INTRODUCTION

The Liaison Committee on Medical Education (LCME) letter of June 24, 2008 informed Virginia Commonwealth University School of Medicine (VCU SOM) of continued accreditation of the educational program leading to the MD degree for an eight-year term. The Survey Report noted a number of institutional strengths that included: 1) The energy, comprehensive knowledge and approachable style of Dean Strauss earning the respect of faculty, department chairs, students and the broader VCU and health system community, 2) The collaborative and effective working relationship of the dean, hospital chief executive officer and the vice president for health sciences to the benefit of the organization, 3) the exceptional support of the School for and responsiveness to students and the many innovative programs for students, most notably Project HEART, a program that fosters student well-being and promotes altruism and professionalism, and 4) The significant resources committed to the development of the Inova Fairfax regional campus; a new medical education building, and the telecommunications infrastructure that links the two campuses seamlessly to facilitate close collaboration and interaction among faculty and students.

The Survey identified the following items of partial (satisfactory with continued monitoring) or substantial noncompliance (unsatisfactory) with the following accreditation elements: 6.3: The preclinical curriculum is predominantly lecture-based and provides few opportunities for students to engage in self-assessment of their learning needs or to independently identify, synthesize, and evaluate information to meet those needs; 9.2: There are physicians who supervise students in required clinical clerkships who do not hold VCU faculty appointments; 3.6: VCU medical students report on the AAMC Graduation Questionnaire (AAMC GQ) with greater frequency than do students nationally, that they had experienced mistreatment during their medical education. This mistreatment primarily involved public humiliation and belittlement, typically from clinical faculty, residents, and nurses. This reported mistreatment occurred more frequently at affiliated clinical facilities. While there is a confidential hotline for reporting incidents, most students who reported experiencing mistreatment did not report it to the school of medicine; 4.3: The guidelines for faculty promotion specifically tailored to Inova-appointed clinical faculty are currently under development and review. The Survey also noted the following areas under transition whose outcome could affect the school’s ongoing compliance with accreditation standards/elements: Feedback to students on clinical skills and debt levels and scholarship. Progress reports were submitted to the LCME in 2010 and in 2012 describing measures undertaken to address the areas of partial and substantial noncompliance and areas under transition.

Substantial investment and expansion of faculty development resources and intensive work with faculty and course directors was initiated to reduce the dominant lecture-based lessons to approximately 50% from the 70% noted in the 2008 study year. In 2008, we had 1541 total hours in the preclinical curriculum. By the self-study year, we had reduced the number of hours to 1206. The decrease in the proportion of lecture hours is an ongoing process with a decrease from 693 total lecture hours (57%) in the preclinical curriculum in 2014-2015 to 646 (54%) lecture hours in the current academic year. In March 2015 a new assistant dean was hired to work with each division director to identify specific sessions that could be converted to active or self-directed learning. Every course has opportunity for
student self-assessment of learning needs and to independently identify, synthesize and evaluate information to meet those needs. Students receive feedback on performance and formal assessment of lifelong learning skills including Meyers-Briggs Type Indicator, Learning and Studies Strategies Inventory, Inventory of Classroom Styles and Skills and the Jefferson Scale of Lifelong Learning (6.3). Utilizing the School’s Faculty Information System Database and Curriculum Management System that stores evaluations, quarterly reconciliation is performed to ensure that physicians supervising or evaluating students in required clinical clerkships hold VCU faculty appointments (9.2). Medical students, faculty and housestaff are required to take and pass, annually, a quiz on material relating to VCU SOM Students’ Bill of Rights and Responsibilities and Mistreatment Prevention Policies. Departments with higher rates of reported mistreatment received special training. After an initial increase in reports of mistreatment, 44% to 100% in 2010 (felt to be due to increased awareness after training), the rates have declined over the past two years (3.6). Faculty guidelines on promotion at the Inova Campus were approved and implemented, effective May 12, 2008 (4.3).

In response to self-study the school instituted the Clinical Educational Innovators (CEI) program, which provided student observation in clerkships and formative feedback on their mastery of core clinical skills. The CEI program no longer exists but other programs are in place which ensure that observation of students continues at this high level. In each clerkship, faculty sign off on each student indicating that the student was observed performing a specified portion of a history and physical exam and documenting that written and/or verbal feedback was provided. AAMC GQ from 2013-2015 show that students report being observed performing history and physical exams in each clerkship at a greater rate than the national mean.

Fund-raising for scholarships, and scholarship support have increased. Debt counseling is mandatory for all students. Grants and scholarships have increased to an average of 69.8% of students receiving scholarships compared to a national average of 61.2%. The tuition rate has increased only 4% making VCU the least costly medical school in Virginia for residents and the out of state tuition is competitive with the other Virginia schools. The total educational debt has remained flat from 2011 to 2015 with total debt of $188,749 and $188,957 respectively. This is higher than the national average of $183,189. However, the VCU SOM students also had significantly higher premedical debt ($50,841 compared to $45,008).

The VCU SOM continues to sustain the momentum began during the last accreditation cycle and has witnessed significant changes and successes since the last LCME Survey in 2008. A significant achievement of the SOM was the design and construction of the James W. and Francis G. McGlothlin Medical Education Center, which opened in March 2013, adding more than 40,000 square feet of classroom space and 20,000 square feet for simulation and standardized patient facilities. The added space allowed for class size expansion from 184 to 216 students per class. Beginning with the 2014 Academic year, impressive team effort led to implementation of the new improved and innovated School’s curriculum, whose redesign began in 2008 shortly after the Survey. The new integrated C³ curriculum (Centered on the needs of the learner, Clinically Driven and Competency Based) incorporating some of the newest educational and technological research on medical and interprofessional education has been fully implemented in years 1 and 2. Under the leadership of Dean Strauss, expansion of the clinical and research infrastructure has continued with the recruitment of new department chairs, major research space construction and renovation, implementation of a new faculty practice compensation plan, construction of two new facilities for Pediatrics (ambulatory care and mental health), expansion of clinical services and total sponsored program awards for research reaching the highest in the school’s
history. In 2014, MCV Hospitals received the American Hospitals Association McKesson Quest for Quality Prize, a distinct honor for an academic medical center. The institutional self-study shows that the SOM efforts to prepare physicians to meet the healthcare needs of Virginia and the nation have been and continue to be successful.

**Brief Overview of the Self Study Process**

The dean appointed a Self-Study Steering Committee (SC) and five (5) subcommittees comprised of faculty, administrators, staff and students. Committee membership is listed in Appendix A. Each subcommittee examined and assessed select components of the LCME Standards and compiled respective data for the database and participated in the review of all data for the self-study summary. The SC and subcommittees met regularly together and separately from their inception until completion of the database. During the self-study, periodic reports, updates and concerns were presented to the faculty at General Faculty Meetings and the Executive Committee of the Faculty, and via e-mail to all faculty members with open invitation for comment. Student leadership conducted an extensive survey based on LCME guidelines with a high percentage (91.6%) of participation by all classes. The students prepared their report with administrative support from the dean’s office. The self-study process continues to be incorporated as part of planning and has been invaluable in pointing out areas that need assessment and often revision, modifications, improvements, or consideration for redirection. Concerns and issues are discussed at all administrative levels and efforts are made to address them with effective solutions.

**Standard 1: Mission, Planning, Organization and Integrity**

The Medical College of Virginia (MCV) was established in 1838 and renamed in 1968 with the establishment of the Virginia Commonwealth University (VCU), the result of a merger between Richmond Professional Institute and MCV. VCU is a public, not for profit, corporation and is accredited by the Southern Association of Colleges and Schools Commission.

The School became an integral component of the VCU Health System, in 2001, when it was recast as a Hospital Authority. A 16 member Board of Visitors (BOV) governs VCU and a Board of Directors governs the health system. The BOV appoints all administrative officers and approves all faculty promotions and tenure decisions. The President, Michael Rao, Ph.D., was appointed in 2009. The dean was initially appointed as the Chief Academic Officer for the SOM in 2005. The dean is also the Executive Vice President for Medical Affairs with oversight of the Medical College of Virginia Physicians (MCVP). In both roles, the dean reports to the Vice President for Health Sciences and CEO of the VCUHS. The dean serves as an ex officio member on the VCUHS Board of Directors.

The mission of the School of Medicine is to provide preeminent education to physicians and scientists in order to improve the quality of health care for humanity. Through innovative, scholarly activity and a diverse educational context, the School seeks to create and apply new knowledge, and to provide and continuously improve systems of medical and science education. Furthermore, it is our mission to develop more effective health care practices to address the needs of the diverse populations we serve, and to provide distinguished leadership in the advancement of medicine and science. This mission statement was reviewed and modified somewhat in May 2010. The School’s priorities are set through a collaborative institutional strategic planning process involving the Boards of Visitors (University) and Directors (Health System), administration, faculty, staff and students. The University’s strategic plan, Quest for Distinction, serves as the framework for individual Schools’ strategic plans. The most recent
Plans for the University and SOM were completed in 2011 and 2012 respectively. The SOM’s Strategic Plan includes goals, objectives, and measurable outcomes for education, research, service and diversity. The SOM senior associate deans conduct a yearly review of compliance with accreditation standards which is reported to the dean and an action plan to address deficiencies is developed as needed. For example, a number of policies were developed after the most recent review to support compliance with new standards. Significant accomplishments noted in the metrics and outcomes to date are the following:

- Revision of the SOM’s Faculty Guidelines on Promotion and Tenure to provide more flexible and extended probationary period, with the option of up to 10 years from 6.
- Hiring of an Associate Dean for Professional Instruction and Faculty Development and support staff, which includes an instructional technologist
- Increased interprofessional learning experiences for our students,
- Established a Certificate in Medical Education in association with the School of Education
- Increased the number of women division chairs from 0% to 20%
- Implemented a Principal Investigator dashboard for research investigators
- Attained an NIH Clinical Translational Science Award
- The School conducted the first comprehensive survey of workforce race and ethnicity in the School, which is now repeated annually
- The School achieved 100% graduation of underrepresented in medicine (URM) freshmen matriculating in 2008.
- The School completed a comprehensive assessment of cultural attitudes and behaviors of M2 students and initiated cultural competency and awareness interventions with faculty.
- The School conducts annual review of salary equity among faculty.

SOM faculty must demonstrate compliance with Commonwealth of Virginia, University and School conflict of interest policies. Administrators must recuse themselves from business arrangements that involve either a conflict of interest or a perceived conflict. SOM faculty is governed by several policies that require the approval, reporting and disclosure of outside professional activities, financial interests and industry relationships. The University Office of Integrity and Compliance, the Office of Research and the SOM Office of Faculty Affairs administer, monitor and provide oversight over faculty and other employees for conflict of interest policies. Required web-based training and reporting are in place for key policies.

There are numerous standing committees at the University, School and Health System level, which permit faculty participation in service and governance. Standing committees which report to the dean include the Curriculum Council, Student Promotions Committee, Committee on Scholarly Leave, Grievance Board, Executive Committee, Admissions Committee, Nominating Committee, School-wide Promotion and Tenure committee, Teaching Excellence Awards Committee, Appeals Committee for Medical Students, Multicultural Affairs Advisory Committee, Professionalism Committee, Scholarship Committee and the Criminal Background Check Committee for medical students. The Nominating Committee is charged with ensuring broad representation in faculty governance. The faculty votes yearly to select new committee members replacing those whose terms of service have expired, except for the Executive Committee. In addition to the VCU SOM committees, faculty may be appointed or elected to specified terms of service for University and Health System committees.

There are numerous means outside of committees for faculty to communicate about University, SOM and Health System issues of importance. The dean has general faculty meetings twice yearly. The Executive Committee meets monthly (except July/August) to bring together department chairs, department
administrators, leadership of faculty practice, VCUHS CEO, faculty members elected at large by faculty, and administrators in the dean’s office to learn about and comment on medical school policies and procedures. Department chairs disseminate key information to their faculty at their individual faculty meetings. The SOM Bylaws are available on the SOM website; amendments to bylaws are sent to the faculty for comment and then voted on by the faculty electronically.

Affiliation agreements with all clinical sites where medical students are assigned for core clinical experiences are up-to-date. They are reviewed every 3 years or more frequently as needed.

VCU recently received full accreditation from the Southern Association of Colleges and Schools. The next institutional accreditation survey will be in the year 2024.

**Standard 2: Leadership and Administration**

Jerome F. Strauss, III is Executive Vice President for Medical Affairs for the VCU Health System and was appointed dean in 2005. His training, administrative experience, research, clinical work and honors provide the necessary qualifications to provide leadership in the areas of medical education, scholarly activity, and patient care. Since his appointment, Dr. Strauss has led the School to unprecedented growth in research, scholarly activity and medical education innovations. He annually receives his evaluation from the vice president for health sciences and the CEO of the VCUHS. As part of his evaluation, the vice president’s office solicits a "360" web-based evaluation from all faculty and administrators, both internally and externally, who work with the dean. In addition, there are a series of metrics in the areas of research and education upon which he is evaluated.

The dean reports to the Chief Executive Officer for VCUHS and the Executive Vice President for Health Sciences who in turn report to the University president. The university governing board has no role in the appointment process, having delegated to the Provost and Vice President for Health Sciences for member of the medical school administration including the dean, dean’s staff and members of the faculty. The President of MCV Associated Physicians (faculty practice plan), the Executive Director of MCV Physicians, the Associate Dean for Quality and Safety, Associate Dean for Graduate Medical Education, Chief Medical Officer, and the Senior Associate Dean for Continuing Medical Education all report to the dean in his role as Executive Vice President for Medical Affairs at VCUHS. The dean has ultimate authority in medical education on both the Inova and MCV campuses.

The dean delegates administration of the medical education program to a senior associate dean for medical education and student affairs on the MCV campus and an associate dean for student affairs, on the Inova campus. Both deans have an array of associate and assistant deans for the pre-clinical and clinical medical education programs.

The AAMC GQ and the Independent Student Analysis (ISA) both report high student satisfaction with the office of the associate dean for student affairs with regard to accessibility, awareness of student concerns, and responsiveness to student problems. The same is true for the office of the senior associate dean for medical education and student affairs. The ISA asked similar questions about the assistant dean of curriculum and student affairs on the Inova campus with all students reporting they were satisfied or very satisfied with these offices.

