report was highly laudatory of the Graduate School and also offered compelling recommendations for the future. It paved the way for the following phases in the planning process.
- Brainstorming – Broad discussions with all stakeholders, including faculty, students and administrators. The objective is to generate new ideas with an open mind that all perspectives are welcome. Consideration will be given not only to the internal ISMMS environment but also to external forces, using such resources as the highly regarded 2012 report by the NIH Biomedical Research Workforce Working Group, and an influential 2014 article in the journal PNAS about preparing biomedical graduate students for entry to the professional world.
- Review and "Mapping" of Ideas from Brainstorming Sessions – This process will form the basis for the strategic plan.
- Implementation – Launch is targeted for Fall 2015.

Among the challenges to be considered will be increasing graduate student exposure to human biology, clinical problems, and companies that turn biomedical discoveries into innovative solutions; incorporating some of the principles of educating engineers (e.g., problem solving and design) into PhD training areas; creating customized curricular offerings and thesis work opportunities to serve a more diverse group of incoming students, particularly students with backgrounds outside of biology; developing courses and experiences for the MD/PhD students that facilitate their unique training as physician-scientists throughout their training for both degrees. The entire planning process is designed to apply introspection, discussion and creative thinking to the development of a curriculum and an environment that will train students to apply innovative approaches to scientific discovery and translation in an effort to improve human health in the 21st Century.

The development of the new Master of Health Care Delivery Leadership (MSHCDL) degree program, which enrolled its first cohort of students in Fall 2014, is another example of the robust planning efforts of the Graduate School. This is the School's first (and currently only) distance learning degree program and was a logical outgrowth of many of the programs and health care delivery activities that were already established at ISMMS. Planning of the program commenced upon confirmation that its concept and goals were consistent with the School's mission. As part of this planning process, the School engaged a leading market research firm with expertise in higher education to conduct a competitive market and demand assessment of existing graduate degree programs – with and without a distance learning component – geared toward developing the next generation of health care leaders. The results of this assessment demonstrated significant demand for such a program and confirmed that ISMMS was well-positioned to offer this degree program considering its broad experience in the relevant subject matters, including health care reform policy, health economics, and population health. After Kenneth L. Davis, MD, President and CEO of the Mount Sinai Health System, and Dean Charney endorsed the creation of the new degree program, a core leadership team used the details of the market research as part of the planning process for launching the program. The MSHCDL program is discussed in more detail under Standards 11, 13 and 14.

The Graduate School is also developing a Master of Biomedical Informatics degree program. This program would be wholly consistent with the School's mission and Strategic Plan, and would expand and leverage its significant research programs and clinical expertise in biomedical sciences and data analytics to improve patient care. The program would seek to train a new generation of professionals who are skilled in both informatics and biomedical sciences. The due diligence process for this program has included: (1) examining open positions nationwide requiring Master's-level informatics expertise in the biological sciences and medical fields; (2) investigating enrollment rates at comparable programs throughout the country; (3) conducting a literature review on the demand for these skills; and (4) interviewing senior health service administrators and researchers at Mount Sinai, other academic medical centers and in industry about the demand for such skills. These activities confirmed that the proposed degree program in biomedical informatics would be complementary to other programs in the New York metropolitan area and would both attract and bring value to students across academic medicine and industry. A faculty advisory committee was formed to design the program, identify its key objectives and explore potential partnerships with other academic institutions and industry that

would enhance the experience of students. The advisory committee consulted with additional faculty across disciplines to continue refining the program development plan and to confirm that many existing courses could effectively integrate the biomedical informatics students. A faculty steering committee consisting of experts in biomedical research and clinical informatics was updated regularly and provided invaluable feedback throughout planning process.

MD Program Strategic Planning

Under the direction of the Dean for Medical Education, the MD program routinely and consistently conducts careful, thoughtful and inclusive planning efforts. Of particular note is the year-long planning effort that resulted in major revisions to the curriculum. This process commenced with the creation of a Curriculum Design Team comprised of School leaders, faculty, students and staff (Appendix 2-B) which met biweekly beginning in January 2012. The team conducted a comprehensive, in-depth review of:

- The existing MD program curriculum (evaluation data, course director interviews, data from AAMC Graduation Questionnaire and ISMMS graduation survey)
- Curricular changes made by the School based on educational value and quality
- Student outcomes (national board scores, residency match, GQ comparisons with schools nationwide)
- National guidelines and standards
- Accreditation mandates
- Presentations by leaders and experts in research, innovation, education (attached list)
- Curricula of top 20 medical schools
- Best practices in the field from leading Medical Education journals
- Literature from residency program directors

The committee reflected upon our MD program mission (to produce physicians and scientists who are prepared to enter society as informed advocates and activists, able to advance clinical care and science, and capable of promoting change) and also participated in a formal process to develop guiding principles to provide a framework for educational activities. The team used these and graduation competencies to engage in team-based interactive discussions to build the new curriculum. The outcome of this extensive planning effort was the launch of a revised curriculum in August 2013 that solidly positions the School to provide an educational experience that gives MD students the knowledge base, analytical skills, clinical skills, understanding of and appreciation for scientific research, and passion for learning that will prepare them well for practicing medicine and conducting biomedical research in the 21st century. The new curriculum is described more fully in Standard 11.

Research Strategic Planning

The translational research thrust of the School's Strategic Plan continues to be critical and serves as an essential roadmap for ISMMS scientific directions.   Current initiatives include targeted investments that will expand our translational abilities and support our mission to conduct groundbreaking research. These initiatives include:

- Experimental Therapeutics Institute, including recruitments and capital investments in chemistry, screening, proteomics, and monoclonal antibodies
- Novel technologies for therapeutic discovery-gene/cell therapies, vaccines
- Systems Biomedicine
- Molecular and Genetic Diagnostics, including testing lab in Connecticut
- Device development
- Novel digital applications to healthcare
- High Performance Computing and Big Data analytics
- Population Health
- Global Health

Faculty, staff and administrators at all levels are involved in carrying out the work that is generated by these investments.

Clinical Strategic Planning

With an overarching commitment to providing the highest quality clinical care and bringing breakthrough scientific discoveries into the patient care realm, the clinical component of the School's Strategic Plan focuses on organizing faculty to provide excellent care, to be productive and to be fiscally responsible. Towards this end, Mount Sinai Doctors Faculty Practice has devoted enormous resources in developing reporting systems that measure faculty performance across these key metrics (Standard 7). The introduction of electronic medical records, clinical data monitoring systems, a centralized billing office and online appointment scheduling have contributed substantially to these efforts.

The creation of the Mount Sinai Health System (Standard 4) and the associated addition of many clinical faculty introduces new challenges for ISMMS. Planning for the integration of these physicians into Mount Sinai Doctors is underway and involves close collaboration among faculty, administrators and Deans. Teams of personnel are reviewing the number and types of physicians who will join the faculty practice (estimated to be more than 700 by the end of 2015). These teams are also projecting the financial, space and staffing needs for these new faculty, and developing uniform standards for quality of care and physician performance. By the end of 2014, it is expected that faculty from four clinical departments will be fully on-boarded from across the Health System. The experience gained in effectuating their integration will provide models for working with faculty joining other departments. On an ongoing basis, the gradual integration of Health System physicians to the Mount Sinai Doctors Faculty Practice will require rigorous planning in order to establish effective record-keeping, clear performance expectations and rigorous financial monitoring for each department at ISMMS.

The School's Strategic Plan is complemented by extensive departmental and programmatic planning.. Examples focusing on ensuring appropriate infrastructure (Standard 3) include:

Financial Planning

Financial planning, monitoring and assessment are integral to virtually every ISMMS program, because a strong fiscal foundation is essential for meeting the goals set forth in our strategic and

local plans (Standards 3 and 7). Financial planning includes consideration of investment in educational programs and student services. Financial review is an ongoing activity, with monthly and annual budget planning and reconciliation efforts that focus on the School and individual departments. The School's Deans, Department Chairs and Institute Directors are accountable for the fiscal performance of the areas under their purview, and meet monthly, or more often as necessary, with the ISMMS Dean and Senior Vice President for Finance to discuss financial planning and assessment. A "Position Control" team chaired by the Senior Vice President for Finance oversees all personnel transactions to ensure that hiring and compensation decisions are consistent with the School's objectives and are affordable. Importantly, business plans must be prepared by the departments for all faculty recruits. Expenditures on capital equipment and facilities must go through a similar review process as described below. The School's financial planning and budgeting approaches have been quite effective, resulting in ongoing annual achievement of break-even results that allow for investments to meet our myriad goals and objectives; if at any point this is no longer the case, consideration will be given to creating and applying more stringent or alternative metrics.

Capital Planning

Capital planning is an essential process that ensures that the School fulfills its mission and accomplishes its goals in a fiscally responsible manner. Weekly capital planning and assessment meetings bring together representatives from the Dean's Office, Finance, Facilities Management, Engineering, Vivarium and Information Technology to review, assess and monitor projects. A senior leadership team comprised of the ISMMS Dean, the education deans, the Senior V.P. for Finance and facilities experts convenes each September to review capital planning requests for the following year. Each project must be compatible with the Strategic Plan, with a sound business model that demonstrates both fiscal viability and consistency with our educational, research and clinical goals. Projects are prioritized based on: deferred projects of importance; commitments to new chairs and faculty recruits; and space problems requiring correction. Projects deemed elective are moved lower on the list, to be pursued only if money and other resources are available.   After an ordered list of priority projects is created, the Dean's Office funds initial cost studies for project deemed highest priority. These studies involve rough plans and associated cost estimates, and if approved the projects can move forward. Once funding is identified for a project, contractors will be hired through a competitive bidding process. To the extent possible, timetables are compressed to minimize disruptions to our students and faculty.

In the past three years, capital improvement projects have included repurposing of space to provide additional classrooms (Annenberg 10 and 11), renovation of a lecture hall (Annenberg 12) and creation of an incubation lab for student/trainee entrepreneurs (in progress on Annenberg 11). The effectiveness of the capital planning process was evident in the successful and on-budget construction of the 550,000 sq.ft. Hess Center for Science and Medicine, completed in 2013 and housing a state-of-the art conference center, laboratories and clinical space.

Academic Informatics and Technology

Academic Informatics and Technology, comprised of the Levy Library, Academic IT Support, Multimedia Services, Instructional Technology, and Archives and Record Management

(Standard 3), has undergone a significant transformation in the last decade, as print volumes have largely been replaced by web-based collections and on-line learning resources have become the norm. As the print collection yields to new ways of researching, studying and learning, the retirement of the School's Library Director provided an opportunity to re-think the focus and purpose of the library. Towards this end, a position for Vice President of Academic Informatics and Technology (with an Associate Dean title later added) was created with broad responsibilities for overseeing the library and instructional and educational technology; defining , building and leading a service-oriented Academic Informatics unit; delivering technology platforms, tools and services that support faculty teaching and research; and integrating information technology into the curriculum to enhance student learning and engagement.

The Academic Informatics and Technology team was charged by the Dean with developing a vision for the role of academic technology in the School. Towards this end, they are developing a three-year plan that includes repurposing current library space into an information commons, updating and consolidating Health System library resources and services and ensuring that the Upper East Side campus is the nexus for library and informatics support.

Core Research Facilities and Services Planning

Institutional shared research facilities, or "Cores" (Standard 3) are subject to intensive scrutiny to ensure that they function properly and adequately meet the needs of the School's research community (Standard 7). The Dean for the Basic Sciences and the Senior Associate Dean for Research Resources work closely together to lead decisions on the research infrastructure and to conduct long-range planning. Their end goal is to ensure that ongoing and new projects have access to state-of-the art resources (equipment and expertise) to meet the needs of our students and faculty.

An Executive Scientific Advisory Committee (ESAC) comprised of department chairs, institute directors and other senior faculty contribute to the strategic planning process by considering what Cores will be needed over the next five years. The ESAC reviews the scientific justification for proposed new cores, and makes recommendations on phasing out obsolete cores. All cores are reviewed on a three to five year cycle by a three-member panel comprised of both internal and external members.

Typically proposals to establish new institutional Cores are initiated by users from multiple departments and disciplines or via a departmental core that transitions to an institutional resource. The review of proposals uses an approach resembling an NIH Study Section for shared instrumentation grants. The review has three primary criteria: 1) Scientific justification (ESAC review); 2) Business plan (Financial review); and 3) Infrastructure needs (Engineering review). These three aspects allow for adequate planning and implementation of proposed new resources.

In summary, ISMMS takes a robust approach to planning in all areas. The careful consideration paid to our mission, long and short term goals, and the internal and external environments, combined with broad input from relevant constituencies create planning processes and outcomes that effectively serve the needs of the School and its students.

Standard 3: Institutional Resources

Icahn School of Medicine at Mount Sinai (ISMMS) has a rich infrastructure to support the educational, research and clinical activities that comprise its mission. Decisions regarding the type, quality and quantity of resources are closely tied to the planning, allocation and assessment processes (Standards 2 and 7). The interrelatedness of these processes and their connection to the School's mission ensure the availability of appropriate resources to meet our needs and fulfill our goals. Appendix 3-A points to particular sections of the Self-Study report that address the Middle States Fundamental Elements relating to Institutional Resources.

Rational, consistent, well publicized policies and procedures contribute to a strong ISMMS infrastructure. In an era of limited resources, escalating costs, a challenging NIH landscape and extreme competition, the School leadership insists on defined performance metrics, adherence to protocol, tight monitoring and controls, and extensive communication to ensure that resources are used and distributed rationally, equitably and transparently. Bidirectional planning and decision-making are encouraged through communication of information and feedback from subordinates up to supervisors, as well as down from leaders to the broad School community.

Most School activities in some way relate to the educational experiences of our students, so that resource investments typically directly or indirectly translate into a superior educational environment. Some key resources and their attendant allocation policies are described below.

Finances

The 2014 School budget is approximately $1.8 Billion, up from $1.5 Billion only four years ago. The continued rapid growth of the budget is attributable to many factors, including: an increase in faculty practice volume and revenues; the addition of approximately 100 new research faculty who have attracted considerable extramural grant funding; royalty income; and Hospital purchased services and support for faculty recruitment. The faculty practice has been achieving budgeted growth rates of six to seven percent. Record levels of NIH grant funding to both new and longer term ISMMS investigators are a great source of pride for the School this year, and are a reflection of the faculty's hard work and dedication to cutting-edge research.

Unrestricted operating budget performance – actual (2010 to 2014), budgeted (2015) and estimated (2016 to 2019) – is presented in Appendix 3-B. Revenue and expense data from prior years form the baseline for forecasting future budgets. It is noteworthy that although tuition and fees comprise a very small portion of total annual income, a far larger percentage of annual expenditures are instructional and departmental in nature.

Financial planning, assessment of financial performance and allocation of resources are inextricably intertwined, and ensure that the ISMMS remains fiscally sound so that it can carry out its mission. The School uses a well-defined, broadly promulgated, formulaic, mission-based budgeting methodology known as "CARTS" for its Clinical, Administrative, Research, Teaching and Strategic components. This budgeting approach considers funds flow to address both operational and strategic needs at the departmental level, but always within the context of

broader institutional needs and goals. Unrestricted financial operations are required to break even or show positive results overall each fiscal year.

The Senior Vice President for Finance (SVP) and the ISMMS Dean meet weekly to review financial results; by identifying potential problems early, they can work with departments to plan for and pursue corrective action. The Dean and SVP meet weekly with the CEO for a School Strategy meeting, and also meet with the CEO regularly to review, and as necessary refine, the financial strategic plan. The Dean and SVP also report up to the Board of Trustees Finance Committee, providing a monthly report and meeting with the committee bimonthly. Independent audits are conducted annually by an external accounting firm.

The Dean and SVP monitor Departmental financial performance on a continuous basis, meeting regularly with Department Chairs and Institute Directors to review financial results and business plans to support new initiatives. Each fall, all parties meet to plan for financial needs for the following year and to establish an appropriate budget; this is a multilayered process that allows for ample exchange of information and ideas before final budgets are set. The level of cooperation and collaboration is high and contributes to sound and reasonable budgets that have the buy-in of all parties.

For educational programs, the A-R-T and S components of CARTS fund administrative support ("A"), research support ("R dollars"), faculty teaching services ("T dollars"), student services and investments in strategic ("S") program initiatives. "T dollars" have proven to be a particularly successful way to motivate and reward educators. Introduced a decade ago, they represent an allocation to departments based on the teaching efforts of their faculty. Because faculty compensation is based on revenues linked to their various activities, faculty have an incentive to teach so that they will generate T dollars to bolster their income. This approach contrasts quite favorably with prior practices in which not only were there no financial rewards for teaching, but faculty often found themselves at a compensation disadvantage if they dedicated more time to teaching and less to activities that generated revenue for them.

CARTS support for teaching activities is carefully monitored, and during budget season in particular the SVP of Finance examines teaching services, course funding, student services, infrastructure and other components of the teaching programs. The SVP meets with the education deans to review performance against budget and discuss possible changes based on both internal and external factors in order to ensure that appropriate financial support is available to meet teaching program needs.

Facilities/Physical Plant

Most buildings on Mount Sinai's Upper East Side campus are used for educational activities. The recent creation of the Health System has added member hospitals as learning sites for our medical students. The Dean's Office maintains an inventory of facilities on each campus, monitors utilization to ensure that space is optimally allocated, and leads capital planning efforts. Appendix 3-C provides a sample blueprint for a floor in the Annenberg Building.

As described under Standard 2, a standing capital projects group monitors repair, renovation and construction needs on a regular basis; the group includes representatives from the Dean's Office, Finance, Facilities Management, Engineering and Information Technology, and as needed user constituencies are invited to provide input, thus ensuring that all relevant voices are heard. Collaboration and communication are key to the identification, planning and implementation of capital projects. An annual schedule is created for projects, which takes into consideration need, funding availability (including, particularly for educational projects, philanthropy) and timing. In certain projects student input is particularly important, such as for the planning of the new student lounge that is part of a large renovation of the Annenberg lobby.

Major facilities serving the needs of the School include:

- Classrooms and Lecture Halls – Although the majority of classrooms and lecture halls are in the Annenberg Building, the new Hess Center for Science and Medicine has added to the inventory; additional locations include the Icahn Building and the Kravis Center for Advanced Medicine. The lecture halls and meeting rooms at Health System member hospitals are also utilized for educational purposes, primarily postgraduate. Recent capital projects to address educational needs have included upgrades to classrooms and a lecture hall on Annenberg 12 and creation of new classrooms on the 10th floor. A portion of the Annenberg library has been repurposed to house the highly successful Graduate School elective on innovation and entrepreneurship. Increasing student enrollment in particular programs, the addition of programs and the emphasis on small-group learning are all taken into consideration in space planning, decision-making and allocation.
- Research Facilities and Related Resources – High quality, plentiful research resources provide an excellent environment for medical students and graduate students to undertake research projects. Mount Sinai's large research enterprise is made possible by an abundance of laboratories spread over four buildings: the recently completed Hess Center for Science and Medicine, the Annenberg Building (where ongoing laboratory renovations are in progress), the Icahn Medical Institute and the renovated Atran-Berg Building.

  An impressive array of institutional shared research facilities ("Cores") provides state-of-the-art instrumentation and methodologies to support the School's research programs. Cores are staffed by experts who not only provide research services, but also offer instruction and training that constitute a major educational resource for those wishing to diversify or explore new avenues of research. Services are provided on a fee-for-service basis, with partial subsidization by institutional funds to keep costs reasonable for all. Recently, training fees for these Cores were eliminated in order to remove a potential access barrier for students, postdoctoral trainees and junior faculty.

  Each institutional Core has a standing advisory committee (AC) comprised of faculty, graduate students and postdoctoral fellows that meets semi-annually with the Core Scientific Director, Core Manager and Core Administration to review user feedback and consider performance. In this way, the AC serves in an advisory role to the Dean. The Senior Associate Dean for Research Resources leads a central administrative group that supports all business functions of the Cores (billing, hiring, repairs, equipment acquisition, etc.). This team conducts a monthly financial analysis of each Core, including utilization rates, fees and

user satisfaction. The Senior Associate Dean meets with the Dean for Basic Sciences every two weeks to discuss issues pertinent to the Core resources program, and once per month meets 1:1 with the Core Directors. Standard 2 addresses planning and resource allocation decisions relating to institutional Cores.

Institutional cores are supplemented by an array of departmental, institute and center core research facilities. Some of these entities offer their own cores when access to resources must be limited and specialized equipment is required. Access is primarily to members of these areas but resources are available to collaborators or upon special arrangement. These cores are not subsidized and generally do not charge fees to users.

- Research Space Allocation – Productivity is an important factor in the assignment of space to faculty. Benchmarks are well defined and widely publicized. Research density, a calculation of extramural funding per square foot of laboratory space, is used to assign additional space to successful investigators and to condense the laboratories of less productive researchers. Even with the addition of considerable research space in the Hess Center, demand continues to outstrip available space, so that we are exploring off-campus leases for funded investigators. The research density metric is evaluated periodically and in light of the tightening NIH landscape has been amended to recognize the special challenges that junior faculty face in acquiring grant funding.
- Clinical Facilities – Mount Sinai provides both outpatient and inpatients settings for clinical learning. The 1,171 bed Mount Sinai Hospital shares the Upper East Side campus with the School. Outpatient student experiences take place in the Mount Sinai Doctors Faculty Practice on 98th Street, the Center for Advanced Medicine and the new Hess Center for Science and Medicine; some students also gain experience in private practice offices of our voluntary faculty in the local community. With the creation of the Mount Sinai Health System, students will increasingly have rotations and electives at five new member hospitals. Students also gain experience at affiliated academic institutions, most notably Elmhurst Hospital Center, which is part of the municipal hospital system, and the Bronx Veterans Administration Medical Center. The variety of clinical venues presents exciting opportunities for our students to train with populations that are diverse ethnically, socioeconomically, and culturally. The School is currently renovating a building on 85th Street to provide expansion space for the faculty practice, which is functioning at close to capacity; this project was an outgrowth of the ad hoc committee that Dean Charney charged with finding options for adding to clinical space.
- Residential Buildings – The Aron Hall dormitory is owned by Mount Sinai and houses medical students, graduate students and postdoctoral trainees. Mount Sinai also owns 25 apartment buildings with nearly 2,000 units within walking distance of the Upper East Side campus. MD and PhD students are guaranteed institutional housing and indeed, most choose to live in our buildings. Postdoctoral trainees do not have priority access to institutional housing, but because of the large inventory of apartments many postdocs do in fact get assigned to apartments, which they can rent for up to three years. Mount Sinai maintains some master leases that secure a set number of apartments in local residential buildings to accommodate the excess demand. Faculty are not eligible for Mount Sinai housing but in many cases recruits are offered housing loans or other relocation assistance if they are moving to New York.

Information Resources

[Academic Informatics and Technology (AIT)](#) serves as the information resources and technology hub for all students, residents, fellows, and the clinical and basic science faculty of the Icahn School of Medicine at Mount Sinai. It is comprised of four components:

- [Gustave L and Janet W. Levy Library](#) – The library is the core of AIT, with an extensive collection of biomedical resources that includes over 50,000 e-journals, 100,000 e-books and over 150 databases covering clinical information, education, statistics, patient education, and more, all accessible both on campus and remotely. The library's collection also includes several apps and mobile optimized resources. The research services provided include an on-demand Ask-a-Librarian service and research consultations with librarians on searching the biomedical literature, bibliographic data management, bioinformatics, statistics, systematic review methodology and other topics. Additional library services include interlibrary loan and document delivery, printing, scanning, photocopying and phone charging stations. Competence in information literacy is an expectation of all educational programs, and the Library's instructional/information literacy program is outlined in Appendix 3-D. Appendix 3-E provides library utilization statistics for the past year.
- Archives and Records Management – This group ensures that Mount Sinai's historical records (in all physical and electronic formats) are managed and preserved according to their value, leading to more efficient storage of these records; provides historical information and images about Mount Sinai for use in research, lectures and publications; and provides records retention guidance to ensure compliance with all laws, regulations and internal policies.
- Academic IT Support Center – Supports students, faculty, and staff through: distribution of site-licensed software; assistance with resolving hardware and software computing issues; configuring secure email access on mobile devices; assignment of network logins and email accounts for users on medical school computing networks; and management and questions regarding Google apps for students.
- Instructional Technology Group – This team assists with instructional design to promote and demonstrate thoughtful integrations of instructional technology with teaching and learning; manages and supports the Learning Management System (Blackboard) for students and faculty; provides the Lecture Capture System (Echo 360) to record lectures and classes, making them available more easily to students and faculty; and offers an Academic Medical Illustration service to support the research, publication and teaching of faculty and students.

AIT also supports faculty and students through library space on the Annenberg 11th floor dedicated for study and learning. This space includes: 2 hands-on computer classrooms (seating12 and 35); over 80 publically available computers loaded with research tools including EndNote, SAS, and SPSS; study tables, carrels and small group study rooms. Library spaces are open seven days per week, until 11pm most weekday nights and with extended hours during exam times.

In 2014 ISMMS AIT supported over 100,000 user requests, stored over 4000 hours of lecture content, managed 800 Blackboard courses, provided users with over 340,000 digital periodical searches and hosted 260,000 Levy Library visitors.

ISMMS Website

Marketing, development/programming, content management, search engine optimization, social media, and design teams within the Health System's Digital and Social Media Department build, enhance, and maintain the School's website and related social media properties. Their services include updating content, assisting in the development of new and improved departmental or program websites, and providing technical assistance. A major initiative has just commenced to overhaul the entire School website in order to improve user experience, maximize the presentation of important information, and ensure that the site serves the School's mission and goals. The process began with a series of interviews with School leadership, faculty and key staff, and over time will incorporate feedback from many other audiences to ensure the website serves as a useful resource for the entire ISMMS community.

Computational Resources

ISMMS has invested significantly in high performance computing resources to support our research and educational programs. In 2012, the School purchased a supercomputer dedicated to improving scientific discovery for researchers at Sinai. Dubbed "Minerva" after the Roman goddess of wisdom and medicine, it consists of 7,680 AMD compute cores, 30,000 gigabytes of memory, and 1,500,000 gigabytes of high speed parallel storage. It has a peak speed of 70,000 gigaflops, and provides approximately 64 million hours of computation per year. A recent \$2M NIH grant to ISMMS will enable purchase of an additional, specialized supercomputer and data analysis engine to support genomics-based research for a broad range of diseases; approximately 24 NIH-funded Principal Investigators will directly benefit from this new resource.

Supercomputing capabilities comprise only one piece of the research information technology infrastructure at Mount Sinai. Data management, specimen management, data mining/data marts and e-learning are also offered in support of research efforts. Additionally, the School has invested in the development of a new electronic research administration system known as "Ideate" to simplify and expedite the research application submission process for investigators and other research personnel in support of our research mission.

Personnel

ISMMS has approximately 2,700 full-time faculty, and over 99% have doctoral degrees in fields relevant to their educational, teaching and clinical roles. Many of these faculty teach in the degree-granting programs and the postdoctoral clinical and research programs. A high faculty-to-student ratio provides generous staffing for didactic settings and also gives students a large complement of mentors, advisors and role models to support their clinical and research interests. The MD, PhD and Master's programs are taught almost exclusively by full-time faculty whose primary commitment is to Mount Sinai and to teaching and scholarly activities.

The number of full-time faculty has increased dramatically in the past five years for two key reasons. First, recruitment efforts outlined in the Strategic Plan have resulted in growth of the research and clinical faculty. Second, the creation of the Health System has added to the faculty size in the past year. Most faculty based at member hospitals are clinicians, and many have

experience in teaching medical students, residents and fellows (Standard 8); some also conduct clinical research which presents exciting new opportunities because of the large, more diverse patient population served by the Health System.

Investment in faculty for the educational programs continues to expand. Two recent examples involve the MD/PhD program: creation of an MD/PhD core course and associated funding for faculty teaching efforts; creation of two paid associate directors – both faculty positions – will enhance program oversight and student contact.

ISMMS also has approximately 2,300 voluntary faculty and 450 part-time faculty. The voluntary faculty tend to be physicians with practices in the community; their teaching is typically directed to residents and clinical fellows in The Mount Sinai Hospital, although some do occasionally mentor medical students. Part-time faculty are hired primarily to provide a limited, defined clinical service and have few or no responsibilities relating to teaching.

The School employs approximately 5,200 full-time staff. Their credentials are related to the type of work that they perform, and the recruitment process includes an evaluation of an applicant's education and experience relative to the needs of a particular position. Human Resources offers staff development programs to expand skills and enhance job performance.

Resource availability is taken into consideration during both faculty and staff recruitment. For faculty, the hiring department must submit a business plan to the Dean and SVP for approval prior to extending any offer. Both faculty and staff compensation must be approved by Position Control (chaired by the SVP for Finance) prior to any commitments being made. In addition, faculty recruitments require articulation of facility needs and identification of appropriate research and/or clinical space prior to any commitments.

In summary, ISMMS provides abundant resources for the conduct of the School's educational, clinical and research activities. Strong planning efforts, tight systems of controls and rigorous approaches to assessment ensure that School resources are allocated wisely, with ample consideration given to purpose, utilization and goals. In these ways, the School is able to allocate its highly valued resources in a judicious manner that allows it to fulfill its mission.

Standard 4: Leadership and Governance

Icahn School of Medicine at Mount Sinai (ISMMS) has a well-defined governance structure that ensures appropriate decision-making, sound policy development and adequate oversight. Appendix 4-A highlights relevant sections of the Self-Study report that address the Middle States Fundamental Elements relating to Leadership and Governance.

ISMMS is chartered by the Board of Regents of The University of the State of New York, acting for and on behalf of the New York State Education Department. In 2013, ISMMS' charter was amended to reflect the addition of a passive parent to the School's corporate structure. This change occurred as part of a transaction involving three partners: The School, The Mount Sinai Hospital and Continuum Health Partners. A new not-for-profit parent holding company, the Mount Sinai Health System, Inc. (MSHS), became the sole corporate member of the School. The authority of MSHS is limited to electing the School's Board of Trustees. The School's trustees have independent, individual fiduciary responsibility to act in the School's best interests. MSHS is not authorized to conduct education programs or to operate the School, and does not have any resources (employees, facilities, budgets, etc.) to do so. The School retains its authority to make decisions that are best for the School, unencumbered by outside influences that might be detrimental to its ability to fulfill its mission. This new structure was reviewed and approved by the Middle States Commission on Higher Education through its Substantive Change process.

ISMMS's governance structure is set forth in its Bylaws. The Bylaws delineate the powers, size, qualifications, selection, and resignation processes of ISMMS' Board of Trustees, officers and committees of the Board of Trustees (BOT) and identify the key executive positions in the School, e.g., the Dean, Associate Deans and Assistant Deans. The Bylaws also describe the powers of the Health System.

The ISMMS Bylaws articulate the: organization of the Board of Trustees (including composition, meeting frequency and committee structure); roles and reporting relationships of the Chief Executive Officer, the Dean and other School leaders; governance structure; requirement of faculty rules and regulations; budgetary authority; and conflicts of interest standards.

Currently 55 trustees serve on the Board.   Until the expiration of the terms of the current trustees, the Trustees Committee of the Board has the authority to elect trustees. Upon expiration of the terms of the current trustees, the Health System shall have the authority to elect trustees. Trustees come from a variety of professions and bring experience in finance, law, communications, education, public relations and other areas so that they are able to contribute to the School in myriad ways. Many trustees are deeply involved in philanthropic initiatives in connection with ISSMS.   Trustees are not compensated for their service on the Board of Trustees.

Trustees are subject to the same conflicts of interest policies as are ISMMS' faculty, staff and students (Standard 6) in order to ensure that decisions are made in the interests of ISMMS without their personal financial interests influencing the Trustees' performance as members of the ISMMS Board. Trustees complete an annual disclosure form relating to their personal

financial interests, and potential, actual or perceived conflicts are addressed and if necessary managed by the Trustees Conflicts of Interest Committee, a subcommittee of the BOT Executive Committee.

The Board of Trustees or its Executive Committee meets monthly. Standing agenda items include approval of faculty appointment, promotion and tenure recommendations; the agenda also typically includes proposed policy changes for review, such as recent changes to our conflicts of interest in research policy. The Bylaws entitle each trustee to one vote on matters submitted to the Board and require a quorum in order for the Board to take an action; a majority vote is required for approval. The monthly meetings also provide an important opportunity for the senior leadership team to apprise the Board of new issues, concerns and initiatives and to solicit Trustee input and endorsement.

Numerous standing committees of the Corporation/Board of Trustees are described in the Bylaws and provide targeted oversight for School activities ranging from educational programs, research, clinical care and resources to planning, compliance, finances and external affairs. Meeting frequency depends on the purview of the particular committee; quarterly meetings are typical. Together these standing committees offer expertise and support that help ensure that the School fulfills its mission, is fiscally sound, maintains appropriate resources and abides by internal controls and regulatory requirements. In addition, the Board may establish additional standing or special committees. Committee members are designated by the Chairman of the Board and approved by the Board. Standing committees of the Board include the Executive Committee, which has all of the powers of the Board of Trustees to the extent permitted by law. Other important committees fall into the following categories and include:

BOT Trustee Oversight Committee
- Trustees Committee – Recommends candidates for vacancies in the Board of Trustees and for committee chairmanships and membership of each committee; reviews performance of sitting trustees and officers, oversees Board of Trustees' self-assessment, new trustee orientation and ongoing trustee education, and identify governance issues.

BOT Education Committees
- Graduate School Committee – Monitors matters relating to doctoral, Master's and the MD/PhD programs, as well as matters relating to student housing, accreditation and other perquisites.
- Medical Education Committee – Monitors matters relating to the MD program, medical resident training and continuing medical education and training programs, and matters relating to student and resident housing, accreditation and other perquisites.

BOT Research and Clinical Care Committees
- Research Committee – Monitors School research matters including those relating to extramural research grants, and policies and procedures relating to human subject safety.
- Patient Care and Quality Assurance Committee – Reviews and monitors provision of patient care and quality assurance activities, professional staff development and compliance with legal and regulatory requirements.

- Technology Transfer Committee – Monitors matters relating to patents, licensing and related activities.

BOT Planning and Resources Committees
- Strategic Planning Committee – Develops and recommends to full Board or the Executive Committee strategic plans for approval.
- Real Estate and Facilities Committee – Monitors matters relating to the real estate and facilities, including management, maintenance and renovation and construction, acquisition of new properties, and sale or transfer of existing properties.
- Information Technology Committee – Monitors information systems, e.g., management information systems, data processing, clinical technology, and computer technology.
- Development Committee – Monitor matters relating to philanthropic fund raising, donations and testamentary and deferred gifts.
- Finance Committee – Monitors matters relating to School finances, including annual budget of revenues, expenses and capital expenditures; monitors and establishes appropriate levels of general and professional liability, property and other types of insurance.
- Investments Committee – Supervises the investment of the School's endowment and other funds and accounts.
- Compensation, Employee Benefits and Employee Relations Committee – Reviews and approves matters relating to personnel, labor relations, collective bargaining and compensation and fringe benefits of employees; establishes compensation and fringe benefits for senior and/or highly compensated personnel; and serves as, or delegates and appoints, fiduciaries for employee benefit plans.

BOT Legal and Compliance Committees
- Legal Committee – Monitors the legal affairs, including litigation and the services of outside counsel.
- Audit and Compliance Committee – Monitors the integrity of financial statements; financial reporting processes and systems of internal controls; compliance with legal and regulatory requirements and standards of ethical conduct; qualifications, independence and performance of independent auditors; and performance of internal audit and compliance functions.

BOT Outreach Committees
- Community Affairs Committee – Monitors matters relating to relationships with communities served and local community leaders.
- Government Affairs Committee – Monitors matters relating to School relationships to federal, state, and/or local governmental agencies.
- Public Affairs and Marketing Committee – Monitors public relations, including dissemination of information through the press and other media

The Chief Executive Officer, who reports directly to the Board of Trustees, is invested with the authority and responsibility necessary to operate ISMMS and all of its activities and departments. The Chief Executive Officer is responsible for the development, submission and implementation of all plans to maintain ISMMS' compliance with statutory and regulatory requirements.

The Dean, who is the Chief Academic Officer of the School, has powers and responsibilities determined by the Bylaws and specific duties confirmed by the Chief Executive Officer (Standard 5). The Dean reports to the Chief Executive Officer who, in turn, reports to and is monitored by the Board.

Appointment of the Chief Executive Officer, Dean and major School leaders (such as Department Chairs, Executive Vice Presidents, and Deans) are all subject to approval by the Board of Trustees to ensure that those selected are appropriately qualified for their positions. These officers are not members of the Board of Trustees.

The performance of the CEO and ISMMS Dean are evaluated annually by the Board of Trustees. The Dean conducts annual evaluations of all department chairs and institute directors, as well as the deans who report directly to him. Sub-deans are evaluated by their direct supervisors. The Faculty Handbook, which is posted on the mssm.edu website, describes the governing bodies within the School. This includes descriptions of the structure, composition and charge of the Faculty Council and its committees. It also describes the nine standing committees of the Dean, which are charged with focusing on many critical areas, e.g., curriculum, admissions, promotions, grievance, conflicts of interest, and faculty appointments and promotions.

The Dean seeks input from many sources on major decisions. The Dean's Leadership Board is chaired by the Dean and is comprised of Department Chairs, Institute Directors and Deans and votes on major policy changes for the School. Examples of policy changes approved by the Dean's Leadership Board in the past year include revisions to the faculty appointments and promotions methodology and to the conflicts of interest in research policy.

In addition to the Dean's Leadership Board, the Dean has recently initiated meetings in alternating months of a Dean-Clinical Leaders group and a Dean-Research Chair leaders group. The Dean presides over each meeting of the clinical group, and will alternate with the Dean for Basic Sciences in chairing the research leader meeting. It is too soon to determine whether this new structure will achieve the focus and dialogue that are essential in each area; with time, the success of the separate meetings will be evaluated and will either be formalized as the norm or will be adjusted if necessary.

The Faculty Council is comprised of 51 peer-elected representatives from the academic departments and interdisciplinary institutes of the School. Four subcommittees of the Council, including an Executive Committee, focus on specific areas as defined in the Faculty Handbook. The Faculty Council provides a forum for discussion and serves as the collective voice for the faculty by providing a link from the faculty to the Dean. The Council has a website on which it posts a roster of representatives, an email address for soliciting input from the faculty at large, Council minutes and documents relating to its governance. The Council was reformulated approximately five years ago to create a more effective body, and indications to date are that it has been successful. Council members are taking an increasingly active role in soliciting input from their department/institute faculty and in turn taking issues to the administration for discussion. Examples of the influence of the Council have been modifications to the School's travel policy based on Council input and adjustment of the benefits policy in response to concerns raised by representatives. The Faculty Council is beginning to address the issue of

representation of faculty based at Health System member hospitals and is considering the optimal size of the Council, methods of communication across sites and election processes.

The Student Council serves as the voice of the students in the School's degree granting programs. A total of approximately 60 elected members are assigned to three groups: General Body, consisting of class reps, program reps (i.e. MD1s, MD2s, MD/PhDs, Genetics), with subcommittees on areas such as Housing and Academic Technology; Financial Management Team (comprised of class and program representatives) and an Executive Board (Council president, vice president, treasurers – elected from the Financial Management team). The Student Council communicates frequently with the study body through regular email updates, posting of minutes, newsletter and a new website. The Executive Board meets monthly with the ISMMS Dean and select education deans, thus ensuring ample opportunity for exchange of information and ideas. An annual survey of students conducted by the Council addresses all aspects of student life, and the findings are provided annually in a report to the Board of Trustees; the survey indicates overwhelmingly high morale and enormous satisfaction with the School's educational programs.

An entire chapter of the Faculty Handbook (Chapter IV) is dedicated to defining the various types of faculty and their attendant responsibilities. ISMMS faculty members hold a primary appointment in an academic department (and often secondary academic appointments). Occasionally, faculty whose interests and responsibilities are split equally among two departments may receive a "joint primary" appointment. Multidisciplinary Institutes at ISMMS complement the traditional academic departments and foster collaboration. Faculty having research and/or teaching interests and/or responsibilities consistent with one or more Institute's goals can also be appointed as members of those Institutes.

In summary, ISMMS' governance structure and decision-making processes are clearly defined and support ISMMS' ability to carry out its mission. ISMMS is fortunate to have an active and committed Board of Trustees. Its dedicated subcommittees for Research, Medical Education and the Graduate School provide special opportunities for Trustee focus, input, oversight and resources for the related but unique issues of each program, and are enthusiastically embraced by our trustees. ISMMS provides many venues for faculty, students and staff to have input regarding decisions affecting them, and regularly monitors and evaluates these processes to ensure that they continue to enable constituencies to participate in ISMMS' governance function.

Standard 5: Administration

From its inception until 2013, Icahn School of Medicine at Mount Sinai (ISMMS) partnered with The Mount Sinai Hospital under an organizational umbrella known as the Mount Sinai Medical Center. In 2013, the Medical Center combined with Continuum Health Partners to create the Mount Sinai Health System, which is comprised of seven member hospitals and ISMMS. In order to provide the historical context for the current ISMMS administrative structure, this section includes references to both the Medical Center and the Health System.

The ISMMS Bylaws stipulate that a Chief Executive Officer (CEO), appointed by and reporting to the Board of Trustees, is responsible for overseeing all functions of the School (Standard 4). The effective performance of the CEO is assessed on an ongoing basis by the Board of Trustees to ensure that the CEO and the organization comply with statutory and regulatory requirements and carry out appropriate oversight. The Dean, the Chief Academic Officer of the School, is appointed by the Board of Trustees; the Dean reports to the CEO and to the Board and is evaluated by them. The Dean provides periodic updates on School performance to both the CEO and the Board, including presentation of metrics focusing on the multiple components of the School's mission as well as strategic planning initiatives, and in turn receives their input. Together, they ensure that the School carries out the educational, research and clinical components of its mission.

The Dean of ISMMS, Dennis Charney, MD, was appointed in 2007. Dr. Charney, an experienced administrator and world-renowned physician-scientist, is well qualified for the challenges of this position. He was recruited to ISMMS from the National Institute of Mental Health (NIMH) in 2004 to serve as Dean for Research, and within one year was given an expanded role as Dean for Academic and Scientific Affairs. Prior to his NIMH position, Dr. Charney worked for over two decades at Yale University As Dean for over seven years, Dr. Charney's tenure exceeds the average for medical school deans (estimated at four years in a 2007 survey), a testament to his success as a leader, educator, scientist and scholar. He is a role model for students, faculty and administrators alike. Under Dean Charney's leadership, the School's academic, scientific and clinical programs have never been stronger.

Dean Charney reports to Kenneth Davis, MD, the CEO of the Mount Sinai Health System. Dr. Davis is an internationally acclaimed investigator of Alzheimer's disease. He was appointed to his current role in 2013, having served previously as CEO of the Mount Sinai Medical Center (2003 – 2013), ISMMS Dean (2003 – 2007) and Chair of Psychiatry at Mount Sinai (1987–2003). As these dates indicate, for four years, Dr. Davis was both Dean and CEO, an atypical joining of these roles at Mount Sinai, but one that enabled Dr. Davis to steward both School and Medical Center through a difficult period of financial and organizational challenges. As a seasoned administrator with vast knowledge of Mount Sinai, Dr. Davis successfully created tight fiscal controls, strong oversight tools and clear expectations of performance accountability for all employees from most senior to junior. He laid the foundation for the financially sound, highly productive environment of the School today. In 2007, the Board of Trustees separated the Dean and CEO roles so that the School and Medical Center would each have its own designated leader; it was at this point that Dr. Charney was appointed Dean of the School.

Appendix 5-A illustrates the organizational structure of the School and the network of leaders who carry out its mission, develop and implement its plans, and play key roles in the strategic decisions regarding its educational, scientific and clinical programs.

Fourteen deans support the ISMMS Dean by providing targeted leadership in specific areas. Some of these deans are directly responsible for the mission–based educational, research and clinical programs, while others are more focused on infrastructure, overseeing such areas as operations and academic affiliations. In light of Dr. Charney's emphasis on faculty development and mentoring, there is also a Dean for this. Department Chairs and Institute Directors oversee the academic departments and report directly to the ISMMS Dean. The Senior Vice President for Finance completes the senior team and is charged with ensuring that the School is and will continue to be fiscally sound. With the exception of the SVP and Dean for Operations, who have M.B.A. degrees, these leaders all have doctoral degrees in medicine and/or science, as well as programmatic and administrative experience in their areas of expertise.

Chairs and Directors oversee 34 academic departments and 22 multidisciplinary institutes respectively. They are responsible for the programs, personnel, finances and operations of their entities. The administrative structure of large departments often includes divisions focused on specific areas of expertise; these are led by Division Chiefs who report to the Department Chair. In addition, many departments have one or more Vice-Chairs with broad responsibility for a particular area, e.g., Vice Chair for Education. Every department has an administrative team that is responsible for the business activities of the department; the administrator reports to the Chair and also works closely with the SVP for Finance.

Senior Associate Deans, Associate Deans and Assistant Deans support the senior leadership team; those with faculty appointments have doctoral degrees and most others have master's degrees in a relevant field. The Senior Associate Dean title was introduced in 2013 after the creation of the Mount Sinai Health System; eight associate deans were promoted into this title in recognition of their broader responsibilities relating to integrating member hospital faculty and programs into the School.

Additionally, Site Chairs were appointed for every clinical department at every member hospital; reporting up to their System Chairs in the ISMMS academic departments, the Site Chairs partner with their System Chairs on integration. Deans at all levels work closely with each other, with the Chairs and with the SVP for Finance to ensure optimal goal achievement through rigorous planning, assessment and appropriate resource allocation.

The School employs approximately 5,200 staff. The recruitment division within the Department of Human Resources (HR) ensures that the credentials of incoming staff are appropriate to their positions. HR offers staff development courses that train new and veteran staff in a wide variety of skills, ranging from increased computer competencies to public speaking to supervisory training. PEAK, an on-line learning platform, was recently introduced as an additional venue for learning; PEAK is able to track employee completion of mandatory training courses to ensure compliance. Faculty development activities are described in Standard 10.

Lines of authority are well defined and well known. Every faculty recruit receives an offer letter and a job description that identify the person to whom they will report. Similarly, new staff view job descriptions as part of the application process, and upon hire receive a letter from Human Resources than includes the name of their direct supervisor. The Information Technology team has created an on-line reporting tree for each unit which is especially important during the annual evaluation process, when supervisors must assess the performance of all staff under their purview.

The administrative structure is modified on occasion in response to changing needs, as in the creation of the senior associate dean title as described above. Another example was the creation of a single Bursar's Office, one Financial Aid Office and one Registrar for all of the degree granting programs, which evolved from discussions about the similarity of administrative functions in the MD and Graduate School programs. Their integration has resulted in concentrated expertise, improved efficiency and financial savings (Standard 9). Another recent administrative structural change is the reorganization of the Department of Cardiothoracic Surgery into a separate Department of Cardiovascular Surgery and a Department of Thoracic Surgery. This split was implemented after analysis of the large increase in surgical volume following the creation of the Mount Sinai Health System; the higher volume combined with an environment of rapidly expanding options in disease diagnosis and treatments specific to thoracic surgery argued strongly for a distinct thoracic department that would better serve patient needs, aid clinical faculty recruitment and enhance research endeavors. Similarly, the increase in the number of multidisciplinary Institutes (Standard 2) is an outgrowth of the changing biomedical landscape and a commitment to maximize the research and clinical capabilities of the School.

In summary, the ISMMS administrative structure is well organized for the effective and efficient conduct of the educational, research and clinical activities that are central to the School's mission. A talented, energetic and creative leadership team oversees and guides the School's programs and ensures they achieve the highest standards of excellence.   Appendix 5-B highlights some of the sections of the Self-Study report that address the Middle States Fundamental Elements relating to Administration.

Standard 6: Integrity

The Icahn School of Medicine at Mount Sinai (ISMMS) provides a work and learning environment that is transparent, ethical and fair. Faculty, staff and students alike are expected to conduct themselves with integrity in all aspects of their roles and at all times, and are supported by policies and procedures that make clear the expectations for every member of the ISMMS community.   Appendix 6-A points to some key sections of the Self-Study report that address the Middle States Fundamental Elements relating to Integrity.

Academic freedom is integral to the ISMMS culture. The Student and Faculty Handbooks specifically articulate adherence to the principles of academic freedom. For example, the statement of academic freedom articulated in the Faculty Handbook addresses freedom in research and resultant publications, and in classroom teaching relevant to one's area of expertise. At the same time individuals are protected from institutional censorship or discipline, there is acknowledgment of each person's responsibility as a member of the academic community to be accurate, to act appropriately and to respect the opinions of others.

Policies are posted on the School website for easy accessibility. Faculty rely on the Faculty Handbook as their major source of relevant policies; in 2013, a supplemental web-based resource, "For Faculty," was created to facilitate faculty access to policies, procedures and services. Students rely on handbooks for their particular programs, e.g., Medical Student Handbook, Graduate Student Handbook, MPH Student Handbook.   The Human Resources Manual and the Compliance Manual have policies that are applicable across status and job titles. All of these handbooks and manuals help students, faculty and staff to know about both their obligations and rights in the School.

Constant review and reconsideration of policies is conducted to ensure that they remain relevant to the ever-changing environment and needs of our students, faculty and staff. Following is a summary by area that demonstrates the School's commitment to maintaining an environment in which transparent policies, processes and attitudes help to form and guide the behavior of every member of the ISMMS community.

Diversity – The School promotes an inclusive environment that welcomes students, faculty and staff from all backgrounds. ISMMS abides by Equal Employment Opportunity regulations, and School policies protect against discrimination for any reason, including gender, ethnicity, culture, socioeconomic situation, sexual orientation or disability. The Center for Multicultural and Community Affairs (CMCA) provides an environment that nurtures and supports students and trainees from groups underrepresented in the medical and biomedical research workforces; the ISMMS Dean's Faculty Diversity Council and Diversity in Biomedical Research Committee supplement the efforts of CMCA by addressing a range of student, trainee and faculty issues. The Disability Services Office is committed to providing equal educational opportunities for students with physical, learning or psychiatric disabilities. The Office for Women's Careers strives to advance the academic careers of women at ISMMS and to address potential barriers to their success; the goal of the Women in Science and Medicine program developed by this Office aims to enable and empower women at all levels to achieve their professional and personal goals.

Student Programs and Services – There are many ways in which ISMMS ensures a fair, supportive and ethical environment for its students. These include:

- Student Handbooks – As described above, on-line student handbooks contain policies and procedures that all ISMMS students need to know. Student Handbooks are revised annually to ensure that the most current policies and processes are included. Both the MD program and Graduate School Handbooks contain a Code of Conduct emphasizing professionalism.
- Ethics Education – Ethics is taught in many venues. For example, the Responsible Conduct of Research Course, which is mandatory for all students and postdoctoral fellows engaged in biomedical research, reflects the School's commitment to integrity in research, and actually surpasses NIH guidelines for content. Upon entering the MD program, students take a Medical Student Oath that emphasizes honesty, compassion and commitment to patients. Medical students receive ethics training throughout their time at ISMMS, including in the Arts and Science of Medicine course and various clerkships.
- Admissions – Admission criteria for each degree-granting program are posted on the web. New members to the admissions committee are oriented to the review process to ensure that every applicant receives fair consideration.
- Consumer Information – Student outcomes, including graduate and attrition rates and MD program placement rates are posted online, as are the fire safety report and the annual Security and Safety Report.
- Course Catalogues – The Graduate School posts its course listings online. The MD program, however, has a proscribed set of courses for the first two years of study and descriptive information about those courses is provided. Every degree-granting program offers sufficient courses to ensure timely student graduation.
- Advancement – The websites of the degree-granting programs, as well as the relevant student handbooks contain the requirements and expectations for advancement to the next level; this applies both to promotion within a program and to meeting requirements to graduate.   The Student Promotions Committee plays a central role in student promotion and preparedness for graduation.
- Student Grievances – The student grievance process is described in Standard 9.
- Discipline – The Student Handbooks address the issue of discipline. In the MD program, the Promotions Committee, which is comprised of both faculty and students, reviews and discusses situations and votes on proposed actions. Precedents established in prior cases are taken into consideration in determining whether discipline is appropriate, and if so in what form.   Students have the right to appeal a disciplinary action to the ISMMS Dean.

Academic Integrity – In addition to the commitment to Academic Freedom described earlier in this section, policies that ensure the integrity of the academic enterprise include:
- Authorship – Clear guidelines are provided on assignment of authorship, the contributions that merit authorship and order of authorship. Individuals are encouraged to communicate clearly prior to commencement of manuscript work in order to clarify expectations up front and avoid possible disputes later in the process.
- Ethical Practices in Research: This policy makes clear the expectation of integrity in the conduct of research. It further outlines the process for addressing allegations of research misconduct.

- Research Integrity Officer (RIO) – A designated senior member of the faculty oversees the review of allegations of scientific misconduct; our RIO, Dr. Reginald Miller, is one of the longest-serving RIOs in the United Statements. His excellence in guiding this process has resulted in a request by the Public Health Service to host an "RIO Boot Camp" at Mount Sinai in 2015. Sponsored by the Public Health Service, the Boot Camp will put forth ISMMS as a model program and the standard for teaching RIO courses.
- Intellectual Property Policy -- The School has a robust policy on the identification and protection of intellectual property.

Personnel – A host of employee policies provide well defined, clear guidelines for faculty and staff. As part of their on-boarding process, faculty are required to sign an "Affidavit and Acknowledgment of Policies" to confirm that they are aware of major policies and where to locate them. Some important policies and practices that apply to all employees include:

- Job Descriptions – All faculty and staff recruits receive a job description that outlines their duties and scope of responsibility.   They are also informed in writing of the person to whom they directly report.
- Performance Reviews – Annual performance evaluations are required for all employees. Although the evaluation tools differ for faculty and staff, both are designed to promote feedback, clarify expectations and improve communications. Reviews are also taken into consideration during compensation and promotion review.
- Code of Conduct and Professionalism – Faculty, students and staff are expected always to act in a professional manner, and policies help to clarify this. A Faculty Council Professionalism Committee was established in 2010 to adjudicate faculty problems that cannot be resolved at the department level. Ombuds Officers are available to respond to complaints by or about faculty, students, trainees and staff. The School Director of Human Resources is also available to investigate allegations. These policies and avenues for complaint are designed to encourage all members of the Mount Sinai community to behave fairly, courteously and appropriately.
- Harassment – The anti-harassment policy and the role and processes used by the Grievance Committee to address allegations are accessible through the faculty, student and postgraduate handbooks.
- Compensation – In all cases, compensation must reflect Fair Market Value and equity. The Faculty Compensation Policy and associated processes are posted in the on-line Faculty Handbook. Staff compensation is determined by the Human Resources Compensation Division, which analyzes the demands of a position and the experience of a particular applicant or incumbent. For both faculty and staff, the Position Control team led by the School's Senior Vice President for Finance reviews compensation recommendations prior to implementation in order to assess need and ensure availability of funds.

Some policies that apply specifically to faculty include:
- Faculty Appointments, Promotions and Tenure (APT) – The Faculty Handbook outlines the criteria and methodology for academic appointment, promotion and tenure. The institutional APT Committee rigorously follows these rules in reviewing candidate applications in order to ensure that fair and equitable consideration is given to each candidate. The on-line policies are supplemented by periodic Faculty Development events to ensure that the

methodology is widely known and understood; the most recent all-campus Faculty Development Symposium dedicated to APT issues was held on October 30, 2014. Similarly, APT education sessions for new Health System Site Chairs were conducted this past spring, to ensure that they are familiar with the methodology and can advise and support their faculty.

- Discipline and Termination – Faculty Handbook guidelines carefully and thoroughly articulate the process for faculty discipline. The Faculty Disciplinary Tribunal, a Committee of the Faculty Council, adheres scrupulously to these published guidelines to ensure due process for faculty who request a hearing to contest a disciplinary action. Staff discipline is coordinated by the Office of Labor Relations within the Department of Human Resources.

Financial Integrity – As described under Standards 2, 3 and 7, ISMMS takes a strong and broad approach to creating and maintaining a sound financial environment. On an annual basis, an independent auditor reviews the School's financial statements to ensure that they comply with generally accepted accounting principles; external financial consultants are available throughout the year to consult on specific situations and to confirm ongoing compliance.

