LCME Self-Study Summary

Table of Contents

Introduction ................................................................................................................................................. 1

Vision and Mission of the College of Medicine
Prior Accreditation Findings, Progress, and Major Changes
UVM College of Medicine Self-Study Process (Task Force and Subcommittees, Open Forums, Independent Student Report; Preparation of Self-Study Summary)

I Institutional Settings ............................................................................................................................ 3

A. Governance and Administration
   1. How institutional priorities are set; success of institutional planning efforts
   2. Role of the governance structure in administrative functioning of the medical school
   3. Relationship of the medical school to the university and its clinical affiliates
   4. Organizational stability and effectiveness of the medical school administration

B. Academic Environment
   5. Contribution of graduate programs(s) in basic sciences and other discipline to mission and goals of the medical school
   6. Availability and impact of residency training programs and continuing medical education actions on education of medical students
   7. Research activities of the faculty as a whole
   8. Adequacy of resources for research
   9. Impact of research activities on education of medical students
  10. Availability of opportunities for medical students to engage in service learning
  11. Programmatic and institutional goals for diversity

II Educational Program for the MD Degree .......................................................................................... 8

A. Educational Objectives
   1. Level of understanding of educational program objectives
   2. Linking objectives to physician competencies
   3. Ensure students encounter patients/clinical conditions needed to meet objectives

B. Structure of the Educational Program
   4. Providing a general professional education
   5. Opportunities and time for active learning and independent study
   6. Consistency of educational quality and student assessment at alternative educational sites
   7. Experiences for students to apply the scientific method
   8. All required content areas addressed in the curriculum
   9. Balance of inpatient and ambulatory teaching; appropriateness of clinical sites

C. Teaching and Evaluation
   10. Adequacy of supervision during required clinical experiences
   11. Adequacy of methods used to assess student attainment of program objectives
   12. Frequency and timeliness of formative assessment, including mid-clerkship feedback
   13. System for ensuring acquisition of core clinical skills
D. Curriculum Management
14. System for planning and managing the curriculum
15. Resources and authority to achieve institutional goals and learning objectives
16. Educational workload – balance between education and service in clinical years
17. Educational quality across geographically separate campuses
18. Single standard for promotion across instructional sites

E. Evaluation of Program Effectiveness
19. Evidence that education program objectives are being achieved
20. Use of student and graduate information to improve education program

III Medical Students ................................................................................................................................ 18

A. Admissions
1. Admissions criteria, recruitment, selection of medical students
2. Policies to ensure student selection is faculty responsibility; no conflict of interest
3. Number of students related to resources available for teaching
4. Successes in broadening diversity among medical school applicants
5. Prospective student information current, accurate, and accessible
6. Impact of transfer or visiting students
7. Systems to verify credentials of visiting students

B. Student Services
8. Student attrition and academic difficulty
9. Effectiveness of systems for career counseling, residency preparation, elective selection
10. Tuition and fees related to debt; needed and available financial aid
11. Financial aid services and debt management programs
12. Student support and satisfaction in:
   i. Personal counseling and mental health services
   ii. Preventive and therapeutic health services
   iii. Health and disability insurance
   iv. Education about bodily fluid exposure, needle stick policy and other hazards

C. The Learning Environment
13. Ensuring an appropriate learning environment
14. Policies for addressing allegations of student mistreatment; educating academic community about standards of conduct in teacher-learner relationships
15. Familiarity of students and course and clerkship directors with standards and policies for advancement, graduation, disciplinary action, appeal, dismissal
16. Adequacy and quality of student study space, lounge, personal storage

IV Faculty ................................................................................................................................................. 27

A. Number, Qualifications, and Functions
1. Appropriateness of size, qualifications, mix of faculty
2. Opportunities to improve skills in teaching and assessment
3. Faculty engagement, support, and mentoring in scholarly activities
B. Personnel Policies
   4. System for appointment, renewal, promotion, tenure, dismissal
   5. Institutional and Departmental conflict of interest policies
   6. Faculty feedback about progress toward promotion and/or retention

C. Governance
   7. Mechanisms for organizational decision-making
   8. Methods used to communicate with and among the faculty

V Educational Resources

A. Finances
   1. Adequacy, stability, balance of financial support
   2. Pressures to generate revenue and balance of activities of faculty members
   3. Planning related to clinical enterprise
   4. Addressing present and future capital needs

B. General Facilities
   5. Adequacy of facilities for teaching, research and service
   6. Adequacy of security systems

C. Clinical Teaching Facilities
   7. Adequacy of resources for clinical teaching
   8. Appropriate clinical facilities, equipment, support systems for exemplary patient care;
      presence of resident physicians
   9. Interaction between administrators of clinical affiliates and medical school administrators
   10. Interaction and cooperation between staff members of clinical affiliates and medical school

D. Information Resources and Library Services
   11. Quantity, quality, accessibility of print and non-print holdings of the library
   12. Participation of library and information technology professionals in development and
       implementation of the educational program
   13. Adequacy of information technology resources and services

Self-Study Summary

Institutional Strengths
Areas of Continued Focus and Action

Appendix

Self-Study Task Force and Subcommittees
Introduction

For nearly 200 years, the University of Vermont College of Medicine has educated physicians and scientists, conducted world class biomedical research, and partnered in caring for patients and their families. Today, the College has nearly $80 million in external grant funding, a 12,600 square foot Clinical Simulation Laboratory, an award-winning integrated curriculum; international recognition for research expertise, clinical and teaching excellence, and strong community partnerships. As the seventh medical school established in the United States, the College has a rich tradition of innovative medical education. The University of Vermont and teaching hospital partner Fletcher Allen Health Care serve as Vermont’s academic medical center. In February 2011, three new rotation sites for clerkship students were established at Eastern Maine Medical Center in Bangor, Danbury Hospital in Connecticut and St. Mary’s Medical Center in West Palm Beach, Florida, adding to the breadth and diversity of students’ clinical experiences.