The Department chairs range in experience from newly appointed to almost 30 years. National searches were recently completed for the Chair of Neurosurgery, Dr. Alex Valadka, and the Chair of Orthopedics, Dr. Stephen Kates. There remains one open position for department chair (Neurology) and a national
search is imminent. Vacancies within the SOM are filled as quickly as possible given the availability of suitable candidates.

The associate dean for medical education from the Inova campus is a member of the following SOM committees via teleconferencing: Executive committee, Curriculum council (ex-officio), student progress meeting, student promotion committee, professionalism, and any number of ad hoc committees that may be established from time to time. Any deficiencies of faculty and/or issues around their suitability to discharge their duties are investigated by the regional dean, and reported to the dean for adjudication.

The MCV and Inova campuses run an integrated model of education. Faculty from both campuses sit on all school of medicine committees including: admissions, student promotions, pre-promotions, curriculum council, clinical subcommittee on curriculum, clerkship director committee, professionalism, student progress and a joint promotion and tenure committee for the Inova campus. Student performance is compared yearly between campuses for shelf exams, board scores, and clerkship grades.

All deans visit both campuses at least twice yearly. The faculty meets at monthly clerkship meetings. Clerkship directors on each campus communicate regularly via email and conference calls regarding curriculum and grading issues. All clerkship directors meet monthly for clerkship director meetings. Evaluation data is shared across both campuses.

The Inova principal academic officer prepares a quarterly reconciliation report regarding the number of learners from other medical schools on service. Students from the VCU SOM are on separate teams, which focus only on the VCU curriculum and learning objectives, so that the number of learners does not compromise clinical opportunities meeting the SOM learning objectives.

Standard 3: Academic and Learning Environments

Residents are present at all of the sites where core clinical clerkships are conducted except Chippenham-Johnston Willis Hospital (CJW) in Richmond where some students spend a portion of their pediatrics clerkship. Those students assigned to CJW only spend 2 weeks of the 6 week clerkship at this site. The remaining time they are at the VCUHS where there are pediatric residents.

The associate dean for student affairs meets with the class early in the MS-1 year to discuss research opportunities that are available in the summer. The senior associate dean for research and the associate dean for student affairs maintain a web site listing opportunities for research. The SOM office of research assists students, on both campuses, interested in summer research opportunities to identify potential research mentors. Sixty two percent of graduating students have participated in some type of mentor-sponsored research activity on site or at other institutionally approved sites off campus. This percentage is up from 52% over the past 3 years. The majority of students completing research experiences do so during the summer between the first and second years of medical school. The dean provides a $2500 stipend to students participating in this program. The students also participate in Student Honor’s Day presenting their work in poster form and competing for additional prize money for the best three abstracts. The dean’s office pays all applicable tuition and fees, in addition to a $15,000 stipend to students participating in the year-out program for biomedical research.

The SOM targets Black/African-American, Hispanic/Latino, and students from rural areas as defined by the U.S. Census bureau in its diversity initiatives to increase enrollment of these underrepresented in medicine groups. Several effective programs (Health Sciences Academy, Project ACE, and the Medical Scientist Internship) are administered by the Office of Student Outreach, which resides in the Office of the Vice President for Health Sciences, aimed at high school students in the Richmond metropolitan area.
The Summer Academic Enrichment Program is aimed at junior and senior undergraduate students as well as students in post-baccalaureate degree programs. Other programs are designed to assist students in applying for medical school or increasing success in medical school. The SOM has made improvement in diversity a priority. Although we have had numerous pipeline programs in place, the amount of URM students has remained relatively flat at around 8%. It is hoped that the increased availability of scholarships through the 1838 campaign can attract more URM students to the SOM.

VCU Equity and Access Services leads, coordinates and supports civil rights compliance, including Title IX, for the University. There are written policies and procedures for addressing student mistreatment including sexual harassment. These policies are reviewed in detail at orientation. Students are also invited to use the institutional hotline to report any concerns, which are in turn investigated by the University's Office of Integrity and Compliance. The senior associate dean for medical education, and associate dean for student affairs at both campuses, along with general counsel immediately investigate all allegations of student mistreatment. The School of Medicine has a zero tolerance policy for student mistreatment. Education of the academic community about acceptable standards of conduct in the teacher-learner relationship occurs at the departmental and school level. Web based training and ready access to policies have also been effective strategies for educating the faculty/academic community.

The averages on the ISA and AAMC Graduation Questionnaire for mistreatment are well below the national data for recent years. This follows an intense awareness and training program for faculty and residents and the development of a Policy on student mistreatment that is zero tolerant of such behavior. The AAMC GQ also indicates that nearly 100% are aware of the mistreatment policies and how to report mistreatment.

The faculty and new matriculating students participate in the “White Coat” ceremony, which emphasizes the attributes of the good physician. The students are introduced to the SOM Code of Conduct and professionalism objectives during orientation to medical school. All faculty, residents and students are required to review the SOM Professionalism Standards on an annual basis and submit in writing their commitment to the principles of the code. In the transition to the clinical phase, all students participate in a Gold Student-Clinician Ceremony during which six residents chosen by the senior level students as exemplars of professionalism speak about humanism in the practice of medicine and receive an award. During the ceremony, the students and faculty recite the AAMC Compact between Teachers and Learners reaffirming a commitment to providing a positive learning environment.

Students are evaluated in the professional domains during the Practice of Medicine course and the clerkships. In addition, any member of the SOM community may make an early concern note if a student is observed not behaving according to SOM code of conduct.

**Standard 4: Faculty Preparation, Productivity, Participation and Policies**

The faculty continues to perform in an exemplary manner in sustaining the mission of the institution, which is the training of a workforce that increasingly makes significant contributions to the healthcare of the nation. The medical school currently has 183 full time basic science faculty and 1335 full time clinical faculty on the MCV and Inova campuses. There are another 113 part-time basic science and clinical faculty and some 1400 volunteer clinical faculty. Of 840 full-time faculty members, 30% are tenured (215) or tenure-eligible (41) on the MCV campus. Women comprise 39% of full time faculty. Nineteen percent are Asian, 4% are Black/African American and 2% are Hispanic/Latino. The attrition rate for faculty over the last several years has been stable in the 6-7% range.
Eight course masters, 19 division directors, 8 clerkship directors, 56 PCM small group leaders, and additional elective coordinators and preceptors directly support the curriculum. Since the study year we have added two acting internship directors and we are recruiting 2 course directors for a point of care ultrasound course. The VCU SOM provides protected time with salary support to faculty with significant teaching responsibilities.

The School of Medicine (SOM) Faculty Guidelines on Promotion and Tenure were initially revised in 2009 to emphasize and expand the definition of scholarship. The document was again revised in 2014 retaining this emphasis. Key enhanced provisions of the guidelines intended to facilitate career development for junior and mid-career faculty include:

- Transfer from term (non-tenure eligible) appointments to tenure track positions upon request by the departmental chair and written consent of the dean and vice president for health sciences. Time spent as a term faculty member is not necessarily included in the probationary period for tenure but accomplishments as a term faculty member are considered.
- Linkage for tenure-eligible assistant professors, which is review in one process for promotion and tenure.
- Expedited tenure review outside the regular promotion and tenure cycle.
- Transfer of tenure-eligible faculty to a term appointment during enrollment in a university degree program suspending the period of probationary service.
- The right of non-tenured or term and tenure-eligible faculty to receive timely notice and a terminal period up to one year.
- Extension of the initially agreed upon probationary period for extenuating circumstances (include, but are not limited to childbirth, adoption, care of terminally ill immediate relative, personal trauma, short-term disability as defined by the Virginia Sickness and Disability Program, natural disaster, major accidents, or other circumstances beyond the control of the candidate) not to exceed 10 years.
- A term (non-tenure) appointment may be for a period of one to five years and may be renewable.

The VCU SOM guidelines on promotion and tenure provide a flexible template for faculty achievement and allow individuality in how faculty achieves their academic goals in the areas of research. Faculty receives annual written evaluation and feedback by the department chair on their progress toward promotion and/or tenure.

In 2013-2014, VCU SOM faculty collectively published 1691 peer reviewed journal articles, 97 books or book chapters, and are principal investigators or co-investigators on 685 extramural research grants. Despite the negative economic climate and tightening of National Institutes of Health budgets, there has been an increase in total grants and contracts funding of 21% since the last full survey visit in 2008.

The Faculty Guidelines on Promotion and Tenure govern faculty appointments. There are four ranks within VCU: Instructor, Assistant Professor, Associate Professor, and Professor. Faculty appointments are tenure, tenure-eligible or term (non-tenure track). Upon hiring, contract negotiations determine the initial status of the faculty member upon entry into VCU.

Faculty, including both tenured and term faculty, are notified annually in their contract of their appointment, compensation, and conditions of employment. The percent allocations are documented in the Faculty Activity Reporting and Evaluation Record (FARES).
Faculty development initiatives within the SOM include a range of opportunities available to all teaching faculty including monthly, 90-minute Lunchtime Learning sessions; one- and two-day Teaching Intensive Boot Camps for clinical teaching the use of digital media technologies for teaching in Medicine; one-hour Teaching Interest Groups (TIGs) that meet with a faculty peer who has expertise in a particular content area such as Team-Based Learning (TBL) or Process-Oriented Guided Inquiry Learning (POGIL); three-hour professional development workshops and topics of interest to new faculty, including a session on Basic Teaching Skills; a half-day New Faculty Orientation; Speed Designing workshops designed to introduce faculty to a variety of teaching techniques; and a Graduate Certificate Program in Medical Education (TiME), offered in collaboration with the School of Education at VCU, in which faculty can complete a 12-credit hour certificate program during evening hours over the course of two years.

During the study year, 620 faculty members participated in 25 scheduled workshops and seminars. Faculty development staff held 96 individual or small group consultations to assist faculty with teaching methodologies. The TiME Faculty graduate certificate program had a total of 86 faculty enroll in the six courses offered in FY15.

The VCU Office of Research and Innovation offers a variety of opportunities for faculty to develop skills in research methodology, publication development, and grant procurement. The New Investigators Research Grant Writing Institute provides intensive proposal training for someone submitting for the first time. The Clinical Research Core Translational Research Center offers a research incubator and mentorship program.

**Standard 5: Educational Resources and Infrastructure**

Between Fiscal Year 12 and Fiscal Year 14, the total revenues from all sources increased 12.2%. The overall diversity of funding sources and growth in virtually every area has provided an overall positive growth pattern for the SOM indicating stability. The average operating margin over the period was 2%. The SOM depends on a diverse mix of funding sources. The hospital supports just under 25%, the MCV Physicians practice plan an additional 30% of revenue, funding from the parent university and the tuition and fees just under 20%, and grants, contracts and gifts the final 25%. The market value of endowments and income from endowments has been very stable over the last five years. The Development Office continues to have success in fundraising efforts to support the School’s mission.

As of June 2014, the SOM maintained a considerable amount of reserves with just under $200 million in endowments or quasi-endowments, an additional $42 million available in current funds, $18 million in indirect costs from research, and over $159 million as part of the separate 501(c)(3), physician practice plan. The $159 million was designated as follows: $23.9 million for the dean for the SOM reserves, $54 million for the practice plan self-insured malpractice insurance, $12 million held in accounts payable to the health system and $69.1 million is set aside for use by the practice plan. The conservative system for allocating medical school reserves has been established to minimize risk and ensure stability.

The SOM is responsible for $4.2 million annually in debt service to cover the cost of the McGlothlin Medical Education Center building, which opened in 2013. It is anticipated this debt will be retired in 2032. There is currently no other debt for the SOM or the practice plan. The school has projected its commitments through the end of the decade and has sufficient funding to cover all commitments made to date as well as anticipated commitments for chair packages and other programmatic investments.
The dean works directly with the chairs of the basic health science and clinical departments, the directors of SOM centers and institutes, and the management team of the dean's office to develop and execute the budget. On the university side, the vice president for health sciences works with the dean to develop incremental budget requests for review by the University's Budget Advisory Committee and ultimately the university president's cabinet. On the health system side, the dean works with the president of MCVP and the MCVP Finance Committee to develop budgets for presentation and approval to the MCVP Board of Directors.

Faculty members are supported with institutional funds (School, VCUHS), as is appropriate and necessary. The dean makes bridge funding available to the clinical and basic science faculty for a period up to 18 months in gap sponsored-funding periods based on the recommendation of a faculty committee reporting to the senior associate dean for research and research training.

MCVP implemented a Compensation Plan in 2013 with a specific emphasis on incentive-based compensation and enhancing organizational and operational efficiency of the group. Support of clinical faculty teaching time is based on the allocation of instructional time in key areas. Funding is specifically provided to clinical departments to cover the portion of faculty members' salaries related to teaching administration roles for division directors, co-division directors, course masters, co-course masters, clerkship directors, small group leaders and other administrative roles. In addition, departments are allocated funding to support direct faculty effort in teaching and all clinical faculty receive incremental salary support to recognize teaching that occurs in the patient care setting. The dean also provides salary support for faculty with Federal grant support to cover the gap between their compensation and the Federal cap. Basic science departments receive Commonwealth of Virginia Education and General funding to support the portion of salary not covered by sponsored research. Basic science faculty are reviewed annually to ensure that their departments receive sufficient funding to support their teaching efforts in the medical education curriculum as well as provide sufficient support staff for the educational and research missions. In addition, MCVP makes available an Academic Enhancement Fund to the department chairs to support the academic mission of clinical faculty.

Pressures to generate revenue by faculty are not onerous and are consistent with assuring a fair balance of faculty activity in teaching, research and patient care to support the SOM mission. The use of financial resources is monitored through the Audit and Compliance Office, which has a dual reporting structure to the university and the VCUHS. SOM and MCVP business functions are routinely audited by the Audit and Compliance Office with input provided annually from the senior associate dean for finance and administration and MCVP executive director as to areas of potential concern or in need of special review. In addition, the Commonwealth has adopted a statewide compliance framework -- ARMICS (Agency Risk Management and Internal Control Standards) -- that requires the dean to review, revise and certify internal control processes and procedures annually. The School’s relatively stable yet challenged finances allow it to attain its objectives.