Conflicts of Interest – The School's Conflicts of Interest (COI) Office is responsible for monitoring any financial relationships that faculty, staff and students may have with industry. The goal of the Office is to protect the School and its students and faculty from any potential, actual or perceived conflicts of interest. Three policies that apply to all faculty, students and staff and help protect against conflicts of interest are:

- Business Conflicts of Interest – All trustees (Standard 4), executives and paid faculty are required to disclose their financial interests through an on-line Annual Report on Relationships with Outside Entities. In addition, the COI Office reviews proposed draft contracts that faculty or staff wish to enter into with industry, to ensure that the needs of the School are protected. Complex cases that present possible conflicts may be reviewed for a determination by the institutional Business Conflicts of Interest Committee.
    - Educator Disclosure of Financial Interests – Since 2010, the Department of Medical Education has required that all faculty and speakers in the MD program disclose their financial interests prior to teaching so that administration and audiences are aware of the potential for biased presentations.
- Financial Conflicts of Interest in Research – Research team members must disclose financial interests each time that they submit a research project for review or approval so that a determination can be made regarding whether any financial interests that they have might be relevant to the research. This policy helps to protect the design, data collection and analysis, and reporting relating to the study from any possible bias. The Financial Conflicts of Interest in Research Committee and staff are responsible for developing plans to reduce, eliminate or manage any conflict identified in connection to a research project.
- Interactions with Vendors and Other Commercial Entities – These guidelines explain restrictions on vendor interactions, e.g., prohibitions against accepting gifts, food or pharmaceutical samples. Such restrictions help to ensure that student, faculty and staff judgment and decision-making are not influenced by commercial entities.

The Conflicts of Interest Office will soon be expanded in order to ensure that our growing faculty receive sufficient attention and support in terms of reporting and as necessary managing their financial interests. The recent launch of the Federal Open Payments system underscores the importance of full disclosure and transparency in this regard.

Communications – The Marketing and Communication team ensures accurate and complete reporting on ISMMS activities, and provides oversight for all press releases and public relations documents, while our Human Resources Department has guidelines for advertising. There is considerable interaction between the media staff and our academic departments in this regard, and often the Dean's Office is also consulted to ensure the accuracy of information.

Both the M.D. and Graduate School programs put tremendous effort into providing accurate information to current and prospective students. Significant changes to services, programs, leadership, etc. are announced to the entire ISMMS community through broadcast emails. As needed, Town Hall meetings are convened to address broad changes.

Important information relating to the School is always posted on the website. This includes accreditation information such as our Middle States status and relevant information; prior to going to the Board of Trustees for final approval, this Self-Study report will be posted on the website in order to encourage community input. Key information from the Verification of Compliance with Accreditation –Relevant Federal Regulations is similarly posted.

The School is also committed to keeping Middle States informed of major changes. For example, a Substantive Change request was submitted to and approved by Middle States in 2013 when the Mount Sinai Health System replaced the Mount Sinai Medical Center.

In summary, ISMMS is diligent in its efforts to represent itself accurately and to treat all members of the School community with dignity, fairness and respect. Policies are broadly disseminated, communication is frequent and accurate, and faculty, students and staff are well versed in the rules and processes that are so important to creating an environment of integrity and honesty.

Standard 7: Institutional Assessment

Icahn School of Medicine at Mount Sinai (ISMMS) readily meets and exceeds the requirements set forth in Standard 7 by following a rigorous institutional assessment approach that ensures that the School remains true to its mission and attains its goals. Performance assessment is inextricably linked to planning and resource allocation processes; in an environment of competing needs and finite resources, careful monitoring helps to achieve maximal effectiveness in all areas.   Appendix 7-A highlights some sections of the Self-Study report that address the Middle States Fundamental Elements relating to Institutional Assessment.

The Dean sets forth expectations of thorough, thoughtful, ongoing assessment at all levels, from the institution as a whole to departments, institutes, programs and even individuals.   At all times, these assessments tie in to mission, goals and objectives and their related planning and resource distribution. He directs his leadership team to oversee these efforts and provide frequent updates to him.

The Deans for Education, Research and Clinical Affairs are each accountable for performance in their respective areas of responsibility, and to the extent that there is overlap across areas they are jointly accountable. In the same way, every Department Chair and Institute Director is accountable for the performance of his/her entity, and together are expected to contribute to the success of the School. The Dean meets regularly with each these leaders to review performance vis a vis goals and objectives. As supplements to these 1:1 meetings, the Dean chairs monthly group meetings with all area Deans, Chairs and Directors; the meetings provide an important ongoing forum for clarifying expectations, identifying difficulties, sharing triumphs and planning for ongoing success.

Recognition of the importance of collecting, analyzing and discussing objective data is an integral part of the School's culture.   Although not every aspect of our work is quantifiable, to the extent possible the Dean and his leaders place a high priority on utilizing metrics to compare and assess performance. Internal and external benchmarks are used, and may change over time in response to internal or external exigencies. Industry standards can provide a powerful tool for comparing ISMMS performance with peers. Similarly, home-grown metrics can capture information for areas that are unique to the School and its programs. Dissemination of metrics and outcomes ensures transparency, so that the broader community is aware of expectations and results.

Following are examples of the School's assessment approaches in each of the three main areas of our mission – education, research and clinical care.

Educational Performance

All educational programs at ISMMS are expected to attract highly capable students and to provide an outstanding learning experience to them. Offering a stimulating, vibrant educational environment that prepares our students to be excellent clinicians, scientists, public health experts and leaders with a commitment to lifelong learning is of paramount importance. As the educational program leaders, the Dean for Medical Education and the Dean for the Graduate

School of Biomedical Sciences are responsible for evaluating the quality of all degree-granting programs and ensuring that the School satisfies its mission and meets its goals.

The information below on the overall assessment of educational programs and student learning is addressed in detail in Standards 11 and 14.

Continuous monitoring of program objectives and student success are central to the assessment process. Broad approaches include:

- MD Program
    - Comprehensive assessment exercises target student achievement of specific program goals and objectives as well as preparedness for the next phase of training;
    - Student evaluations of content and teaching methods
    - Faculty evaluation by both students and course directors
    - Annual course and clerkship reviews.
- Graduate School
    - Faculty committees assess whether students have achieved certain "progress points" in order to advance
    - Tools confirm achievement of core and advanced skills, plus critical reasoning, communication and mastery of responsible conduct of research
    - Annual – or if needed more frequent – meetings of Program Directors with the Dean of the Graduate School for ongoing assessment of students' progress and discussion of programmatic issues
    - Annual retreat by each degree-granting program to review course and program strengths and weaknesses and develop recommendations for program revisions.

Among the many metrics used to evaluate institutional success relating to the School's educational mission are:

Assessing Student Body/Student Performance

- Student Qualities – ISMMS seeks students who are highly intelligent and well prepared to excel in our rigorous academic environment; equally important are diversity of gender, culture and experience. Each year, a detailed profile is created of the entering class in order to evaluate the success of the admissions processes in meeting these goals and to determine how our numbers compare with those of our competitors. Metrics include GPA, MCAT and GRE scores, which have been rising each year so that our current classes overall boast some of the highest grades and scores in the history of the School. Gender and ethnic diversity are also important and are evident in our overall enrollment figures. Diversity of experience is similarly apparent. The FlexMed early admissions program introduced in academic year 2013-2014 has already increased the variety of students' academic backgrounds, with a strong showing in computational science, physics and engineering.
- National Benchmarks of Comparative Performance – National standardized exams (USMLE Steps I, II CK and IICS, NBME shelf exams) provide invaluable feedback on MD student performance and competencies so that the School can assess its effectiveness in preparing its students; additionally, to the extent available we also compare ISMMS student scores with

those of students at other schools. The Graduate School of Biological Sciences uses reports from the National Survey of Graduate Faculty and the AAMC to compare ISMMS data with that of graduate programs in other medical schools, which is valuable for identifying strengths and possible weaknesses.

- Postgraduate Placements
    - Residency Match – Each year, after fourth year medical students learn which residency training programs they have been accepted into, the MD program analyzes the "match" data as a means of evaluating program success in preparing students for the most desirable residency programs, and determining where ISMMS stands in relation to its competitors.
    - MD Student Feedback – Graduation surveys – both the AAMC Graduation Questionnaire and an internal ISMMS survey – are valuable tools for evaluating the MD program experience.   In addition, program directors who oversee the internship placements of ISMMS graduates are polled regarding the preparedness of these newly minted physicians for residency programs.
    - PhD Placements – All graduating students are interviewed by the Dean of the Graduate School and/or a relevant Program Director about career plans and placements. By monitoring postdoctoral placements, the Graduate School can assess its success in preparing students for highly coveted positions in academia and industry. Students who do not complete the doctoral program are also interviewed. Each student completes an Exit Survey; the data is presented to the Steering Committee of the Graduate School for insight to possible program weaknesses that might warrant changes.
- Years to Graduation – The completion rate and median time to program completion for matriculated PhD students is monitored by the Graduate School. The data are presented to the Steering Committee of the Graduate School by the Graduate School Dean or Program Director for discussion and evaluation. This information has stimulated a reconsideration of the optimal length of the training period for both the PhD and MD/PhD programs, and may spur changes.
- Student Publications – Peer-reviewed publications are an important metric. Particularly for doctoral students, the quality of publications emerging from their thesis work is an indicator of the School's training success. The growing emphasis on medical student research experiences will increasingly make their publications an important measure.
- Commitment to Community – Because becoming an outstanding physician requires compassion as well as commitment, the MD program values not only grades but also strong interest in the greater social good. Indeed, this is an important part of the School's mission, and we can look proudly at the many remarkable programs which our students have organized or joined to confirm our success in this area. Community outreach activities that bring MD students into collaborative relationships with residents and caregivers of our adjacent East Harlem neighborhood – one of the poorest zip codes in the country – include the East Harlem Health Outreach Partnership (EHHOP) (providing health care to uninsured residents), the Community Health Improvement Project (health screenings), First Generation Scholars (MD students mentoring high school students), the Human Rights and Social Justice Scholars Program, and Hands on Science (creating videos for pediatric patients). Increasing student interest in international health issues is reflected in their rising participation in the activities of Mount Sinai's Institute for Global Health. Both the number of students participating and the quality of the services delivered attest to goal achievement in this area.

Assessing Educational Program Quality

- <u>Teaching Quality</u> – Evaluations take place at multiple levels. Students complete evaluations of their faculty in every course and clerkship, and Course and Clerkship Directors review all faculty teaching evaluations. As a result, faculty receive ample feedback on their success as educators. As necessary, corrective action plans are developed to enhance performance and progress is monitored; if remediation does not succeed, a faculty member may be removed. Faculty success as educators in an important consideration on individual annual faculty performance reviews by department chairs. These reviews supplement the feedback that faculty receive from students and course directors and help them understand how their teaching activities are valued within their home academic department. Further, these reviews allow for discussion between a faculty member and his/her Chair of the relative time devoted to educational activities compared to other endeavors, and whether a realignment of work duties is needed.
- <u>Training Grant</u>s – NIH training grants for PhD and MD/PhD programs are a prestigious source of support and a valuable measure of the quality of our graduate training programs. Performance assessment includes tracking new and renewed grants, and also securing feedback from the NIH to our annual progress reports as well as the extensive competitive renewal evaluations undertaken every five years. As NIH support for training grants shrinks nationwide, our ability to retain or increase our complement of slots will be closely monitored by the School
- <u>Curricular Reform</u> – In the past year, in concert with the tenets of our Strategic Plan, the MD program developed and implemented curricular reforms to enhance the educational experience of our students. The increasing prominence of the MD program as a national leader in educational innovation is reflected in a recent award to ISMMS from the Josiah Macy, Jr. Foundation to organize a national "summit" on pre-medical education. Undergraduate science educators, pre-health advisors, medical school admissions deans, leaders of innovative curricular programs, leaders of post baccalaureate programs and leaders of successful pipeline programs and diversity initiatives convened to engage in a discourse on potential improvements. Over the course of two days, participants educated each other on each discipline's best practices, current innovations, challenges and ideas for the future. Members of each discipline contributed to what will ultimately be a white paper on the future of pre-med preparation.

The Graduate School uses student surveys and other feedback to assess program quality and student satisfaction. Strategic planning efforts currently in progress for the PhD and MD/PhD programs (Standard 2) are heavily influenced by student input on the strengths and weaknesses that they perceive in such areas as curriculum and scheduling.

The Graduate School carefully tracks the volume of applicants interested in each training area and its connection to a multidisciplinary Institute in order to assess the impact of the Institutes on the number and quality of prospective students. The recent introduction of a new MTA in Design, Technology, and Entrepreneurship is an example of the responsiveness to student feedback; it has proved enormously popular with students and confirms that our increasing emphasis on biomedical innovation has strong relevance for our students.

- Accreditation Reviews – Many of the degree-granting programs are periodically evaluated by an accrediting organization in their field. All provide opportunities for self-assessment and improvement, confirm that we meet all standards set by all agencies, and provide valuable feedback to the programs. The accrediting bodies include:
  - Liaison Committee on Medical Education (LCME) – As the accrediting body for the MD program, the LCME conducts a broad review that encompasses curriculum, resources and assessment methods, and provides an important source of feedback on the program. In 2012 the LCME granted a full eight-year reaccreditation to the MD program.
  - Council on Education in Public Health (CEPH) – CEPH conducts regular annual reviews of the Graduate Program in Public Health and a full accreditation review every seven years. The program was fully reaccredited through December 2015. The next full review will take place in 2015, and we expect to receive full reaccreditation through December 2022.
  - American Council for Genetic Counseling (ACGC) – The program was granted full reaccreditation in 2008 for a period of six years, and each year during this period the program submits an annual report to assure continued compliance with standards. The next reaccreditation self-study is planned for September 2015.
  - New York State Department of Education (NYSED) – The State has a timetable for review and re-registration review for degree-granting programs.
- Student Loan Default Rate --The three-year default rate was 1.5% as of September, 2014. This extremely low level reflects successful default management that emphasizes information, communication, and strategic reduction of the average total loans of our graduates.

It is also important to acknowledge the role of the Board of Trustees subcommittees in ensuring the highest possible quality for the MD, PhD and Master's programs. The Deans for Medical Education and the Graduate School meet quarterly with their respective Board committees and Dr. Charney to review performance, obtain feedback and chart action for attaining even higher levels of excellence.

Research Performance

Conducting high-quality, innovative research and providing outstanding research experiences to our students are critical components of the Icahn School of Medicine at Mount Sinai mission. The Strategic Plan's emphasis on translational research adds structure and direction to these endeavors. There are many ways in which the School assesses its success in fulfilling its research mission and achieving its research goals, including:

- Extramural Funding – The $247 million awarded to ISMMS by the NIH funding in the recently ended Federal fiscal year speaks to the School's strength as a biomedical leader; this represents an increase of $32.9 million or 15.4% compared to last year, a remarkable achievement in the face of the challenging NIH funding landscape. In the latest available data, ISMMS ranked 17th in NIH funding among all medical schools in the United States, and this number may rise given this year's spectacular performance.   ISMMS has made steady progress in securing NIH funding, jumping in a decade from a rank of 25th nationally; this has been achieved through a combination of focused leadership, vision and planning, the

extreme dedication of faculty and staff, and intensive recruitment consistent with our Strategic Plan. Included among the NIH awards are 19 training grants from seven NIH agencies in support of our research education efforts. The NIH peer-review process for grant applications confirms the excellence of ISMMS research programs. Foundation grants – some of which are also peer reviewed – and industry funding provide important additional sources of support that are closely assessed for their contribution to our research success.

Investigator spending on extramural research grants is carefully monitored. For NIH grants in particular, the spending rate drives associated indirect cost funding, an important source of support for the School's infrastructure. Accordingly, we strive for timeliness and consistency in grant expenditures and investigators are notified early if their spending rates are problematic so that they can take steps as appropriate.

- Research Density – Optimal allocation of ISMMS wet and dry laboratory space is achieved through the application of research density targets – grant funding/net assignable square feet – to all research programs (Standard 3). This metric is critical to allocating research space – an expensive and limited resource – carefully and methodically, and it is a factor in capital planning discussions. Investigators who fall below research density targets may be subject to space reductions, while those exceeding targets may be eligible for more benches or space. The increased complement of laboratories created by the recently opened Hess Center for Science and Medicine has eased research space allocation in the School; in contrast to our pre-Hess ranking as third among all U.S. medical schools on research density, we are no longer one of the most tightly constrained. Nevertheless, space continues to be a challenge and we must be vigilant to allocate our inventory wisely.

- Funding Per Investigator – This is another grant-related metric that we examine on an annual basis. Currently ISMMS is 4th nationwide in research funding per investigator, which reflects an intensive level of productivity and high peer acknowledgment of our research programs.

- Scholarship – Original publications in leading peer-reviewed journals are an important indicator of achievement, whether by an individual or as part of team science. Textbook chapter authorship and editorial leadership are also valued. The faculty appointment, promotion and tenure methodology gives careful consideration to publication records that reflect innovative contributions to the body of literature. Citation factors are a useful tool for assessing success in this arena at the institutional and individual levels.

- Intellectual Property – Mount Sinai Innovation Partners (MSIP) is an ISMMS office dedicated to patenting and commercializing intellectual property generated by our faculty and students. Such activities are essential for bringing new technologies from the laboratory to the public benefit, and are both an indicator of mission fulfillment and an important potential source of income for the School. Examination of MSIP performance metrics by the Board of Trustees Technology Transfer subcommittee prompted an increased funding commitment by the School in 2012. The attendant expansion of MSIP staffing has resulted in an increase in the volume of patent applications and licensing opportunities.

- Core Research Facilities – In order to remain responsive to rapidly changing scientific needs and increasingly sophisticated technologies, the School continuously monitors the efficacy and utilization of each Core so that as appropriate the School can modernize, restructure or even sunset technologies, methodologies and facilities. Two assessment mechanisms are used: 1) Three Member Review Panel – Each core facility is reviewed every three to five years by a panel comprised of two experts from outside ISMMS and one in-house expert. The two external experts are recommended by Core users, scientific directors or other members of the scientific community; the internal expert is a user who is familiar with institutional policies and procedures; and 2) Executive Scientific Advisory Committee (ESAC) – The ESAC, comprised of department chairs, institute directors and other senior faculty, assists the Dean's Office with long-term planning for resource needs.   This includes the review of new core resource proposals. Through these two mechanisms the School leadership is apprised of changes in technology, management concerns, and needs for future investment planning.

- Research Administration – Prompted by an in-house survey of investigator satisfaction in 2013, an initiative to streamline and improve the centralized research administration functions in the School has resulted in a variety of changes. These include development of performance metrics (e.g., turn-around time on internal review and approval of grant protocols). Such metrics give research infrastructure departments such as the Program for the Protection of Human Subjects the ability to pinpoint problem areas and implement corrective actions. The survey feedback also contributed to a decision to replace our existing on-line grants management with one that is more user-friendly. By dissecting the ways in which we do business ISMMS is increasing efficiency and facilitating changes which are expected to improve investigator satisfaction.

Clinical Performance

The ISMMS mission emphasizes the importance of providing excellent clinical care to our patients. Closely tied to this is the expectation that the MD program offers outstanding pre-clinical and patient-centered experiences to our medical students. Our success in fulfilling this clinical mission and thereby providing a superb venue for students, is assessed in many ways, including:

- Quality of Care – The range of metrics for evaluating the quality of care provided by our physicians continues to grow. In response to both internal and regulatory requirements, clinicians are held accountable on a broad range of quality metrics, many of which are monitored through a clinical "dashboard" that allows for frequent review and, if necessary, corrective action. The introduction in 2008 of EPIC, an electronic medical record system, has been instrumental in improving access and availability of clinical performance data. Patient satisfaction ratings are another means of assessing physician and staff performance in the delivery of care, and are used to create staff development sessions on "customer" service.

- Finances – Mount Sinai Doctors Faculty Practice is a growing physician practice group which currently has approximately 1200 members. Financial oversight encompasses revenue and expense monitoring, volume, activity by specialty and utilization of resources. Faculty

practice volume and net revenues have grown steadily over time as a result of higher volume, higher productivity and more efficient space utilization.

- Clinical Productivity – Relative Value Units (RVUs) are a key measure of physician productivity. They vary by specialty and can be adjusted to take into consideration the unique circumstances of a practice. Careful monitoring of RVUs is essential to gauge individual physician activity levels and is tied to the faculty practice compensation model. RVUs also add value in assessing the overall productivity of programs, departments and the faculty practice as a whole, and are valuable in addressing weaknesses and rewarding strengths.

- Clinical Space Density – Space limitations in clinical areas require careful monitoring of utilization to optimize provider productivity and patient access. Reports generated by the Faculty Practice include exam room utilization (number of visits per exam room per session) and Fill Rate (average number of booked minutes per provider session decided by the session length of four hours).

Finances

ISMMS has a well-defined financial management system which includes careful oversight (Standard 3). Ongoing assessment of fiscal performance is essential to ensuring that we have sufficient resources to fulfill our mission and meet strategic goals. A variety of tools contribute to fiscal assessment, including:

- Budgets – The School's strong fiscal health and consistent break-even budget is attributable to strong financial controls and excellent dialogue and collaboration of the Dean, Senior Vice President for Finance, Department Chairs and Institute Directors. Despite an increasingly competitive clinical environment and a shrinking Federal research budget, the School has managed to grow and thrive. Financial information is prepared, disseminated and assessed monthly and annually, with budget monitoring and excellent communication ensuring that problems are addressed and resolved early and efficiently.
- Revenue Sources – Revenues are generated from a variety of sources relating to the School's education, research and clinical activities, and these are tracked on a monthly basis.
- Annual Financial Review – In addition to monthly discussions among each Chair, the Dean and the Senior Vice President for Finance – which lead to corrective actions as needed – every department undergoes an intensive annual review which becomes the foundation for budget planning for the next fiscal year.
- Faculty Recruitment Assessment – Business plans are required in any department wishing to recruit new faculty in order to understand the resource commitments of both school and department. Once hired, actual performance is assessed in relation to the business plan in order to evaluate each recruit as well as entire programs. These evaluations can trigger adjustments to accommodate for unexpected outcomes.

Physical Plant

Significant investment and oversight ensure the high quality of appropriate facilities that contribute to supporting all components of the School's mission. Ongoing assessment is closely tied to planning and resource allocation (Standards 2 and 3), all overseen by the Dean's Office. Internal guidelines for space utilization, e.g., research density targets (as described earlier in this section) and clinical exam room scheduling (also described in this section), allow for data-driven analysis and sound decision-making.

Information Resources

The availability of appropriate information technology for students, faculty and staff is a high priority. The Department of Academic Informatics and Technology (AIT) and its component groups perform regular assessments of services and products. Statistics are collated monthly and are used to guide strategic planning and resource allocation within the department. These efforts include:

- AIT Services Standing Committee – A committee comprised of AIT staff and student representatives meets monthly to get student feedback on improving current services and creating new ones.
- Levy Library collects statistics on visits to the library, reference and usage of the collection to guide collection decisions. The library's collection policy also recommends adding books written by faculty or requested by faculty or students to the collection when possible, as well as purchasing all reserve books in multiple formats and copies for student convenience.
- Educational Program Assessments – AIT is assessed by the Graduate School and Medical Education on how well it meets faculty and student needs.
- Surveys – AIT performs regular student and faculty surveys for assessment, as well as capturing system metrics.
- Academic IT Support Center (ASCIT) – ASCIT has an in-person Help Desk and also provides support to user requests via telephone and email. ASCIT collects statistics on all user support activity. Average response times are tracked, as are transfers to other departments to resolve service issues.
- Archives – The archivist collects statistics on reference requests, 80% of which come from internal users such as faculty.
- Health System Resource Review – The Academic Informatics team conducted an assessment of the holdings of the various libraries throughout the Mount Sinai Health System and produced a "Discovery Report" that inventories existing resources and recommended consolidation of all resources and services at the Upper East Side campus. Centralizing the management and access of library resources under a system-wide Levy Library leadership structure will result in cost and service efficiencies so that the School can maximize its ability to serve faculty, students and trainees regardless of site.

Human Resources

- Recruitment and Compensation – Proposed faculty and staff hires and compensation requests are analyzed and approved by the Dean's Office. A team chaired by the Senior Vice

President for Finance and staffed by the School's Director of Human Resources reports to the Dean on requests for new hires, and assesses proposed compensation, sources of funding and budgetary soundness. The process allows for careful tracking of personnel quality, numbers and costs, and allows for identification of trends valuable to decision-making.

- Performance Evaluations – Annual personnel evaluations are an important part of the School's culture, receiving considerable attention because of the critical contributions that employees make to programmatic and overall institutional success. Performance evaluations set the stage for rewarding excellence through promotion or increased compensation, and also allow for early identification of problems for which corrective remediation is needed. Different evaluation instruments are used for faculty and staff, but all are done on-line to optimize efficiency and data retention, and to ensure that all personnel who should be evaluated are included. Chairs sign off on every faculty evaluation in their departments, and the ISMMS Dean receives a final report which enables him easily to access the record of any employee. The Dean evaluates his direct-report deans, who in turn evaluate their own more junior deans. Staff are reviewed by their immediate supervisors.

External Assessment Measures

In addition to the robust internal assessment measures described in this section, external recognition of ISMMS accomplishments provides additional feedback confirming success in all arenas – education, research and clinical care. Some examples are provided below:

- *U.S. News & World Report* Ranking – For the fourth consecutive year, this survey ranks ISMMS among the top twenty medical schools in the United States; the current ranking is #19 out of the 153 U.S. medical schools. Fewer than ten years ago the School was ranked #32, and the steep rise is attributable to our rapidly expanding NIH research funding portfolio as well as student profiles (GPA, MCATs) that have never been higher.
- U.S. News & World Report Clinical Ranking – The reputations of our partnering hospitals is due largely to the excellence of the School's faculty. In the 2014 – 2015 *U.S. News & World Report* "Best Hospitals" report, The Mount Sinai Hospital's ranking jumped to 16 out of approximately 5,000 hospitals nationwide, and was designated "Honor Roll" status for scoring near the top in at least six specialties.
- Best Doctors" Report – *New York* magazine's 2014 annual report included 142 ISMMS clinical faculty in 59 specialty areas. The School consistently ranks at or near the top for New York City medical schools in terms of the number of physician faculty honored in the magazine's annual survey.
- 5th Most Innovative Company in the World – In its 2014 Big Data rankings, *Fast Company* magazine named Icahn School of Medicine #5 among the "World's Top Ten Most Innovative Companies in Big Data." In explaining this ranking, the magazine acknowledged the School's recruitment of top talent to "map" patients' genomes, its investment in a $3M supercomputer for data analysis and research, and the BioMed database of genomic samples from more than 25,000 patients.
- Emory Innovation Award – The ISMMS Global Health Program was awarded the Innovation Award at the prestigious Emory Global Health Case Competition in recognition of its "out-

of-the-box thinking" for problem resolution. This competition involved student teams from universities around the world.

- New York City Economic Development Corporation (EDC) Support – EDC has contributed $5,000,000 to ISMMS for the creation of the Mount Sinai Technology Institute. The award was granted in recognition of the promise held by our innovative teaching programs and our commitment to developing new biomedical technologies.
- NYC Regional Innovation Node (NYCRI) I-Corps Cohort – Two ISMMS teams, one that evolved from last year's " QED" innovation class with the Graduate School and a second from our Translational and Molecular Imaging Institute, were selected for participation in the NYCRIM educational network efforts to spur funding for translational research and to prepare students to be entrepreneurially competitive in securing grant funding for their projects; the end-goal is to bring biomedical improvements to the marketplace. It is also worth noting that the QED group separately won $15,000 in a venture capital competition sponsored by Columbia University's engineering department in support of their projects.
- People under 30 to Watch in Science and Medicine – ISMMS PhD student Jillian Shapiro was chosen by Forbes as one of 30 people under 30 to watch in Science and Medicine for her discovery of a new molecular pathway that can be used to deliver small interfering RNA (siRNA) into cells that could have significant implications in the development of future therapeutics across disease types.
- Faculty and Staff Featured in Journal Articles – In addition to the hundreds of professional publications in which ISSMS faculty are authors, we also have many instances in which members of the School community are the subject of very laudatory press. Examples of recent in-depth reporting include:
  - Center for Personalized Cancer Therapeutics – The December 2013 issue of *Esquire* magazine featured Mount Sinai and the pioneering work being done under the leadership of Eric Schadt, PhD, Director of the Icahn Institute of Genomics and Multiscale Biology.
  - Neuroscience – Dr. Daniela Schiller, Assistant Professor of Neuroscience and an expert in memory, was profiled in the May 19, 2014 issue of *The New Yorker* magazine.

In summary, ISMMS uses a broad range of assessment tools to confirm its success in fulfilling its mission and meeting its goals. A well-orchestrated planning process sets the direction for our programs and activities, and strong, well-defined internal controls promote a high level of productivity in all areas. Both individually and collectively, our students, faculty and staff contribute to an institution that can be proud of its accomplishments in the educational, research, scholarly, clinical and service arenas.

Standard 8: Student Admissions and Retention

The admission policies of the Icahn School of Medicine at Mount Sinai (ISMMS) ensure the enrollment of a student body that is passionate about biomedical research and clinical care, scholarship, community service and advocacy, all in direct alignment with the School's mission. ISMMS offers a stimulating and supportive learning environment that monitors student progress, provides appropriate assistance to ensure student success, posts essential program information and achieves high graduation rates. Appendix 8-A highlights some key sections of the Self-Study report that address the Middle States Fundamental Elements relating to Student Admissions and Retention.

ISMMS degree-granting programs actively seek to attract a diverse pool of applicants who are high academic achievers with enthusiasm for learning and a commitment to their chosen field of study. Admission characteristics, including grade point averages and standardized test scores, are tracked over time (Appendix 8-B). Other information such as undergraduate college attended, undergraduate major, previous degrees, extra-curricular activities and professional experiences are also followed. The programs utilize these data for comparative and evaluative purposes. Admission decisions are linked to defined characteristics and standards developed by each program, based on analysis and understanding of what makes successful graduates in each field. Admissions policies and criteria are available to prospective students on the School's website. Links to each program's admissions information can be found in Appendix 8-C.

The MD Program has launched several new and innovative programs designed to broaden and diversify the applicant pool while always meeting the School's mission-based goals. FlexMed, a novel early assurance program, had its first admissions cycle, admitting 51 undergraduate sophomore students in June 2014. Students are accepted in their sophomore year of college, and during the remainder of their undergraduate years are encouraged to forego traditional premedical requirements and instead pursue their academic passion in a broad range of fields, e.g., the arts, language, computational sciences and engineering. This flexibility to explore and experience diverse educational pathways is intended to foster a love of learning that will ultimately graduate scholars capable of thinking broadly and leading the future of science and medicine. Following graduation from college, they matriculate at ISMMS, although gap years are encouraged.

FlexMed grew out of a robust 25-year experience with an early assurance program called the Humanities and Medicine program in which sophomores with humanities and social science majors received acceptance to ISMMS, finished their degree and then matriculated at ISMMS. Notably, students who entered through the Humanities and Medicine Program did at least as well as students accepted through the regular admission track. As with Humanities and Medicine, a rigorous tracking system will ensure that FlexMed students maintain qualifications and meet undergraduate milestones. A summer enrichment program will be required for students who have less extensive biomedical science preparation.

ISMMS has also launched another innovative approach to recruitment that involves an alliance with McKinsey & Company, a leading healthcare consulting firm, which will allow co-recruitment of exceptional candidates from our applicant pool and their junior analyst pool. We

have also introduced an experience that would allow current medical students to work in the McKinsey environment for two years during their medical education. Programs like these will allow outstanding students and applicants a chance to be physicians with additional expertise in policy, economics and administration.

The Medical School offers several dual degree programs for students who seek augmented experiences to broaden their professional preparation. A Global Health Scholars Program was started in 2013 and the first cohort of six students in a Primary Care Scholars Program will matriculate in August 2015. These programs allow students enhanced exposure to global health and urban primary care respectively. Students in the Global Health Scholars Program earn a Master of Public Health degree in addition to the Doctor of Medicine. Other dual degree programs offer students additional education and training in clinical and translational research, public health and bioethics. Please see Standard 11 for additional information about our dual degree programs.

Diversity and inclusion are significant drivers for excellence in medicine and science and represent an important focus of ISMMS. In order to increase the participation of individuals underrepresented in the medical and scientific professions (URMs), the Office for Admissions partners with the ISMMS Center for Multicultural and Community Affairs (CMCA) to enhance the diversity of prospective students. CMCA directs innovative, integrative, and coordinated approaches to achieving a more diverse community in all areas of our mission, and provides an infrastructure to support the recruitment and retention of minority medical and graduate students.

The Office for Admissions meets weekly with CMCA to refine recruitment strategies for URMs and first generation applicants. One strategy is a new "second look" experience called *Explore Icahn School of Medicine at Mount Sinai.* Underrepresented minority applicants accepted by December of the admissions interview cycle are invited back for a tailored return visit in January of the next year. This experience includes in-depth presentations by a cross-section of URM students who explain how they have explored and integrated teaching, research, and service into their medical education experience. The Office of Admissions has also channeled philanthropy to increase scholarship funding for competitive URM applicants, which has served a critical need. Appendix 8-D summarizes gender and URM status metrics for each degree-granting program over the past three years.

Our MD, PhD and MD/PhD programs also actively work to diversify the applicant pool through biomedical science research pipeline and graduate programs. Collectively, they expose students to research while encouraging them to consider applying to our MD and PhD programs.

Other joint recruitment initiatives conducted by the Admissions Office and CMCA include the Revisit Day for Waitlisted URM Applicants, Revisit Weekend, and the Annual Fall Open House. For all of our academic programs we have conducted targeted recruitment and informational events with minority enrichment high school and college-level programs including the Posse Foundation, Prep for Prep, College Science Technology and Entry Program, and others. We continue to actively target colleges and universities designated as Minority Serving Institutions, Historically Black Colleges and Universities, and Hispanic Serving Institutions to increase the visibility of our School, our work in diversity affairs via CMCA, and our academic programs.

ISMMS is also committed to creating an inclusive school environment with regard to sexual orientation and gender identity. Our focus on recruiting applicants who either self-identify as LGBT or are committed to working on LGBT health issues, policies, and programs is a priority for the School. We are actively developing LGBT specific recruitment materials and are working in partnership with our LGBT People in Medicine student organization. Through a dedicated group of LGBT faculty, we have successfully raised monies to promote and offer a generous merit scholarship in LGBT Health and Advocacy to an accepted applicant. To our knowledge, we are the first medical school to do so.

Ongoing Assessment of Student Success

Each degree-granting program bears responsibility for evaluating the success of its admissions decisions. For most programs, a designated committee tracks the progress of each student and makes recommendations with regard to promotion. When students are at academic risk, this process includes a review of their previous academic records to determine whether there were early predictors for failure. This information informs regular reviews by program-based admission committees and guides the review of desirable characteristics of future classes and types of support services needed by incoming students.

Standard 14 describes many tools that are used to assess student and programmatic performance, and these are often also valuable for measuring the success of our admissions processes. For example, medical students undergo assessments of competency (both formative and summative) which support the goals and mission of the School; these are supplemented by national standardized exams (USMLE Step I, Step II CK and Step II CS and the National Board of Medical Examiners (NBME) third year subject test exams) which assure that student competencies are consistent with national standards and also provide a means to compare medical students' performance and competencies with those at other schools.

The National Residency Match Program process provides external validation that residency programs nationwide perceive our students to be well-prepared to continue their training. The ISMMS MD student match rate in the past five years is well above the match rate for graduating medical students nationwide. Although the match produces limited quantitative data (as residency programs have only begun being formally ranked in 2014), it nevertheless provides important qualitative feedback. ISMMS students match to what are considered the top facilities and top programs by reputation.

The Associate Dean for Admissions is charged with recommending changes to the MD program's admission policies, and some recommendations may be based on analysis of student learning performance or success after graduation. This information is routinely shared and analyzed at the Executive Curriculum Committee, the Promotions Committee and the Medical Education Leadership group. The Associate Dean for Admissions is a member of each of these committees and summarizes feedback from these committees into recommendations for consideration by the Executive Admissions Committee.

The PhD in Biomedical Sciences leaders measure the success of the admissions process by examining the outcomes of the graduate education program, including qualifying exams pass

rates, and quality of thesis proposals and final defenses. Every PhD student must pass a qualifying exam in general knowledge associated with his or her training area and successfully defend a thesis proposal prior to moving on to full-time thesis work and PhD candidacy. Student success rates are shared with the Admissions Committee. In addition, MD/PhD students who are supported by the NIH funded Medical Scientist Training Program (MSTP) grant and other PhD students who are funded by departmental or training area-specific training grants are tracked via an annual progress report to the NIH which summarizes admissions statistics, student publications, attrition, and other important information used to evaluate student success. The Graduate School programs also rely on exit interviews, alumni questionnaires, and student feedback forums to assess whether experiences have met the goals of the student and the mission of the graduate programs.

Financial Aid

The School is committed to providing our students access to the financial support they need to complete their education. The Office of Student Financial Services, staffed by experienced financial aid professionals, has an open door policy and a goal of assisting all students seeking advice and assistance. Information is also posted on the School's website along with a limited list of organizations and agencies that provide external scholarship opportunities

Upon enrolling, all students applying for student loans undergo an entrance interview online, and graduating students have an exit in-person interview in the ISMMS Financial Aid Office. Systems are in place to insure that students cannot receive loan disbursements or degrees without completing both the entrance and exit interviews. The ISMMS financial aid award package includes a list of the students' loans and current interest rates, grace periods, and residency repayment options. The default rate at ISMMS is 1.5% as of September, 2014.

In processing federal financial aid, ISMMS requires both the FAFSA application and a "Needs Analysis" report from the *Access Group*, a non-profit organization that specializes in higher education financing for students in graduate and professional programs. This report provides additional information about the student and family, assuring uniformity of information across the student body. The Director of Financial Aid, in conjunction with the Senior Director of Enrollment Services, reviews all available information, assures that determination of need criteria are applied fairly and consistently, considers extenuating circumstances, and maintains adherence to Title IV Program criteria.

Tuition and associated costs vary across the ISMMS degree-granting programs. 68% of medical students graduating in the Class of 2014 received financial aid through the Financial Aid Office. Of those, 40% received some type of scholarship aid. The majority of ISMMS scholarship support is need-based and is automatically awarded to eligible candidates without an additional application process beyond the standard FAFSA/Need Access procedure. ISMMS has limited endowed scholarship funds, which are awarded by the Admissions Selection Committee based on donor requirements, student academic credentials, and the candidate admissions interview. Students receive merit-based assistance on top of their need-based aid, not to exceed cost of attendance. The Financial Aid Office notifies matriculating students of scholarship offers received from outside agencies.

Our medical students obtain loans to fund a significant portion of their cost of attendance. The average medical school debt of indebted graduates at ISMMS in 2014 was $129,763 (Appendix 8-E). The School leadership's proactive commitment to supporting our students has identified scholarship fundraising as a priority for the Development Office and a robust strategic plan has been implemented.

All PhD and MD/PhD students in Biomedical Sciences and Neuroscience receive fellowships that cover a stipend, health benefits and tuition remission. The NIH-funded Medical Scientist Training Program (MSTP) supports a subset of MD/PhD students during their first two years in the program, with the Graduate School covering the balance. During the years dedicated to thesis work, students are supported by funds provided through their thesis advisor. The Graduate School ensures that internal funding issues do not hinder progress toward a degree. PhD students are guaranteed support as long as they remain in good academic standing, even if their mentor loses funding or leaves the institution. In these cases, students are temporarily covered by institutional funds until alternative funding is identified.

Transfer Policies

The School's transfer credit policies are documented in the Student Handbooks and are available to prospective and enrolled students. Transfer credit is rarely requested by ISMMS medical students; among current medical students, none has transfer credits. Infrequently, a Masters or PhD student will request transfer credit. In such cases, their transcripts, syllabus and course content are reviewed by the Program Director to determine if credit transfer is warranted, and final approval by the Dean of the Graduate School is required. Only 11 graduate students (2% of those currently enrolled) have received transfer credits. Students may also request a course exemption. In the rare instance that a student requests an exemption, he or she must pass an assessment arranged by the program director to determine whether the exemption should be granted. The policies and procedures for transfer credits are included in the Graduate School Handbook.

Dissemination of Information about Educational Programs

The School's website contains a wealth of information about its medical and graduate school programs, their respective curricula, and the expectations of how students will progress through their program of study. Descriptions of the curricula include information about educational formats, such as didactic coursework, small group learning, journal clubs, laboratory experiences, and clinical rotations, as well as information about program requirements, such as the thesis proposal and defense for all PhD and Master's degree programs. The considerable information posted about academics is supplemented by ample information on support services, student governance and quality of life issues. Together, this information is a valuable resource for both prospective and current students.

Throughout the admission process, prospective students have access to a wide array of information about the School and the various degree granting programs. Important admissions information and links to the online applications for each program are posted on the website. For

some programs the online application is followed by interviews and site visits, during which structured presentations not only outline the timetable for learning outcomes, but also highlight historical student performance. This information is extremely valuable to prospective students and helps to guide their consideration of our programs.

The School's website is the most important venue for marketing our programs and sharing detailed information with prospective students. A concerted effort has been made in recent years to improve the content and navigation capabilities of the education sections of the website to make it more accessible users. Despite this effort the overall design and functionality of the School's website has limitations. A large scale initiative has been launched to fundamentally rework the website and the educational program staff will be engaged in this important project.

In 2013, the School created a strategic marketing plan with a focus on enhancing its messaging and outreach efforts. Plan goals included increasing visibility and promotion of the School's unique identity, integrating medical and graduate school marketing materials and actively using students in both the design and execution of our marketing plan. A staff position was established to provide expertise and to organize marketing efforts. Implementation of the plan involved streamlined and coordinated efforts to connect with prospective students and applicants. The School's website was restructured, integrated print materials were created, and video and slide presentations were developed and are now utilized for internal and external recruitment efforts. Further, the School engages accepted students, current students and alumni as ambassadors at their undergraduate institutions and post-graduate environments to complement this initiative. The results to date have been well received.

In summary, ISMMS has robust admission policies and practices that are well publicized and ensure a diverse, talented student body that is well suited for success in our academic programs. Student progress is carefully tracked to ensure that potential problems are addressed early so that enrollees can complete their program. Regular assessment of admissions policies and student outcomes ensure the ongoing relevance and success of these endeavors.

Standard 9: Student Support Services

Providing outstanding student support is central to achieving the educational mission of the Icahn School of Medicine at Mount Sinai (ISMMS). The School offers a wide array of support services to ensure the academic progress and overall well-being of students enrolled in all of our educational programs. Support and mentorship programs across the institution enable students to seek career guidance, access resources to promote health and wellness, and connect with peer and faculty programs for academic and educational support. These programs are designed to support students at advanced levels and create a platform for success in an adult learning environment. Appendix 9-A highlights some key sections of the Self-Study report that address the Middle States Fundamental Elements relating to Student Support Services.

Qualified professionals manage and deliver the support services necessary for our students' academic and professional success. The Medical Education and the Graduate School Deans, along with their staff, oversee processes and ensure the equitable and appropriate provision of student services. Communication between the Medical and Graduate School programs is strong and all have embraced the goal of increasing efficiency and effectiveness in student services and educational offerings.

The Office of Enrollment Services bridges the medical and graduate programs to provide support to students in the areas of orientation, admissions, registrar, bursar, financial aid, housing and benefits. The Senior Director of Enrollment Services and Student Information has a global understanding of issues and barriers across programs and works closely with program leaders from each area to ensure that services are provided to students in a timely and effective manner. Student Services departmental managers actively manage all aspects of institutional processes relating to orientation, academic calendar, disability services, handbook policies, emergency management, and health clearance and New York State vaccination requirements.

Orientation

Upon acceptance, students are given access to orientation and enrollment portals that provide specific information for health clearance, housing, and all pre-matriculation requirements. These websites allow students to engage with their program, manage their information and establish communication to support a smooth transition to ISMMS. The Orientation Committee, comprised of students, faculty and staff from all programs, provides new students with the opportunity to connect with their peers, participate in social activities and acclimate themselves to the community in which they will train.

Student Health, Student Mental Health and Disability Officer Services

Student Health Services are available to all students, providing physical exams, illness visits, vaccine administration, STI and HIV testing, travel consultation, gynecologic exams, medication refill, and compliance requirements including tuberculosis screening and influenza vaccination. These services are offered free of charge. The Student Mental Health Service offers confidential mental health care to students from all programs. Mental health services are covered in part by student's medical benefits plan as well as a contribution from the School to

the Department of Psychiatry for administrative services. The School also supports a disability officer who is available to any student for consultation and who coordinates accommodations in the learning and testing environments.

Student Wellness

The Student Wellness Committee, comprised of students, faculty and staff, focuses on raising awareness and providing programming about self-care to students in all programs. Featured programming includes Wellness Week, the Wellness Fair and Depression Screening Day. Other informal wellness activities include study breaks during board exams, yoga and Pilates sessions as well as free access to the 92nd Street Y gym facility.

The School provides a lactation room that offers a quiet, private space for breast-feeding mothers.

Housing

The Aron Residence Hall, geographically adjacent to the School campus, provides low-cost housing to 855 students. Amenities include a 24-hour doorman, health fitness room, outdoor basketball courts, entertainment lounge, and laundry facilities. Students enrolled in the MD, PhD, and MD/PhD programs are guaranteed housing. With some exceptions, housing is not offered to students enrolled in the Master's degree programs. Housing for couples and families is provided at other properties in the surrounding area that are also owned by Mount Sinai.

Technology Services and Learning Support

The Academic Informatics and Technology (AIT) Department within the School ensures that all educational programs have access to advanced technology services and learning support systems. AIT staff work closely with the educational program leaders to continuously enhance the learning environment for ISMMS students. For example, all lecture halls and large classrooms are equipped with the Echo-360 video capture system, which provides students with access to recorded classroom sessions. Lectures, course materials, and online examinations are posted on our Blackboard Content Management system. Course and elective registration is offered through an electronic system that allows for remote programming of schedules and educational sessions. Students can make appointments online with the Student Health Service as well as selected advisors and administrators through a platform utilizing the Starfish system.

The School gives students access to on-campus and remote academic and support resources. The Levy Library provides online access to journal subscriptions and library search tools, thus providing wide availability to the entire School community. The Levy Library has a staff of seasoned librarians, including a virtual reference librarian available through an online chat system, to answer student questions regarding library resources for their studies and research. The Academic IT Support Center assists students with technology issues through online, phone, or in-person support. Phone support for technology issues is available round the clock. A more extensive description of the Levy Library can be found in Standard 3.

Student Advisement

The Medical School provides a rich network of advising and mentoring. All students are assigned to a Student Affairs Faculty Advisor who provides academic, personal, and career guidance from orientation through graduation. Advisors offer support, information and referrals to department-specific mentors, and also guide students through the career planning process. Six designated advisors are supported by the Department of Medical Education, and each advisor meets with his or her cohort of students as a group as part of the InFocus curricula (Standard 11), as well as individually. Students sign up for appointments with their advisors through an online scheduling system. To facilitate completion of the scholarly project, the Director or Associate Director of the Medical Student Research Office meets with each student during the first semester to help identify a project and mentor. Additionally, students have access to Track Advisors who have knowledge of a student's area of interest and can help the student meet the milestones established to complete the required scholarly project.

Students have opportunities to develop close relationships with many other members of the faculty in addition to their Faculty Advisors and Track Advisors. Specialty advisors in each of the major medical specialties are identified for students and are available to meet with students to offer advice and perspective, and assist students in the residency application process. The Office of Student Affairs maintains a Mentor Database, a searchable web-based tool that helps students identify potential advisors and mentors based on specialty interests and advising needs. Currently, the database contains over 200 faculty volunteers across every major specialty.

Robust longitudinal programming for career planning and specialty selection includes career panels and specialty fairs, and also sessions on the residency application process, including interviewing, and creating a match list. Additionally, numerous student interest groups host specialty-specific panel discussions and skills sessions, as well as broader themed programming around topics such as women in medicine and primary care careers.

The Graduate School also has student advising services in each of its programs. First-year PhD students are assigned an academic advisor to monitor and assess their progress throughout the program. Upon matriculation, PhD students are required to attend a one-day workshop (supported by multiple New York City graduate programs, including ISMMS) which addresses practical issues students are likely to face during the early stages of their training. Students also select a dissertation advisor, a relationship that is critical for their doctoral experience. In addition to a student's dissertation advisor, students have an Advisory Committee that serves to guide and monitor their thesis progress. Students are required to have a face-to-face meeting with their Advisory Committee at least once a year and three months prior to their dissertation defense in order to obtain clearance to defend their thesis.

In addition to mentoring, career development is a very important component of a student's training. The PhD program has ongoing initiatives to ensure that students are exposed to various career paths and start networking early in their training. The program recommends that second-year students meet with their dissertation advisor to discuss possible options and to complete a self-assessment of their individual skills relative to their career goals. Students are then assisted by their dissertation advisor in establishing an Individual Development Plan (IDP) which is a

roadmap to acquiring the skills and competencies needed to achieve short- and long-term career objectives. The IDP is a living document which is updated frequently and focuses on concrete career options as students move closer to the end of their training.

A Career Day is offered to PhD students in their fourth year and beyond and provides an opportunity to meet with representatives from the pharmaceutical, biomedical science, financial, consulting, non-profit and academic sectors. Several times each academic cycle, the Graduate School underwrites a career seminar where alumni can meet informally with students and discuss their career paths. Additionally the Graduate School participates with other academic institutions in the metropolitan area in a two-day bi-annual workshop focused on career planning. Each year, ISMMS hosts SINAInnovations, a two-day symposium with an overarching theme of innovations in biomedicine. A subset of the annual program is developed exclusively for students and postdoctoral trainees. SINAInnovations includes a dynamic series of panels, workshops, and a large, popular networking reception. Last year this event focused on team science as a vehicle for innovation and success.

Student-led organizations recently launched Sinai Neuroscience Outreach Program (SNOP) and Students for Equal Opportunity in Science (SEOS). SNOP aims to promote neuroscience education and encourage an interest in brain research. SEOS focuses on increasing diversity in the sciences, providing support and resources to its members, improving faculty mentoring for students and increasing networking opportunities. Another organization, Women in Science and Medicine (WiSM), advocates for the professional and personal goals of the female medical and graduate students, postdoctoral fellows, and laboratory technicians. It provides a network of support and mentorship, and fosters an ongoing discussion of concerns and issues specific to career advancement and work-life balance.

Each of the Master's degree programs in the Graduate School have advisement and career development capabilities that are tailored to support their respective students.

Academic Support

The School has strong support services for academic remediation. Students have access to course directors, teaching assistants, Peer Tutors and Senior Tutors, as well as a Learning Specialist who is on retainer for limited sessions each year. The Senior Tutor program for medical students is comprised of senior medical or graduate students with particular tutoring interests who receive intensive training in support and tutoring. Students are referred to the Senior Tutors through their advisors, program leaders or the Office of Student Affairs.

Procedures for Addressing Student Complaints and Grievances

Strictly maintained and fairly implemented ISMMS policies uphold students' rights to voice concerns about mistreatment and other grievances and have them addressed in a supportive manner. Students in both medical and graduate programs can bring concerns about student mistreatment to the Student Mistreatment Resource Panel, a group of students with representation across all programs. The panel serves as a sounding board for students with

concerns about mistreatment in the educational environment. Medical students who are finishing a clinical rotation are asked about mistreatment as part of their evaluation of the clerkship site. Students are encouraged to raise concerns to their clerkship directors about any mistreatment. When specific incidents are reported, the Associate Deans of Undergraduate Medical Education discuss the matter with the clerkship director and/or Chair of the department involved. This approach has led to remediation plans for the faculty and house staff involved, and in rare instances resulted in the removal of a faculty member from teaching obligations.

The School's Grievance Committee addresses allegations of harassment or abuse brought by any faculty, medical or graduate student, house staff officer, or postdoctoral research fellow against any other such member of the School community. The composition of this Committee and the procedures for addressing grievances are detailed in the Medical Student and Graduate Student Handbooks as well as in the Faculty Handbook. In addition, Graduate Students can express academic complaints and grievances at the Academic Review Committee.

The Associate Deans for Undergraduate Medical Education in the Medical School hold monthly open office hours for students to voice any concerns or make suggestions. These office hours are publicized and are held at times convenient to students.

Students can also express their concerns to the Student Council (Standard 4), which has representation across the Medical and Graduate Schools. The Student Council addresses a broad range of issues, including curricular concerns, student services, community service, student health, and social activities. In addition, the Executive Committee of the Student Council meets monthly with the Dean, the Deans of the Medical School and Graduate School, and several Associate Deans to advise the School's leadership of suggestions or concerns on behalf of the student body. These meetings have formal agendas and minutes are recorded and maintained by the Student Council.

Student Records

The secure maintenance of student records and a clear policy on the release of student information are crucial to providing an environment where students can trust that their information is respected and kept confidential. The Family Education Rights and Privacy Act (FERPA) guides these two priorities and is strictly upheld by Enrollment Services staff. The Registrar's Office periodically provides a workshop for select newly hired faculty, administrators and other staff about the requirements under FERPA. FERPA information is also readily available in the Medical School and Graduate School Handbooks. Importantly, students have the right to access their academic record. The policy for access is also listed in the student handbooks with additional information and forms posted on the Registrar's website.

Evaluation of Student Services

Students have multiple ways to evaluate student services, and changes are often made in response to their feedback. As the direct recipients of support services, students are uniquely equipped to identify strengths and weaknesses of these services and the offices responsible for providing them.

Each year, the Student Council works with a select group of students from all programs to craft, administer and analyze a Comprehensive Student Survey for both the medical students and the graduate students. Results are presented to the School's leadership and many substantive changes to support services and other aspects of student life have been made as a result.

Beyond qualitative measures of satisfaction, the Comprehensive Student Surveys are a source of qualitative data that inform strategic planning for School operations (Appendix 9-B and Appendix 9-C). As an example, student survey feedback has led to multiple changes to the Aron Residence Hall, including: restructuring of communication channels between dormitory residents and building employees; streamlining of maintenance services; creation of monthly meetings between the Real Estate Office, school representatives, and the Student Council; a student-led redesign of the room assignment policy; renovations of shared student spaces (TV room, exercise room, laundry room); and the addition of green initiatives throughout the facility. Other improvements based on student feedback include an online resource for students to place work orders to ease the process of scheduling repairs and an automated system for receiving and being alerted to packages. In addition to changes within the Aron Residence Hall, improvements have also been made with respect to security surrounding the building. The Mount Sinai Security Department and the Real Estate Office have increased the number of closed-circuit television cameras and the presence of security officers in the areas near Aron Hall to ensure continued student safety. Future surveys and assessment activities will guide further improvements to student housing.

The most recent Comprehensive Survey highlighted some institutional issues which the School's leadership continues to address. As noted above, housing is not currently offered to students in the Masters in Biomedical Sciences, Masters in Public Health and Masters and PhD in Clinical Research programs. Although recruitment materials and student handbooks for these programs clearly state that housing is not offered, this remains a source of dissatisfaction for affected students.

The AAMC Medical School Graduation Questionnaire (GQ) is a voluntary survey sent to all medical students in the months leading up to graduation and asks about their experiences across all facets of education. It allows for year-to-year comparisons, and for comparison of their own medical school with other LCME-accredited medical schools. The response rate at ISMMS is typically around 70%. Recent changes based on feedback from the GQ includes offering additional career planning services (such as creation of the Mentor Database as noted above), identification of specific faculty in each department available for residency application counseling, and increased measures for ensuring student confidentiality.

In summary, ISMMS provides a comprehensive set of support services to help our students thrive in the academic setting. Specific programs and services may be modified over time in response to the changing environment and evolving needs, as we strive to offer consistently high quality, relevant support that enhances the student experience and is congruent with our educational mission.

