

University of Vermont College of Medicine Institutional LCME Self-Study Summary Report

INTRODUCTION

The University of Vermont (UVM) College of Medicine (COM) Self-Study began at the direction of newly appointed Dean John N. Evans, Ph.D., in February 2004. He appointed John Fogarty, M.D., Professor and Chair of the Department of Family Medicine, as Self-Study Coordinator and Susan Ligon, Director of Operations and Project Management, as LCME Administrative Coordinator. Over the next month, a Task Force was appointed and sub-committee Chairs selected and appointed. In an effort to ensure college-wide representation, nominations for the committees were solicited from department Chairs, the Associate Dean for Student Affairs, and LCME sub-committee Chairs. Each of the committees was appointed and charged in May 2004. Concurrently, the self-study database was developed at the College of Medicine and teaching hospital partners, Fletcher Allen Health Care (FAHC) and Maine Medical Center (MMC). The committees conducted their work from May through August 2004, involving over 110 faculty, staff and students and submitted their reports in September 2004. The Self-Study Task Force met monthly from August through December, as they received the analyses of the subcommittees and formalized their conclusions into the Self-Study Summary Report.

An independent Student Self-Study was organized during this same period. Student members of the Instructional Improvement Committee from the Classes 2004 through 2007 were selected as organizing Chairs and appointed in February 2004. This group added representative members from each of their classes, developed a self-study questionnaire tailored to each class, and analyzed the responses from both this questionnaire and the AAMC Graduation Questionnaire. Details on response rate, analysis, and conclusions are available in the Independent Student Survey Analysis Report. Administrative support was provided from the Dean's office and the College of Medicine Educational Tools (COMET) team as requested by the students.

The LCME Self-Study came at a propitious time for the COM. When the new Vermont Integrated Curriculum (the VIC) was successfully launched in the Fall of 2003 with the entering Class of 2007, it was soon clear that the processes for governance and decision making needed revision since most courses were no longer department or discipline based. When the rest of the University of Vermont faculty (exclusive of the COM faculty) voted to form a union in 2002, the College of Medicine's role in the Faculty Senate, the governing body of the UVM faculty, changed in a number of important ways. The self-study provided a stimulus to look at these curricular, faculty and governance issues which are highlighted in our self-study materials.

The LCME Self-Study was also an impetus for the College to embark on a formal Strategic Planning process. Dean Evans announced the development of a new Strategic Planning process at a faculty meeting on June 22, 2004. A Strategic Planning Task Force has since been charged and has begun its work.

Previous findings and progress from the LCME 1997 Survey report

1. Governance. At the time of the previous LCME survey, Fletcher Allen Health Care (FAHC) was a relatively new organization, formed in 1995 with John Frymoyer, M.D., serving as both COM Dean and CEO of FAHC. FAHC was a merger of the Medical Center Hospital of Vermont, the Fanny Allen Hospital and University Health Center (the multi-disciplinary Faculty Practice) to form an integrated health system. He stepped down as CEO in 1996 and a new FAHC CEO was appointed after a national search. The LCME Survey Report in 1997 requested follow-up on the changes in leadership at the University and Fletcher Allen to clarify the role of the Dean in

both organizations. These clarifications took place in writing to the LCME on April 30, 1998 and again on April 27, 2000. In addition, the LCME Secretariat was updated on February 25, 2002 with information on the new curriculum and other issues, including the leadership transition as Dr. Daniel Mark Fogel was named President of the University.

Dr. Frymoyer retired as Dean in 1999, and Executive Dean John Evans was appointed interim dean. After a national search in 2000, Joseph B. Warshaw, M.D., Yale University Chair of Pediatrics and Associate Dean for Clinical Affairs, was appointed as the 15th Dean of the College of Medicine. Dr. Warshaw continued the momentum on the development of the VIC, and also established a formal MD/PhD program in 2002. Dr. Warshaw went on medical leave in June 2003 and passed away in December after a courageous battle with multiple myeloma. Dr. Evans, who had been serving as Acting Dean for six months during Dr. Warshaw's medical leave, was named the 16th Dean of the College of Medicine on February 1, 2004.

This is a new era in leadership for the College, the University and Fletcher Allen Health Care. At UVM, Dr. Daniel Fogel arrived in July 2002 to serve as University President. He was previously Executive Vice Chancellor and Provost at Louisiana State University. At FAHC, Melinda Estes, M.D., was named President and CEO in October 2003. Dr. Estes, a neurologist and neuropathologist who also has a master's degree in Business Administration, spent nearly twenty years in the Cleveland Clinic health care system, holding a variety of positions of progressive responsibility. Since 2001, she had served as CEO and Chair of the Board of Governors of Cleveland Clinic Florida, where she oversaw both Cleveland Clinic Naples and Cleveland Clinic Weston.

The appointment of Dr. Evans as Dean, along with the successful President and CEO searches at UVM and FAHC (with Dr. Evans serving on both search committees), has had a positive impact on the relationship between the institutions. For the first year of President Fogel's tenure, Dr. Evans served as his Senior Advisor for Strategic Initiatives, and he was very involved in the development of the Vision for the University announced by Dr. Fogel in 2003. This close working partnership has continued today strengthening the cooperation between the University and the College. Dr. Evans and Dr. Estes also work closely on the issues that affect the academic health center, its faculty, staff and students, including both a restructuring of the affiliation agreement and the faculty practice plan which are currently underway.

2. Curriculum revision. In 1997 at the last LCME Site Survey, the COM had just begun its initial work on the new integrated curriculum. From 1997 through 2003, the new competency-based, patient-focused, Vermont Integrated Curriculum was designed and progressively implemented. The VIC has three Levels, Foundations, Clerkship and Advanced Integration; each Level has a director, as does each course within each Level. Integrated comprehensive exams occur at the end of the first year, the end of Foundations, the closing of Clinical Clerkships, and after completion of two Acting Internships during Advanced Integration. Foundations Level courses present a progression from basic vocabulary, concepts and methods to relationships of organ systems in health and disease to complex presentations of pathophysiology. The Clerkship Level year is composed of three 15-week segments of departmentally based clinical experience and didactic programs, separated by three 1-week blocks of Bridge Clerkships. During the Advanced Integration Level, each student completes two months of Acting Internships, one of which must be in Internal Medicine, plus a 4-week elective in Emergency Medicine. The required Acting Internship in Internal Medicine is designed to demonstrate advanced integration of basic and clinical sciences and to assess the student as being competent at integrating concepts learned during the first three years. Students at this level are also offered the opportunity to assist with teaching in Foundations level courses and/or participate in a scholarly project.

The Class of 2004 was the first to experience the new Clerkship year in 2002-03, and the Class of 2007 was the first to experience the new Foundations curriculum starting in August, 2003. To support the new curriculum, COMET (College of Medicine Education Tools) was developed. This innovative compendium of informatics tools provides newly created educational programs and products along with the COM's platform for course content information, schedules, lecture notes and PowerPoint presentations, plus a grade-book for faculty and students. A COMET team supports the faculty and ensures the electronic availability of basic course components and other tools, including discussion boards, online assessments and interactive chat rooms. COMET offers a full menu of multimedia development tools for online learning, including creation of animations, virtual reality models, QuickTime movies, interactive documents and case studies. To ensure that each student has full-time access to COMET resources, beginning in fall 2003 each member of the first-year class has been issued a laptop computer.

Although national external measures such as USMLE Step 1 scores are not yet available for our first class in this new curriculum, results from our self-study process, combined with course evaluations from students and faculty, and student examination performance to date, indicates that curricular objectives are being achieved and competencies are being met with the implementation of the VIC. The interdisciplinary nature of the teaching in our Foundations courses has required a truly integrated approach. Each of the course directors was chosen for their expertise and commitment to teaching, and is engaged in a continuous quality improvement process regarding courses, both concurrently with their presentation, and at the end of the course using student evaluations and feedback tools. The Instructional Improvement Committee has had the responsibility to ensure readiness of each new course prior to its launch and to review the content, development, and delivery of the course upon completion. The VIC has undergone a continuous quality improvement process from its beginning. Courses offered for the second time were modified and improved based on the feedback and influence of students, course directors, and Level directors, as well as the recommendations of the Instructional Improvement Committee. Course directors have also made mid-course corrections based on feedback from students, educational developers and assessment specialists.

3. Comparability of experience at FAHC and MMC. Clerkship directors at Maine Medical Center (MMC) and FAHC have had close ties for many years, and the work of creating the VIC and the development of a newly formatted Clerkship year have created even stronger working relationships. The initiation of a required Neurology rotation in the VIC along with an innovative Bridge curriculum, both within and between clerkship rotations, has brought these groups and clerkship teaching sites together in a stronger way. In addition, the COMET infrastructure supporting the VIC facilitates sharing of administrative course materials and handbooks, test questions, competencies, curricula, and teaching materials across the two sites via the internet. While there is still unevenness in requirements and collection methods for patients seen in each clinical rotation, the methods used by each specialty are similar. With the help of COMET in the coming year, we anticipate more uniformity and a greater ability to ensure that appropriate numbers and types of patients are seen by students at both sites.

4. Student indebtedness. The indebtedness of COM graduates has been and continues to be of concern to the institution. Our tuition for both resident and non-resident students is high, whether compared to our public or private peers. College leadership has and will continue to work diligently to manage this issue. Our plans are more fully described in response to question seven in Section III of the narrative.

5. Adequacy of facilities and resources to support the curriculum. The UVM COM campus is a very different place than it was in 1997. The new Health Sciences Research Facility was

completed in 2001, providing 121,000 gross square feet of laboratory, office, and small group meeting space. The Given Building, the major academic site for the College since 1963, has had major renovations during 2001-2004, including creation of a Professional Learning and Assessment Center for standardized patients and small group teaching. Significant investment has been made in the Information Technology infrastructure to support computer based learning including the COMET system and the student laptop program that was initiated with the Class of 2007.

A new Education Center is currently under construction and is scheduled to open in summer 2005. The new space will include a two-story classroom building and a concourse where the new library will be located. It will physically connect the Given Building with the new Ambulatory Care Center at FAHC. This will allow students, faculty and staff to walk inside from the far end of the health sciences complex all the way through to the hospital. The Education Center has 15 small group rooms designed to facilitate a wide variety of interactions, a medium-sized classroom designed to seat 35-40 students, and a Case Method room designed for a maximum of 120, with power and data connections as well as writing space at each seat. The new library will replace the Dana Medical Library, which was housed in the now-demolished Medical Alumni Building and has been located in the Given Courtyard enclosure during construction. The new library will have a seating capacity of 140, and features fixed and moveable stacks, a computer area and classroom, plus a lounge and study carrels with data connectivity.

Methods for disseminating the findings and summary report of the 2004 task force.

A public UVM COM web site (www.med.uvm.edu) contained information regarding the task force and subcommittee membership, charges for the subcommittees, and self-study updates. This web site was visited over 8,000 times during April through December. The sub-committee members and the task force had password-protected access to an “intranet” site to access the database applicable to their needs, chat rooms for sub-committee members, committee worksheets and meeting notes, and updated portions of their summaries and other documents. The LCME administrative staff kept these materials up to date and available for the members.

Once the sub-committees had completed their work, their summaries, narratives and matrix responses to the standards were disseminated by email to the membership. Members had the opportunity to reply and update the work of the group. The sub-committee chairs integrated this into the self-study summary document. The Self-Study Report will be made widely available to department Chairs, course directors, students, residents, and faculty prior to the site survey with the intent of updating and reviewing these materials going forward.

Note if the self-study process was incorporated as part of institutional planning, or served some other purpose beyond fulfilling requirements for LCME accreditation.

The COM used this self-study as an opportunity to re-gather the academic community, following the substantial effort needed in planning and implementing the VIC, and identify areas needing improvement, as well as new initiatives. It created a stimulus to review the successes and issues around the VIC and led to a number of needed changes, including approval of a “Teacher-Learner Relationship” document, development of new governance for the VIC, formation of Task Forces to look at Strategic Planning, Governance, and Faculty Development, and addressing issues around monitoring student clinical experiences.

NARRATIVE

I. - Institutional Setting

A. Governance and Administration

1. Describe how institutional priorities are set. If planning is a regular institutional activity, discuss how it has facilitated accomplishment of the school's academic purpose, research prospects, and goals of the clinical enterprise.

Institutional priorities are set through an annual planning and budget process, which includes an annual review with all Chairs and Program leaders, and regular ongoing work with this group and senior leadership. Planning is done in two broad contexts: the University as a whole, and Fletcher Allen Health Care. College of Medicine planning is rolled into the University's plan in three ways. First, an annual "matrix process" results in a comprehensive database of all University priorities; second, the Dean reviews and defends the COM plan to the President and his advisors; and third, the University holds retreats during the year where each college or school discusses its plan. Substantial planning is completed in collaboration with FAHC through the Strategic Management Committee that includes all of the clinical Chairs, Dean, CEO and other FAHC senior leadership. The Dean also serves on the FAHC Board of Trustees, and its Planning Committee and Finance Committee. Dr. Evans has initiated a formal Strategic Planning process for the College, which is underway and will be completed in 2005.