The dean, as the chief academic officer of the SOM, has full autonomy for the administration of the academic programs of the school and the development and administration of the academic budget. In addition the senior associate deans for medical education, faculty affairs, research, and finance and administration and a host of associate and assistant deans and staff assist the dean. There are frequent formal and informal meetings between university management (Council of Deans) and academic administrators (Senior Leadership Team chaired by the Vice President for Health Sciences and CEO of the Health System and meets weekly) for the dean to engage, inform and solicit support for resources for the school.
The organizational locus for the planning, implementation, evaluation and oversight of the curriculum is the Office of the Curriculum under the leadership of the senior associate dean for medical education and student affairs who reports directly to the dean. The office responsible for the development and maintenance of the tools for curriculum monitoring and management is the Office of Application Development and Data Management. The staff of this office reports to the Executive Director of Technology Services who reports to the senior associate dean for finance and administration who reports to the dean.

The dean determines the size of the entering class in consultation with the senior associate dean for medical education and student affairs. Given the current availability of clinical assignments, the dean has decided to maintain class size at 216. The dean will continue to reassess on an annual basis the extent and the rate by which the school will increase its class size.

Over the last 5 years, the percentage of funding obtained from tuition and fees has been stable at approximately 6.5%. The dean recommends tuition rates annually that are reviewed by both the vice president for health sciences and president of the university who in turn submit recommendations to the VCU Board. The dean, with the support of the university, has continued to recommend modest increases (typically capped at the rate of inflation as measured by the consumer price index) for continuing students. As part of the annual review, the dean evaluates how VCU's current tuition, fees, total cost of attendance, and student debt level compares to other Virginia institutions and other public institutions nationally with a goal to limit the impact on students while maintaining competitiveness with peer institutions. Over the last decade, the Board has always accepted the dean's recommendations on annual tuition levels.

The pre-clinical curriculum with the exception of the anatomy labs is entirely taught within the MMEC. The building has 40,000 square feet of classroom space, which consists of one large capacity theater, 4 floors of learning studios with capacity for 132 students per floor for interactive group work, and 13 small group rooms. The 9th and 10th floors have 10,000 square feet dedicated to simulation and 9,400 square feet for standardized patient use respectively. There are 8 small group rooms equipped as physician’s offices for the teaching of physical examination skills. The classrooms are all equipped with state of the art technology for teaching. A newly renovated 12,000 square foot space for simulation has been completed on the Inova campus.

The anatomy labs are located in a separate building (Sanger Hall, former medical education building) adjacent to MMEC. The anatomy lab was renovated in 2008. In 2014, all the monitors were changed to high definition monitors to accommodate new teaching methods, which involved pre-dissection videos recorded with a high definition camera. The anatomy labs and simulation space are shared spaces with other schools, residents and hospital staff. The anatomy lab schedules are set from year to year to avoid conflicts with the different schools (SOM, Dentistry, Graduate Schools and Allied Health) that utilize the space. The simulation center schedule is planned months to a year in advance. Any conflicts are resolved between the affected parties negotiating a resolution to the conflict.

The majority of clinical experiences for the required M3 core clerkships occur at the VCUHS inpatient and outpatient locations, McGuire Veterans Administration Hospital or the Inova Fairfax Hospital. Some students are assigned to the Chippenham-Johnston Willis (CJW) Hospital (Hospital Corporation of America facility located 8.3 miles south of downtown Richmond) for a portion of their pediatric clerkship (2 weeks) and three students per rotations are assigned to the Riverside Hospital (located 71 miles southeast in Norfolk) for a 6-week OB/GYN clerkship.
The clerkships develop objectives from both the SOM objectives and national guidelines. Clerkships select appropriate numbers and types of patient encounters and settings to meet those objectives. Students are required to care for a specified number of patients with key clinical conditions and the clerkship directors review sites to ensure that students are provided those experiences. Additionally, curriculum council reviews each clerkship experience on an annual basis to determine if students are meeting these expectations. Lastly, curriculum council reviews each clerkship to determine if students are in need of alternative experiences (e.g., simulation, on-line cases, etc.) to meet the learning objectives. If so, additional clinical space is obtained. During the study year, no students needed additional alternative experiences to complete required inpatient and ambulatory learning experiences.

All clinical sites have adequate space for team rooms, study space, computers, conferences and teaching spaces. Every site has wireless networks for computer access. Each site is equipped with call rooms and lockers. On the VCUHS campus there are study spaces throughout the hospital. There are student study spaces in MMEC, over 70 study carrels in two student study lounges and multiple study areas within the library. At the VAMC, students have access to study space in the patient care areas as well as in the library. At the Inova campus, students have numerous places to study in the health system as well as in the Claude Moore Health Education and Resource Center.

All students, regardless of what campus they are assigned, have access to VCU libraries, James Branch Cabell Library on the Monroe Park Campus and the Tompkins McCaw Library (TML) on the MCV campus. In addition to the library buildings, students have free online access to hundreds of journals, texts and periodicals through library databases. On the Inova campus, students have 24-hour access to the Jacob D Zylman Health Sciences Library. The VAMC, Riverside Hospital, and CJW hospitals all have small libraries that students can use as a study space with electronic access to the VCU library. The Student ISA raised several issues that are being resolved: the need for additional locker space at VCUHS, limited space on the Pediatrics rotation team rooms, and poor wireless connectivity at the VAMC.

VCU has an independent police force with offices on both the Monroe Park and MCV campus. Expedited access to Police is available by strategically placed “blue phones” all over campus, or by using a free smart phone app. The VCU police are aided by private security hired by VCU, Richmond City police and Virginia State police. Police patrol the campuses 24 hours a day by foot, bicycle and patrol car. Other services offered by the VCU police include bike registration, bike U-locks, building access control, an emergency communications center, G4S security patrols, computer registration, rape aggression defense training, text alerts, residence hall security, special event coverage, a safe zone program focusing on LGBTQI individuals and a victim-witness program, video surveillance of all buildings, and security escort services after normal business hours. Statistics on person-on-person crimes reveals the MCV campus to be one of the safest in Virginia. Inova has 24 hour on site campus security available 365 days a year. Notifications about crime or threatening situations are sent via text, email, electronic message boards, and emergency communication speakers. The pediatric unit at CJW hospital is a locked unit. The students’ call room is locked at all times and only accessible via combination lock. Riverside Hospital utilizes several security personnel on-site 24 hours a day, and a badge swipe system for entry into L&D. The McGuire VAMC provides on-campus security 24 hours a day, 365 days per year. Students are issued VAMC identification cards, as are all VAMC employees, for access to the VAMC campus during non-business hours. Although VCU SOM students do not travel to detention facilities, there is a locked prison unit within VCUHS for the care of hospitalized inmates. The unit is heavily guarded with safeguards in place for all personnel. Students and Faculty on both campuses are required to view the respective emergency preparedness and disaster policies annually.

The VCU library provides services on a contractual basis to VCUHS overseeing a hospital-based Community Health Education Center. The library also oversees a computer center in the Hunton Hall.
student center. The library has more than 16 FTE professional staff and 18 FTE technical and paraprofessional staff and has more than 150,000 book titles, almost 11,000 journal subscriptions and 330 databases. VCU libraries is a Resource Library in the National Network of Libraries of Medicine and a member of the Association of Southeastern Research Libraries, the Scholarly Publishing and Academic Research Coalition, Coalition for Networked Information, Biomed Central, Richmond Academic Library Consortium (RALC), and the Virtual Library of Virginia (VIVA).

All students and faculty have access to online resources from remote sites through EZ-proxy, a Web-based gateway that uses the eID and password. All students and faculty have access for free to materials not available in the TML collection via interlibrary loan. All students and faculty have access to the UpToDate database even from remote sites. Librarians offer free consultation via web-conferencing software. As a result of the independent student analysis, the library recently increased its hours to M-Th 7:30AM to midnight, Friday 7:30AM-8:00PM, Saturday 9:00AM to 6:00PM and Sunday 11:00AM to Midnight. Librarians are active participants in curriculum council, division directors and clerkship directors meetings and lesson planning consultations. The SOM Research and Education Librarian is actively involved in faculty development sessions, teaching in the population health and evidence based medicine course, and participates in sessions for the Physician, Patient and Society course.

The Jacob D. Zylman Health Sciences Library, Fairfax Inova Hospital is under the direction of Lois Culler, MSLS. Appointed in 2004, Culler reports to the associate dean for medical education on the Inova campus. The Health Sciences Library provides resources and services to support the clinical, educational, and research needs of all physicians, staff, residents and students. The library owns 1300 book titles, 3,650 journal subscriptions and 5 databases. All VCU students and Inova faculty also have access online to all VCU library resources. The librarian interacts with every M3 student during each M3 clerkship as they complete their evidence based medicine projects. Students have 24 hour a day badge access to the library seven days a week.

The VAMC library supports the staff of the medical center and four satellite clinics, as well as residents and students in Pharmacy, Dentistry, Medicine, Nursing, Social Work, Occupational Therapy and Physical Therapy. Medical students on rotation at the VAMC have 24-hour access to the library. The VA library is a member of the VA Library Network (VALNET). The library utilizes CyberTools for its integrated library system and online catalog. The library has more than 20,000 book titles, 7,000 journal subscriptions and 52 databases.

All three libraries are members of the National Libraries of Medicine and use an automated interlibrary loan and document delivery system, along with DOCLINE and OCLC to provide users with materials that are not available locally. Both the ISA and AAMC GQ indicate students are satisfied or very satisfied with VCU SOM library resources.

In addition to IT services provided centrally by the university, the SOM invests $3.2 million annually to support a staff of 44 FTE who reports to the senior associate dean for finance and administration. The SOM technology services team provides dedicated application and software development, computer support services, classroom technology support, web design, and information security support. The university has broadly adopted SOM advances in application and software design in a number of key areas including curriculum support, faculty evaluation and assessment, and research administration.

The IT directors for the Academic Systems and Educational Technologies unit are active members of the curriculum council, which provides oversight for the planning and delivery of the curriculum. IT staff in the Academic Systems unit develop, maintain and support all applications and databases relevant to the curriculum. The Educational Technologies unit provides on-site staff to coordinate and provide support
to faculty in using technology effectively for instruction. There is a monthly meeting between the IT staff and the leadership in curriculum to discuss ongoing and new projects that will be needed to support medical curriculum learning objectives.

Videoconferencing hardware and software codecs are used to link instructional sites/campuses together. The technology staff maintains, supports and coordinates the delivery of video conferencing sessions between instructional sites/campuses. The VCU SOM has its own curriculum management system developed in house by our IT staff called eCurriculum. eCurriculum is available anywhere that the Internet is available. Students must log into eCurriculum using their eID and password.

Students are required to have laptops and bring them to class. They take all quizzes and examinations on these laptops. Both the AAMC GQ and the ISA indicate that students are satisfied or very satisfied with computer support services.

The VCU SOM does not accept transfer students. In the event of a natural disaster forcing the closing of a medical school, we would consider accepting transfer students only if clinical spaces are available and it would not compromise the education of our students. No transfer students have been accepted in the last three years. Visiting students must apply for electives through the Visiting Student Application System (VSAS). Visiting students are accepted for an elective only after VCU SOM students have been placed in electives and spaces allow for visiting students to be accepted.

There are individual and group study rooms and lockers available on floors 5, 6, 7, & 8 of MMEC. After class hours, the students may use the classrooms for study space. After hours, floors 6 and 8 are designated “quiet floors.” There is a study lounge designated for medical students on the 8th floor of Sanger Hall, which is currently undergoing renovation. Hunton Hall has study space for all medical campus students as does the library. There is relaxation space in the many common areas of MMEC, in Hunton Hall and in the hospital cafeteria. In addition, there are many courtyards for relaxation when the weather allows. There are 170 lockers in the VCUHS hospital. There are reserved call rooms for medical students. Students have overnight call during some clerkships at Inova. They have a designated, secure call room for medical students only. At CJW, there is a call room available for the medical students although medical students are not required to stay overnight. Students do not take call at Riverside hospital, however, they have access to a call room located within labor and delivery if rest is needed. The McGuire VAMC does not require overnight call, but call rooms are available for students who may need to rest. Space is adequate on campus for instructional, research, service, small group teaching, and personal study.

Standard 6: Competencies, Curricular Objectives and Curricular Design

Following the 2008 LCME Survey, the Curriculum Planning Committee performed a complete review of the curriculum. Prior to this time, the SOM program objectives were based on the AAMC Medical School Objectives Project. The Curriculum planning committee wanted to reflect the continuum between undergraduate medical education, graduate medical education and continuing medical education and based the new SOM objectives on the GME core competencies.

In fall of 2012, the Faculty Development team, under the leadership of Drs. Ike Wood and Terry Carter, associate dean for professional instruction and faculty development, developed a series of working sessions around the theme of “Strategies for Curriculum Design and Implementation.” This process was based on a learner-centered approach to developing goals and objectives, teaching methods, and assessment strategies. Faculty Development staff and selected faculty were involved in the design and
delivery of these sessions. The ten-week series of 2 to 6 hour sessions covered the following topics and provided opportunities for practice and discussion:

- Introduction to learner-centered educational design.
- Writing robust, learner-centered goals and objectives.
- Peer feedback sessions for goals and objectives in development.
- Vella’s concept of learning tasks.
- Recognizing the continuum of medical education: Incorporating ACGME Milestones and Using Longitudinal Cases for Teaching Basic and Clinical Sciences.
- Developing lesson plans.
- Instructional design tools and resources.
- POGIL (Process-Oriented Guided Learning).
- Making large classes interactive.
- Team based learning (Guest Faculty from the TBL Collaborative).
- Student and learning assessment and evaluation.
- Instructor and course evaluation.

These sessions were designed around and supplemented by a resource notebook providing worksheets, models, guided exercises, and references developed by Faculty Development staff and organized into the following sections:

- Determining Goals and Objectives for your Course.
- Aligning Goals and Objectives with Assessment and Evaluation Strategies.
- Incorporating Active Learning Strategies for Converting Lectures into Small Group Learning Experiences.
- Creating an Curriculum Plan that describes Who will Teach What, When, and for How Long, Using Active Learning Strategies.

In 2014, VCU SOM was chosen as one of the pilot schools for the AAMC EPA project. Thus, to reflect changes based on the milestones project and core entrustable professional activities (EPAs), the SOM objectives were again reviewed and revised to include activities felt to be important for a graduating medical student. The SOM objectives were sent to the faculty for review, presented to the Executive committee and eventually approved by the curriculum council.