Vision and Mission of the College of Medicine

The mission of the UVM College of Medicine is to educate a diverse group of dedicated physicians and biomedical scientists to serve across all the disciplines of medicine; to bring hope to patients by advancing medical knowledge through research; to integrate education and research to advance the quality and accessibility of patient care; and to engage with our communities to benefit Vermont and the world.

Prior Accreditation Findings, Progress, and Major Changes

Following the April 3-6, 2005 survey visit, the LCME continued accreditation of the educational program leading to the M.D. Degree at the UVM College of Medicine for an eight-year term, and noted institutional strengths of the Vermont Integrated Curriculum, strong commitment of College faculty, Foundations course directors, the online educational support system COMET (College of Medicine Educational Tools), and the strong working relationships of the College with clinical affiliates. Since 2005, the College continues to build on these institutional strengths to further improve the curriculum and apply the same collaborative approach to build strong relationships with new affiliate sites.

History of Previous Findings and Progress

In 2005, there were 7 citations and 8 areas of transition. On October 15-17, 2006 the LCME site visit team performed a limited visit.

2005 Citations:

- **ED-2**: Clerkships had not completed written criteria. Remediation: Core clerkship directors used national core curriculum content to finalize the number and type of clinical experiences needed to meet clerkship learning objectives. They also developed mechanisms to ensure that students complete these experiences. Compliance recognized: 2007
- **ED-25**: Students in newly required emergency medicine clerkship rotate to some distant sites not supervised by College faculty. Remediation: The curriculum committee determined that the benefits of the experience outweighed the need for this to be a required clerkship, so it was reclassified as a “required selective” with defined requirements, goals and objectives. Compliance recognized: 2007.
- **MS-8**: Racial and ethnic diversity of accepted students notably less diverse than national population. No comprehensive plan in place. Remediation: Focused efforts to attract, recruit and enroll students from diverse backgrounds; redesigned admissions and marketing program, creation of UVM Medical Student Scholars Awards program. Compliance recognized: 2008.
- **MS-19**: Limited resources for career counseling and student dissatisfaction. Remediation: System for career and academic counseling was significantly altered with Careers in Medicine (CiM) advising program formulated by the AAMC and enhancements to the Specialty Advisor program in 2005-2006 academic year; high student satisfaction on internal survey. Compliance recognized: 2010.
- **MS-23**: Paucity of debt counseling sessions and move of financial aid office to main campus. Remediation: Increased debt counseling sessions; auxiliary student financial services office on medical
school campus; financial aid resources on COMET web student portal; strong student satisfaction on internal survey. Compliance recognized: 2010.


Areas of transition:

- New curriculum management system: bylaws for revised governance structure in development. Remediation: In fall 2005 the Instructional Improvement Committee (IIC) was reconstituted and redesigned as a curriculum governance committee. At that time it was determined that no bylaws changes were necessary to create this revised governance structure.
- Academic counseling – Foundations Advisor System requires follow-up to determine effectiveness. Remediation: An internal student survey showed more than twice the satisfaction among the Class of 2009 with accessibility to the CiM Advisors (67.1% very satisfied/ satisfied) as well as support and advice from CiM Advisors (60.3%) than among the Class of 2008.
- Plans for Advanced Integration component not finalized at time of site visit. Remediation: VIC fully implemented August 2006 with Class of 2007 first class to complete full 4-year curriculum.
- Revision of faculty policies – uncompleted revision of faculty handbook. Remediation: All non-unionized faculty at the University, including the faculty of the College of Medicine, are governed by the Non-Unionized Faculty Handbook. This document was updated, approved by the UVM Faculty Senate and adopted by the UVM Board of Trustees in May 2008.
- Faculty Development and diversity - Task force to review faculty recruitment, development and retention not complete. Remediation: Associate Dean for Faculty and Staff Development and Diversity position increased from 60% time to 100%; formal cultural competency training and leadership development was instituted; new recruitment process for faculty hiring implemented.
- Impact of FTARS – functionality and effectiveness is unknown. Remediation: A recalculation of departmental teaching efforts was completed in 2006 and then used to calculate the FY07 budget and departmental allocations. Those departments experiencing a decrease in funding were limited to a maximum 5% reduction over the previous year’s funding in order to minimize the impact.
- Affiliation agreement with Fletcher Allen Health Care – under revision. Remediation: completed August 1, 2005.
- New Education Center – Not open at time of site visit; Remediation: Opened August 2005.

Following continued progress in the areas noted above, on October 22, 2010 the LCME determined the UVM College of Medicine to be in full compliance with accreditation standards.

**Major Changes in the School of Medicine since the last LCME Full Site Visit: New Clinical Rotation Sites.** On February 22, 2011, the UVM College of Medicine notified the LCME of anticipated changes in the affiliation status of our clinical facilities, and a modification of the curriculum to accommodate these changes. The affiliation with Maine Medical Center (MMC) in Portland, which accommodated clerkship rotations totaling 36 students, was discontinued as per the affiliation agreement. Three new clerkship rotation sites were established at Eastern Maine Medical Center in Bangor, Danbury Hospital in Connecticut, and St. Mary’s Medical Center in West Palm Beach, Florida. Class size remained at 114 students and students continue to receive most of their clinical training at Fletcher Allen, our primary clinical affiliate in Vermont. The clerkship experiences were redesigned and students were able to rotate for individual clerkships at Eastern Maine, Danbury, and St. Mary’s starting March 2011. In April 2012, the College reported detailed data on student performance, methods to ensure comparability, student satisfaction, assessment methods, availability and satisfaction with student services, and faculty supervision. The LCME responded that “the medical education program is in compliance with standard ED-8 as it relates to comparability of the clinical
education program at Eastern Maine Medical Center, Danbury Hospital, and St. Mary’s Hospital, but that
ongoing monitoring is required to ensure continued compliance.”