Outcomes of the longer range planning process since the 1997 site visit have had a direct impact on the school's academic purpose, its research focus and success of the clinical enterprise. Strategic planning identified the need for a fresh and vibrant approach to medical education, and led to the development and implementation of the VIC. Strategic planning focused special emphasis on established research and clinical programs in cardiovascular disease, cancer, lung biology and neuroscience; and plans for continued growth in behavior and addiction, health care outcomes, and immunobiology and infectious disease were strengthened. Several initiatives, both completed and ongoing, are the direct result of planning, include the launch of the MD/PhD program, facility upgrades and new construction, expansion of research and laboratory space, a stronger presence in cancer clinical research, and a current initiative in collaboration with Fletcher Allen Health Care into medical imaging as a scholarly area.

2. Evaluate the role of the governance structure in the administrative functioning of the medical school. Is the governance structure appropriate for an institution of this size and characteristics? Describe any situations that require review by or approval of the school's governing board prior to taking action.

The governance structure of the COM has evolved over the long history of the school and, with the 2003 addition of a Senior Associate Dean for Medical Education, is appropriate for a school of our size and characteristics. The Dean, his administrative leadership, and the department Chairs have complimentary roles and responsibilities in achieving the goals of the College. The Dean meets twice a week for one-hour meetings with the Dean's Group, which includes the Senior Associate Deans and other key personnel such as the Assistant Deans of Development and Finance. The Dean and his senior leadership meet twice a month with the Dean's Advisory Council (Senior Associate Deans, Chairs and Program leaders). This structure has been consistently able to plan budgets, review and set priorities and allocate resources, and design and implement programs and projects within the College and in collaboration with its teaching hospital affiliates and the University.

The Governance of the COM is guided by the Officers' Handbook of the University and the By-Laws, and Rules & Regulations of the College. Importantly, since the faculty of all other schools at UVM have recently unionized, the COM, with the approval and encouragement of the University President and Provost, has embarked on a process to review the University Officers'

Handbook, College By-Laws and Rules & Regulations and to propose modifications for the purpose of developing governance that meets current needs. The Dean has charged a Task Force to address this issue and return a report by Spring 2005.

Ultimately, the governing board of the College is the same as that of the University, the Board of Trustees. Actions of the College that require the sanction of this Board include large purchases and contracts and construction projects.

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

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

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

The appointments of Dr. Daniel Mark Fogel as President in July 2002, and Dr. John Bramley as Provost that October began a new era of stable and progressive leadership at the University. As Vice Chair of the presidential search committee, Dr. Evans had the opportunity to develop an early relationship with President Fogel, and has also worked closely with Provost Bramley during their years at UVM. Dean Evans is a member of the Provost's Council of Deans, which meets monthly, and he regularly meets one-on-one with both the President and Provost to review specific issues or initiatives. Senior Associate Dean for Research and Academic Affairs, Dr. Russell Tracy, meets bi-weekly with the Vice President for Research and Dean of Graduate Students, Dr. Frances Carr. They work together on issues of common importance such as the graduate school structure and the development of an Advanced Computing Center on campus. Regular meetings also occur between the Senior Associate Dean for Finance and Administration, Ms. Wendy King, and the University finance team led by Mr. Michael Gower, Vice President for Finance and Administration. Examples of positive outcomes of these relationships are a commitment to further expansion of COM research facilities, the establishment of a campus-wide neuroscience graduate program, and agreement to plan a biomedical engineering program involving the College of Medicine and College of Engineering.

College administration and the administration of FAHC work closely on issues that impact the academic medical center. Dean Evans serves on the FAHC Board of Trustees, and its Finance and Strategic Planning committees. FAHC CEO Dr. Melinda Estes has brought stability to the hospital and its relationship to the College. Dr. Estes and Dean Evans meet at least weekly and often more frequently, and serve together on committees that have a direct impact on activities and initiatives at both institutions. They jointly review appointments of clinical faculty and review department Chairs and physician leaders, and Dr. Estes attends the twice monthly Dean's Advisory Council meetings. In addition, they present together on the academic health center to groups ranging from state and federal legislators to community interest groups. Recent progress in restructuring the Faculty Practice Plan is an example of the close interaction of COM and FAHC leadership.

Dean Evans and COM senior leadership are also in regular contact with the Maine Medical Center (MMC) leadership team, including Mr. Vincent Conti, President and Chief Executive Officer, and Dr. George Higgins, Interim Vice President for Medical Affairs and Chief Medical Officer. They have frequent visits to discuss the educational and research programs of the two institutions.

Dr. John Brumsted serves as Chief Medical Officer of FAHC as well as Senior Associate Dean for Clinical Affairs at the College, and attends both the Dean's Group and Advisory Council

meetings. Dr. George Higgins serves as Vice President for Medical Affairs at MMC and Dean for Maine Affairs on behalf of the COM.

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

Dean John Evans has been at the College since 1976, and in a leadership position since 1992 when he was appointed Executive Dean. He served in that role through 2001, and also as Interim Dean during 2000 and 2003. In 2001, he was named Senior Advisor to newly-appointed Dean Joseph Warshaw along with his role as Senior Advisor for Strategic Initiatives to UVM President Fogel upon his arrival. Dr. Evans was named Acting Dean on June 4, 2003 and appointed Dean on February 1, 2004. His knowledge, experience and thorough understanding of the College have positioned him well to lead effectively and bring continuity and stability.

Dean Evans' administrative leadership structure reflects experience and continuity, as well as his vision for growth at the College. The structure since 2001 has included three Senior Associate Deans: Finance and Administration, Research and Academic Affairs, and Clinical Affairs. A fourth Senior Associate Dean for Medical Education was added in February 2003. Dean Evans filled the vacant Senior Associate Dean for Finance and Administration position with Ms. Wendy King in 2004, and streamlined the reporting lines of the Associate Deans, Assistant Deans and Directors to the four Senior Associate Deans. Dr. Tracy has served as Senior Associate Dean for Research and Academic Affairs since 2001, and as Associate Dean for Research for two years prior to that. Dr. Brumsted has served as Senior Associate Dean for Clinical Affairs since 2001. Although turnover at the leadership level has been minimal, Dean Evans has carefully assessed each replacement opportunity in order to maximize efficiency and effectiveness.

The fact that the College has been led, since the last LCME visit, by three Deans (Frymoyer, Evans, Warshaw), with some positions being Acting, has hindered some progress. This has been ameliorated by Dr. Evans' presence as well as a relatively stable group of Senior Associate Deans and Senior Staff who are very dedicated to the College.

B. Academic Environment

5. Evaluate the graduate program(s) in basic sciences, including involved departments, numbers and quality of graduate students, quality of coursework, adequacy of financial support, and overall contribution to the missions and goals of the medical school. Describe the mechanisms for reviewing the quality of the graduate program(s) in basic sciences and comment on their effectiveness.

The graduate program in the College is considered critical to the overall mission of the College including the recruitment of the highest quality faculty and students. During the academic 2003-04, 100 graduate students were engaged in study, an enrollment that has been relatively constant over several years. Students are mentored in all 6 of the basic science departments: Anatomy and Neurobiology (8 students), Biochemistry (14), Microbiology and Molecular Genetics (42), Molecular Physiology and Biophysics (5), Pathology (9) and Pharmacology (13). A campus-wide Cell and Molecular Biology Program (CMB) provides faculty in clinical as well as basic science departments the opportunity to mentor graduate students. Currently nine CMB students are mentored by the faculty of the College of Medicine in clinical departments. The total number cited above includes the MD/PhD students who are in their third years of the seven year program.

For overall graduate education, an Umbrella Structure of the type being used at many major research medical schools around the country would be best for the College. The implementation

of this organizational structure has not evolved as quickly as we would have liked, due in part to leadership transition at the University, specifically in the Dean of the Graduate School, and the commitment of faculty time to the development and implementation of the VIC. The recent appointment of Dr. Frances Carr as Vice President for Research and Dean of the Graduate College should allow us to move forward expeditiously. Several courses are in place already that will form a core for the Umbrella, e.g., the graduate biochemistry and cell biology courses. For other courses, such as general physiology, the recent transition to the new VIC has had a mixed effect. In some cases the new VIC courses offer advantages, such as an early introduction to the clinical impacts of the material. In other cases, courses are not at a level of depth appropriate for graduate education. The VIC faculty leadership and the COM Graduate Education Committee (GEC) are working to determine which new graduate courses need to be developed. A timeline has been developed for implementing the Umbrella Program now that the VIC is underway.

All graduate students receive stipends and tuition support. Students are typically supported through training grants, research grants or College of Medicine funds including endowment. Faculty members have the capacity to mentor more students than we currently have, and our applicant pool suggests we could recruit more students. However, we do not currently have the financial resources for a substantial increase in graduate student numbers. Several groups are preparing, or have recently submitted, training grant applications (e.g., the Immunobiology group and the Lung Biology group). The Dean of the College of Medicine and the UVM Vice President for Research have recently announced a campus-wide Neuroscience Graduate Program to which the Graduate College has awarded three new graduate stipends and tuition waivers.

Mechanisms for reviewing the quality of the basic science graduate program reside both in the College and at the University level and have been effective. In the College, the GEC reviews programs and also plays an important role in developing new courses. Each of the departmental programs, as well as the cross-department Cell and Molecular Biology program, have committees that evaluate the number and types of courses, and the quality of the coursework in each course. These committees also review applicant pools and admit new students. When in place, the Umbrella will assign these functions to an executive or steering committee with representation from each participating basic science program. In addition, graduate student progress is monitored through periodic meetings of each student's Studies Committee and the use of Qualifying Exams (usually in the 3rd or 4th semester). Finally, the Dean of the Graduate School periodically reviews graduate programs across the campus, and the UVM Faculty Senate Subcommittee on Curriculum plays an analogous role to the College's GEC.

6. Evaluate the impact of residency training programs and continuing medical education activities on the education of medical students. Describe any anticipated changes in graduate medical education programs (numbers of residents, shifts in sites used for training) that may affect the education of medical students.

The COM and its affiliated institutions offer a rich environment in the area of Graduate Medical Education (GME), which has an important and positive impact on medical education. This is reflected in the 2004 AAMC Medical Student Graduation Questionnaire (MSGQ) in which UVM medical students gave stronger ratings than the "all schools" average in evaluating effective teaching and enhancing education by residents during clerkships. Beginning late in the second year, medical students take core clerkships at FAHC and MMC, where they have daily interaction with residents in Internal Medicine, OB/GYN, Pediatrics, Psychiatry, Neurology, and Surgery. Residents at both clinical sites are prepared during orientation for their role as teachers and mentors to medical students. At FAHC there are 276 residents and 39 ACGME fellows; at MMC there are 177 residents and 22 ACGME fellows. Departments are expected to familiarize their residents with medical student course objectives and their role as teachers. This is done for all

residents at a general weekend-long orientation in June of each year and specific mandates are supported at the department level. This spring for the Class of 2007, there will be a more uniform deployment of objectives for residents and faculty with the assistance of COMET, through the COM e-learning network. Both FAHC and MMC have effective GME oversight processes to maintain strong programs, insuring quality and consistency. There are no planned significant changes in our residency complement or programs in the coming years.

The College and its partners FAHC and MMC are accredited by ACGME to sponsor continuing medical education (CME) activities, and both sites do so at a substantial level. For example, in 2003 the COM and FAHC sponsored 117 CME activities (Grand Rounds and Conferences), with a total of 13,666 physician attendees. In addition, 75 CME activities were jointly sponsored with regional hospital programs. Medical students are encouraged to participate in CME events (and may attend any CME program at no charge) to augment the medical school curriculum, enhance clinical knowledge and skills, and further prepare them for life-long learning. All clinical departments sponsor weekly Grand Rounds accredited by the Office of CME, and students on the respective service rotations are expected to attend. However, the very active medical curriculum does limit their ability to participate in CME activities, particularly off-site conferences.

7. Evaluate the research activities of the faculty (areas of emphasis, level of commitment, quality, and quantity) in the context of the mission and goals of the medical school.

A core mission of the College is to advance medical knowledge through research. In the last decade, research at the College has grown substantially, with extramural funding increasing from \$30.7 million in 1993 to \$82.3 million in 2003. While many schools increased their funding during this time of NIH expansion, the COM shifted ranking from 66th to 57th (2003) in total NIH support (out of 125 US Medical Schools), suggesting a significant increase in relative research quality. Additional programs are in place at MMC, which in 2003 had \$8.6 million in extramural research support.

Each of the 16 departments at the College is engaged in research, and each year our faculty members publish in high-profile journals including the *New England Journal of Medicine*, *JAMA*, *Nature*, and others. Both basic science and clinical faculty do research, and we have more than 1000 IRB-approved active clinical protocols currently in place. Courses in the VIC emphasize up-to-date research findings, and many of the faculty include new findings – sometimes from their own work – in the Foundations part of the curriculum and during clinical rotations both at FAHC and MMC. Students are taught to evaluate the medical literature by faculty who are also contributors to the medical literature. The integration of research with clinical care and the translation of research findings to the clinical arena are areas of emphasis in the VIC. The clinical experience for our students also includes a major emphasis on new research findings, during clinical rounds and in the new required fourth year Medicine Acting Internship program.