Preclinical curriculum course planning starts with the SOM program objectives, mapping learning objectives for that course to SOM objectives. Each division maps the objectives to the course objectives and each lesson maps the objective to the division objectives. Thus for each lesson, we are able to map back to the parent SOM objective. For each lesson, the method of assessment for each objective is also mapped. At the end of every division, a designated course reviewer ensures that the methods of assessment are appropriate to determine competency for the objectives listed. This is then reported to and approved by the curriculum council.

Clerkship directors determine clerkship objectives based on the SOM objectives and national standards for that specialty. The method of assessment of this objective is included. The clinical curriculum council committee when it reviews the clerkship assesses whether the assessments are appropriate to assess the competency of the objective. Curriculum council approves the objectives. The curriculum council is also charged with ensuring that there is appropriate vertical and horizontal integration of the curriculum. The curriculum map and the review forms helps with this process.
The medical education program objectives are available on the SOM website, in the student handbook, In eCurriculum and are reviewed with the MS-1 medical students during orientation. The objectives for each course, division and lesson are available on eCurriculum. The medical education program objectives are sent to the faculty via email listserv annually for their review and comment. All teaching faculty have access to eCurriculum. The clerkship directors for individual clerkships notify residents of the clerkship objectives annually. The clerkship objectives are also reviewed in the New Innovations Residency Management System before each rotation and the residents must sign off affirming that they have viewed them.

There is an extensive list of **required clinical experiences and skills** that each student must complete as part of their core clerkships and are present in the student ‘passport’. The clerkship directors from both VCU SOM and Inova and the clerkship committees for each clerkship developed this list to meet SOM learning objectives. For each clerkship, the committees started with the medical program objectives and a national clerkship organization’s recommendations (e.g. Council on Medical Student Education in Pediatrics). They were then reviewed and approved by the curriculum council committee. For each skill, a student must demonstrate competency on a patient or in a simulation. For a patient encounter, students are expected to perform an assessment of the clinical condition and formulate an initial plan of management. Review of student passports has revealed that students fail to acquire required clinical encounters or skills less than 1% of the time.

There are multiple opportunities in the pre-clinical curriculum for students to learn about and practice self-directed learning. During each block of study in the first semester, students have an opportunity to interview, as a group, standardized patients. They then must research the symptoms and order more testing to determine the diagnosis, identify their own learning objectives to complete the process, and propose a diagnosis. This is done during formal class hours. In a separate assignment during the Biochemistry course teams are assigned a disease which they must research. This requires them to identify learning objectives, and find and determine the credibility of resources. Time is provided during class but work outside of formal class is also required. They prepare a power point presentation and present it to the class, receiving feedback from a basic scientist (biochemist) and a clinician. During the Applied Medical Sciences the Marrow, Endocrine, Reproduction, Cardiovascular, and Renal courses require group case-based assignments that are completed outside of class. In order to encourage time for self-directed learning as well as balance and wellness, there is a policy limiting the number of hours that students can have in-class activities in a week (no more than 28 hours). In addition, there is a limit (30 minutes per hour of lesson, or one hour for a TBL) to the amount of out-of-class work that can be assigned to students during the week. In general, students have at least one afternoon completely free of any activity each week. In most weeks, they have more than one free afternoon and afternoon classes on other days do not go later than 3PM.

Each clerkship determines the types of experiences necessary to enable students to fulfill all requirements in the student passport for that clerkship. There are no required electives in the pre-clinical curriculum. Students may shadow and participate in interest groups to help explore their potential career options. In the third year, students have 4 weeks of required electives in which they take two, two-week foundational electives. These electives represent a broad variety of experiences to allow students to explore fields not typically represented by the usual M3 clerkships, or to explore something more in-depth.

In the M4 year, students have 24 weeks of electives. They choose electives in consultation with an advisor chosen for them based upon their choice of specialty. Students take a balanced mix of specialty and non-specialty based clinical and non-clinical electives.
All students participate in a service-learning course called Learners Serving the Needs of Communities (LINC) in the MS-2a semester. Facilitating the interprofessional education program, the following programs are located on the MCV Health Sciences Campus: School of Allied Health, School of Dentistry, School of Nursing and School of Pharmacy. A description of the inter-professional programs is discussed in standard 7 below. In addition, there are masters and doctoral students in the basic sciences within the SOM. Graduate students act as teaching assistants in some medical student courses. The MD/PhD students interact with masters, doctoral students and post-doctoral fellows throughout the graduate phase of their education.

The medical education program consists of 150 weeks during the four year curriculum.

**Standard 7 Curricular Content**

The ultimate goal of the VCU SOM program leading to the MD degree is to provide a broad based generalist educational experience that will allow each student to achieve competencies that cross all fields of medicine. Emphasis is placed on the development of the attitudes, knowledge, and skills necessary to promote professionalism and lifelong learning among our graduates. To meet this goal, the faculty of the School of Medicine has undertaken a three phase project to restructure the curriculum of the SOM by integrating basic science disciplines, providing greater clinical exposure in year one, and increasing small group and team learning activities.

In 2013, the VCU SOM launched a new integrated pre-clinical curriculum, divided into three semesters. The first semester course is the Scientific Foundations of Medicine (SFM) that teaches the foundational principles of biochemistry, genetics, physiology, pharmacology, microbiology, immunology, histology and pathology required to understand the organ systems in the next phase of the curriculum, the Applied Medical Sciences. At the completion of SFM, the students take a comprehensive examination prepared by the faculty of the SOM to determine if the student is ready to progress to the next phase of the curriculum.

Pre-2013 SOM Curriculum diagram:
# Virginia Commonwealth University School of Medicine

## Four Year Curriculum – 2006-2007

### Year 1

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* EXACT SEQUENCE OF CLERKSHIPS AND ELECTIVES VARIES.

Revised 11/13/07
In January of the first year, the student enters the next phase of the curriculum, Applied Medical Sciences. The MS2a semester consists of two courses Marrow and Movement (Hematology/Oncology and Musculoskeletal Divisions) and Glands and Guts (Gastroenterology, Endocrine and Metabolism and Reproduction Divisions). The students begin the Cardio-Pulmonary-Renal Course after their return from summer break. The final course is Mind, Brain and Behavior, which include neuroscience, neurology, neurosurgery and behavioral sciences. Topics such as human development and the life cycle, and geriatrics are woven into the first 18 months of the curriculum.

The backbone of the curriculum running all three semesters are three longitudinal courses: the Practice of Clinical Medicine (PCM), Physician, Patient and Society (PPS) and Population Health and Evidence Based Medicine (PH). PCM is the physical diagnosis course where students learn how to take a history and perform a physical examination, document them in a medical record and begin honing diagnostic reasoning skills. Students are paired with a small group leader (8 students per group) for the entire pre-clinical curriculum. They are able to practice with standardized patients and the experience culminates with a community preceptorship. There is an Observed Structured Clinical Examination (OSCE) at the close of every semester that builds on the previous semester’s knowledge. PPS is a course that covers topics including complementary and alternative medicine, ethics, legal aspects of medicine, the patient
experience, physician-patient relationships, palliative care and spirituality in medicine. Population Health teaches statistics, evidence based medicine, health disparities, health systems and socioeconomic aspects of medicine, basic, clinical and translational research techniques, and public health and epidemiology issues such as outbreak management.

After completion of the pre-clinical curriculum, students take the USMLE Step 1 examination after an 8 week study period. Students must pass Step 1 to move on to the clinical phase of the curriculum. The M3 core clerkships consist of 8 weeks each of internal medicine and surgery, 6 weeks each pediatrics and OB/GYN, and 4 weeks each of neurology, psychiatry, family medicine and ambulatory medicine. During the third year, students take two, 2-week electives called foundational electives to explore other potential specialties. The M3 year is completed by June. During the fourth year, students must complete two acting internships, an urgent care elective (ICU or emergency medicine), and the capstone course. The remaining time (24 weeks) is for elective experiences. Students are well trained in the care of patients across all stages of the human life cycle. Topics are integrated throughout the preclinical curriculum and required clinical experiences. On core clerkships students see patients in the ambulatory setting, hospitalized patients, and critically ill patients.

The AAMC GQ for 2012-2013, 2013-2014 and 2014-1015 indicates that students believe their instruction in the areas of diagnosis of disease, management of disease, health maintenance, disease prevention and health determinants are appropriate. Topics of acute and chronic care are integrated into the organ systems courses and clerkships. In addition, PCM includes introductory content on chronic disease management and acute focused care. The topics of continuity of care/primary care are taught in PCM and PPS but are also integrated into the other courses and clerkships. Rehabilitative care is integrated into multiple courses although primarily Movement and Mind, Brain and Behavior (MBB). End-of-Life care learning objectives are included in PCM, PPS and in the clerkships. Determinants of health are taught in PPS, PH and are also integrated in to the different courses. Finally, health promotion and wellness is integrated throughout the curriculum and particularly in PCM and PPS.

Objectives and assessments related to the normal human development and the life cycle across the life span of the human are in PCM, Glands and Guts and MBB in the pre-clinical curriculum and Psychiatry, Pediatrics, OB/GYN, Internal Medicine and Family Medicine in the clinical clerkships. Adolescent medicine is taught in PCM and MBB in the pre-clinical curriculum and Psychiatry, Pediatrics, OB/GYN, Family Medicine and to a lesser extent Internal Medicine in the clinical years. Geriatrics is integrated throughout the preclinical courses of the Applied Medical Sciences in terms of the physiology of aging, but also as distinct modules in PCM. Students participate in a yearly Geriatrics forum in years 1 and 2, do a long term care visit and a geriatric house calls visit with a Geriatrician, participate in the Senior Mentor project and in the fourth year participate in the interprofessional Geriatric virtual case. They also study geriatric related topics in Psychiatry, Family Medicine, OB/GYN, Neurology and Internal Medicine.

The primary course where students learn about the scientific method, basic, clinical and translational research is Population Health and Evidence Based Medicine. This is a four-year longitudinal course that begins early in the MS-1 year and continues throughout medical school. During the pre-clinical years the students learn aspects of study design including sample size, recruitment, and biostatistics as well as critique of the literature and clinical trials. Students are assessed on the acquisition of this knowledge through activities designed to practice and assess a wide range of knowledge, skills, attitudes, including multiple choice examinations, critiques of various research study designs, required literature reviews, design of a research project based on a research question, evaluation of case results based on basic science research, and discussion of the implications and limitations of clinical trials. In several courses
throughout the pre-clinical curriculum, students are given experimental data to interpret, or analyze classic experiments that prove important physiological or pathophysiological principles.

In the clerkships, students complete an evidence based medicine project during each clerkship and must demonstrate proficiency in the following domains: demonstrate the ability to formulate a specific clinical question, demonstrate proficiency in performing a search of the medical literature, identify two research articles addressing a clinical problem in the context of a specific patient, demonstrate the ability to evaluate these two articles for study methodology, effectiveness, and generalizability, demonstrate the ability to succinctly summarize the evidence in the context of patient preferences, and present the summarized evidence as a recommendation to the patient.

The curriculum is built around problem solving. An increasing number of our sessions are either flipped classroom, team based learning, case based learning, process oriented guided inquiry learning, simulation or problem based learning. Students work individually or in groups to solve problems or use clinical reasoning skills from the very first week they are in class. From the design of the classrooms and the classroom furniture to the technology built to support the classroom teaching, the VCU SOM demonstrates our commitment to emphasizing the application of knowledge and critical thinking and problem solving.

The case builder system allows students to test their hypotheses regarding differential diagnoses and order diagnostic studies while learning about cost effective care. Simulation teaches team building as they learn critical thinking skills. In all courses, lessons are designed to help students develop higher thinking skills and the ability to synthesize and apply information. Students are also expected to teach and learn from each other, ultimately the best assessment of what they have learned.

Living and working in a large urban environment, VCU SOM students are exposed daily to many societal problems in our patient population. To determine which problems to focus on in the curriculum, the faculty used the following resources: AAMC GC, AAMC/LCME Hot Topic List, societal issues included in the content for Step 1 and Step 2 CK and CS of the USMLE, societal issues germane to the Commonwealth of Virginia and the surrounding region and review by curriculum council of societal issues where students must achieve competency to achieve the objectives of the SOM.

All students are required to complete the Intercultural Development Inventory (IDI), which assesses them individually and as an aggregate group about their likelihood to be prejudicial and biased in their interactions with individuals of different race, ethnicity or sexual orientation. In the PPS through a series of activities that involve patient panels, videos, class discussions and reflective essays, they continue to explore their own biases and how they can overcome their prejudices as young professionals. In Project HEART, they meet with a faculty mentor in small groups and talk honestly about their own gender and cultural biases that may be impeding their professional growth. Students watch videos on intimate partner violence and write reflective essays about their reactions and biases. In PCM students are taught to interact with standardized patients who present difficult challenges, such as substance abuse and mental illness, and are rated on their professionalism and compassion. Students learn about health disparities throughout the curriculum in the different courses of the Applied Medical Sciences. There is also material specifically about health disparities in both PPS and Population Health and EBM.

Medical ethics is taught in the Physician Patient and Society course and is integrated into the individual courses as appropriate. For example, in PPS, students are taught about Tuskegee and the African AZT trials. In the Renal course, they discuss the ethics of organ transplantation.

As a component of the evaluation of every core and advanced clinical experience, each evaluator assesses students on professionalism. One component is ethical behavior in the provision of patient care...
clerkship may recommend that a student fail a clerkship for an egregious breach of ethical behavior, which is then reviewed by the /Promotions Committee for development of a remediation plan. Student professionalism issues are reported (without disclosing student identities) to the SOM Professionalism Committee which may offer suggestions for addressing any perceived trends or recurring unprofessional behaviors in the overall learning environment.