Standard 10: Faculty

A large, highly qualified faculty teach in and oversee the educational programs of Icahn School of Medicine at Mount Sinai (ISMMS). These faculty are appropriately trained, receive ample career development support, and thrive in an environment that values academic freedom. Appendix 10-A highlights some key sections of the Self-Study report that address the Middle States Fundamental Elements relating to Faculty.

2014 has been a period of extraordinary growth in the size of the ISMMS faculty. As of September 2014, the ISMMS full-time faculty count was 2,753, an increase of approximately 800 since 2013. Although the number of faculty has risen steadily over the past decade, this recent sharp increase is attributable largely to the creation of the Mount Sinai Health System and the integration of many new physicians to our teaching, research and clinical programs. Conducting proper review of these new faculty in a relatively short period required extraordinary effort by our faculty Committee on Appointments, Promotions and Tenure (APT) as well as the support of our back offices in shepherding through the transactions. Three positive factors worked in our favor. First, the vast majority of these incoming faculty had academic appointments at other highly regarded medical schools, primarily Columbia University College of Physicians and Surgeons, and Albert Einstein College of Medicine, so that we had a foundation off which to work in evaluating their applications. Second, our highly dedicated APT Committee organized into faculty subgroups to vet all senior candidates prior to approval. Third, we were able to increase the size of the APT administrative office to assist with the extra volume.

The full-time faculty is complemented by a voluntary faculty of approximately 2,000 individuals. Many work in nearby physician offices and come to the main campus to teach and/or invite students to their offices for unique outpatient learning experiences.

The ISMMS faculty are well trained to perform their duties. 99.8% of our full-time faculty have doctoral degrees, primarily M.D. or Ph.D. degrees; some have two doctoral degrees, with MD/PhD a typical combination. Similarly, 99.5% of our voluntary faculty have doctoral degrees. All have a broad range of expertise that is relevant to their roles as educators, researchers and clinicians, and many have training and experience in multiple areas. All teaching faculty, regardless of rank or full-time status, are held to the same standards as educators.

Every full-time faculty recruit receives a job description that clearly articulates his/her roles and responsibilities. This helps to ensure that new faculty and their supervisors have a mutual understanding of expectations, and serves as a valuable foundation for future performance reviews.

Many ISMMS faculty are expected to teach as a condition for holding their appointments. Approximately 900 faculty teach in one or more of the degree-granting programs. Others may devote their efforts to postgraduate teaching, i.e., postdoctoral research fellows, clinical residents and clinical fellows. Some teach in both degree-granting and postgraduate programs.

Teaching faculty roles and responsibilities vary by program. The MD program provides detailed job descriptions (Appendix 10-B) to course directors who teach in the first two years that address all aspects of their role, from syllabus preparation to resource availability to evaluation and assessment strategies. Similarly, clerkship director guidelines cover their broad range of responsibilities, including career guidance, documentation, assessment and faculty development. Another example is the MPH Faculty Handbook, which clearly communicates expectations for faculty teaching and administrative responsibilities.

Faculty participate extensively on the standing Executive Curriculum Committee (ECC) of the MD program, which is charged by the ISMMS Dean with:

- Conducting a continuing review of curriculum design, course organization and teaching performance and formulating specific recommendations for improvement
- Reviewing the educational objectives of the School of Medicine and to assure a curriculum that is consistent with these objectives
- Evaluating all segments of the existing curriculum and approving any changes or additions
- Reviewing the allocation of curriculum time for all subjects through the four years and the associated academic calendar
- Reviewing all course evaluations, student feedback, AAMC Graduation Questionnaire data and student performance data as outcomes of curricular design and implementation, and using this information to suggest improvements.
- Working in the best interests of the students and the educational program without regard for parochial or political influences or departmental pressures

The Curriculum Steering Committee, the Years 1 & 2 Committee, and the Clinical Curriculum Committee (representing Years 3 & 4 clerkships) all report to the ECC and each has a specific area of focus.

ISMMS is committed to sustaining an enriching environment in which our faculty can grow professionally and instruct and support our students in pursuing their academic goals. The following institutional resources and programs illustrate our commitment to optimizing faculty effectiveness.

Faculty Handbook

The online Faculty Handbook is an important resource for all faculty. As the repository for many policies and procedures, it is heavily utilized by both faculty and administrators. Recently, the Dean's Office created a "For Faculty" website to enhance faculty access to policies by offering targeted information to educators, researchers and clinicians. "For Faculty" also provides easily accessible information about services and benefits that are not included in the Faculty Handbook.

Faculty Appointment, Promotion and Tenure (APT) Methodology

The Faculty Handbook describes the criteria for all faculty ranks, and is supplemented by web documents that assist faculty and administrators in understanding the methodology and assembling applications. There are four full-time "tracks": Clinician and/or Educator; Investigator; Research; and Clinical Practice. There is some overlap across tracks in terms of types of activities addressed, but every track has its own specific criteria for expected achievement at the ranks of assistant professor, associate professor and professor. Entry-level instructors are not placed in a track, to allow time for them to develop their interests and roles prior to assignment to a track when they are promoted to assistant professor.

The APT methodology evolves over time in response to changing internal and external conditions. For example, the Clinical Practice Track was introduced in 2011 in recognition of the increasing clinical workload for many of our physicians, and the reduced likelihood that they will have time for scholarly endeavors. The new track provides opportunities for success and advancement for a cadre of faculty who might otherwise have been confined to a junior level in the Clinician and/or Educator Track without hope of meeting criteria for promotion to more senior ranks in that track.

The other full-time tracks have also changed with time. For example, all have had criteria added that address innovation. The Clinician and/or Educator Track has been amended to recognize changing teaching modalities such as web-based educational materials that faculty develop. The Investigator Track has undergone the greatest change; previously called the Academic Track (which inadvertently suggested that the other tracks might not be academic in nature), the Investigator Track criteria have been broadened to recognize the increasingly diverse backgrounds of our researchers, who are now recruited not just from academia but also from industry. The broadening profile of our faculty brings new areas of expertise and fresh perspectives that enrich the experiences of our students and hold great promise for pushing the boundaries of science and medicine.

Faculty Performance Review

Annual performance evaluations are an important part of the ISMMS culture. The evaluation policy for full-time faculty is posted on the School's website, and a standardized template is used by all academic departments (Appendix 10-C). Because the responsibilities and activities of faculty vary, the assessment instrument allows supervisors to address those relevant to each individual faculty member; the many areas covered include teaching, scholarship, research, clinical care, mentoring, service, professionalism and leadership. Within the teaching category, lectures, course development and directorship and mentoring are among the attributes to be considered. Every faculty member is assigned to a primary academic department, and many also have a strong connection to one or more of the multidisciplinary institutes; for faculty who are deeply involved in the activities of both their department and institute, the department Chair and institute Director may both contribute to the evaluation. The annual performance review process provides an important opportunity for faculty to meet with their Chair, Director or Chief for feedback on performance and to plan for the coming year.

Support Specifically for Educators

Communication of expectations and assurance of appropriate training for teaching faculty have always been important at ISMMS. With the addition of new training sites for ISMMS medical students at Mount Sinai Health System member hospitals, the Department of Medical Education devoted months to planning and preparing orientation sessions. At the start of the 2014-2015 academic year, the clerkship leaders at each new training site attended sessions to learn expectations and rules for teaching staff to ensure equivalency across all sites for students' experiences. In addition, five online modules were created for educator faculty at these sites. The modules related to the following topics: an introduction to ISMMS and the curriculum; clerkship-specific information; student and faculty expectations (policies); student resources; and faculty resources.

Ongoing programs that promote ISMMS faculty learning and growth as educators include:

- Life-Long Learning – ISMMS expects that faculty who teach in any setting possess up-to-date knowledge in their areas of expertise. Our culture of continuous learning drives faculty to develop their skills and knowledge as researchers and clinicians on an on-going basis. The School sponsors a large Continuing Medical Education program (Standard 13) and departmental grand rounds, has an extensive library collection (Standard 3), provides financial support for travel to conferences, and offers resources to enhance the grant application process. Such support provides faculty with a highly sophisticated understanding of the material they teach, thus creating a strong platform for them to excel as educators.

- The Institute for Medical Education (IME) – The IME is one of the most visible and active resources supporting the progress and development of educators who fulfill the teaching mission of ISMMS. As one of the School's strategic institutes, the IME serves an integral role in advancing the institution's education agenda.

  IME membership is open to all medical/health sciences educators. Most members and participants are full-time faculty at ISMMS. Entry-level ("Associate") membership is open to all faculty, as well as to postdoctoral research and clinical fellows. There are also two advanced levels of membership – Fellow and Master Educator – for faculty who have demonstrated excellence and have made significant contributions to biomedical education. The IME uses a rigorous peer review application process for membership. As of 2015, there are 42 Associate members and 67 advanced members across the two levels. Both basic and advanced members have a responsibility to contribute actively to the teaching community. Fellows and Master Educators are integral to the expansion of the IME's infrastructure and scope of programs.

  The IME's goals are to:

  - Recognize and reward excellence in education and teaching – The IME sponsors events that highlight the value of education in the life of ISMMS and its associated hospitals and ensure that teaching excellence is recognized and rewarded by the School. Excellence in Teaching Awards are conferred annually to outstanding faculty, staff and students who

embody the principles of excellence in teaching and go beyond the call of duty. Winners are selected through a peer-review process, with 45 faculty recipients in the past four years.

- Encourage educational research – At an annual Educational Research Day, poster presentations showcase the work of faculty, staff and students in the area of educational research, with the twin goals of encouraging all to participate in this important arena and providing a stepping stone to regional and national dissemination of their work. The IME awards the AAMC Medical Education Research Certificate (MERC) to faculty for developing skills in educational research; over the past two years, 13 such awards have been conferred.
- Facilitate the academic promotion of educators – Mentoring teaching faculty fosters professional development and educational portfolios. Advanced membership in the IME also provides evidence of outstanding quality and quantity of educational work to the Appointments and Promotions committee.
- Support skills development – The IME provides multiple opportunities for faculty to participate in enrichment programs for professional development. A series of peer-led faculty development workshops address a wide variety of topics, including bedside teaching, effective presentation skills in the classroom, and portfolio development. In the past four academic years, IME has held 24 such workshops.
- Promote the dissemination of innovative medical education scholarship – The IME sponsors Medical Education Grand Rounds, bi-weekly conferences that provide a forum for ISMMS educators to exchange ideas about curricular innovations, new teaching theories, research in education, use of technology, evaluation methods and mentorship of teachers and learners. Each year there are 12-14 Grand Rounds, with at least a third of the speakers invited from other institutions to provide a fresh perspective.
- Create an educational community whose members inform and support one another– Activities include peer leadership of development workshops, mentorship of junior faculty on education-related projects, and support to present at national educational conferences.

Faculty Development

In acknowledgment of the importance of faculty development, Dean Charney elevated oversight for faculty development to the full dean level in 2013, and restructured the existing program as the Office of Academic Development and Enrichment (OADE).   OADE provides guidance and resources for faculty career advancement, and targets junior faculty in particular for assistance. The OADE dean and staff meet monthly with assistant professors to obtain input, identify knowledge gaps and design programming.   Key initiatives launched by OADE include:

- Mentoring Program – Using institutional guidelines established by the faculty development program in 2011, the academic departments have created their own mentoring programs to reflect their unique culture and needs. A Mentoring Leader has been assigned in each department. OADE supports departmental efforts by providing web-based resources for both mentors and faculty, and consults as needed to enhance existing programs.
- Seminars and Workshops – OADE offers faculty skills training to help faculty achieve their goals. Events have covered a wide range of topics including:

- Promotion Methodology/Steps to Success
- Conducting successful basic and clinical research
- Work-life balance
- Scientific writing

After each event, a survey is distributed to rate the quality and relevancy.

Welcoming New Faculty:

- "Faculty First: Welcome to the Mount Sinai Health System!" is a bi-monthly luncheon in which faculty recruits are invited to meet and dine with other new colleagues, the ISMMS Dean and the OADE Dean.
- Clinical Coach Pilot Program: Currently under discussion with Department Chairs, this program will assign the many new clinical faculty who join ISMMS each year to a seasoned faculty member or administrator within their own department who can introduce them to institution and the Department. Having a "go-to" person for the many questions that newcomers have is expected to facilitate acclimation to the workplace.

- Encouraging Collaboration – Because networking and collaboration create a community among the faculty and also foster collective success, OADE has created a number of programs to stimulate collaboration. Of particular note is the popular Junior Principal Investigator Club, an informal opportunity for young faculty scientists to meet, talk about their research, exchange ideas and forge collaborations.

- Resource Awareness – OADE organizes faculty resource fairs to raise awareness about services and resources available to ISMMS faculty. Representatives from many infrastructure groups, from research core facilities to Human Resources to the Appointments, Promotions and Tenure Office set up booths to provide information and field questions.

With the establishment of the Mount Sinai Health System, OADE has expanded its mission to include faculty at the member hospitals. Over the past year, OADE has met with each hospital president and faculty members of all ranks to assess needs. Faculty at all sites are now routinely invited to participate in all OADE events, which whenever possible are video-conferenced to accommodate member hospital faculty who cannot take the time to travel from one campus to another. OADE is also identifying faculty to serve on committees to develop programs that address the needs of faculty across the health system. Importantly, these faculty members will also serve as a point of contact for individuals interested in mentorship opportunities.

OADE tracks participation in its many programs, and over time will develop mechanisms (beyond its current surveys) to measure its overall impact. Plans include more detailed assessment across the Health System.

Women Faculty Programs

The Women Faculty Group (WFG) is dedicated to advancing the academic success and careers of ISMMS women faculty. Many WFG programs focus on effective mentorship and access to resources. Other topics covered by WFG programs include academic advancement and gender-based issues. Program materials are posted on the WFG website to ensure broad dissemination. Several important groups have emerged from the original WFG:

- Office for Women's Careers (OWC) – A natural outgrowth of the WFG, OWC was formed in 2008 to advance the academic careers of women at ISMMS and to address potential barriers to their success by offering mentoring, networking, advocacy, and educational services. The founding and current OWC director, Sandra Masur, PhD (Professor of Ophthalmology) was recently invited by the NIH Director to present at a workshop at the Office for Research in Women's Health of the NIH on developing national programs for the Advancement of Women in Biomedical Careers.
- Women in Science and Medicine (WiSM) – WiSM was created in 2013 as part of OWC to provide additional resources and efforts enabling and empowering ISMMS women to achieve their professional and personal goals. WiSM partners with other ISMMS research groups to offer skill development programs and support networking and mentorship activities. Annually, WiSM also sponsors at least one keynote lecture – open to the entire ISMMS community – by a prominent external expert. WiSM contains two targeted subgroups:
  - Women in Science (WiS) – Fosters an ongoing discussion of concerns specific to the early stages of a woman scientist's career in the Graduate School, and extends access to outreach and professional development opportunities.
  - Women's Network/American Medical Women's Association Chapter at ISMMS – Seeks to create a community of support for women in medicine by providing mentorship and networking opportunities, advancing career development, and engaging in advocacy for women medical students' health.

In addition, Sisters in Medicine is an employee resource group that grew from Mount Sinai Health System diversity initiatives. The group serves as a collective voice that brings awareness to issues of concern to women of color at ISMMS, the Health System's member hospitals, and beyond the institution.

Diversity Programs

Diversity and inclusion are significant drivers for excellence in science and medicine and represent an important focus at ISMMS. Increasing the participation of individuals underrepresented in the medical and scientific professions is a fundamental goal of the School. A breakdown of faculty by gender and race can be found in Appendix 10-D.

Established in 1998 under the leadership of Gary Butts, MD (Professor of Pediatrics), the Center for Multicultural and Community Affairs (CMCA) is the diversity center of the ISMMS. With a federal award to create a Center of Excellence of Minority Health at Mount Sinai, CMCA has developed a "grow our own" approach to address workforce diversity in academic medicine, focusing on improving the recruitment and retention of junior minority faculty. Towards this end, CMCA created the Faculty Scholars Program (FSP), a highly individualized career-mentoring program for minority junior clinical and basic science faculty at ISMMS. FSP addresses individual development in the areas of research, education and training, service to the community, clinical practice and professional leadership and equips faculty with the necessary tools, information, and resources for success in academic medicine.

Since 2002, 61 ISMMS minority faculty and trainees have participated in FSP, which has six critical components:

- Individualized Coaching Sessions – Two seasoned career development experts in academic medicine have 1:1 meetings with Scholars to discuss progress, roadblocks, challenges, and accomplishments, and also to monitor all areas of responsibility, including teaching, clinical practice, research and administration.
- Travel and Tuition – Support is available when applicable.
- Career Development Workshops – Skill building sessions – both internal and external – focus on areas such as scientific writing, leadership development, and negotiating for success.
- Senior Faculty Network – FSP participants have access to senior faculty who function as consultants and trusted advisors.
- Individual Faculty Development Plan – Each Scholar has a workbook to assess specific areas of responsibility, develop and track a career development process, and plan and track meetings with faculty mentors and relevant supervisors.
- Individualized Just in Time Education – FSP participants have direct access to resources and consultants in the areas of research methods, teaching and curriculum design, and community engagement strategies on as-needed basis.

A new challenge is implementation and integration of minority faculty development programs across the Mount Sinai Health System. In 2014, the Health System launched a new Office for Diversity and Inclusion (ODI) to integrate and execute best practices for diversity system-wide, and to help drive excellence and innovation in research, education, and health-care delivery. Dr. Butts has been named Chief Diversity and Inclusion Officer, and will lead efforts focusing on: faculty and employee recruitment, retention, and advancement; education and training; research on health care workforce and disparities; youth education programs; community engagement; employees with disabilities; the LGBT community; and supplier diversity.

Moving forward, CMCA and ODI will integrate efforts, setting the standard for diversity and inclusion programs within our larger health system. In this regard, the FSP is entering unchartered waters as we now face the distinct challenge of determining how best to expand and/or replicate the FSP to nearly twice as many minority faculty (approximately 200+) situated in five additional hospital sites across a large metropolitan area without compromising the highly individualized nature and richness of the program.

In summary, ISMMS has a talented, well prepared faculty who are excellent teachers and mentors. Faculty are supported in their efforts by a vast infrastructure that offers the teaching instruction, continuing education and advisement that faculty need to build and maintain the skills and sense of community that ensure their success as educators.

Standard 11: Educational Offerings

ISMMS leverages its broad expertise in biomedical research, clinical care, and medical and scientific training to offer a rich variety of educational programs leading to advanced degrees. Every degree-granting program has rigorous, well-developed goals, curricula and expectations of student learning outcomes that are compatible with one or more components of the School's mission of clinical care, education, teaching, research, information dissemination, and community service. Appendix 11-A highlights some key sections of the Self-Study report that address the Middle States Fundamental Elements relating to Educational Offerings.

Programs utilize a variety of learning settings appropriate to their unique educational goals and to each course, including traditional didactic and interactive small group formats, participatory journal clubs and seminars, and experiential venues such as laboratories, clinical rotations, and research practice. The educational experience of ISMMS students is shaped by the School's commitment to developing new approaches to teaching, facilitating learning, promoting cutting-edge basic research, translating scientific discoveries into improvements in patient care, and identifying new means to enhance the health and educational opportunities of its community. At the same time, the curricula promote lifelong learning, information retrieval and use skills, and professionalism. Each program undergoes regular self-evaluation and is responsible to School leadership, and in some cases, to external professional accreditation bodies.

Medical Education

To accomplish its educational goals, the four-year course of study leading to the MD degree is designed to integrate core knowledge with clinical competence while promoting critical thinking skills, problem solving strategies, and clinical reasoning. The ultimate goal is summarized in the program mission statement of the Medical School: "to produce physicians and scientists who are prepared to enter society as informed advocates and activists, able to advance clinical care and science, and capable of promoting change." The medical education competencies were defined in 2009, revised in 2012 and a new curriculum was developed and implemented starting with the class of 2017. A full description of the MD Program's Core Competencies can be found in Appendix 11-B. The comprehensive program evaluation and subsequent revision of the curriculum were prompted by the evolving need for physicians to be not merely clinical care-givers but also collaborators, team members, leaders and innovators. A multidisciplinary Curriculum Design Team spent over a year reviewing the curriculum, student outcomes, course evaluations and data from the AAMC Graduation Questionnaire to inform its recommendations and final plan.

The curriculum for the MD degree prepares students for the opportunities and challenges of practicing medicine and conducting biomedical research in the 21st Century. It provides students with the analytical tools needed for research, the skills to work in inter-professional teams, a passion for lifelong, self-directed learning, and an appreciation for applying science in the service of society to address disparities locally and globally. Each course, clerkship and elective opportunity has explicit goals and objectives as learning outcomes. Students in the first and second years are also given explicit milestones to accomplish in a timely manner. These

milestones facilitate completion of the required scholarly project and help students to explore careers and develop specific interests.

Highlights of the MD curriculum include:

- "InFocus" weeks across all four years that provide core curricula in vital topics such as research methods, global health, service learning, leadership, patient safety and quality, and scientific innovation. These immersion experiences bring together outstanding interdisciplinary faculty and emphasize skill development and knowledge application.
- Mentored clinical, translational, basic, or educational research opportunities that culminate in a required independent scholarly product prior to graduation. The Medical Student Research Office (MRSO) counsels students about research mentors and funding opportunities.
- Active, small group and team-based learning opportunities that encourage collective problem solving and peer teaching and mentoring;
- A Longitudinal Clinical Experience (LCE) that partners medical students with patients beginning in Year 1 to enhance patient-centeredness and reflective practice; In addition, the Interclerkship Ambulatory Care Track (InterACT) gives select third-year medical students a unique longitudinal clinical experience grounded in the foundations of ambulatory medicine and chronic illness care. It develops students committed to the practice of patient-centered care who are able to navigate health care systems while addressing the social, economic, and cultural factors that impact chronic illness care in an urban setting.
- Protected half-days of "Flex-Time" in Years 1 and 2 for self-directed individualized learning, discovery and leadership development;
- A strong emphasis on service learning and urban primary care that includes participatory opportunities in the community;
- Opportunities to participate in advanced, mentored international missions that address the health care, education, research, and public health needs of our global community. Roughly one-third of our medical students elect to do a global health experience during their time at ISMMS.
- Ample time and mentoring for exploration of career choices;
- Flexible scheduling that can accommodate the addition of a scholarly year; currently 25% of students elect to take a scholarly year between years 3 and 4.
- Specialty-specific skill-based preparation for supervised practice in residency; and
- Prestigious "Distinction in Research" and "Distinction in Medical Education" opportunities for graduates.

The new curriculum expands the number of available elective weeks from 21 to 28 in years 3 and 4, creating time for enhanced learning experiences that allow students to explore areas of specific interest. Detailed descriptions of the current and future third and fourth year clinical rotations can be found on the School's website. Similarly, the revised MD curriculum affords individualized learning opportunities for Year 1 and 2 medical students through Nexus Learning, which comprises a diverse range of non-clinical courses aligned with the mission and vision of the School.

A variety of degree-granting programs provide opportunities for additional training. These include:

- Patient Oriented Research Training and Leadership (PORTAL) is a 5-year, MD/MS in Clinical Research program that offers advanced coursework, mentorship, and projects to help prepare medical students for careers in clinical research;
- Dean's Scholars in Global Health program (DSGH) is a 5 year, MD/MPH program that offers advanced coursework, mentorship, and field experiences to help prepare medical students for careers in global health. Alternatively, medical students can earn an MPH as part of the 4-year MD curriculum.

Graduate School of Biomedical Sciences

The programs under the Graduate School of Biomedical Sciences umbrella include both PhD and Master's programs. These integrated programs within the Graduate School give graduate students abundant opportunities to appreciate and engage in translational science and expose them to course availability outside of the program in which they are enrolled.

PhD Program

PhD students can earn their degree in Biomedical Sciences or Neuroscience. All entering PhD students in Biomedical Sciences or Neuroscience must fulfill general program requirements that provide a solid foundation in core scientific knowledge. Most students take a Biomedical Sciences (BMS) core course to obtain a highly integrated academic introduction to the first year of the PhD program. The course, which was revised in 2010, spans the major topics of the biomedical sciences including cell biology, cell physiology, metabolism, genetics and genomics, developmental and stem cell biology, immunology, microbiology, model systems, and disease. It is divided into six modules, each with a self-contained set of 25 lectures. Every module is taught by a team of four to six professors.

In 2010, BMS underwent a comprehensive evaluation by the Graduate School Curriculum Committee. The evaluation included student evaluations, course director assessment, and teaching faculty feedback. Through this process, several areas of needed improvement were identified. These included:

- Students and faculty felt there was too much overlap between BMS courses and other courses in the curriculum.
- Some content specialization was not sufficient and seemed out of place in a general knowledge core curriculum.
- Students and faculty felt the course extended too far into the summer and interfered with students laboratory rotations
- Students felt there wasn't adequate coherence within the course.

In response, the Associate Dean of the Graduate School charged the Course Director with proposing changes which were later reviewed by the Curriculum Committee. Changes were implemented that addressed all of the concerns. The Curriculum Committee has re-evaluated the BMS course on an annual basis to confirm the success of the course revisions.

After their first year of training, PhD students select one of nine Multi-Disciplinary Training Areas (MTAs) The MTAs are aligned and integrated with the School's interdisciplinary Institutes, which provide collaborative research opportunities and teaching enhancement for faculty, and also provide shared resource facilities and other infrastructure to support the School's clinical, research and educational missions (Standards 2 and 3).   The focused thematic groups within the Institutes enable students to interact and identify with broadly based, translational faculty. Each MTA also provides specialized advanced coursework. Individual MTA-led courses are open to students from other MTAs, ensuring that students can pursue interests outside of their specialty. Students also benefit from course offerings, journal clubs and seminars of their respective Institute. The MTA structure has been appealing to students.

The School seeks to offer each student many ways of developing a personalized program of pre-doctoral training that meets individual goals in research and academics. In addition to formal classroom learning and participation in journal clubs and seminars, every student has up to four laboratory rotations that expose them to a wide range of research areas and potential mentors in the ISMMS community.

Students must pass an initial qualifying exam early in their second year and then develop and defend their thesis proposal within the following year. Each student is expected to develop a research project that he/she conducts under the guidance of one or more faculty members. That project culminates in a thesis that is presented and defended. The maximum time allowed for the completion of the PhD program is seven years, although the average time to completion is five and a half years.

In recognition of the changing employment trends in the biomedical sciences, the PhD program has begun recruiting candidates with more diverse educational backgrounds including engineering, computer science and physics, and has begun to prepare students for a more diverse spectrum of job options. This is a growing trend throughout the country in recognition that a diverse scientific workforce breeds more impactful research and that there is a real need to diversify career paths for our students.

The Design, Technology and Entrepreneurship (DTE) MTA was introduced in Fall 2013 in response to the changing options our students will face. This training area focuses on the development of innovative technologies, models, designs, techniques and methods that have the potential to substantially advance biomedical research by infusing it with principles and concepts from the quantitative sciences. Within one year, five students had chosen DTE as their training area and are now participating in this new novel curriculum. The scope of Mount Sinai Innovation Partners (MSIP) was broadened to facilitate bringing students' ideas to fruition by guiding them through the processes associated with patenting and intellectual property.

Another example of how program evaluation informs improvement and planning efforts was the recent commissioning by the Dean of the Graduate School of an External Advisory Board (EAB) in the summer of 2014. Charged with reviewing the PhD and MD/PhD programs, the EAB found both ISMMS programs to be robust, with a strong track record in recruitment and retention, programmatic requirements and student outcomes. The EAB made several recommendations that the Graduate School is planning to implement, including:

- Creating a career office to disseminate opportunities in the marketplace and to work one-on-one with graduates on their specific career needs
- Developing more mini-courses in a "boot camp" format to meet new and emerging needs of doctoral students
- Utilizing PhD alumni to serve as ambassadors for recruitment purposes

The Graduate School leadership is utilizing the EAB's insights to develop PhD curricular enhancements. It is also planning to increase the visibility and name recognition of the Graduate School in order to attract more exceptional students, especially those who are underrepresented in science.

In May 2013, the School signed an affiliation agreement with Rensselaer Polytechnic Institute (RPI) to foster collaboration on educational programs, research and the development of new diagnostic tools and treatments. This unique affiliation combines Mount Sinai's biomedical expertise with RPI's renowned proficiency in engineering and invention prototyping. A joint online course, *Introduction to Experimental Design,* was introduced by RPI in Fall 2014 and taken by four ISMMS students. A second course, *The Biology of Aging*, will be offered in Spring 2015. In addition, ISMMS reserves five slots for RPI students in its Summer Undergraduate Research Program (SURP). SURP, a 10-week internship program that offers undergraduates an intensive research training experience working in a Mount Sinai basic science laboratory, is an important pipeline for the PhD and MD/PhD programs at ISMMS.

[Master of Biomedical Sciences](#)

The Master of Biomedical Sciences (MSBS) program addresses the nationally recognized need for generalist graduate study in the medical sciences by providing students with the foundation necessary to pursue a variety of careers in the health professions.   MSBS graduates pursue doctoral degrees in research and/or clinical medicine, or seek employment in a related field. The first year of the MSBS program focuses on mastery of fundamental concepts in cellular and molecular biomedical sciences, application of statistical principles to experimental design and data analysis, responsible conduct of research, and critical analysis and presentation of primary research literature in the biomedical sciences. Students attend core courses with first-year PhD students and thus share their academic and social environment. MSBS students spend a significant amount of time on a laboratory research project that becomes the basis for their Master's thesis project. MSBS students can also take courses in the Design, Technology and Entrepreneurship MTA, either as a defined track leading to the development of a product for potential commercialization or as electives. MSBS students complete the degree requirements in three terms, with an option to continue their research for a fourth term.

[Master of Science and PhD in Clinical Research](#)

The Master of Science in Clinical Research (MSCR) is a two-year program which provides outstanding clinical and postdoctoral fellows, junior faculty, and other trainees (MD, MD/PhD, and "basic science" PhD students) with the knowledge, skills, and experience to launch successful clinical and/or translational research-intensive careers. Students develop

competencies in clinical research methodologies, including the design, implementation and presentation of clinical research, biostatistical data analysis, epidemiology, research ethics, socio-behavioral health, grant writing and the application of basic science techniques in clinical research. MSCR students complete a combination of formal graduate courses, research practicum, works-in-progress/clinical research seminars, and thesis-related work.

The PhD in Clinical Research is a 66-credit program which is designed for outstanding students who desire an intense educational experience to prepare them for a career in clinical or translational research. This program provides a strong didactic foundation combined with a mentored clinical research experience leading to a doctoral degree in Clinical Research. The PhD in Clinical Research emphasizes more advanced topics in biostatistics and experimental design and requires trainees to choose from among four areas of research concentrations including, bench to bedside; clinical trials; implementation research; and molecular genetics and genomics. These concentrations further inform additional select coursework pertaining to the area of concentration. All students are required to pass a written qualifying exam and successfully defend their dissertation work in order to be awarded a PhD in clinical Research.

[Master of Public Health](#)

The Master of Public Health (MPH) program offers training in public health research and practice. The MPH program is accredited by the Council on Education for Public Health (CEPH) and is a founding member of the Association of Schools and Programs of Public Health (ASPPH). The MPH program educates students about disease prevention, environmental protection and health promotion in partnership with the populations they serve. MPH students can focus their studies in one of several tracks: Health Promotion and Disease Prevention; Global Health; Epidemiology; Health Care Management; Occupational and Environmental Medicine; Biostatistics; and Outcomes Research. Students undertake didactic coursework, a practicum experience, and a Master's thesis or Capstone project that demonstrate a knowledge base in the core competencies of public health. MPH graduates pursue careers in a wide variety of settings, including hospitals, clinics, departments of health, international organizations and industry, and work in basic public health practice, management, education and research.

[Master of Science in Genetic Counseling](#)

The Master of Science in Genetic Counseling (MGC) program prepares students for careers as genetic counselors. The program is accredited by the Accreditation Council of Genetic Counseling (ACGC) and harnesses Mount Sinai's considerable expertise in the Department of Genetics and Genomic Sciences and the Icahn Institute for Genomics and Multiscale Biology. The MGC curriculum is taught largely by faculty from these areas and promotes genetic counseling that is sensitive to all cultural and age groups, research, and the intellectual motivation to create lifelong learners. In addition to a robust didactic curriculum, the MGC program includes clinical rotations, practicum experiences, and a required thesis project. Upon completion of the program, MGC graduates are eligible for board certification by the American Board of Genetic Counseling.

Master of Science in Health Care Delivery Leadership

The School's newest program, the Master of Science in Health Care Delivery Leadership (MHCDL), was launched in 2014 in recognition of the rapidly changing health care environment. The program is designed for mid-career health care professionals and provides them with the skills, knowledge, and strategic tools required to successfully navigate the health care landscape. This rigorous and unique 21-month program is delivered through an online learning platform (Standard 13), with two residency seminar sessions on the Mount Sinai campus. Students are exposed to case studies with relevance and immediate applicability to their workplaces, and conduct a detailed Improvement Project either at their home institution or at another institution as part of a team. Personal leadership development experiences are threaded throughout the program. Students receive mentoring from faculty and other participating professionals, and have access to the vast resources and expertise of the Mount Sinai Health System. There are eight students in the program's first cohort.

A list of courses including credit hours and sequencing for this new program is shown in Appendix 11-C. The program is delivered on a cohort basis (all students take the same courses at the same time) with thirteen of the fifteen courses delivered online in a blended synchronous-asynchronous format. Online courses take seven weeks to complete, with an exception of the first, two week Affordable Care Act course, and will be sequenced one at a time. Two of the courses will be delivered as part of an in-person, five day residency session; one in the beginning of the program and one that bridges into the second year.

The program has a series of learning competencies that are modeled on peer-reviewed published research conducted on competency assessment within health care management degree programs. Specific program competencies can be found in Appendix 11-D

Significant attention was paid to developing the Program Evaluation Plan for this new program (Appendix 11-E) to be sure it met the same standards as other programs in the Graduate School of Biomedical Sciences, but also included a strong assessment of the distance learning elements. The Program Director will aggregate assessment results to evaluate student attainment of learning goals and program effectiveness. Gaps will be addressed in consultation with the program leadership and faculty. Additionally, evaluation results will be shared with the Dean of the Graduate School and the Chair of the Department of Health Policy on an annual basis to ensure comparability of quality across Graduate School programs and program effectiveness.

The Program Evaluation Plan includes student tracking in each course, monitoring of course-to-course progress and program completion, and student surveys (course, exit, and post-graduation) as general methods for monitoring overall student progress and achievement. Student learning assessment is an aggregation of data from course specific evaluations which directly relate to specific course learning goals that are, in turn, mapped to the competencies desired of all students in the program. The assessments for this graduate student audience are consistent with the types of assessments used in other graduate programs by being heavily geared toward individual paper assignments, case study analysis, annotated bibliographies, organizational assessments, and other project-based work.

ISMMS offers several options for students to pursue more than one degree simultaneously. The prestigious NIH-funded Medical Scientist Training Program (MSTP) is a joint MD-PhD program that prepares students to be physician-scientists capable of leading the translation of basic science discoveries into new approaches to disease prevention and treatment. The Dean's Scholars in Global Health Program is a five year program that accepts two students from each MD class to earn an MPH degree in addition to the MD. Five students in each MD class are selected to participate in the Patient-Oriented Research Training and Leadership (PORTAL) program. Students enrolled in the PORTAL program earn both the MD and MSCR degrees over a five-year period. Tuition is waived for the Masters degree in both the Dean's Scholars in Global Health and the PORTAL program. Students who are not accepted to either program can also choose to pursue a Masters degree but are expected to pay tuition.

Transfer Policies

Unlike undergraduate education, the transfer of credits at the graduate level is uncommon. Medical students at ISMMS are only accepted as transfer students in extremely rare cases with the approval of the Associate Dean of Student Affairs and the Dean for Medical Education. Graduate School programs have policies pertaining to graduate-level transfer credits that uphold the academic integrity of the School.   As indicated under Standard 8, credits for graduate courses taken at other institutions may be awarded under certain conditions but must be approved by the Program Director and the Dean of the Graduate School. Approval is based on analysis of the course content taken at the other institution in comparison to the course content of the related ISMMS course. The Graduate School Handbook contains a full description of transfer credit policies.

Information Literacy

ISMMS values and facilitates the development of excellent information literacy skills. The Academic Informatics and Technology (AIT) department oversees the School's library and Academic IT Support Center and ensures that all ISMMS students can access and utilize information and technology resources to support their academic endeavors. The Levy Library offers web-based tutorials, and conducts regular workshops highlighting various research tools and maintains a high caliber of onsite and online research resources. Librarians are available to meet with users individually or in groups for assistance with information resources and research tools. A team of instructional designers, instructional technologists and medical illustrators comprise the Instructional Technology Group (ITG), which promotes best practices for integrating technology into teaching and learning. The ITG provides individual and group training for faculty and staff upon request. The AIT department also hosts a monthly "Lunch and Learn" series that highlights innovative uses of instructional technology in education.

The ITG team maintains the School's Blackboard learning management system, an integral teaching and collaboration tool for faculty and students. Courses have a site on Blackboard for posting syllabi, class schedules, instructional content and lecture recordings, competencies,

assessment methods, and bibliographies. The use of Blackboard by instructors has been mandated for all programs to ensure that students can consistently access course materials.

Educational Program Assessment

The Medical School and the programs in the Graduate School all evaluate the admission processes, curricula and student learning outcomes on a regular basis, using a variety of approaches and mechanisms. All programs have active and engaged Curriculum Committees that report findings and recommendations to a broader Steering Committee or other executive level oversight group. Some (the MD, MPH and MSGC) have additional expectations associated with their professional accreditation agencies. Evaluation of faculty effectiveness is an important component of program assessment. Rigorous criteria, including student feedback, ensure that educators are facilitating student learning as expected. Examples of effective programmatic assessment were threaded throughout this section to further demonstrate the School's commitment to regular evaluation and improvement.

Standard 13: Related Educational Activities

Icahn School of Medicine at Mount Sinai (ISMMS) has a variety of educational programs that do not lead to the awarding of degrees. All of the programs have in common a commitment to providing high quality experiences that train participants to master a particular field of knowledge. These programs are summarized under this Standard. Appendix 13-A highlights some key sections of the Self-Study report that address the Middle States Fundamental Elements for Related Educational Activities.

Certificate Programs

ISMMS has two credit bearing Certificate programs, the Clinical Research Training Program (CRTP) and the Advanced Certificate in Public Health.

The CRTP is a 26 credit hour program typically completed within one year. The program provides the basic knowledge and skills for conducting patient oriented clinical and translational research. It is designed for young investigators, clinical research coordinators and other trainees who wish to advance their careers in clinical research by fostering critical thinking and improving analytical skills. The CRTP curriculum is based on the first year didactic component of the Master of Science in Clinical Research program (see full description in Standard 11).

The Advanced Certificate in Public Health is a 13-15 credit hour program completed within one year. Students choose from three concentrations of study: general public health, global health or outcomes research. The certificate program covers public health core content and provides a foundation for practitioners, researchers, and other trainees who are interested in enhancing their public health skillset. While enrolled in the certificate program, students may only register for a maximum of 15 credits in the courses outlined in the advanced certificate program curriculum.

The admissions and application review processes for both the CRTP and the Advanced Certificate in Public Health follow the same standards as our other degree granting programs. Information about eligibility, application process and curriculum is available on the program websites for both matriculated and prospective students.

Once admitted, certificate students have access to all of the support services offered to students in other degree granting programs. Because courses required for our certificate programs are also part of other degree granting programs, they benefit from the design, administration and evaluation rigor of all of our courses. Students receive academic credit for courses taken in the certificate programs. If they later apply for and are accepted to the respective full Master's degree program, the earned credits from the certificate program will be counted toward the degree.

Graduate Medical Education

Under the auspices of ISMMS, the Consortium for Graduate Medical Education oversees 230 residency and fellowship programs at 17 participating institutions in New York City and New Jersey; approximately 2400 residents and fellows fall under the Consortium umbrella. The Office

ensures the quality of house staff and clinical fellow training, including resident responsibilities, evaluations and quality of patient care. It also supports programs to enhance the educational experience of trainees throughout the Consortium.

GME functions under the leadership of the Senior Associate Dean for Graduate Medical Education, who reports directly to the Dean for Medical Education. The Senior Associate Dean role was established after the creation of the Mount Sinai Health System to provide an extra level of oversight for the many programs of member hospitals. The incumbent is an experienced, widely respected GME expert who directed residency programs at Health System member hospitals for many years. Associate Deans for GME at key training sites are responsible for programs at their respective hospitals and report up to the Senior Associate Dean. Together, they work with trainees and program directors to provide excellent residency education.

Administering the GME program of the integrated Mount Sinai Health System requires maintaining appropriate and strategic clinical training sites for postgraduate medical education programs while ensuring that our patients have the best possible outcomes. Programs that previously existed on multiple campuses are being located at particular sites. The System brings new clinical training opportunities for residents. Residents and fellows also get first-hand experience in learning about this new health care delivery system. Standardizing the approach to certain diseases across campuses is a priority.

Mount Sinai's GME program adheres to all requirements set forth by the Accreditation Council for Graduate Medical Education (ACGME). Initial accreditation was granted to the Consortium in 1996, and the program has been continuously accredited since that time. The current accreditation period, effective October 1, 2012, is for five years.

Continuing Medical Education

Life-long learning is a central principle of the ISMMS educational philosophy. This commitment to the importance of continuous education is echoed by many medical specialty boards, which require ongoing training for their physicians.

The Page and William Black Post Graduate School for Continuing Medical Education (CME) focuses primarily on the ongoing education of practicing physicians, but also serves other medical professionals. CME courses are designed both for skill building and to ensure that practitioners remain up-to-date in their areas of expertise. Mount Sinai's CME program is accredited by the Accreditation Council for Continuing Medical Education (ACCME), and abides by all requirements of this national accrediting agency, including their guidelines for course organization, faculty, commercial sponsorship, evaluation, etc. As an accredited program, the ISMMS Post Graduate School can offer CME "credits" that enable participating physicians to fulfill their annual CME requirements. The program was recently reaccredited for six years rather than the usual four because we received "Accreditation with Commendation" for exemplary performance.

Mount Sinai's CME programs are open not only to Mount Sinai faculty and staff, but also to practitioners from other institutions. Courses cover a wide range of topics in many medical

specialties. Courses may be as intimate as internal departmental grand rounds, or as expansive as a multi-day course that attracts thousands of participants. Course venues may be on-campus or off-site, and may include live webcasts.

The CME program comes under the purview of the Associate Dean for Continuing Medical Education, who reports directly to the Dean for Medical Education.   The Associate Dean is responsible both for adherence to ACCME requirements and for program quality. Participant evaluations are shared with Course Directors and become part of the permanent file for a course; performance is reviewed by the Associate Dean to ensure that all programs offered are of the highest quality and accomplish intended goals.

During calendar year 2013, ISMMS sponsored 328 CME-approved activities totaling approximately 4,000 hours of instruction. They included live events, regularly scheduled series (such as clinical grand rounds) and enduring materials. Together these activities accommodated nearly 63,000 physician participants and 20,000 non-physician participants.

Office of Postdoctoral Affairs

ISMMS has a large complement of postdoctoral research trainees, and the numbers are growing as the School's research activities continue to expand. Currently, 628 postdoctoral fellows are engaged in hands-on research training in the School. Postdoctoral fellowships provide a stepping stone to careers in academic biomedicine or in industry.

Postdoctoral fellows are recruited by individual investigators to work and learn in their research laboratories and programs. Trainees are recruited by mentors on the basis of shared research interests and relevant experience. ISMMS postdoctoral fellows come from doctoral programs in the United States and around the world, creating a very diverse group of trainees.

The Office of Postdoctoral Affairs within the Graduate School of Biomedical Sciences provides oversight and support for research trainees. A faculty Program Director works closely with an advisory committee comprised of faculty and postdoctoral fellows. A Postdoctoral Executive Committee led by two trainees meets monthly with other fellows to identify concerns that need to be communicated to the advisory committee for disposition.

The broad range of services offered by the Office of Postdoctoral Affairs includes:

- Sponsorship of Academic Programs – The highly acclaimed Responsible Conduct in Research course guides trainees on integrity relating to all aspects of research.
- Career Planning and Support – Job fairs, meet-and-greets and career discussions are designed to identify options and provide assistance.
- Support for New Trainees – Incoming trainees may obtain immigration assistance, housing assistance (housing is offered for up to three years through Mount Sinai's Real Estate Department), medical benefits guidance, etc.
- Networking and Socials – Regularly scheduled informal events provide an opportunity for trainees to meet each other and faculty.

- Trouble Shooting – The Office is a resource for trainees who experience difficulties with their mentor, peers or others.

Distance Education

ISMMS launched its first (and currently only) distance education program, a Master of Science degree in Health Care Delivery Leadership (MSHCDL), in August of 2014. The program provides a coherent, quality-based educational experience that meets the same high academic standards expected of other educational programs at the School.

Mission Congruence and Rationale (also see Standard 11)

Mount Sinai's multifaceted mission statement connects our desires to lead in patient care, education, research, scholarship, community, and workplace. This new degree program reinforces our commitment to advancing our mission and is a logical outgrowth of the programs and health care delivery activities already in place. The program provides direct access to leaders in health care reform, a world-class faculty from our integrated health system (the largest in NY state), and Mount Sinai's newly-launched Accountable Care Organization.

Assessment of Program Quality, Consistency, and Coherence

The Program Evaluation Plan (see Appendix 11-E and discussion in Standard 11) is comprehensive and encompasses program vision and goals, student services, e-learning management system and instructional resources, faculty support and training, student learning outcomes and faculty effectiveness.

Given the newness of the program and the distance learning format, care was given to be sure faculty members would have the support and input from a professional Instructional Designer, a Media Specialist, a Curriculum Assistant, and the Program Director so that courses had the expected level of academic depth and rigor, as well as appropriateness to the institution's chosen learning management system (Blackboard).

The Blackboard management system has multiple features to facilitate the student learning outcomes assessment process including:

- a multi-faceted grading center with "customizable" recording templates with calculations and rubrics,
- a retention center that tracks 4 key indicators (deadlines, grades, activity, and access), and
- a portfolio tool enabling the collection and recording of multiple assessments of student's work.

Course instructors operate under a set of instructional guidelines including a defined number of instructor-led hours, use of discussion boards moderated by the instructor, use of weekly synchronous web conferencing, scheduled office hours dedicated to students of this program, instructor-provided weekly course synthesis, and expectations of communication frequency and assessment feedback to students. The guidelines also require that faculty establish criteria for

formal assessment of student interactions with the instructor and peers (e.g., grading the quality of discussion board posts). The Program Evaluation Plan includes multiple ways to assure the Program Director can assess interactions including the student learning outcome process, course surveys, instructor feedback, and having full access to each online course to monitor activity.

Appropriate Level of Resources

The School has made significant investments to ensure the support and success of the MSHCDL online program including:

- A full-time, dedicated Administrative Director
- A full-time, dedicated Program Coordinator
- A full-time, dedicated Instructional Designer
- A full-time, dedicated Media Specialist
- A full-time, dedicated Curriculum Assistant
- Internal and external faculty (including project mentors)
- Student Service Support help desk, including technological services
- An updated electronic management learning system (Blackboard) with additional supports and applications
- Faculty training and on-going support to deliver online curriculum

The resources required to support this new program have been incremental and do not impact the support available for other academic programs. Since this is primarily an online program, the burden on ISSMS's physical plant facilities is minimal and the in-person residency sessions are held during the summer months when demand for educational space is lower.

Student Services

Consistent with the offerings made available to students in the traditional setting, the Enrollment Services Office coordinates many of the services that are offered to students in the MSHCDL program including admissions, financial aid, and registration, as well as access to the Disability Officer (Also see Standards 8 and 9).

As a program within the domain of the Graduate School of Biomedical Sciences, the [Graduate School Student Handbook](#) is the primary source of information for MSHCDL students.

Learning Resources

Students are provided access to a variety of digital resources including student services and course content. Our intent is to create a virtual experience that connects the learner to ISMMS and on-campus student life.

Students have full access to the Gustave L. and Janet W. Levy Library which supports clinical, educational, and research programs at ISMMS through its reference and instructional services and by providing access to an extensive digital collection of biomedical information resources (Also see Standards 3, 7 and 9). Specific to the MSHCDL program, the Levy Library resources

include the Ebsco Business Source Complete, a premier business database containing the *Harvard Business Review* and many marketing, management and business sources. Students also have access to the Health Policy Reference Center which includes more than 400 e-journals on the topics of health care access and delivery, administration, financing, quality, reform and public health.

The School recently moved to a hosted solution by Blackboard that provides additional licenses and improved reliability across the enterprise. In recognition of the importance of quality media elements in an online environment, course content is carefully designed to enhance the experience of a distance learner while ensuring their learning experience mirrors an on-campus experience.

Faculty Support

Academic IT specialists and librarians provide orientations to faculty about library resources and research services, computing services, and Blackboard. An additional special set of intensive Blackboard training sessions, designed by the program's Instructional Designer, are offered to MSHCDL faculty and teaching assistants on both a group and individual basis. These sessions provide in-depth counsel on migrating learning material to a digital environment and adopting select features to support course learning objectives, assessments, and collaborative engagement of students and faculty. Multiple individual follow-up occurs as needed. Faculty and teaching assistants are also assisted by an instructional technologist with course design and selection of technology that will create a positive experience for the distance learner.

The School hired a full-time digital Media Specialist to support the faculty by facilitating recordings, encoding to a variety of codecs, providing training on best practices in lecture presentations, and ensuring media is tagged and metadata is accurate within the content storage system.

More routine follow-up is provided through in-person instructional sessions, online tutorials, and remote consultations. Support is also provided by email, phone, online, or via videoconferencing 7 days per week.

An annual assessment of the faculty support program will be conducted and will include the participation of faculty and key academic IT staff involved in providing support. More frequent adjustments occur as a result of weekly meeting discussion between the Program Director and Academic IT staff. In recognition of the need to be responsive to relevant substantive concerns, continual changes will be made based on frequent feedback from the program faculty and students.

Periodic Assessment of Resource Impact

ISMMS provided an ample budget to launch and maintain the MSHCDL program. The School's annual budget process provides an opportunity to assess the results of the Program Evaluation Plan (Appendix 11-E) in the context of program's impact on human, fiscal, and infrastructure resources and re-allocate resources to best match on-going needs.

Legal and Regulatory Compliance

Credit Hours

The program adheres to the New York State Department of Education regulations concerning credit hour definitions (Commissioner's Regulation 50.1 (o)). See Appendix 11-C for a full listing of courses, credits and sequencing.

On Boarding Student Identity Verifications

Upon matriculation to ISMMS, all students undergo a detailed background check which is conducted by Corporate Screening Services, Inc. and includes verification of key identity and background information. Students are then issued a unique life number that serves as their student ID number. This ID/life number is also found on the photo badge issued by the Security Department. Student identity is matched at the time of issuance. The ID/life number is used by the School's IT division to issue credentials for accessing email, School's network, and online services including Blackboard. This initial process is designed to ensure integrity of student identity and key information up to the point of course access.

Course-Level Student Identity Verifications

ISMMS has employed the [Acxiom Identify-X TM](#) solution provided by LearningHouse, to assure student identity authentication in courses. This product uses a database of publicly available and nonpublic proprietary records to verify student identities and then generates challenge questions on demand, without prior input from students. This ensures students cannot share their responses and circumvent the identity verification process. This solution is compatible with our learning management system, Blackboard, and is deployed randomly at multiple times in each course.

 Each course has weekly synchronous sessions that provide an opportunity for faculty to match student images against their student identification pictures. This approach is effective since most of the course level assessment activity in this program will be unique project-based work, not examinations.

The program will regularly evaluate the effectiveness of the onboarding process and Acxiom solution as part of its annual program evaluation. The Program Director will solicit feedback from Academic IT, program faculty, and students identify any gaps or process issues.

There are no fees charged to students for identity verification.

The comprehensive nature of the program's development and planned evaluation processes, which were created in line with ISMMS's standards of academic excellence, demonstrate that the MSHCDL program's offerings meets the fundamental elements for Distance Education in Standard 13.

Standard 14: Assessment of Student Learning

Ongoing assessment of students, academic programs, and teaching faculty is integral to ensuring fulfillment of the ISMMS educational mission. In addition to the comprehensive overview of assessment of student learning provided in this section, Standard 14, relevant information is also contained in Standards 7, 8, 10 and 11; together, these sections describe assessment at the level of student, faculty, alumni, overall curriculum, teaching methods, learning environment, program goals, and institutional leadership. Appendix 14-A highlights some key sections of the Self-Study report that address the Middle States Fundamental Elements relating to Assessment of Student Learning.

Data collection and analysis for assessment purposes begin within each individual program, and are also conducted for the Graduate School and MD programs as a whole, and overall for ISMMS. All facets of the assessments are aggregated to create a complete picture of successes and shortcomings. Observations and recommendations made at each level feed back to each program to inform programmatic change, thus contributing to the evolution of our programs.

Considerable diversity in assessment approaches is evident across programs, reflecting the individual needs of each program and the disparate educational needs of the students in each program. Some programs require a curriculum that is tailored to each individual student, e.g., the PhD Program, while others have a more unified curriculum that is at least partially mandated by an outside regulatory body, e.g., Master of Science in Genetic Counseling or MD Program. Appendix 14-B summarizes each program's goals, assessment methods, outcome measures, and action plans to address weaknesses, and provides a guide to the overall processes. In all cases, student assessment, including adherence to program timelines for academic achievement (Appendix 14-C), and program assessment are evaluated by an oversight group/committee and feedback is provided to Course Directors and program leadership.

Doctor of Medicine Program

The innovative curriculum of the MD program trains students to become highly skilled physicians and compassionate caregivers. Assessments are grounded in defined guidelines and provide evidence that ISMMS students successfully meet both internal and national graduation competency requirements. Learning outcomes are based upon the requirements of the Liaison Committee for Medical Education (LCME), the national organization that accredits Doctor of Medicine programs. The Accreditation Council for Graduate Medical Education (ACGME) competencies for residents (the next training step for medical school graduates) are also taken into consideration.

In order for students to progress through the MD program, they must complete each year's requirements. These requirements are tracked to ensure they are met by each student.

- Year 1 medical students must pass all courses and complete their milestone requirements to progress to Year 2

- Year 2 medical students must pass all courses, complete their milestone requirements and successfully complete the United States Medical Licensing Exam (USMLE) Step 1 before progressing to Year 3
- Year 3 medical students must pass their Year 3 clerkships and complete all milestones to progress to Year 4
- Year 4 medical students must pass their clerkships, complete their milestones and pass USMLE Step 2 Clinical Skills and Step 2 Clinical Knowledge to graduate.

The curriculum is developmentally structured and requires that students demonstrate adequate knowledge and skills in order to progress to subsequent years. While each course and clerkship has subject-specific goals and objectives, global competencies, e.g., communication skills, professionalism, self-directed learning, are threaded throughout the curriculum. Course and clerkship directors conduct assessments that assure these objectives are met. They review their course or clerkship goals, objectives, curriculum, teaching formats and assessments to confirm that they are consistent with the overarching graduation competencies and that they facilitate advancement through medical school.

A variety of modalities for assessment of student learning are used throughout the MD program, including: multiple choice and modified short answer essay examinations; practical exams; assessment of small group performance; direct observations with real and standardized patients; chart reviews; and, oral and written case presentations and performance at simulators. The assessments are complementary, using multiple, additive modalities in an ongoing fashion to assess student outcomes. In addition, our assessments correlate with student achievement of national standards as documented by the USMLE Step 1, Step 2 Clinical Knowledge and Step 2 Clinical Skills and successfully completing the first year of residency training. In the aggregate, the results of these assessments provide convincing evidence that students achieve the required competencies.

At each stage of the MD program, learning outcomes are evaluated through a variety of measures that include:

- Collecting and tracking pass/fail rates for each course and clerkship, and longitudinally tracking each graduating class for their performance in specific content areas, e.g., Anatomy, Pathophysiology, Internal Medicine, on USMLE examinations to assess competency in these specific areas. This information is reviewed with course and clerkship directors to inform changes to the curriculum.
- Monitoring of students who need to retake exams or repeat courses. Although grades are pass/fail in Years 1 and 2, the Student Affairs Manager tracks students with marginal performance or failing grades and implements remediation when required, as described in Standard 9. Within Student Affairs, a network of Student Support personnel review students with marginal performance, creating integrated, individualized educational plans for them with continuous feedback and reassessment. Thresholds are defined to identify when students are reviewed by the Promotions Committee for more extensive remediation plans.
- Tracking by Student Affairs of student incident reports. Multiple incident reports or a single egregious event prompting an incident report will result in a review of the student by the Promotions Committee.