Through the strategic planning process, the College identified four major areas of research emphasis that reflect strengths at our institution: cardiovascular disease, cancer, lung biology and neuroscience. Each of these programs has basic science, animal model research and translational activities, as well as clinical research and clinical trials. This programmatic, collaborative approach to research engages faculty from across the College and the University, and has led to considerable success as shown by programmatic extramural support, including seven Program Project awards, two COBRE (Centers of Biomedical Research Excellence) awards (with a third submitted), major publications in high profile journals, and recruitment of key young faculty.

We have also identified three areas of research as growth opportunities: behavior and substance abuse, immunobiology/infectious disease, and health care outcomes. We have made progress by

increasing staffing, funding and infrastructure. In addition, the Dean and FAHC CEO have recommended new programs on the Science of Quality and Medical Imaging.

8. Assess the adequacy of the resources (equipment, space, graduate students) for research. Evaluate the amount of intramural support for research and the level of assistance available to faculty members in securing extramural support.

Research space at the College was enhanced dramatically in 2001 with the opening of the 121,000 gross square foot (GSF) Health Sciences Research Facility. Nevertheless, research growth continues to stress the available space. The College recently received approval for purchase of the 72,000 GSF Colchester Research Facility, where COM faculty are already working in leased space (36,000 GSF), located 4 miles from the Burlington campus. The Colchester site provides the opportunity to increase research space by approximately 170,000 GSF.

Resources include an extensive range of core facilities that provide wide access to state-of-the-art equipment and procedures. Key cores include: transgenic animals, molecular imaging, structural biology, genomics, proteomics, custom instrumentation fabrication, flow cytometry and others. These cores represent a major strength for research, especially for helping new faculty develop sustainable research programs.

There are 100 graduate students enrolled in programs at the College, and there is capacity to increase that number. Successful implementation of the Umbrella Program, discussed above, will help in recruitment, as will the initiatives underway to increase financial resources for graduate student support.

The University has an Office of Sponsored Programs (OSP), located in two sites on campus, providing assistance and guidance to faculty for outside funding searches and submission of grants. The Senior Associate Dean for Research meets weekly with the Associate Director of OSP. In addition, the Office of Clinical Trials Research was launched in August 2002 to assist Principal Investigators with the business and regulatory aspects of clinical research, and also to attract additional research work to the University. Intramural funding for research is provided in several venues. Start-up packages are developed jointly by the departments and the Dean's Office. The COM also supports research through the strategic use of one-time funds to launch new efforts, bridge programs when extramural funding is not available, and improve research infrastructure. These funds, in the range of \$100,000 annually, are available from the Dean, from Departmental reserves, and from the UVM Provost, and are administered competitively through the COM Research Committee. In addition, the COM provides more than \$1 million annually to support core facilities such as molecular imaging, animal care, flow cytometry and others.

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

The research activities of the COM, centered on developing new knowledge and addressing health challenges, are a major asset for medical education beginning in the first year and continuing throughout the curriculum as discussed above. In 2001, the College launched a formal MD/PhD program, accepting four students per year to pursue this joint degree. With 16 students now enrolled, and the first students fully engaged in research, the program is attracting a strong applicant pool and there is opportunity for federal funding. The COM fully supports the tuition and provides a stipend for each MD/PhD student.

Medical students also have a broad range of opportunities to engage in research-based activities. The summer research program for first year students supported about 25% of the student class

during summer 2004. Summer research support is also available from several of the eight NIH-funded T32 Training Grants at the College. In addition, there is a VIC requirement that every student completes a public health research project during their second year, and some clinical rotations (Surgery majors, for example) have a research requirement. Finally, each department in the College has identified a faculty member to serve as a research liaison for medical students to help enhance participation.

II: Educational Program for the MD Degree

A. Educational Objectives

1. Indicate the level of understanding of the objectives for the educational program among administrators, faculty members, students and others in the medical education community. Do the objectives serve as effective guides for educational program planning, and for student and program evaluation?

There is a high degree of understanding of the educational program objectives, based on the extensive involvement of faculty and COM leadership in their development and implementation and the way the objectives are used to drive the student learning experience. At the outset, an initial Task Force developed a framing document and a Curriculum Design Committee was formed in 1998. Using the “Competencies for the MD Degree” document from this Task Force, along with integrating themes across the curriculum and referencing the Medical Student Objectives Project of the AAMC, objectives were defined for the educational program, all of which focused on providing the knowledge, skills, and professional attitudes needed for a physician to practice medicine in the 21st century. More than a thousand of these objectives were reviewed, evaluated, and then distributed across a series of new courses within the VIC. These objectives guided the development of each course in terms of what students are expected to learn, not just what is to be taught. As documented in the self-study database, each objective has a specific and measurable outcome and has been cross checked against national curricular objectives for clinical specialties and content outlines. Each course in the Foundations and Clerkship Levels of the VIC post their objectives on the course home page on COMET. Objectives for Advanced Integration courses are provided and reviewed with students at the start of the rotation and it is planned to post these objectives on COMET beginning with the Class of 2007. Objectives can be viewed immediately by clicking on the “VIC objectives” tab on that course’s home page. These objectives are reviewed at the end of a course by course directors and faculty, by students and then again by the curriculum committee to ensure they are met and determine if they need adjustment for the upcoming year. These objectives have served as effective guides for continuous improvement in educational planning and have been a key component of student, faculty and program evaluation.

2. Comment on the extent to which school-wide educational objectives are linked to physician competencies expected by the medical profession and the public. Summarize results of any associated outcome measures that demonstrate how well students are being prepared for the next stage of their training.

The school-wide objectives have been linked to the AAMC Medical School Objectives Project and the content outlines for the USMLE. In addition, members of the National Board of Medical Examiners visited Vermont to review our objectives and competencies to ensure that they reflect objectives expected by the state licensing boards, the public, and the medical profession. Students who have experienced VIC will be required to take and pass USMLE. We note that our students have been historically well prepared for licensure. An end of year cumulative exam given to our recent first year class did correlate with achievement of competencies identified throughout their first year, and showed students had appropriate mastery of material to advance to the second year. This is based on the correlation between their cumulative scores on exams throughout the year and their performance on the end of the year exam. Similarly, a cumulative

end of third year clerkship assessment reflected that competencies were achieved by all our students, allowing them to move on to fourth year, based on all students passing this exam. Courses in the third and fourth year depend upon the achievement of competencies within the first and second year, and qualitative as well as summary assessments at the end of those curricular components demonstrate that students are achieving the required competencies. Our Medical Student Leadership Group (MSLG) course addresses professionalism, humanism, and family-centered care, along with assessing non-cognitive, yet critical competencies in medical leadership. Again, our students are demonstrating achievement of these competencies as they prepare to enter the medical profession. This is based on end-of-year evaluations performed by a student's preceptor that are contingent upon mastering the course competencies as detailed on the evaluation sheet, and supported by direct observation over the year in the small group session. Beginning with the class of 2005, students must pass USMLE Steps 1 and 2 CK and must pass Step 2 CS to graduate as further evidence that they are prepared for the next stage of training.

3. Evaluate the adequacy of patient resources in clinical settings for achieving the school's clinical objectives.

Based on hospital census data and the self-study forms submitted by each clinical department, each of the major affiliated teaching centers has sufficient patient resources to ensure an appropriate clinical experience. Increased emphasis on outpatient and ambulatory experiences in the Foundations and Clerkship curricula has stressed the primary care offices in the local (Chittenden County) region, so students are encouraged through our Area Health Education Centers (AHEC) to seek experiences in more distant rural settings. Faculty in these areas have been eager to have our students rotate through their offices.

A review of the database submitted for the self-study in both Maine and Vermont suggests that while attention is being paid to the adequacy of patient resources and clinical settings, the evaluation of this effort is not being done as well as might be, and usually consists of retrospective reviews of students' patient logs by clerkship directors. There is variability among clerkships in reviewing these logs. We are developing systems using COMET for implementation in the spring of 2005, which we anticipate will remedy the documentation problem, with ongoing review and proactive adaptation to ensure adequate patient experiences for our students.

B. Structure of the Educational Program

4. Delineate the mechanisms ensuring that the educational program provides a general professional education that prepares students for all career options in medicine. Cite relevant outcomes indicating success in that preparation.

The educational objectives are designed from a generalist's perspective and are such that each student must achieve competency in these objectives that are not career specific, but cross all fields of medicine. The educational program also provides students with strong skills in professionalism and leadership to prepare them for all career options in medicine. For each student a first year mentor and a research liaison is available in all departments to help do career planning with an understanding of as many career options as possible. Concerning research and academic careers, in the VIC the entire second year class participates in a health services research project. Over half of each class participates in a more individualized research activity that provides significant exposure to research investigation. The creation of an MD/PhD program for four students in each class has also broadened possible career options. Fourth year students in the Class of 2007 will participate as teachers in the Foundations curriculum, introducing them to the educational aspects of medicine.

All students have a rigorous and thorough exposure to the clinical disciplines during the core clerkship year, with evaluation of competency achievement in each area using Objective

Structured Clinical Exams (OSCE) and standardized patients. Students have additional exposure to career opportunities through the Bridge Curriculum of the VIC. Differentiation into career specific options occurs following completion of the core clerkship year, ensuring three years of broad general experiences.

As a measure of outcome success in preparing students and educating them about a breadth of career options, over the past five years our graduates have chosen to pursue residencies in 18 separate areas.

5. Discuss the types and sufficiency of educational activities to promote self-directed learning and the development of skills and habits of life long learning.

The VIC has self-directed learning modules in each of the Foundations courses that are accessed through COMET. In addition, clinical core clerkships require self-directed learning to ensure that cognitive objectives are achieved, even if not seen clinically. In the Medical Student Leadership Group course, strategies for self-directed and life-long learning are encouraged and stressed at three separate individual student feedback sessions, and students maintain a portfolio of their learning goals and objectives. During graduation week, a class-wide graduation exit interview specifically asks students what they will do to maintain life-long learning, e.g., by keeping up with journals, going to conferences and achieving board re-certification. Keeping track of educational activities provided through licensing boards and possibly through COMET following graduation may be a new way to encourage and measure life long learning in our students.

6. Evaluate the adequacy of the system for ensuring consistency of educational quality and of student evaluation when students study at an alternative site within a course or clerkship.

Assessment is a critical part of the VIC and all of its components. Clerkship directors in Maine and Vermont share student evaluations between sites to ensure consistency of educational quality and resources. The clerkship objectives and assessment exercises are similar between sites, and are prepared jointly by clerkship directors and respective faculty in both sites to ensure further consistency in our program. The use of COMET will facilitate consistent transmission of information across both sites. Students report that mid-course feedback happens in some clerkships more uniformly than in others, and we anticipate the further implementation of COMET will ensure a more uniform process across all core rotations in both Vermont and Maine.

7. Comment on how well all content areas required for accreditation are addressed in the curriculum, note any evidence supporting the adequacy of content coverage for such topics.

The use of COMET has enabled us to be quite rigorous in our surveillance of content areas in courses, as well as across clerkships and across sites. Based on information collected in our database from clerkship directors and students on the Education Sub-committee for LCME, the perception is that we meet the content area requirements for accreditation during the course of our four year curriculum. In addition, in preparing our new curriculum we did a cross-walk matrix analysis of content areas from our previous curriculum to ensure that they are contained in the new VIC. This is an appendix to the database. All content areas are also matched against national curricula either by specialty or by the content outlines for USMLE.

8. Evaluate the workload and balance between education and service in the clinical year. Do students receive sufficient formal training in their clinical clerkships? Assess the balance between inpatient and ambulatory teaching and the appropriateness of the teaching sites used for clinical experiences.

Careful attention is paid to ensure that education is a key component in the clinical years. Each core clerkship contains student-specific educational sessions including attending rounds and core conferences as outlined in the database. In addition, Bridge curricula within and across clerkships

provide educational content in the clinical years. Workload is consistent with that of residents, and resident guidelines are followed for clinical clerkship students. Clinical rotations universally comply with the requirement to maintain work weeks of no more than 80-hours for our students. Evaluations from students and from faculty, as well as a review of weekly schedules, demonstrate that students do receive formal teaching during the clinical clerkships. Ambulatory teaching first occurs in the “Doctoring in Vermont” experience in the first and second years, and is a major component in at least a third of the core clerkship year through Family Medicine, Outpatient Internal Medicine, Pediatrics and Obstetrics and Gynecology. In addition, ambulatory teaching is provided in Medicine and Surgery subspecialties through office-based visits. Primary care teaching sites and preceptors are selected by course directors who orient these faculty to course objectives. Faculty development is strongly encouraged through an annual Faculty Development Day sponsored by our Office of Primary Care. All local primary care practices utilized for ambulatory teaching during the past seven years have had representation at this annual workshop and have undergone a faculty orientation.

C. Faculty Development

9. Comment on the adequacy of the supervision of medical students during the required clinical experiences. Discuss the effectiveness of efforts to ensure that all individuals who participate in teaching including residents, physicians and voluntary faculty members are prepared for their teaching responsibilities.