Communication skills are introduced in week one of the curriculum when students are taught the fundamentals of history taking in PCM. These skills continue to be refined and expanded over the next 18 months of the PCM curriculum. They practice motivational interviewing, giving bad news and requesting consuts from other physicians. Students receive formative and summative feedback on their communication skills as part of their evaluation. In the Pediatrics clerkship, all students are required to compose oral presentations in a “family-centered rounds” style. Students are instructed how to perform this skill effectively and are given feedback on their ability to present to families and other providers (i.e. nurses) in a manner that is understandable by all parties. In addition, students complete two interprofessional courses in the preclinical years in which they learn about the roles and responsibilities of other professionals on the healthcare team. They work together in classroom teams to solve problems that require communication among the different pre-professional students. In their MS4 year, both in the interprofessional critical care simulations course and in the required simulated case experience, communication skills with other professionals are assessed. In the 2014 AAMC GQ 97.8% of students agree or strongly agree that they have the communication skills to interact with patients and other health care professionals.

The Center for Interprofessional Education and Collaborative Care at VCU was established in 2013 with the primary goal of creating and implementing curricula that provide multiple exposures to interprofessional practice. Students from the schools of pharmacy, dentistry, nursing, social work and allied health join the first year medical students for several important interprofessional experiences. During the first year senior adult mentoring project, in collaboration with the Department of Gerontology, students from several different schools go into the home of an elderly person living in an assisted living facility and together they assess the patient for risks such as falls. In spring of the first year, they take a Quality and Patient Safety course with an interprofessional group. During the third year, some clerkships may be comprised of interprofessional teams for at least part of the experience. In the fourth year, all students participate in the virtual case experience and in the critical care simulation with students from other schools. They are assessed on their ability to work together collaboratively.

**Standard 8: Curricular Management, Evaluation, and Enhancement**

The curriculum council is responsible for the design and management of the curriculum. There are 12 voting members of the curriculum council. One member must be a basic science chair, one must be a clinical department chair, at least one clinical faculty member from each of the three institutions and two basic science faculty. The faculty members are solicited from the faculty and are selected by the existing members of the curriculum council based on their knowledge of the candidate’s expertise and interest. The council selects one member to be chair. Each class has student representatives on the curriculum council who are non-voting members. The dean appoints other associate and assistant deans and the Directors of Instructional Technology and Academic Information Systems to be ex-officio members of the council but they are advisory, non-voting members. The terms of service of the curriculum council are staggered.

In addition to our curriculum council, there are two sub-committees, the pre-clinical curriculum committee and the clinical curriculum committee. The charge of these committees is to critically review the divisions, courses, clerkships, and any required experiences of the curriculum and prepare a report to
be presented to curriculum council. The membership of the pre-clinical subcommittee includes a chair, two basic science faculty and two clinical faculty who teach in the pre-clinical curriculum, the senior associate dean for medical education and student affairs, assistant dean for medical education, assistant dean for curriculum (Inova campus) and student representatives from the MS-1 and MS-2 class, representative of the Office of Assessment and Evaluation studies, and a representative from the simulation center. The clinical subcommittee has a chair, one basic science representative, three clinical faculty representatives, senior associate dean for medical education and student affairs, assistant dean for clinical medical education, assistant dean for curriculum (Inova campus), associate dean for medical education (Inova campus), representative of the office of assessment and evaluation studies, representative of the simulation center, student representatives from the clinical years.

Outcome measures examined in evaluation of the medical program include: student evaluations of faculty and the divisions, AAMC GQ, graduation rate, attrition rate, USMLE Step 1 and 2 first time pass rates and scores, student satisfaction surveys, match statistics, student honors and awards, and postgraduate surveys of program directors (GME) one year after graduation.

Each course, division, clerkship and segment of the curriculum is vigorously reviewed annually in the following domains: instruction, resources, assessment, curriculum and content, sequence of presentations, and student evaluation data. Division directors must indicate the extent to which each of the following vertical threads are integrated in their division/course/clerkship: anatomy, behavioral sciences, clinical and translational research, cultural competency, evidence based medicine, healthcare disparities, healthcare economics, histology, immunology, human genetics, interprofessional education, medical bioethics, microbiology, pathogenesis, pharmacology, physiology, population medicine, practice of clinical medicine, primary, secondary, and tertiary prevention, and rehabilitation. Similarly, as a component of the course review each division/course/clerkship and segment must indicate the extent to which each has appropriate horizontal integration by using the content database to determine if there is sufficient prerequisite knowledge for the section, non-purposeful redundancies or omissions, a logical progression of the curriculum across times and an expectation that students will use higher order cognitive skills as they move through various phases.

The curriculum council has been active in correcting problems in the curriculum, whether it is with faculty that are poorly evaluated or clerkships that receive poor ratings. They work with the division or clerkship director to develop a remediation plan. The associate dean for professional instruction and faculty development is an ex-officio member of the curriculum council and is helpful in this process. Annually, the curriculum council will review results of the following outcome data to assess the efficacy of the curriculum: USMLE and NBME subject examinations, student scores on internally developed examinations, performance-based assessment of clinical skills (e.g. OSCEs), student responses on the AAMC Graduation Questionnaire, student evaluations of divisions and clerkships, student advancement and graduation rates, NRMP match results, specialty choices of graduates, assessment of residency performance of graduates (GME feedback), and practice location of graduates. After every four-year cycle of the curriculum, the curriculum council performs a comprehensive review of the curriculum as a whole by integrating data from reviews of divisions, courses, clerkships, and segments of the curriculum and data enumerated above. Since the implementation of the new curriculum was in 2013, there has not yet been a full four-year cycle of the new curriculum.

The Curriculum Planning Committee first identified the outcomes desired in the graduating medical student through the backwards design of the curriculum. The committee identified the behaviorally based and measurable objectives that would developmentally bring students to the desired outcomes. The committee designed horizontal and vertical integration of content such that the curriculum addressed the knowledge, skills and attitudes of students and continues to build in
expectations of what the learner should know and be able to do related to attitudes, skills and knowledge as they progress through the four years. The medical education program objectives serve as a guide to determine at what points in the curriculum there should be a focus on specific objectives, and where it is best to address them longitudinally and developmentally. The longitudinal courses that start in the preclinical years also serve as a backbone of the curriculum for those medical education program objectives that tend to be more developmental.

The basic science faculty participating in design of the new curriculum felt that Phase I, (Scientific Foundations of Medicine), of the curriculum was necessary because of the diversity of the educational backgrounds and experiences of matriculants. Students need a baseline level of basic science knowledge delivered in a clinical context that would enable them to be able to understand the fundamental normal functioning and pathophysiology of the organ systems in the Applied Medical Sciences.

The evaluation of curriculum outcomes is guided by the SOM medical education program objectives. As described earlier, these are mapped down through individual lesson objectives. The curriculum council reviews the methods of assessment for individual division objectives to determine that they are valid and reliable measures and to ascertain if the medical education program objectives are being met. In addition, there are a number of summative assessments that act as gateway examinations after various segments of the curriculum: cumulative exam, Objective Structured Clinical Examinations (OSCEs), Step 1 Practice examination, Step 1 examination and Clerkship subject examinations. The faculty of the division course or clerkship determines the appropriate course objectives and teaching and assessment methods, which are presented to the subcommittee of the curriculum council and the curriculum council. The Office of Assessment and Evaluation Studies is represented on curriculum council (ex-officio) and is available to assist in determining appropriate methods of assessment.

The quality of teaching is evaluated as part of every course and clerkship review. Feedback used to evaluate quality includes student evaluations (50-90% participation rate), observations by the division director and if requested, by other peer reviewers. Faculty who perform below expectations are provided a remediation plan developed with the assistance of the associate dean for professional instructional and faculty development. The appropriate subcommittee assesses the overall quality and outcomes of the course/clerkship annually, and a summary report is sent to curriculum council listing strengths, opportunities for improvement and a preliminary remediation plan. An extremely detailed review packet is completed by the course/clerkship director (see 8.3: SD-1), which is analyzed by a member of the appropriate curriculum subcommittee. The subcommittee prepares a report that is vetted by the curriculum council.

The senior associate dean for medical education and student affairs serves as the liaison to the chief academic officer for the activities of curriculum council. The chief academic officer retains the capacity to veto any decisions by curriculum council that are not consistent with the mission of the school or university, or for which resources would not be available to successfully carry out the plan. The decision is returned to curriculum council for reconsideration. Since the last LCME accreditation visit, the chief academic officer has never vetoed a decision of the curriculum council, but on occasion, has asked the council to reconsider a decision if it is not consonant with the mission of the school or available resources cannot support it.

Required clerkships are reviewed annually. The clerkship director completes a comprehensive course assessment form. Clerkships for MCV and Inova are reviewed together. In addition to student evaluation data, the reviewer also looks at data regarding student performance at both campuses. The chair of the subcommittee summarizes the findings of the clinical report and then provides a summary to curriculum council where it is vetted and the remediation plan is verified for required completion. The curriculum
council also compares the performance data on Step 2 by campus, match statistics and other metrics to ensure the comparability of the educational experiences on the two campuses. Final reports are submitted to the relevant department chairs and the senior associate dean for medical education and student affairs debriefs the chief academic officer.

All phases of the curriculum are reviewed annually. The assistant dean for the preclinical curriculum prepares a report for SFM and AMS phases and the assistant dean for the clinical medical curriculum prepares a report for the core clinical clerkships. These reports include student survey data, student performance data, student hourglass surveys, previous curriculum council reports as well as follow-up information on curriculum council action items. The assistant dean for the clinical curriculum and the assistant dean for curriculum for Inova campus work collaboratively on the report and include comparison data from the two campuses. The reports are reviewed in subcommittee and in curriculum council. As the new curriculum has not yet completed a full four years, the curriculum as a whole is yet to be reviewed, after graduation of class of 2017. The data collected will include the reports for the phases of the curriculum, the scores from USMLE Step 1, subject and Step 2 examinations, OSCE, graduation rates, match rates, AAMC GQ data and internal surveys of the educational environment.

**Curricular content monitoring** occurs with the review of every division course and clerkship with particular attention paid to the horizontal and vertical integration of the curriculum. Examples of how curriculum content monitoring has resulted in intervention include: at the completion of Phase One of the curriculum, curriculum council review revealed that the autonomic nervous system was being taught in two consecutive divisions of SFM and again in the Mind, Brain and Behavior course. It was determined that this degree of redundancy was unnecessary, so the normal autonomic nervous system is now taught only in the Principles of Physiology division within the Scientific Foundations of Medicine. In another example course reports revealed that multiple divisions taught cell signaling. The curriculum council determined that it should be taught in the Molecular Basis of Health and Disease from a biochemical standpoint and the Principles of Physiology from a physiological standpoint only, limiting the amount of redundancy and overlap. An example where review of content revealed an unintentional gap in education was in male reproductive physiology. A review of the curriculum revealed this had been inadvertently omitted. This has now been corrected and this content has been integrated into the Reproduction course.

The curriculum is monitored through the use of a database that was created by the Division of Academic Information Systems. It utilizes USMLE Step 1 and Step 2 content terms to tag the curriculum. Faculty are responsible for tagging each lesson with the appropriate tags that match their lesson. Any faculty member can search the database using these tags to determine where in the curriculum specific topics are taught.

Continuous medical program evaluation includes analysis of student evaluations, annual course reviews, performance on national standardized examinations, Step 1, Step 2CK, Step 2CS, clinical subject shelf exams, AAMC GQ, internal educational environment surveys, match statistics, and post-graduation surveys of program directors. The C³ curriculum has not been fully evaluated since it has only been implemented since 2013. The first cohort, had a 98% first time pass rate on Step 1 with a 230 mean score which is slightly above National mean. The subject exam scores thus far are equivalent to previous scores. Analysis of the old curriculum demonstrated that VCU SOM graduates are highly sought after well-trained physicians. We anticipate the new curriculum will produce at least equally well-qualified physicians. We continue to improve the curriculum striving to produce the best educated next generation of physicians.

Students evaluate divisions/courses and teaching faculty at the completion of every division. Evaluations are open from the start of a division in the pre-clinical curriculum so that students may complete
evaluations of faculty as they teach rather than trying to remember the session later. The division director, course master, assistant dean for the pre-clinical curriculum, and the senior associate dean for medical education and student affairs review student evaluations. Student response rates vary from 50% to more than 90%. Student curriculum representatives collate the responses and present a summary report to the division director, course master, assistant dean of pre-clinical curriculum and senior associate dean of medical education and student affairs. The students make suggestions for improvements in the course and the division directors propose their ideas for changes in the following year, getting feedback from the curriculum representatives. The reviewer for the division for the subcommittee of curriculum council also will review the comments that were presented at this meeting and consider these in their evaluation of the division.

Examples of changes to the curriculum that have occurred as a result of student feedback include adding an additional examination to the gastrointestinal division of the Glands and Guts course as there was too much material for one exam, moving metabolism content into the endocrine division of Glands and guts, and changing the textbook that was used for the Applied Medical Sciences which they felt was at a level above their understanding.

Because students go through each clerkship at different points in their clinical year, student feedback is comprehensively reviewed after the completion of the year. After each rotation, feedback is reviewed for any major concerns and students may flag their evaluations if they feel they have been treated unfairly during the clerkship. In addition, students may take their concerns to their curriculum representatives who will bring them to the attention of the clerkship director immediately. An example of a student concern that resulted in a change in practice is that students on the Internal Medicine Clerkship no longer must come to MCV from the VAMC for lectures and other didactic sessions. This resulted in a loss of time from their inpatient learning opportunities; all didactics are now teleconferenced to the VA hospital.

The clerkship directors review the encounter logs (Passport) of each student mid-way through the clerkship. If there are deficiencies, the clerkship director works with the student to formulate a plan to ensure the student is completing all the required clinical encounters and skills. Aggregate data is reviewed annually by the curriculum office and presented to curriculum council to ensure that all students are meeting the required clinical encounters and skills and that the number of students utilizing alternate methods to meet these requirements remains exceedingly small.