**UVM College of Medicine Self-Study Process.** The College’s Self-Study was conducted following LCME
guidelines and began at the direction of Frederick C. Morin, III, MD, Dean of the College of Medicine, who
appointed Jan K. Carney, MD, MPH, Professor of Medicine and Associate Dean for Public Health, as Self-
Study Coordinator and Susan Ligon, Director of Operations and Project Management, as LCME
Administrative Coordinator. The Task Force, chaired by Dean Morin, provided oversight to the self-study
process and included Subcommittee Chairs of the five key areas, the UVM Provost and a member of the
UVM Board of Trustees, representation from all clinical affiliates, and medical students, residents and
faculty from the basic and clinical sciences. More than 150 faculty, staff and students participated on the
Task Force and Subcommittees. An Independent Student Task Force conducted the Independent Student
Analysis and Report. Open Forums were held in early 2012 to gather input from faculty and students. An
LCME web page, email updates, and student newsletters inform faculty, students, and staff of LCME
progress, processes, and timelines. The Self-Study Task Force met regularly to discuss progress and key
issues, and synthesize and summarize the work of the subcommittees to prepare the final self-study summary
report.

**I-Institutional Settings**

**A. Governance and Administration**

1. **How institutional priorities are set; success of institutional planning efforts**

Institutional planning and priorities are aligned with the College’s Mission and set through the Strategic Plan,
which is prepared by the Senior Associate Deans and approved by the Dean. The Strategic Plan is integrated
with the strategic plans of our parent University and our clinical academic medical center partner, Fletcher
Allen Health Care. The most recent Strategic Plan (2012-2017) was updated in May 2012, and our new
clinical affiliates are being incorporated into the process.

Annually, the Strategic Plan is reviewed with the University Provost. Initiatives with financial
implications are reviewed with the University Chief Financial Officer; initiatives with curricular or research
implications are discussed at the Provost’s Council of Deans or with the University Vice President for
Research. Focused discussions occur frequently with the administration at other colleges, such as the joint
effort with the College of Nursing and Health Sciences to develop a simulation laboratory in collaboration
with Fletcher Allen.

The annual planning process allows for broad participation from stakeholders with a robust vetting
process and has proven effective. Proposed strategic initiatives are reviewed and vetted by the Faculty
Strategic Planning Committee, the Dean and Senior Associate Deans, and then the College of Medicine
Advisory Council, comprising Department Chairs and key education and research leaders for review.
Resulting priorities are shared and discussed with the faculty at individual departmental and faculty wide
meetings, with details and documents made available electronically. Approved initiatives are detailed on an
Action Plan, which outlines goals, metrics and a timeline.

The planning process and regular assessment of progress through review of the Action Plan is not only
an effective system for long- and short-term decision-making and prioritization, but has been important in
linking philanthropic goals and priorities for the upcoming University Campaign. The process has also
proved beneficial in planning for the anticipated expansion of clinical affiliates, as Fletcher Allen Partners
and Western Connecticut Health Network forge new alliances that could present opportunities for our
students, as well as for our research and service missions.

2. **Role of the governance structure in administrative functioning of the medical school**

The University of Vermont (UVM) was chartered in 1791 and is currently accredited by the New England
Association of Schools and Colleges, with the next review in 2019. The College of Medicine was established
in 1822, and today serves with teaching hospital partner Fletcher Allen Health Care as Vermont’s academic
medical center. The UVM Medical Group faculty practice is a wholly-owned subsidiary of Fletcher Allen,
and a formal affiliation agreement between the University and hospital governs the clinical relationship.
UVM is governed by a Board of Trustees, composed of 23 members serving 6-year staggered terms and 2 elected students serving 2-year terms. Members include the Governor, UVM President, and a variety of members appointed by the legislature, governor and trustees. Appropriate safeguards are in place to prevent conflict of interest, with clear and comprehensive policies in place, and the College receives annual written confirmation of full compliance with those policies. College actions requiring review and/or approval of the UVM Board relate to the graduating of students, the hiring of faculty and administrative officers (who are appointed by the Dean and Provost as delegated by the Board), and the approval of capital projects, and revisions to major governance documents.

The College Bylaws are current, clear and comprehensive, and are reviewed regularly. They were updated most recently in September 2012, and are accessible on the College website or from the Dean’s Office.

3. Relationship of the medical school to the university and its clinical affiliates

The leadership of the College has a strong relationship with the President and University administration, and the College’s location on the University campus facilitates regular interaction and collaboration. The Provost and the Dean have regular monthly meetings and the President and the Dean meet regularly as well. The Dean periodically presents concepts and initiatives to the Provost, the President and the Board of Trustees. The Dean and the Senior Associate Dean for Finance & Administration attend all Board of Trustee meetings and comment on specific topics as requested, and the Senior Associate Dean for Research meets frequently with the University Vice President for Research. Annually, the President and Provost attend the College of Medicine Advisory Council meeting and a College-wide faculty meeting at least annually to present University plans and hear faculty comments and concerns.

The Dean also has a strong, effective relationship with the President and CEO of teaching hospital partner Fletcher Allen, which is physically connected to the College. The CEO holds a faculty appointment in the College, the clinical chairs report dually to the Dean and the CEO, and the clinical faculty are jointly employed by the College and Fletcher Allen through the UVM Medical Group (UMMG) faculty practice. The Dean is a member of the both the Fletcher Allen Health Care and Fletcher Allen Partners Board of Trustees. He also sits on the Board of the UVMMG and meets regularly with its President, who also serves as the Senior Associate Dean for Clinical Affairs at the College. The Dean, the Senior Associate Dean for Medical Education, and the Associate Dean for Clinical Education have also established and maintained effective collaborative relationships with leadership of the clinical affiliate teaching sites in Connecticut, Maine and Florida.

4. Organizational stability and effectiveness of the medical school administration

Dr. Frederick Morin was appointed Dean of the College of Medicine in August 2007. He joined UVM from the University of Buffalo (NY) where he was chair of pediatrics and chief of Women and Children’s Hospital. He is an experienced leader, administrator, clinician, scholar and researcher, and his stable tenure since 2007 has proved extremely effective in planning and achieving institutional priorities.