- Conducting comprehensive clinical assessments (COMPASS 1 and 2) at the end of the second and third years to identify student achievement of the specific goals for each segment of the program as well as preparedness for the next phase. These exercises utilize standardized patients to assess application of knowledge, skills and attitudes, including communication, clinical skills, ethical reasoning, and professionalism.
- Comparing student performance in clerkships across all training sites. Analyzing grade components by location allows us to ensure comparable educational and assessment experiences for students regardless of the training site.
- Comparing the performance of Icahn School of Medicine students longitudinally with performance of students at other medical schools on national standardized exams (USMLE Step 1, Step 2 Clinical Knowledge and Step 2 Clinical Skills, and National Board of Medical Examiners subject test exams) and with changes in the curriculum content, format and learning experiences.
- Creating a comprehensive Medical Student Performance Evaluation (MSPE) for each student at the end of the third year of medical school. The MSPE compiles all awards and prizes, involvement in school and the community, academic performance, and research accomplishments, and includes the five appendices required by the Association of American Medical Colleges (AAMC) to support student applications for residency. ISMMS has created a numeric system to quantify the accomplishments of each student within the goals of the curriculum and the mission of our School and in concert with our definition of success (not only knowledge acquisition but also professional attributes, scholarship, superb communication, and commitment to community and leadership). A grid is used to group students into quartiles according to the guidelines for creation of the MSPE by the AAMC.
- Analyzing success in the fourth year student match for residency training programs. Data is tracked based upon match rates by specialty choice and specific type and quality of residency program. In the school's internal exit survey, students identify where their ultimate match was on their rank list (top choice or further down on their preference list).
- Polling graduates and their residency program directors at the end of their internship on how well-prepared our graduates are for residency training and their performance during the graduate medical education experience. Feedback from residency directors provides unique insight in this regard and results are compared against previous years.

The MD program has a multi-tiered reporting quality assurance structure to review curricular assessments and provide feedback to appropriate individuals. At the granular level, there are three basic sources of assessment data:

- Students' grades and other performance-related summative data;
- Students' evaluations of courses and clerkships. All medical students complete on-line evaluations of every course and clerkship providing both quantitative and qualitative data. This information is summarized and thematically coded by the Office of Curricular Support and provided to the course/clerkship directors.
- Faculty reflection/analysis of their course/clerkship for the academic year.

In the first level of the assessment process, this data is reviewed by the course/clerkship directors and shared with their faculty. Course/clerkship directors use all of this information to identify areas in which faculty need to improve their teaching skills and/or where the curriculum may

need to be adjusted. Concurrently, the Medical Education leadership reviews this information and provides guidance and support to the course/clerkship directors to facilitate refinement of the educational activities.

Information generated through the first level of assessment is then provided to multiple groups: the Curriculum Steering Committee (CSC), an oversight body that continuously reviews and revises our educational process where necessary; the Years 1/2 Course Directors Committee; and the Clinical Curriculum Committee (CCC). This extensive dissemination allows course and clerkship directors as well as educational leaders to share information and lessons learned.

Finally, the course/clerkship directors present this information to the Executive Curriculum Committee (ECC), which is the oversight body for the medical school program. The EEC reviews each course or clerkship and provides feedback and recommendations for changes directly to the course/clerkship director(s) and to the CSC in order to ensure that appropriate changes are implemented. The Deans attend the ECC meetings so they are constantly aware of successes as well as of needed improvements.

The overall assessment process is coordinated by the Director for Assessment and Evaluation. This process is continually reviewed by the program's Dean and the Associate and Assistant Deans, with modifications implemented as necessary to ensure that modalities capture the necessary evidence to document student achievement and to provide feedback that informs modifications to our educational process. In addition, program administration reviews assessment methods in the course of periodic self-studies submitted to the LCME and subsequently implements LCME suggestions for improvement.

Graduate School Programs

The Graduate School of Biomedical Sciences at ISMMS offers an array of degree granting programs that span the spectrum of basic science to clinical research and population health. Each program maintains its own set of academic expectations, standards (in some cases set by a professional accrediting body), and assessment strategies. All programs are monitored by a committee structure including faculty to ensure students achieve expected learning outcomes.

The Graduate School has implemented a number of improvements in response to the 2010 Self-Study findings, and these changes have further strengthened or provided added structure to support the student learning assessment processes. These include:

- A comprehensive revision of the Graduate Student Handbook to provide a higher level of consistency and to more explicitly define policies and procedures across educational programs.
- Enhancement of the course evaluation structure for the PhD and Masters in Basic Science programs.
    - Adopting best practices in place elsewhere in the Graduate School, the PhD and Masters in Basic Science programs implemented a 360º evaluation for all core and specialty courses, which includes input from students, course directors, teaching faculty, and teaching assistants. The Graduate School Curriculum Committee (GSCC) coordinates a

subsequent review of the evaluations and holds course directors accountable for making improvements based on the evaluations. A standard set of evaluation questions is now asked of all students in the Graduate School. Teaching faculty evaluate their respective courses using a newly developed "Course Evaluation and Course Faculty Response Form." Teaching Assistants complete a similar form. Course Directors are expected to review student, faculty, and TA evaluations and develop an action plan that addresses responses, which is then reviewed by the GSCC.

- The GSCC reviews new and ongoing courses in a different way. New courses must be approved prior to implementation and the first 360º evaluation is conducted within three months of completion. New courses are reviewed annually until the GSCC moves it to Ongoing Course status. Ongoing courses are reviewed annually as part of their respective MTA portfolio, with the MTA Director(s) summarizing strengths and weaknesses and plans for remediation.

- Redesign of the Committee for Academic Review (CAR) process for students' academic performance and professionalism including a standardized appeals procedure. The redesigned structure and process has been expanded to include students from all Graduate School educational programs (previously programs had an independent process with student appeals directed to the Dean of the Graduate School). In the new design, programs will either utilize CAR for their full review or as the first step of an appeals process. CAR membership has been expanded to include representation from all programs and include students. The appeals process has been redrafted and is explicitly delineated in the Graduate Student Handbook.

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Following is assessment information specific to each program.

Basic Science MS and PhD Programs (Biomedical Sciences/Neuroscience)

The Graduate School offers a range of courses and training experiences that culminate in a Master of Science or Doctor of Philosophy in either Neuroscience or Biomedical Sciences. The PhD in Neuroscience and the PhD in Biomedical Sciences are built around Multidisciplinary Training Areas (MTA) that are aligned with the School's mission-driven Institute structure (as described in Standard 11).

Through core and specialized coursework, journal clubs, small group activities and structured mentoring, students are expected to gain a strong scientific foundation upon which hypothesis-driven basic science research can be conducted. Effective critical reasoning and communication skills are also required for students to produce a scholarly work in the form of a Master's Thesis or PhD Dissertation that must be successfully presented and defended in order to earn their degree.

An educational environment that is rich in formal and informal educational opportunities is available to support students' progress toward their degree. Students benefit from a hybrid education; one that includes both traditional courses and one-on-one mentorship, akin to an apprenticeship, for significant portions of the educational process. Assessing student learning in these disparate environments requires different forms of both direct and indirect feedback which are summarized below:

- Assessing foundational biomedical science knowledge though course related examinations, problem sets, group discussions, and the General Knowledge exam.
- Assessing excellence in specialized knowledge through examinations in advanced courses, writing assignments, group and one-on-one discussions, and the Thesis Proposal presentation and exam.
- Assessing scientific and analytical skills through courses, seminars, and journal clubs, in one-on-one mentoring with the students' advisors and mentors, in the qualifying exams, and ultimately in the completion, presentation and oral defense of the thesis or dissertation.
- Assessing communication skills through seminar/research presentations, literature presentations, written and oral presentation of research proposals and finished projects and in sessions with mentors.
- Tracking of the timing and achievement of program milestones to confirm student progress and growth. Several review structures are in place to accomplish this:
  - Faculty Advisory Committees, charged with overseeing student progression, have required one-on-one meeting schedules with MSBS and PhD students to confirm satisfactory progress and establish development plans when needed. Faculty Advisory Committees are the primary source for student tracking during the research years. These committees report student progress to the MTA Directors to ensure sufficient progress of the student and that the training goals of the MTA are met.
  - MTA Directors meet on a regular basis to discuss students whose progress is inadequate and they meet annually to formally review each student in the training area. They update the Program Director about student progress following this annual review.
  - The Program Director also monitors student progress by reviewing information provided by the MTA Directors and meeting with each student annually to review progress and plan for the following year. He/she reviews information provided by the MTA directors and meets with each student annually to review progress and plans for the next year.
  - A referral to the Committee for Academic Review (CAR) is made if a student is failing to meet academic, research, or professional standards. The result of this review may include formative feedback, remediation planning, or in cases when remediation plans are not completed, dismissal from the program.

- Evaluating student feedback while training and after graduation in a number of ways including:
  - The Dean of the Graduate School or the Program Director conducts exit interviews of all departing students, including those who do not complete the program. Each PhD student also completes a written Exit Survey, the results of which are used to evaluate student satisfaction with the program.
  - Review and response to the results of the annual, student administered Satisfaction Survey which queries student opinion about all facets of academic and extracurricular life at Mount Sinai.
  - Biannual alumni surveys to track career progression and professional activities of graduates.

Oversight of the student learning assessment process is assured in several ways. The Graduate School Curriculum Committee conducts an annual review of all existing courses and approves all new courses to confirm that they are consistent with institutional and Graduate School

missions, demonstrate appropriate excellence and rigor and that they complement current course offerings. The Curriculum Committee also oversees implementation and monitors the success of all policies and procedures related to course or student assessment. The Graduate School Steering Committee is tasked with using student learning outcomes as a component of their strategic planning deliberations and recommendations to the Dean. The Steering and Curriculum committees often work as a seamless unit to develop and implement a broad range of policies and procedures. Finally, data from our graduate programs are compiled and compared to data from other similar programs. Data sources include the National Survey of Graduate Faculty, the survey of graduate programs by the National Research Council, the Group on Graduate Research, Education, and Training Education and Training (GREAT), and the AAMC.

MD/PhD Program

The joint degree MD/PhD Program is an important ISMMS training priority. Mount Sinai's considerable expertise in translational science positions us well to educate future physician-scientists in rapidly advancing basic science discoveries that lead to clinically relevant treatment paradigms. MD/PhD students complete the first two years of medical school, followed by four or five years meeting the requirements for a PhD in Biomedical Sciences or Neuroscience, and then return to medical school to complete the clinical training required for the MD degree. Upon graduation, students typically enter residency programs and often combine fellowship and postdoctoral studies thereafter.

For over 35 years, the Graduate School of Biomedical Sciences has received partial funding support for the MD/PhD Program through a prestigious NIH award Medical Scientist Training Program (MSTP) grant. An application for competitive renewal is submitted every five years and requires ISMMS to demonstrate student and programmatic success as measured by criteria such as trainees' research publications, completion records and current positions of past trainees.

Students in the MD/PhD program are expected to fulfill the standard learning outcome requirements of the MD and the PhD programs. Significant discussion took place during the course of this Self-Study about whether unique attributes required of effective physician-scientists -- which are incremental to being only a successful clinical physician or academic scientist -- warrant additional expectations and associated additional layers of student learning assessment in the MD/PhD program. The discussion evolved beyond just the MD/PhD program to include ISMMS students in other dual degree programs, including the MD/MPH and MD/MSCR programs. Although conclusions were not reached, it was agreed that this important dialogue should continue.

Master of Public Health

The Master of Public Health (MPH) requires students to demonstrate progress toward achieving pre-determined competencies for degree completion in preparation for becoming members of the public health workforce. This competency-based educational approach is consistent with the requirements of the program accrediting organization, The Council on Education for Public Health (CEPH); CEPH aims to foster workforce development and help academic institutions and training providers develop curricula and course content.

The latest revision of the program's core set of public health competencies was completed in June 2014. The competencies were developed by both administrators and faculty within the MPH program with oversight provided by the program's Curriculum Committee. Competencies are used to guide overall program learning objectives, curriculum development and course specific learning objectives. These competencies are the primary guide for measuring student achievement in the classroom, in the practicum, in the culminating experience and in other service learning opportunities. All methods of assessment are linked backed to the program competencies, which students are expected to achieve at degree completion. Detailed student assessment data is compiled and disseminated to pertinent program and institutional committees for review and comment, thus ensuring a continual iterative process of student and program evaluation. The Curriculum Committee has responsibility for the ongoing assessment and evolution of the competencies to ensure they remain relevant and are adequately addressed by the program curriculum.

In addition to the core public health competencies that every student must demonstrate to earn the degree, each specialty track has an additional set of competencies. Students are initially informed of the core and specialty competencies through the website and then on Blackboard upon entry into the program.

Assessment of MPH student achievement occurs at multiple levels with continual evaluation. Examples of indirect and direct measures of student achievement include:

- Assessing learning through coursework, including examinations, small group exercises, laboratory sessions, final papers, multiple choice examinations, group projects, and oral presentations.
- Maintaining a "B" average throughout the program and upon degree completion.
- Completing a 150-hour public health practicum experience that is planned, mentored and evaluated by a qualified field preceptor who provides feedback including student behavior, attitudes, motivation, reliability, dependability and team interaction.
- Completing a culminating experience. Students must work with an advisor to develop an original research question related to public health, gather and analyze data and summarize their findings in a 25 to 30 page written master's thesis or capstone project. This experience is iterative and requires continual feedback from the academic advisor(s) as the project progresses. Upon completion, students participate in an "intellectual dialogue" with their advisor and a second reader. Students are also assessed on a five to ten minute oral presentation summarizing the project followed by an in-depth discussion of strengths and weaknesses.
- Twice during the program, students must self-evaluate their progress in achieving program competencies. This is done through a Competency Survey.

The MPH program regularly evaluates how student achievement is measured and whether those results demonstrate that learning outcomes are being met, using data and methods that include:

- The MPH Curriculum Committee reviews the course evaluations with the Course Director who is expected to make revisions to the curriculum in response to the evaluations and to ensure that learning objectives, which are mapped to competencies, are met. Critically

evaluating student course evaluations allows for effective feedback on course content, teaching format and the skills of the course director.

- The MPH Curriculum Committee reviews the raw data generated from the student completed Competency Surveys which provides another perspective on potential gaps in learning objectives.
- Monitoring of degree completion rates (which is also an annual report required to be submitted to CEPH on an annual basis).
- Conducting annual informal student feedback sessions and exit surveys of all graduating students.
- Conducting annual employer and practicum site surveys.

The methods for assessment of student learning are continually reviewed for their relevance and utility at multiple levels. Initially this process is coordinated by the Curriculum Committee, which reports to the Program administration as part of a continual feedback loop that includes planning, modification, assessment, and implementation. Additionally, the program administration reviews its assessment methods with several key stakeholders, including the External Advisory Board, in the course of its periodic self-study process for its accrediting body CEPH. Finally, the annual review and reaccreditation process by CEPH includes updated guidance that contributes to the review and shapes the methods of student learning assessment at the macro level.

PhD and Master of Science in Clinical Research (MSCR) Programs

These programs are designed to foster the development of future leaders in patient-oriented research through the encouragement of critical thinking and analytical acumen necessary to conduct innovative hypothesis-driven, independent and collaborative team-based clinical/translational scientific research. Fourteen consensus-based competency domains supported by the NIH funded Clinical and Translational Science Award (CTSA) guide overall program learning objectives. The outcome measures used to assess student performance in these respective programs are also comparable to other CTSA directed clinical research education programs across the country and are informed by these nationally accepted norms.

Under the auspices of the Graduate School of Biomedical Sciences, the Clinical Research programs have adopted the standards employed for assessing and awarding an MS or PhD degrees in biomedical science. Since the initiation of the PhD program, a number of changes have been implemented in our assessment of student learning to further enhance the rigor of this educational training venue.

Student performance is assessed according to: established milestones for core course requirements; qualifying exams (if applicable); and research thesis development conduct, defense (if applicable) and deposit. The specific milestones are provided to students at the time of orientation and are also posted on the website and on Blackboard.

The Clinical Research Education Program utilizes a variety of outcome measures either common or distinct for each of the respective degree granting programs to assess student learning including:

- Assessing core knowledge using homework assignments, problems sets and examinations
- Participating in a year-long clinical/translational seminar series, "Works in Progress", where professionalism, critical thinking, leadership abilities, teamwork, oral presentation skills and respectful, constructive debate are evaluated and feedback is provided
- Participating in a year-long Clinical/Translational Journal Club, including required leadership of at least one session, where mastery of methodology and analytical skills are further developed and evaluated
- Assessing written and oral communication skills, leadership and teamwork through participation in Journal Club, Grant Writing Course, Annual Research Day and Writing Workshops
- Maintaining a "B" average in required coursework
- Assessing professionalism through a required term paper on topic of relevance to ethics in clinical research, and participation in required Ethics curriculum
- Successful completion, submission and deposit of thesis (Masters program)
- Successful completion of written qualifying exam, oral thesis presentation and dissertation defense (PhD program)
- Tracking of entry and post graduate appointments, grants, awards, publications and participation in interdisciplinary team science, utilizing Graduate Tracking Survey System (GTSS)

The critical evaluation of ongoing curricular activities and the implementation of new curricular initiatives are overseen by the Center for Patient Oriented Research Training, Education and Development (CePORTED) Curriculum Committee (as distinct from the Graduate School Curriculum Committee which reviews the basic science curriculum). Course evaluations and student feedback are reviewed with the Course Director who is charged with making changes to ensure the learning objectives have been met. A similar approach is taken for evaluating workshops and additional educational forums. Formative evaluations are also provided to Course Directors by assigned advisors, mentors and faculty involved in the oversight of specific coursework.

Assessing the progress of individual PhD students is conducted through the Multidisciplinary Advisory Committee (MAC) process. Students are required to meet twice annually with their three-person MAC to receive ongoing feedback concerning: progress in developing a research thesis proposal; assessment and formal feedback verbally and in writing regarding approval or adjustments to proposed thesis following formal oral presentation of proposed thesis work to be pursued; and ultimate evaluation of dissertation defense.

The PhD in Clinical Research program is now overseen by a PhD oversight committee comprised of four faculty with complementary clinical/translational research expertise and scientific backgrounds. This oversight committee was established in response to a recognized need to enlist experts in relevant disciplines to provide leadership and input to the recruitment process and achievement of specific milestones. This committee meets monthly and reviews ongoing and emerging curricular needs, student progress, and program recruitment strategies.

Master of Science in Genetic Counseling (MGC) Program

The competency based MGC program utilizes standards established by the Accreditation Council for Genetic Counseling (ACGC), the professional accreditation body for genetic counseling programs. Of note, accreditation of graduate genetic counseling training was previously the responsibility of the American Board of Genetic Counseling (ABGC), the body that also administers the national board certification examinations in genetic counseling. In 2013 it was determined that accreditation and certification should be independent and the ACGC was created to assume the accreditation role. The American Board of Genetic Counseling (ABGC) remains the certifying body for genetic counselors.

As an accredited program, Mount Sinai submits required annual reports to the ACGC. The most recent report demonstrated compliance with competencies and was reviewed favorably. Periodic full accreditation reviews are conducted by self-study and site visitation. The ISMMS MGC self-study for re-accreditation is due in September 2015, and a site visit will take place in 2016.

At each stage of the MGC program, learning objectives are assessed using a variety of outcome measures that include:
- Evaluating students in their didactic curriculum in a number of ways: exams (multiple choice, short answer, and essays), papers, small group interactions, review of standardized patient encounters and overall program participation.
- Written evaluations by clinical supervisors of student progress in mastering ACGC clinical competencies during clinical rotations and review of student case logs.
- Holding regularly scheduled clinical supervisor meetings to review student status. In addition, one to two formal meetings of all supervisors across disciplines for further evaluation and development of clinical education plans are held for each student.
- Thesis requirements are reviewed and evaluated by the faculty preceptor(s). In addition, students are required to give an oral presentation of their thesis results to clinical faculty and staff, and a MGC thesis committee evaluates and provides feedback on each thesis.

Further evidence that the program is successfully meeting learning outcomes is provided by:
- Data from the certification examinations support that graduates of our program successfully master core competency requirements.
- Tracking of graduate activities and publications also support the achievement of our outcomes.

Didactic courses and clinical training experiences are evaluated by students and reviewed by the program's internal Curriculum Committee. Results are reviewed with Course Directors and Clinical Supervisors who are responsible for making adjustments when needed. In addition to the ACGC accreditation and Curriculum Committee, the Program is subject to review by the Graduate School of Biomedical Sciences and the Department of Genetics and Genomic Sciences. Finally, the program provides updates to, and solicits feedback from its Advisory Board on an annual basis.

Master of Science in Health Care Delivery Leadership (MSHCDL) Program
As described in Standard 11, ISMMS launched a Master of Science in Health Care Delivery Leadership in August of 2014 after receiving approvals from the New York State Department of Education in late April 2014 and the Middle States Commission on Higher Education in March 2014.

The program, delivered in a distance learning format described fully in Standard 13, is designed to deepen knowledge of environments, processes, structures, and strategies that are driving disruption in health care. Accordingly, the curriculum has three main components: an exploration of broad principles and key influencers of the health care system; an examination of evidence-based frameworks for strategic leadership and effective management of health care delivery organizations and issues; and analysis of novel health care delivery models, and clinical and translational research innovations. The program is delivered on a cohort basis utilizing a blended learning design consisting of two one-week residency-based seminar sessions, weekly synchronous sessions, and asynchronous learning experiences for existing senior health care professionals.

The overarching learning goals of the program are to:
- Lead in appraising models and crafting strategies that guide health care organizations toward successful adoption of, and adaptation to, changes in policy and management.
- Be critical consumers of the major literature on health care delivery and its reform, with the ability to judge the quality of prominent proposals for innovation in health care systems, and a capacity to discern challenges in the translation of theories into practice.
- Know how to access, interpret, and apply reliable evidence from multiple sources, both qualitative and quantitative, to organizational problem-solving.
- Analyze the larger environments (political, financial, economic, competitive) of health care organizations and assess the influence of external developments for organizations in which they have, or aspire to have, leadership roles.
- Bridge, both conceptually and institutionally, the worlds of clinical care medicine and population-based health improvements.

The program has a multifaceted student learning outcomes assessment process including student activity tracking in each course, monitoring of course-to-course persistence and program completion, and student surveys (course, exit, and post-graduation) as general/indirect methods for monitoring overall student progress and achievement.

As highlighted in Chapter 11, and listed in Appendix 14-B, the primary student learning outcomes assessment process is organized upon course-level assessments which relate to specific course learning goals that are, in turn, mapped to the competencies desired of all students in the program. The assessment methods for this student audience are consistent with the types of assessments used in other graduate programs by being heavily geared toward individual paper assignments, case study analysis, annotated bibliographies, organizational assessments, and other project-based work. The rubrics used relate to course learning goal(s) and to ensuring academic depth and rigor, and are appropriate to the learning experience.

As a further means to validate the quality and breadth of outcomes, the program learning competencies (which are described in Appendix 11-D) are modeled on peer-reviewed research conducted on competency assessment within health care management degree programs.

The Program Director will request from faculty, at the conclusion of each course, aggregate data by assessment and course goal. This data aggregation and mapping process will enable the program leadership to assess attainment of learning goals and competency acquisition across the breath of desired outcomes. Gaps will be addressed in consultation with the program leadership and faculty. Additionally, aggregate results of these evaluations and resulting action plans will be shared annually with the Graduate School and the Dean's Office.

The Blackboard management system has multiple features to facilitate the student learning outcomes assessment process which are particularly important in a distance learning environment. See Standard 13 for a more detailed description of these features.

Appendix 14-B lists the assessment methods for this program including the direct methods of lecture embedded quizzes on critical concepts, question response, and poll tracking in synchronous sessions, assessment of individual discussion posts, critical essays, reflections, and case study analysis, reporting out and benchmarking of self-assessment results, and production and assessment of a Capstone project. The assessment plan also uses the indirect methods of course mapping, Blackboard user tracking, Student course evaluations, persistence rate tracking, and exit and alumni surveys

The program has not yet completed its first full year nor graduated its first class of students. At this early stage in the life of the program initial analysis will occur course-by-course and then aggregated yearly thereafter with course evaluations to be used as immediate feedback with alumni surveys occurring every 1 and 3 years out for each cohort.

The assessment plan for this new program is part of a larger program evaluation plan, based on competency standards identified in the literature of heath care administration education, and fortified with metrics embedded with the learning management system (Blackboard). However, some of the anticipated challenges to this plan revolve around limitations in benchmarking against the competencies given the unique nature of the audience (senior health care leaders), tracking student's post-program success in leadership roles, and calibrating an appropriate level and blend of metrics derived from the digital and in-person learning experiences.   We will address such challenges as the program evolves.

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In summary, ISMMS employs rigorous evaluation processes to examine student progress and program strengths and weaknesses, all in the context of program, school and institutional mission. Students, course directors, faculty, teaching assistants and administrators participate in reviewing and revising courses and programs. In addition to extensive internal evaluation metrics, ISMMS also benchmarks our students and programs against external standards when possible, including standardized tests and competency standards established by external regulatory bodies. Our comprehensive monitoring, analysis and follow-up ensure that ISMMS students receive excellent educations and move on to successful careers in biomedicine and related fields.

Conclusion

The Self-Study and Report confirm that Icahn School of Medicine at Mount Sinai (ISMMS) readily meets or exceeds all standards set forth by the Middle States Commission on Higher Education. The Self-Study process provided faculty, students and staff and the broader ISMMS community with ample evidence that the School is thriving and will continue to do so into the future.

This concluding section summarizes the success of ISMMS in fulfilling each of the MSCHE standards. The voluminous documentation examined during the Self-Study, and the extensive discussions of all aspects of our program and School, provide ample evidence of our many strengths and bright future.

Standard 1 - Mission
ISMMS has a clearly defined mission, with goals and objectives that flow directly from that mission. The mission statement addresses a strong commitment to education, research, clinical care and scholarship, and also recognizes the importance of serving the community and creating a sound work environment. Taken together, the components of the mission statement set the stage for an outstanding educational experience for our students.

The Self-Study has generated interest in possible changes to the mission statement that would create a more tightly worded document that resembles those of many other schools. If pursued, such a statement would have the dual advantages of placing additional emphasis on innovation and creativity, and of creating a more concise message. Pursuit of alternatives is likely in 2015.

The School's mission is closely linked to the planning, resource and assessment practices described under Standards 2, 3 and 7, and in fact is present throughout all standards.

Standard 2 – Planning
ISMMS plans extensively to ensure mission fulfillment and optimal allocation of resources. The Strategic Plan, developed with broad input from multiple constituencies, is a guiding force for the School, setting the course for success of our educational and research programs and in clinical care. The Strategic Plan is adjusted over time in response to changing internal and external realities; its flexible, dynamic format allows us to be nimble in positioning ourselves optimally in each area. The creation of the Mount Sinai Health System and an increasingly competitive economic environment at the local and federal levels are two notable examples of forces that led the School to plan for and accommodate changes that could not have been foreseen a few years ago. Planning and assessment together play a strong role in decisions regarding resource allocation.

The Strategic Plan is complemented by extensive short range planning as well as planning at the local level. The ample evidence of the success of our planning efforts is noted under Standard 7.

Standard 3 – Resources
The School's robust educational infrastructure is continuously evaluated and improved through careful planning and resource allocation. A broad range of resources, e.g., classrooms, library,

information technology, laboratories, clinical settings and personnel, support the mission and provide excellent education and training to our students. Well defined, executed and disseminated policies ensure optimal resource allocation. Excellent financial planning and oversight keep the School on a break-even budget every year. Complementary processes in other areas such as space allocation and capital planning, utilize appropriate metrics and oversight to direct resources where they are most acutely needed.

An external environment that includes a tightening NIH budget and increasing clinical competition compels us to maintain our current vigilance in order to protect our sound financial position. Towards this end, it is imperative that we continue to employ rigorous control over resources to keep us strong into the future.

Building a significantly enhanced website, a project which has just begun, will require enormous stakeholder effort to ensure that the final product is informative, easily navigable and effectively serves its many constituencies.

Standard 4 – Leadership and Governance
ISMMS has a clearly defined governance system and a dedicated, talented Board of Trustees that supports all facets of the School's policy development and decision-making. The various committees of the Board are focused on specific areas of School functions are well suited to members' interests and expertise. Strong conflicts of interest policies ensure that Board members function entirely without self-interest in the School's activities. In close collaboration with School leadership, the Board ensures the ongoing strength of the institution. Students have ample opportunities to provide input through a strong student governance structure, access to leadership and participation in strategic initiatives. The Faculty Council is a representative body which is a forum for discussion and serves as a conduit to the Dean.

Standard 5 – Administration
The Dean of ISMMS is a highly experienced administrator, physician-scientist and leader who works closely with the Health System CEO to maintain excellence and grow School programs. A network of deans is responsible for specific areas relevant to their own expertise, and report to the ISMMS Dean or other Deans. Other leaders include academic department chairs and institute directors. The overall size of the staff is appropriate to carrying out all School programs and services that tie into our mission. Decision-making is tied to the planning, resource allocation and assessment activities described in Standards 2, 3 and 7.

Standard 6 -- Integrity
High ethical standards are applied in all areas of our mission, from education to research to clinical care to scholarship to community service. All activities take place within an environment that places high value on academic and intellectual freedom. ISMMS policies and processes are clearly articulated and widely promulgated; the mssm.edu website is a favored resource for both. These include policies pertinent to faculty promotion, compensation and hiring, as well as staff employment policies. Ample information is available to prospective students on admissions, retention, curriculum, etc.

Standard 7 – Institutional Assessment

Assessment approaches are many and varied, but all are designed to ensure that the School fulfills its multifaceted mission. ISMMS assessment practices are ongoing and very data-driven, with metrics available in many areas that are complemented as appropriate or necessary with less quantifiable evidence. These metrics are essential to evaluating our success in fulfilling the components of our mission. Planning and resource allocation decisions are closely tied to assessment to ensure that the School remains on course and directs its resources to ensure success. Educational program assessment and student outcomes are also extensive, and are described in detail under Standards 11 and 14.

Standard 8 – Student Admissions and Retention

Consistent with the institutional mission, ISMMS seeks a student body that is passionate about biomedical research and clinical care, scholarship, community service and advocacy. We actively seek to attract a diverse pool of applicants who are high academic achievers with enthusiasm for learning and a commitment to their chosen field of study. Students facing academic challenges are identified early and provided with the support they need to succeed.

Admission policies, program and curriculum descriptions, and expectations are posted on the web for both prospective and current students. Financial aid information is also readily available.

Standard 9 – Student Support Services

ISMMS offers a wide array of support services to ensure the academic progress and overall well-being of students enrolled in our degree-granting programs. Qualified professionals manage and deliver the services necessary for our students' academic and professional success, including academic support and mentoring, technology support, and health and wellness resources. The Office of Enrollment Services serves both the medical and graduate programs in the areas of orientation, admissions, registrar, bursar, academic calendar, financial aid, housing and benefits. Student records are securely maintained, with a clear policy on information release confidentiality.

Multiple avenues, both formal and informal are available for students to voice concerns and grievances, and remedial actions are taken as necessary. All student support services are reviewed on a regular basis to ensure that they effectively meet the needs of our student body.

Continued pursuit of philanthropy to support educational scholarships and student debt relief is an ongoing challenge that is critical for continuing to attract high caliber students.

Standard 10 – Faculty

ISMMS faculty are highly qualified to teach in, and develop content for, our educational programs. Clearly articulated appointment and promotion standards are complemented by faculty development programs which provide skill building and mentorship. Policies of specific relevance to faculty, ranging from compensation to discipline, are posted on the website.

The ISMMS faculty has grown rapidly with the creation of the Mount Sinai Health System. The integration of member hospital faculty requires new and innovative approaches to dissemination

of information and access to resources that will ensure the success of all faculty. Further, metrics to evaluate our success in these efforts will be important.

Standard 11 – Educational Offerings
ISMMS offers a rich variety of educational programs leading to advanced degrees. Every degree-granting program has well-developed goals, rigorous curricula and well-defined expectations of student learning outcomes. Programs utilize a variety of learning settings appropriate to their unique educational goals and to each course, and there is an overarching commitment to providing educational experiences that are relevant, supportive and promote the acquisition of cutting-edge knowledge in clinical care, research and related fields. Each program undergoes regular self-evaluation and is responsible to School leadership and in some cases, to external professional accreditation bodies.

With the introduction of a distance learning component in our new Master of Health Care Delivery, we will need to employ and confirm appropriate and effective assessment methods to ensure that we meet program goals and achieve expected student outcomes.

Standard 13 – Related Educational Activities
ISMMS offers a variety of programs that do not confer degrees but are nevertheless consistent with our educational, research and clinical mission. These include certificate programs, Graduate Medical Education (postgraduate clinical training), Continuing Medical Education (life-long learning for clinicians) and postdoctoral research training. In all cases, the School provides qualified faculty and appropriate resources, and conforms to relevant external requirements.

This academic year, the School has embarked on its first distance learning experience through the new Master in Health Care Delivery program; the program received Substantive Change approval from Middle States in 2014. Although the first class will not graduate until Spring 2016, tools to measure student outcomes and program assessment have already been established to ensure that we meet our educational goals and objectives.

Standard 14 – Assessment of Student Learning
ISMMS puts tremendous effort into developing clear student outcome expectations for its courses and programs, and collecting and analyzing information in order to modify educational offerings as needed to promote student success. Regular assessments are essential in confirming achievement of expected student learning outcomes.

LIST OF APPENDICES:

Appendix 1-A

Mission Statement

APPENDIX 1-A
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI
MISSION STATEMENT

PREAMBLE

In the context of the Jewish traditions of scholarship and charity, the Board of Trustees commits Mount Sinai to the advancement of the art and science of medicine through clinical excellence. This central mission consists of high-quality patient care and teaching conducted in an atmosphere of social concern and scholarly inquiry into the nature, causation, prevention and therapy of human disease.

ARTICLE I: PATIENT CARE

In this academic medical center, the responsibility to teach and do research in the laboratory, at the bedside and in the community enhances the fundamental goal of entirely personal, compassionate patient care. Mount Sinai will strive to provide superlative patient care, considered to be the requisite model for learning.

ARTICLE II: EDUCATION

The educational process will aim to graduate individuals who will be committed to a lifetime of continuing education while they are contributing in many and varied ways to the health needs of people. Mount Sinai will be responsible for the certification of physicians at the undergraduate, graduate and postgraduate levels, as well as the certification of biomedical scientists at the graduate level; and, as appropriate, will undertake the education of other health and allied professionals.

ARTICLE III: RESEARCH

Since medicine is a derivative science and must draw upon at least the biological, social and physical sciences, no discipline will intentionally be excluded as irrelevant. Fundamental and applied research will be primarily centered in geographic proximity to clinical facilities. Mount Sinai will encourage, support and evaluate innovative ideas and programs in health services delivery.

ARTICLE IV: DISSEMINATION OF KNOWLEDGE

Mount Sinai will participate as a national and international resource in the gathering, analysis and dissemination of information pertaining to the prevention, diagnosis and treatment of disease.

ARTICLE V: CONCERN FOR THE COMMUNITY

Mount Sinai will be ever-sensitive to the social and health care needs of the many different communities it serves. Mount Sinai will be a participant in efforts to define and solve health problems in population groups and communities through its capability in developing scientific knowledge, education and service.

ARTICLE VI: ORGANIZATION

In a framework of free participation, Mount Sinai will strive to create an evolving work environment conductive to individual creativity.

Appendix 1-B

Fulfillment of Mission Statement

APPENDIX 1-B
MISSION FULFILLMENT

The overarching institutional mission is to provide "*high-quality patient care and teaching…in an atmosphere of social concern and scholarly inquiry into the nature, causation, prevention and therapy of human disease.*" A wide range of programs, services and practices contribute to fulfillment of each of the six components of the mission, which are closely intertwined. Brief commentary on each component is provided below.

I.   **CLINICAL CARE***: "…strive to provide superlative patient care, considered to be the requisite model for learning."*

The provision of superb patient care in both inpatient and outpatient settings is a priority, and is closely linked to student training experiences. Quality of care metrics and patient satisfaction surveys help confirm our excellent and compassionate services, which are further corroborated by external performance metrics and peer recognition of our success as clinical providers.

II.   **EDUCATION:** *Graduate individuals committed to a lifetime of continuing education while they are contributing in many and varied ways to the health needs of people… responsible for certification of physicians at <all> levels, as well as certification of biomedical scientists at the graduate level; and, as appropriate, undertake the education of other health and allied professionals*

Lifelong learning is a priority in all ISMMS educational programs. Intensive information literacy training emphasizing the sourcing and effective use of the biomedical literature helps to equip students with the technical expertise to continuously grow in their respective professions. All programs focus on graduating students who are not merely competent in their field of study, but also excel; an emphasis on translational research in particular encourages students to recognize the interface between science and medicine so that they can push the boundaries in advancing biomedicine.

III.   **RESEARCH: "…** *Fundamental and applied research will be primarily centered in geographic proximity to clinical facilities…encourage, support and evaluate innovative ideas and programs in health services delivery… Mount Sinai will encourage, support and evaluate innovative ideas and programs in health services delivery."*

ISMMS has a large and productive research program supported by an excellent infrastructure. Clinical and research spaces are in close proximity to facilitate interaction and innovation, e.g., Hess Center for Science and Medicine, the Annenberg Building and the Icahn Medical Institute. Multidisciplinary institutes encourage collaboration and exploration across disciplines, and new institutes and research programs are introduced as internal capability and external exigencies evolve.

IV.   **<u>DISSEMINATION OF KNOWLEDGE</u>**: *"…Participate as a national and international resource in the gathering, analysis and dissemination of information pertaining to the prevention, diagnosis and treatment of* disease… "

Mount Sinai physicians, scientists and other professionals are expected to publish and lecture locally, nationally and internationally on their work. The appointment and promotion guidelines in the Faculty Handbook emphasize scholarship at every level. Graduate and medical students are mentored on both presenting and publishing.

V.   **<u>CONCERN FOR THE COMMUNITY</u>: *"…Be ever-sensitive to the social and health care needs of the many different communities it serves… participate in efforts to define and solve health problems in population groups and communities through its capability in developing scientific knowledge, education and service."***

The importance of addressing community needs – particularly in the socioeconomically challenged East Harlem neighborhood that borders ISMMS – is evidenced through numerous student and faculty programs. Examples include the student-run East Harlem Health Outreach Partnership (health care for uninsured community residents), First Generation Scholars (MD students mentor high school students) and the Post-Baccalaureate Research Education Program (supporting underrepresented minority and disadvantaged students aspiring to careers in biomedical research).

VI.   **<u>ORGANIZATION</u>:** *"…create an evolving work environment conductive to individual creativity."*

Career development opportunities abound for both faculty and staff. Our fast-paced environment encourages innovation and creativity, with a common goal of creating a more effective and rewarding environment for those who work and study at Mount Sinai.

Appendix 1-C

Standard 1 Fundamental Elements Grid

APPENDIX 1-C
COMPLIANCE WITH FUNDAMENTAL ELEMENTS
STANDARD 1 – MISSION AND GOALS

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
➢ Clearly defined mission and goals that:	
o Provide guidance for decision-making	• Page 15 (Standard 3) - Mission-based budgeting system • Page 25 (Standard 4) – Reformulation of Dean's Leadership Board to address mission-specific research and clinical issues • Appendix 5-A (Standard 5) – Table of Organization captures mission-based structure of School leadership
o Support scholarly activity	• Appendix 1-A (Standard 1) – Mission Statement specifically addresses scholarship/ dissemination of information
o Are periodically evaluated/approved	• Pages 9 – 12 (Standard 2) - Planning and goal development directed at educational, research and clinical components of mission • Pages 35 – 42 (Standard 7) – Mission-based assessment of performance in educational, research and clinical arenas.
o Are developed collaboratively	• Page 6 (Standard 1) – Describes initial efforts and plans to give broad community consideration to revisions of mission statement • Pages 8 – 14 (Standard 2) – Involvement of many constituencies in plan and goal development
o Are well publicized and widely known	• Page 7 (Standard 1) – The School's mission statement is posted on the web; communications relating to goal attainment and challenges are numerous and frequent.
➢ Mission and goals relate to external and internal contexts and constituencies	• Page 8-9 (Standard 2) – Creation of new multidisciplinary institutes in response to changing internal and external environment and evolving goals • Page 9 (Standard 2) – Graduate School Strategic Plan
➢ Institutional goals are consistent with mission	• Pages 6-7 (Standard 1) – Mission, statements of purpose; influence of mission on goal development
➢ Goals focus on student learning, other outcomes and institutional improvement.	• Page 8 (Standard 2) – The School's Strategic Plan provides a roadmap for institutional growth and success. Goals derive from the plan but can be fluid in

	response to changing environment.
	• Pages 9 – 11 (Standard 2) – Comprehensive educational program analysis and planning focus on quality improvements and enhancement of student experiences
	• Page 13 –14 (Standard 2) – Capital facilities, academic informatics, technology and other resources are assessed, planned for, modified and grown as needed to ensure that they provide for student needs and contribute to overall institutional success.
	• Page 23 – 24 (Standard 4) – Board of Trustees subcommittees, including those focused on education, aim to ensure goal achievement and excellence throughout the School.
	• Page 28 (Standard 5) – Extensive communication among the School leadership ensures broad understanding of and commitment to common goals.
	• Page 35 (Standard 7) – Comprehensive institutional assessment is closely linked to both planning and resource allocation to ensure maximal goal achievement.
	• Page 66 (Standard 11) – Each degree-granting program articulates student learning outcomes that are compatible with one or more components of the School's mission.
	• Appendix 14-B (Standard 14) – Summarizes student learning goals, methods of teaching, assessment results and action plans for each educational program.

Appendix 2-A

Standard 2 Fundamental Elements Grid

APPENDIX 2-A
COMPLIANCE WITH FUNDAMENTAL ELEMENTS
STANDARD 2 – PLANNING, RESOURCE ALLOCATION AND INSTITUTIONAL RENEWAL

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
➤ Clearly stated goals/objectives/strategies:	
o Reflect conclusions from assessments	• Page 9 (Standard 2) – Graduate School's strategic plan emerged from comprehensive program assessment • Page 11 (Standard 2) – MD program curricular redesign driven by assessment data, e.g., evaluations, surveys, comparison to national standards
o Are linked to mission and goal achievement	• Page 7 (Standard 1) – Goals closely intertwined with mission, assessment and resource allocation. • Page 8 (Standard 2) – ISMMS Strategic Plan built around educational, research and clinical components of mission.
o Are used for planning and resource allocation at both institutional and unit levels	• Page 16 (Standard 3) – Mission-based "CARTS" budgeting system is closely tied to goal attainment and is central to resource allocation at all levels.
➤ Well communicated, participatory planning and improvement processes that incorporate assessment results	• Pages 8-11 (Standard 2) -- ISMMS, Graduate School and MD program Strategic Plans all highly participatory process which incorporate assessment feedback • Appendix 2-B (Standard 2) illustrates broad representation of MD Curriculum Design Team
➤ Well-defined decision-making processes and authority that facilitate planning and renewal	• Page 9 (Standard 2) – Graduate School Strategic Planning • Page 11 (Standard 2) – MD program planning takes place under the authority of the Dean for Medical Education • Page 14 (Standard 2) -- Core research facility planning is well-defined, with clear lines of authority
➤ Accountability for improvements	• Page 28 (Standard 5) – The organization structure provides for clear lines of authority and accountability
➤ Record of institutional and unit improvement efforts and results	• Page 39 (Standard 7) – Annual tracking NIH awards to ISMMS ensure that School is aware of performance and can strive for continual improvment. • Page 42 (Standard 7) – Five year financial projections, with monthly and annual

	performance review, ensure appropriate corrective actions on a timely basis
➢ Periodic assessment of effectiveness of planning, resource allocation, and renewal processes	• Pages 9 -10 (Standard 2) – Describes the strategic planning process that has been adopted by the Graduate School • Page 13 (Standard 2) – The effectiveness of current processes break-even financial results on an ongoing basis confirm • Page 18 (Standard 3) – Research density metrics, which inform space allocation, are periodically assessed and amended and needed to adapt to changing funding environment.

Appendix 2-B

MD Curriculum Design Team Membership

ICAHN SCHOOL OF MEDCINE AT MOUNT SINAI
MD PROGRAM CURRICULUM DESIGN TEAM MEMBERSHIP

Faculty:

Anu Anandaraja, MD
Director, Mount Sinai Global Health Training Program
Assistant Professor, Medical Education & Pediatrics

David Bechhofer, PhD
Professor, Department of Pharmacology and Systems Therapeutics

Sara M. Bradley, MD
Assistant Professor of Geriatrics and Palliative Medicine (now associate professor)
Co-director, Integrated Internal Medicine Geriatrics Clerkship

Robert Blitzer, MD
Associate Professor
Department of Pharmacology & Systems Therapeutics

Carrie Ernst, MD
Co-Director of Brain and Behavior
Assistant Professor of Psychiatry

Erica Friedman, MD (has since left ISMMS)
Associate Dean for Undergraduate Medical Education
Professor, Medical Education

Beverly Forsyth, MD
Assistant Professor, Medicine/Infectious Diseases

Kathleen Gibbs, MD
Co-Director, Pediatrics Clerkship
Assistant Professor, Pediatrics

Peter Gliatto, MD, FACP
Associate Dean for Undergraduate Medical Education and Student Affairs
Associate Professor of Medical Education and Medicine

Reena Karani, MD
Associate Dean for Undergraduate Medical Education and Curricular Affairs
Associate Professor of Medical Education, Medicine, and Geriatrics & Palliative Medicine (now Professor)

Yasmin Meah, MD
Assistant Professor of Medicine and Medical Education
Program Director, East Harlem Health Outreach Partnership

Clerkship Director, InterACT

David Muller, MD
Dean for Medical Education
Professor and Chair, Medical Education
Professor, Medicine

Valerie Parkas, MD
Associate Dean for Admissions
Associate Professor, Medical Education and Medicine/ Infectious Diseases

Rainier Soriano, MD
Director of Medical Student Education
Co-Director of Curriculum and Director of Educational Technology
Associate Professor, Geriatrics & Palliative Medicine, Medical Education, Medicine

David C. Thomas, MD, MS
Associate Dean for Continuing Medical Education
Director of Ambulatory Care and Training
Associate Professor of Medicine, Medical Education and Rehabilitation Medicine
Vice Chair of Medicine

Joseph Truglio, MD
Course Co-Director, Art and Science of Medicine 2
Clinical Instructor of Internal Medicine and Pediatrics

Karen Zier, PhD
Associate Dean for Medical Student Research
Professor of Medicine/Immunology, and Medical Education

Students:

Cassie Bigelow, MS4 (has now graduated)

Stephen McCullough, MS4 (has now graduated)

Staff:

Shashi Anand
Administrative Director, Student Affairs (now Assistant Dean)

Priya Sikka
Administrative Director of Curricular Affairs

Jennifer Reyes
Coordinator, Clinical Curriculum

Appendix 3-A

Standard 3 Fundamental Elements Grid

COMPLIANCE WITH FUNDAMENTAL ELEMENTS
STANDARD 3 – INSTITUTIONAL RESOURCES

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
➢ Strategies to measure/assess resource utilization	• Pages 15-16 (Standard 3) and Page 42 – CARTS budget methodology • Page 18 (Standard 3) Pages 39-41 (Standard 7)– Research allocation methods and research performance metrics • Pages 36- 37 (Standard 7) – Student performance metrics • Pages 38 – 39 (Standard 7) – Educational program assessment • Pages 41-42 (Standard 7) – Clinical Performance metrics • Pages 56 – 57 (Standard 9) – Student feedback on student services
➢ Rational, consistent policies for resource allocation	• Page 13 (Standard 2) – Capital planning process • Page 14 (Standard 2) Executive Scientific Advisory Committee to introduce new research core facilities and sunset obsolete cores • Pages 15-16 (Standard 3) – Financial policies relating to resource allocation • Page 43 (Standard 7) – Information technology metrics that influence resource allocation
➢ Allocation that ensures adequate faculty, staff and administration to support mission and outcomes expectations	• Page 43 (Standard 7) – Joint Finance-Human Resources committee that supports Dean in evaluating faculty recruitment and staffing levels. • Page 43 (Standard 7) – Statistics are collated monthly and are used to guide strategic planning and resource allocation within the Department of Academic Informatics and Technology (AIT). • Page 52 (Standard 9) – Allocation of human resources in the Office of Enrollment Services as well as the administrative staff for Medical Education and the Graduate School provide comprehensive support to all students.
➢ Financial planning/budgeting process:	
o Aligned with mission, goals	• Pages 15-16 (Standard 3) – Description of mission-based CARTS budget methodology
o Annual budget & multi-year projections at institutional and	• Appendix 3-B (Standard 3) – Actual budgets 2010-2014, budgeted (2015) and projections (2016-2019)

departmental levels	
o Utilizes planning and assessment documents	• Pages 12-13 (Standard 2) – Description of intertwined financial planning and assessment processes • Page 42 (Standard 7) – Examples of fiscal assessment tools that contribute to financial management
o Addresses resource acquisition and allocation	• Page 13 (Standard 2) – Describes capital planning process • Pages 15 – 16 (Standard 3) – CARTS budgeting process, including intensive evaluation of educational resources and services
➢ Comprehensive infrastructure/facilities master plan and life-cycle management plan, with evidence of implementation	• Page 13 (Standard 2) --- Capital planning and assessment processes, including examples of projects that have resulted from these processes
➢ Recognition in plan of facilities and staffing needed to support educational and research programs	• Page 13 (Standard 2) – Describes involvement of educational deans and other senior leaders to ensure that educational and research program needs are appropriately addressed.
➢ Educational and other equipment acquisition/replacement processes and plan, including technology, appropriate to educational programs and support services, with evidence of implementation	• Page 13 (Standard 2) – Describes involvement of educational deans and information technology leadership in reviewing, assessing and monitoring capital requests and projects. Includes examples of both educational and research facilities that have resulted from these processes.
➢ Adequate controls for financial and administrative operations, with rational and consistent policies and procedures to determine allocation of assets	• Pages 15-16 (Standard 3) – CARTS budgeting process includes clear and rational policies and procedures to determine resource allocation, as well as extensive oversight of ongoing fiscal performance.
➢ Annual independent financial audit, with evidence of follow-up of any concerns cited in auditors' management letter	• Pages 16 (Standard 3) – Independent audits are conducted annually by an external accounting firm. • The Final Self-Study Report submission is accompanied by copies of the two most recent audited financial statements and management letters, as required by Middle States Commission on Higher Education.
➢ Periodic assessment of effective and efficient use of institutional resources	• Page 38 (Standard 7) – Assessment of faculty performance as educators • Pages 39 – 40 (Standard 7) – Research metrics are used to assess allocation of resources and areas for reallocation • Page 42 (Standard 7) – Clinical space density metrics are used to evaluate

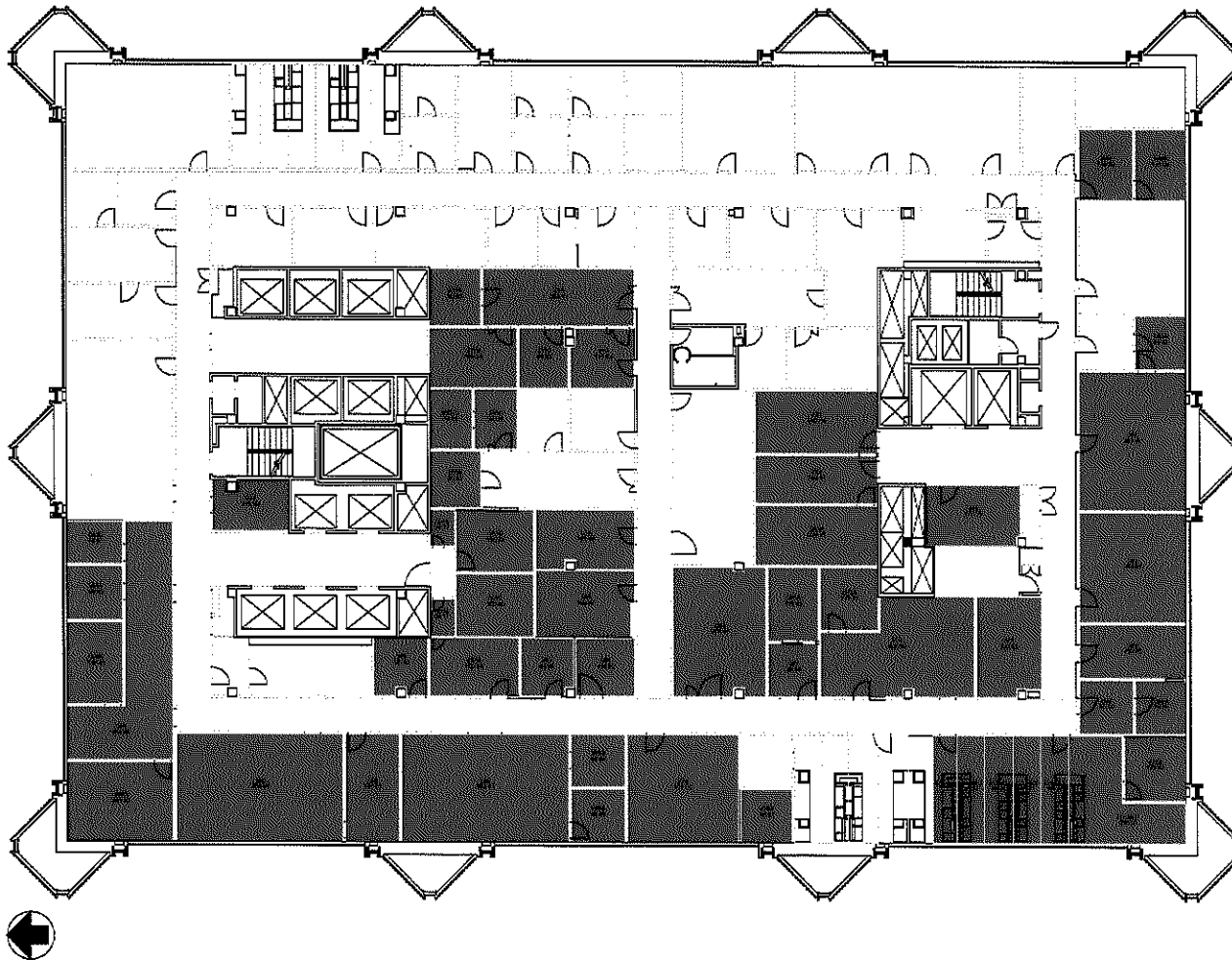|	effective and efficient use of clinical space
	• Page 43 (Standard 7) – IT metrics are used to assess use and effectiveness of technology services
	• Page 74 (Standard 11) – On a regular basis the Medical School and Graduate School use a variety of methods to evaluate the admission processes, curricula and student learning outcomes to ensure the effective and efficient use of institutional resources.