The duty hour policy for the MS-3 clerkships is modeled after the ACGME duty hour policies. All students are provided a copy of the duty hour policy during the orientation to the third year. Faculty and residents are reminded of the policy annually during the training session provided by the clerkship director. Twice a year, the assistant dean for clinical medical education performs an audit of duty hours by having students record their hours using the hourglass icon on eCurriculum. This anonymous data is presented to the clinical subcommittee and the curriculum council. Students may report violations of duty hours to their clerkship director, clerkship administrator, attending, department chairs, chief residents or the curriculum office. If duty hour limits are exceeded, the assistant dean for clinical medical education (MCV campus) or the assistant dean for curriculum, (Inova campus), work with the respective clerkship directors to identify the cause for these issues and resolve them.
The GME office requires that all residents and fellows participate in an institutional orientation program called "Walk the Walk" for first year residents and "Lead the Walk" for all others. This program includes sessions on the role of house staff as leaders and teachers and training on providing effective feedback and evaluation data to learners. During the study year, discussions began for developing a Residents-as-Teachers program to enhance the skills and knowledge base of our residents as educators. This will be implemented in the fall of 2015. There are numerous faculty development programs such as Lunchtime Learning, TiME courses, and Teaching Boot Camp that residents are invited to attend as their time allows with the permission of their program director.

In some clerkships, advanced practice nurses, genetic counselors, nurse practitioners and physician assistants may assist in teaching specific skills. These individuals are selected on the basis of their teaching abilities and are often faculty in their respective schools. Their teaching and observation are strictly limited to the scope of their practice as defined by each health system where students may be placed. Supervision is ultimately the responsibility of the attending faculty. There is occasional use of graduate students as teaching assistants for labs or problem sessions during the preclinical curriculum. The lead faculty member provides orientation to the learning objectives for the session in which they are assisting.

The school conducts a reconciliation report quarterly to ensure that all individuals who teach and assess students have faculty appointments. Rarely, an individual is found whose faculty appointment had not been confirmed prior to his/her teaching and this is generally due to incomplete, but in progress, credentialing procedures. In order to access the eCurriculum to complete an assessment on a student, an individual must have an eID, which is only issued to faculty who have an appointment in the SOM. Annually, as part of the performance evaluation by their supervisors using the Faculty Activity Reporting and Evaluation System (FARES), each faculty is assessed regarding their teaching contribution to the school and the quality of that contribution vis-a-vis student evaluations. At that time continued participation as an educator may be reviewed during the performance appraisal and expectations reviewed and reassessed.

Ultimately, attending physicians with faculty appointments are responsible for all learners on the team (medical students, residents, interns and other professional learners). When not present, the attending physician may delegate appropriate supervision to another member of the team, such as a resident, with the proviso that any issues related to required clinical experiences and patient safety are immediately brought to the attention of the attending physician. The student passport clearly delineates which procedures students are able to participate in and which are "observer only". The attending physician or the attending’s designee must supervise, in person, all procedures performed by a medical student beyond simple venipuncture.

Patient safety is a system-wide priority at VCUHS. In 2014, VCUHS was awarded the American Hospital Association McKesson Quest for Quality prize. The culture here is to stress escalation of care whenever there is concern by a learner. During M3 orientation, students are instructed to call for help whenever they are uncomfortable in a situation. They can call their attending, clerkship director, department chair or an administrator in the curriculum office with any concerns. At the end of the clerkship, students may flag the evaluation if they want to raise a concern either about supervision or mistreatment. The assistant dean for clinical medical education will share these concerns with the clerkship director and department chair, and devise a plan for resolution of the issue.

All students are required to have some portion of the history and physical examination observed by a faculty member on each clerkship. They are required to have the faculty member observe and sign off on the exam which is reviewed by the clerkship director. OSCEs are done both as formative and summative
assessments as part of PCM and several of the clerkships (Family Medicine, Internal Medicine and Psychiatry). During PCM, each student has a complete history and PE observed by their faculty small group leader.

After the completion of phase I and II of the curriculum, students take a Comprehensive Basic Science examination as a practice Step 1 exam. This examination counts 5% toward their class rank (the VCU SOM reports quartiles only) but not toward a course grade. This examination is meant to be formative to help the student prepare for the USMLE Step 1 exam.

The C³ curriculum assesses the student’s ability to think critically, solve problems and enhance their communications skills through multiple assessment methods and in multiple courses throughout the four years of the curriculum. Student progress is monitored both at monthly student progress meetings and at the quarterly Promotion meetings. All students receive a narrative assessment in addition to a final grade at the end of the clerkships as part of their performance evaluation. In addition, students receive written formative feedback mid-way through the clerkship if the clerkship is longer than 4 weeks in duration. All grades must be certified within six weeks of the completion of the rotation. In the preclinical curriculum, students receive formative narrative assessments on graded assignments such as case based problem solving in the Applied Medical Sciences. Student groups receive feedback on their final diagnosis, the resources used and the steps taken to arrive at their final diagnosis using the case system. Self-assessments in each preclinical course give immediate formative feedback with explanation for the correct answer.

Students are in small groups of 6-8 students in PCM with one faculty member for the entire pre-clinical phase of the curriculum. They receive written formative comments on each encounter note they write and at the end of each semester they receive summative narrative assessments.

For the pre-clinical courses, the division directors, course masters and faculty in the division determine the weighting of the different assessments in the division and propose this to the pre-clinical subcommittee of curriculum council. The clerkship committees, which include the clerkship directors from both campuses, decide the weighting of the various components that contribute to the final grade. Experts in evaluation and assessment are ad hoc members of the curriculum council, provide their expertise and render their opinion about the reliability and validity of the methods used.

Curriculum council, after taking into consideration the standards of achievement in courses and clerkships and weighting of national benchmarking examinations, recommends graduation requirements. This is vetted by the faculty and revised as necessary with recommendations from experts in evaluation and assessment. The curriculum council makes a recommendation to the chief academic officer who codifies the final requirements.

Divisions in the pre-clinical curriculum provide self-assessment questions for students to assess their knowledge related to the division objectives. In addition, all courses include quizzes, TBLs, or other problem based sessions that enable students to self-assess their knowledge. The number and quality of self-assessment questions vary from division to division. Regardless of the number, the students on course evaluations and on the independent student analysis request more self-assessment questions. Course directors are asked to provide more self-assessment opportunities each year.

The clerkships include quizzes and TBLs, which help students self-assess their understanding of clinical content. Each clerkship has a mid-point evaluation completed by the attending physician with formative feedback for the student. Both the student and the attending physician sign the evaluation, which is reviewed by the clerkship director. As part of the annual review process for clerkships by the
curriculum committee, each clerkship director must provide evidence that students are receiving mid-clerkship feedback including the percentage of students who received feedback.

The turnaround for final grades in the pre-clinical curriculum is less than two weeks. The goal for turnaround for final grades for the clerkships is four weeks. The policy and procedure for certifying grades was changed in early 2014 and since then, the longest average time for reporting grades was 4.9 weeks. The assistant deans for clinical medical education (MCV campus) and (Inova) campus perform quarterly audits of grade turnaround for each clerkship. This data is provided to each clerkship director and to curriculum council on a quarterly basis. If the goal of 4 weeks is not being met, the assistant dean of the respective campus meets with the clerkship director and department chair and helps identify barriers to timely completion of grades.

A single promotions committee reviews the progress of every student from all campuses quarterly, and makes all final decisions regarding promotions, remediation, repeating an academic year, and dismissal in accordance with guidelines set forth by the SOM. The SOM guidelines were distributed to the faculty for comment and approved by the curriculum council. The promotion committee consists of MS1 and MS2 course masters for the pre-clinical years and the clerkship directors for both campuses for the clinical years. Amongst the ex officio members of this single promotions committee are the associate and assistant deans from both campuses.

When there is the possibility that the medical school will take an adverse action against a medical student for academic or professionalism reasons, due process is assured. First, when there is a possibility that the promotions committee will make an adverse decision against a student, the student is encouraged to meet with the associate dean of student affairs and compose a letter to the promotions committee outlining the circumstances that led to the poor performance or professionalism concerns from the student’s perspective. Once the promotion committee has met, the student is notified of the decision by email. Through this communication, the student is informed that SOM policy requires that they must file any appeal in writing to the dean's office within 14 calendar days. The date of the email marks the official start of the appeal process.

An appeal hearing is held by the Appeals Committee, which consists of three faculty members elected by the faculty with staggered terms. The student has the right to appear before the appeals committee. The student may have an advisor who assists the student in his/her presentation to the committee. The student may have an attorney present but the attorney may not participate in the proceedings. The senior associate dean for medical education and student affairs presents the findings of the promotions/committee. The appeals committee deliberates and sends its recommendation to the dean. The dean’s decision is final and may not be appealed.

**Standard 10: Medical Student Selection, Assignment and Progress**

The faculty of the Admissions committee periodically determines the premedical requirements. The process involves evaluating the performance of medical students in the pre-clinical curriculum and correlating it with metrics such as GPA, MCAT scores and science courses taken prior to matriculation. In addition, the division directors are surveyed to determine if there are any deficiencies in the prerequisite knowledge of the students early in the curriculum. This was last done in the summer of 2014. Based on these findings, the Admissions committee voted to keep the existing prerequisites, with the addition of the requirement of one upper level science course, until the next assessment.

The Admissions committee consists of 99 members including a chair and a vice chair. There are 41 faculty members, 32 affiliate faculty, 16 student members, and 10 MD-PhD candidate members. There
are several subcommittees for admissions through the guaranteed admission track, preferred admission track, and the fmSTAT committee. Every year the dean seeks nominations for the admissions committee. Faculty members are appointed for a one-year term and are eligible for reappointment as long as they are fulfilling the duties of the committee. Student members are either self-nominated, nominated by classmates or by faculty. The chair of the Admissions committee, the director of Admissions, and associate dean of admissions interview these prospective student members.

There is extensive training of new members to the admissions committee. The Admissions committee has sponsored two AAMC workshops on holistic review in the last six years and each year at the retreat for the Admissions committee these principles are re-emphasized. Training for new members and the re-training at the yearly retreat reviews how both the file review and interview techniques are used to ensure we focus on applicants who meet SOM criteria for preferred candidates. New members must observe an interview and be observed conducting an interview before they can independently interview candidates. SOM policies are reviewed during the training session. The characteristics sought in applicants through the holistic review process are emphasized and explained including, but not limited to, cognitive and non-cognitive factors, prior experience in healthcare, and a humanistic ethical grounding.

The policies, procedures, and other criteria for medical student selection were developed by the Admissions Committee and are reviewed annually. The review of criteria for admissions includes input from the administration of the curriculum office about students’ performance and statistical analyses of student performance after matriculation based on various pre-matriculation metrics (GPA, MCAT, etc.). The dean of the SOM has final approval of the policy, procedures and other criteria after circulation to the general faculty for comment. The selection criteria are disseminated in the VCU Bulletin, the SOM website, in recruitment materials, at special events such as campus visits to undergraduate campuses, biannual open house events, and through calls to the SOM Admission’s Office.

The application process begins with the receipt of the AMCAS application. Applicants with a minimum GPA of 3.2 and MCAT of 26 are sent a supplemental application. The associate dean of admissions, director of admissions, or the outreach office reviews applications that do not meet the criteria, to see if the student meets any of our diversity criteria or has special circumstances that would warrant a closer look despite the metrics. If they do, they are sent a supplemental application. If not, they are rejected. Once a supplemental application is received, a file review is performed to determine if the applicant will be granted an interview. A holistic review of the application is conducted taking into account cognitive factors (e.g., MCAT scores, GPA) and non-cognitive factors (e.g., humanism, altruism, and capacity for self-reflection as evidenced by the AMCAS and secondary application essays; life and healthcare related experiences; community service; letters of recommendation; leadership; ethical and moral behavior; social concern; creativity; personal maturity; self-confidence; ability to work as a member of a team; etc.). A rank is assigned and students are invited to interview based on this rank. In the last three admission cycles, VCU SOM received more than 9000 applications annually, completed full file reviews on more than half and interviewed almost 900 applicants each year.

The one hour interview for each applicant is conducted by an admissions committee member who ranks the applicant based on the cognitive and non-cognitive factors described above as well as using the following: responses to behavioral questions that assess specific qualities sought in matriculants, clarification of questions raised by the file reviewer, and communication skills. Applicants who have been interviewed are presented to the admissions committee for review. During the review, the applicant’s file is presented along with a verbal and written summary of the interview. The admissions committee discusses each applicant. Each member submits a ranking for the candidate. A rank order list of all applicants interviewed is created for acceptance decisions.
Using the rank order list created by the admissions committee, the dean of admissions makes offers of admission. Offers are made October 16, December 16, February 1, and March 16 based on the rank order of each applicant interviewed. After March 16, a ‘wait list’ is created. Beginning April 1, as applicants withdraw their acceptance, future offers of admission are made to candidates based on their rank order as appears on the wait list.

There are no joint baccalaureate-MD degree programs. There is a guaranteed admission (GMed) program and a preferred admission program. The GMed program application is open to high school seniors who are applying to the VCU Honors College. Applicants are interviewed by a subcommittee of the Admissions Committee consisting of representatives from the SOM and Honors College. Twenty applicants are accepted each year.

The Preferred Applicant program is open to students currently enrolled in an undergraduate program at VCU. They must first apply and be accepted into the Honors College. Prerequisites, selection process, and continued program eligibility are the same as in the guaranteed admissions program.

The VCU SOM also has an MD-PhD program. Applicants wishing to apply to this program indicate this on the AMCAS application. They are assessed for admission to the SOM using the same criteria and standards as indicated above. In addition, they must submit a graduate school reference assessing the potential of the applicant to be successful in the PhD phase. Students, who are not accepted into the MD/PhD program, may be accepted into the MD program separately. An applicant must be acceptable for admission to medical school to be accepted into the MD-PhD program. Each year there are approximately eight matriculates.

The ideal applicant to the SOM has the following characteristics: the required cognitive skills as assessed by GPA and MCAT, altruism and humanism as evidenced by health care experience and community service and social concerns, excellent oral and written communication skills, leadership, ethical and moral behavior, appropriate motivation, ability to realistically self-appraise, and a demonstrated ability to work as a member of a team. The interview is designed to assess the candidate’s motivation and qualities important for a physician including problem solving, acceptance of criticism, teamwork, cultural sensitivity, maturity, independence, social awareness, moral reasoning, personal ethics, interpersonal competency, ability to communicate, a sense of responsibility, willingness to ask for help and a commitment to lifelong learning and service to people. A member of the admissions committee performs the one-on-one interview, and a written summary of the applicant's performance is entered into EMSARS the electronic medical student academic record system, the computer software available to all committee members.