E. Thomas Sullivan became President of the University of Vermont in July 2012, succeeding Daniel Fogel, who retired as president. Before joining UVM, President Sullivan served as Senior Vice President for Academic Affairs and Provost at the University of Minnesota from 2004-12, and was previously Dean of the Law School there. The University Provost, Jane Knodell, stepped down at the end of 2012, and a national search has begun. Robert B. Low, PhD, professor emeritus of molecular physiology and biophysics, was appointed as Interim Provost as of January 1, 2013. College and University leaders have a long-standing collaborative, strong relationship, which continues under Dean Morin and President Sullivan.

The Office of the Dean is appropriately staffed by four Senior Associate Deans (Medical Education, Research, Clinical Affairs, and Finance), and twelve Associate and Assistant Deans, who appropriately and efficiently serve the needs of the school. The faculty and students perceive the Dean’s staff to be accessible and effective. In the Independent Student Report, medical students reported over 95% satisfaction with availability and accessibility of medical school administration.

Department leadership has been stable since the last review, with four of fifteen Chairs appointed under Dean Morin (Biochemistry, Family Medicine, Obstetrics, Gynecology & Reproductive Sciences, and Pathology) and two searches underway to fill interim leadership in Surgery and Neurological Sciences. The
Dean conducts an annual review of each Chair (clinical Chair reviews are conducted in concert with the President of the UVM Medical Group and the CEO of Fletcher Allen). Department Chairs have spending authority over their unrestricted departmental budgets to achieve their strategic goals. Annual departmental resources are funded from the General Fund as well as gift and endowment income, faculty practice funds, and extramural support.

B. Academic Environment

5. Contribution of graduate programs(s) in basic sciences and other discipline to mission and goals of the medical school

Outstanding funded research and excellent graduate programs in the basic sciences contribute to the mission of the College, with 125 masters and doctoral students enrolled across eight programs, including three University-wide interdisciplinary programs. College of Medicine faculty comprise the majority of the faculty in the Cellular, Molecular and Biomedical Sciences Program, the Neuroscience Graduate Program, and the Center for Clinical and Translational Sciences, and are also engaged in graduate programs in biomedical engineering and psychology. Graduate programs are reviewed frequently by their faculty governance structures and centrally every eight years through the University Academic Program Review. The graduate programs are vibrant with high-quality students, generate numerous research collaborations across departments, and are considered to be highly successful based on the ability to acquire competitive NIH T32 training grants and the positions they accept upon graduation.

Graduate programs have a positive impact on medical school education and medical students have many opportunities for interaction with graduate students. Investigators, researchers and basic scientists are active educators in the medical school curriculum and Neuroscience graduate students act as teaching assistants in the medical Neural Sciences course. Although the College no longer accepts entering students for the MD/PhD joint-degree program, the fifteen students who continue in the program are engaged in substantive and long-term research projects with faculty mentors and are on track to complete their education as physician scientists.

6. Availability and impact of residency training programs and continuing medical education actions on education of medical students

Graduate medical education programs at UVM/Fletcher Allen Health Care have 226 residents in 16 programs and 53 fellows in 25 programs each accredited by ACGME. The GME programs are overseen by the Associate Dean for Graduate Medical Education, who also serves as the Designated Institutional Official at Fletcher Allen. ACGME-accredited residency training programs are also in place at clinical affiliates Danbury Hospital (129 resident in 8 programs and 6 cardiovascular fellows) and Eastern Maine Medical Center (27 residents and 4 fellows in Family Medicine). Residents play an integral role in the teaching of medical students during Clerkship and Advanced Integration, under the supervision of faculty and Clerkship Directors. Residents at Fletcher Allen have faculty appointments, emphasizing their contribution to teaching, and the Resident Orientation program includes expectations and details about their teaching role. No GME programs are on probation, and there are no major changes anticipated in the residency training programs.

UVM/Fletcher Allen is accredited by the ACCME to deliver Continuing Medical Education. A robust annual schedule of conferences, seminars, grand rounds and other events are available for medical students to attend as often as their schedules permit. Active CME programs are also in place at clinical affiliates Eastern Maine and St. Mary’s Medical Center that medical students are encouraged to attend.

7. Research activities of the faculty as a whole

Research is a core mission for the College, and the breadth and quality of faculty research across both basic science and clinical departments is outstanding. In 2010, extramural funding for the College reached an all-time high of $89.3 million, with 153 principal investigators involved in 342 projects, and faculty publishing 1096 articles in peer-reviewed journals and 132 books and book chapters.

Many programs of national and international prominence are present, and faculty involved in research and graduate education also teach in the medical curriculum. With a strategic goal to capitalize on our strengths and identify opportunities for investment, areas of emphasis include cardiovascular disease, neurosciences, pulmonary disease, cancer, immunobiology/infectious disease, and outcomes research. There
is excellent core facility infrastructure supporting these areas and facilitating considerable overlap and collaboration. Several of the College’s areas of emphasis also fit well with the University Spires of Excellence (Neuroscience, Behavior and Health; Food Systems; and Complex Systems), which expands the opportunities for funding and collaboration.

The College has done exceptionally well in the recent times of restricted resources at the federal level. Virtually all faculty engaged in research are currently funded from external sources, garnering nine NIH-funded training grants, four NIH Program Project Grants, three NIH COBRE Center awards, along with numerous R01, R21 and other competitive awards. A vibrant clinical trials program in collaboration with Fletcher Allen has both industry and federal funding. Research funding is a component of the College’s formula for departmental funding, so research success is rewarded within the departments.

8. Adequacy of resources for research

Space, equipment and graduate student resources are sufficient to support the research enterprise at the College, and we continue to recruit outstanding faculty to contribute to our academic community. Recent projects include upgraded research laboratories in the Given Building and Colchester Research Facility, purchase of massively parallel sequencing and ultra-high resolution microscopy, and a joint initiative with the State of Vermont Health Laboratories to co-localize BSL-3 activities.