Input from faculty, residents and students supports the position that medical students are well supervised during all clinical experiences. However, we have not yet put in place mechanisms that fully document this supervision. During this past year (and in part as a result of the self-study process), with the new clinical skills component of the USMLE, faculty development has focused on the importance of documenting student observation, particularly on clerkships where faculty are directly observing our students performing clinical skills.

All individuals who teach, including residents, participate in faculty development sessions during their orientation to a particular course. In addition, all residents undergo a cross-discipline faculty development session during resident orientation and at least five clinical specialties have their own faculty development days or retreats for their residents and faculty. This year, we have begun pilot teaching modules online for residents and faculty to gain general principles in teaching applicable to VIC courses. This will replace the monthly “Teachers Teaching Teachers” faculty development seminars which, while successful for those who attended, did not reach the wide numbers of teachers needed. The modules will be able to track how many people utilize this method of faculty development and will seek feedback on their benefit by inviting online comments to be sent to the module developers by those who use the tool. Residents and faculty who teach on clinical rotations or clerkship are told at orientation to review their objectives. Having the objectives readily available on-line through COMET should improve compliance and residents will be reminded by clerkship directors to review objectives on COMET throughout the year as needed.

10. Evaluate the adequacy of methods used to evaluate student attainment of the objectives of the educational program. How appropriate is the mix of testing and evaluation methods? Do students receive sufficient formative assessment in addition to summative evaluations. Discuss the timeliness of performance feedback to students in the pre-clinical and clinical years.

The VIC has a wide mix of evaluation methods and an extensive program of assessment led by Director of Assessment Karen Richardson-Nassif, Ph.D., who meets with course and Level directors to review evaluation strategies and the multiple methods of assessment being used, which we believe ensure achievement of learning objectives. The Student Education Group, a

group of students working with faculty to continuously improve our curriculum, has created a mid-course feedback process to identify areas needed to ensure students' achievement of objectives and competencies and ensure that improvements can be instituted before a course ends. There are also end-of-Level exams involving standardized patients and multiple choice examinations to ensure not only course-specific but comprehensive cumulative attainment of objectives at three critical points prior to graduation. Foundations courses use multiple choice, essay, and take-home exams, small group case discussions and patient OSCE's for assessment. Clerkship courses offer multiple choice exams, some oral exams, and patient OSCE's to gather evaluative data on student performance.

Students receive results of Foundations examinations through COMET within one to two days. On clinical rotations, all students receive formative assessment midway through a clerkship and at the end of a clerkship and often more frequently. Performance feedback is given to students on multiple choice exams almost immediately, and in non-cognitive assessments through formative feedback sessions such as with mentors in the Medical Student Leadership Group course during the first and second year. If problems are found, student remediation includes tutors, other study aides, and/or use of an advisor helps to ensure subsequent improved performance during a course or clerkship.

11. Describe the system for ensuring the students have acquired the core clinical skills specified in the schools educational program objectives. Evaluate its accuracy.

Faculty members for the VIC Foundations Level meet to set global standards of achievement and have published criteria for that achievement. Clerkship directors in Maine and Vermont communicate to determine grading systems, a schedule for frequency of feedback to students, and how the feedback is given to ensure uniformity. At the end of each Level, comprehensive evaluations occur. For Foundations, the requirements are passage of Step 1 and an OSCE exam. For Clerkships, the requirements are passage of a comprehensive OSCE exam as well as passage of Step 2. Students are thus required to pass Step 1 and 2 (CK) of USMLE by January of their graduating year, ensuring that core clinical skills are achieved prior to graduation. Students now must also take the new CS exam prior to graduation. An acting internship in Medicine that is now mandatory for all students will also have a cumulative assessment using standardized patients to integrate basic science and clinical knowledge. This will begin in the spring of 2005, and further ensures meeting the educational program objectives.

D. Curriculum Management

12. Assess the adequacy of mechanisms for managing the curriculum and ensuring a coherent and coordinated curriculum. Do the curriculum as a whole and its component parts undergo regular systematic review? Are there sufficient resources for the Associate Dean of the Curriculum Committee to support the management of the curriculum?

Prior to the VIC, curriculum management was already fairly complex. Given our faculty base in Vermont and Maine, the cross departmental nature of the program, and the multiple stakeholders involved, curriculum management is now even more complex. The governing process that worked in a department-based curriculum now needs more coordination and new governance. Currently, the VIC Board of Directors and curricular leadership discuss and evaluate the curriculum as a whole. A new curricular governance process and a new curriculum committee will review the overall quality of the curriculum as a whole, as well as recommend continuous improvement efforts where needed. This group will receive input from a Foundations subcommittee, a Clinical Core subcommittee, a Fourth Year committee, a Student Education Group, and an Operations Team. The Foundations, Clinical Core and Fourth Year committees will evaluate all required courses on an ongoing basis and review elective courses in the fourth

year, and provide their summary recommendations to the governing Curriculum Committee. The Senior Associate Dean for Medical Education will coordinate these efforts and report to the Dean.

At the present time, courses are reviewed formally at their conclusion. Students and faculty complete course evaluations which are forwarded to the course director, and then given to the Level director and the Senior Associate Dean for Medical Education. Each course is formally evaluated by an Instructional Developer, the Assessment Director, and the E-learning Manager who oversees the COMET course components. All reports are provided to the Instructional Improvement Committee, which has a formal review process. This committee will dissolve in 2005 and re-form as a new oversight curriculum committee. Sufficient resources are provided through the Dean's Office and the Office of Medical Education to support curriculum management. Operationally, the curriculum is the responsibility of the Senior Associate Dean for Medical Education.

13. Judge the effectiveness of curriculum planning at your institution. Describe efforts to ensure this is sufficient participation in planning and that procedures to rectify any problems identified in the curriculum and individual courses and clerkships: describe and evaluate.

We believe curricular planning is both effective and inclusive. The seven year process of evolving the VIC was a broad-based effort that included faculty, students and staff. Numerous "Town Meetings" were held, committee meetings were open to all, and there was an overall vote of the faculty to adopt VIC with over 300 faculty present. The various ongoing curriculum-associated committees will ensure continued participation at a high level college-wide. The newly constituted curriculum committee will be responsible for reviewing all student experiences, coordinating the evaluative input from course and clerkship directors. When problems are identified, the curriculum committee will require course directors to report back prior to the next rendition of the course on how concerns were addressed and how the course was improved. Mid-course feedback for Foundations courses rectified many problems even before course completion. Feedback from students in end-of-course evaluations confirms that our present process is highly responsive.

14. For schools that operate geographically separate campuses, evaluate the effects of the mechanisms to ensure that the educational quality and student services are consistent across sites.

There is a collaborative relationship and mutual respect and cooperation between the leadership at Maine and Vermont. The tone set by the leadership at both sites diffuses to faculty and staff. There are regular meetings and communications involving senior leadership and Clerkship Directors from both Maine and Vermont about the VIC. The Dean monitors the process through frequent meetings with the Senior Associate Dean for Medical Education and with the Associate Vice President for Medical Education in Maine to ensure that these standards are achieved on an ongoing basis. Course directors meet in person at least twice annually and on telephone calls as needed. Senior leadership meet face-to-face twice yearly with clerkship directors to ensure that educational quality is consistent across sites. There is a single standard for promotion and graduation for all students across both campuses, and students are randomly assigned to placement sites through a lottery system. All services are uniform with the exception of housing, which is temporary in Maine and thus provided. Health services are available at both sites, as are gym facilities. The Financial Aid Office is located only in Burlington, but is accessible by phone or e-mail. Student advising and counseling personnel are available and utilized by students at both campuses. Computers and library access are ample.

15. Evaluation of Program Effectiveness. Assess the quality of your graduates, describe the evidence indicating that institutional objectives are being achieved by students.

The COM utilizes a number of outcome measures to assess the quality of our graduates. These include performance on USMLE Step 1 and Step 2, as well as residency match results. For example, over the last 3 years our students have averaged a 92% pass rate on USMLE Step 1 and a 95% pass rate on Step 2. In addition, our residents have demonstrated strong performance in residency match placements obtaining positions at outstanding institutions.

16. Discuss how information about the students and graduates is used to evaluate and improve the educational program.

Results on standardized tests (USMLE Steps 1 & 2) and questionnaires from graduating students (e.g., the MSGQ), and from residency programs in which our students have matched, inform us about how well prepared our students are. In addition, a final exit interview with the graduating class helps determine students' perceptions of the COM strengths and areas for improvement as they move on to residency and develop and reinforce their program for life-long learning. Identified weaknesses are addressed by the Curriculum Committee and its subcommittees and then implemented in the VIC as a continuous improvement process.

III. MEDICAL STUDENTS

A. Admissions

1. Critically review the process of recruitment and selection of medical students, and evaluate the results of that process. Is the size of the applicant pool appropriate for the established class size, both in terms of number and quality? How do you validate your selection criteria?

Approximately 5000 applications are received for 101 positions. The pool of applicants who meet qualifications is greater than the number considered reasonable to interview to fill the entering class, leading to a sufficient pool of qualified applicants for consideration by the admissions committee. The self-study team performed a critical review and analysis of the recruitment and selection process for matriculants to the College. Based on the total number of applicants, the criteria used for selection for interview, the percent of students who withdrew or were dismissed over the four years of medical education, the overall graduation rate, the performance of the students on national exams and the match rate for residency programs, the Task Force concluded that the process of recruitment and selection was appropriate.

2. Evaluate the number of students of all types (medical students, residents, visiting medical students, graduate students in basic sciences, etc.) in relation to the constellation of resources available for teaching (number of faculty members, space, clinical facilities, patients, educational resources, student services, etc.).

On review of resources available for teaching and learning, the Task Force concluded that the COM has sufficient numbers and quality of basic science and clinical faculty to have accredited graduate and clinical training programs, to teach all pre-clinical and clinical courses, and to enable medical students to perform successfully in Steps 1 and 2 of the USMLE. No students from other medical schools take required clerkships with the UVM students on the FAHC campus. A small number of student clerkships (32 per year on average over the past three years) from other medical schools occur at Maine Medical Center, but this has not diminished the resources available to UVM medical students. There is some capacity (mentors, labs, class size) for an increased number of graduate students once the Umbrella Program is in place, if appropriate funding for stipend support can be identified.

3. Describe your goals for gender, racial, cultural, and economic diversity of students. How well have they been accomplished? Are there student support programs and professional role models appropriate for the school's diversity goals?

Our goal is to have a diverse student body that would provide a rich environment appropriate for student growth, maturation and learning, even though it might not necessarily reflect national demographics. The COM continuously strives to increase diversity, and provides an environment that is appreciative of multiple cultures. While the diversity of the students, faculty and staff, and patients is not reflective of national demographics, when considered in comparison to the state demographics, the COM student body and faculty in Maine and Vermont are more ethnically diverse than the general population of either state. For example, the Vermont and Maine general populations are 98% white while UVM medical students are 76% white. Role models and a number of support programs are available in the COM and the University, such as the African Latino/a Asian Native American (ALANA) student center.

The Independent Student Survey Analysis for the LCME documented some concern in the Classes of 2004, 2005, and 2006 with the overall diversity of the student body and faculty. However, this Independent Student Survey also revealed that students have a positive perception of the apparent sensitivity students and faculty members have toward issues of diversity at the COM. The two most recent graduating classes had more dissatisfaction with the relative lack of inclusion of diversity issues into the curriculum than current classes, suggesting that the school has improved in this regard, especially with the addition of Medical Student Learning Groups. Several classes identified the lack of diversity in the make-up of the faculty as a problem. This issue is not unique to UVM and efforts continue during recruitments to increase the faculty diversity.

4. Evaluate whether the acceptance of transfer students, or visiting students in the school's affiliated teaching hospitals, affects the educational program of regular students (i.e., in the context of competition with the school's own students for available resources, patients, educational venues, etc.).

Acceptance rates for transfer students are typically very low because of the relatively unique structure of the curriculum, with the clerkship year starting during the second year of medical school. This curriculum requires transfer students to repeat courses or extend their medical education beyond four years. The small number of transfer students has not been considered to diminish resources for existing enrolled students. As evidenced by mean undergraduate GPA, MCAT scores and the interview process, transfer students have demonstrated achievements comparable to the students currently enrolled. Visiting students only fill places in rotations that are offered but not filled by our own students, so they do not affect or strain resources.

B. Student Services

5. Comment on the levels of student attrition and academic difficulty in relation to your school's admission requirements, academic counseling efforts, and remediation programs. How effective are counseling and remediation systems?

A review of student attrition since 1997 found that levels are very low. Typically, ninety-seven percent of an entering class graduates. Resources are available for those students experiencing academic difficulty, with tutorial assistance paid for by the Office of Student Affairs. Faculty members are available to provide informal sessions outside scheduled curricular time. For example, many VIC faculty offer review sessions after formal class hours, and even on weekends, to those who require it prior to exams. An individual student who is not succeeding in a course will receive individualized feedback from a faculty member regarding examination performance and how to remediate content areas missed. The standardized patients also offer extra sessions for students to practice their physical diagnosis skills and faculty will review videotapes of student

performance with standardized patients and provide formative feedback as a means of remediation for a deficiency in clinical skills. With help from the faculty, students also avail themselves of the services of a number of local institutions such as the Stern Center for Language and Learning. In the Independent Student Survey Analysis for the LCME, a majority of students responded they were satisfied or very satisfied with the availability and adequacy of tutorial assistance.