Appendix 3-B

Unrestricted Operating Budget

APPENDIX 3-B
Icahn School of Medicine at Mount Sinai
Unrestricted Operating Budget 2010-2019
(In Thousands)

	Actual					Budget	Estimate				2014-2019 Average
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth
Revenues,Gains,and Other Support :											
Patient care services	$ 490,060	$ 537,984	$ 577,923	$ 599,732	$ 670,736	$ 844,238	908,468	1,008,724	1,130,550	1,280,177	18.17%
New York City Health and Hospital Corp	189,630	196,354	201,809	209,900	218,234	226,818	235,891	245,326	255,139	265,345	4.32%
Private gifts	9,689	11,842	9,680	15,407	13,445	16,118	16,924	17,770	18,659	19,592	9.14%
Federal/nonfederal grants and contracts	287,502	281,362	269,090	261,373	281,748	315,981	332,113	349,521	363,012	380,902	7.04%
Recovery of indirect costs	89,110	83,851	85,450	91,953	99,776	117,721	124,052	130,127	131,617	136,566	7.37%
Return on long-term investments	27,936	35,394	34,802	36,298	38,914	40,941	42,988	45,137	47,394	49,764	5.58%
Tuition and fees	22,658	24,939	26,338	27,121	28,757	29,919	31,116	32,360	33,655	35,001	4.34%
Royalty income	18,586	21,953	25,493	41,578	45,542	44,980	47,229	49,590	52,070	54,673	4.01%
Rental income	8,182	8,051	8,051	7,636	7,441	7,236	7,018	6,790	6,550	6,301	-3.06%
Other support	32,194	21,067	20,100	35,674	28,925	38,622	39,781	40,974	42,203	43,469	10.06%
Hospital CARTS Transfer	105,093	133,821	153,434	176,810	194,032	207,396	223,988	241,907	261,259	282,160	9.08%
	1,280,640	1,356,618	1,412,170	1,503,482	1,627,550	1,889,970	2,009,567	2,168,228	2,342,109	2,553,950	11.38%
Net assets released from restrictions	65,072	71,233	85,820	94,774	90,902	150,956	107,434	101,122	96,807	88,173	-0.60%
Total Revenues,Gains,and Other Support	1,345,712	1,427,851	1,497,990	1,598,256	1,718,452	2,040,926	2,117,001	2,269,350	2,438,916	2,642,123	10.75%
Expenses :											
Patient care services	443,120	525,173	564,768	623,212	657,370	867,174	889,841	988,979	1,109,621	1,257,992	18.27%
HHC Patient care services	187,530	194,254	199,709	207,800	216,134	224,718	233,707	243,055	252,777	262,888	4.33%
Sponsored research	274,159	270,457	260,041	250,702	275,430	313,121	332,113	349,521	363,012	380,902	7.66%
Instruction and departmental	210,363	196,234	222,997	233,242	274,608	313,400	329,070	345,524	362,800	380,940	7.74%
Scholarships	3,257	2,785	3,169	3,354	3,943	4,101	4,265	4,435	4,613	4,797	4.33%
Administrative & general	157,177	168,988	167,869	175,245	175,163	197,873	203,809	209,924	216,221	222,708	5.43%
Auxiliary enterprises	1,708	3,292	2,706	2,447	2,028	2,089	2,152	2,216	2,283	2,351	3.19%
Depreciation & amortization	51,119	54,095	57,064	70,227	82,572	88,298	92,713	97,349	100,269	103,277	5.02%
Debt service - interest	16,993	12,458	12,186	31,950	31,204	30,152	29,332	28,347	27,320	26,268	-3.16%
Total Expenses	1,345,426	1,427,736	1,490,509	1,598,179	1,718,452	2,040,926	2,117,001	2,269,349	2,438,915	2,642,124	10.75%
Operating Results	$ 286	$ 115	$ 7,481	$ 77	$ -	$ 0	$ (0)	$ 0	$ 0	$ (0)	

Appendix 3-C

Floor Plan – Annenberg 14

APPENDIX 3-C

Room Type Breakdown

	Description	Area	Count
	Res. Lab	**4,471.83**	**18**
250.01	Res. Lab.	3,758.51	12
250.02	Bench	713.32	6
	Res. Lab Srv.	**2,197.72**	**18**
255.01	Lab Srv.	833.77	7
255.02	Scope Rm.	429.24	4
255.06	Glass Wash	181.46	1
255.09	Tissue Cult.	229.31	1
255.10	Cold Rm.	200.83	1
255.19	Stor.	323.11	4
	Office	**1,582.06**	**13**
310.01	Office	1,582.06	13
	Office Srv.	**202.13**	**2**
315.06	Pantry	83.54	1
315.09	Recept	118.59	1
	Workstations	**1,192.58**	**4**
320.02	Work Area	1,192.58	4
	Conference Rm	**116.52**	**1**
350.01	Conf. Rm.	116.52	1

	0841 Neurology 9,763

**Dept ID Note:

F### Codes = FPA   H### Codes = Hospital
MS## Codes = Institutional   All others are School Departments

Highlight by Department Report

Campus: 001	Mount Sinai Medical Center – Main Campus
Bldg: A	Annenberg
Floor: 14	Printed On: 07/29/2014

Appendix 3-D

Library Instructional/Informational
Literacy Program

APPENDIX 3-D
Library Instructional/Information Literacy Program

Core Goals:

The goal of the library's information literacy program is to enable all ISMMS graduates to effectively and efficiently retrieve, manage, and critically evaluate the biomedical literature to support lifelong learning and also for medical students to apply evidence-based practices to their clinical decision-making.

ISMMS graduating students will:

- Select appropriate resources and databases to conduct research and for medical students to also answer clinical questions using the best available evidence.

- Effectively search the biomedical literature using basic and advanced search concepts and strategies.

- Evaluate information critically applying criteria such as currency, authority and relevance to their research/clinical questions and information needs.

- Manage information retrieval using bibliographic data management tools such as EndNote.

- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally.

- Become aware of the changing landscape of scientific publishing.

- Identify and use EBM filtered resources to assist in locating evidence-based guidelines and systematic reviews to support clinical decision-making (Medical Students only).

- Evaluate their search results to identify articles that are likely to provide strong research evidence for a range of common clinical questions (Medical Students only).

Levy Library Instructional Program:

- All incoming students attend a general library orientation that reviews library resources and services, and also legal and copyright policies governing information resources. Orientations are divided by program.

- All incoming students must pass a PubMed quiz delivered through Blackboard to demonstrate basic information retrieval search strategies and competencies. An online self-paced PubMed tutorial (http://libguides.mssm.edu/pubmed_tutorial) is available. *Successful completion of the PubMed quiz is a milestone within the medical school revised curriculum*

- PubMed Quiz Objectives and Assessment:
    - Identify the coverage, content, and features of MEDLINE using the PubMed interface.
    - Search PubMed using at least 3 different techniques. Use Medical Subject Headings (MeSH) and subheadings in a search, when appropriate.
    - Use PubMed's tools and services to focus or enhance a search.
    - Manipulate search results, download and email citations, and retrieve the full text of articles.
    - Students must pass the online quiz. Students that do not pass the quiz meet with a reference librarian for remediation

- PhD students must demonstrate competency using Web of Science (a citation database) by passing an online quiz delivered through Blackboard. An online self-paced (http://libguides.mssm.edu/citation_analysis) tutorial is available.

    - Web of Science Quiz Objectives and Assessment:
        - Know when Web of Science is a better choice than PubMed or another database.
        - Find papers that cite a specific paper or author.
        - Use effective search techniques in Web of Science to find papers on particular topics.
        - Use Web of Science tools to analyze search results, find Impact Factors and calculate H-indices.
        - Students that do not receive a passing grade on the quiz meet with a reference librarian for remediation.

- 2nd year medical students are given a copy of EndNote (citation management software) and must attend a hands-on instructional session. *This class is a milestone within the medical school curriculum.*
    - EndNote Objectives and Assessment:
        - Effectively manage a personal library of bibliographic citations to support research projects and papers.
        - Assessment is made through in-class exercises.

- 3rd year medical students are required to attend an instructional session on the effective use of Evidence Based Medicine resources, which includes advanced PubMed search strategies and the effective use of other evidence based medicine tools such as UpToDate (http://libguides.mssm.edu/clinical_skills). *This class is a milestone within the medical*

school curriculum.

- Evidence Based Medicine Session Objectives and Assessment:
    - Identify and use appropriate resources to find general and background information, including databases of core online textbooks such AccessMedicine, UpToDate and ClinicalKey.
    - Be able to identify and access treatment protocols and guidelines, including video demonstrations of clinical procedures.
    - Understand the difference between background and foreground information and what types of resources to use for each.
    - Identify and use electronic point-of-care resources, including resources accessible from handheld devices (e.g., DynaMed, UpToDate) for evidence-based clinical protocols and decision support.
    - Distinguish between systematic reviews, meta-analyses and narrative or clinical topic reviews.
    - Understand research methodology in order to evaluate and select the best articles to support clinical decision-making.
    - Be able to filter MEDLINE/PubMed to obtain practice guidelines and systematic reviews.
    - Assessment is made through in-class exercises and discussion.

- 4th year medical students receive a refresher session and an opportunity for guided practice to locate the best evidence to answer a clinical question. *This is integrated into the Introduction to Internship class.*

    - Objectives and Assessment:
        - Apply a variety of search strategies using PubMed and other databases to locate the best evidence to answer a clinical question.
        - Assessment is made through librarian-led guided practice and faculty evaluation.

Appendix 3-E

Library Utilization Statistics

The Levy Library collects statistics on visits to the library, reference, and usage of the collection to guide collection decisions. The library's collection policy also recommends adding books written by faculty or requested by faculty or students to the collection when possible, as well as purchasing all reserve books in multiple formats and copies for student convenience.

Library Statistics:
Circulations in 2013 - 19,049
Circulation between January and June 2014 - 8,621
Reference Questions answered in 2013 - 808
Reference Questions answered between January and June 2014 - 653
Research Consultations provided in 2013 - 181
Questions between January and June 2014 - 223

Collections Usage:
Library website clicks through 2013 - 472,115
Library website clicks between January and June 2014 - 226,336
Individual article uses 2013 - 922,051
Individual article uses between January and June 2014 - 511,255

Appendix 4-A

Standard 4 Fundamental Elements Grid

APPENDIX 4-A
COMPLIANCE WITH FUNDAMENTAL ELEMENTS
STANDARD 4 – LEADERSHIP AND GOVERNANCE

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
➢ Well-defined governance system with written policies on responsibilities of administration and faculty, readily available to campus community	• Page 22 (Standard 4) – Reporting relationships and role of CEO and Dean, as defined is ISMMS Bylaws • Page 25 (Standard 4) – Faculty Council organization and charge, as defined in Faculty Handbook • Page 25 (Standard 4) – Dean's Leadership Board, as defined in Faculty Handbook • Page 26 (Standard 4)– Chapter IV of the Faculty Handbook defines types of faculty and applicable obligations and policies.
➢ Written governing documents that:	
o Delineate governance structure, composition, and duties	• Pages 22-24 (Standard 4) --Board of Trustees Bylaws describe membership, structure, and responsibilities.
o Assign authority/accountability for policy development and decision-making, including involvement of appropriate institutional constituencies	• Page 24 (Standard 4), Page 27 (Standard 5) –Role, responsibilities and reporting structure of CEO and Dean. • Page 25 (Standard 4) – Faculty Council is representative body for faculty and plays advisory role in policy review • Page 25 (Standard 4) – Dean's Leadership Board discusses and votes on major policy changes. • Pages 26 (Standard 4) – Student Council has input through multiple channels
o Provide for selection process of governing board members	• Page 22 (Standard 4) – School Bylaws describe the selection process for trustees.
➢ Appropriate opportunity for student input on decisions that affect them	• Pages 26 (Standard 4) – Student Council is representative body for students; the annual student survey gives all students a formal channel for input.
➢ Governing body that:	
o Reflects constituent and public interest	• Page 22 (Standard 4) – Trustees are in many professions and bring experience in finance, law, communications, education, public affairs and other

o Is an appropriate size to fulfill its responsibilities	• Page 22 – 23 (Standard 4) – The large and active Board is sufficient in size and expertise to fulfill its responsibilities.
o Includes members with appropriate expertise to ensure fiduciary responsibilities are fulfilled	• Page 22 (Standard 4) – Numerous trustees are financial and legal experts and can readily fulfill fiduciary responsibilities.
o Is not chaired by CEO	• Pages 22 and 25 (Standard 4) and Page 27 (Standard 5) – The Chairman of the Board is a board member, not the CEO. The CEO is selected by the BOT.
o Certifies compliance with Commission requirements, standards and policies	• The Dean and the Chairman of the Board have signed the Certification Statement attesting to ISMMS compliance with Commission requirements and Title IV requirements.
o Communicates changes in accredited status	• Page 23 (Standard 4) – The Medical Education and Graduate School Committees of the Board of Trustees have particular oversight responsibility for the School's educational programs. These committees have an in-depth understanding of accreditation activities and are committed to appropriate communication of changes both internally and to accrediting and regulatory agencies.
o Agrees to disclose information required by Commission to carry out its accrediting responsibilities, including compensation if any	• Page 33 (Standard 6) – All trustees, executives and paid faculty are required to disclose financial interests to the Conflict of Interest Office annually. • Compensation disclosures for trustees are made on the School's Form 990.
➢ Conflict of interest policy for governing body	• Pages 22 – 23 (Standard 4) – The Board of Trustees is subject to the same conflicts of interest policies as ISMMS faculty, staff and students.
➢ Governing body assists in generating resources to sustain and improve institution	• Page 23 (Standard 4) – Many trustees are deeply involved in philanthropic activities directed towards ISMMS.
➢ Process for orienting new trustees and providing continuing updates on mission, organization, academic programs and objectives	• Page 23 (Standard 4) – Among the responsibilities of the "Trustees Committee" of the Board of Trustees is orientation of new trustee members.
➢ Procedure for periodic objective assessment of governing body in meeting stated governing body objectives	• Page 23 (Standard 4) – Among the responsibilities of the "Trustees Committee" of the Board of Trustees is self-assessment of the BOT.
➢ Periodic assessment of effectiveness of institutional leadership and governance	• Page 25 (Standard 4) – Assessments of the effectiveness of the CEO and Dean are conducted annually by the Board of Trustees. The Dean in turn conducts

| | annually evaluations of Department Chairs, Institute Directors and his direct-report Deans. Deans who are not direct reports to the ISMMS Dean are evaluated annually by their direct supervisors. |

Appendix 5-A

Organizational Structure

ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI
FUNCTIONAL ORGANIZATIONAL CHART*

Dean, ISMMS

Clinical
- Clinical Affairs
- Global Health
- Clinical Integration & Population Health
- International Clinical Affiliations

Research
- Sponsored Programs
- Scientific Computing
- Research Resources
- Basic Sciences
- Translational Biomedical Research
  - Clinical Research
  - Research Services
  - Therapeutic Discovery
  - Genetics & Genomic Science

Education
- Graduate School of Biomedical Sciences
  - Enrollment
  - PhD Programs
  - Master's Programs
  - Office of Postdoctoral Affairs
- Medical Education
  - MD Program
  - Dual Degree Programs
  - Continuing Medical Education
  - Graduate Medical Education
- Academic Development & Enrichment

Administration
- Operations
- Finance
- Academic Technology
- Education & Research Operations
- Faculty Affairs & Administration
- Planning & Resource Mangement
- Diversity Programs & Policy
- Global Communications, Branding and Reputation

Department Chairs & Institute Directors

Academic Affiliates

Attachments:
- *Roster of Deans & Reporting Relationships*
- *Roster of Academic Departments & Institutes*
- *ISMMS within Health System Structure*

Dorie Klissas	Marketing and Public Relations	Sr. Associate Dean for Global Communications, Branding, and Reputation
Patricia Kovatch	Scientific Computing	Dean for Basic Sciences and the Graduate School of Biomedical Sciences
Paul Johnson	Graduate Medical Education	Sr. Assoc. Dean for Graduate Med. Educ.
Paul Lawrence	Academic Technology	ISMMS Dean
Glenn Martin, MD	Research	Senior Associate Dean for Research
Sharon Mias	Cancer Program Operations	Director, Tisch Cancer Institute
Jagat Narula, MD	Global Health	Dean for Global Health
Valerie Parkas, MD	Admissions	Dean for Medical Education
Shema Patel	Academic Operations	Dean for Operations
Anthony Reino, MD	Bronx Veterans Administration Affairs	Dean for Bronx Veterans Admin. Affairs
Michelle Sainte	Academic Administration	Dean for Medical Education
Mary Sano, Ph.D.	Clinical Research	Dean for Translational Biomedical Research
Prameet Singh, MD	Graduate Medical Education	Sr. Assoc. Dean for Graduate Med. Educ.
David Thomas, MD	Continuing Medical Education	Dean for Medical Education
Kevin M. Troy, MD	Graduate Medical Education	Sr. Assoc. Dean for Graduate Med. Educ.
Karen Zier, PhD	Medical Student Research	Dean for Medical Education
Thomas Ullman, MD	Clinical Affairs	Dean for Clinical Affairs
ASSISTANT DEANS	**AREA OF RESPONSIBILITY**	**REPORTS TO:**
Shashi Anand	Curricular and Student Affairs	Associate Dean for Curricular Affairs and Undergraduate Medical Education

ROSTER OF ACADEMIC DEPARTMENTS

Department Name	Department Chair
Anesthesiology	Andrew Leibowitz, M.D.
Cardiovascular Surgery	David Adams, M.D.
Comparative Medicine & Surgery	Reginald Miller, D.V.M.
Dentistry	John Pfail, D.D.S.
Dermatology	Mark Lebwohl, M.D.
Developmental & Regenerative Biology	Marek Mlodzik, Ph.D.
Emergency Medicine	Andy Jagoda, M.D.
Family Medicine & Community Health	Neil Calman, M.D.
Genetics & Genomic Sciences	Eric Shadt, Ph.D.
Geriatrics & Palliative Medicine	Albert Siu, M.D.
Medical Education	David Muller, M.D.
Medicine	Barbara Murphy, M.D.
Microbiology	Peter Palese, Ph.D.
Neurology	Stuart Sealfon, M.D.
Neuroscience	Eric Nestler, M.D., Ph.D.
Neurosurgery	Joshua Bederson, M.D., F.A.C.S.
Obstetrics, Gynecology & Reproductive Sciences	Michael Brodman, M.D.
Oncological Sciences	Ramon Parsons, M.D., Ph.D.
Ophthalmology	James Tsai, M.D., M.B.A.
Orthopaedics	Michael Hausman, M.D. (Interim)
Otolaryngology	Eric Genden, M.D.
Pathology	Carlos Cordon-Cardo, M.D., Ph.D.
Pediatrics	Lisa Satlin, M.D.
Pharmacology & Systems Therapeutics	Paul Kenny, Ph.D.
Population Health Science & Policy	Annetine Gelijns, Ph.D.
Preventive Medicine	Philip Landrigan, M.D.
Psychiatry	Wayne Goodman, M.D.
Radiation Oncology	Kenneth Rosenzweig, M.D.
Radiology	Burton Drayer, M.D.
Rehabilitation Medicine	Kristjan Ragnarsson, M.D.
Structural & Chemical Biology	Ming Ming Zhou, Ph.D.
Surgery	Michael Marin, M.D.
Thoracic Surgery	Raja Flores, M.D.
Urology	Ashutosh Tewari, M.D.

ROSTER OF INSTITUTES

Institute Name	Institute Director
Brain Institute	Eric Nestler, Ph.D.
Cancer Institute	Steven Burakoff, M.D.
Cardiovascular Institute	Valentin Fuster, M.D., Ph.D.
Child Health and Development Institute	Bruce Gelb, M.D.
Clinical Neuroscience Institute	Susan Bressman, M.D. (co-director)
	Stuart Sealfon, M.D. (co-director)
	Joshua Bederson, M.D. (co-director)
Conduits – Institutes for Translational Sciences	Hugh Sampson, M.D.
Global Health & Emerging Pathogens Institute	Adolfo Garcia-Sastre, Ph.D.
Global Health Institute	Philip Landrigan, M.D.
Institute for Genomics and Multiscale Biology	Eric Shadt, Ph.D.
Immunology Institute	Sergio Lira, M.D., Ph.D.
Institute for Advanced Medicine	Michael Mullen, M.D.
Institute for Critical Care Medicine	Stephan Mayer, M.D.
Institute for Health Care Delivery Science	Madhu Mazumdar, Ph.D.
Institute for Medical Education	Reena Karani, M.D.
Institute for Translational Epidemiology	Paolo Boffetta, M.D., M.P.H.
Mount Sinai Institute of Technology	Geoffrey Smith, J.D.
Personalized Medicine Institute	Erwin Böttinger, M.D.
Primary Care Institute	Roy Cohen, M.D.
Stem Cell Institute	Ihor Lemishka, Ph.D.
Translational and Molecular Imaging Institute	Zahi Fayad, Ph.D.
Transplantation Institute	Sandy Florman, M.D.

Mount Sinai Health System

President and CEO

Icahn School of Medicine at Mount Sinai

Corporate Infrastructure
-Informational Technology
-General Counsel
-Audit & Compliance
-Marketing & Communications
-Human Resources
-Development
-Real Estate
-Patient Safety
-Construction

Member Hospitals
-Mount Sinai Hospital
-Mount Sinai Beth Israel
-Mount Sinai Beth Israel Brooklyn
-Mount Sinai Queens
-Mount Sinai Roosevelt
-Mount Sinai St. Luke's
-New York Eye & Ear Infirmary of Mount Sinai

Appendix 5-B

Standard 5 Fundamental Elements Grid

COMPLIANCE WITH FUNDAMENTAL ELEMENTS
STANDARD 5 -- ADMINISTRATION

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
➢ CEO whose primary responsibility is to lead institution toward goals achievement, with responsibility for institutional administration	• Page 27 (Standard 5) – School bylaws stipulate role and function of CEO, who together with Dean is responsible for carrying out mission and goals.
➢ CEO with academic background, professional training and other qualities appropriate to institution of higher learning and institutional mission	• Page 27 (Standard 5) – CEO Kenneth Davis, MD and Dean Dennis Charney, MD are both experienced physician-scientists with decades of administrative leadership experience that make them ideally suited for ensuring fulfillment of the institutional mission.
➢ Administrative leaders with appropriate skills, degrees and training to carry out their responsibilities and functions	• Pages 28 – 29 (Standard 5) – The School's administrative leaders – including our network of deans, our academic department chairs and our multidisciplinary institute directors all possess degrees and experience appropriate to their administrative roles
➢ Qualified staffing appropriate to goals, type, size and complexity of institution	• Page 28 (Standard 5) -- Over 5,000 staff contribute to carrying out the goals of the School. Staff is vetted by both Human Resources and the pertinent departments to ensure that they possess the qualifications for their jobs. Staff development programs are also available to enhance job related skills.
➢ Adequate information and decision-making systems to support work of administrative leaders	• Page 8 (Standard 2) – Formal and informal communications to exchange information and conduct collaborative planning are integral to decision-making processes. • Page 15-18 (Standard 3) – Comprehensive financial and facilities data are generated and discussed with administrative leaders in both individual and group settings to ensure appropriate resource allocation. • Page 35 (Standard 7) – Data collection and analysis are integral to assessing the School's success at all levels; metrics play a central role in leadership discussions and decision-making.
➢ Clear documentation of lines of organization and authority	• Page 28 (Standard 5) – Both faculty and staff recruits receive job descriptions delineating job responsibilities and reporting relationships

➢ Periodic assessment of effectiveness of administrative structures and services	• Page 28 (Standard 5) – Annual performance reviews of both faculty and staff ensure that individuals are successfully carrying out their duties.
	• Page 29 (Standard 5) – Administrative structures and services are reviewed on an ongoing basis and modified as needed. Examples are provided under:
	   o (page 8-9, Standard 2), creation of additional multidisciplinary institutes
	   o (page 52, Standard 9), consolidated Office of Enrollment Services now provides orientation, admissions, registrar, bursar, financial aid, housing and benefits services across degree-granting programs
	• Page 42 (Standard 7) – Ongoing financial monitoring on a plays an important role in assessing programs, services and personnel and contributes to decision-making on resource reallocation, restructuring etc.

Appendix 6-A

Standard 6 Fundamental Elements Grid

APPENDIX 6-A
COMPLIANCE WITH FUNDAMENTAL ELEMENTS
STANDARD 6 – INTEGRITY

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
➢ Fair, impartial, published and widely available student grievance policies to assure that grievances are addressed promptly, appropriately and equitably	• Page 55-56 (Standard 9) – The Student Mistreatment Resource Panel and the Grievance Committee are formal bodies that address student concerns. Less formally, the Associate Deans for Undergraduate Medical Education and the Student Council offer venues for voicing and addressing grievances.
➢ Fair, impartial practices for employee hiring, evaluation, dismissal	• Pages 32 -33 (Standard 6) – A variety of policies and practices ensure equitable handling of employee hiring, evaluation and dismissal. For example, annual performance evaluations of faculty and staff provide a structured opportunity to periodic communication and appraisal.
➢ Sound ethical practices and respect for individuals through teaching, scholarship/ research, administration, including avoiding conflicts of interest (COI) or appearance of COI among all constituents	• Page 31 (Standard 6) – Academic integrity is ensured through a variety of policies addressing scholarship and research. • Page 32 (Standard 6) – Professionalism is emphasized through the institutional Code of Conduct and is articulated in the Student Handbooks for the MD Program (Handbook Page 117) and Graduate School (Handbook Page 11). • Page 33 (Standard 6) – Conflicts of interest policies focusing on both business and research are applicable to the entire ISMMS community, and standing COI committees oversee review and as necessary management of interests. • Page 32 (Standard 6) -- Ethical practices and respect are fundamental elements of the educational programs at ISMMS and are underscored in the MD Class Oath, Student Code of Conduct and through specific coursework. • Graduate School Student Handbook -- All incoming Graduate School students, except those in the Clinical Research Educational Program and Health Care Delivery Leadership (MSHCDL) Program, must complete a formal 1-credit course in Responsible Conduct of Research
➢ Equitable, consistent treatment of constituencies, e.g., application of academic requirements and policies, student discipline/evaluation/grievance,	• Page 55 (Standard 9) – Strictly maintained and fairly implemented ISMMS policies uphold students' rights to voice concerns about mistreatment and other grievances and have them addressed in a supportive manner. • Page 31 (Standard 6) – The Student Handbooks address the issue of discipline.

faculty promotion/tenure/retention/ compensation, administrative review, curricular improvement, and institutional governance/management.	Precedents established in prior cases are taken into consideration in determining whether discipline is appropriate, and if so in what form. • Standard 14 – Well-defined student learning goals make for straightforward student evaluation. • Page 32 (Standard 6) and Pages 59-60 (Standard 10) – The Faculty Handbook contains policies on promotion, tenure, reappointment, evaluation and compensation. • Pages 22-24 (Standard 4) – The ISMMS Bylaws and the Board of Trustees ensure consistency by providing a well defined structure and oversight. • Pages 25-26 (Standard 4) – The Faculty Handbook describes the standing committees of the Dean which are critical to ensuring equity and consistency in promotions, curriculum, grievance, conflicts of interest, etc.
➢ Climate of academic inquiry and engagement supported by widely disseminated policies on academic and intellectual freedom	• Page 30 (Standard 6) – The Faculty Handbook includes a clear statement on academic freedom. • Page 46 (Standard 8) – ISMMS emphasizes the principles of academic freedom in its educational programs, including the FlexMed early assurance program that allows students to pursue their passion in a broad range of fields.
➢ Institutional commitment to principals of protecting intellectual property rights	• Page 32 (Standard 6) – The School has a detailed policy on intellectual property ownership and rights.
➢ Climate that fosters respect among students, faculty, staff, administration for range of diverse backgrounds, ideas and perspectives	• Page 30 (Standard 6) and Pages 63-65 (Standard 10) – The Center for Multicultural and Community Affairs, the Faculty Diversity Council, the Diversity in Biomedical Research Committee, the Disability Services Office and the Office for Women's Careers are .examples of offices and programs that embrace diversity at all levels in the School.
➢ Honestly and truthfulness in public relations announcements, advertisements, and recruiting/admissions materials and practices	• Page 34 -35 (Standard 6) – Our Marketing and Communication Department and our Human Resources Department work closely with the academic departments to ensure the accuracy of content disseminated to the public • Standard 8 – The School's admissions and recruitment activities are led by dedicated professionals who seek to attract and retain outstanding students.
➢ Required and elective courses that are sufficiently available to allow students to graduate within published program length	• Page 74 (Standard 11) – Educational programs are continuously assessed to meet student needs. Elective courses are clearly outlined in each program's course guide.

➢ Reasonable, continuing student access to catalogs	• Page 31 (Standard 6) -- Graduate School course listing are posted on line. The proscribed MD program curriculum courses are described on line.
➢ When catalogs only available electronically, web page provides guide or index to catalogue information for each catalog available electronically	• The Student Handbooks are available electronically and are clearly cataloged with appropriate guidance.
➢ When catalogs only available electronically, institution archives copies of catalog as sections or policies are updated.	• Prior versions of the Student Handbooks are archived and updated annually.
➢ Changes and issues affecting institutional mission, goals, sites, programs, operations and other material changes are disclosed accurately and in timely manner to ISMMS community, MSCHE and other appropriate regulatory bodies.	• Page 34 (Standard 6) – Blast emails are used to announce important changes in leadership, programs, services etc. and Town Hall meetings may also be convened to communication major changes. • Page 4 (Introduction) – MSCHE is informed of major ISMMS changes through the Substantive Change process, and regulatory bodies are similarly apprised of such changes, all in a timely and accurate manner. The inclusion of ISMMS in the new Mount Sinai Health System is one such example.
➢ Availability of factual information about ISMMS, e.g., MSCHE annual data reporting, Self-Study or periodic review report, team report and Commission's action, accurately reported and made publicly available to ISMMS community	• Page 34 (Standard 6) – The Self-Study document and similar reports of broad importance are posted on the ISMMS website. • Page 31 (Standard 6) – Consumer information is published on the ISMMS website.
➢ Institution-wide assessment information is available to prospective students, including graduation, retention, certification and licensing pass rates and other outcomes as appropriate to programs offered	• Page 31 (Standard 6) – Consumer information is posted on the ISMMS website. • Page 35 (Standard 6) – Key information from the Verification of Compliance with Accreditation-Relevant Federal Regulations is also posted on the website.
➢ Institutional information provided in manner that ensures student and public access, e.g., print electronic, video	• The School posts voluminous amounts and types of information on its website to enable students and the public to obtain information about ISMMS, including Student Handbooks and program information.
➢ Fulfillment of all applicable standards and	• The entire Self-Study report demonstrates ISMMS fulfillment of MSCHE

reporting and other MSCHE requirements	standards • Page 4 (Introduction), Page 72 (Standard 11) and Page 78 (Standard 13) illustrate compliance with MSCHE's Substantive Change reporting and approval requirements
➢ Periodic assessment of the integrity evidenced in institutional policies, processes, practices, and the manner in which these are implemented.	• Page 30 (Standard 6) – Polices are reviewed and reconsidered on an ongoing basis to ensure that they continue to meet the needs of the School and its Constituencies. The Faculty Handbook is considered a "living" document in that it is continuously reviewed and updated as necessary. • Page 32 (Standard 6) -- Student Handbooks are revised annually to ensure that the most current policies and processes are included.

Appendix 7-A

Standard 7 Fundamental Elements Grid

APPENDIX 7-A
COMPLIANCE WITH FUNDAMENTAL ELEMENTS
STANDARD 7 – INSTITUTIONAL ASSESSMENT

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
➤ Documented, organized, sustained process to evaluate/improve programs/ services; achievement of mission/goals/ plans; and compliance with accreditation standards meeting following criteria:	• A broad variety of assessment mechanisms are used at the institutional, program and service levels to ensure that ISMMS achieves its mission and goals. As described throughout the Self-Study document, the institutional mission and the planning, resource allocation and assessment processes are inextricably linked to each other and as a result ensure that the School thrives.
o Foundation in mission with articulated institutional unit and program goals encompassing all programs/services/ initiatives and integrated with one another.	• Appendix 1-A (Standard 1), the Mission Statement, articulates the six components of the ISMMS mission and sets the stage for setting goals and assessing success. • Pages 6-7 (Standard 1) describe the centrality of the mission in goal and program development and the ties to planning, decision-making and assessment • Page 35 (Standard 7) describes expectations, accountability and assessment, and acknowledges the overlap in many areas.
o Systematic, sustained, through use of multiple measures that:	• Pages 35-45 (Standard 7) describe the broad range of measures, both internal and external, to assess performance. It further describes the goal-oriented nature of the review process. Standard 7 is divided into mission-based sections, e.g., education, research and clinical care, as well as into resource-based sections, e.g., finances, facilities and information resources, to demonstrate the quantity and quality of the metrics.
• Maximize use of existing data	
• Relate to goals being assessed	
• Are of sufficient quality that they can be used with confidence to inform decisions	
o Support faculty-administration collaboration in assessing student learning and responding to assessment results	• Pages 35 – 37 (Standard 7) outline a variety of student performance assessment metrics, and in many cases describe key faculty-administrative players who collaborate in the assessment processes.

	• Appendix 14-B (Standard 14) describes the process for assessing student learning, including the participation of faculty and administration.
○ Clear, realistic guidelines/timetable supported by investment in resources	• Page 12 (Standard 2) -- Investment in student services and resources are reviewed as part of the School's annual planning and budgeting processes. • Page 13 (Standard 2) – Capital planning , evaluation and resource commitment • Page 17 (Standard 3) – Core facilities advisory committee review, assessment and resource allocation approaches • Page 42 (Standard 7) – Financial metrics and review timetables
○ Sufficient simplicity, practicality, detail and ownership to be sustainable	• Pages 39 – 41 (Standard 7) – NIH funding levels, research density, funding per investigator typify the direct, practical and sustainable nature of our metrics • Page 32 (Standard 6) – The Faculty Compensation Plan is straightforward, practical and clearly communicated
○ Periodic evaluation of effectiveness and comprehensiveness of institutional assessment process	• Page 27 (Standard 5) --The Dean, CEO and Board of Trustees collectively assess institutional performance, which provides an ongoing opportunity to evaluate metrics and ensure that the School meets its goals.
➤ Evidence that assessment results are shared/discussed w/appropriate constituents and used in planning, resource allocation and renewal to improve and gain efficiencies in programs/services/processes, including activities specific to mission	• Page 13 (Standard 2) describes the capital planning process, Page 42 (Standard 7) describes financial assessment, and Page 17 (Standard 3) provides examples of classroom renovations resulting from these processes. • Page 16 (Standard 3) – Ongoing review and discussion of financial performance takes place at all levels, starting with the Dean and Sr. VP for Finance.
➤ Written institutional (strategic) plans that reflect consideration of assessment results	• Pages 8-9 (Standard 2) – Institutional assessment results are influential in the development of new initiatives undertaken as part of the ISMMS Strategic Plan.

Appendix 8-A

Standard 8 Fundamental Elements Grid

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
An accredited institution is expected to possess or demonstrate the following attributes or activities:	
➢ admissions policies, developed and implemented, that support and reflect the mission of the institution;	• Page 46 (Standard 8) – The School's admissions policies ensure that the qualities and characteristics of students who are accepted to one of Mount Sinai's educational programs are aligned with the School's mission.
➢ admissions policies and criteria available to assist the prospective student in making informed decisions;	• Pages 50-51 (Standard 8) and Appendix 8-B (Standard 8) – The School's website provides information about its medical and graduate school admissions policies and describes programmatic requirements.
➢ programs and services to ensure that admitted students who marginally meet or do not meet the institution's qualifications achieve expected learning goals and higher education outcomes at appropriate points;	• Page 55 (Standard 9) – Describes available support for academic remediation. In addition, Appendix 14-B (Standard 14) identifies plans for each program when students do not meet targeted learning goals.
➢ accurate and comprehensive information regarding academic programs, including any required placement or diagnostic testing;	• The School's website provides comprehensive information for each of its degree-granting programs (links can be found in Standard 11). Student Handbooks are published on the website.
➢ statements of expected student learning outcomes and information on institution-wide assessment results, as appropriate to the program offered, available to prospective students;	• The School's website provides comprehensive information for each of its degree-granting programs (links can be found in Standard 11). Student Handbooks are published on the website.
➢ accurate and comprehensive information, and advice where appropriate, regarding financial aid, scholarships, grants, loans,	• Pages 49-50 (Standard 8) – The School's Office of Student Financial Services is staffed by financial aid professionals and offers a wide range of services in addition to what can be found on the website.

and refunds;	
➢ published and implemented policies and procedures regarding transfer credit and credit for extra-institutional college level learning that state the criteria established by the institution regarding transfer of credit; and	• Page 50 (Standard 8) and Page 73 (Standard 11) – ISMMS has transfer credit policies and procedures which are documented in the Student Handbooks. Transfer credits are rare for medical students (no current medical student has transfer credits) and uncommon for graduate students.
➢ ongoing assessment of student success, including but not necessarily limited to retention, that evaluates the match between the attributes of admitted students and the institution's mission and programs, and reflects its findings in its admissions, remediation, and other related policies.	• Pages 48-49 (Standard 8) and Appendix 14-B (Standard 14) – Each degree-granting program uses different tools to assess a student's performance. Information of these assessments provide a basis for evaluating the success of the program's admission process and enable program leaders to calibrate characteristics of future classes, types of support and remediation which may be needed by incoming students.

Appendix 8-B

Admissions Data

Icahn School of Medicine at Mount Sinai
Admissions Data

MD Program

Entry Year	UGPA	MCAT Total	MCAT Verbal	MCAT PhysSci	MCAT BioSci
2010	3.71	35.4	11.2	12	12.2
2011	3.74	35.6	11.1	12.2	12.3
2012	3.75	35.7	11.1	12.3	12.3
2013	3.75	35.7	11.1	12.3	12.1
2014	3.75	35.6	11.2	12.2	12.3

PhD Program

Entry Year	UGPA	GRE	
		V	Q
2010	3.51	157	157
2011	3.59	160	159
2012	3.56	162	159
2013	3.60	159	160
2014	3.52	159	156

MD/PhD Program

Entry Year	UGPA	MCAT
2010	3.80	37
2011	3.80	38
2012	3.80	37
2013	3.80	36
2014	3.77	38

Appendix 8-C

Admissions Websites

APPENDIX 8-C
Links to Program Admissions Websites

MD Program

http://icahn.mssm.edu/education/medical/admissions/

PhD in Biomedical Sciences and Neuroscience Programs

http://gradschool.mssm.edu/eforms/2014-phd-program-admissions/

MD/PhD Program

http://gradschool.mssm.edu/eforms/2014-mstp-program-admissions/

Master of Biomedical Sciences

http://gradschool.mssm.edu/eforms/2014-msbs-program-admissions/

Master of Science and PhD in Clinical Research

http://icahn.mssm.edu/education/graduate/clinical-research/admissions/application/

Master of Public Health

http://icahn.mssm.edu/education/graduate/public-health/admissions/

Master of Science in Genetic Counseling

http://gradschool.mssm.edu/eforms/2014-msgc-program-admissions/

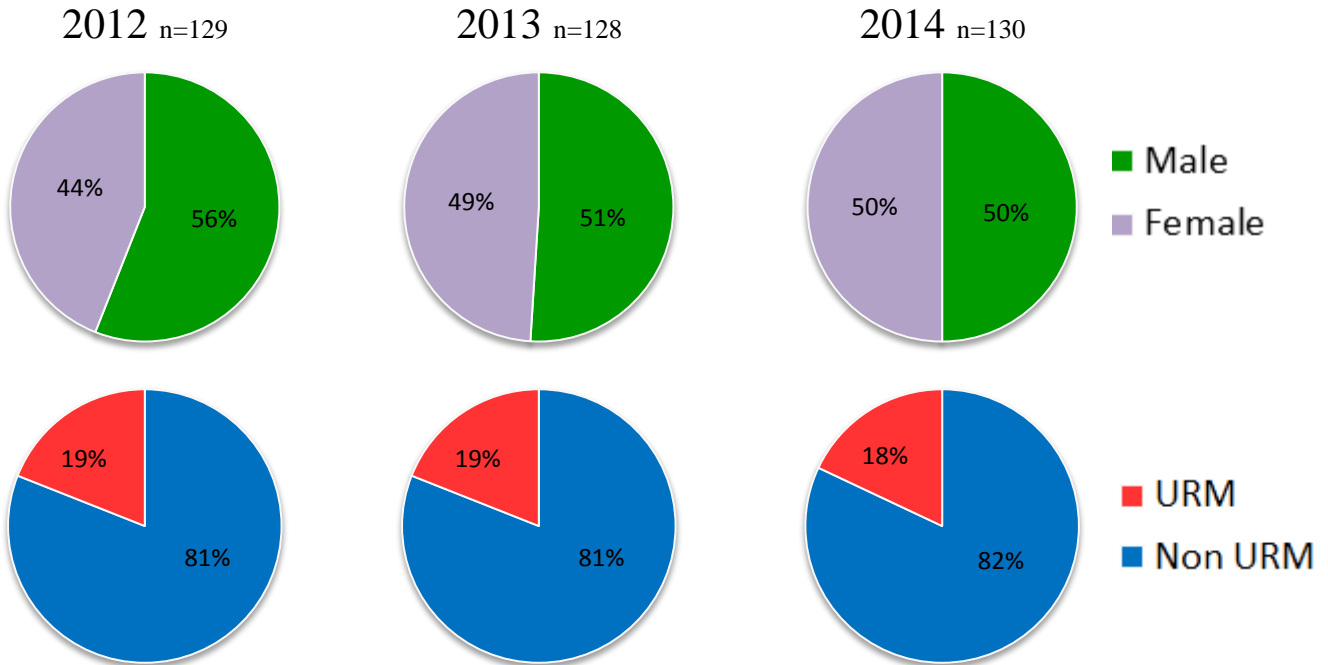**Master of Science in Health Care Delivery Leadership**

http://icahn.mssm.edu/education/graduate/masters-programs/health-care-delivery/admissions/
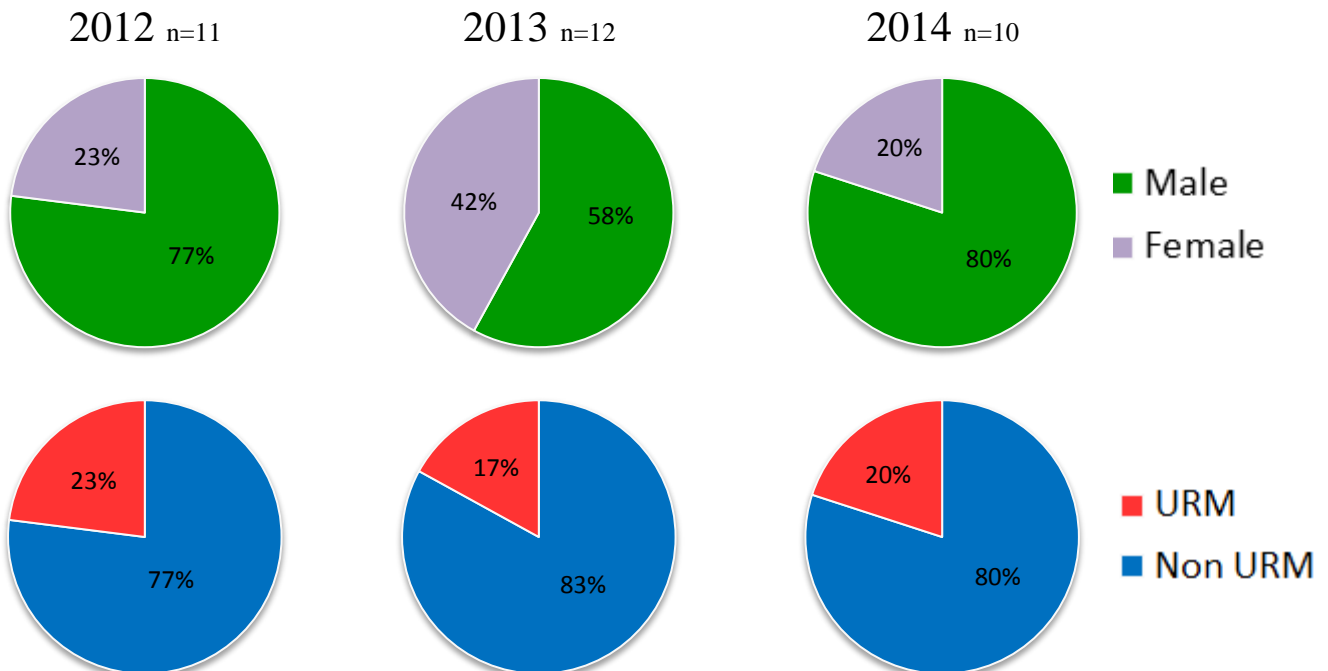
Appendix 8-D

Student Gender and URM Status Metrics
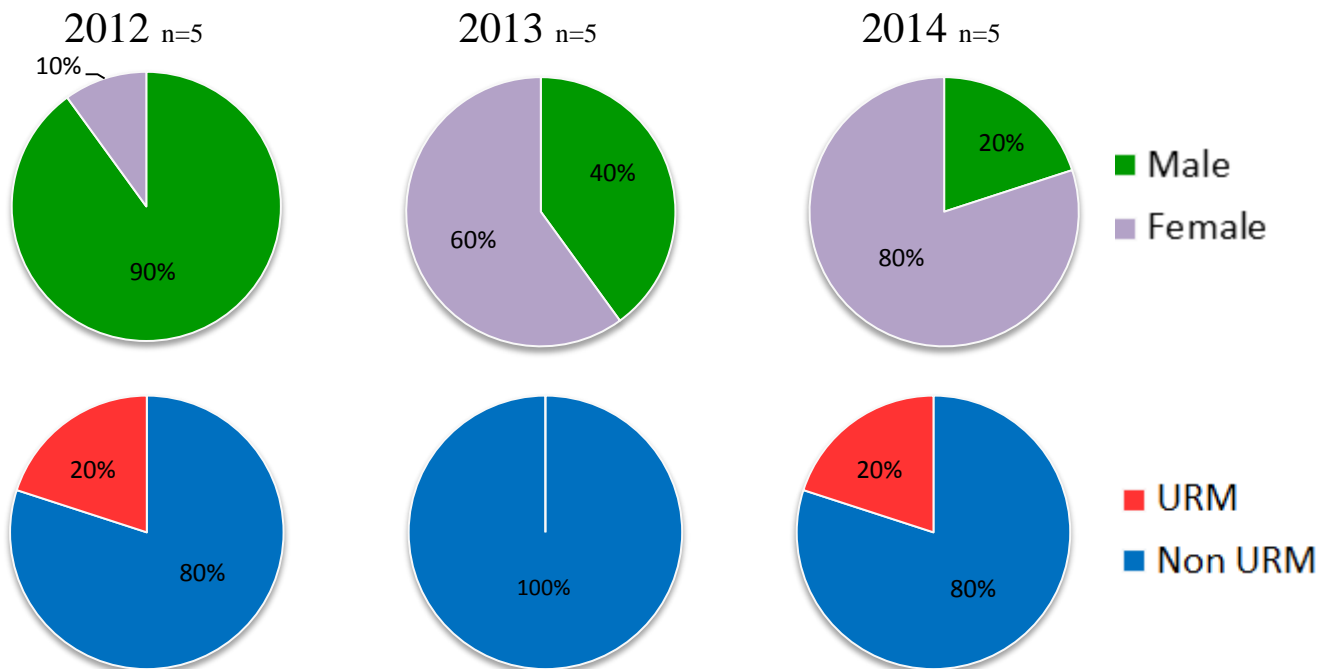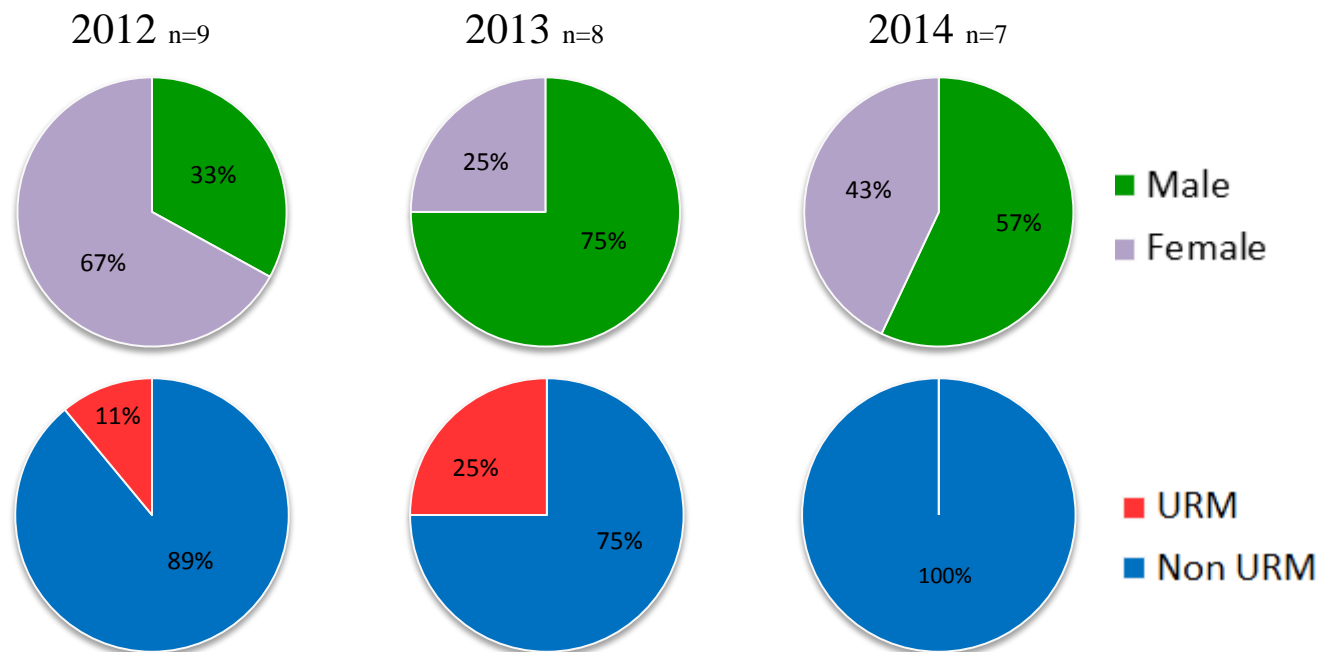
Program Demographics by Incoming Class

MD Program

2012 n=129	2013 n=128	2014 n=130
44% Female, 56% Male	49% Female, 51% Male	50% Female, 50% Male
19% URM, 81% Non URM	19% URM, 81% Non URM	18% URM, 82% Non URM

MD/PhD Program

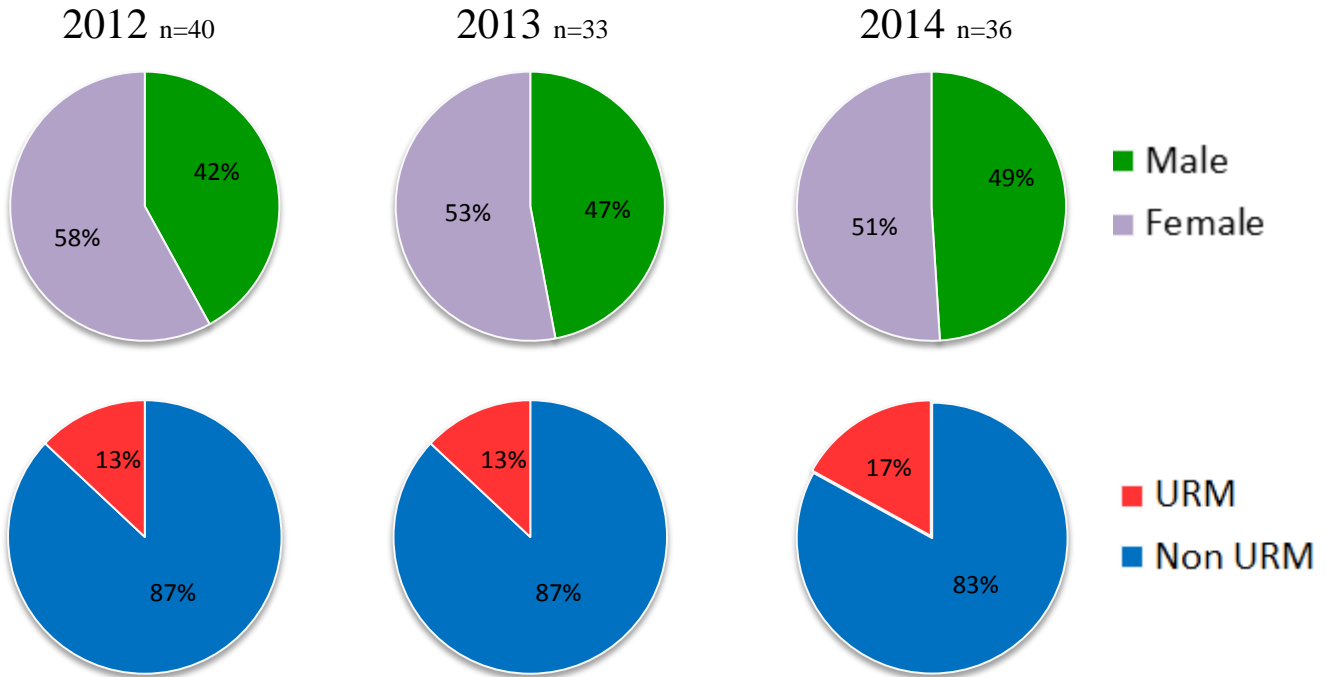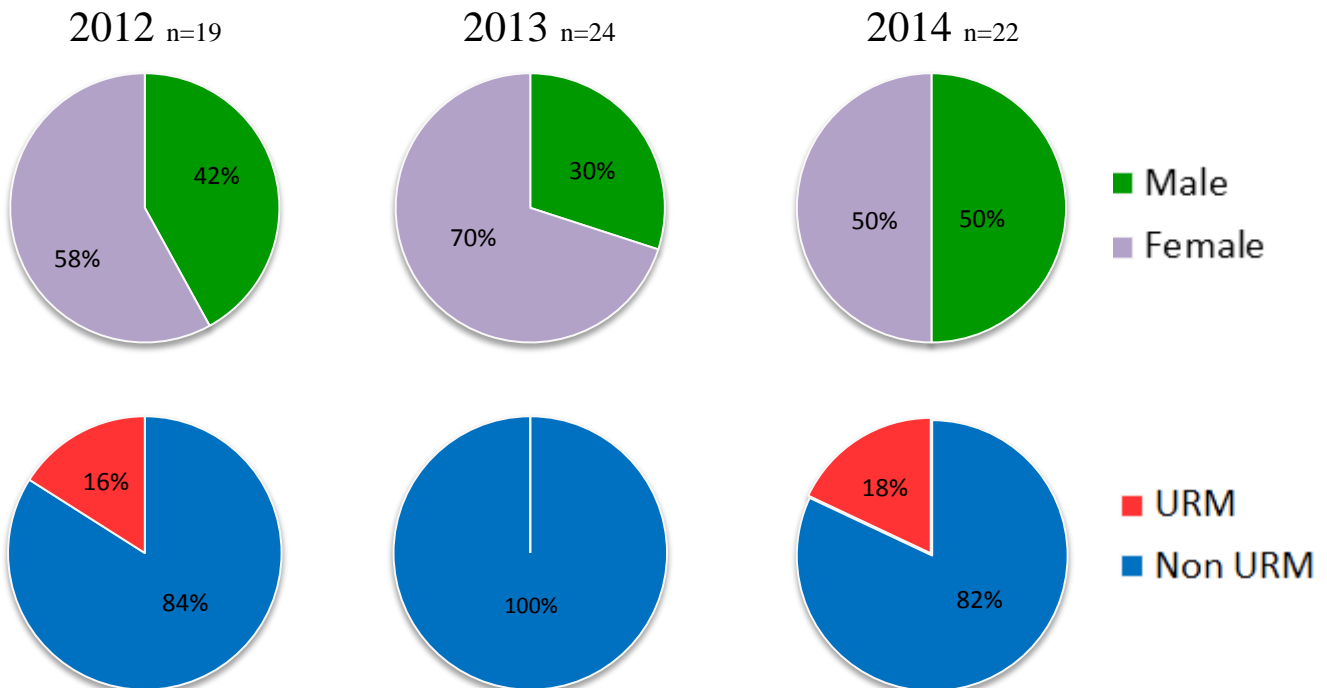| 2012 n=11	2013 n=12	2014 n=10
23% Female, 77% Male	42% Female, 58% Male	20% Female, 80% Male
23% URM, 77% Non URM	17% URM, 83% Non URM	20% URM, 80% Non URM