Several internal grant programs are in place to fund investigator-initiated pilot projects. Bridge funding is also available from the College to support previously-funded faculty, expanded significantly with a new $750,000 annual grant fund from the UVM Medical Group. The UVM Medical Group also sponsors up to three annual seed grants for faculty research projects. In addition to Department administration support, the College is served by a comprehensive central Sponsored Programs Administration, which supplies guidance and support both for grant opportunities and for application preparation and submission.

9. Impact of research activities on education of medical students

Medical students have many opportunities to participate in research throughout all four years of the curriculum. NRMP data on matched seniors 2010-2012 reports that UVM students ranked in the 75th percentile for mean number of research experiences (2.8) and above the 75th percentile for mean number of publications (4.0). Notification of opportunities for research projects are sent electronically by email, in the Office of Medical Student Education student newsletter, and posted on the student bulletin boards.

The First-Year Summer Research Program matches interested students with basic science and clinical faculty researchers, and stipends are available through the Senior Associate Dean for Research. Medical students may also participate in a summer research course at the Mount Desert Island Biological Research Lab (5 participated in Summer 2012). All second-year students conduct service learning public health research projects that culminate in poster presentations. Senior students must complete a required Scholarly Project comprising either a research project or a teaching requirement. Students choosing a research project work with a research mentor, submit a manuscript, and give an oral or poster presentation. The Surgery Senior Major program, now in its 43rd year, has a fourth year research project that is presented in the final semester.

10. Availability of opportunities for medical students to engage in service learning

The College takes advantage of its close connection with the Vermont community to create both required and optional opportunities for medical student service learning. Participation in service learning is highly visible at the College. Students learn about opportunities during Orientation, directly from Student Interest Groups, through publications and media about the programs and opportunities for service learning. As a result of the self-study process, a service learning elective was developed to provide additional opportunities available for interested students.

All students engage in service learning activities in the required Public Health Projects course through a structured and mentored learning experience that combines community service with preparation and reflection. Students engage with community organizations, design and complete a research project that benefits the local community. Student projects have contributed data, ideas and solutions for many specific public health challenges in the community and contributed to broader knowledge of community engagement, advocacy,
and scholarship in public health. These projects are amply supported by the College, including travel funds for students to present their results at national public health meetings.

Each year, a number of second-year medical students (9 in 2012) are selected by the New Hampshire/Vermont Schweitzer Fellows Program to develop and implement year-long, mentored service learning projects designed to help those underserved by the healthcare system. Area Health Education Center Summer Projects provide interdisciplinary, community-based service-learning opportunities for medical students and graduate health profession students in three geographical regions of the state.

11. **Programmatic and institutional goals for diversity**

The College of Medicine values diversity as a driver of excellence, with a clear definition, specific goals and outcomes that are well-defined. Since Vermont is one of the most homogeneous states in the nation, our specific goals reflect a desire to enrich the diversity of the College above that of the State in several distinct categories.

Diversity and inclusion goals are reflected in the College of Medicine Strategic Plan, and explicitly referenced in policies of the College and the University. Based on feedback from a Dean-appointed Diversity Task Force, the College updated its Policy Statement on Diversity & Inclusion in 2011 and created a robust five-year Strategic Action Plan. Recommendations during the self-study process led to the Dean appointing a dedicated Assistant Dean for Diversity and Inclusion, formation of a new Dean’s Advisory Committee on Diversity & Inclusion, and assigned coordination of outreach initiatives to the Director of Admissions.

The College has been very successful in implementing goals for student diversity, and this success has served as a model for our plans for faculty and staff. The Committee on Admissions has a comprehensive recruitment plan with a holistic admissions process to ensure the applicant pool and student body is broadly diverse. Students develop and refine skills in cultural competence throughout the curriculum, and in extracurricular activities. Clerkship rotations in Burlington and at affiliate sites in Maine, Connecticut and Florida provide the opportunity to engage with diverse faculty, staff, patient, and community populations. This skill is effectively instilled in graduates: in the 2011 post-graduation survey, 100% of program directors and 92% of our graduates stated that our graduates were as or better prepared than their peers in demonstrating “sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.” In the Independent Student Report, 78% of students were satisfied with the diversity of the student body, and 82% with the diversity of the faculty.

The College employs a standardized faculty and staff recruitment process designed to enhance diversity above that of the state of Vermont. In addition, opportunities for professional development for staff and faculty around diversity, inclusion, and cultural competence are provided on an ongoing basis. Formal faculty development programs are offered through online modules, the Mud Season Educational Breakout, the Seminar Series and the UVM Center for Cultural Pluralism, which focuses on cultural competencies in the workplace.

The College’s recruitment and retention plans, outreach programming, and strategic partnerships have led to success in these efforts:

- The Office of Admissions has continued the successful recruitment program started in the 2006 academic year to increase overall diversity of the incoming medical school class. This plan has resulted in the successful recruitment of students from targeted groups, including an increase in the UVM defined ALANA (African-American, Latino(a), Asian, and Native American) students every year, from 18% in 2005 to 41% in 2012, and an increase in the number of students from groups underrepresented in medicine from 0% in 2005 to 10% in 2011.

- The College has increased the funds dedicated to need-based scholarships. The UVM Medical Student Scholars Awards program, scholarships developed to increase student diversity by attracting students who are racially and ethnically underrepresented in medicine, has doubled from $90,000 in awards in 2005 to $180,000 in 2011.
To ensure a broadly diverse faculty and staff, the College uses evidence-based strategies to guide practice and ensure consistency. Priority areas include improvements in data collection and use of measurable goals and outcomes, using nationally available data and trends from organizations such as the AAMC. Systematic training of Search Committees, oversight of all faculty recruitments, strategies to increase pools of diverse faculty applicants, improving faculty education, and data collection are priorities.

In the planning for new clinical clerkship sites, one criterion for consideration was whether a site could add to the diversity of clinical faculty and patient populations. Thus, the diversity of the faculty, staff and community populations across clinical affiliates adds breadth and depth to the education of our students.