6. Analyze the pattern of career choice among your recent graduates. Is the pattern congruent with your school's mission and goals? Evaluate the system of career counseling, residency preparation, and the selection of elective courses.

Over the past five years, the pattern of residency choices has been diverse; areas of emphasis include internal medicine (an average of 31% of our graduates), emergency medicine and family practice (8% each) and pediatrics (13%). This reflects the mission of the school which emphasizes general clinical competency and a desire to have a broad base of specialties for our graduates. The Associate Dean for Student Affairs has given a high priority to helping students consider various specialty interests, planning electives and selecting a faculty advisor. The Associate Dean meets with all students individually during the first year and again in the latter part of the clerkship year to guide students in planning electives, selecting a faculty advisor and pursuing specialty interests. Another meeting is held during the summer prior to the senior year for specific discussion of specialty plans and to review residency application plans and procedures. Review of satisfaction ratings in the 2004 AAMC Medical Schools Graduation Questionnaire on questions regarding career planning revealed UVM graduates had levels of satisfaction comparable to all schools in this category. Although a conclusion was reached in the Independent Student Survey Analysis for the LCME that there was some dissatisfaction with the adequacy of career counseling from the Student Affairs Office, 60% of the graduates in the Class of 2004 responded they were satisfied or very satisfied with the adequacy of counseling. In 2003, the Foundations Advisor Program was initiated, assigning a faculty advisor to each first year student. Because of the highly favorable responses from the students, the program has continued.

7. Evaluate the level of tuition and fees in relation to the size of graduates' accumulated debt, and to the level of financial aid needed and available. What is the school doing to minimize student indebtedness? Comment on the effectiveness of debt counseling programs.

The level of indebtedness for graduates who are indebted is high, and a number of efforts are underway to help manage this issue. Among all medical schools, in 2003 we ranked 14th at an average debt of \$133,429. This level is reflective of a relatively high tuition for both resident (\$21,140) and non-resident (\$36,990) students with a predominance of out-of-state students enrolled. It must be recognized that the State of Vermont provides a relatively modest portion of the overall budget of the school compared to other public institutions, and the extensive endowment available in many private schools does not exist at UVM. Therefore, there is a high reliance on tuition, clinical revenue and research funding. In 1999, our students received \$690,000 in grants (without service); while in 2003 they received \$3,700,000. This five-fold increase in grants places us at nearly twice the average for public medical schools and on par with the average for private schools. The capacity for grants is a result of aggressive fund raising exemplified by a gift garnered by Dean Evans in 2000 from the Freeman Foundation, which provides approximately \$2 million per year of which \$1.5 million supports scholarship. The College has also worked diligently to manage expenses, resulting in an average annual increase of in-state tuition of less than 4% over the last four years, while at the same time the average increase for public medical schools has averaged about 10%. The COM recognizes that our tuition and indebtedness remain high, and have a goal of minimizing the growth in both.

8. Evaluate the adequacy of student support in the following areas:

- **Personal counseling and mental health services.**
- **Preventive and therapeutic health services, including immunizations and health and disability insurance.**
- **Education of students about bodily fluid exposure, needle stick policies, and other infectious and environmental hazards associated with learning in a patient care setting.**

Personal counseling is readily available on site from the staff in the Office of Student Affairs, and professional counseling and mental health services are also available and accessible to students. The student's health insurance policy covers professional counseling and mental health services. Strict professional confidentiality is maintained at the Center for Health and Wellbeing, which provides primary health care for medical students, and at the UVM Counseling Center, which provides psychological care. Although compliance with the LCME standard was evident on the Vermont campus, the self-study identified a potential problem at the Maine campus and actions were taken to achieve compliance. Mental health counseling services at MMC, completely separate from the clerkship experience, are now in place for COM students in rotations in Maine.

Health insurance is available and required; additional catastrophic coverage is also available as an option. There are always concerns about cost and coverage of student health and dental insurance and this is as an area of continuing analysis including how our program compares to others. The review found appropriate policies and requirements for immunizations and for participation by students in education on infectious and environmental hazards, including needle-stick policies and universal precautions.

C. The Learning Environment

9. Comment on the effectiveness of school policies for addressing allegations of student mistreatment, and for educating the academic community about acceptable standards of conduct in the teacher-learner relationship.

Student feedback reveals a very low to non-existent occurrence of general, sexual, racial/ethnic or sexual orientation mistreatment at UVM. Since a formal code of conduct for teachers and learners was not in place in 2002, the Associate Dean for Student Affairs brought together a committee of faculty and students to develop a code of conduct. The policy was presented to the Chairs for their review in September 2004 and adopted as COM policy in October 2004. The dissemination of this policy has occurred through e-mail from the Dean to all medical and graduate students, faculty, staff and residents both in Vermont and Maine. In addition, a computer-based training module on this policy is now in the design phase.

10. Evaluate the familiarity of students and course/clerkship directors with the school's standards and policies for student advancement, graduation, disciplinary action, appeal, and dismissal. Review the adequacy of systems for providing students with access to their records, and assuring the confidentiality of student records.

Through the use of multiple vehicles, we believe that students and core/clerkship directors are appropriately familiar with the standards and policies for student advancement, graduation, disciplinary action, appeal and dismissal. Efforts include publication in the Rules & Regulations of the Faculty of the College of Medicine, inclusion in the Student Handbook, and dissemination to each Department. On-line access to these policies has also facilitated broadcast of these standards and policies. Although student satisfaction is very high regarding access to and confidentiality of student records, the Subcommittee on Medical Students, after its self-study, suggested changes regarding access to medical student files to further ensure their confidentiality, which were rapidly implemented by the Student Affairs office.

11. Assess the adequacy and quality of student study space, lounge and relaxation areas, and personal storage facilities. Do they contribute to an environment conducive to learning?

The self-study review demonstrates that this LCME standard is met. The Independent Student Analysis points to some dissatisfaction among students regarding the availability and quality of study space, relaxation space and storage/locker space. Most of these problems are being addressed by renovations and new construction currently underway, but emphasis on providing appropriate space will merit continued attention. Each class was satisfied with the safety in and around the medical school, around the hospitals and walkways to the hospitals, as well as the over-all adequacy of campus security.

IV. FACULTY

A. Number, Qualifications, and Functions

1. Develop a composite assessment of the educational, research, and service activities of the basic science departments, in the context of the mission and goals of the medical school. (In addition to department-specific data in the Faculty section of the database, see also responses for standards IS-11 and IS-12 in Section I of the database, and departmental finances and facilities described for standards ER-2 and ER-4 in Section V of the database.) Include the following areas in the assessment:

- **Leadership (including stability of departmental Chair positions).**
- **Faculty (including numbers, experience and expertise), in total and by discipline.**
- **Finances.**
- **Space and facilities.**
- **Quality and quantity of teaching, research, and service.**
- **Involvement and success in graduate education.**

The self-study confirmed that the 122 full time faculty members within the basic science departments have the numerical strength, breadth of expertise, and diversity to fulfill the mission and goals of the COM. All of the basic science Chairs have been in place 5 years or more providing very stable leadership. The basic sciences faculty within the COM is stable and mature (29% at the Professor level, 24% at the Associate Professor level). The quality and quantity of teaching by the faculty is viewed as strong, highly valued, and meets the needs of the medical and graduate students with expertise in biochemistry, cell biology, histology/anatomy, molecular biology/genetics, physiology and pharmacology. Finances, space and facilities are addressed in another part of the LCME Self-Study; in general they are believed to be appropriate for our mission.

While no direct benchmark exists for detailing the number of basic science faculty necessary to meet the education mission of the institution, during the self-study, the following observations were made. The COM has:

1. Successful accredited graduate degree programs in the basic sciences
2. Recent development of an MD/PhD program
3. Adequate numbers of faculty to teach all the courses given in the first two years
4. Highly successful research programs in many fields
5. 92% first-time passing rates on USLME Step 1

It was concluded that the COM has sufficient basic science faculty to fulfill the overall academic mission. The basic science faculty members are actively engaged in preclinical medical student education through the Foundations portion of the VIC, and many basic science faculty played critical roles in developing and implementing the VIC. Currently, the Foundations Director and seven of 14 Foundations course directors are basic science faculty. One challenge has been recruitment of enough preceptors for the small group sessions. This issue is recognized and efforts are in place to identify sufficient faculty for these venues. Regarding graduate education,

the majority of our 100 graduate students work with basic science faculty, and in general our graduate programs are considered strong, with initiatives in place to strengthen them further (e.g., the Umbrella Program).

2. Develop a composite assessment of the educational, research, and patient care activities of the clinical departments, in the context of the mission and goals of the medical school. (In addition to department-specific data in the Faculty section of the database, see also responses for standards IS-11 and IS-12 in Section I of the database, and departmental finances and facilities described for standards ER-2 and ER-4 in Section V of the database.) Include the following areas in the assessment:

- **Leadership (including stability of departmental Chairs and division head positions)**
- **Faculty (including numbers, experience and expertise), in total and by discipline.**
- **Finances.**
- **Space and facilities.**
- **Quality and quantity of teaching, research, and patient care.**
- **Involvement and success in graduate medical education.**

With more than 800 faculty members within the clinical departments, we have the numerical strength, breadth of expertise, and diversity to fulfill the mission and goals of the COM. Leadership within the clinical departments is also stable and mature. With the exception of the Department of Radiology, which has recently undergone a leadership change and appointment of an interim Chair, the remaining clinical Chairs are filled by permanent appointees. Of those, five out of nine have been in place five years or more. The faculty are mature, with 24% Professors and 32% at the Associate Professor level. The self-study confirmed that the quality and quantity of teaching by the clinical faculty at the medical school and in the hospitals is strong and highly valued.

During the self-study, the following observations were made. The COM has:

1. Accredited residency programs in all clinical disciplines at both MMC and FAHC. The ACGME requires sufficient breadth and depth of faculty to accredit residency programs.
2. Multiple accredited fellowship programs in the clinical sciences, which require sufficient faculty in that sub-specialty area.
3. Adequate number of faculty to precept the medical students in the first, second, third, and fourth year of medical school and participate in didactic sessions in all years.
4. Strong research productivity in every clinical department.
5. 92% first-time passing rate on USLME Step 2.

Despite increased demands for clinical productivity, many clinical departments have expanded their role in medical student education in the new VIC. The integrated nature of the VIC provides new opportunities for clinical specialists in Orthopedics, Ophthalmology, Cardiology, and Anesthesia to participate in the early Foundations curriculum, and a Neurology clerkship has been added.

During the self-study, it was noted that in both Vermont and Maine, the clinical departments' ability to participate in teaching is challenging due to the increasing clinical service demand on them and in particular those demands precipitated by the federally mandated "80 hour work week rules" for residents. While the clinical departments have adequate faculty to precept clerkship students, it was noted that some departments have had challenges placing students in ambulatory sites. Several departments continue to actively recruit preceptors and look for alternative training sites, a situation which we monitor closely.

3. Describe factors that facilitate and hinder the recruitment and retention of faculty members at your institution. Is the current mix of faculty (gender, ethnicity) appropriate for the attainment of your institutional goals?

The recruitment and retention of faculty to UVM and the COM has historically been, and remains, effective because of the rich environment of academics and clinical care, which is collaborative and welcoming. In addition, Vermont and Maine are desirable places to live, with many features found attractive by our faculty. While we experience the same pressures on faculty time and research resources as many other medical schools, we consider recruitment and retention as a positive feature of our institution.

The self-study confirmed that the number of faculty and the current mix of faculty with regard to gender and ethnicity are appropriate to fulfill the academic goals of the COM. Currently, 38% of the basic science faculty and 25% of the clinical faculty are women, while 13% of the basic science faculty and 6% of the clinical faculty are non-whites. The self-study recognized the potential for improvement in these numbers; however, it was also recognized that the COM struggles with the same issues regarding the recruitment and retention of women and minority faculty members that are problematic for the majority of other academic medical centers in the United States. UVM has equal opportunity/affirmative action policies and procedures in place, and it is anticipated that these will continue to underscore the importance of gender and ethnic diversity at the time of faculty recruitment.

4. Evaluate the availability of opportunities for both new and experienced faculty members (full-time, part-time, and volunteer) to improve their skills in teaching and evaluation. Is assistance such as training sessions from education specialists readily available?

Evidence of opportunities for improvement of teaching skills includes the substantial work by the many faculty who helped plan and implement the new VIC, the programs that exist to help faculty improve their teaching, and the significant weight given to teaching effectiveness by the Faculty Standards Committee and the Dean for reappointment or promotion. Opportunities available to improve faculty academic skills, especially teaching, include the Teachers-Teaching-Teachers (TTT) program, a bi-monthly seminar through the Office of Medical Education, and the Mud Season Educational Breakout, which brings faculty together to discuss the education programs and the VIC. The COMET support system includes specialists to help faculty develop and improve both IT and non-IT teaching skills. This upcoming year, TTT is being replaced with a monthly on-line faculty development module program to reach a broader audience of faculty and residents. It is also expected that the content of the TTT bimonthly seminar program will be recreated through online modules in the months ahead. Based on information obtained during the self-study, issues relating to teaching goals, methods and outcomes are regularly discussed at departmental faculty meetings.