Program Demographics by Incoming Class

Program Demographics by Incoming Class
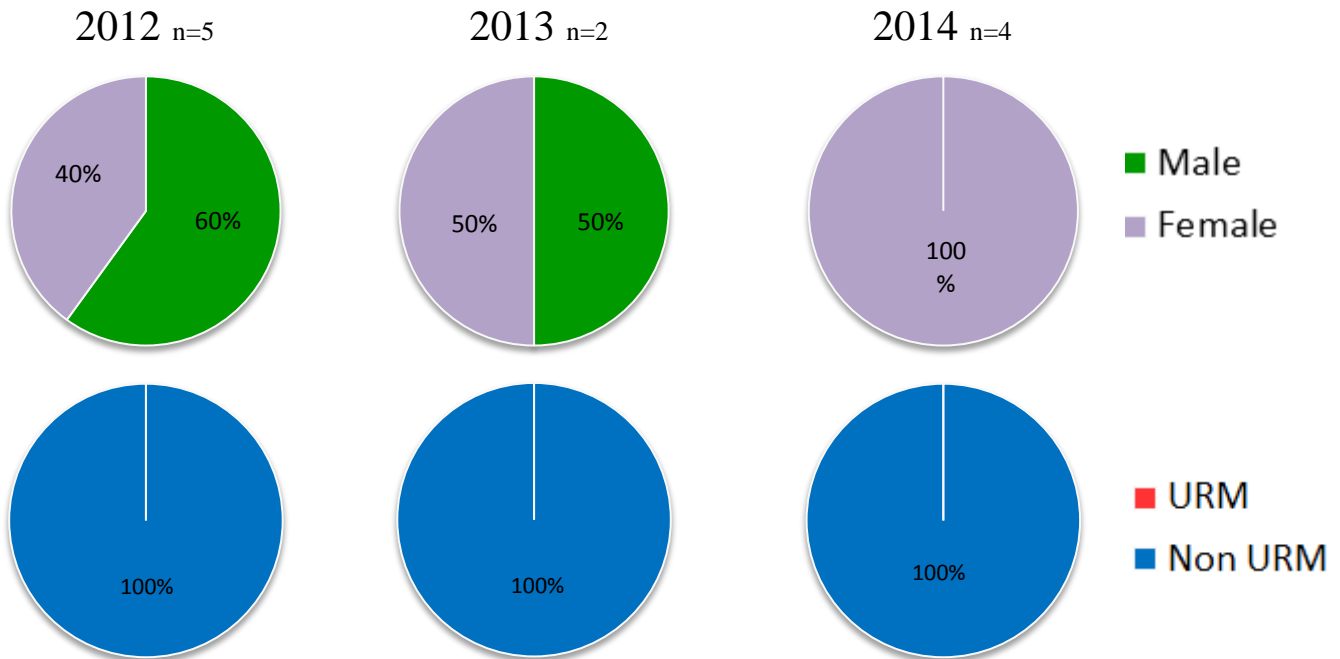
PhD in Basic Science Research Program

Program Demographics by Incoming Class

PhD in Clinical Research Program
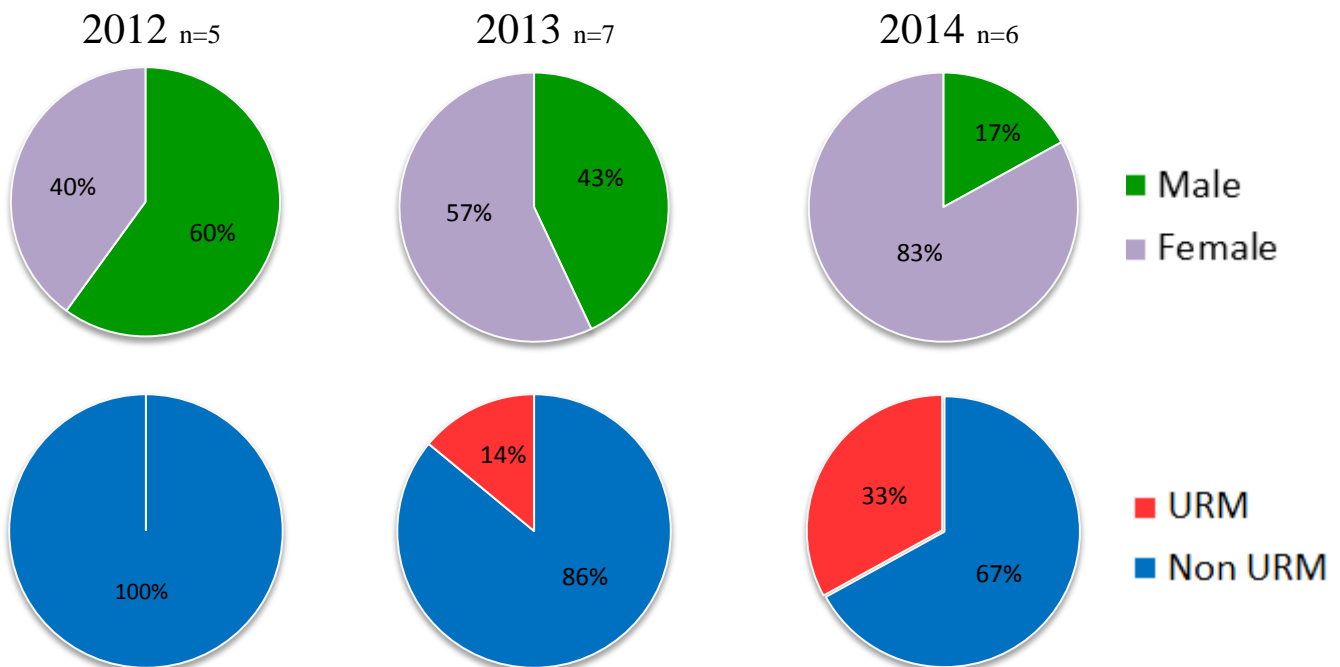
Program Demographics by Incoming Class

MS in Genetic Counseling Program

| 2012 n=9 | 2013 n=8 | 2014 n=12 |
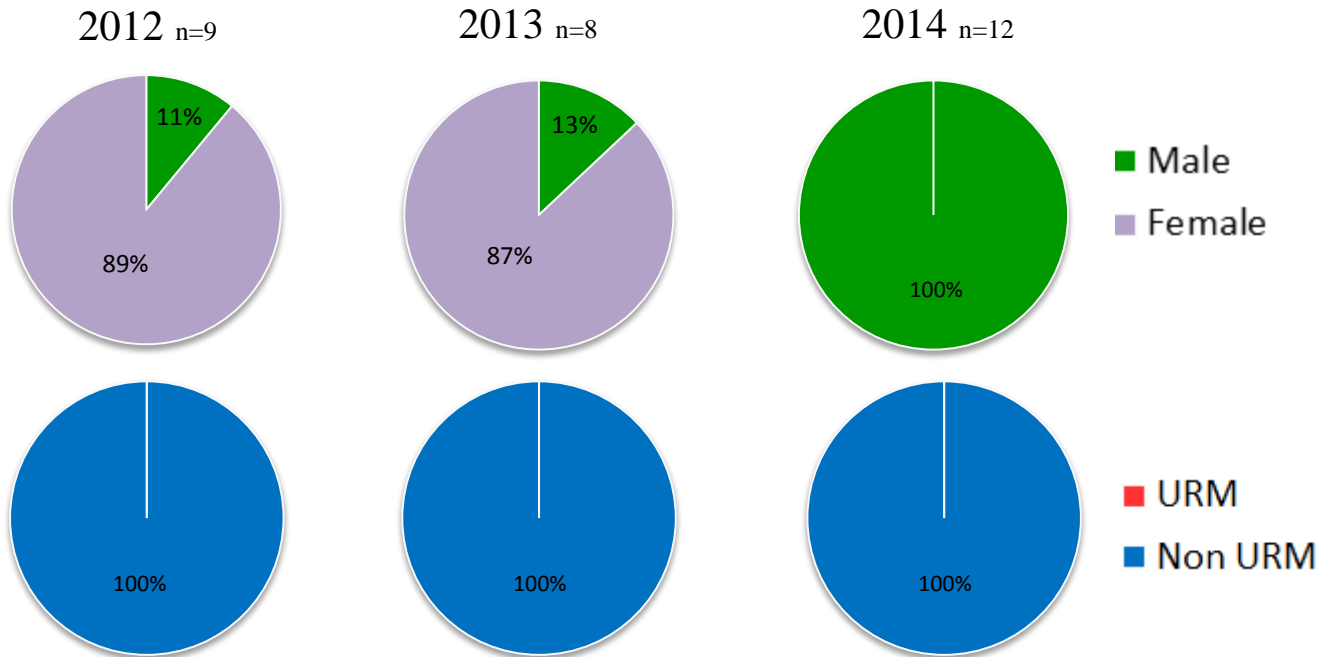
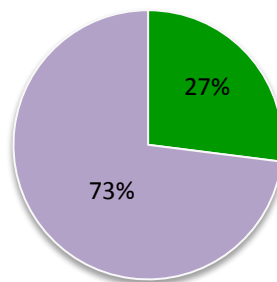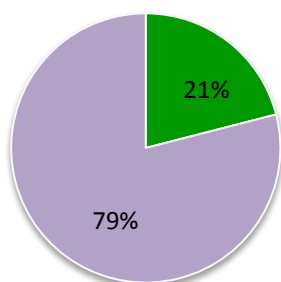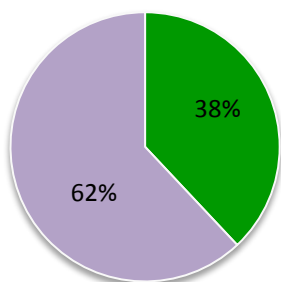## MS in Health Care Delivery Leadership Program

2014 n=9
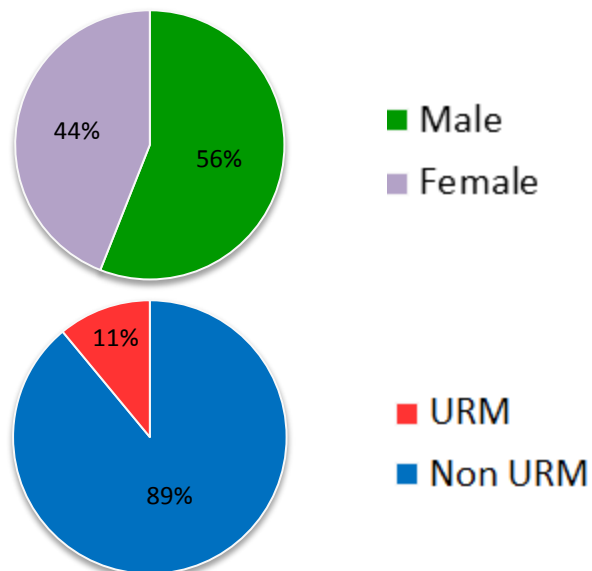
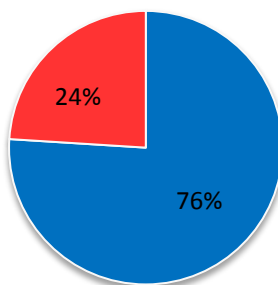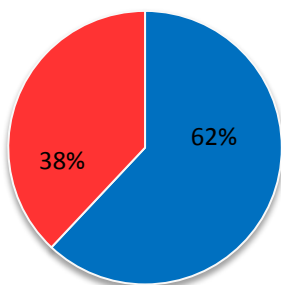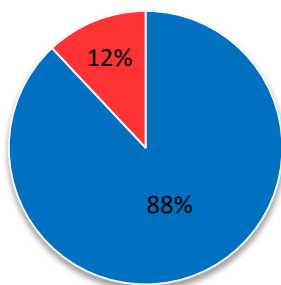# Program Demographics by Incoming Class

Masters in Public Health Program

2012 n=42   2013 n=48   2014 n=59

Male
Female

URM
Non URM

Appendix 8-E

Average Medical School Debt
of Indebted Graduates

AAMC

Tomorrow's Doctors, Tomorrow's Cures

Graduate Debt: Graduate Medical School Indebtedness
Comparison Group: Mount Sinai-Icahn vs. All Schools, All Regions
Year: 2014

Select Report Criteria

Rank | Trend

Table | Graphs | Explanations | Print Version | Download

		Total Number of Graduates	Total Number of Graduates with Medical School Debt	Percentage of Graduates with Medical School Debt	Total Dollar Amount of Medical School Debt at Graduation	Average Medical School Debt of Indebted Graduates
	Mount Sinai-Icahn	128	99	77.34%	$12,846,525	$129,763
	Private, All Regions Average	132	109	80.85%	$18,697,578	$162,667
	Comparison Group					
	All Schools, All Regions Average	133	113	83.56%	$17,843,841	$154,379
	Ranked By Average Medical School Debt of Indebted Graduates					
1	Meharry	98	92	93.88%	$24,973,806	$271,454
2	Tulane	177	141	79.66%	34,397,229	243,952
3	Southern Cal-Keck	167	135	80.84%	29,628,905	219,473
4	Oregon	127	105	82.68%	22,866,106	217,772
5	George Washington	182	124	68.13%	26,880,946	216,782
6	New York Medical	198	185	93.43%	40,076,793	216,631
7	Chicago Med Franklin	191	165	86.39%	35,400,865	214,551
8	Michigan State	186	164	88.17%	35,171,593	214,461
9	Georgetown	196	170	86.73%	36,387,244	214,043
10	Creighton	141	130	92.20%	27,520,846	211,699
11	Morehouse	51	47	92.16%	9,895,344	210,539
12	Drexel	237	206	86.92%	43,038,794	208,926
13	Temple	172	161	93.60%	33,509,889	208,136
14	Illinois	297	245	82.49%	50,735,415	207,083
15	Commonwealth	64	52	81.25%	10,747,600	206,685
16	Mercer	100	90	90.00%	18,444,968	204,944
17	Eastern Virginia	121	108	89.26%	22,129,898	204,906
18	Rush	124	101	81.45%	20,337,257	201,359
19	Albany	138	114	82.61%	22,736,810	199,446
20	FIU-Wertheim	43	38	88.37%	7,574,958	199,341
21	MU South Carolina	160	140	87.50%	27,533,565	196,668
22	Tufts	187	147	78.61%	28,707,571	195,290
23	Loma Linda	177	160	90.40%	31,121,959	194,512
24	Loyola-Stritch	143	128	89.51%	24,578,750	192,021
25	Ponce	52	52	100.00%	9,629,885	185,190
26	Boston	176	138	78.41%	24,871,886	180,231
27	Howard	118	111	94.07%	19,924,540	179,500
28	Vermont	109	95	87.16%	16,915,181	178,055
29	South Carolina	85	75	88.24%	13,327,043	177,694

30	Indiana	299	252	84.28%	44,522,970	176,678
31	Northeast Ohio	115	92	80.00%	16,242,918	176,553
32	Wright State-Boonshoft	103	93	90.29%	16,405,254	176,401
33	MC Wisconsin	189	162	85.71%	28,533,936	176,135
34	Northwestern-Feinberg	163	129	79.14%	22,517,555	174,555
35	Toledo	168	150	89.29%	26,156,966	174,380
36	Wake Forest	114	99	86.84%	17,199,872	173,736
37	Cincinnati	160	142	88.75%	24,665,275	173,699
38	Jefferson-Kimmel	243	179	73.66%	30,993,907	173,150
39	Saint Louis	161	134	83.23%	23,071,379	172,174
40	SUNY Upstate	162	144	88.89%	24,424,112	169,612
41	Penn State	133	113	84.96%	19,130,921	169,300
42	Southern Illinois	65	52	80.00%	8,708,542	167,472
43	Tennessee	158	133	84.18%	22,183,313	166,792
44	Utah	78	69	88.46%	11,461,542	166,109
45	Rutgers New Jersey	170	145	85.29%	23,979,889	165,379
46	Colorado	144	131	90.97%	21,611,168	164,971
47	Ohio State	212	182	85.85%	29,920,806	164,400
48	Stony Brook	128	105	82.03%	17,235,495	164,148
49	Case Western Reserve	185	138	74.59%	22,640,558	164,062
50	Louisville	157	130	82.80%	21,294,811	163,806
51	Miami-Miller	161	127	78.88%	20,720,802	163,156
52	Wayne State	269	223	82.90%	36,151,077	162,112
53	Minnesota	220	196	89.09%	31,726,009	161,867
54	New York University	163	114	69.94%	18,320,005	160,702
55	Arkansas	157	134	85.35%	21,470,047	160,224
56	UC Irvine	98	81	82.65%	12,873,251	158,929
57	Missouri Kansas City	90	66	73.33%	10,470,739	158,648
58	Nebraska	122	100	81.97%	15,526,162	155,262
59	South Alabama	63	47	74.60%	7,296,020	155,234
60	Maryland	170	136	80.00%	20,884,442	153,562
61	Kentucky	115	105	91.30%	16,015,454	152,528
62	Yeshiva Einstein	180	125	69.44%	19,039,510	152,316
63	Marshall-Edwards	67	55	82.09%	8,358,902	151,980
64	Cornell-Weill	109	81	74.31%	12,297,180	151,817
65	Florida	133	112	84.21%	16,978,480	151,594
65	North Dakota	62	58	93.55%	8,792,471	151,594
67	Virginia Commonwealth	192	175	91.15%	26,433,334	151,048
68	Iowa-Carver	148	132	89.19%	19,927,977	150,970
69	Kansas	187	165	88.24%	24,857,033	150,649
70	U Washington	218	193	88.53%	29,072,121	150,633
71	USF-Morsani	129	101	78.29%	15,191,521	150,411
72	East Tennessee-Quillen	67	58	86.57%	8,707,707	150,133
73	Arizona	150	144	96.00%	21,507,386	149,357
74	Alabama	161	123	76.40%	18,172,660	147,745
75	Florida State	115	92	80.00%	13,498,232	146,720
76	SUNY Downstate	228	189	82.89%	27,680,464	146,457
77	Buffalo	128	116	90.63%	16,988,850	146,456
78	Nevada	55	55	100.00%	8,053,969	146,436
79	New Mexico	71	66	92.96%	9,645,062	146,137
80	Wisconsin	173	163	94.22%	23,752,390	145,720
81	Oklahoma	153	137	89.54%	19,873,531	145,062

82	San Juan Bautista	44	34	77.27%	4,904,001	144,235
83	LSU New Orleans	177	152	85.88%	21,819,556	143,550
84	Dartmouth-Geisel	89	81	91.01%	11,623,184	143,496
85	UC Davis	95	89	93.68%	12,733,146	143,069
86	Emory	128	95	74.22%	13,571,419	142,857
87	Missouri Columbia	97	84	86.60%	11,943,376	142,183
88	West Virginia	78	67	85.90%	9,501,071	141,807
89	Rutgers-RW Johnson	123	102	82.93%	14,450,065	141,667
90	Rochester	97	84	86.60%	11,864,226	141,241
91	Vanderbilt	91	60	65.93%	8,413,576	140,226
92	Massachusetts	122	107	87.70%	15,000,293	140,190
93	Connecticut	88	78	88.64%	10,923,949	140,051
94	UCF	55	53	96.36%	7,368,183	139,022
95	Pennsylvania-Perelman	170	118	69.41%	16,385,431	138,860
96	South Dakota-Sanford	54	48	88.89%	6,625,623	138,034
97	Pittsburgh	151	124	82.12%	16,880,701	136,135
98	Columbia	155	113	72.90%	14,940,904	132,220
99	LSU Shreveport	109	85	77.98%	11,170,180	131,414
100	**Mount Sinai-Icahn**	128	99	77.34%	12,846,525	129,763
101	Michigan	169	127	75.15%	16,460,610	129,611
102	Texas Tech-Foster	53	47	88.68%	6,028,850	128,273
103	Brown-Alpert	93	70	75.27%	8,864,162	126,631
104	Texas Tech	136	109	80.15%	13,506,021	123,908
105	Hawaii-Burns	63	51	80.95%	6,186,523	121,304
106	Virginia	148	111	75.00%	13,353,386	120,301
107	UCLA-Geffen	190	156	82.11%	18,287,451	117,227
108	Chicago-Pritzker	102	79	77.45%	9,259,062	117,203
109	UT HSC San Antonio	220	182	82.73%	21,293,394	116,997
110	UC San Francisco	160	134	83.75%	15,539,372	115,965
111	UT Houston	227	167	73.57%	19,362,233	115,942
112	Duke	99	74	74.75%	8,545,559	115,481
113	Mississippi	129	120	93.02%	13,792,600	114,938
114	Yale	100	66	66.00%	7,544,750	114,314
115	Johns Hopkins	127	96	75.59%	10,861,840	113,144
116	Texas A & M	159	135	84.91%	15,044,798	111,443
117	GRU MC Georgia	213	177	83.10%	19,694,358	111,268
118	UT Southwestern	225	177	78.67%	19,114,359	107,991
119	Baylor	168	121	72.02%	13,025,674	107,650
120	Stanford	85	73	85.88%	7,733,305	105,936
121	East Carolina-Brody	78	68	87.18%	7,015,206	103,165
122	UC San Diego	118	93	78.81%	9,215,049	99,087
123	Harvard	167	124	74.25%	12,064,009	97,290
124	North Carolina	164	128	78.05%	12,077,250	94,354
125	Washington U St Louis	118	86	72.88%	7,911,583	91,995
126	UT Medical Branch	215	193	89.77%	15,310,836	79,331
127	Puerto Rico	105	92	87.62%	6,625,555	72,017
128	Mayo	45	38	84.44%	2,704,307	71,166
129	Virginia Tech Carilion	40	29	72.50%	1,768,884	60,996
130	Caribe	59	45	76.27%	1,981,024	44,023

131	Arizona Phoenix	O	O	NI	O	NI
131	Central Michigan	O	NI	NI	NI	NI
131	Cooper Rowan	NI	NI	NI	NI	NI
131	Florida Atlantic-Schmidt	O	NI	NI	NI	NI
131	Hofstra North Shore-LIJ	O	NI	NI	NI	NI
131	Oakland Beaumont	NI	NI	NI	NI	NI
131	Quinnipiac-Netter	NI	NI	NI	NI	NI
131	South Carolina Greenville	NI	NI	NI	NI	NI
131	UC Riverside	O	O	NI	O	NI
131	Western Michigan	NI	NI	NI	NI	NI

Report Explanation

Graduate Medical School Indebtedness: Source: LCME Part I-B Student Financial Aid Questionnaire

Note: Medical School Indebtedness only includes the debt incurred while in medical school. Premedical debt and personal debt are excluded. Because of its unique mission and structure, Uniformed Services University of the Health Sciences F. Edward Hébert School of Medicine is excluded from this report.

LSU New Orleans was unable to submit data in 2005.

Prior to 2007, the Total Number of Graduates was collected on the LCME Part II Survey, while the Total Number of Graduates with Medical School Debt was collected on the LCME Part I-B. Given differences between these two surveys, the Total Number of Graduates with Medical School Debt may exceed the Total Number of Graduates. Moreover, the Percentage of Graduates with Medical School Debt may exceed 100 percent. The LCME Part II is administered in the winter and asks for an estimate of the expected graduates for that academic year. By contrast, the LMCE Part I-B is administered in the summer following graduation and asks for actual graduates. Starting in 2007, the Total Number of Graduates and the Total Number of Graduates with Medical School Debt come from the LCME Part I-B. Since then, there have been no anomalous differences between the Total Number of Graduates and the Total Number of Graduates with Medical School Debt.

NI - No Information

Appendix 9-A

Standard 9 Fundamental Elements Grid

APPENDIX 9-A
COMPLIANCE WITH FUNDAMENTAL ELEMENTS
STANDARD 9 – STUDENT SUPPORT SERVICES

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
An accredited institution is expected to possess or demonstrate the following attributes or activities:	
➢ a program of student support services appropriate to student strengths and needs, reflective of institutional mission, consistent with student learning expectations, and available regardless of place or method of delivery;	• Pages 52-55 (Standard 9) – A wide array of support services are available to students enrolled in each of the degree-granting programs.
➢ qualified professionals to supervise and provide the student support services and programs;	• Page 52 (Standard 9) – Staff with specialized education and/or experience are responsible for the provision of support services, including enrollment, health care and technology support.
➢ procedures to address the varied spectrum of student academic and other needs, in a manner that is equitable, supportive, and sensitive, through direct service or referral;	• Pages 54-55 (Standard 9) – Each academic program offers advising services to support the unique needs of their students.
➢ appropriate student advisement procedures and processes;	• Pages 54-55 (Standard 9) – Each academic program offers advising services to support the unique needs of their students.
➢ if offered, athletic programs that are regulated by the same academic, fiscal, and administrative principles, norms, and procedures that govern other institutional programs;	• N/A
➢ reasonable procedures, widely disseminated, for equitably addressing student complaints or grievances;	• Pages 55-56 (Standard 9) – There are formal, well-defined mechanisms in place to address student grievances to ensure complains and concerns are appropriately and promptly resolved.

➤ records of student complaints or grievances;	• Pages 55-56 (Standard 9) – There are formal, well-defined mechanisms in place to address student grievances to ensure complaints and concerns are appropriately and promptly resolved.
➤ policies and procedures, developed and implemented, for safe and secure maintenance of student records ;	• Page 56 (Standard 9) – The School's procedures for the secure maintenance of student records are guided by FERPA and internal training takes place for new faculty and staff.
➤ published and implemented policies for the release of student information; and	• Page 56 (Standard 9) – Policies related to the access and release of student information are described in the Student Handbooks and posted on the Registrar's website.
➤ ongoing assessment of student support services and the utilization of assessment results for improvement.	• Pages 56-57 (Standard 9) – Student services are routinely assessed, including gathering feedback from the students themselves, to ensure high-quality services that meet their needs.

Appendix 9-B

Medical Student
Comprehensive Evaluation 2013-14

2013-2014 School Year Comprehensive Evaluation: Summary Presentation

Robert Conley, Student Council Secretary, MS4

Zachary Lorsch, Student Council President, MD/PhD Student (Y3)

Carine Davila, Student Council Vice President, MS3

Hope Kronman, Student Council Treasurer, MD/PhD Student (Y2)

Max Png, Class Representative, MS1

December 8, 2014

Mount Sinai

Outline

1. Introduce Survey

2. Comment on Revised Metrics
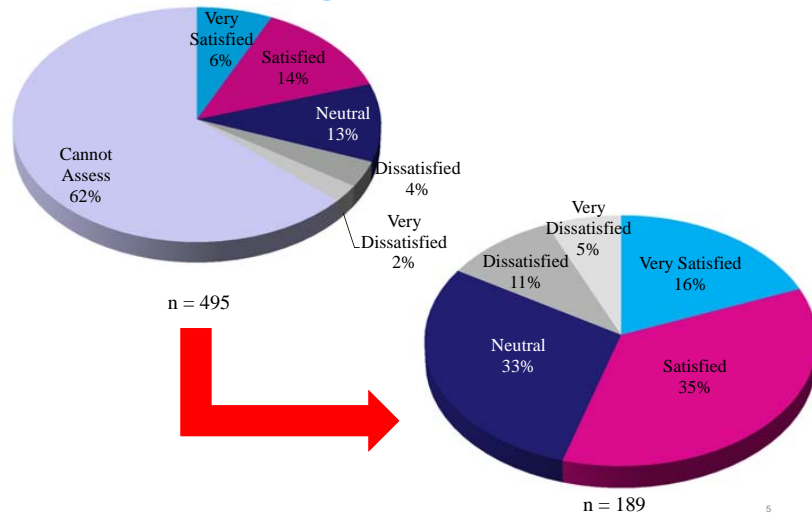
3. Present Section Data

4. Summary

The Survey

‣ Developed by medical students
‣ 141 questions long
‣ Separated into distinct sections (e.g. "housing")
  – Multiple choice
  – Free-response
‣ Class-specific questions
‣ General free-response

3

Revised Metrics

‣ Most of the percentages presented in this year's report **can** be directly compared to the report from the last two years
‣ Some questions were changed from 2012-2013 and for those questions, no comparisons will be made
‣ Typical options for multiple choice questions:

Very dissatisfied	Strongly Disagree
Dissatisfied	Disagree
Neutral	Neutral
Satisfied	Agree
Very satisfied	Strongly Agree
Cannot Assess	Cannot Assess

4

Slide 5

Excluding "Cannot Assess"

n = 495

Very Satisfied 6%
Satisfied 14%
Neutral 13%
Dissatisfied 4%
Very Dissatisfied 2%
Cannot Assess 62%

Very Satisfied 16%
Satisfied 35%
Neutral 33%
Dissatisfied 11%
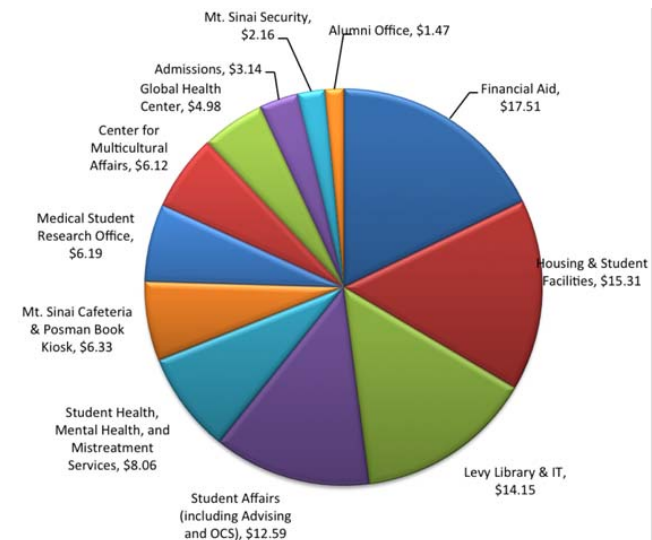Very Dissatisfied 5%

n = 189

Slide 6

New Analysis- Net Satisfaction

- ‣ Calculated by subtracting the % of unfavorable responses from the % of favorable responses
  - Ignores both "Cannot Assess" and "Neutral"
- ‣ The more positive the score, the larger percentage of students responding favorably

Slide 7

New Questions

- ‣ General questions
  - Recommend ISMMS to a peer?
  - Choose ISMMS again?
- ‣ Similar to last year, at the end of the survey, students were asked how they would divide a fictional $100 amongst the 12 various departments and services surveyed
  - This allowed us to analyze the importance of each area to the students independent of how favorable

Slide 8

Student Spending Preferences

Mt. Sinai Security, $2.16
Alumni Office, $1.47
Admissions, $3.14
Global Health Center, $4.98
Center for Multicultural Affairs, $6.12
Medical Student Research Office, $6.19
Mt. Sinai Cafeteria & Posman Book Kiosk, $6.33
Student Health, Mental Health, and Mistreatment Services, $8.06
Student Affairs (including Advising and OCS), $12.59
Levy Library & IT, $14.15
Housing & Student Facilities, $15.31
Financial Aid, $17.51

Additional Notes on Data Presentation

- 5-point scale positive or negative responses were aggregated to broader categories. i.e.:
  - Very Satisfied + Satisfied = "**Satisfied**"
  - Very Dissatisfied + Dissatisfied = "**Dissatisfied**"
- Unless specified, percentages represent all MS1-MS4 students respondents
- Dissatisfaction percentages greater than 30% are clearly designated
- Free-response comments were limited to concrete requests from within the 3 most common themes in each section

Statistical Significance

- All data were compared to the same questions from the 2012-2013 survey (if applicable) and compared statistically using a chi-squared test
- If the current year data is significantly ($p<0.05$) improved compared to the previous year, this is denoted with a "+"
- If the current year data is significantly ($p<0.05$) lower compared to the previous year, this is denoted with a "-"

Now onto the data, but before we go there, are there any questions?

Response Rates

2013-2014 Comprehensive Evaluation Response Rates
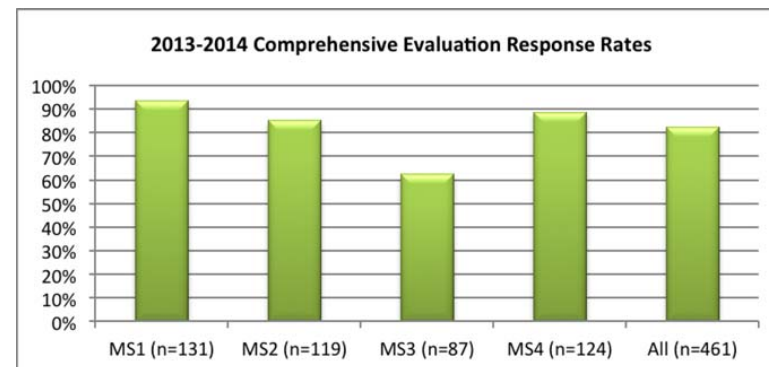
Curricular and Student Affairs (4)

‣ 61% were **satisfied** with school-wide sponsored events (-)
  – E.g. white coat ceremony
‣ 67% of MS1 and MS2 students were **satisfied** with access to tutoring and other resources
‣ 70% and 76% of MS3 students were **satisfied** with the 3rd year lottery procedure and consequent schedules, respectively
‣ 75% and 80% of MS4 students were **satisfied** with the 4th year lottery and their resulting schedules, respectively

13

Curricular and Student Affairs (4)

‣ 38% of students were **satisfied** with general career counseling
  – 27% were **dissatisfied,** net satisfaction = 11%
‣ 67% of MS4 students were **satisfied** with residency counseling and advising
‣ 33% of MS4 students were **satisfied** with Class Meetings for USMLE Step 2 (-)
‣ Student populations who felt they **could** go to Student Affairs with a personal issue:
  – MS1: 53% - MS3: 54%
  – MS2: 55% - MS4: 54%

14

Curricular and Student Affairs (4)

‣ The three most prevalent of a total of 210 free-response comments were:
  – (33%) Generally positive comments
  – (10%) Comments requesting improvements to specialty-specific advising
  – (9%) Communications issues that students felt existed between themselves and Student Affairs
‣ Suggestions for the most prevalent topic (advising) included:
  – Increased faculty-student interaction
  – Designated advisors for each specialty
  – Earlier presentation of "how to" sessions for residency applications and board exams
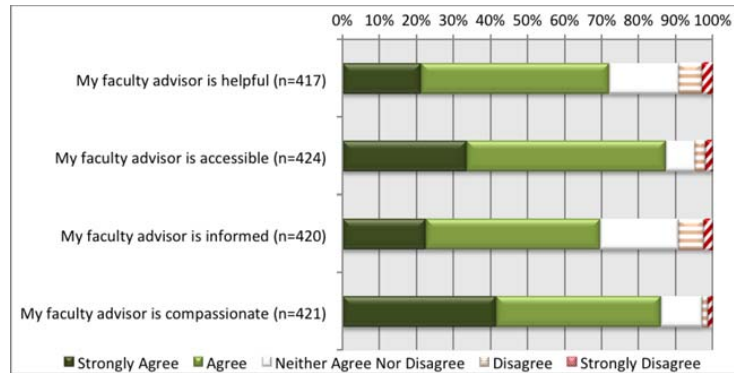
15

Advising (4)

‣ 93% of respondents reported meeting their advisor
‣ Advisors were identified as:
  – **Helpful** (MS1=78%; MS4=69%) (+)
  – **Informed** (MS1=81%; MS4=64%)
  – **Compassionate** (85%)
  – **Accessible** (87%) (+)

16

Advising (4)

▸ 81% of the student body was **satisfied** with their personal advisor (+)

Mental Health Services (5)

▸ 60% of students are **satisfied** with the accessibility of mental health services
▸ 57% reported being **satisfied** with services provided
▸ 67% **agreed** that it is acceptable to seek out mental health services
▸ In the free response section, 27% of 128 comments expressed **general satisfaction** with mental health services, 17% commented on a **lack of understanding** on how to access mental health services, and 13% mentioned **concerns with confidentiality**

Mistreatment

▸ 63 students reported being **mistreated**
  – MS1 = 15, MS2 = 5, MS3= 17, MS4 = 25
▸ Only 39 students who indicated that they had been mistreated **reported the incident(s)** to a faculty member or administrator
▸ In the free response section:
  – 28% of 50 respondents expressed concerns with **anonymity**, expressing that they felt a report could negatively affect their standing/grade
  – 24% of respondents indicated that they **didn't feel action would be taken** following a complaint
  – 22% did not feel that the **effort** associated with filing a complaint was worth it

Types of Mistreatment Reported
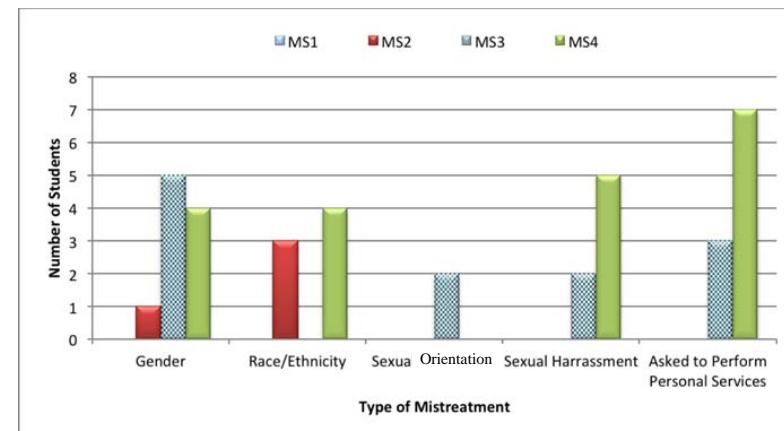
Office for Curriculum Support (4)

- 68% of MS1 and MS2 students **agreed** that OCS was responsive to student concerns
- 79% of MS1 and MS2 students **agreed** that the staff was courteous and friendly
- 65% of students were **satisfied** with the timeliness of lecture posting online
- In the free response section, 15% of 89 comments expressed **satisfaction** with OCS services, 15% requested that **materials be posted more quickly,** and 15% requested **better use of technology for learning**

21

Global Health Center (9)

- 65% were **satisfied** with advertising of training opportunities
- 60% were **satisfied** with training opportunities offered
- 57% were **satisfied** with faculty mentorship
- 66% were **satisfied** with office staff
- 64% were **satisfied** with the application process
- In the free response section:
  - 57% of 74 comments **praised** the Global Health Center
  - 11% requested **more communication**
  - 8% requested more **diversity** of Global Health Training options

22

Medical Student Research Office (7)

- 60% were **satisfied** the counseling they received about research opportunities (-)
- 57% were **satisfied** with mentors and 54% were **satisfied** with research projects they received
- 59% of MS4 students were **satisfied** with the counseling the received regarding a scholarly year
- 70% of MS4 students returning from a scholarly year were **satisfied** with MRSO's facilitation (+)

23

Medical Student Research Day (7)

- 41% were **satisfied** with the impact of Medical Student Research Day on presentation skills
- 56% reported Medical Student Research Day kept them in touch with ISMMS Research
- 34% of students were **dissatisfied** with the current level of networking with current researchers during research day (net satisfaction -2%)
- 46% of students were **satisfied** with the writing skills learned from Medical Student Research Day (-)

24

Medical Student Research Office (7)

▸ In the free response section, out of 129 total comments:
 – 43% of comments indicated that MSRO was helpful
 – 16% of comments expressed that MSRO was not as helpful in finding projects and securing funding as they had hoped
 – 11% of comments expressed dissatisfaction with the lack of access to clinical research projects in fields such as surgery
 – **NOTE:** 19% of comments were from MS1 students who expressed frustration with the new milestone system and its required research curriculum, requesting more flexibility be built into the system

Housing (2)

▸ 85% were **satisfied** with housing options offered by ISMMS
▸ 70% were **satisfied** with couples' housing
▸ 88% of Aron Hall residents were **satisfied** with building maintenance
▸ In the free response section, out of 179 comments, 57% students expressed satisfaction with the **housing experience**, 13% students expressed dissatisfaction with the **reliability and price of laundry machines** and **lack of electronic payment system** in Aron Hall, and 11% of students expressed a desire for better housing options for couples and MD/PhD's

Financial Aid (1)

▸ 74% were **satisfied** with counseling received (+)
▸ 83% **agreed** that the staff was helpful
▸ 64% **agreed** that there is adequate information for scholarships and 63% were **satisfied** with the quality of scholarship information given to students (+)
▸ In the free response section, 90 comments were recorded:
 – 70% of comments expressed satisfaction with the financial aid office
 – 17% of comments suggested increased financial aid counseling
 – 11% of comments indicated poor interactions with staff

Admissions (10)

▸ 77% of MS1 and MS2 students **agreed** that their interactions with the admissions office positively impacted their admissions decision
▸ The majority of students **agreed** that:
 – the staff was courteous and friendly (91%)
 – their application was handled efficiently (81%)
▸ 68% agreed the admissions website was easy to use and 66% that it gave a positive impression of ISMMS

Admissions (10)

▸ A total of 130 free response comments were recorded:
  – 85% of comments expressed an overall positive experience being involved with admissions as a student at ISMMS
  – 8% made suggestions for improving the interview day and getting more current students involved
  – 5% of comments related to poor interactions with admissions staff

Center for Multicultural and Community Affairs (8)

▸ 80% were **satisfied** with CMCA sponsored events
▸ 75% were **satisfied** with academic/career counseling
▸ 79% **agreed** that "Diversity is valued at ISMMS"
▸ In the free response section, 83 comments were recorded:
  – 44% regarded CMCA as a positive influence
  – 11% felt excluded as non-minorities
  – 9% commented that the CMCA mission was not adequately represented in the rest of the institution

Alumni Association (12)

▸ 71% were **dissatisfied** with their awareness of the programs/services that the Alumni Association is involved in (net satisfaction: -37%)
▸ 15% were **satisfied** with their level of interaction with alumni (net satisfaction: -15%)
▸ 40% **interested** in attending Alumni events
▸ 19% interested in **volunteering** at the Alumni Relations office
▸ In the free response section, 100 comments were recorded:
  – 57% of comments indicated that students were **not aware** of the alumni office
  – 22% of respondents requested increased **interaction with alumni**
  – 6% of comments suggested a centralized resource for **alumni contact info**

Student Health (5)

▸ 57% were **satisfied** with quality of care received
▸ 53% were **satisfied** with hours and accessibility (-)
▸ 40% were **satisfied** with lifestyle/nutritional counseling (MS2 Only)
▸ 45% were **satisfied** with their health insurance (MS2 Only)
▸ 45% were **satisfied** with access to specialists (MS2 Only)
▸ 77% of students **agreed** that the staff was courteous and friendly

Student Health (5)

- In the free response section, a total of 204 comments were recorded:
  - 48% praised the student health office
  - 23% expressed concerns with scheduling due to limited hours
  - 16% expressed concerns about the medical professionalism and competence of the staff

Academic Technology (3)

- 85% were **satisfied** with library resources (including books, journals and online resources)
- 73% were **satisfied** with library staff
- 73% were **satisfied** with printing and copying facilities
- 36% were **dissatisfied** with the number of power outlets available in the library
- 43% were **dissatisfied** with climate control in the library (net satisfaction: -2%)
- 30% expressed dissatisfaction with enforcement of noise rules (i.e. cell phone use) by staff

Academic Technology (4)

- 57% were **satisfied** with available study space (net satisfaction: 25%)
- 49% were **satisfied** with the Blackboard system
- 74% and 67% were **satisfied** with wireless internet access in Aron Hall and the ISMMS campus, respectively
- 78% were **satisfied** with the availability of computers
- In the free response section (n=191comments), students commented:
  - There are too few power outlets in the library (20%)
  - The noise in the library is too high (17%)
  - The library has climate control problems (16%)

Cafeteria (6)

- 49% and 59% were **satisfied** with the price and variety of food available in the hospital cafeteria, respectively
- 58% were **satisfied** with the availability of food in the hospital, when excluding the cafeteria (e.g. vending, Starbucks)
- In the free response section, students (n=168) requested:
  - **extended cafeteria hours (**33%)
  - **lower prices** (15%)

Posman Book Kiosk (6)

- 84% were **satisfied** with the Posman Book Kiosk

Student Facilities (2)

- 61% were **satisfied** with recreational space (31% were **dissatisfied**)
- 53% were **satisfied** with study space
- In the free-response section (n=131):
  - 34% of respondents commented that they feel as if students lacked space and that the existing space was filled with non-students
  - 31% complained with the appearance of the current student lounge
  - 5% commented on satisfaction with the Aron Hall gym

Mount Sinai Security (11)

- 94% **agreed** that they felt safe in Mount Sinai buildings at all hours
- 80% **agreed** that they felt safe in the surrounding neighborhood at all hours
- 81% were **satisfied** with the helpfulness of Mount Sinai security guards and/or the security office.
- In the free response section (n=94):
  - 82% were highly complimentary of the security staff or felt that changes made them feel safer on campus
  - 10% expressed concerns about inconsistent ID checks for entry to ISMMS buildings
  - 6% expressed concerns about specific security guards in Aron Hall

Student Community Relationships

- 64% reported being **satisfied** with peer relations across the years within the medical school
- 41% reported being **satisfied** with graduate and medical school student peer relations
- 72% **agreed** that student morale is good at ISMMS
- In the free response section (n=60), students:
  - **requested more medical school-graduate school mixing** (36%)
  - expressed satisfaction **student morale** (33%)
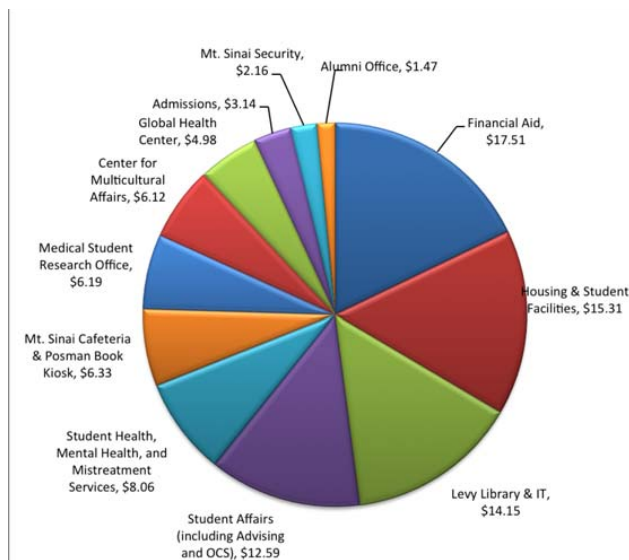
Student Government

- 70% **agreed** that the Student Council was responsive to their concerns (+)
- 51% **agreed** that they were well informed about the work done by Student Council
- 73% **agreed** that Student Government is fair in distributing funds (+)
- In the free-response section (n=17):
  - 90% requested increased transparency and availability of minutes

Overall

- 78% would recommend ISMMS to a friend/family member interested in attending medical school
  - net satisfaction: 69%
- 78% would choose ISMMS again
  - net satisfaction: 69%
- No statistical difference between classes

Mt. Sinai Security, $2.16
Alumni Office, $1.47
Admissions, $3.14
Global Health Center, $4.98
Center for Multicultural Affairs, $6.12
Medical Student Research Office, $6.19
Mt. Sinai Cafeteria & Posman Book Kiosk, $6.33
Student Health, Mental Health, and Mistreatment Services, $8.06
Student Affairs (including Advising and OCS), $12.59
Financial Aid, $17.51
Housing & Student Facilities, $15.31
Levy Library & IT, $14.15

"High Yield" Improvement Areas

- Specialty-specific career counseling
- Increasing student confidence in the mistreatment reporting process
- Increase student study and lounge space
- Better climate control and technology in the library
- Professionalism and access to care in student health
- More information on scholarships
- Graduate-Medical school interaction
- Student Council transparency
- Alumni interaction

Conclusions

- Some areas for improvement, many of which are long-term goals
  - A number of these (i.e. library, Student Council transparency) have already been addressed
- However, overall student satisfaction as well as student morale are extremely high

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Concerning Comment in Survey (n=13)

"After much discussion and reflection, we, as members of the Sinai student body, have crafted this statement to reflect our concerns about the role of Student Affairs in our medical education. We feel that the ability of Student Affairs to adequately advocate and advise students is compromised by the fact that it also evaluates students - for example, through ranking systems and Dean's Letters. Although we recognize that there are anonymous resources for raising our concerns safely and without fear of retribution, we feel that this anonymity does not facilitate transparency or accountability for change. We feel that Student Affairs has demonstrated a lack of respect for us and our classmates and their particular circumstances. Although the people submitting this statement may not necessarily be directly affected by all of these issues, we all still feel that they are important concerns that do negatively affect student performance and medical education. Specifically: 1) Our classmates have expressed feeling harassed by MedEd, through "at-risk" meetings and confrontational emails, especially those directed at our underrepresented minority classmates. 2) Our classmates have felt that Student Affairs has been unyielding and unhelpful with regards to the unplanned emergencies surrounding family, including those of us with children. 3) Many of us feel hesitant about talking to MedEd advocates because of perceived fear of retribution, especially through incident reports about professionalism. We look forward to being part of an institution that values respect for students and respect for diversity. "

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Medical Education Response

- Comment shared with Dr. Muller, Dr. Karani, Dr. Gliatto, Dr. Butts, Dr. Ann-Gel Palermo, and Shashi Anand
- Medical Education met with Student Council leadership to discuss
  - Conclusion: more information was needed
- Student Council leadership anonymously met with students who produced comment in two focus groups to clarify points
- Student Council leadership conveyed information back to Medical Education

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Actions Taken

- MedEd examining better ways to reach out to students having academic difficulties to ensure the tone is perceived as supportive
- Expansion of diversity goals
  - Diversity representation on Student Council Steering Committee
  - Discussion about having the People's Institute for Survival return to offer their Beyond Undoing Racism Workshop
  - Support for school-wide diversity initiatives
- Clarification of MSPE policies (and evaluations in general)
- Re-examining absence policies

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Appendix 9-C

Graduate Student
Comprehensive Evaluation 2013-14

2013-2014 School Year Comprehensive Evaluation: Summary Presentation

Tobias Cohen, MD/PhD Candidate 5th yr

Jessica DiGiovanna, MGC Candidate 2nd yr

Jesse Gelles-Hurwitz, PhD Candidate 2nd yr

Vivian Nguyen, MPH Candidate 2nd yr

March 9th, 2015

Mount
Sinai

Outline

1. Introduce survey

2. Comment on metrics

3. Present section data

4. Summary

The Survey

- Developed by graduate students
  - questions identical to medical student survey when applicable

- ~120 questions long

- Separated into distinct sections (e.g. "curriculum")
  - Multiple choice
  - Free-response

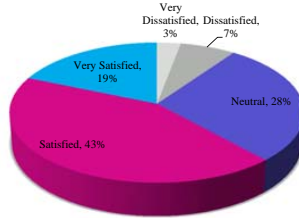- Tailored to progression in program and to program itself

3

Executive Summary

- Strengths
  - Research facilities (labs and libraries)
  - Overall morale and satisfaction
  - Maintenance of Sinai Housing

- Weaknesses
  - Survey Participation
  - Alumni/Career services
  - General MD/PhD Dissatisfaction
  - Med School/Grad School Interaction
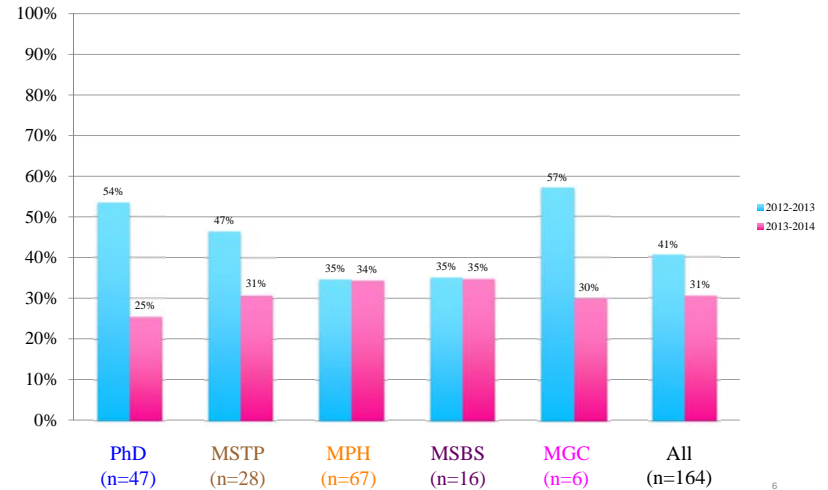
4

Excluding "Cannot Assess"
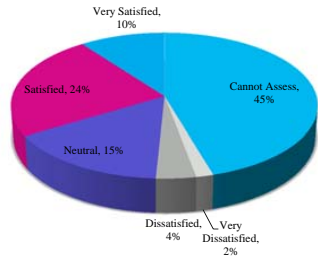
n = 187

n = 102

Response Rates

Additional Notes on Data Presentation

‣ Positive or negative responses combined
  – Very Satisfied + Satisfied = "**Satisfied**"
  – Very Dissatisfied + Dissatisfied = "**Dissatisfied**"

‣ More than 10% change since last survey will be noted by either ↑or↓

‣ Numbers will not add up to 100%
  – %responding "neutral" not shown

Additional Notes on Data Presentation

‣ Data are shown as "Satisfied/Agree" vs. "Dissatisfied/Disagree" where green is good and red is bad
  – PhD: PhD in Biomedical Science and Neuroscience
  – MSTP: MD/PhD in Biomedical Science and Neuroscience
  – MPH: Master of Public Health (including MD/MPH)
  – MSBS: Master of Biomedical Science
  – MGC: Master of Genetic Counseling

Curriculum/Registration

- ‣ Overall quality of the Academic Curriculum:
  - 49% Above Average vs. 15% Below Average (n=156)
  - PhD: 43% vs. 17% (n=46)
  - MSTP: 8%↓ vs. 29%↑ (n=24)
  - MPH: 61% vs. 9% (n=64)
  - MSBS: 69% vs. 19% (n=16)
  - MGC: 83% vs. 0% (n=6)

- ‣ Coordination and integration of content between classes:
  - 52% Satisfied↑ vs. 23% Dissatisfied (n=155)
  - PhD: 41% vs. 33%↑ (n=46)
  - MSTP: 17% vs. 43%↑ (n=23)
  - MPH: 66% vs. 13% (n=64)
  - MSBS: 69% vs. 19% (n=16)
  - MGC: 83% vs. 0% (n=6)

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Curriculum/Registration

- ‣ Response to student feedback regarding teaching:
  - 37% Above Average vs. 23% Below Average (n=125)
  - PhD: 35% vs. 30%↑ (n=37)
  - MSTP: 21% vs. 42%↓ (n=19)
  - MPH: 45% vs. 13% (n=53)
  - MSBS: 17% vs. 25% (n=12)
  - MGC: 75% vs. 0% (n=4)

- ‣ Feeling overwhelmed by overall workload:
  - 50% Disagree vs. 22% Agree (n=156)
  - PhD: 50% vs. 28% (n=46)
  - MSTP: 33%↓ vs. 25% (n=24)
  - MPH: 63%↓ vs. 11% (n=64)
  - MSBS: 31% vs. 38↑ (n=16)
  - MGC: 33% vs. 33%↓ (n=6)

- ‣ Graduate students are extremely satisfied with program milestones

10

Program Office/Administration

- ‣ Satisfaction with program office
  - 79% Satisfied vs. 9% Dissatisfied (n=150)

- ‣ Trust program office staff to keep their personal information confidential
  - 88% Agree↑ vs. 5% Disagree (n=102)

- ‣ Feel comfortable approaching people in their program office regarding personal and academic issues
  - 78% Agree vs. 6% Disagree (n=148)

- ‣ Know whom to contact about stipends/financial aid/insurance
  - 76% Yes↑ vs. 24% No (n=146)

- ‣ Satisfaction with the stipend provided by the Graduate School
  - PhD: 60% vs. 24% (n=45)
  - MSTP: 68% vs. 20% (n=25)

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Advising/Career Counseling

- ‣ Satisfaction with graduate students advisors
  - 74% Satisfied↑ vs. 5% Dissatisfied (n=142)

- ‣ General career counseling
  - 51% Satisfied vs. 16% Dissatisfied (n=136)
  - PhD: 38% vs. 18% (n=40)
  - MSTP: 50% vs. 25% (n=20)
  - MPH: 54% vs. 16% (n=57)
  - MSBS: 69% vs. 8% (n=13)
  - MGC: 83% vs. 0% (n=6)