The Diversity and Inclusion Plan outlines specific steps for the development of programs, measures and timetables around recruiting and retaining a diverse academic and administrative workforce, and creating a welcoming and inclusive environment at the College. In 2011, the College conducted a climate survey related to diversity and inclusion efforts, with results used for benchmarking and program planning. The annual demographic survey of faculty, staff and students (distributed in January 2013) will also be used as a benchmark for measuring success in achieving goals for the College.

II-Educational Program for the MD Degree

A. Educational Objectives

1. Level of understanding of educational program objectives

The curricular competencies and program objectives were last revised in 2012 and are linked to the physician competencies (ACGME) expected by the medical profession and the public. These competencies are readily understood and followed by all stakeholders of the educational mission and effectively drive curriculum content, assessment methods, methods of instruction and inform our system of program evaluation and improvement.

The six curricular competencies and associated objectives are widely and sufficiently disseminated via multiple avenues to faculty and students. They are posted on every student’s home page and ID badge and are accessible through a menu tab on each course and clerkship page on the College of Medicine Educational Tools (COMET) web site. Faculty, residents, community-based preceptors and affiliate sites are sent orientation materials that include the competencies, learning objectives and course objectives.

The curricular program objectives, stated in outcome-based terms, serve as effective guides for the Medical Curriculum Committee (MCC) and Level Committees for educational program planning and for student assessment and program evaluation. Objectives of a particular course or clerkship are annually reviewed by the MCC, which evaluates how well the course is meeting program objectives. Course and Clerkship Directors also evaluate achievement of the learning objectives annually, and map course content to educational objectives through creation of the annual Quality Assurance Report. In addition, overarching achievement of competencies is also monitored and improvement is driven by the MCC examination, the biannual level reviews and the curriculum-wide reviews. For example, in recent years it was determined that additional primary care experience was needed for the Patient Care competency. This drove the MCC to
mandate changes to the Family Medicine Clerkship, which changed its length, organization and didactic curriculum. In a more global example, the MCC recently undertook a complete review of the achievement of our program competencies that relate to clinical skills. The result was a revamped map of clinical skills content, instructional methods and assessments across the 4-year curriculum.

2. **Linking objectives to physician competencies**
   
   Curriculum Competencies and program objectives are based on the six ACGME core competencies that delineate the expectations of the profession and the public (Patient Care, Medical Knowledge, Practice-Based Learning, Interpersonal and Communication Skills, Professionalism, and Systems-Based Practice). These competencies and program objectives are mapped to course objectives and are longitudinally achieved in the curriculum within each of the three program levels (Foundations, Clerkships, and Advanced Integration). At each level, student progress is directly based on assessment derived from the competencies. The acquisition of each core competency is determined via institutionally-derived and nationally-recognized outcome measures such as clinical knowledge exams, clinical skills exams, and clinical performance based on quantitative and qualitative data.

   Evaluation of outcome measures support that our students are well prepared for the next phase of their training. These measures include performance on internal exams, USMLE Step exams, the AAMC Graduation Questionnaire, match results and postgraduate surveys of graduates and program directors.

3. **Ensure students encounter patients/clinical conditions to meet objectives**

   Each discipline-specific Clerkship committee, led by the Clerkship Director and informed by national specialty standards, has identified the required types of patients, clinical conditions and settings to be encountered by students to meet core competencies. All students must experience the prescribed encounter or its designated alternate activity, monitored by the Clerkship Director. Encounters, condition, role and setting are recorded by students in the electronic Patient Interaction Tracker. This information is reviewed by the Clerkship Director and student at mid-Clerkship to ensure the student is meeting the requirements. Encounter data are also reviewed at Clerkship end to ensure students have met all requirements. Central monitoring by the Office of Medical Education ensures the adequacy of student experiences. These data are included in each Clerkship’s Quality Assurance Report that is reviewed by the Medical Curriculum Committee.

**B. Structure of the Educational Program**

4. **Providing a general professional education**

   The medical education program prepares students for all medicine careers options. This is ensured through central oversight by the Medical Curriculum Committee with support from the Office of Medical Student Education and the senior leadership of the College. At 160 weeks of instruction, the program includes more than the required 130 weeks, allowing sufficient opportunities for students to learn about societal needs and demands on health care, and to develop skills of critical judgment based on evidence and medical problem solving. All courses and course content undergo an annual review by the MCC to ensure ongoing quality improvement. Our students consistently rate their medical education as outstanding (95.2 % in the 2012 AAMC GQ), and feel they are well prepared for their careers. Our graduates enter a wide variety of specialties at outstanding residency locations. In the 2012 residency match, 113 graduates matched in 19 different specialties at 77 residency programs in 29 states and Canada. A significant percentage of our students match in primary care each year, including 43% of the Class of 2012, and about 14% of graduating students continue their education in Vermont, with residency programs at UVM/Fletcher Allen. In the last five years, graduating students were accepted into programs at top medical centers across the nation: 16% to Ivy League schools and 16% to top public and private schools.
including Duke, Johns Hopkins, Vanderbilt, University of Colorado, Einstein/Montefiore, Tufts, the University of California Programs, and Stanford.

5. **Opportunities and time for active learning and independent study**

Medical students have a wide variety of opportunities for active learning and independent study, have opportunities to assess their own learning needs, and consistently receive feedback on skill development. Active learning in the Foundations level is exemplified in the Convergence course, in which students work through a series of problem-based cases. In this setting, students are provided time to independently develop their own learning objectives and find the information necessary to meet those objectives. Students then contribute their knowledge in formal sessions to aid group learning. This prepares the student for lifelong learning, developing skills in independent reasoning along with self-assessment and recognition of the outcome of their learning on the patient and health care team. Students are narratively assessed by faculty on their ability to use life-long learning skills.