The senior associate dean for medical education and student affairs in conjunction with the Division of Academic Success developed the technical standards for Academic Success with the Office of the Vice President for the Health Sciences Campus. The standards are reviewed by the faculty of the SOM at large, and approved annually by the admissions committee and curriculum council in consultation with the chief academic officer of the SOM. The technical standards for admissions, retention, and graduation are disseminated to potential and actual applicants, enrolled medical students, faculty, and others as follows: they are posted on the public area of the SOM website, in the student handbook and they are sent to all students accepted by the SOM. Accepted students must sign the standards and return them to the SOM prior to matriculation, stating that they meet the technical standards, and stating if they can be met with or without requested accommodations. Accepted applicants may meet with the Division of Academic Success prior to matriculation to determine if the requested accommodations will be granted and whether this will enable them to meet the technical standards. Current students are required to review the technical standards annually as part of the required and documented student handbook review.
Annually, the senior associate dean for medical education and student affairs is required to update all information in the VCU Bulletin (on-line university handbook) that describes the medical education program. Recruitment materials about the medical education program are made available to potential and actual applicants, career advisors, and/or the public as follows: the VCU Bulletin (university handbook), the SOM website open to the public, and hardcopy materials developed by the Admissions Office for individuals, career advisors, recruitment trips and professional group meetings.

Medical students may only transfer into the VCU School of Medicine under rare and extraordinary circumstances (e.g., natural disaster that prevents continued education at the student’s home institution, loss of accreditation by the home institution). The SOM has not accepted a transfer student in over three years.

**Visiting students** may apply for elective experiences offered at VCU SOM utilizing the Visiting Student Application Service (VSAS) sponsored by the AAMC. The Electives Coordinator in the curriculum office reviews applications received by all visiting students to assure they meet the criteria used for selection to complete an elective experience at VCU SOM. Only students who have satisfactorily completed clerkship experiences comparable to those for VCU SOM students will be considered for electives. Visiting students are offered elective experiences only after all VCU SOM students have been able to schedule electives and acting internships desired/required for graduation. The Electives Coordinator in the curriculum office maintains an active roster of all visiting medical students to ensure that all students receive proper training and security clearance required for participation in clinical duties at VCUHS and collects the performance assessment for each visiting student and returns it to the home school.

Students are accepted to complete their clinical and advanced clinical concentrations on either the MCV of Inova campus. If a student wishes to change location, he/she must find a student on the other campus to make the swap. If there are extenuating circumstances (e.g., illness of a parent, spouse relocated, etc.) the student progress committee will consider the request of the student, and if a campus is undersubscribed, switch the student. If the campus is not undersubscribed, the administration will work with the student to find a peer who will switch. There is only one campus (MCV) for the pre-clerkship phase of the curriculum. Students may rank order clinical clerkship sites for an individual clerkship. If not available, the clerkship coordinator randomly assigns sites. Students may appeal their site assignment to the clerkship director if there is space at another placement.

Students may opt to enter the fmSTAT (Family Medicine Scholars Training and Admissions Track) upon application to medical school. Their acceptance to the school will indicate whether they are accepted into this program. Students may apply for the I2CRP (International, Inner City, Rural Preceptorship Program) curricula at any point in the preclinical phase. The leadership of these programs approves all admissions.

**Standard 11: Medical Student Academic Support, Career Advising, and Records**

Students are identified for academic counseling in numerous ways. Any student achieving a less than passing grade on an examination, will be contacted for counseling by the assistant dean for pre-clinical medical education. The clerkship director and/or the assistant dean for medical education on the appropriate campus counsels any student who is not achieving competencies at the mid-point in a clerkship. Students not demonstrating the defined competencies of the curriculum are reviewed monthly by the Student Progress Committee consisting of the associate and assistant deans on each campus, a
member from the Division for Academic Success and a member from the Office of Student Outreach and are referred for additional intervention specifically related to the problems identified (e.g., health issue referred to Student Health or University Counseling Services; learning issue referred to the Division for Academic Success; professionalism issues referred to the student affairs dean on the appropriate campus).

The VCU SOM ensures that all students have the opportunity to obtain academic counseling from individuals who have no role in their assessment or advancement decisions. The Division of Academic Success (DAS) is a university-based office operating within the Office of the Vice-President of the Health Sciences Campus with teach specialists who work individually with students to identify issues that may be leading to poor academic performance. They also assist students with identifying resources to evaluate and manage disabilities, determine if students are eligible for accommodations for disabilities, and help with administering academic accommodations including provision of testing facilities for students requiring additional time or distraction-free environments. They train and provide tutors for students who need them (for medical students, the tutors are either fourth year medical students or MD-PhD students in the graduate phase of study). The DAS provides workshops on study skills, time management, learning styles and mindfulness. Medical students are introduced to members of this office during medical school orientation. Students can access services by walk-in, calling for an appointment, email, referral by an advisor or curriculum office administrator.

The assistant deans at both campuses counsel students on academic issues such as study habits, test-taking skills or presentation skills both when they identify a student that needs extra help or when a student self-identifies and seeks help. A student may also seek help from the associate dean for student affairs and the student outreach office.

Project HEART (Healing with Empathy, Acceptance, Respect and Integrity) is a SOM-based initiative consisting of faculty members trained to serve as academic advisors. They meet with their assigned group of students every four to six weeks during the first three years of medical school and on an as needed basis. All students participate in Project HEART where they may receive advisor and peer support for any issues interfering with optimal performance in medical school. Project HEART mentors are helping students formulate individual learning plans (ILP). They do not have an assessment role for the student and do not sit on the promotion/advancement committee.

A SOM initiative of four societies, led by faculty trained by the associate dean for student affairs, longitudinally follows a cohort of the students by meeting with students in their respective society semi-annually or on an as-needed basis to provide academic support. Students may self-refer to the society masters or be referred by any of the above entities. The societies address academic assistance and provide a source of mentoring and peer support for students. In addition there is peer-to-peer support within the societies through the assignment of upper-class students (“big buddies”) to assist students who are experiencing difficulty adjusting to the rigors of medical school.

The SOM delivers an intensive, in-house USMLE Step 1 review course and requires that all students take a practice Step 1 assessment. Two faculty members with expertise in preparing for Step 1 meet with each student to develop an individualized study plan that is modified based on performance on practice assessments. The faculty mentors provide guidance for students who are unsuccessful on either step of the USMLE for better preparation.

The associate dean of student affairs is responsible for a comprehensive four-year career-advising program called Careers in Medicine@VCU. Prior to matriculation, students complete the Myers-Briggs assessment and during orientation, students participate in a discussion of their results and how it might help students better understand group dynamics, learning styles, and career choices. Later in the MS-1
year, they are introduced to the AAMC careers in medicine (CIM) website. As part of a Project HEART session, the students complete the CIM self-assessment tools and discuss the results in their small groups. The leader completes the self-assessment as well and discusses the results in context of their chosen specialty. There is an information session in October regarding planning for the summer between the MS-2a and MS2b semesters, on the relative competitiveness of different specialties and the value of research. In the beginning of MS-2b all students participate in a day long CIM course with topics including a discussion of the NRMP match algorithm, personal statement and curriculum vitae writing workshops, presentation on the financial implications of specialty choices, and a residency program director panel discussion. Each student must submit a curriculum vita for critical review by a faculty member.

During M3 orientation, students have a presentation on career decision-making based on the five hat model. Mid-year, students have a review of the residency match time-line and planning for M-4. At this time, all students are assigned a specialty-specific advisor. Students undecided can be assigned up to two advisors. In MS-4 orientation, an ERAS workshop is held in small groups to help students start the application process and answer any specific questions they might have. Another session on residency interviewing is held. The associate dean for student affairs offers to review the personal statements and hold mock interviews for any students wishing to do so. The university writing and career center also can be utilized for assistance. The associate dean for student affairs monitors residency program interview invitations. Supplemental Offer and Acceptance Program (SOAP) support is provided to all unmatched students to assist with securing unfilled residency positions, potential changes in career plans, planning activities for a gap year after graduation and plans for re-entering the residency match. Student satisfaction with career advising is high in both the AAMC GQ and ISA.

The associate dean for student affairs is primarily responsible for providing guidance to medical students on their choice of intramural and extramural electives during the final two years of the curriculum. The assistant dean for student affairs fulfills this role on the Inova campus. On the MCV campus, the electives coordinator in the curriculum office meets with students to help them strategically plan their lottery requests for electives in the MS4 year. Each student must meet with his or her career specific advisor during the spring of the MS3 year in order to develop his or her MS4 schedule. The advisor must sign off on the proposed M4 schedule. Society Masters, Project HEART advisors and other administrative deans may also assist as requested by the student.

Medical Student Performance Evaluation

The senior associate dean for medical education and student affairs is the primary individual responsible for preparation of the Medical Student Performance Evaluation (MSPE) on the MCV campus. Society masters provide additional personal information for each student based on their interactions with students in advising sessions. The associate dean for medical education and the assistant dean for student affairs are the primary individuals responsible for preparation of the Medical Student Performance Evaluation on the Inova campus. Students may review and ask for changes in the MSPE based on the discretion of the administrative dean on each campus. If they are dissatisfied with changes, they may petition the dean of the school of medicine to ask for another MSPE writer.

Students are asked to provide two paragraphs summarizing their unique characteristics for the unique characteristics section of the MSPE. Tables are generated by the school of medicine information technology staff to show the relative performance of medical students in the preclinical and clinical phases of the curriculum. Comments concerning student clinical performance are taken directly from the written student evaluation summaries for each MS3 required clinical clerkship. The summary paragraph is
written for all students based on their overall ranking in the pre-clinical and clinical portions of the curriculum.

The **medical student educational file** includes the AMCAS application, MCAT scores, prior transcripts, demographic information, grades and narrative comments from courses/divisions and clerkships, official letters, early concern notes, honors, residency training, status changes related to advancement/promotions, and letters of recommendation. The medical school administration determines which individuals have permission to review a medical student’s file by job function. The institutional officials who are permitted to review medical student records are those with a legitimate educational interest in a student at the discretion of the registrar unless released by the medical student or otherwise governed by laws concerning confidentiality. The medical school ensures that student educational records are available only to those individuals who are permitted to review them by giving only these individuals computer access to the records and/or requiring access from the SOM registrar. The location where medical student records are kept is in the SOM electronic student information system, data imaging system, and the backup data collection storage computers on the Monroe Park campus.

If a student wishes to review or challenge their educational records the student must submit a written request to the registrar specifically noting what they wish to review or obtain a copy of their records. The registrar will honor such requests to view the record within 48 hours and to make copies of the record within 45 days of receiving the request. To challenge grades or narrative comments, students must follow school policy, requesting an amendment to the information in their permanent record through the registrar’s office. If resolution cannot be made, the student may meet with the senior associate dean for medical education and student affairs who will make a final decision about changing a student’s record. If there are no changes to the student’s record, the student may submit a written notation of disagreement with the record, which will become a permanent part of the student’s file. Students may not access records where they have waived this privilege (e.g., letters of recommendation). Otherwise, they may have access to all components of their records.

**Standard 12: Medical Student Health Services, Personal Counseling, and Financial Aid Services**

The VCU SOM has a dedicated financial aid office. The assistant dean for financial aid has a dual reporting relationship to the associate dean for student affairs in the school of medicine and the director of financial aid for the university. In addition to the assistant dean, there is a financial aid counselor and an administrative assistant and counselor. During the interview day, students hear a presentation on how to afford medical school. Prior to matriculation, the financial aid office hosts a workshop for all incoming students. The assistant dean presents or hosts a mandatory presentation each year on debt management. Inova students may contact the SOM financial aid office by phone, email or in person when they are visiting the medical school campus in Richmond. In addition, videoconferencing is available.

Since the last LCME visit, tuition increases on average have been 2.6% for residents and 2.2% for non-residents. In addition to completing the FAFSA, students must complete the **Need Access** to gauge potential sources of income for paying tuition. By knowing the students who have the greatest needs, the scholarship committee may exercise discretion in awarding need-based scholarship to those students with the greatest debt. The financial aid office requires students to participate in an advisory meeting and complete the Loan Acceptance Form indicating the minimal amount of financial aid need before disbursing any money from Federal Direct Unsubsidized Stafford Loans. There is an additional application for the Federal Direct Unsubsidized Stafford Loan and Federal Direct Graduate Plus Loans. This has significantly decreased the amount of funds borrowed.
The SOM launched the 1838 campaign in July 2011 to celebrate the year in which the Medical College of Virginia was founded. The $25 million campaign is specifically dedicated to raising scholarship funds for medical students, increasing support and allowing us to be more competitive in securing outstanding applicants. As of October 2014 the Campaign’s total gift commitment was $8,565,663. More than 61% of students receive some sort of scholarship or grant through the VCU SOM.

**University Counseling Services (UCS)** is a department within the Division of Student Affairs at VCU. UCS is available on the health sciences, Monroe Park and Inova campuses affording students easy accessibility and confidentiality. The services are free of charge to enrolled students on these campuses. UCS promotes its services at orientations, via its website, and presentations in classrooms or workshops. University Counseling Services' professional staff includes licensed clinical psychologists, licensed clinical social workers, psychiatrists, psychology interns, advanced graduate students in social work and psychology, and advanced mental health residents (post-docs). On the Inova campus, mental health services are available in four different ways to make sure that all student needs are met. Students are informed about the availability of personal counseling services during MS1 and MS3 orientations, in the student handbook and on pocket cards that delineate available student services.

On the MCV campus, appointments are scheduled through UCS in advance, but crisis appointments are available daily. UCS is open 42 hours per week during the school year and 40 hours per week during breaks. After hours, student may access mental health services through the emergency department.

On the Inova Campus, George Mason University Counseling and Psychological Services (GMUCAPs) are open 46 hours weekly. A counselor is available daily after hours for urgent mental health concerns. The contact for the CrisisLink 24 hour hotline is also provided to student.

All records are kept separate from any academic records and are subject to HIPAA and Virginia Law pertaining to the maintenance of healthcare records and confidentiality. No one in University counseling on the MCV campus or on the Inova campus is involved in the evaluation or promotion of any students. In an emergency situation, students may be referred to or self-refer to a health professional that would provide immediate psychiatric/psychological counseling or other sensitive health services. It is possible at a later date that this health professional may be in a situation to potentially become involved with academic evaluation of promotion; in such instances, the health professional is required to recuse himself/herself from the evaluative/advancement/promotions process. In addition, should they inadvertently complete an evaluation, they must check a box at the end indicating they have had access to sensitive health information, at which point, the evaluation is eliminated.