- ‣ Career guidance offered by the Graduate School Office
  - 38% Satisfied vs. 27% Dissatisfied (n=123)
  - PhD: 28% vs. 33% (n=36)
  - MSTP: 25% vs. 38% (n=16)
  - MPH: 43% vs. 21% (n=56)
  - MSBS: 62% vs. 23% (n=13)
  - MGC: 50% vs. 0 (n=2)

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Alumni Relations Office

▸ I am aware of Alumni Office's programs/services:
  – 11% Agree vs. 73% Disagree (n=127)

▸ Satisfaction with current level of student-alumni interaction:
  – 18% Satisfied vs. 37% Dissatisfied (n=87)

▸ I am interested in attending events hosted by Alumni Office:
  – 50% Agree vs. 24% Disagree (n=125)
  – PhD: 54% vs. 23% (n=35)
  – MSTP: 23% vs. 55% (n=22)
  – MPH: 60% vs. 12% (n=52)
  – MSBS: 50% vs. 20% (n=10)
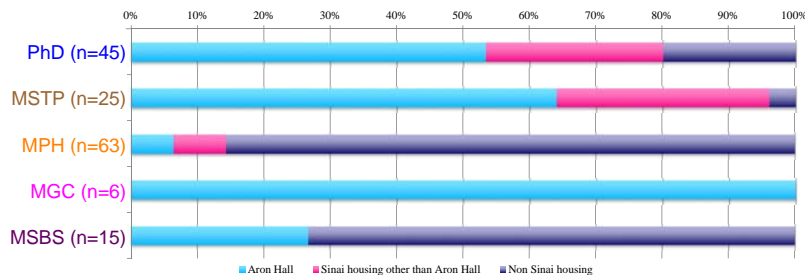 – MGC: 33% vs. 33% (n=6)

Admissions

▸ Ease of use of the admissions website:
  – 36% Above Average vs. 19% Below Average (n=36)

▸ Impression of ISMMS from the admissions website:
  – 28% Positive vs. 17% Negative (n=36)

▸ Impact of Revisit Weekend on PhD/MSTP admissions decision:
  – 84% Positive vs. 0% Negative (n=19)

Housing

Aron Hall   Sinai housing other than Aron Hall   Non Sinai housing

▸ Housing options offered by ISMMS
  – 56% Satisfied vs. 35% Dissatisfied (n=82)
  – PhD: 60% vs. 33% (n=43)
  – MSTP: 54 vs. 33% (n=13)
  – MSBS: 11% vs. 78% (n=9)
  – MGC: 100% vs. 0% (n=6)
▸ Couples housing options offered by ISMMS
  – 45% Satisfied vs. 38% Dissatisfied (n=29)

Housing

▸ Helpfulness/responsiveness of the real estate office
  – 41% Satisfied vs. 26% Dissatisfied (n=110)

▸ Graduate Students are satisfied with services offered within Sinai Housing
  – Laundry, maintenance, Wi-Fi

▸ Do you have any general comments about housing?
  – MPH/MSBS (22)
    • Need student housing options (18)
  – **Students in Non-Aron Hall housing** (12)
    • Too expensive (5)
  – **Students in Aron Hall** (21)
    • Need options other than Aron for single students (5)

International Students

‣ Do you have any comments about international student services (9)
  – MPH (6)
    • Provide some sort of housing so students (even if temporary) so students have somewhere to live when they arrive (4)
    • Provide on campus employment since off campus employment is not legal (2)

Facilities

‣ Satisfaction with leisure space:
  – 45% Satisfied vs. 23% Dissatisfied (n=133)

‣ Satisfaction with available recreational spaces:
  – 63% Satisfied vs. 11% Dissatisfied (n=126)

‣ Satisfaction with study space:
  – 63% Satisfied↑ vs. 21% Dissatisfied (n=126)
  – PhD: 47% vs. 32% (n=38)
  – MSTP: 48% vs. 33% (n=21)
  – MPH: 66% vs. 14% (n=59)
  – MSBS: 67% vs. 7% (n=15)
  – MGC: 67% vs. 17% (n=6)

Security

‣ I feel safe in Mount Sinai buildings at all hours:
  – 89% Agreed vs. 3% Disagreed (n=151)

‣ I feel safe in the surrounding neighborhood at all hours:
  – 60% Agreed↓ vs. 19% Disagreed (n=153)
  – PhD: 64% vs. 16% (n=45)
  – MSTP: 72% vs. 12% (n=25)
  – MPH: 53% vs. 24% (n=62)
  – MSBS: 40% vs. 27% (n=15)
  – MGC: 100% vs. 0% (n=6)

Student Health

‣ Quality of care provided by student health service:
  – 60% Satisfied vs. 19% Dissatisfied (n=124)

‣ Satisfaction with Student Health Insurance:
  – 50% Satisfied vs. 15% Dissatisfied↓ (n=107)

‣ Satisfaction with the convenience of student health service hours:
  – 55% Satisfied vs. 21% Dissatisfied (n=121)

‣ Satisfaction with mental health services provided:
  – 48% Satisfied vs. 13% Dissatisfied (n=52)

Library

- Satisfaction with library resources (including books, journals and online resources):
  – 85% Satisfied vs. 2% Dissatisfied (n=146)

- Satisfaction with wireless internet access around the ISMMS campus:
  – 74% Satisfied vs. 14% Dissatisfied (n=153)

Mistreatment/Ombudsperson

- 6/164 (4%) of Survey Respondents Reported That They Had Been Mistreated in 2013-2014

Program	Type of Mistreatment	Reported?	Reason for No Report
PhD	Gender	No	"Would have exacerbated the situation"
PhD	No Response	Yes	N/A
PhD	No Response	Yes	N/A
PhD	Race/Ethnicity + Physical Harassment	Yes	N/A
MSTP	No Response	No Response	No Response
MPH	Race/Ethnicity + Gender	Yes	N/A

- "I know how to reach the Ombudsperson":
  – 46% Yes vs. 54% No (n=126)

- "I feel comfortable approaching the ombudsperson with sensitive issues":
  – 52% Agree vs. 14% Disagree (n=74)

Research Environment

- Resources provided for research:
  – 84% Satisfied vs. 4% Dissatisfied (n=83)

- Comfortable sharing research details with peers outside lab:
  – 87% Agree vs. 5% Disagree (n=82)

- Availability of resources provided for MPH practicum/thesis/capstone:
  – 56% Satisfied vs. 17% Dissatisfied (n=57)

Student Government/Peer Relations

- Responsiveness of Student Council to student concerns:
  – 66% Satisfied vs. 8% Dissatisfied (n=119)

- Fairness of distribution of Student Council funds:
  – 69% Satisfied↑ vs. 5% Dissatisfied (n=81)

- Student Council kept students well-informed about their work:
  – 58% Agree vs. 14% Disagree (n=140)

- Satisfaction with peer relations between the Graduate school and Medical school:
  – 28% Satisfied vs. 40% Dissatisfied (n=139)
  – PhD: 20% vs. 53% (n=40)
  – MSTP: 16% vs. 56% (n=25)
  – MPH: 39% vs. 28% (n=54)
  – MSBS: 29% vs. 29% (n=14)
  – MGC: 33% vs. 33% (n=6)

Graduate Student Experience

▸ Diversity is valued at ISMMS:
  – 76% Agree vs. 9% Disagree (n=148)

▸ General morale at ISMMS is good:
  – 65% Agree vs. 16% Disagree (n=147)
  – PhD: 59% vs. 29% (n=41)
  – MSTP: 44% vs. 28% (n=25)
  – MPH: 72% vs. 5% (n=61)
  – MSBS: 80% vs. 7% (n=15)
  – MGC: 80% vs. 0% (n=5)

Graduate Student Experience

▸ "I would recommend ISMMS to friends/family members interested in the same degree program":
  – 65% Yes vs. 12% No (n=153)
  – PhD: 69% vs. 5% (n=42)
  – MSTP: 52% vs. 12% (n=25)
  – MPH: 66% vs. 17% (n=64)
  – MSBS: 63% vs.13% (n=16)
  – MGC: 100% vs. 0% (n=6)

▸ "If I could go back, I would choose ISMMS again":
  – 71% Yes vs. 10% No (n=154)
  – PhD: 72% vs. 7% (n=43)
  – MSTP: 68% vs. 12% (n=25)
  – MPH: 67% vs. 13% (n=64)
  – MSBS: 75% vs. 13% (n=16)
  – MGC: 100% vs. 0% (n=6)

Student Priorities

▸ Students were asked how they would divide a fictional $100 amongst the 10 various departments and services surveyed

- Student Affairs (Including Advising and Curriculum)
- Student Health, Mental Health, & Mistreatment Services
- Housing & Student Facilities
- Financial Aid (Stipend Supplementation)
- Admissions
- Alumni Office
- Levy Library & IT
- Mt. Sinai Cafeteria & Posman Book Kiosk
- Mt. Sinai Security
- Laboratory Space/Equipment (School-wide)

Student Priorities

	Highest Priorities			Lowest Priorities		
MSTP	Housing & Facilities 27.37	Financial Aid 25	Student Affairs 16.84	Cafeteria & Book Kiosk 4.79	Alumni Office 4.25	Security 1.67
PhD	Financial Aid 30.88	Housing & Facilities 24.32	Student Affairs 23.86	Library & IT 11.05	Cafeteria & Book Kiosk 8.2	Alumni Office 4.8
MPH	Student Affairs 29.76	Housing & Facilities 27.79	Financial Aid 25.38	Security 8.52	Admissions 8.1	Alumni Office 5.77
MGC	Financial Aid 66.67	Admissions 50	Housing & Facilities 37.5	Alumni Office 0	Library & IT 0	Security 0
MSBS	Student Affairs 26.82	Housing & Facilities 22.27	Financial Aid 22.08	Admissions 6.43	Alumni Office 4.17	Security 4.17

Executive Summary

▸ Strengths
  – Research facilities (labs and libraries)
  – Overall morale and satisfaction
  – Maintenance of Sinai Housing

▸ Weaknesses
  – Survey Participation
  – Alumni/Career services
  – General MD/PhD Dissatisfaction
  – Med School/Grad School Interaction

Appendix 10-A

Standard 10 Fundamental Elements Grid

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
An accredited institution is expected to possess or demonstrate the following attributes or activities:	
➤ faculty and other professionals appropriately prepared and qualified for the positions they hold, with roles and responsibilities clearly defined, and sufficiently numerous to fulfill those roles appropriately;	• Page 58 (Standard 10) – 99.8% of full-time faculty and 99.5% of voluntary faculty have at least one doctoral degree, with a broad range of expertise in the subjects they teach. • Page 58 (Standard 10) – Every full-time faculty recruit receives a job description that clearly articulates his/her roles and responsibilities. • Page 58 (Standard 10) – Approximately 900 faculty teach in one or more degree-granting programs
➤ educational curricula designed, maintained, and updated by faculty and other professionals who are academically prepared and qualified;	• Page 59 (Standard 10) – Faculty participate extensively on the Executive Curriculum Committee (ECC) of the MD Program that continuously reviews the curriculum's design, organization and teaching performance.
➤ faculty and other professionals, including teaching assistants, who demonstrate excellence in teaching and other activities, and who demonstrate continued professional growth;	• Pages 59-60 (Standard 10) – The School's Appointment, Promotion and Tenure (APT) methodology encourages professional growth and recognizes achievements in teaching.
➤ appropriate institutional support for the advancement and development of faculty, including teaching, research, scholarship, and service;	• Pages 60 – 64 (Standard 10) – A wide range of programs and services are available to assure the continued development of our faculty (e.g., Institute for Medical Education, Office of Academic Development and Enrichment)
➤ recognition of appropriate linkages among scholarship, teaching, student learning, research, and service;	• Pages 61-62 (Standard 10) – Through the Institute for Medical Education (IME), faculty are recognized for excellence in education; encouraged to conduct research; mentored for career and skills development; and sponsored for innovative scholarship activities.

➢ published and implemented standards and procedures for all faculty and other professionals, for actions such as appointment, promotion, tenure, grievance, discipline and dismissal, based on principles of fairness with due regard for the rights of all persons;	• Page 59 (Standard 10) – The Faculty Handbook is the central repository for policies and procedures that impact faculty.
➢ carefully articulated, equitable, and implemented procedures and criteria for reviewing all individuals who have responsibility for the educational program of the institution;	• Page 60 (Standard 10) – A formal annual Faculty Performance Review process is described in the Faculty Handbook. A standardized template is used by all departments.
➢ criteria for the appointment, supervision, and review of teaching effectiveness for part-time, adjunct, and other faculty consistent with those for full-time faculty;	• Page 59 (Standard 10) – The Faculty Handbook provides criteria for the appointment of full-time, part-time and voluntary faculty at each academic rank. • Page 38 (Standard 6) – Annual reviews provide feedback to faculty on their performance as educators. • Page 58 (Standard 10) – All teaching faculty are held to the same standards, and must have appropriate qualifications and background, and are evaluated through course evaluations.
➢ adherence to principles of academic freedom, within the context of institutional mission; and	• Page 30 (Standard 6) – Academic freedom is integral to the ISMMS culture, and both the Student and Faculty Handbooks specifically articulate adherence to the principles of academic freedom. The Faculty Handbook includes a statement of academic freedom.
➢ assessment of policies and procedures to ensure the use of qualified professionals to support the institution's programs.	• Page 32 (Standard 6) – A host of employee policies provide well defined, clear guidelines for faculty and staff. Job descriptions and performance reviews are examples of tools that are regularly assessed to ensure the programs are supported by qualified professionals.

Appendix 10-B

Faculty Job Description

APPENDIX 10-B

Cardiovascular Pathophysiology Course Director

The Cardiovascular Pathophysiology course at the Icahn School of Medicine at Mount Sinai (ISMMS) is a 2nd year fall offering which runs over 5 weeks from November into December each year. Goals of the course are to provide students with a clinically oriented framework for understanding common pathophysiologic derangements of cardiac function. The course offers a comprehensive review of normal anatomy, hemodynamic function, electrophysiology, pathology and pharmacology using small group sessions, lectures and laboratories. This is coupled with an in-depth study of cardiovascular diseases including cardiomyopathies, valvular heart disease, ischemic heart disease, vascular diseases, and congenital heart disease. The course is taught from a clinical perspective focusing on a physiological understanding of the underlying pathophysiology, connecting pathophysiology to patient signs and symptoms, and understanding the role of various medical and procedural treatments to restore normal physiologic performance.

Overall Responsibilities:
The Course Director is responsible for overseeing all activities related to the course. He/she designs, manages, teaches and evaluates the course in keeping with the overall ISMMS core competencies and relevant national standards. He/she serves as the link between 2nd year medical students and the Cardiovascular Pathophysiology faculty, demonstrating interpersonal and leadership skills that earn the trust of both groups. Additionally, he/she demonstrates scholarly activities in medical education and assumes leadership roles in educational endeavors at ISMMS. The Course Director must remain informed of trends and practices in medical education, pedagogy, technology, and administration. Planning involves consultation with content experts, Co-Directors of the Curriculum, the Associate Dean for UME and Curricular Affairs and others.

Curricular Activities:
1. Develop and effectively communicate course objectives and outcome measures to faculty and students.
2. Work closely and collaboratively with the Co-Directors of the Curriculum to assure that the necessary and desired educational content is addressed and optimal instructional and assessment methods are utilized.
3. Develop and review outcome measures to assess the achievement of learning objectives within the competencies, and provide feedback, when requested, to the Executive Curriculum Committee and the Year 1/2 Course Director Committee.
4. Provide direct teaching of various content areas and components of the course.
5. Develop and disseminate appropriate materials (including the course syllabus, schedule, course and faculty guides, and other relevant educational materials) for both students and faculty in a timely fashion.
6. Work closely with the Year 2 Coordinator to maintain curricular content on the online Learning Management System (Blackboard) at ISMMS.
7. Provide faculty development for all educators in the course including house staff and teaching faculty.

8. Oversee the planning and implementation of the course assessments (quizzes and exams) including the identification and reporting of medical students either at risk and/or requiring remediation.
9. Review and respond appropriately to student evaluation information, including meeting with student course and class representatives, when appropriate.
10. Track national trends in medical education in cardiology and implement appropriate changes to the course based on student evaluations, curricular review committee reports, and in collaboration with the Associate Dean for UME and Curricular Affairs and Co-Directors of the Curriculum
11. Engage in scholarly activities in medical education including authoring publications, applying for educational grants, participating in national activities such as giving workshops, presenting abstracts, and serving as a member of educational committees.

Administrative Activities
1. Provide the Registrar with course grades in a timely fashion.
2. Submit to the Department of Medical Education the annual Course Director's Course Assessment in a timely fashion and any other report pertaining to the design, implementation and evaluation of the course.
3. Attend, when appropriate, lectures, small group activities, teaching rounds and other course educational activities to monitor quality and consistency.
4. Report, when appropriate, on teaching contributions (quality and quantity) of course faculty members.
5. Meet regularly with the Co-Directors of the Curriculum and the Associate Dean for UME and Curricular Affairs for course planning, implementation and evaluation.
6. Participate in the recruitment of teaching faculty for the course
7. Systematically review student evaluations of course teaching faculty, make evaluation data available to faculty educators and Department/Division Chair, and provide timely feedback to them.
8. Maintain contact and collaborate with other course directors who teach in related areas to ensure consistency, coordination, and integration, with minimal redundancy.
9. Work closely with the Department of Medical Education, Associate Deans, Co-Directors of Curriculum and other course and clerkship directors, in a collaborative fashion to shape the overall educational plan of the institution.

Service Activities:

1. Attend and participate in Year 1/2 Course Director Meetings and activities as requested by the Department of Medical Education.
2. Serve, when requested, in leadership roles in ISMMS educational activities including LCME task forces, committees, etc.
3. Participate in the remediation of students with academic difficulties

Co-Director, Integrated Internal Medicine-Geriatrics Clerkship

The Medicine-Geriatrics Clerkship is a core 12-week third year clerkship jointly sponsored by the Departments of Medicine and Geriatrics and Palliative Medicine. It consists of two inpatient ward months, one at The Mount Sinai Hospital and one at an affiliated hospital. The third month is outpatient-based, with a focus on the care of older adults.

The co-director from the Department of Medicine is responsible, along with the co-director from the Department of Geriatrics and Palliative Medicine, for overseeing all activities of the clerkship. The co-directors are equal partners in all parts of the clerkship and collaborate closely. The co-director position from the Department of Medicine represents a 50% FTE effort.

Responsibilities include:

1. Direct teaching of students
2. Oversight and maintenance of curriculum
3. Oversight and faculty development of site directors at three inpatient sites
4. Career counseling and mentoring of students, including preparation of departmental letters of recommendation
5. Management of student assessment methods and preparation of grades
6. Programmatic assessment, including meeting and documenting LCME requirements
7. Participation as a faculty member in Clinical Skills Week, Intersession and Compass 2 and participation in Compass 2 remediation committee.
8. Providing feedback and faculty development to attending physicians and house staff who teach students in the clerkship
9. Participation in the Clinical Curriculum Committee
10. Participation in the other Medical School committees as needed (i.e., Promotions, Admissions)

Appendix 10-C

Faculty Performance Review Template

APPENDIX 10-C

Annual Faculty Performance Evaluation

DEPARTMENT OF:	Dentistry	**YEAR:**	2014
NAME:	ROD AMINIAN	**DEGREE:**	
RANK:		**TRACK:**	
TRANSACTION:	FA1112965	**TERM END DATE:**	

Allocation of Effort (%)

Teaching: Research: Clinical: Administration: Other: **Total:**

Ratings: **1=**below expectations   **N/A=**not applicable, e.g., if individual teaches only medical students, select N/A for postdocs, house staff/clinical fellows.
2=marginally meets expectations
3=meets expectations
4=exceeds expectations
5=markedly exceeds expectations

Add comments for any indicator as desired.	Rating
Scholarship	
Peer-Reviewed Publications - quality and quantity; personal impact factor; H-index	
Invited Presentations - regional/national/int'l; quality and quantity	
Other Evidence of Scholarship, e.g., innovation, web-based materials	
Teaching	
Mount Sinai Medical/Graduate Students - lectures, course development/directorship; T-dollar generation	
Postdoctoral Fellows, House Staff/Clinical Fellows - #, venues, outcomes	
Regional, National, International Teaching - quantity/quality	
Teaching/Mentoring excellence, e.g., course evaluations, teaching awards, mentee evaluations/productivity	
Research	
Extramural and Internal Funding - type,$, R dollar generation, renewal prospects, research density, ISMMS pilot funding	
Innovations - patents, patent applications, licenses	
Clinical Trials - scope, patient enrollment, financials	
Clinical	
Patient Care, e.g., quality, malpractice, certification, patient satisfaction	
wRVUs -- performance against benchmarks, eg. FPSC	
FPA Financial Results - clinical receipts, expenses, deficits	
Service	
Service/Leadership @ ISMMS and MSH, e.g., institutional committees	
Service to Primary Dept/Institute, e.g., committees, administration	
Mentoring, Active participation as a mentor or mentee	
External Service/Leadership, e.g., study sections, professional society committees, editorial boards, public advocacy (e.g. testifying before Congress, lab tours to policy makers, advocating Federal $ for science), public education/ talks to lay audiences/ high school science outreach	
Professionalism towards faculty, trainees, staff. Incidents (positive or negative)?	
Final Rating : not applicable, e.g., if individual teaches only medical students, select N/A for postdocs, house staff/clinical fellows.	

Appraiser's Comments
Completion of this section is optional for APPRAISER.

Development/Improvement Plan
Completion of this section is mandatory for faculty who receive ratings of 1 or 2, and optional for faculty receiving rating of 3,4 or 5.
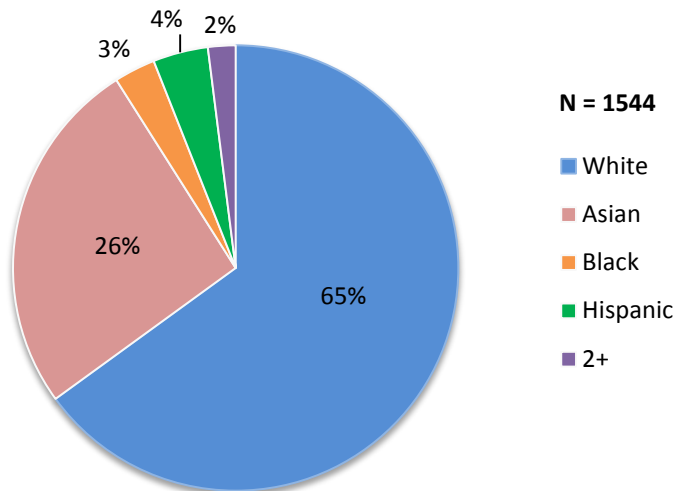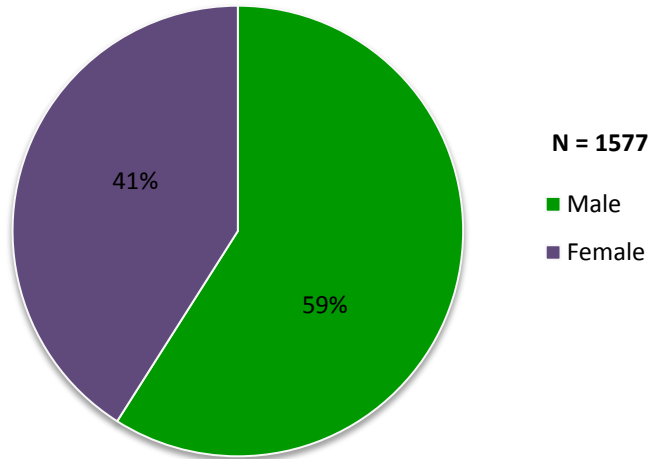
Appendix 10-D

Faculty Demographics

ISMMS FACULTY
Overall Demographics

N = 1577

- ■ Male
- ■ Female

41%

59%

3%   4%   2%

N = 1544

- ■ White
- ■ Asian
- ■ Black
- ■ Hispanic
- ■ 2+

26%

65%

* Upper East Side campus

**The difference in counts for gender and ethnicity reflects absence of responses from some faculty to ethnicity/race survey

Appendix 11-A

Standard 11 Fundamental Elements Grid

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
An accredited institution is expected to possess or demonstrate the following attributes or activities. These elements also apply to all other educational activities addressed within Standard 13.	
➢ educational offerings congruent with its mission, which include appropriate areas of academic study of sufficient content, breadth and length, and conducted at levels of rigor appropriate to the programs or degrees offered;	• Page 66 (Standard 11) – creation of MD Program core competencies that align with the stated mission of the school • Page 71 (Standard 11) – MPH program requires a Master's thesis or Capstone project that demonstrates knowledge of public health competencies
➢ formal undergraduate, graduate, and/or professional programs—leading to a degree or other recognized higher education credential—designed to foster a coherent student learning experience and to promote synthesis of learning;	• Page 67 (Standard 11) – all medical students required to complete a mentored scholarly product • Page 67 (Standard 11) – "InFocus" weeks that bring together interdisciplinary faculty and emphasize skill development and knowledge application • Page 69 (Standard 11) – The Design, Technology and Entrepreneurship Multi-disciplinary Training Area is an approach to biomedical research infused with principles from the quantitative sciences.
➢ program goals that are stated in terms of student learning outcomes;	• Appendix 11-B (Standard 11) – MD Program Core Competencies • Appendix 11-D (Standard 11) – MS in Health Care Delivery Leadership (MSHCDL) Program Competencies • Appendix 14-B (Standard 14) – Summary of Student Assessment Policies and Methods
➢ periodic evaluation of the effectiveness of any curricular, co-curricular, and extra-curricular experiences that the institution	• Pages 36-39 (Standard 7) – description of continuous monitoring of program objectives and student success across MD Program and Graduate School • Page 84 (Standard 14) – comprehensive clinical assessments (called COMPASS 1

provides its students and utilization of evaluation results as a basis for improving its student development program and for enabling students to understand their own educational progress (see Standards 9: Student Support Services and 14: Assessment of Student Learning);	and 2) to assess students' preparedness for the next phase of training • Page 86-87 (Standard 14) – a description of the feedback and evaluation that PhD students receive to support their progress toward the degree. • Appendix 11-E (Standard 11) – MSHCDL Program Evaluation Plan
➢ learning resources, facilities, instructional equipment, library services, and professional library staff adequate to support the institution's educational programs;	• Page 19 (Standard 3) – describes the library facility, the collection and services offered by the library staff
➢ programs that promote student use of a variety of information and learning resources;	• Page 19 (Standard 3) – An on-demand Ask a Librarian consultation service is available to support student research needs. • Page 73 (Standard 11) – The Instructional Technology Group promotes best practices for integrating technology into teaching and learning.
➢ provision of comparable quality of teaching/instruction, academic rigor, and educational effectiveness of the institution's courses and programs regardless of the location or delivery mode;	• Page 74 (Standard 11) – a description of the broad programmatic assessment approaches across programs • Page 78 (Standard 13) and Appendix 11-E MSHCDL Program Evaluation Plan – will effectively assess the School's first program delivered in a distance learning format.
➢ published and implemented policies and procedures regarding transfer credit that describe the criteria established by the institution regarding the transfer of credits earned at another institution. The consideration of transfer credit or recognition of degrees will not be determined exclusively on the basis of the accreditation of the sending institution or the mode of delivery but,	• Page 50 (Standard 8) and Page 73 (Standard 11) – ISMMS has transfer credit policies and procedures which are documented in the Student Handbooks. Transfer credits are rare for medical students (no current medical student has transfer credits) and uncommon for graduate students.

rather, will consider course equivalencies, including expected learning outcomes, with those of the receiving institution's curricula and standards. Such criteria will be fair, consistently applied, and publicly communicated;	
➤ policies and procedures to assure that the educational expectations, rigor, and student learning within any accelerated degree program are comparable to those that characterize more traditional program formats;	• The School does not offer any degree-granting programs in an accelerated format.
➤ consistent with the institution's educational programs and student cohorts, practices and policies that reflect the needs of adult learners;	• Page 52 (Standard 9) – The School's support services are designed to address student needs at advanced levels and position the adult learner for success.
➤ course syllabi that incorporate expected learning outcomes; and	• Page 58 (Standard 10) – description of course director expectations in MD program, including syllabus preparation • Page 59 (Standard 10) – description of the Executive Curriculum Committee (ECC) of the MD program, which is charged the educational objectives of the School of Medicine and to assure a curriculum that is consistent with these objectives
➤ assessment of student learning and program outcomes relative to the goals and objectives of the undergraduate programs and the use of the results to improve student learning and program effectiveness (see Standard 14: Assessment of Student Learning).	• Appendix 14-B (Standard 14) – For each degree-granting program, Appendix 14-B outlines student learning goals (first column), how learning goals are assessed (third column) and how assessment results are used to further improve teaching and learning. • Page 36 (Standard 7) – Program objectives and student success are continuously monitored across the MD and Graduate School programs

Appendix 11-B

MD Program Core Competencies

Core Competencies for the Icahn School of Medicine at Mount Sinai

Competency I: Patient Care
 	
    A. History taking
    B. Physical examination
    C. Procedural skills
    D. Clinical reasoning
    E. Medical decision making
    F. Communication skills

Competency II: Scientific and Medical Knowledge
 	
    A. Organ structure and function
    B. Characteristics and mechanisms of disease
    C. Healing and therapeutics
    D. Social and cultural determinants of health and disease
    E. Health care resources and delivery systems
    F. Ethical principles of medical practice and research

Competency III: Learning, Scholarship, and Collaboration
 	
    A. Self-awareness and commitment to self-improvement
    B. Methods of investigation, analysis and dissemination
    C. Teamwork

Competency IV: Professionalism and Advocacy
 	
    A. Service
    B. Leadership and accountability
    C. Honesty and integrity
    D. Empathy
    E. Respect

Competency I: Patient Care

Graduates will reliably obtain and interpret clinical data, propose a prioritized management plan, and communicate effectively with patients, families, colleagues and staff.

A. History taking
1. Establish a safe and comfortable environment to allow for a patient to provide a confidential history.
2. Conduct an interview that is appropriate to the patient's age and the clinical venue.
3. Conduct a comprehensive interview that is organized and efficient and includes the appropriate elements of the history.
4. Incorporate additional sources of information, including the medical record and perspectives of caregivers.

B. Physical examination
   1. Establish a safe and comfortable environment for the physical examination, respecting the patient's privacy and dignity and counseling the patient about what to expect during the exam.
   2. Conduct an exam that is appropriate to the patient's chronological and developmental age and the clinical venue.
   3. Conduct a comprehensive physical exam that is organized, efficient and technically correct, focusing on organ systems related to the chief complaint.

C. Procedural skills
   1. Describe indications for and potential complications of basic procedures
   2. Demonstrate correct techniques for basic procedures with attention to universal precautions, sterile technique and patient comfort.
   3. Describe indications for and potential complications of commonly performed advanced procedures.

D. Clinical reasoning
   1. Integrate and interpret data from the medical history, patient records, physical exam, and diagnostic procedures to generate a prioritized patient problem list and differential diagnosis.
   2. Formulate plausible explanations for clinical phenomena using probabilistic deduction and application of basic science principles, epidemiology and biostatistics.
   3. Recognize patients who require emergent assessment and management.
   4. Recognize when screening for disease is appropriate.

E. Medical decision making
   1. Initiate diagnostic and management plans with attention to medical evidence, acuity of illness, risk-benefit estimations, patient and/or family preferences, consideration of cost and availability of therapies.
   2. Recognize when consultation is required.
   3. Plan for safe transitions across the care continuum, with attention to health literacy, patient safety, and support systems.
   4. Apply the principles of evidence-based medicine to critique and utilize scientific literature and in clinical decision making.

F. Communication skills
   1. Communicate information honestly, accurately, reliably, empathically, and in a culturally sensitive manner with patients and their families and/or caregivers.
   2. Elicit and respond to patient values, preferences and expectations for health and health care.
   3. Communicate effectively with members of the interprofessional health care team.
   4. Listen actively to patients, their families and/or caregivers, and all members of the health care team.
   5. Effectively educate and counsel patients about plans of care, health promotion and disease prevention, chronic disease management and end-of-life care.

6. Record clinical information and reasoning in the medical record clearly, reliably and accurately.

Competency II: Scientific and Medical Knowledge

Graduates will apply knowledge and analytic abilities to engage in problem solving at multiple levels, from the individual patient to the health care system.

A. Organ structure and function
   1. Apply the principles of anatomy, histology and physiology to describe the interrelated functions of organs and organ systems.
   2. Apply the principles of molecular and cellular biology to describe the basis of tissue specificity.
   3. Apply knowledge of major biochemical pathways to describe normal cell function and metabolism.
   4. Describe the changes that occur to organs and organ systems in development and aging.

B. Characteristics and mechanisms of disease
   1. Explain mechanisms of disease using the principles of molecular biology and genetics.
   2. Describe the structural changes and physiologic alterations that underlie disease states.
   3. Explain how microorganisms interact with the host at cellular, tissue and systems levels to promote homeostasis or cause disease.
   4. Describe the incidence of, prevalence of, and risk factors for major diseases.
   5. Recognize and interpret the clinical manifestations of major diseases.
   6. Develop prognoses based on the natural history of disease and patient presentation.
   7. Explain how genomics is used to predict disease vulnerability and inform management.

C. Healing and therapeutics
   1. Describe the role of the immune system in preventing and responding to disease.
   2. Recognize reparative responses to cell and tissue injury.
   3. Apply the principles of pharmacokinetics and pharmacodynamics to describe the mechanisms of action, clinical utility, adverse effects and interactions of major therapeutic agents.
   4. Select and apply basic pharmacologic and non-pharmacologic approaches to disease and symptom management.

D. Social and cultural determinants of health and disease
   1. Recognize the impact of age, culture, environment, disability, ethnicity/race, gender, sexuality, socioeconomic status and spirituality on health, disease, treatment and prevention.

2. Describe the concept of human rights and its impact on health, disease, treatment and prevention.

E. Health care resources and delivery systems
   1. Describe the global distribution of disease and its impact on the health care needs of communities.
   2. Identify available models of and barriers to organizing, financing and delivering health care to patients and communities.
   3. Describe the U.S. health care system and contrast it with other health care systems
   4. Describe a systems approach to address health care resource needs.
   5. Describe emergency preparedness as related to health care needs.

F. Ethical principles of medical practice and research
   1. Recognize ethical dilemmas in the practice of medicine, health care systems and research.
   2. Recognize the effects of laws and policies on medical practice and health care systems.
   3. Apply the principles of autonomy, beneficence, non-maleficence, and justice to clinical scenarios and to issues of resource allocation.

Competency III: Learning, Scholarship, and Collaboration

Graduates will be inquisitive and reflective learners and practitioners who will think creatively and work effectively and collaboratively with others.

A. Self-awareness and commitment to self-improvement
   1. Identify and critically reflect upon personal strengths, limitations and biases.
   2. Recognize when and how to seek assistance and mentorship.
   3. Actively solicit and incorporate feedback into practice.
   4. Actively seek out self-directed learning opportunities.
   5. Identify resources to support one's own physical and emotional health.
   6. Recognize one's evolving role in patient care, teaching and inquiry.

B. Methods of investigation, analysis and dissemination
   1. Utilize information resources to facilitate learning and to inform patient care.
   2. Formulate questions and generate hypotheses that will drive learning, investigation, discovery and innovation.
   3. Engage in and present scholarly activity relevant to health and disease.

C. Teamwork
   1. Engage actively in group learning and peer and colleague teaching.
   2. Recognize the role and expertise of interprofessional health care team members.
   3. Work effectively as part of an interprofessional patient care team.

Competency IV: Professionalism and Advocacy

Graduates will use their knowledge and skills responsibly to serve the needs of patients and society.

A. Service
1. Demonstrate a concern for the vulnerabilities of patients.
2. Advocate for individual and community access to health care and resources that promote health.
3. Show concern for the basic needs and life circumstances of patients.
4. Demonstrate commitment to the health care needs of communities.

B. Leadership and Accountability
1. Assume responsibility for one's own actions.
2. Identify strategies for effective conflict resolution, negotiation and decision-making.
3. Consistently follow up with learning tasks and patient care.
4. Adhere to institutional and professional standards of medical practice.
5. Recognize and report actual and potential medical errors.
6. Demonstrate a commitment to quality improvement and patient safety.

C. Honesty and Integrity
1. Be honest and ethical in clinical interactions, educational activities, scholarly work and service activities.
2. Accurately represent one's role and capabilities.
3. Recognize potential conflicts of interest.

D. Empathy
1. Demonstrate compassion for the experiences and conditions of patients.
2. Respond to the emotional needs of patients and their caregivers.

E. Respect
1. Acknowledge and protect the dignity of patients.
2. Act in a non-judgmental manner toward patients and caregivers.
3. Ensure the privacy of health information.
4. Conduct oneself in a manner appropriate to the setting and activity.

Appendix 11-C

MS in Health Care Delivery Leadership
Program Courses

MS in Health Care Delivery Leadership Courses

Courses (listed in sequence)	Credit Hours	Delivery Method
1. Gateway Seminar: Critical Themes for Health Care Delivery in the 21st Century	2	In-Person Format
2. The Affordable Care Act	1	Online (100%) Synchronous – asynchronous
3. Navigating Health Care Reform Policy and Politics	2.5	Online (100%) Synchronous – asynchronous
4. Health Care Delivery Economics	2.5	Online (100%) Synchronous – asynchronous
5. Strategy Creation for Health Care Delivery Organizations	2.5	Online (100%) Synchronous – asynchronous
6. Strategic Communications for Health Care Delivery Organizations	2.5	Online (100%) Synchronous – asynchronous
7. Leading and Managing Health Care Delivery Organizations	2.5	Online (100%) Synchronous – asynchronous
8. Leveraging Data for Evidence-Based Decision-Making in Health Care	2.5	Online (100%) Synchronous – asynchronous
9. Seminar 2: Systems, Tools, and Techniques for Improved Health Care Delivery	2	In Person Format
10. Health Information Systems and Technology	2.5	Online (100%) Synchronous – asynchronous
11. Finance Essentials for Health Care Delivery Leadership	2.5	Online (100%) Synchronous – asynchronous
12. Operations Management in Health Care Delivery	2.5	Online (100%) Synchronous – asynchronous
13. Improving Population and Public Health Delivery	2.5	Online (100%) Synchronous – asynchronous
14. Novel Clinical Microsystems	2.5	Online (100%) Synchronous – asynchronous
15. Capstone	2.5	Online (100%) Synchronous – asynchronous

Appendix 11-D

MS in Health Care Delivery Leadership
Program Competencies

MSHCDL Program Competencies

Flowing from these expectations, the program focuses upon the development of the following competencies deemed vital to effective leadership in health care delivery:

<u>**Domain A: Personal Leadership Development**</u>
The program will enable participants to:
1. Build and manage team decision-making
2. Update and improve project leadership skills
3. Lead change management processes
4. Manage conflict
5. Develop cultural competence to serve heterogeneous populations
6. Recognize and analyze the ethical dimensions that arise in the course of health care delivery

<u>**Domain B: Technical and Substantive Knowledge**</u>
The program will provide opportunities for participants to learn how to:
1. Use financial information in strategic decision making
2. Navigate the system of medical reimbursements and payment systems
3. Use economic analyses to understand major market influences and to find organizational cost effectiveness and efficiencies
4. Identify successful models of cost containment that enhance quality service delivery
5. Apply operations management tools/practices towards performance improvement and optimization
6. Apply basic tenets of human resource management to health care delivery problems
7. Appraise the use of evidence-based and leveraged translational science for decision-making in health care delivery
8. Articulate the role of information systems and technologies in improving patient-centered health care delivery
9. Understand the content and likely implications of the Affordable Care Act (ACA) and the nature of the regulatory system
10. Identify potential methods for managing patient growth under ACA
11. Analyze social and behavioral determinants of health
12. Craft potential solutions to the major challenges of public health interventions
13. Apply principles of safety and risk management towards improving health care delivery effectiveness
14. Understand the strengths and limitations of innovations in clinical microsystems

<u>**Domain C: Conceptual Reasoning**</u>
Participants will further develop their abilities to:
1. Understand rationales, theories and political models of health care policy-making
2. Learn strategy creation and implementation methods
3. Learn and apply processes for creating and employing innovation
4. Improve problem-solving skills
5. Enhance knowledge of strategic communication strategies and principles
6. Learn legal perspectives and context about health care delivery issues

Appendix 11-E

MS in Health Care Delivery Leadership Program Evaluation Plan

MSHCDL Program Evaluation Plan (12/30/2013)

Item/Element	Information/Data Source	Review Period	Responsible Parties	Review Targets/ Standards
Program Mission **Program Vision** **Program Goals**	1. Program Business Plan 2. School Strategic Plans 3. Program Competencies	Every 3 years Progress on action steps yearly	Program Administration Dean's Office	Identify gaps & inconsistencies Propose action steps
Enrollment Criteria & Processes	1. Admissions enrollment & graduation data 2. Student surveys 3. Survey of students choosing not to enroll. 4. Academic Performance of enrolled students	Annually	Program Administration Core Faculty Enrollment Management Team	Funnel management goals High student satisfaction 48 hour problem resolution plan of any student issue Year 1: measure student progress against key admission criteria variables
Marketing & Recruitment	1. MarCom ROI & other metrics 2. Funnel metrics from Enrollment Management	Annually	Program Administration Marketing Director/team Enrollment Management team	Inquiry and funnel goals
Program Policies & Procedures	1. Student surveys 2. Faculty review 3. Records of student complaints / grievances	Every 2 years (per cohort)	Program Administration Core Faculty	Establish high satisfaction baseline from students and faculty for Year 1 Close identified gaps and action items
Student Services, including libraries	1. Student surveys 2. Discussions with service units (relevant metrics) 3. Focus group in Seminar #2	Annually	Program Administration Director of Student Services Academic I.T. Director Unit Service	Establish high satisfaction baseline from students and faculty for Year 1

			Directors	
E-learning Management System and Instructional Resources	1. Student survey 2. Faculty input 3. Academic IT input 4. Regulatory: NYSED & Middle States, including student verification processes 5. Call center data 6. Outside peer review	Annually Every 2 years (after 1st cohort)	Program Administration Faculty Academic I.T. Team Student Services Team	Year 1: Identify perceived gaps and satisfaction levels Year 2: Measure program on addressing gaps and related action plans.
Faculty Support & Training	1. Faculty feedback 2. Academic I.T. feedback	Annually	Program Administration Academic I.T. Director & team	Year 1: Identify gaps and satisfaction issues Year 2: Measure program on gap closure and related action plans
T.A. Recruitment, Training and Functions	1. Faculty feedback 2. Academic I.T. feedback	Annually	Program Administration Faculty Academic I.T. Director	Year 1: Identify gaps and satisfaction issues Year 2: Measure program on gap closure and related action plans
Curriculum & Expected Student Learning Outcomes	1. Map program competencies (to courses and specific assessments) 2. Grading/course assessment data (aggregate) of student performance 3. Professional Documents/Standards in health care leadership; expert consultations 4. Student Course Evaluations 5. Comprehensive program survey of graduating students	In initial year and then every 2 years Yearly Formally every 2 years; continual process at course level Every semester In year 2 and then every year thereafter	Program Administration Faculty Advisory Council	Assess relevancy of specific competencies. Identify gaps or problems. 100% of course assessments relate to a competency and learning goal Identify matching and gaps: correct gaps By Year 2: Establish baseline of student satisfaction w/content. Establish baseline metrics Year 1: Establish baseline (desired goal of 90% persistence per year) Validate professional standards &

				competencies
	6. Graduation and persistence rates			
	7. Alumni assessment: 1 & 3 years post-graduation	In year 2 and then every year thereafter		Validate professional standards & competencies
	8. Advisory Council	Yearly		
Residency Seminars	1. Student survey	Once per residency session	Program Administration	
	2. Faculty feedback			
Faculty	1. Annual performance evaluations	Annual (for the year in which course is taught)	Program Administration	Faculty performance meets or exceeds expectations of program and course learning goals.
	2. Student evaluations		Department of Population Health Science and Policy	
	3. Program goals	Each course		
	4. Course learning goals			

Appendix 13-A

Standard 13 Fundamental Elements Grid

APPENDIX 13-A
COMPLIANCE WITH FUNDAMENTAL ELEMENTS
STANDARD 13 – RELATED EDUCATIONAL ACTIVITIES

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
An accredited institution is expected to possess or demonstrate the following attributes or activities:	
➢ Distance learning offerings (including those offered via accelerated or self-paced time formats) that meet institution-wide standards for quality of instruction, articulated expectations of student learning, academic rigor, and educational effectiveness. If the institution provides parallel on-site offerings, the same institution-wide standards should apply to both	• ISMMS's first distance learning program meets institutional rigor and quality expectations as evidenced in the description of the program (Page 72, Standard 11), the plan for assessment of student learning (Appendix 14-B, Standard 14) and the overall Program Evaluation Plan (Appendix 11-D, Standard 11)
➢ Consistency of the offerings via distance learning with the institution's mission and goals, and the rationale for the distance learning delivery	• Page 78 (Standard 13) – There is mission congruence of the MSHCDL program to the institution's multi-faceted mission statement. • See Maguire market research presentation in Document Room for market validation study of distance format
➢ Planning that includes consideration of applicable legal and regulatory requirements	• Page 81 (Standard 13) and Appendix 11-C (Standard 11) – The program is in compliance with all legal and regulatory requirements.
➢ Demonstrated program coherence, including stated program learning outcomes appropriate to the rigor and breadth of the degree or certificate awarded	• ISMMS's first distance learning program meets institutional rigor and quality expectations as evidenced in the description of the program (Page 72, Standard 11), the plan for assessment of student learning (Appendix 14-B, Standard 14) and the overall Program Evaluation Plan (Appendix 11-E, Standard 11)
➢ Demonstrated commitment to	• The committed program schedule for the current cohort is posted online at

continuation of offerings for a period sufficient to enable admitted students to complete the degree or certificate in a publicized time frame	http://icahn.mssm.edu/education/graduate/masters-programs/health-care-delivery/curriculum/course-schedule
➢ Assurance that arrangements with consortial partners or contractors do not compromise the integrity of the institution or of the educational offerings	• N/A
➢ Validation by faculty of any course materials or technology-based resources developed outside the institution	• Appendix 11-E (Standard 11) – The Program Evaluation Plan identifies area of direct faculty input on program substance and technology resources.
➢ A system of student identify verification that ensures that the student who participates in class or coursework is the same student who registers and receives academic credit; that students are notified at the time of registration or enrollment of any additional student charges associated with the verification of student identity; and that the identity verification process protects student privacy	• Page 81 (Standard 13) – A comprehensive process for verifying student identity upon matriculation and throughout the required curriculum is in place. There are no fees associated with identity verification.
➢ Available, accessible, and adequate learning resources (such as a library or other information resources) appropriate to the offerings at a distance	• Pages 79-80 (Standard 13) – Students enrolled in the MSHCDL program have access to the same services and learning resources available to students in the School's other programs.
➢ An ongoing program of appropriate orientation, training, and support for faculty participating in electronically delivered offerings	• Page 80 (Standard 13) – Faculty support services such as administrative staff and training are easily accessible.
➢ Adequate technical and physical plant facilities, including appropriate staffing and technical assistance, to support	• Pages 79-80 (Standard 13) – A significant investment in staff, student and learning resources were made to ensure the success of the School's first distance learning program.

electronic offerings	
➢ Periodic assessment of the impact of distance learning on the institution's resources (human, fiscal, physical, etc.) and its ability to fulfill its institutional mission and goals	• Page 80 (Standard 13) – The School's annual budget process allows for the periodic assessment of resource availability • Appendix 11-E (Standard 11) – The Program Evaluation Plan includes an annual resource assessment

Appendix 14-A

Standard 14 Fundamental Elements Grid

COMPLIANCE WITH FUNDAMENTAL ELEMENTS
STANDARD 14 – ASSESSMENT OF STUDENT LEARNING

FUNDAMENTAL ELEMENT	EXAMPLES OF COMPLIANCE WITH THIS FUNDAMENTAL ELEMENT
An accredited institution is expected to possess or demonstrate the following attributes or activities:	
➢ clearly articulated statements of expected student learning outcomes (see Standard 11: Educational Offerings), at all levels (institution, degree/program, course) and for all programs that aim to foster student learning and development, that are:	• Appendix 14-B (Standard 14) – The first column of this Appendix lists learning goals associated with each of ISMMS's degree granting programs.
o appropriately integrated with one another;	• Appendix 14-B (Standard 14)
o consonant with the institution's mission; and	• Page 66 (Standard 11) – Each degree-granting program articulates student learning outcomes that are compatible with one or more components of the School's mission. • Appendix 14-B
o consonant with the standards of higher education and of the relevant disciplines;	• Several degree granting programs are also required to meet their respective professional accreditation organization requirements (Page 82 – LCME; Page 88 – CEPH; Page 91 – ACGC).
➢ a documented, organized, and sustained assessment process to evaluate and improve student learning that meets the following criteria:	• Appendix 14-B (Standard 14) – The third column of this Appendix describes the assessment or monitoring methods used for each degree granting program's learning goals.
o systematic, sustained, and thorough use of multiple qualitative and/or quantitative measures that:	• Appendix 14-B (Standard 14) (Indirect assessments methods are shown in italics)
• maximize the use of existing data and information;	
• clearly and purposefully relate	

to the goals they are assessing;	
• are of sufficient quality that results can be used with confidence to inform decisions; and	
• include direct evidence of student learning;	
o support and collaboration of faculty and administration in assessing student learning and responding to assessment results;	• Page 60-61 (Standard 10) – Faculty expectations in the MD program are articulated in their Job Descriptions (Appendix 14-B) and in their participation on the Curriculum Steering Committee where the assessment of student learning is reviewed as part of the overall program evaluation.
o clear, realistic guidelines and timetable, supported by appropriate investment of institutional resources;	• Page 52 (Standard 9) – The Office of Enrollment Services as well as the administrative staff for Medical Education and the Graduate School provide comprehensive support to all students. • Page 53 (Standard 9) – ISMMS has invested in technology services and learning support. • Appendix 14-C (Standard 14) – Academic Program Timelines for each degree-granting program.
o sufficient simplicity, practicality, detail, and ownership to be sustainable; and	• Appendix 14-B (Standard 14) Demonstrates straightforward and clear methods of assessment.
o periodic evaluation of the effectiveness and comprehensiveness of the institution's student learning assessment processes;	• Page 85 (Standard 14) – The overall assessment process is coordinated by the Director for Assessment and Evaluation and continually reviewed by the program's Dean and the Associate and Assistant Deans. Program administration reviews assessment methods in the course of periodic self-studies. • Page 90 (Standard 14) – The methods for assessment of student learning are continually reviewed for their relevance and utility at multiple levels, including the Curriculum Committee, program administration, and external accreditors.
➢ assessment results that provide sufficient, convincing evidence that students are achieving key institutional and program learning outcomes;	• Appendix 14-B (Standard 14) – The fourth column of this Appendix describes the results that demonstrate learning goals are being achieved.

➢ evidence that student learning assessment information is shared and discussed with appropriate constituents and is used to improve teaching and learning; and	• Appendix 14-B (Standard 14) – The fifth column of this Appendix describes how each degree granting program uses assessment results to further improve teaching and learning.
➢ documented use of student learning assessment information as part of institutional assessment.	• Page 38-39 (Standard 7) – Program success, student learning and performance assessment are considered in assessing the overall performance of the institution. • Page 78 (Standard 13) – Assessment of student learning is included as part of the evaluation of educational program effectiveness.

Appendix 14-B

Summary of Student Assessment Policies and Methods

Summary of Student Assessment Policies and Methods

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
MD Program				
I. Patient Care Graduates will reliably obtain and interpret clinical data, propose a prioritized management plan, and communicate effectively with patients, families, colleagues and staff. • History Taking • Physical Examination • Procedural Skills • Clinical Reasoning • Medical Decision Making • Communication Skills	• Small group discussions (by physicians and inter-professional educators) • Large group discussions • Lectures • Case- based problem solving exercises • Bedside rounds • Mock morning report • Evidence-based medicine training • Computer-based learning modules (radiology) • Standardized patient (SP) encounters • Direct patient care experiences as part of the health care team • Longitudinal patient experiences • Longitudinal integrated clerkship for select students in 3rd year • Simulation exercises • Basic Life Support training	• Preceptor assessment of small group participation • Faculty and house staff evaluation of clinical performance • Direct observation by residents and faculty • MCQ exams • Oral examination • Oral case presentations • Faculty review of EHR student notes • Faculty review of case write ups • Standardized Patient evaluation in 1st year of medical school (Art and Science of Medicine) • Standardized Patient evaluations (COMPASS I) in 2nd year of medical school • Standardized Patient evaluations (COMPASS II) in 3rd year of medical school • USMLE step 2 CS and	• 2014 Step 2CS pass rate = 94%, USMLE benchmark= 94% • 2014 Step 2CK pass rate = 100%, USMLE benchmark = 97% • There is a less than 1% fail rate across courses and clerkships • 62% of students participate in EHHOP	• Clinical performance is tracked over the course of four years. If there are any concerns about student performance, course and clerkship directors provide students with feedback. They also raise the issue to the Office of Student Affairs. • The Office of Student Affairs has a centralized process of forward feeding students in serious academic status on an as-needed basis to courses and clerkship directors to ensure that students get the support they require. Centralization of the process ensures privacy of student information. • Clerkship Director's review PxDx results midway through each clerkship and work to ensure learning of key

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
	• Patient care at EHHOP (student run free clinic)	CK • Medical Student Performance Evaluation (MSPE) • PxDx electronic tracking of completion of directly observed and supervised skills and exposure to key diagnoses during clerkships		areas for every student.
II. Scientific and Medical Knowledge Graduates will apply knowledge and analytic abilities to engage in problem solving at multiple levels, from the individual patient to the health care system. • Organ structure and function • Characteristics and mechanisms of disease • Healing and therapeutics • Social and cultural determinants of health and disease • Health care resources and delivery systems • Ethical principles of medical practice and research	• Small group discussions (by physicians and inter-professional educators) • Large group discussions • Lectures • Case- based problem solving exercises • Evidence-based medicine training • Standardized patient (SP) encounters • Direct patient experiences as part of a health care team • Longitudinal patient experiences • Simulation exercises • Personalized data interpretation (Molecular, Cellular and Genomic Foundations) • Frontiers in Science	• Preceptor assessment of small group participation • Faculty and house staff evaluation of clinical performance • Direct observation by residents and faculty • MCQ exams • Oral presentations/table conferences • Faculty review of evidence-based medicine write-up • Faculty review of ethics write-up • Standardized Patient evaluation in 1st year of medical school (Art and Science of Medicine) • Standardized Patient evaluations (COMPASS I) in 2nd year of medical	• 2014 Step 1 pass rate = 99%, USMLE benchmark = 96% • 2014 Step 2CK pass rate = 100%, USMLE benchmark = 97% • There is a less than 1% fail rate across courses and clerkships • 38% of students report they participated in an extra-curricular or elective Global Health activity (2014 Graduating Class survey) • 62% of students participate in EHHOP	• Academic performance is tracked over the course of four years. Students with multiple marginal passes or failures are monitored by the Office of Student Affairs. • The Office of Student Affairs has a centralized process of forward feeding students in serious academic status on an as needed basis to courses and clerkship directors to ensure that students get the support they require. Centralization of the process ensures privacy of student information. • Lowest 10% of students in Compass II are required to perform remediation. A remediation committee

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
	presentations • Team based learning (Structures and Art and Science of Medicine courses) • Health policy didactics • EHHOP (student run free clinic) patient encounters and community engagement (in health fairs, community walking tours, etc.) • Online HIPAA training • CITI training on human subjects research • InFocus curriculum has evidence-based medicine exposure	school • Standardized Patient evaluations (COMPASS II) in 3rd year of medical school • USMLE step 2 CS and CK • HIPAA training MCQ exam • CITI training MCQ exam • *Graduation survey (self-assessment)* • Medical Student Performance Evaluation (MSPE)		decides the level of remediation which may include peer tutors, faculty and outside resources.
<u>III. Learning, Scholarship, and Collaboration</u> Graduates will be inquisitive and reflective learners and practitioners who will think creatively and work effectively and collaboratively with others. • Self-awareness and commitment to self-improvement • Methods of investigation, analysis and dissemination • Teamwork	• Independent scholarly research project with mentorship • Small group discussions • Case based seminars • Team based learning (Structures and Art and Science of Medicine) • Journal clubs • Protected time (Flextime) for self-directed learning • Required training on	• Preceptor assessment of small group participation • Students reflections about their clinical experiences • Mentor feedback • Faculty advisor feedback • Milestone tracking throughout four years • *Graduation survey (self-assessment)* • Peer review of applications for DIME • Online quizzes	• Distinction in Medical Education (DIME) graduation recipients (7 in 2014) • Distinction in Research graduation recipients (30 in 2014) • 69% of students who report they have published based on their research during medical school also report a first author manuscript based on that	• Students have multiple levels of mentoring and advising which provide oversight and support. • Students are required to meet with their Faculty Advisor annually to ensure they are on track and reflecting on next steps for personal and professional development. • For scholarship, oversight is provided by the

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
	PubMed, EndNote and select core clinical databases • Required annual meeting with faculty advisor; prior to each meeting there is a self-reflection activity • InFocus curriculum has research, career development and professional development themes		research (2014 Graduating Class survey)	Associate Dean for Medical Student Research, track advisors, and project mentors. Each student is assigned a track advisor who will help her/him select a research mentor; offer feedback on the project; and follow his/her progress. • There are faculty advisors who provide oversight and guidance for those students who lead or participate in a student group, student elective, EHHOP, etc.
IV. Professionalism and Advocacy Graduates will use their knowledge and skills responsibly to serve the needs of patients and society • Service • Leadership and Accountability • Honesty and Integrity • Empathy • Respect	• First year students develop their class's student oath for White Coat ceremony - Large group activity • The White Coat Ceremony where students publicly affirm their adherence to ethical/professional standards • Gold Humanism Society induction for 3rd year students – peer nominated • Honor code inclusion in	• Preceptor assessment of small group participation • Faculty and house staff evaluation of clinical performance • Critical Incident Reports for laudable and unacceptable behaviors • *Graduation survey (self-assessment)* • Medical Student Performance Evaluation (MSPE)	• 18% of the graduating class receive AOA honors • 18% of the class receive Gold Humanism honors • 85% of graduating students report that they participated in one or more service learning projects (2014 Graduating Class survey) • ~25% of the medical student population participate as peer tutors and teaching assistants • 15 Senior Tutors	• Faculty, members of the inter-professional team, and administrators/staff assess our students' professionalism and provide us with feedback on deficiencies. • Issues are raised to the Office of Student Affairs which tracks the assessments. If a pattern is identified, the Student Affairs team will plan an intervention. Interventions include but are not limited to: meeting

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
	all exams • Faculty role modeling and guidelines for focused feedback in small group and team activities • HIPAA training • Conflict of Interest annual disclosure • Student participation in the free community student-led clinic (EHHOP) • Robust student council with participation in school and institutional committees • Ethics integrated into Art and Science of Medicine, clerkships and COMPASS II • Didactic and small group sessions on professionalism • Disaster preparedness training for class representatives • Student led community service groups • InFocus curriculum has community health, social justice, human		(scholarly year, 4th year and MD/PhD students) provide advanced tutoring • 22 students/year (~16%) are clerkship representatives • 30 students/year (~21%) are course representatives • ~100 students (~25%) volunteered after disasters at Mount Sinai and within the community	with Faculty Advisor to discuss issue, meeting with Dean of Student Affairs, meeting with the faculty member that identified the issue. An action plan is developed to help students understand and remediate the problem(s). • In cases where the professionalism breach is considered egregious, the student will go before the promotions committee.