Additional active independent learning and knowledge assessment is developed via formative online quizzes, online learning modules, problem-set completion, and written reflections. In the Professionalism, Communication and Reflection Course, a longitudinal course which runs concurrently with the other Foundations Courses in year one, students engage in small-group discussions that help to identify learning styles and develop strategies for life-long learning. During the Doctoring in Vermont community clinical placements, students are provided with early exposure and feedback on their ability to synthesize what they are learning in the classroom and apply it in the office setting. In the Clinical Clerkships, students assess their own learning needs by evaluating the utility and quality of available learning resources and choose those that best suit their needs to meet course objectives. Students are provided with feedback from their preceptors and formal mid-Clerkship feedback to assess their progress. In Advanced Integration, the final year research project/teaching practicum requires students to pursue the scholarly work necessary to teach or conduct research.

Student progress in developing skills needed for lifelong learning is assessed across the curriculum. Students receive both formative feedback from activities in small groups, writing/reflection assignments, formative quizzes, standardized patient teaching sessions and summative feedback from end of course written and clinical exams. All Clerkships routinely and systematically assess the learners’ ability to identify, analyze and synthesize information related to patient care with a standardized common student evaluation tool. Preceptors are asked to assess students on problem solving/clinical judgment, learning habits/motivation and self-improvement/adaptability, and are also asked “Recognizing that all learners can benefit from continued efforts at expanding their fund of knowledge through independent study and reading, what skills should this student focus on improving during their next rotation?”

6. **Consistency of educational quality and student assessment at alternative educational sites**

During the self-study, it was determined that processes and procedures are in place to systematically ensure that educational experiences and methods of assessment are comparable. Under the centralized management of the Medical Curriculum Committee and educational leadership, an administrative infrastructure is in place to ensure consistency of educational quality and assessment at each clinical affiliate site. This includes a standard set of objectives, common educational core, common metrics and methods of assessment, and routine systematic review of comparability and action on data.

In addition to our primary site at Fletcher Allen Health Care, students also rotate among clerkship experiences in Danbury Hospital in Connecticut, Eastern Maine Medical Center in Bangor, and St. Mary’s Hospital in West Palm Beach, Florida. While these options allow students to follow their own unique path through the Clerkship year, every rotation in a Clerkship has the same length, course syllabus, objectives, assessment tools and grading policies. Comparability data are reviewed after each rotation. The Clerkship Committee annually reviews the curriculum across all clerkships and sites, reviewing objectives, learning activities, implementation of policies, assessments and evaluations to ensure quality and appropriate teaching methods. In addition, the Committee identifies needs and shares innovative ideas. Site Directors and Site Coordinators have been appointed at each affiliate, and are extensively trained on the objectives, grading system and administrative methods for each Clerkship. They make regular visit to the College to meet with students and faculty, and also participate in curriculum planning, implementation and review.
All Clerkships begin in Burlington with a two-day Orientation Session conducted by the Clerkship Director where the expectations, policies, objectives, course requirements and assessment methods are articulated to students. In addition, key didactic topics are covered to prepare students to start the Clerkship, core clinical skills are taught in the simulation laboratory, and formative feedback is provided. Students achieve identical objectives for didactic experiences via lectures in person, or by synchronous or asynchronous distance learning methods, and all students track their clinical experiences by logging them in a Patient Interaction Tracker, which are reviewed against Clerkship standards at the required mid-rotation feedback session. Students at all sites are formatively assessed at mid-rotation using the same rubric and summatively assessed using the same Universal Clerkship Assessment tool, the same Clinical Skills Examinations, and the same cognitive assessment final examination. The Clerkship Director assigns the grades using a single standard for successful completion of the Clerkship and writes the narrative assessment for all students in that rotation at all sites.

Physicians who supervise students, regardless of training site, have faculty appointments at the College of Medicine. Clerkship Directors orient the faculty to the objectives and grading scheme, and ensure that all faculty and preceptors are familiar with the Clerkship requirements and policies. The Clerkship Directors monitor the use of the Universal Clerkship Assessment tool and provide feedback to faculty as needed. The Clerkship Director also reviews performance on clinical skills exams and cognitive exams to ensure there is no difference in student performance based on training site. The students complete course evaluations at the end of the clerkship using the CoursEval system, providing comparable qualitative and quantitative data across all sites. Faculty development opportunities are made available to all faculty, with offerings posted on the website and via emails to all faculty. Teaching development programs are available and required for all residents, either by completion of six online GME Today modules or by participation in the department faculty development programs.

The Clerkship Committee annually reviews the curriculum across all clerkships and across all sites. The curriculum objectives, learning activities, implementation of policies, assessments and evaluations are reviewed to assure quality, minimize redundancy, ensure appropriate teaching methods, identify needs and share innovative ideas.

7. Experiences for students to apply the scientific method

Students have sufficient opportunity to apply the scientific method and become familiar with basic principles of clinical and translational research across the continuum of the curriculum. Beginning with the first course in Foundations, Introduction to Clinical Decision Making, Dana Medical library faculty participate in assignments that involve searching, evaluating, and managing health sciences literature. Foundations courses are designed to integrate the study of normal micro and gross anatomy, physiology and clinical skills. The organ systems courses integrate the principles of gross and micro anatomy, immunology, microbiology, pathophysiology, pathology/neoplasia, and pharmacology. Students participate in case-based instruction, small and large group discussions, laboratory sessions, lecture, patient presentations done by clinical faculty, problem based learning, simulation and standardized patient activities, and workshop activities that require accurate observation of biomedical phenomena and critical analysis of data. Clinicopathologic conferences introduce the application of core curriculum material to clinical situations. Pathology colloquia, separate from laboratories, occur during some of the courses and allow students to work in smaller groups and review pathology cases.