A unique opportunity to enhance teaching skills is the Frymoyer Scholars Program, an endowed program specifically targeted for faculty “teachers”. It provides two-year faculty stipends to help develop new COM methods of instruction or curricula. This program, funded at the retirement of Dean John Frymoyer, has allowed eight faculty members over the past four years to develop innovative teaching or assessment methods in support of the new VIC.

B. Personnel Policies

5. Evaluate the system for the appointment, renewal of appointment, promotion, granting of tenure and dismissal of faculty members. Are the policies clear, widely understood, and followed?

The deliberations during the self-study confirmed that the personnel policies regarding appointments, promotions, granting of tenure and dismissal have been clearly articulated, widely

understood by the faculty and followed by the COM administrative leadership. These policies are explicitly stated in the Officers' Handbook and the College of Medicine Standards and Guidelines for Reappointment, Promotion and Tenure, two documents that are widely available to the faculty. The Faculty Standards Committee and the COM Administration base their recommendations for appointment and promotion on these policies.

The self-study and an ad hoc committee in 2002 have clearly identified a need to fully re-evaluate the faculty appointment process. As stated earlier, there has been a substantial change in UVM governance with the election of a union to represent all non-medical school faculty. With the support of the President and Provost, Dean Evans has charged a task force to create a new handbook for COM faculty for adoption in 2005.

6. Assess the adequacy of institutional and departmental conflict of interest policies relating to faculty members' performance of their academic responsibilities.

The self-study confirmed that clearly stated Conflict of Interest policies exist at the COM, FAHC and MMC. The UVM policies are written in the Officers' Handbook and available on several UVM web sites. FAHC also has a set of conflict of interest policies. In November 2004, FAHC CEO Dr. Melinda Estes sent the newly revised formal Code of Conduct to all employees at their home addresses, emphasizing the importance of compliance with these rules. The faculty at MMC are required to adhere to a conflict of interest policy developed for the Governing Board Members, administration and physicians, which requires full disclosure of any duality of interest and nonparticipation in decisions where these interests are involved.

7. Describe the extent of feedback provided to faculty members about their academic performance and progress toward promotion. Are faculty members regularly informed about their job responsibilities and the expectations that they must meet for promotion?

The UVM Officers' Handbook requires that the departmental Chair shall make an annual review of each faculty member's performance. The self-study concluded that the faculty members do receive regular and meaningful feedback from this mechanism and others regarding their academic performances, progress to promotion, job expectations, salary and benefits from their department Chair (or his/her designee). There are also regular reviews completed by the Dean and the Faculty Standards Committee for reappointment as an individual progresses towards promotion. A concern that arose was that this process varies from department to department. The Faculty Subcommittee recommended that the procedures for this feedback should be standardized across the academic and clinical units of the COM. The Task Force on Governance, charged by Dean Evans in December, will articulate for consideration institution-wide standards regarding appointment, reappointment, promotion and tenure process.

8. Discuss the extent to which education is valued in the institution. How are the degree and quality of participation in medical student education factored into decisions about faculty retention and promotion?

Education is highly valued and the self-study confirmed the active and extensive participation of both the basic science and clinical faculty in the teaching mission of the institution, particularly demonstrated by the substantial commitment of time and effort necessary to develop and implement the new VIC. Significant importance and weight is given to teaching evaluations during the reappointment and promotion process. Specifically, a significant portion of the formal reappointment/promotion process addresses teaching contributions, abilities and student evaluations. Another example of the importance of education relates to the investment the COM has made in educating the faculty as teachers; as described previously, multiple opportunities exist to enhance the teaching ability of the COM faculty.

C. Governance

9. Evaluate the effectiveness of mechanisms for organizational decision-making. Are necessary decisions made in a timely and efficient manner with appropriate input from concerned parties? Assess the relative roles of committees of the faculty, department heads, and medical school administrators in decision-making.

The self-study confirmed that faculty members actively participate in decision-making related to medical school policies and educational programs at the COM. Multiple committees and meetings demonstrate that the faculty members are given the opportunity to provide direct input to the Dean and senior leadership. Some of these faculty committees make recommendations to the Dean, and others have been given the authority to take direct action, such as the COM Admissions committee, the Student Advancement committee, and a Faculty Nominations committee that develops ballots for elected positions.

The self-study also noted multiple opportunities for direct interaction between the Dean, senior leadership, and the faculty. These opportunities include:

- COM Faculty Meetings at least three times annually, which are presided over by the Dean, at which direct faculty input is sought and received
- Graduate Education Committee meetings, which include the Senior Associate Dean for Research and Academic Affairs as an ex-officio member
- VIC Board meetings, an advisory group comprised of senior faculty and Chairs which meets monthly to offer direct input to the Dean regarding the medical school curriculum
- Frequent meetings of MMC administration and faculty with the Dean and senior leadership to allow input and discussions regarding issues related to this affiliated institution
- A twice weekly meeting of the Dean's Senior Leadership Group
- Twice monthly meeting of the Dean's Advisory Council: the Chairs and Dean's Senior Leadership team

10. Assess the effectiveness of the methods used to communicate with the faculty. Do faculty perceive themselves to be well informed about important issues at the institution?

The Task Force concluded that there are effective lines of communication between the faculty and the COM administration. All of the basic science and clinical Chairs meet with the Dean twice monthly to share information, and there are regular faculty meetings in all of the departments and clinical units which allow for further dissemination of information. In addition, the COM and the University frequently use e-mail and web based methods to communicate with faculty on important events and issues. On the COM web site a quarterly VIC newsletter updating all faculty, students and residents about our curriculum is posted. This quarterly update is also sent as an e-mail to all faculty members teaching in VIC courses. The COM publishes the Vermont Medicine magazine three times per year and an Annual Report, mailed to faculty, staff, students, alumni, donors and others, with articles about COM programs, events, students and faculty. There is also a bi-monthly Faculty Practice News that includes information on academic, research and clinical programs.

V. – Educational Resources

A. Finances

1. Discuss the appropriateness of the balance between the various sources of financial support for the school (i.e., state and local appropriations, income from patient care, endowments, tuition income, research income, hospital revenues). Are revenue sources stable? How do you view the prospects over the next five years?

The COM is financially sound and we expect this to continue into the future. Approximately 3.5% of the budget is provided by the State of Vermont. We expect modest increases in this over the coming years and feel assured of its stability. Approximately 5% of the budget is derived from medical, undergraduate and graduate tuition. Our goal is to minimize increases in tuition. Approximately 20% of the budget is derived from the direct funding of research grants. In addition, the COM receives an allocation equivalent to 30% of the indirect costs associated with COM grants. We expect modest growth in extramural funding given the leveling of the NIH budget. For FY06, Dean Evans has negotiated an increase to 34% of the indirect recovery. The endowment income represents 1.5% of the budget and our goal is to grow that substantially over the next five years. The balance of the budget is predominantly related to clinical revenue.

2. Comment on the degree to which pressures to generate revenue (from tuition, patient care or research funding) affect the desired balance of activities of faculty members. If so, what mechanisms are in place to protect the accomplishment of the educational mission?

Given that the COM receives a relatively modest amount of its revenue from the State, there is substantial pressure for faculty to generate revenue from clinical practice and research grants. In addition, the quality of the educational program is critical to our ability to generate tuition revenue. Since the mid 1990's, the COM's general fund allocation budget has been mission-based, with specific allocations to departments based on carefully defined teaching effort, research productivity measures, and with base amounts required to assure the solvency of a department. The department Chairs and faculty understand this allocation and recognize that there are specific funds to support the educational mission. In the clinical departments, a substantial fraction of compensation is derived from the clinical revenue; however, there is a clear expectation by Chairs and recognition by faculty that base salary is provided for all components of the mission including education and research. The distribution of effort is highly variable among individuals; however, every department recognizes the need for the department as a whole to participate in all aspects of the mission. A new compensation plan and re-organization of the faculty practice is under development, and the missions of education and research will be an integral component of the faculty compensation system.

As in most academic medical centers, pressures to increase clinical service and research dollars have grown substantially, and challenges remain to support teaching in the both the preclinical and clinical settings. The Frymoyer Scholars program, supported by an endowment specifically targeted for faculty teaching support, offers two-year faculty stipends for two faculty per year to develop new methods of instruction as well as curricula for the medical school.

3. Describe how the school has positioned the clinical enterprise (faculty practice plan/organization and structure of healthcare system) for best results in the local health care environment. Is planning related to the clinical enterprise occurring?

In 1995, Fletcher Allen Health Care (FAHC) was formed as an integration of the Medical Center Hospital Center of Vermont, the Fanny Allen Hospital and University Health Center (the faculty practice). This integrated health system is the only hospital in the local area and is the tertiary referral system for nearly 1,000,000 people in Vermont and upstate NY. The hospital is an open staff hospital with approximately 450 faculty physicians and an additional 290 staff physicians, most of whom are volunteer faculty. The integrated system has a significant market share and is undergoing significant growth. A new ambulatory center for the faculty practice will open in mid to late 2005 providing state of the art facilities. There is a strong relationship to the hospitals in the region and to the physicians, many of whom are graduates of the medical school and its training programs. The Chiefs of Service at FAHC are the Chairs of the departments of the medical school and there is substantial overlap of the senior leadership between the two institutions. There is common strategic planning ongoing to assure the success of

the Academic Health Center. The organization of the faculty practice is undergoing modification in order to provide it more identity as an academic practice and to have increased clarity of responsibilities, accountabilities and mission. The faculty practice will become a discrete business unit within FAHC, with a governance board predominantly made up of department Chairs with the Dean serving as the Chair of the governance board. This will provide opportunity to further assure the commitment to all of our missions.

4. Describe how present and future capital needs are being addressed. Is the financial condition of the school such that these needs can be met?

Based on current financial analysis the capital needs of the College are expected to be able to be met. These include equipment, IT and facilities. The COM and FAHC are in the midst of substantial facility growth. A new Ambulatory Care Center (ACC) and Education Center & Library are nearing completion. Most of the specialty practices will move from their present location at University Health Center to the ACC, co-located with the inpatient facility. The ACC is scheduled for final completion in October 2005, with the new Emergency Room opening in June 2005. The Education Center and Library are expected to open in the summer of 2005, in time for the incoming Class of 2009. In addition, a research facility expansion in Colchester is being planned. Support of these improvements has come from state, federal, development and endowment revenues, and bond offerings. Current fiscal analyses indicate that the financial obligations associated with these new facilities will be met.

B. General Facilities

5. Evaluate the adequacy of the general facilities for teaching, research, and service activities of the medical school. Is the opportunity for educational change (e.g., introduction of small group teaching) constrained by space concerns?

Although facilities are utilized heavily, they provide adequate space to meet the academic and research needs of faculty and students. In addition, there are specialized medical student learning facilities in both Vermont (Professional Learning and Assessment Center) and Maine (Assessment Center at the Falmouth Primary Care). The new Education Center facilities, including the addition of 15 new small group rooms and a large 120-seat Case Method classroom, will fully support the teaching mission. A new research facility has also been approved by the Board of Trustees.

6. Discuss the adequacy of security systems on each campus and at affiliated sites.

The COM, FAHC and MMC all have security departments and provide full security services for students, faculty and staff. On-duty 24 hours/day, 7 days/week, police and security services maintain state-of-the-art emergency communication centers, surveillance monitoring, panic button/alarm response systems, and respond to meet both law enforcement and service needs at the University and clinical sites.

C. Clinical Teaching Facilities

7. Analyze the clinical resources available to the medical school. For the size of the student body, are there adequate numbers of patients and supervisors available at all sites? Is the patient mix appropriate? Are clinical facilities, equipment, and support services appropriate for exemplary patient care? Discuss the availability, quality, and sufficiency of ambulatory care facilities for teaching.

The combined clinical resources available in Vermont and Maine fully meet the requirements for medical student education. Clinical activities at FAHC and the practice sites in the Burlington area, along with resources at MMC and practice sites in the Portland area, combine to provide over 1,123 in-patient hospital beds, 53,523 hospital admissions, 817,803 outpatient visits and 101,501 ER visits per year for the education of students and resident physicians in both sites.

These numbers do not include the patients seen in the local practices that serve as ambulatory sites for students. Patient mix is broad, since FAHC is the only tertiary care setting serving a catchment area of more than 1,000,000 people. The breadth and depth of clinical cases permits students to have strong general medical and subspecialty training experiences, and a broad exposure to consider a wide range of career opportunities. The physical facilities also meet the educational needs of students in an ambulatory setting. These resources will be further enhanced by the completion of the ACC and the Education Center and Library in 2005.

8. Describe and evaluate the interaction between the administrators of the hospitals/clinics used for teaching and the medical school administration. Does the level of cooperation promote the education of medical students?