**VCU Student Health Services** has clinics on both the Monroe Park and Health Sciences campuses. The clinic on the Health Sciences campus is located near the McGlothlin Medical Education Center and Main Hospital. Services provided include primary care, women’s health, treatment for exposures to blood or body fluids, travel medicine, immunizations and allergy shots. Students have access to laboratory services including in-house strep, pregnancy and flu tests. LabCorp is used for all reference labs. A pharmacy is located on the Monroe Park campus clinic and a courier service is utilized to provide convenient access for health science students. The clinic is open 40 hours weekly. Students may contact a clinician for telephone advice after hours, weekends and holidays. None of the clinical staff are involved in the academic evaluation or promotion of students. The school has a generous exception request procedure that allows students to be excused from educational/clinical activities to be seen in the student health clinic. An area for concern from the ISA was student health hours. However, student health services felt that extended hours were not necessary since the SOM allows a generous exception request.
The third and fourth year medical students on the Inova campus have full access to preventative and therapeutic services through the student health services program set up at the Fairfax Family Practice site. The services covered by the Student Health are the same as those provided to students on the MCV campus through University Student Health Services. None of these providers are involved in the academic evaluation or promotions decisions of the students.

The immunization requirements for medical students follow Centers for Disease Control and Prevention (CDC) guidelines for healthcare workers as determined on an annual basis by staff at the University Student Health Services in conjunction with requirements for clinical practice as determined by staff at Employee Health for VCUHS.

Institutional policies regarding exposure to infectious and environmental hazards are provided to students during their first PCM session in the MS1 year through workshops and lectures held during the first week of class and prior to any clinical exposure. Visiting students are provided with the same information as a component of their orientation and must take a written quiz. All students receive this information on a pocket card, which fits easily in the student I.D. badge. Students receive a more in-depth presentation on “Isolation Guidelines” during the orientation to the MS3 year through workshops and lectures. All students are fit tested for face masks for respiratory isolation patients during M3 orientation.

Counseling and treatment for blood and body fluid exposures is handled by Student Health from 8a.m-4:30p.m. on weekdays. On nights and weekends students utilize the VCU Health System Post Exposure Prophylaxis (PEP) team. Students on away rotations seek help at that institution due to time constraints for medication administration. PEP medication costs are covered for injuries that occur at VCUHS; students are responsible for cost of Hepatitis B vaccine, Hepatitis B immune globulin (HBIG) and anti-emetics. Students on away rotations are financially responsible for testing and medications. The University Sponsored Health Insurance Plan does cover for medications on away rotations for students enrolled in the plan.

At Inova, counseling and treatment for blood and body fluid exposures is handled by Employee Occupational Health Services (EOHS) 7 am - 4 pm on weekdays. Referrals to an Infectious Disease physician or other specialist is arranged free of charge and the student insurance is billed for any post exposure medications or laboratories ordered. During non-EOHS office hours, the nursing administrative director will coordinate any urgent medical care. If a student has an exposure at an off-campus site, the site is responsible for any testing on the source patient, and the student is accountable for any expenses incurred related to self-testing or treatment.

Communicable Disease notification is done by Epidemiology at both locations. At the Richmond campus, VCU Student Health is contacted who then notifies the student of the need for evaluation and treatment. All lab work is covered by Student Health Fee, medications are the responsibility of the student except for DOT (INH and rifapentine) for latent TB which is provided free of charge by Richmond City Health District.

Students who self-disclose or are discovered to have a chronic infectious pathogen are referred to the VCU Health System Expert Panel to make recommendations for necessary accommodations and modifications of the medical student educational activities. The Director of Student Health counsels the student regarding the recommendations. The panel also notifies the dean of the medical school of the necessary accommodations.

Summary of Changes
Since the 2008 LCME Survey, the VCU School of Medicine has undergone several important changes. These include:

- Implementation of the C3 curriculum
- Renovation of Anatomy Labs to update the technology to high definition monitors and cameras
- New Chairs in Departments of Anesthesiology, Health, Behavior and Policy, Internal Medicine, Neurology, Neurosurgery, Obstetrics and Gynecology, Orthopedics, Otolaryngology, Pathology, Pediatrics, Pharmacology and Toxicology, Radiation Oncology, Surgery, and Orthopedic Surgery.
- New Assistant/Associate Deans, most positions created to enhance medical student education and support:
  - Assistant Dean for Curriculum (MCV)
  - Assistant Dean for Advancement of the Curriculum (MCV)
  - Assistant Dean for Curriculum (Inova)
  - Assistant Dean for Student Affairs (Inova)
  - Assistant Dean for Faculty Development (Inova)
  - Associate Dean for Evaluation and Assessment
  - Associate Dean for Professional Instruction and Faculty Development
  - Associate Dean for Patient Safety and Quality Care
  - Senior Associate Dean for Professional Education Programs
- New Center and Vice President for Interprofessional Education
- Completion of the McGlothlin Medical Education Center
- New Center for Human Simulation and Patient Safety (2008)
- Critical Care Bed Tower-$192 million hospital dedicated to critical care opened in 2009
- Expansion of clinical services and delivery sites to include:
  - Baird Vascular Institute
  - VCU Health at Mayland Court
  - VCU Health at Gaskins Road
  - VCU Health at Ridgefield Parkway
  - VCU Plastics and Reconstructive Surgery Clinic at Forest Avenue
  - VCU Health at Chesterfield Meadows
  - VCU Health at Temple Avenue
  - VCU Health Community Memorial Hospital (new facility to open 2017)
  - VCU Health at Williamsburg
- New University Chartered Centers
  - Parkinson’s and Movement Disorder Center
  - Virginia Institute for Molecular Medicine
  - Center for Rehabilitation Science and Engineering
  - Victoria Johnson Center for Pulmonary and Critical Care Research
- Renovation of research and office space in Sanger Hall is in Phase 1 of four.
- June 2010 Merger of VCU Health and Children’s Hospital to form Children’s Hospital of Richmond at VCU
- Children’s Pavillion is on schedule to be completed and occupied in March 2016

The LCME Steering Committee has identified the following significant programmatic and infrastructure improvements and institutional strengths that support education, research and clinical service:

- Progressive strong leadership with an aggressive and successful research, clinical and education agenda
• A very nurturing, high quality educational process marked by active faculty involvement and commitment to a redesigned educational program with an innovative curriculum and learning format that is in evolution,

• Successful implementation of the C³ curriculum as evidenced by:
  o Increased active and engaged learning opportunities,
  o Significant reduction in the number of lectures in most courses to approximately 50% with many courses introducing new TBLs, POGILs, flipped classroom sessions and other engaged learning strategies,
  o Positive student evaluations both internally and on the Independent student analysis,
  o Step 1 pass rate increased from 95% to 98% in the first cohort,
  o Mean Step 1 score in first cohort of 230 which is at least as good as previous classes,
  o Stability of subject exam and excellent OSCE scores in the first cohort

• Systematic assessment of curricular inventory, content outcomes and results
• Measured achievement of educational objectives concurrent with curricular redesign,
• Substantial and effective faculty development opportunities and activities
• Strategies that have stabilized student indebtedness with an increase in resources for financial aid,
• An independent student analysis which reports that students are satisfied with the administration and faculty on both campuses and are satisfied with their education and feel supported by the administration
• Academic and career advising that begins during and is integrated throughout the four years of the curriculum
• Excellent clinical learning opportunities on all clinical training sites with dedicated clinical teaching faculty
• Significant reduction in student mistreatment rates, below national levels,
• VCU SOM selected among 10 sites by the AAMC to pilot the core Entrustable Professional Activities (EPAs) for the graduating medical student,
• Healthy financial portfolio for the SOM with good outlook for near future.
• Sustained faculty productivity reflected in practice plan success and growth in grants and contracts despite a negative Federal grant environment,
• Clinical and Translational Science Award –competitive renewal being resubmitted
• Effective strategic planning, review and commitment by the University, School leadership and faculty supportive of the academic mission,
• The Faculty Group Practice has implemented a balanced Compensation Plan that supports academic endeavors and medical education,

The LCME Steering Committee has identified areas that require ongoing monitoring:

• New curriculum has not yet completed a four year cycle and thus has not been fully evaluated to determine its effectiveness. A compete four year review will be completed as of 2018.
• Although students are acknowledging they are getting feedback during clerkships, the quality of that feedback is sometimes inconsistent. Plans are in place to institute mandatory faculty and resident development that will address feedback. This should be ready in the spring of 2016. Follow-up surveys will be performed to monitor the success of this program.
• We would like to increase student involvement in research and scholarship from the current 62% to 75%. Due to retirement, VCU SOM is currently recruiting an associate dean for research and research training. When the new associate dean arrives, we will convene a task force on how best to achieve these goals.
• The ability to limit debt in a definitive manner awaits the results of a fund-raising campaign to significantly increase the amount of funding available for scholarships. Despite these efforts, average educational debt continues to rise, and tuition has increased steadily at a five year annualized rate of 14.5%.

• Continue to increase opportunities for self-directed and active learning in the preclinical curriculum. The new assistant dean hired for this purpose will continue to work with faculty to identify ways to convert lectures to self-directed and active learning. Goal is to decrease purely passive lectures to less than 50% in all courses by 2018.
Appendix A

Self Study Committees

Steering Committee
Jerome F. Strauss, M.D., Ph.D., Dean, Chair
PonJola Coney, M.D., Senior Associate Dean for Faculty Affairs
Craig Cheifetz, M.D., Associate Dean for Medical Education, Inova Campus
Amy Sebring, Senior Associate Dean for Finance and Administration, MCVP Executive Officer and COO
Isaac K. Wood, M.D., Senior Associate Dean for Medical Education and Student Affairs
Christopher Woleben, M.D., Associate Dean for Student Affairs
David Chelmow, M.D., Chair, Curriculum Council
John Ward, M.D., M.S.H.A., Senior Associate Dean for Clinical Affairs and President Chief Medical Officer MCVP
Emily Onufer, President Medical Student Government, Class 2015
Stequita Hankton, President Student National Medical Association, Class 2018
Christopher Ray, President Class 2015
Peter Ghamarian, President Class 2016
Danica Kim, Inova Student Leader Class 2015
Kathleen Waybill, Leader of ISA Class 2016

Standards 1, 2 and 4 – “Team Coney”
PonJola Coney, M.D., Senior Associate Dean for Faculty Affairs – Chair
Christopher Woleben, M.D., Associate Dean for Student Affairs
Teresa Carter, Ed.D., Associate Dean for Professional Instruction and Faculty Development
Elizabeth Ripley, M.D., M.S., Associate Chair for Faculty Development, Dept. Internal Medicine
Anton Kuzel, M.D., M.H.P.E., Chair, Family Medicine and Population Health
Jan Chlebowski, Ph.D., Associate Dean for Graduate Education
Tricia Olaes, Class 2015
Jared Cummings, Class 2015
Hannah Thomason, Class 2015

Standards 3 and 9 – “Team Cheifetz”
Craig Cheifetz, M.D., Associate Dean for Medical Education, Inova campus – Chair
Michael Ryan, M.D., Assistant Dean for Clinical Medical Education
Alicia Freedy, M.D., Assistant Dean for Curriculum, Inova campus
Donna Jackson, Ed.D., Assistant Dean for Admissions, Director of Outreach
Isaac K. Wood, M.D., Senior Associate Dean for Medical Education and Student Affairs
Mary Alice O’Donnell, Ph.D., Associate Dean for Graduate Medical Education
PonJola Coney, M.D., Senior Associate Dean for Faculty Affairs
Evan Reiter, M.D., Chair, Graduate Medical Education Committee
Greg Trimble, M.D., Assistant Dean for Faculty Development, Inova Campus
Samantha Beury, M.D., Assistant Dean for Student Affairs, Inova Campus
Danielle Kania, Class 2015
Allison Hastings, Class 2015
Christopher Lynch, Class 2015, Inova campus

**Standard 5 - “Team Sebring”**

Amy Sebring, Senior Associate Dean for Finance and Administration and MCVP Executive Officer and COO-Chair
Paul Peterson, Assistant Dean for Administration
Keith Hayes, Director of Design and Construction
Isaac K. Wood, M.D., Senior Associate Dean for Medical Education and Student Affairs
John Cyrus, M.S., M.L.I.S., Research and Education Librarian, Tompkins-McCaw Library
Michael Duong, Executive Director of Technology Services
Candace Gordon, Director of Academic Finance
Pamela Knapp, Ph.D., Professor of Anatomy and Neurobiology
Susan Roseff, M.D., Professor of Pathology
Clayton Bauer, Class 2015
Stephanie Marshall Class 2015

**Standard 6, 7, and 8 – “Team Wood”**

Isaac K. Wood, M.D., Senior Associate Dean for Medical Education and Student Affairs-Chair
Susan R. DiGiovanni, M.D., Assistant Dean for Pre-clinical Medical Education
Michael Ryan, M.D., Assistant Dean for Clinical Medical Education –MCV Campus
Lelia Brinegar, M.Ed., Assistant Dean for Curriculum
Alicia Freedy, M.D., Assistant Dean for Curriculum, Inova Campus
David Chelmow, M.D., Chair, Curriculum Council
Christopher Woleben, M.D., Associate Dean for Student Affairs
Linda Costanzo, Ph.D., Chair, Pre-Clinical Subcommittee of Curriculum Council
John Bigbee, Ph.D., Professor of Anatomy and Neurobiology
Mark Ryan, M.D., Chair, Clinical Subcommittee of Curriculum Council
Jade Kinley, Class 2015
Thomas Carraway, Class 2015
Christina Yu, Class 2015, Inova campus

**Standards 10, 11 and 12 –“Team Woleben”**

Christopher Woleben, M.D., Associate Dean for Student Affairs
Michelle Whitehurst-Cooke, M.D., Associate Dean for Admissions
Samantha Buery, M.D., Assistant Dean for Student Affairs, Inova campus
Heather Davison, M.T., Registrar, School of Medicine
Margaret Roberson, M.D., Medical Director, University Health Services
Pemra Cetin, M.B.A., Assistant Dean for Financial Aid and Student Affairs