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
	rights and advocacy themes.			
PhD in Biomedical Sciences, PhD in Neuroscience, and MS in Biomedical Sciences Programs				
Graduates will possess a strong scientific foundation through an understanding of key concepts and techniques in biomedical science and neuroscience	- Core Curriculum and Elective courses - Lectures - Small group discussions - Problem solving sessions - Journal Clubs - Mentoring with Program Director and Research Advisor	- Faculty developed written exams - Final paper - Problem sets - Oral presentations - Faculty evaluation - General knowledge exam (**PhD Only**) - Thesis Proposal exam (**PhD Only**) - Thesis or Dissertation Defense	- All students are expected to complete the core curriculum with a grade of B or better. - All students are expected to complete all coursework with a cumulative GPA of 3.0 or higher. - All students complete a General Knowledge exam before the end of their 3rd semester in the PhD program (**PhD Only**). - In the last 6 years, 10% of students failed to meet the minimum grade requirement in the core curriculum. Fifty percent of students who failed successfully completed a remediation plan while the remainder either withdrew or were dismissed from the program.	- Students are monitored constantly during courses. Students who struggle meet with the course director for extra help from the Course Director and/or the course TA. In several courses, they are also offered peer-tutoring. - Those students who fail to meet any of these academic standards are reviewed by the Committee for Academic Review (CAR). CAR can take several actions including, developing a remediation plan, designating the student as on academic monitoring status (e.g. academic probation) and/or dismissal from the program. - Students are generally given a remediation plan and placed on academic probation. Students who successfully complete

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
				• remediation are taken off academic probation and continue towards their degree. • Those who fail to successfully complete the remediation plan are dismissed from the program.
Graduates will sharpen scientific and analytic approaches to research through critical evaluation of published research	• Journal clubs • Thesis proposal (**PhD Only**) • Laboratory meetings • Rotation Presentations • Work-in-Progress Seminars • Workshops/tutorials on PubMed and Web of Science	• Faculty evaluation • One-on-one mentoring with research advisor • Written thesis proposal and oral exam (**PhD Only**) • Faculty developed quizzes • Faculty evaluations, mentoring, and committee meetings provide both summative and formative feedback to students regarding all aspects of the students training, including feedback on their mastery of the literature and analysis and interpretation of their own data as well as the data of others. • Meeting with research mentors is on a frequent ongoing basis, while	• All students are expected to complete all coursework with a cumulative GPA of 3.0 or higher. • Students are expected to present at least 1-journal article each semester and show steady improvement in presentation skills over time. • Each student is given a passing or failing grade on his/her Thesis Proposal exam. Each student must pass this exercise before he/she can move on to full-time pursuit of dissertation research. • At regularly scheduled committee meetings, students must show satisfactory progress on the research project and	• Students who do not show improving skill in oral presentations are required to participate in Journal Clubs beyond the Thesis Proposal Exam. • Students who do not receive a passing grade on the Thesis Proposal exam are required to retake the exam. They are mentored throughout the re-examination preparation process by their primary research advisor. If a student fails a second time he/she is presented to CAR and will likely be dismissed from the program. • Students who do not show satisfactory progress during any stage of the educational process are

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Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
		committee meetings occur at least twice per year for PhD students and at least twice for the MSBS students.	towards completing their degree. Students are given a written evaluation at the end of each committee meeting. • While it is not unusual that student don't always make satisfactory progress at each periodic committee meeting, all successfully remediate such deficiencies and quickly get back on track. In the last six years, no students have been dismissed for failing to miss this learning objective.	first advised by their committee and/or research advisor of their failure to meet expectations and instructed on a course of action needed to rectify the deficiency. Failure to make satisfactory progress at two or more committee meetings results in a referral of the student to CAR for a full review. CAR can take several actions including, developing further remediation, designating the student as on academic monitoring status (e.g. academic probation) and/or dismissal from the program.
Graduates will use the scientific method to pursue hypothesis-driven basic science research	• Lab rotations (**PhD Only**) • Thesis proposal (**PhD Only**) • Research Rotation Presentation (**PhD Only**) • Research Presentation (**MSBS Only**) • Dissertation (**PhD Only**)/Thesis (**MSBS**	• Oral laboratory rotation (**PhD Only**) or research (**MSBS Only**) presentations and written faculty evaluations • Written thesis proposal and oral exam. Students receive feedback from the committee at the end of the oral exam and then continued feedback from	• It is expected that the majority of students will meet this objective. The students receive regular feedback on their development in this area from a number of sources. Constant redirection and refinement occurs through the mentoring process. • While students regularly	• Students are given ample opportunity to remediate this skill-set through constant mentoring by their research mentors. If a student is unable to make satisfactory progress in this area, he/she would meet with the Program Director for additional advising and guidance. If

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Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
	Only) • Committee Meetings	the research advisor. Faculty and Program Director evaluation. One-on-one meeting with Program Director for summative and formative feedback. These meetings occur at least once per year. • One-on-one mentoring from research advisor. These meetings are ongoing and occur on a regular basis. • Advisory committee meetings. All PhD students meet twice a year with their advisory committee and MSBS students meet at least twice with their thesis committee during the 3-semester program. PhD and MSBS students are provided with both oral and written evaluations • Written thesis and oral presentation/defense. The written document is read by all committee members and written commentary is provided. Students are given immediate feedback	must rewrite portions of their Thesis Exam document, rarely do they fail the oral defense. In the last 10 years, only two students have failed the oral defense, and consequently been dismissed from the program, following remediation efforts.	satisfactory progress is still not met, the student would be referred to CAR for a comprehensive review of performance. CAR can take several actions including, developing further remediation, designating the student as on academic monitoring status (e.g. academic probation) and/or dismissal from the program.

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		 • on the oral exam. • *Funding of grants, publication of manuscripts*		
Graduates will communicate complex scientific information clearly and effectively	• Mini-symposia • Training area Journal clubs • Works-in-Progress seminars • Thesis presentation • National meetings • Laboratory meeting • Training Area Research Retreat presentations • Publication record • Grant writing workshop	• Faculty evaluation • *Peer-review* • *Success in receiving grant awards and peer reviewed publications* • Defense of dissertation (PhD students) or thesis (MSBS students)	• All students must demonstrate competency in this area in order to graduate. • We have not dismissed a student for failing to show competency in this area.	• Students who fail to meet this competency are identified early because of the large number of presentations that are given by our graduate students. This is quickly remediated and brought up to a satisfactory level.
Graduates will be responsible and professional scientists with the ability to function as a member of a collaborative and/or interdisciplinary team	• Course Lectures • Small Group Discussions • Role playing	• Pre and post evaluations • Faculty evaluations • Written progress reports • Advisory committee meetings. All PhD students meet twice a year with their advisory committee and MSBS students meet at least twice with their thesis committee during the 3-semester program. PhD and MSBS students are provided with both oral and written evaluations	• All students are graded on a Pass/Fail basis in "Responsible Conduct of Research" in order to continue in the training program. • All students are expected to maintain professional standards in all elements of their academic and scholarly work. • The most common reason students are brought before CAR for possible disciplinary actions is plagiarism. Since 2009,	• Students who do not receive a passing grade in "Responsible Conduct of Research", are given an opportunity to remediate deficiencies. Remediation plans are developed individually for each student. • Students whose mentor or advisory committee identifies deficiencies in this area must complete a remediation plan developed for the student by the mentor/committee.

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			three students were presented to CAR for plagiarism. Of these, two were dismissed and one withdrew voluntarily.)	• Students who have repeated low-level deficiencies or those with a substantial breech of professionalism are reviewed by CAR. CAR can take several actions including, developing further remediation, designating the student as on academic monitoring status (e.g. academic probation) and/or dismissal from the program.
Graduates will be successful, professional scientists who become leaders in a broad spectrum of industries including academic research, biotechnology and pharmaceutical industries, policy, education and finance.	• Professional development seminars • Attendance at Career fairs, Retreats, Scientific Meetings • Graduate School Career Seminars • Individual Development Plan • Mentoring by dissertation advisor	• Faculty evaluation • Alumni surveys	• Time to graduation. At the time of the last Self-Study, the average time to complete the PhD was 5.7 years. Through efforts in the Graduate School to facilitate students' completion, the average time to degree has been reduced to 5.5 years. The average time to completion for MSBS students is 1.7 years. • We aim to place all of our graduates in jobs or postdoctoral training.	• In the past 2-3 years the Graduate School has added several programs to aid in job placement. These include: ➤ Training area called Design, Technology, and Entrepreneurship that aims to provide business and entrepreneurship training to our students. ➤ Individual Development Plan – all MSBS and PhD students now participate in a

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				multistep IDP mentoring process that helps them shape their educational plan to better meet their career objectives and to provide job placement networking. ➢ Internships in business – we are developing a growing list of partners who provide internship and job opportunities for our students. Job sectors now available include finance, consulting, venture capital, and computer/computational science.
Embrace greater diversity in our trainees to bring new ways of innovative thinking to the biomedical disciplines.	• Students for Equal Opportunity In Science • MedStart • Sinai Neuroscience Outreach Program • Women in Science Program • Women in Science and Medicine (WISM) • American Medical			

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	Women's Association (AMWA) • Sinai Consulting Interest Group • Mount Sinai Biotech Association			
Graduates will understand the importance of translating basic science discovery into innovative solutions for improving human health.	• Lectures • Small Group Discussions • Problem Solving Sessions • Journal Clubs • Projects • Competitions	• Faculty developed exams • Project submissions • Oral presentations • Slides • Competition outcomes	• Students incorporating ideas of entrepreneurship in their lab work • Submission of patents • Entrance in competitions • Startup companies	
MD/PhD Program Only: Graduates will uniquely apply a bench-to-bedside approach to medicine by developing a simultaneous and intense understanding of both the basic science foundations and clinical nuances of disease with the ultimate goal of driving truly innovative approaches to treating human disease.	• Lectures • Problem Solving Sessions • Small Group Discussions Journal Clubs • Seminars	• Faculty developed exams • Problem sets • Oral presentations • Discussions • Direct assessment by dissertation advisor		• Over the last two years, the School has begun to directly and systematically build content and assessment specifically designed for MD/PhD dual degree candidates. The outcomes for these students are distinct from those of either the PhD or MD degrees alone and we have begun to distinguish them in our curricula and assessments. An example of this development is the new Graduate School Core Curriculum for

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				MD/PhD students. This new course combines the foundational knowledge for graduate studies interwoven with related medical knowledge and clinical problem solving. MD/PhD students take this new course in lieu of the Graduate School Biomedical Sciences Core and the Medical School Molecules, Cells, and Genes course. Over the next 1-3 years, we will continue to build unique curricula and assessments for MD/PhD students and develop analogous systems for other dual-degree programs.
Master of Public Health Program				
Graduates will understand the factors affecting the health of a community (e.g., equity, income, education, environment)	• Lectures/small group discussions • Practicum Experience • Culminating experience (Master's Thesis or Capstone)	• Faculty developed written examinations • Final papers • In-class presentations • Culminating experience oral presentation • Practicum proposal and postscript reports • Practicum Preceptor Evaluation	• All students will successfully complete coursework in each of the five core areas of public health knowledge, including epidemiology, biostatistics, environmental health, health policy or management, and socio-	• Students whose GPA falls below 3.0 will be placed on academic probation by the Academic Advisory committee. Students will have up to one year to improve their GPA or will otherwise face dismissal from the program. • The Academic Advisory

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		- Competency Surveys - Course evaluations	behavioral health. • All graduating students will successfully complete a mentored culminating experience, a master's thesis or capstone project, which requires both a written and oral component that is evaluated by both an advisor and second reader. • All students maintain a 3.0 average GPA to remain in good academic standing in the program. • Quarterly review of academic transcripts by the Academic Program Office and Chair of the Academic Advisory Committee. • Quarterly review of course evaluations by the Curriculum Committee.	Committee meets regularly to monitor the status of students on academic probation. • The curriculum committee makes any necessary recommendations to the course director or program administration based on feedback form the course evaluations.
Graduates will understand the behavioral determinants of contemporary public health problems, and apply behavioral theories to the development and implementation of policies and programs.	- Lectures/small group discussions - Practicum Experience - Culminating experience (Master's Thesis or Capstone)	- Faculty developed written examinations - Final papers - In-class presentations - Culminating experience written and oral evaluation - Practicum proposal and	- All students are required to successfully complete a course in socio-behavioral health. - All students successfully complete a 150-hour planned, mentored and evaluated practicum	The practicum preceptor evaluations are reviewed by the academic program office to monitor learning experience and to incorporate student feedback for future placement site planning.

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		postscript reports • Practicum Preceptor Evaluation • Annual Competency Surveys • Course evaluations	experience in the field where application of theory is evaluated. • Quarterly review of academic transcripts by the Academic Program Office and Chair of the Academic Advisory Committee. • Quarterly review of course evaluations by the Curriculum Committee.	
Graduates will understand the impact of social, political, economic, and cultural forces on the development and implementation of health policies and programs.	• Lectures/small group discussions • Practicum Experience • Culminating experience (Master's Thesis or Capstone)	• Faculty developed written examinations • Final papers • In-class presentations • Culminating experience written and oral evaluation • Practicum proposal and postscript reports • Practicum Preceptor Evaluation • Annual Competency Surveys • Course evaluations	• All students are required to successfully complete a course in health policy or health care management. • All students successfully complete a 150-hour planned, mentored and evaluated practicum experience in the field where application of theory is evaluated. • Quarterly review of academic transcripts by the Academic Program Office and Chair of the Academic Advisory Committee. • Quarterly review of course evaluations by the Curriculum Committee.	Students whose GPA falls below 3.0 will be placed on academic probation by the Academic Advisory committee. Students will have up to one year to improve their GPA or will otherwise face dismissal from the program. The Academic Advisory Committee meets regularly to monitor the status of students on academic probation.

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Graduates will be prepared to critically evaluate the influence of behavioral, social, cultural, political, economic, environmental factors on the initiation and persistence of health disparities within communities both locally and globally.	• Lectures/small group discussions • Practicum Experience • Culminating experience (Master's Thesis or Capstone)	• Faculty developed written examinations • Final papers • Multiple-choice exams • In-class presentations • Culminating experience written and oral evaluation • Practicum proposal and postscript reports • Practicum Preceptor Evaluation • Annual Competency Surveys • Course evaluations	All students will successfully complete coursework in each of the five core areas of public health knowledge, including epidemiology, biostatistics, environmental health, health policy or management, and socio-behavioral health. • Quarterly review of academic transcripts by the Academic Program Office and Chair of the Academic Advisory Committee. • Quarterly review of course evaluations by the Curriculum Committee.	The curriculum committee makes any necessary recommendation to the course director or program administration based on feedback form the course evaluations.
Graduates will understand how population exposures to environmental risk factors interfere with human biological systems to produce disease in communities	• Lectures/small group discussions • Practicum Experience • Culminating experience (Master's Thesis or Capstone)	• Faculty developed written examinations • Multiple-choice exams • Final papers • In-class presentations • Culminating experience written and oral evaluation • Practicum proposal and postscript reports • Practicum Preceptor Evaluation • Annual Competency Surveys • Course evaluations	• All students are required to successfully complete a course in environmental health or occupational medicine, MPH0500. • 80% of students will achieve a 3.0 (B) grade in MPH0500. • Quarterly review of academic transcripts by the Academic Program Office and Chair of the Academic Advisory Committee. • Quarterly review of	Students whose GPA falls below 3.0 will be placed on academic probation by the Academic Advisory committee. Students will have up to one year to improve their GPA or will otherwise face dismissal from the program. The Academic Advisory Committee meets regularly to monitor the status of students on academic probation. The curriculum committee makes any necessary

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			course evaluations by the Curriculum Committee.	recommendation to the course director or program administration based on feedback form the course evaluations.
Graduates will be prepared to utilize descriptive and inferential statistical methods to critically evaluate and interpret scientific evidence from public health reports and published studies	- Lectures - Small group activities - Lab sessions - Practicum Experience - Culminating experience (Master's Thesis or Capstone)	- Faculty developed written examinations - Problem-sets - Lab exercises - Culminating experience written and oral evaluation - Practicum proposal and postscript reports - Practicum Preceptor Evaluation - Annual Competency Surveys - Course evaluations	- All students are required to successfully complete a course in biostatistics, either MPH0300 or MPH0800. 80% of students will achieve a 3.0 (B) grade in MPH0300 or MPH0800. - All graduating students will successfully complete a mentored culminating experience, a master's thesis or capstone project, which requires students to evaluate and interpret evidence they present. - Quarterly review of academic transcripts by the Academic Program Office and Chair of the Academic Advisory Committee. - Quarterly review of course evaluations by the Curriculum Committee.	Students whose GPA falls below 3.0 will be placed on academic probation by the Academic Advisory committee. Students will have up to one year to improve their GPA or will otherwise face dismissal from the program. The Academic Advisory Committee meets regularly to monitor the status of students on academic probation. The curriculum committee makes any necessary recommendation to the course director or program administration based on feedback form the course evaluations.

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Graduates will be prepared to apply epidemiological methods to reveal casual associations between risk factors and disease and to measure and describe patterns of disease occurrence in populations.	• Lectures • Small group activities • Lab sessions • Practicum Experience • Culminating experience (Master's Thesis or Capstone)	• Faculty developed written examinations • Multiple-choice exams • Problem-sets • Final papers • In-class presentations • Culminating experience written and oral evaluation • Practicum proposal and postscript reports • Practicum Preceptor Evaluation • Annual Competency Surveys • Course evaluations	• All students are required to successfully complete a course in epidemiology, MPH0400. • 80% of students will achieve a 3.0 (B) grade in MPH0400. • All graduating students will successfully complete a mentored culminating experience, a master's thesis or capstone project, which requires students to apply epidemiologic study design. • Quarterly review of academic transcripts by the Academic Program Office and Chair of the Academic Advisory Committee. • Quarterly review of course evaluations by the Curriculum Committee.	Students whose GPA falls below 3.0 will be placed on academic probation by the Academic Advisory committee. Students will have up to one year to improve their GPA or will otherwise face dismissal from the program. The Academic Advisory Committee meets regularly to monitor the status of students on academic probation. The curriculum committee makes any necessary recommendations to the course director or program administration based on feedback form the course evaluations.
Graduates will be prepared to analyze the validity and reliability of data.	• Lectures • Small group activities • Lab sessions • Practicum Experience • Culminating experience (Master's Thesis or Capstone)	• Faculty developed written examinations • Lab exercises • Data Analysis • Problem-sets • Culminating experience written and oral evaluation	• All students are required to successfully complete a course in epidemiology and biostatistics. • 80% of students will achieve a 3.0 (B) grade in both MPH0300/MPH0800 and MPH0400.	Students whose GPA falls below 3.0 will be placed on academic probation by the Academic Advisory committee. Students will have up to one year to improve their GPA or will otherwise face dismissal from the program.

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		- Practicum proposal and postscript reports - Practicum Preceptor Evaluation - Annual Competency Surveys - Course evaluations	- All graduating students will successfully complete a mentored culminating experience, a master's thesis or capstone project, which requires students to analyze validity and reliability of data. - Successful completion of culminating experience requires both a written and oral component and is evaluated by both the advisor, second reader, and approved by specialty track advisor and program director. - Annual review of competency surveys by the Curriculum committee.	The Academic Advisory Committee meets regularly to monitor the status of students on academic probation. The Curriculum Committee reviews the annual competency surveys to assess student learning. Modifications to courses and learning objectives are made in order to achieve program competencies.
Graduates will be prepared to clearly articulate a public health issue and formulate relevant research questions.	- Culminating experience (Master's Thesis or Capstone) - Thesis workshop - Capstone seminars	- Final paper - Culminating experience oral presentation - Practicum proposal and postscript reports - Practicum Preceptor Evaluation - Annual Competency Surveys - Course evaluations	- All graduating students will successfully complete a mentored culminating experience, a master's thesis or capstone project which requires students to formulate a research question. - Successful completion of culminating experience requires both a written and oral component and is	The Curriculum Committee reviews the annual competency surveys to assess student learning. Modifications to courses and learning objectives are made in order to achieve program competencies.

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			evaluated by both the advisor, second reader, and approved by specialty track advisor and program director. • Annual review of competency surveys by the Curriculum committee.	
Graduates will be prepared to apply ethical principles in accessing, collecting, analyzing, using, maintaining, and disseminating data and information.	• Lectures/small group discussions • Practicum Experience • Culminating experience (Master's Thesis or Capstone)	• Culminating experience oral presentation • Practicum proposal and postscript reports • Practicum Preceptor Evaluation • Annual Competency Surveys • Course evaluations	• All graduating students will successfully complete a mentored culminating experience, a master's thesis or capstone project, which requires students to apply ethical principles. • Annual review of competency surveys by the Curriculum committee.	The Curriculum Committee reviews the annual competency surveys to assess student learning. Modifications to courses and learning objectives are made in order to achieve program competencies.
Graduates will be prepared to demonstrate effective written and oral skills for communicating with a wide range of audiences and in a variety of public health practice settings	• Lectures • Practicum Experience • Culminating experience (Master's Thesis or Capstone) • Thesis or Capstone oral presentations	• Culminating experience oral presentation • Practicum proposal and postscript reports • Practicum Preceptor Evaluation • Annual Competency Surveys • Course evaluations	• All graduating students will successfully complete a mentored culminating experience, a master's thesis or capstone project, which requires students to demonstrate both effective writing and communication skills. • Successful completion of culminating experience requires evaluation of	The Curriculum Committee reviews the annual competency surveys to assess student learning. Modifications to courses and learning objectives are made in order to achieve program competencies.

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			both components by both the advisor, second reader, and approved by specialty track advisor and program director. • Annual review of competency surveys by the Curriculum committee.	
MS and PhD in Clinical Research Program				
Graduates will acquire a strong foundation in needed concepts, methodology, skills and critical thinking in order to facilitate a rigorous approach to research design and analysis	Specific coursework in introductory and/or advanced biostatistical analyses, study design, computational tools utilized by clinical investigators, professionalism & ethics, responsible conduct in research, cultural diversity in clinical research, clinical trials management, drug discovery, outcomes research, methods, secondary data analysis, qualitative research methods, year-long integrative problem solving course (PhD only), year-long journal club, year-long works in progress seminar series, annual symposia, annual summer workshop in	• Faculty developed homework/problem sets • Faculty developed multiple choice & written exams • Class presentations and discussions • Faculty evaluations • Works in progress presentations • Journal club leadership & presentations • Poster presentations • Faculty mentored Thesis proposal document • Mentored research project • Grant proposal • Faculty developed written qualifying exam and thesis defense (PhD only) • Participation on protocol	• Teaching faculty in courses, discussion groups, workshops, seminar series and journal club provide course grades. • Program Director and Co-director ongoing evaluation of progress through coursework with appropriate feedback • Number of Awards, submitted, in press and published manuscripts • Procurement of mentored K award (K23, KO8 or health services K08), R21, Doris Duke or equivalent foundation awards • # of graduates who become Faculty or academically allied	Development of a formal and objective mechanism by which students are individually evaluated for these specific skills, utilizing simulation techniques and web-based case-based scenario tools Implementation of a web based tracking tool adapted from Rockefeller University called Graduate Tracking Survey System (GTSS)

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	clinical research focused on selective themes and current state of the art topics in clinical research; bi-annual writing workshop, independent study & electives, poster presentations at local research and national venues, mentored clinical/translational research project	review committees for Clinical Research Center (KL2 Scholars only), Participation as Mentors of MD/MSCR trainees (KL2 Scholars only)	positions in the healthcare, pharmaceuticals & biotechnology • Trainees portfolio including annual update of CV, reprints of abstracts & papers, awards, chapters, reviews original manuscripts submitted, in press and/or published • Participation as integral members of an interdisciplinary disease focused research team	
Graduates will acquire the ability to understand and use both qualitative and quantitative methods to design and analyze research projects (their own and others)	• Didactic lectures in biostatistics, epidemiology, multivariable methods, clinical trial design, informatics, genomics, molecular genetics, cultural diversity • Small group discussions • Computer labs • Journal Club • Works in Progress seminar series • Grant writing • Thesis development • MD/MSCR monthly	• Literature and applied science based discussion groups • Faculty composed multiple choice and written exams • Journal club presentations • Faculty mentored Written Thesis • Faculty Developed qualifying exam and thesis defense (PhD only)		• Development and implementation of web-based problem-based assessments and self-assessment tools, to additionally encourage and objectively evaluate these skills

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	journal club			
Graduates will master basic and clinical scientific concepts and vocabulary of relevance to clinical/translational research in order to pose testable clinical/translational research hypotheses	• Core didactic curriculum including genomics, proteomics, study design, biostatistics, epidemiology, multivariable methods, health services research, comparative effectiveness research, cognitive tools for assessment, survey methodology, community engagement quality of life instruments, informatics, bioinformatics, participation in annual retreat and quarterly molecules to man seminar series	• Faculty developed written exams • Small group discussions • Class participation • Class presentations • Faculty mentored research project • Oral and written • Thesis presentation overseen by faculty thesis committee • Faculty developed qualifying exam and thesis defense (PhD only) • Faculty organized and developed Integrative Problem Solving course with emphasis on critical thinking (PhD only)	Graded coursework by faculty, publication track record, IRB protocol development, mentored research project completion, thesis	Development of a new courses on Genetics as a pre-requisite for molecular epidemiology course to further foster acquisition of important scientific vocabulary
Graduates will develop skills to facilitate the acquisition of new knowledge	• Core curriculum in biostatistics, epidemiology, quantitative and qualitative methods, Journal Club, Works in Progress seminar series,	• Faculty prepared written exams • Presentations in works in progress seminar series (1 yr. for MSCR & 3-4 yrs. for PhD)	Core Faculty evaluations and grades; Mentor(s) evaluations	

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	Summer Workshop in Clinical Research • Use of publically available databases • Use of EMR in clinical research • Workshops/tutorials on PubMed, EndNote, RefWorks, and Web of Science			
Graduates will develop the oral and written skills needed to effectively communicate clinical and translational research findings to various constituents (peers, faculty, lay public)	• Works in Progress Seminar Series, Grant writing course • Bi-annual scientific writing • Presentation and public speaking Skills workshops as part of mentoring program and in conjunction with annual retreat • Didactic and small group sessions on cultural diversity in clinical research • Reach for your first K and Reach for your first R programs	• Presentations in works in progress seminar series • Leadership in dyads for Journal Club • Poster presentations at annual retreat subspecialty and annual ACRT meeting • Oral presentations during the development (2) and final presentation (1) of thesis (MD/MSCR program)	• Faculty evaluations and grades • Formal evaluation and feedback of oral presentations • Critical review and feedback on components of and near final grant proposals	We plan to develop a writing center to further support the written skills of our trainees
Graduates will obtain the skills to recognize the attributes of ethically appropriate and ethically conducted human	• Courses in ethics, • Responsible Conduct in Research • Human Subjects	• Faculty prepared final exams • Faculty chosen topic for term paper in ethics	Clinical Research Mentor Currently we do not have a mechanism to obtain feedback	

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subjects research	research, Good Clinical Practice • IRB, protocol development course, HIPA and IRB human subjects research training modules • Clinical Trials Management and role of the Principal Investigator	• Class participation • Presentations analyzing others' research during journal club & works in progress seminar series (1 yr. for MSCR & 3-4 yrs. for PhD) • Faculty mentored thesis • Faculty organized and composed qualifying exam and thesis defense **(PhD only)**	from human subjects participating in clinical research projects or from other professional staff involved in the conduct of these studies	
Graduates will develop knowledge and possess a profound understanding of the importance and need for adherence to ethical and professional standards	• Lecture, group projects and required paper in in ethics in clinical research, • Journal Club, works in progress seminar series • Responsible Conduct in Research • Course in cultural diversity in clinical research • Professionalism module as introductory lecture for journal club & works in progress seminar series • Team learning in journal club • Meet the Expert Sessions (KL2 Scholars)	• Class participation • Exams • Conduct during journal club and works in progress sessions (1 yr. for MSCR & 3-4 yrs. for PhD) • Promptness of response to requests by administrative director of program • Adherence to requirements for educational programs • *Class attendance*	• Up until now, our trainees have been drawn from and reside within ongoing fellowship subspecialty programs, research residency track & nursing, As such, these individuals undergo regular 360 and annual performance evaluations utilizing validated tools which evaluate professional conduct, as one component of the overall evaluation • Biannual review with Program Directors, during which time feedback is provided concerning the trainees respective	Institute a formal 360 evaluation for our clinical research education program, which includes input from faculty, administrative assistant and administrative program director for the Clinical Research Education Programs, with regular formative and summative feedback to trainees

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	• Participation in mentorship and career development panels		performance • Annual Mentor(s) evaluation	
Graduates will be afforded the ability to acquire the skills needed for leadership and teamwork of critical importance to the conduct of clinical/translational research	• Required cross disciplinary (T1 and T3) mentorship Program • Journal Club and Seminar Series in collaboration; teamwork/dyad structure • Annual retreat • KL2 & MD/MSCR dyad mentorship	• Class participation • Dual leadership in journal club	• Mentor(s) evaluations; faculty evaluations and grades • Track participation & role in interdisciplinary disease focused teams.	Implementation of 360 assessment by members of trainees clinical/translational research team
MS in Genetic Counseling				
Graduates will be prepared to demonstrate their use of the core knowledge of the biologic and genetic basis of human disease and the psychosocial skills necessary to provide patient centered genetic counseling consistent with the core competencies of the profession	• Lectures, Small group discussions, case-based problem solving exercises, SP-standardized patient encounters, direct supervised patient experiences	• Small group assessments • Multiple choice exams • Patient case write-ups • Standardized patient encounters • Observed histories and physical examinations of patients • Written clinical evaluations by faculty • Supervised patient encounters • Oral presentations • Comprehensive	• Teaching faculty in courses, preceptors in clinical training experience. Course and clinical training supervisors conduct ongoing formative and summative learner assessment and provide feedback. Less than 2% of students fail any specific course or clinical training assessment • In conjunction with the competencies set forth by	Board performance/ alumnae feedback is reviewed by content area and if there is a specific recurrent pattern of poor performance in a competency(ies) the information is reviewed with the appropriate curriculum development team, course director, or clinical preceptor to enhance future learning and subsequent performance Students who are not achieving during their training are followed by the Program

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
		assessments • Review of case logs	the Accreditation Council for Genetic Counseling, a remediation committee reviews student achievement and determines how students or content areas are remediated. Student success rate in passing the American Board of Genetic Counseling Certification Examination is over 90% • Alumnae surveys to assess preparedness in core competencies and professional growth	Director, Assistant Director, and Office of Student Affairs to be sure that there is not a recurrent pattern of poor performance and if so, to determine the cause (academic or social) and develop a remediation plan
Graduates will acquire skills in critical thinking and clinical reasoning in order to practice a scientific approach to problem solving and promote the pursuit of research in genetic counseling	Didactics, small group discussions, case- based problem solving exercises, individual student assignments by clinical preceptors or faculty for written and/or oral case presentations, self-study, thesis development , journal club presentations	• Evaluation of didactic learning and clinical preceptor evaluation forms • Research mentor evaluation of thesis process • Oral presentation and product • Evaluation of oral presentations	Course and Clinical rotation supervisors, publication(s) of thesis and/or other research, alumnae scholarly activity and achievements Board certification	There is continued feedback between course faculty, clinical supervisors, thesis mentors and the program director. When we identify deficiencies or omissions (a pattern), we review our curriculum and create additional teaching and assessment activities to correct the omission
Graduates will be prepared to recognize the defining attributes of professionalism and humanistic behaviors which are	A rich Ethics and Counseling curriculum is vertically and horizontally integrated; A thorough	• Didactic faculty evaluation and clinical preceptor assessments • Peer assessments	Every member of the medical education community, including Genetics and other clinical and research faculty,	Any pattern of outlying behavior is discussed by the Program Director, Assistant Program Director and Student

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
expected for genetic counselors in their professional role	understanding of the Genetic counseling professional code of ethics, healthcare delivery team model faculty and clinical mentor role modeling, and guidelines for focused feedback, as well as HIPPA training, all serve to provide our students with unambiguous means of learning / developing the professional and humanistic behaviors required in the profession of genetic counseling	• Written critique/defense of ethical principles and behaviors • Standardized patient exercise • Clinical delivery team feedback • *Self assessments*	other members of the health care delivery teams, administrators and patients are assessing our students' professionalism and providing us with feedback on any deficiencies. Specific issues are addressed with the student by the program director and assistant program director, and/or by the specific faculty member that identified the issue. An action plan is developed to help students understand and remediate the problem(s). The Board certification exam evaluates ethical and professional understanding and Alumnae review tracks professional development	Affairs team and when necessary, other programmatic faculty, including the director of medical ethics. We then will review our curriculum to determine if we need to create additional didactics or clinical guidelines
Graduates will be prepared to evaluate new information and engage in self-directed learning and assessment as a foundation for the practice of lifelong learning	Small groups and individual case based assignment and other assignments for class presentations, journal clubs, clinical case preparation, evaluation and presentations, thesis	• Written and oral evaluations • Review of summary case logs • *Self assessments*	Each course and clinical experience is designed to help students to learn and "apply" information outside of their didactic requirements. Our program faculty and clinical supervisors who evaluate our students, determine students' abilities to direct their own learning; and students are constantly presented with unknowns in the clinical	As the required amount of medical and scientific knowledge exponentially increases, we increasingly rely on students to direct their own learning agendas; We ask for their feedback about their ability to do this successfully and ask our course directors and clinical supervisors to document whether students have

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
			setting and are required to identify their learning issues, direct their own learning and present their findings; Self-directed learning skills develop incrementally in tandem with students' knowledge, experience, and their ability to identify and manage their own learning issues; Ability to self-direct learning to enhance genetic counseling skills and communication as well as the ability to keep pace with new scientific advances is critical to meet the competencies and ethical conduct of the profession	achieved these competencies. If they have not, we review our curriculum to determine what aspects may need to be taught by our faculty instead of expecting our students to learn it on their own
MS in Health Care Delivery Leadership				
Graduates will be prepared to lead in appraising models and crafting strategies that guide health care organizations toward successful adoption of, and adaptation to, changes in policy and management.	• Lectures, • Expert presenters, panels and recorded interviews, • Facilitated group discussions (synchronous and asynchronous), • Case study reviews/analysis, • Facilitated problem-solving exercises,	• *Course mapping: Goal to desired competency to course objective to relevant assignments/assessments* • *Blackboard user tracking*, • Faculty assessment of individual discussion posts (using rubric), • Lecture embedded quizzes by faculty on critical concepts,	Program administration and faculty analyzes the following measures: • 100% of course assignments relate to a competency and learning outcome goal, • All students are accessing all content on a timely basis and are active participants in discussions and assignments,	• Program launched in Fall 2014, • Initial analysis will occur course-by-course and then aggregated yearly thereafter, Course evaluations will be used as immediate feedback to instructors, • Alumni surveys will be every 1 and 3 years out for each cohort,

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
	• Self-assessment tools, • Individual and group presentations, • Mentored applied project (capstone).	• Faculty question response and poll tracking in synchronous sessions, • Faculty assessment of critical essays, reflections, and case study analysis (using rubric), • Reporting out and benchmarking of self-assessment results, • Production and faculty assessment of applied project (Capstone), • *Student course evaluations,* • *Persistence rate tracking,* • *Program exit survey,* • *Alumni survey.*	• 90% of students are meeting or exceeding satisfactory/passing marks on discussion posts, quizzes, and course assignments, • Input/ poll results to be used to make timely adjustments in content presentation and explanation, • Analyze aggregate self-assessment results and reflection essays to determine if planned learning modules need to be added or modified to meet knowledge or skill gaps, • Achieve a 90% student overall course satisfaction result, • Achieve a 90% persistence rate, • Achieve a 90% alumni satisfaction rate with applicability or curriculum content to their leadership roles.	• Assess any program curriculum gaps and address with new program content or alignments and validate against professional health care leadership standards.
Graduates will be critical consumers of the major literature(s) on health care	• Lectures, • Expert presenters, panels and recorded	• *Course mapping: Goal to desired competency to course objective to*	Program administration and faculty analyzes the following measures:	• Program launched in Fall 2014, • Initial analysis will occur

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
delivery and its reform, with the ability to judge the quality of prominent proposals for innovation in health care systems, and a capacity to discern challenges in the translation of theories into practice.	interviews, • Facilitated group discussions (synchronous and asynchronous), • Case study reviews/analysis, • Facilitated problem-solving exercises, • Self-assessment tools, • Individual and group presentations, • Mentored applied project (capstone).	*relevant assignments/assessments* • *Blackboard user tracking*, • Faculty assessment of individual discussion posts (using rubric), • Lecture embedded quizzes by faculty on critical concepts, • Faculty question response and poll tracking in synchronous sessions, • Faculty assessment of critical essays, reflections, and case study analysis (using rubric), • Reporting out and benchmarking of self-assessment results, • Production and faculty assessment of applied project (Capstone), • *Student course evaluations,* • *Persistence rate tracking,* • *Program exit survey,* • *Alumni survey.*	• 100% of course assignments relate to a competency and learning outcome goal, • All students are accessing all content on a timely basis and are active participants in discussions and assignments, • 90% of students are meeting or exceeding satisfactory/passing marks on discussion posts, quizzes, and course assignments, • Input/ poll results to be used to make timely adjustments in content presentation and explanation, • Analyze aggregate self-assessment results and reflection essays to determine if planned learning modules need to be added or modified to meet knowledge or skill gaps, • Achieve a 90% student overall course satisfaction result, • Achieve a 90%	course-by-course and then aggregated yearly thereafter, Course evaluations will be used as immediate feedback to instructors, • Alumni surveys will be every 1 and 3 years out for each cohort, • Assess any program curriculum gaps and address with new program content or alignments and validate against professional health care leadership standards.

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
			persistence rate, • Achieve a 90% alumni satisfaction rate with applicability or curriculum content to their leadership roles.	
Graduates will know how to access, interpret, and apply reliable evidence from multiple sources, both qualitative and quantitative, to organizational problem-solving.	• Lectures, • Expert presenters, panels and recorded interviews, • Facilitated group discussions (synchronous and asynchronous), • Case study reviews/analysis, • Facilitated problem-solving exercises, • Self-assessment tools, • Individual and group presentations, • Mentored applied project (capstone).	• *Course mapping: Goal to desired competency to course objective to relevant assignments/assessments* • *Blackboard user tracking*, • Faculty assessment of individual discussion posts (using rubric), • Lecture embedded quizzes by faculty on critical concepts, • Faculty question response and poll tracking in synchronous sessions, • Faculty assessment of critical essays, reflections, and case study analysis (using rubric), • Reporting out and benchmarking of self-assessment results, • Production and faculty assessment of applied project (Capstone), • *Student course*	• Program administration and faculty analyzes the following measures: • 100% of course assignments relate to a competency and learning outcome goal, • All students are accessing all content on a timely basis and are active participants in discussions and assignments, • 90% of students are meeting or exceeding satisfactory/passing marks on discussion posts, quizzes, and course assignments, • Input/ poll results to be used to make timely adjustments in content presentation and explanation, • Analyze aggregate self-assessment results and reflection essays to	• Program launched in Fall 2014, • Initial analysis will occur course-by-course and then aggregated yearly thereafter, Course evaluations will be used as immediate feedback to instructors, • Alumni surveys will be every 1 and 3 years out for each cohort, • Assess any program curriculum gaps and address with new program content or alignments and validate against professional health care leadership standards.

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
		evaluations, • *Persistence rate tracking,* • *Program exit survey,* • *Alumni survey.*	determine if planned learning modules need to be added or modified to meet knowledge or skill gaps, • Achieve a 90% student overall course satisfaction result, • Achieve a 90% persistence rate, • Achieve a 90% alumni satisfaction rate with applicability or curriculum content to their leadership roles.	
Graduates will be prepared to analyze the larger environments (political, financial, economic, competitive, and global) of health care organizations and assess the influence of external developments for organizations in which they have, or aspire to have, leadership roles.	• Lectures, • Expert presenters, panels and recorded interviews, • Facilitated group discussions (synchronous and asynchronous), • Case study reviews/analysis, • Facilitated problem-solving exercises, • Self-assessment tools, • Individual and group presentations, • Mentored applied project (capstone).	• *Course mapping: Goal to desired competency to course objective to relevant assignments/assessments* • *Blackboard user tracking*, • Faculty assessment of individual discussion posts (using rubric), • Lecture embedded quizzes by faculty on critical concepts, • Faculty question response and poll tracking in synchronous sessions, • Faculty assessment of critical essays, reflections,	Program administration and faculty analyzes the following measures: • 100% of course assignments relate to a competency and learning outcome goal, • All students are accessing all content on a timely basis and are active participants in discussions and assignments, • 90% of students are meeting or exceeding satisfactory/passing marks on discussion posts, quizzes, and course	• Program launched in Fall 2014, • Initial analysis will occur course-by-course and then aggregated yearly thereafter, Course evaluations will be used as immediate feedback to instructors, • Alumni surveys will be every 1 and 3 years out for each cohort, • Assess any program curriculum gaps and address with new program content or alignments and validate against

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
		and case study analysis (using rubric), • Reporting out and benchmarking of self-assessment results, • Production and faculty assessment of applied project (Capstone), • *Student course evaluations,* • *Persistence rate tracking,* • *Program exit survey,* • *Alumni survey.*	assignments, • Input/ poll results to be used to make timely adjustments in content presentation and explanation, • Analyze aggregate self-assessment results and reflection essays to determine if planned learning modules need to be added or modified to meet knowledge or skill gaps, • Achieve a 90% student overall course satisfaction result, • Achieve a 90% persistence rate, • Achieve a 90% alumni satisfaction rate with applicability or curriculum content to their leadership roles.	professional health care leadership standards.
Graduates will be prepared to bridge, both conceptually and institutionally, the worlds of clinical care medicine and population-based health improvements.	• Lectures, • Expert presenters, panels and recorded interviews, • Facilitated group discussions (synchronous and asynchronous),	• *Course mapping: Goal to desired competency to course objective to relevant assignments/assessments* • *Blackboard user tracking,* • Faculty assessment of individual discussion	Program administration and faculty analyzes the following measures: • 100% of course assignments relate to a competency and learning outcome goal, • All students are accessing	• Program launched in Fall 2014, • Initial analysis will occur course-by-course and then aggregated yearly thereafter, Course evaluations will be used as immediate feedback to

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
	• Case study reviews/analysis, • Facilitated problem-solving exercises, • Self-assessment tools, • Individual and group presentations, • Mentored applied project (capstone).	posts (using rubric), • Lecture embedded quizzes by faculty on critical concepts, • Faculty question response and poll tracking in synchronous sessions, • Faculty assessment of critical essays, reflections, and case study analysis (using rubric), • Reporting out and benchmarking of self-assessment results, • Production and faculty assessment of applied project (Capstone), • *Student course evaluations,* • *Persistence rate tracking,* • *Program exit survey,* • *Alumni survey.*	all content on a timely basis and are active participants in discussions and assignments, • 90% of students are meeting or exceeding satisfactory/passing marks on discussion posts, quizzes, and course assignments, • Input/ poll results to be used to make timely adjustments in content presentation and explanation, • Analyze aggregate self-assessment results and reflection essays to determine if planned learning modules need to be added or modified to meet knowledge or skill gaps, • Achieve a 90% student overall course satisfaction result, • Achieve a 90% persistence rate, • Achieve a 90% alumni satisfaction rate with applicability or curriculum content to	instructors, • Alumni surveys will be every 1 and 3 years out for each cohort, • Assess any program curriculum gaps and address with new program content or alignments and validate against professional health care leadership standards.

Learning Goals (Knowledge, Skills, Attitudes)	Method of Teaching (Lecture, Lab, Small Group, Medium Group, Self-Study)	Method of Assessment or Monitoring (Small Group, Faculty Evaluation, Oral, Essay, Practical or MCQ exam) (*Indirect Method*)	Targets / Results	Contingency or Action Plan
			their leadership roles.	

Appendix 14-C

Program Timelines

Appendix 14-C
Academic Program Timelines

MD Program Timeline
(represents new curriculum)

Year 1	Year 2	Year 3	Year 4
➢ Pass all (7) courses ➢ Pass InFocus ➢ Complete all Milestones	➢ Pass all (10) courses ➢ Pass InFocus ➢ Complete all Milestones ➢ Pass USMLE Step 1	➢ Pass all (4) clerkship modules ➢ Pass InFocus ➢ Complete all Milestones ➢ Complete 10 weeks of electives ➢ Pass Compass II	➢ Pass all (3) sub-internship modules ➢ Pass InFocus ➢ Complete all Milestones ➢ Complete 18 weeks of electives ➢ Complete PxDx skill competency requirements ➢ Complete Graduation survey ➢ Pass USMLE Step 2 CS and Step 2 CK ➢ Complete Scholarly Project

PhD Program Timeline

Year 1

➢ Fall
  - Research Rotation
  - Fall Core Course(s)
  - Intro to Journal Club I
  - Biostatistics
  - Responsible Conduct in Research
  - Research Presentation
➢ Spring
  - Spring Core Course (s)
  - Research Rotations (2)
  - Intro to Journal Club II
  - Research Presentation

Year 2

➢ Fall + Winter
  - Choose Laboratory and Initiate Research Project
  - Advanced Elective
  - Journal Club
  - Works-in-progress
  - Research Seminar
  - General Knowledge Exam
➢ Spring + Summer
  - Advanced Elective
  - Laboratory Research
  - Journal Club
  - Works-in-progress
  - Research Seminar

Year 3

➢ Fall + Winter
  - Laboratory Research
  - Journal Club
  - Works-in-progress
  - Research Seminar
  - Thesis Proposal Exam
➢ Spring + Summer
  - Laboratory Research

Year 4

➢ Full Year
  - Laboratory Research
  - Write and Defend Thesis

PhD in Clinical Research Program Timeline

Year 1

* - track specific courses

➢ Fall
  • Advanced Biostats
  • Professionalism & Ethics
  • Spectrum I
➢ Spring
  • Linear Models
  • Intro to Epi*
  • Spectrum II*
➢ Spring II
  • Linear Models II
  • Computational Tools
  • Spectrum III
  • Grant Writing

Year 2

➢ Fall
  • Journal Club
  • Problem Solving
  • Probability
  • RCR
  • Clinical Trials Management*
➢ Spring I
  • Journal Club
  • Problem Solving
  • Applied Biostats*
➢ Spring II
  • Journal Club
  • Drug Development*
  • Problem Solving
  • Outcomes Research*
  • Analysis of Longitudinal Data*
  • Qualifying Exam

Year 3

➢ Fall
  • Research
  • Thesis Proposal Oral
  • Presentation
➢ Spring I
  • Research
  • Elective*
➢ Spring II
  • Research

Year 4

➢ Fall
  • Research
➢ Spring I
  • Research
➢ Spring II
  • Research
  • Submit and defend thesis (depending on student's progress, students may take 1 or 2 additional years to complete research & defend thesis)

MGC Program Timeline

Year 1	Summer	Year 2

Year 1

- ➢ Fall
  - Core curriculum
  - GGS Case Conference
  - Clinical Journal Club
- ➢ Spring
  - Core Curriculum
  - Research (Thesis)
  - Clinical Rotations and companion course (CC)
  - GGS Case Conference
  - Clinical Journal Club

Summer

- Research (Thesis)
- Clinical Rotations (CC)
- Camp Sunshine
- Case Conference
- Clinical Journal Club

Year 2

- ➢ Fall
  - Core Curriculum
  - Research (Thesis)
  - Clinical Rotations (CC)
  - Case conference
  - Clinical Journal Club
- ➢ Spring
  - Research (Thesis)
  - Thesis Presentations
  - Thesis Deposit
  - Clinical Rotations (CC)
  - Case Conference
  - Clinical Journal Club

MPH Program Timeline

Year 1	Summer	Year 2

Year 1

- ➤ Fall
  - Biostatistics
  - Intro to Public Health
  - Health Policy
- ➤ Spring I
  - Epidemiology
  - Environmental Health
- ➤ Spring II
  - Socio-Behavioral Health
  - Research Methods
  - Elective

Summer

- Practicum Experience
- Research/Data collection

Year 2

- ➤ Fall
  - Electives
  - Practicum Experience
  - Thesis/Capstone Research
- ➤ Spring I
  - Electives
  - Thesis/Capstone Research
  - Thesis Workshop
- ➤ Spring II
  - Electives
  - Defend thesis/capstone

4-Year MD/MPH Program Timeline

Year 1	Summer	Year 2	Year 3	Year 4

Medical School Year 1

MPH curriculum
- ➢ Fall
  - Biostatistics
  - Intro to Public Health
  - Health Policy
- ➢ Spring I
  - Epidemiology
  - Environmental Health
- ➢ Spring II
  - Socio-Behavioral Health
  - Research Methods
  - Elective

- Practicum Experience
- Research/Data collection

Medical School Year 2

MPH curriculum
- ➢ Fall
  - Electives
  - Thesis/Capstone Research
- ➢ Spring I
  - Electives
  - Thesis/Capstone Research
- ➢ Spring II
  - Electives

Medical School Year 3

Medical School Year 4

MPH curriculum
- ➢ Fall/Spring
  - Thesis Workshop
  - Defend thesis/capstone

5-Year MD/MPH Program Timeline

Year 1	Year 2	Year 3	Year 4	Year 5

Medical School Year 1

MPH curriculum
- Fall
  - ➢Biostatistics
  - ➢Intro to Public Health
- Spring I
  - ➢Epidemiology
  - ➢Environmental Health
- Spring II
  - ➢Socio-Behavioral Health

Medical School Year 2

Medical School Year 3

Medical School Scholarly Year

MPH Curriculum
- Fall
  - ➢Electives
  - ➢Practicum
  - ➢Thesis/Capstone Research
- Spring I
  - ➢Electives
  - ➢Thesis/Capstone Research
  - ➢Thesis Workshop
- Spring II
  - ➢Electives
  - ➢Defend thesis/capstone

Medical School Year 4

MSBS Program Timeline

Year 1	Summer	Year 2

Year 1

- ➤ Fall
  - Select lab
  - Core 1
  - Biostatistics
  - RCR
- ➤ Spring
  - Core 2
  - Electives
  - Research
  - Research Presentation

Summer

- ➤ Research

Year 2

- ➤ Fall
  - Electives
  - Research
  - 50% of students typically write and defend thesis
- ➤ Spring
  - Elective
  - Research
  - Remaining students write and defend thesis

MSCR Program Timeline

| Year 1 | Year 2 |

Year 1

➢ Fall
- Biostats
- Professionalism & Ethics
- Spectrum
- RCR

➢ Spring
- Multivariable Methods
- Intro to Epi
- Spectrum II

➢ Spring II
- Applied Analysis
- Computational Tools
- Spectrum III
- Grant Writing

Year 2

➢ Fall
- Journal Club
- Research

➢ Spring
- Journal Club
- Research
- Electives

➢ Spring II
- Journal Club
- Research
- Write and submit thesis

MD/MSCR Program Timeline

Year 1	Year 2	Scholarly Year	Year 4

Year 1
- ➢ Fall
  - Spectrum I
- ➢ Spring
  - Spectrum II
- ➢ Spring II
  - Spectrum III

Year 2
- ➢ Fall
  - Biostats
- ➢ Spring I
  - Multivariable Methods
- ➢ Spring II
  - Preparation for USLME step 1

Scholarly Year
- ➢ Fall
  - Journal Club
  - Professionalism & Ethics
  - Elective (can be taken during any term)
  - Thesis Research
- ➢ Spring I
  - Journal Club
  - Thesis Research
- ➢ Spring II
  - Journal Club
  - Applied Analysis
  - Grant Writing
  - Computational Tools
  - Thesis Research

Year 4
- ➢ Thesis Deposit

* Year refers to medical school year

MSHCDL Program Timeline

Year 1	Summer	Year 2

Year 1

➢ Fall
- Gateway Seminar on Healthcare Delivery Leadership in the 21st Century
- The Affordable Care Act of 2010
- Navigating Health Care Reform Policy and Politics
- Health Care Delivery Economics

➢ Spring
- Strategy Creation for Health Care Delivery Organizations
- Strategic Communications in Health Care Delivery
- Leading and Managing Health Care Delivery Organizations
- Leveraging Data for Evidence-Based Decision-Making in Health Care Part I
- Leveraging Data for Evidence-Based Decision-Making in Health Care Part 2

Summer

➢ Seminar 2: Improved Health Care Delivery Effectiveness and Quality: Systems, Approaches, Tools

Year 2

➢ Fall
- Health Information Systems and Technology
- Finance Essentials for Health Care Delivery Leadership
- Operations Management in Health Care Delivery Part I

➢ Spring
- Operations Management in Health Care Delivery Part 2
- Improving Population and Public Health Delivery
- Clinical Microsystems Innovations
- Capstone