COM administration has long-standing excellent relationships with the senior leadership at both major teaching affiliates, FAHC and MMC. Senior staff at both affiliate institutions serve on committees responsible for the clinical training programs and operational issues related to the COM, including medical student education and research. Senior administrative personnel meet regularly throughout the year, the FAHC CMO serves as the Senior Associate Dean for Clinical Affairs at the COM and the Vice-President for Medical Affairs at MMC serves as the Dean for Maine Affairs on behalf of the COM. The Senior Associate Dean for Medical Education is actively involved with the leadership at both institutions to ensure a uniform high level of medical student education. These relationships are confirmed in the formal affiliation agreements between the COM and both FAHC and MMC. These documents provide assurance of appropriate resources and infrastructure at both sites for high quality medical education and, in general, primacy of the medical school in matters related to curriculum development, faculty appointments for teaching, and education and evaluation of students. Both FAHC and MMC have responsibility for monitoring performance of all of their staff (physicians, nurses, residents, students, staff, etc.) and as such have the responsibility and authority to act unilaterally if unusual circumstances require such action. Both agreements ensure appropriate College authority over teaching activities.

9. Describe and evaluate the level of interaction/cooperation between the staff members of the hospitals/clinics used for teaching and medical school faculty members and department heads, related especially to the education of medical students.

At both FAHC and MMC there are strong, daily contributions to the educational mission of the COM by nursing staff and other allied health professionals, through interactions with medical students during clerkships, acting internships and other hospital-based activities. Both organizations have been teaching institutions for many years, and education is fully integrated into their cultures. The attending physicians are for the most part medical school faculty and there is a great deal of cooperation between faculty and other professional staff centered on medical student education.

D. Information Resources and Library Services

10. Evaluate the print and non-print holdings of the library as a resource for medical students, graduate students, and faculty members.

The Dana Medical Library subscribes to, or licenses electronically, over 25% of the 4,800 titles indexed by the National Library of Medicine in Medline. The Library focuses on acquiring the most important journals in the biomedical and health sciences in the English language. Criteria such as high impact factor in a relevant field, and faculty and student recommendation are major factors in selection decisions. Relevant cost versus current or anticipated use is also factored in the decision to cancel or subscribe to a journal title. Medical librarians, in cooperation with faculty and students in the College of Medicine and the College of Nursing and Health Sciences, carefully select the journal collection, in print and electronic format.

The Library collection budget grows at a modest rate of 3-4% per year. This is an area of concern in the face of the rapid growth in the cost of biomedical journals, and is an area we are monitoring closely. The Senior Associate Dean for Research and Academic Affairs meets regularly with the Director of the Dana Medical Library to review issues and recommend changes. Students needing articles from journals to which the Library does not subscribe make requests through document delivery services. The Library then supplies articles to students as quickly as possible, usually within a few days, and free of charge. The facilities and collections are adequate for medical student education. The LibQual+ survey completed by medical students indicated strong satisfaction with the support provided by the library staff, the accessibility of resources and the extant collections and interlibrary loan.

11. Comment on the adequacy of information technology services, particularly as they relate to medical student education. Are the information systems of the medical school and major clinical affiliates sufficiently well integrated to assure achievement of medical school missions? Note any problems.

The COM, FAHC and MMC have adequate information technology services to develop and maintain the mission of excellent medical student education. The COM defined a set of requirements for an information system to serve the needs of the students, faculty and staff. The College of Medicine Information Systems (COMIS) department was formed in 2000 to work with IS departments at UVM, FAHC and MMC to create an integrated and seamless set of IS services for our users. COMIS works closely with the UVM Center for Information Technology and Network Services, and also designed its core information systems to integrate with those at FAHC. This integration provides an efficient and effective method of communication and collaboration independent of a user's IS department. For example, users at COM and FAHC use Microsoft Office and Outlook, and can even share folders through a one-way trust between the FAHC network and the COMIS network.

COMET, a component of COMIS, is the online learning system that allows faculty, students and others to access educational information, share ideas and files, and to participate in interactive exercises and discussions. COMET is password-protected accessible from any computer at UVM, FAHC, MMC, home, or any computer with an internet connection. Thus, students at MMC have similar access to the educational resources as the students in Burlington.

12. Evaluate the usability and functional convenience of the library. Are hours appropriate? Is assistance available? Is study space adequate? Are resources, such as computers and audiovisual equipment, adequate?

Dana Medical Library resources are easily available to faculty and students; available hours are substantial and computer access easily obtainable. The space capacity of the Library will increase with the new facilities to open in 2005; seating capacity will increase to 140 and individual carrels and public workstations will increase as well. We also expect that the number of people using online access to the Library Home Page will continue to increase.

The Task Force concluded that overall the library resources are adequate. There were questions regarding the adequacy of research collections, as the number and range of publications in biomedical science have increased significantly. Interlibrary Loan and 'e-publications' have improved access to publications not housed within the Library, but ongoing review is needed to keep abreast of the changing needs. The LibQual+ survey completed by medical students indicated some concern with the size and features of the temporary space (survey of 2002). In response to the survey, the Library made numerous changes and a repeat survey of the 2004 graduating class showed a much improved perception of the Library and its interim space.

13. Assess the library and information technology staff contributions to the education of medical students and the professional development of faculty members in the following areas:

- **Teaching specific skills, such as instruction in computer usage / bibliographic search.**
- **Retrieving and managing information.**
- **Interaction with the curriculum committee to coordinate various library and information resources with planned curricular design.**

The Dana Medical Library faculty and COMIS/COMET staff contribute substantially to the education of medical students and the development of faculty. Library faculty have provided instruction in finding, evaluating, and using the biomedical literature in the curriculum since the mid-1990s. COMIS supports the educational mission of the medical center by providing computing services to all users. COMET supports multimedia educational development for the Office of Medical Education, and the combined efforts of library and technology services are fully integrated to enhance retrieving and managing information, instructing faculty in the resources available for instruction and working at all levels of curriculum development to ensure a high quality medical education. A regularly scheduled meeting to discuss the medical library's contributions to the academic life of the medical center includes the Director of the Dana Medical Library, the UVM Dean of Libraries/UVM CIO, the Deans of the Nursing and Medical Schools, and the COM Senior Associate Dean for Research and Academic Affairs. Both the Director of COMIS and the Manager of COMET participate several times weekly in leadership and operational committees related to the new curriculum and the educational mission. The Director of COMIS also serves as the Director of Technical Operations for the Telemedicine Department, and works closely with the Associate Dean of Continuing Medical Education. The COMET Manager meets weekly with the Manager of the Office of Medical Education, attends all course director meetings, and meets on an as-needed basis with individual course directors, often daily while a course is on-going. Interactions occur at multiple levels across the educational venues of the COM. These collective resources have expanded with the development of the VIC, and as the curriculum undergoes continuous change, so have library and technology contributions. Faculty and staff members of the Library and Technology Education Teams regularly attend the Annual Educational Retreat in April to participate in planning the COM Curriculum for the coming year.

STRENGTHS AND PROBLEMS AREAS

Strengths:

The COM is a strong, vibrant institution that has undergone significant change in the last 10 years. Changes in leadership, the curriculum, and the physical plant have made the institution stronger and prepared it well for the 21st Century. Identified strengths confirmed by this self-study include:

1. A **strong collaborative faculty** that is committed to teaching, research and high quality patient care, and very accessible to students. This is confirmed by student feedback and the independent student analysis that reports high satisfaction with their faculty relationship, accessibility and support. Faculty members are also highly productive in the major mission areas of the COM:
 - In 2003, COM teaching hospital sites had over 50,000 admissions, over 100,000 ER visits and over 800,000 outpatient visits. The Faculty Practice in Vermont had over 680,000 professional visits in fiscal year 2003 (excludes Anesthesiology, Radiology, and Pathology).
 - The COM is ranked in top third of med schools for NIH funding per faculty member (Average of Clinical & Basic Science rankings); the strength of the faculty and the

institutional commitment to research is reflected in a substantial increase in extramural funding:

- 1998: Overall funding of \$37.2 million, with an NIH ranking of 66th (of 125 schools)
 - 2003: Overall funding \$82.3 million, with an NIH ranking of 57th (of 126 schools)
 - 2003: \$8.6 million of extramural support at the MMC Research Institute
- In 2003-2004, the COM faculty educated 401 medical students, 100 graduate students, 264 residents, and 39 fellows; in addition our colleagues at MMC educated 13 graduate students, 177 Residents and 22 Fellows;
 - The COM faculty have an active Clinical Trials program at FAHC/UVM with over 1000 open studies.
2. In addition to our **partnership with Fletcher Allen**, the College has a long-standing relationship with the **Maine Medical Center that is strong**, vibrant and growing. This relationship allows us to provide a seamless educational experience for students, as well as opportunities for both clinical and basic research. The Vermont-Maine relationship, in essence, provides both states with a medical school and an academic health center.
 3. A **strong academic environment**, with nationally recognized research programs involving many faculty members from all departments. The size and scale of our institution was noted in the self-study as a positive feature for collaboration and integration of activities. Our increased extramural funding over the past 6 years represents a broad repertoire of scholarly activities ranging from basic structure/function studies by x-ray crystallography to outcomes research in diabetes and pediatrics. Importantly, this is in the context of focused areas of excellence. The research faculty members are the same faculty who teach our students, and they bring experience, expertise and passion to the curriculum. The amount of COM clinical research is impressive and our faculty members are actively engaged in bringing this work into their clinical practices, which strongly impacts the clinical experiences of the students.
 4. A **strong educational program** with an innovative new curriculum that has fully engaged the faculty and is well received by the students. Three hundred and fifty eight basic and clinical science faculty participated in the Foundations and Clerkship Levels of the VIC in 2003-2004.
 - The Educational Objectives are comprehensive, subjected to continuous improvement and review, and accessible through COMET for all stakeholders. They have been developed in an inclusive manner through annual retreats and course committee meetings using multidisciplinary groups.
 - Learning objectives appear on COMET for each course, ensuring that students and faculty are aware of these objectives and the assessments that demonstrate competence in basic science and clinical content areas.
 - Uniformity is assured across clinical sites in Maine and Vermont through COMET and through twice yearly course director meetings among other mechanisms. A Director of Assessment who oversees assessment methods, feedback, evaluation and grading standardization has been critical to providing uniformity across courses and sites. Close collaboration by clerkship directors in Maine and Vermont also assumes uniformity of feedback and evaluation strategies.
 - An ongoing variety of strategies to educate, inform, and improve the teaching skills of our faculty ensures continued and more uniform instruction.
 - A vigorous process of continuous improvement, combined with meticulous database management of course objectives and evaluative assessments, enables a coherent and coordinated curriculum and assessment process.

- Multiple national and internal metrics used to assess our graduates prior to graduation, along with evolving strategies to assess them after graduation help to ensure that curricular objectives, including life-long learning, are monitored and achieved.
 - The very nature of the new curriculum creates an intellectual atmosphere by fostering inquiry and challenging students to evaluate, compare, and assimilate data through integrated courses taught jointly by basic science and clinical faculty. Student initiated research, including the mandatory public health projects in the second year, addresses these skills specifically. There is an emphasis on life-long learning, beginning with the course on professionalism and fostered with the emphasis on teaching in the fourth year through the Acting Internship in Medicine and opportunities to assist in the teaching of the Foundation courses.
5. **COMET** is a powerful addition to the new curriculum, delivering online course objectives, course maps, requirements and learning materials for students. The full utilization of materials online allows students to augment classroom experiences. It also facilitates online secure testing, course evaluations, a grade-book for faculty and students and easy access to goals, objectives, and competencies.
 6. The presence of a **vibrant graduate student population** along with the **MD/PhD program**. This adds to the academic and scholarly environment and culture, and influences the presence of a strong summer research program for the first-year students.
 7. The **Library Faculty and Staff** are excellent and highly supportive, teach in the VIC, and are rated highly by the students for being accessible for searches and acquiring needed materials. There is ready availability of required class materials, despite the significant transitions in library facilities in the past three years. The new library opening this summer will further strengthen our resources.
 8. While students have had to deal with a significant climate of change in facilities and resources, several areas of **students' high satisfaction in improvements** were identified:
 - **Quality of Computers and Technical Assistance** – Each class expressed enthusiasm for the support they received from the COMET team for student learning and responsiveness to their needs.
 - **Learning Labs and Assessment Center** - Each class expressed satisfaction with the quality of the learning labs (pathology and dissection labs) as well as the new Professional Learning and Assessment Center
 - **Safety** - Each class was satisfied with the safety in and around the medical school, around the hospitals and walkways to the hospitals, and with the overall campus security at UVM.

Since the last survey in 1997, the following improvements have occurred:

- Development and implementation of the VIC, a total redesign of the curriculum that is patient and family-centered, learner-focused, competency-based, and highly integrated, both vertically and horizontally.
- Major capital improvements in facilities include a new Health Sciences Research Facility, a new Professional Learning and Assessment Center, a nearly-completed Education Center with 15 small group rooms, a 120 seat case-based lecture hall, a 35-40 seat classroom and a library complex, and a new information systems infrastructure to support the new curriculum
- New clinical facilities and technologies at our major affiliated institution, FAHC, include a new Birthing Center, new Cardiac Cath Lab, the purchase of a 3-Tesla MRI and 40-slice

CAT scanner, plus the new Ambulatory Care Center, emergency department, and inpatient Psychiatry space, due to be completed October 2005.

- New leadership at the University of Vermont, at Fletcher Allen, at the College of Medicine and at Maine Medical Center, has forged new levels of cooperation, collaboration and congruence with the mission.

Areas identified for improvement and accomplished as a result of the LCME process:

- A new process to ensure confidentiality of student records was implemented in the Office of Student Affairs.
- A new governance and committee structure in support of the new curriculum is being developed and will be implemented in 2005.
- The “Teacher Learner Relationship” Policy was brought to the Chairs by the Dean for their review in September 2004 and adopted as policy in October 2004 and distributed in both Vermont and Maine.
- New arrangements for mental health counseling of students while at Maine Medical Center were implemented, to ensure confidentiality and that mental health care be kept separate from academic evaluation.
- Faculty development materials were created for individual courses and for the enhancement of teaching by residents and faculty. Enhanced online faculty development modules will be made available to basic science and clinical faculty at UVM, FAHC, and MMC in 2005.
- Course objectives were explicitly identified and posted on COMET for each course, with cross referencing to the VIC expected competencies. COMET will also be used to better track types and numbers of patients for students on required clerkships, an area of ongoing quality improvement.
- Sharing of student evaluations of clinical experiences between clerkship directors in Maine and Vermont is now occurring using COMET.
- The LCME self-study process reinforced the decision to engage four task forces: Strategic Planning, Governance, Faculty and Staff Development, and the Science of Quality.

Problem areas / areas of concern requiring work (Prioritized):

1. **Competing demands on finite resources.** The Task Force recognizes that the recruitment and retention of quality faculty members is highly dependent on having the resources of space, salary support and infrastructure. Current stresses include:
 - a. Multiple demands on faculty time
 - b. Need for even more high quality research space
 - c. Dependence on faculty practice income production

Response/plan: The COM is experiencing the same stress as many institutions in the US. The development of the new curriculum, recent facilities enhancement, increases in research grant awards, and improved clinical productivity point to success of the faculty. While we need to continue to work to understand and positively modify the stresses, several initiatives will help. Two examples are: a new practice plan is in development for implementation in Spring 2005 that will help provide more autonomy and control for these competing demands, and a new commitment has been made to expand research space by the UVM Board of Trustees at the Colchester Research Facility.

2. **Student debt/tuition expense.** Although progress has been made to minimize increases in tuition, it is clear that the debt burden of our graduates is high and, if allowed to grow unimpeded, will affect our ability to compete for the best students.

Response/plan: Continued work on development/endowment is a high priority. The recent success of the COM in meeting the \$60 million goal as part of the UVM Capital Campaign

demonstrates the high regard that alumni and friends have for the College. We plan to continue efforts in this area, along with carefully managing expenses, to continue to minimize increases in tuition.

- 3. Lack of diversity of the student body and of their clinical experience.** The COM is deeply committed to recruitment and retention of a more diverse student body. COM students and faculty are more diverse than the actual populations of Vermont and Maine. Efforts continue to be needed for improvement in these areas since admission favors the matriculation of students from Vermont and Maine.

Response/plan: Students must continue to have sufficient elective time to experience other cultures and regions, and many students have pursued international experiences both in the summer of their first year and on electives. We plan to encourage and, if financially possible, expand these opportunities. The VIC has specific components that emphasize cultural competency and sensitivity, and student feedback indicates that they feel well trained in communication and sensitivity with diverse populations. Continued emphasis on diversity will remain a priority at all levels, including admissions, curriculum components, and available rotation opportunities. Dean Evans has developed funds to support scholarships for underrepresented groups, resulting in scholarships equivalent to 30% of tuition for two students per class to help foster diversity.

- 4. The current Faculty Tracks and Tenure Program:** The Task Force, as well as COM leadership, have concern about the current faculty tracks and the relationship of COM faculty to UVM governance now that all other UVM faculty are unionized

Response/plan: A Governance Task Force was charged in December 2004 with making recommendations regarding faculty tracks, and a number of other faculty governance issues. This work will be completed in 2005.

- 5. The Faculty Practice is in the midst of a restructuring.** The Task Force expressed uncertainty about how this restructuring might impact the educational and research missions of the COM. In keeping with the periodic review and renewal of the formal affiliation agreement between the COM and FAHC, the practice group has met over the past two years to evaluate its relationship with its parent institutions.

Response/plan: While the formal details have not been fully determined, there will be a new structure for the Faculty Practice Plan in Spring 2005 that will allow more autonomy and more visibility of the academic practice group within the local community. This will result in a greater role for the Dean who will serve as the Chairman of the Practice Plan Governance Board. The majority of the Board will be department Chairs, along with the Dean and FAHC CEO. The roles of the Dean and the Chairs in this structure will serve to emphasize the importance of balancing academic needs with competing clinical demands.

- 6. Faculty Teaching and Research Allocation System (FTARS).** FTARS was developed in 1996 to account for the educational, administrative and research commitments of the departments and allocate general funds accordingly. A concern was expressed that the methodology needs to be reapplied to adjust the distribution of funds to more accurately reflect faculty contribution to the VIC.

Response/plan: The FTARS allocation methodology was “held harmless” for several years as the VIC was implemented. In FY 2005, the FTARS data will be revalidated to determine the appropriate distribution of COM General Funds based on teaching, research and administrative needs of each department.

7. **Curriculum Governance:** The structure in place for the development of the curriculum was effective. However, once the VIC was implemented it became clear that an alternative governance structure would better serve the institution. Since the courses are no longer department based, the composition and function of the curriculum committee needs redesign.

Response/plan: Dean Evans charged the Senior Associate Dean for Medical Education to make recommendations on curriculum governance in September 2004. Multiple national models were reviewed and recommendations for changes were accepted by the department Chairs in October 2004. Courses will be reviewed at the specific curricular level first (Foundations, Clerkship, and Advanced Integration) and recommendations forwarded to the newly constituted Curriculum Committee. The committee will advise the Dean. This, along with other governance changes, will be acted upon by the faculty in 2005.

8. **The Umbrella Graduate Program.** The proposed Umbrella Program is critical to the school's research success and educational environment. The lack of an official Umbrella Program is therefore viewed as a weakness.

Response/plan: The COM has developed a step-by-step process for implementation of the program. We have successfully created a cross-campus Graduate Program in Neurosciences which will also help to attract and retain the best graduate students. We fully expect to implement the Umbrella Program in 2005 with the help and guidance of Dr. Frances Carr, the relatively new VP for Research and Dean of the Graduate College.

9. **Other:** There were several other problematic issues identified by the Task Force:
- a. High core facility costs, including those for animal husbandry
 - b. Library funding
 - c. Excess deferred maintenance

Response/plan: While none of the above falls below the Standards for Accreditation, in the opinion of the Task Force, we are committed to continued review and efforts to determine if strategic investments are necessary in these areas.

10. Student concerns / responses

- **Move of Financial Aid Office.** Prior to 2003, the Financial Aid Office was located in the College with limited linkages to the expertise at the university level. In 2003, it was relocated to the central UVM Financial Aid Office, which has left the perception that students have less access and support in this area. However, the COM Financial Aid Officer continues to be readily available for consultation by phone, e-mail or a short walk across campus, and the students now have improved access to considerable central resources and expertise.
- **Method of Choosing Senior Advisor/Career Counseling.** With the support of the Associate Dean for Student Affairs and the Office of Medical Education, in conjunction with the Student Education Group and Class Officers, a committee will be formed in 2005 to review the issues around the methods of choosing senior advisors and career counseling. If appropriate, this committee will make recommendations that address the basis for student concerns.
- **Student health insurance/coverage and Student Knowledge of and Comfort with Personal Counseling Services.** It is not surprising that students are concerned about the costs for their insurance coverage, a problem not unique to Vermont or to medical students. With the support of the Associate Dean for Student Affairs and the Director of the UVM Center for Health and Well-Being, a committee will be formed in 2005 to review the issues around health insurance, dental insurance, access to health care,

and counseling. If appropriate, this committee will make recommendations that address the basis for student concerns.

- **Facilities (study space, relaxation space, lecture hall quality).** The new Education Center should obviate many of the issues regarding availability of study space, relaxation space, and lecture hall quality. In addition, in January 2005 a large portion of the Given cafeteria will be open for student use from late afternoon through the night, providing substantial study space.
- **Availability of Call Rooms and Locker Space at FAHC & MMC and Quality of Call Rooms at FAHC.** An inventory is presently underway of locker availability, call rooms, and private space for each clerkship rotation at FAHC and MMC. This issue will be addressed with the support of the Associate Dean for Student Affairs and Office of Medical Education, along with the GME offices at FAHC and MMC.
- **Parking.** With the significant construction taking place on and around the COM campus for the past four years, it is not surprising that students have expressed concerns about parking space. In the past year, parking has become more available as the construction moves forward and on-site parking is currently available for all medical students within a 5-minute walk.
- **Bridge/MSLG.** The Medical Student Leadership Groups and interdisciplinary bridges are the newest and most innovative components in the curriculum, but have not received universal acclaim from the students, some of whom have expressed concern about relevance and the time taken from patient care experiences on clinical rotations. The MSLG has undergone a complete review and improvements have been made since its first presentation in 2003-2004. Each of the Bridge iterations has undergone a continuous improvement process based on feedback from students and faculty. The third and fourth year students, who have had only one brief Bridge experience in its earliest form, recognize this and are appreciative that their feedback is being taken seriously. The Class of 2007 has expressed appreciation for all of the work of the MSLG course directors in response to its feedback.
- **Preparation time for USMLE Step 1 and 2.** In the VIC, there has been a concern expressed that there was not sufficient dedicated time prior to the taking of the USMLE tests for students, as opposed to a “study month” that many students experienced in the earlier curriculum. The last course in Foundations, called Convergence, serves as a 4 week review of Foundations material and is followed by three weeks of additional time to study for Step 1. Students can take a reading month at any point in the fourth year to prepare for Step 2. This provides the students with 4-6 weeks of review time for each Step. In addition, a series of board review lectures are given in the Convergence course and special seminars organized by the Student Education Group help the students prepare.

Note major recommendations for the future. How can the strengths be maintained and the most pressing problems addressed? Be brief but specific in describing actions that will need to be taken.

Major recommendations that will maintain our positive momentum and address the most pressing problems:

- Re-designing the Faculty Practice Plan, with a new expanded role for the Dean, is critical to optimally balancing the clinical and academic missions.
- Completion of the new FAHC Ambulatory Care Center in 2005 will link the College directly with its major academic health center as an integrated campus, with shared library and educational space.

- Reengineering the FTARS budget process in the VIC era will more accurately provide resources to departments for teaching efforts.
- Maintenance of the MD/PhD program, establishment of the Umbrella, and continued review of areas of emphasis linked to resource allocation, will reinforce the critical scientific and clinical linkages in the College.
- The recent success of the Capital Campaign and continued emphasis on development should benefit an institution that for too long has relied too greatly on tuition support.
- Increased interactions with our colleagues at MMC in educational research and clinical areas will provide a strong compass and lead to significant gains for our institution going forward.
- Formal strategic planning is underway, the outcome of which will help chart the specifics of our path. The Dean has already brought forward the following opportunities for the next 5-10 years:
 1. The Science of Quality and its vertical and horizontal integration into the curriculum and throughout the Academic Health Center
 2. Medical Imaging, with impacts in several of our key areas of emphasis including neuroscience and cardiovascular disease
 3. Continued emphasis on community interactions including Outcomes Research, community education, and information linkages with local physicians throughout Vermont and Maine.

APPENDIX

University of Vermont College of Medicine Self-Study Task Force.

John Evans, Ph.D., Dean, UVM College of Medicine (Chair)
John Brumsted, M.D., UVM Senior Associate Dean for Clinical Affairs and FAHC Chief Medical Officer
Matthew Coates, MD/ PhD Student, Class of '05, (Chair, Student Independent Self-study Committee)
Vincent Conti, President & CEO, Maine Medical Center
Brian Cote, Assistant Dean for Finance and Administration
Melinda Estes, M.D., FAHC Chief Executive Officer
Lewis First, M.D., Senior Associate Dean for Medical Educational, and Chair, Department of Pediatrics (Chair, SC II)
John Fogarty, M.D., LCME Self-Study Coordinator and Chair, Department of Family Medicine
Robert Hamill, M.D., Chair, Department of Neurology (Chair, SC V)
George Higgins, M.D., Associate Dean for Maine Affairs, and Vice President for Medical Affairs, Maine Medical Center
Nicole Rioux Hynes, M.D., Resident (Chief Resident in Medicine 7/1/04-6/30/05)
Susan Ligon, LCME Administrative Coordinator and Director of Operations and Project Management
Sylvia Park, M.D., Medical Student, Class of '04
Mark Phillippe, M.D., Chair, Department of Obstetrics & Gynecology, (Chair, SC IV)
Mildred Reardon, M.D., Associate Dean for Primary Care, (Co-Chair, SC III)
Marga Sproul, M.D., Associate Dean for Student Affairs, (Co-Chair, SC III)
Russell Tracy, Ph.D., Senior Associate Dean for Research & Academic Affairs, (Chair, SC I)