In the Public Health Projects course, students perform original research projects. Students review basic quantitative and qualitative research methods, and then work with a mentor to develop hypotheses, design original experiments, gather data, perform detailed statistical analyses, compile results, develop a discussion, draw conclusions and present their findings. During Clerkships, students are routinely answer clinical questions by conducting literature searches and applying the data to the care of patients. Pediatrics and Surgery specifically require completion of specific evidence-based medicine assignments. In the Bridge Clerkship, students use scientific data and evidence from the literature to analyze specific scenarios. The Advanced Integration Level features a scholarly requirement in which students conduct an original research project or act as a teaching assistant in a Foundations course. In the Internal Medicine Acting Internship, students participate and present in a weekly journal club.
8. **All required content areas addressed in the curriculum**

The self-study process affirmed that the Vermont Integrated Curriculum (VIC) contains all areas needed that are required for accreditation. The curriculum was designed to incorporate all required areas of basic and clinical science expected by the profession and the public to produce excellent medical practitioners of all specialties, and is continuously reviewed and updated to reflect advances in science and clinical practice. The curriculum is particularly strong in foundational sciences (anatomy, biochemistry, genetics, immunology, microbiology, pathology, pharmacology, and physiology), public health, clinical skills and communication. Behavioral and socioeconomics are emphasized both in Foundations and the clinical levels of the curriculum.

In addition to basic science and clinical disciplines, the VIC includes behavioral and socioeconomic subjects essential for the practice of medicine. In the AAMC GQ 2012, students feel the curriculum prepares them with a fundamental understanding of the issues in the social sciences of medicine- ethics, humanism, professionalism, structure of health care systems.

On the AAMC Graduation Questionnaire, there were topic areas in which UVM students ratings of their preparedness were below national means, such as biostatistics, medical economics, and cultural competence. In response to these data, the Medical Curriculum Committee has taken action to address those gaps in the VIC. In the areas of occupational health and rehabilitation medicine, areas also noted by students in the 2012 AAMC GQ, a detailed curriculum review revealed that content met or exceeded national means for numbers of required sessions, and labeling this material in an integrated curriculum was the recommended approach.

The curriculum covers all organs systems in Foundations and this continues throughout the clinical curriculum. Instruction in preventative, acute, chronic and continuing care and rehabilitative and end of life care begins in Foundations and intensifies in the Clerkships, Acting Internships and Emergency Medicine requirement. During the Clerkship year, students continue to develop the knowledge, skills and attitudes needed to provide care in preventive, acute, chronic, continuing, rehabilitative, end of life and a variety of medical settings.

The VIC prepares students to enter any field of graduate medical education and includes content and clinical experiences related to each phase of the human life cycle. The curriculum contains content to prepare our students to recognize wellness, determinants of health, and opportunities for health promotion; recognize and interpret symptoms and signs of disease; develop differential diagnoses and treatment plans; and assist patients in addressing health-related issues involving all organ systems. These content areas are introduced in Foundations and continue in Clerkship. Students have early clinical experiences in Doctoring in Vermont (1st and 2nd years) in primary care practices and observe direct patient care and practice examination and communication skills under the direct tutelage of experienced primary care faculty physicians. In these real-life situations, students learn to apply the concepts of wellness and the determinants of health, health promotion and disease prevention.

Most Foundations courses address aspects of health promotion and disease prevention. Clerkship objectives integrate wellness and health promotion, as well as determinants of health and disease. For example, students perform health maintenance visits under faculty supervision and are assessed on their knowledge and skills. Our students rated the coverage of management of disease, health maintenance, and disease prevention as appropriate (88-92%) on the 2012 AAMC GQ.

The VIC includes excellent elective opportunities to supplement required courses and clerkship rotations. The Vermont Integrated Curriculum includes more elective time than most medical schools which allows ample time to pursue career interests and academic interests. On the 2012 AAMC GQ, 98% of our students reported sufficient elective time, well ahead of national peers. Our Advanced Integration Level requires the Acting Internship in Medicine, and an Acting Internship of the student’s choice which must be done at a COM affiliate site. The other requirements are the Emergency Medicine selective, a surgical specialty/subspecialty rotation, and the Teaching/Scholarly Project requirement. These requirements complete all of the curricular objectives of the VIC, allowing up to 6 additional months of elective time. The Advanced Integration Level begins early relative to the timing of residency applications to allow students to use elective time to expand their knowledge and experience and explore career options. All students have advisors with whom to collaborate on choices of electives, taking account of career goals, educational needs, and individual interests.
The curriculum includes specific instruction in communication skills as they relate to physician responsibilities, including communication with patients and their families, colleagues, and other health professionals. The clinical skills curriculum is horizontally and vertically integrated throughout the Foundations Courses and the clerkships. The clinical skills curriculum includes instruction in professionalism, communication and interpersonal skills and medical interviewing, physical exam, clinical reasoning, documentation using the electronic medical record, and presentation skills. 100% of UVM students felt they had the necessary communication skills for residency on the 2012 AAMC GQ. This result was confirmed in UVM surveys of program directors and graduates.

Our integrated curriculum prepares students to address the medical consequences of common societal problems. Each student completes a module on the diagnosis, prevention, appropriate reporting, and treatment of violence and abuse in the Family Medicine clerkship. The curriculum includes sexually transmitted infections, substance abuse, family violence and neglect and unwanted pregnancy. The topic of elder abuse, including the legal responsibilities of physicians as mandated reporters, is covered in the Generations course in Foundations. Based on the 2012 AAMC GQ, we are confident that the content material is covered (90% appropriate) and our students feel well prepared.

Students develop an understanding of the manner in which people of diverse cultures and belief systems perceive health and illness and respond to various symptoms and disease and treatments. Most Foundations courses have cultural competency objectives. The Professionalism, Communication, & Reflection Course and the Public Health Projects Course are specifically designed to introduce and support the development of the capacities, attitudes, and behaviors critical to medical professionalism with a focus on cultural competency. From the 2012 AAMC GQ, 93% of UVM medical students believed they were adequately prepared to care for patients from different backgrounds. Our students felt more comfortable than their peers (93%/89%) in providing safe sex counseling to patients with a different sexual orientation. In the 2012 AAMC GQ, 41% of students participated in a global health experience compared to 30% peers.

9. Balance of inpatient and ambulatory teaching; appropriateness of clinical sites
The curriculum utilizes an appropriate balance of outpatient (Doctoring in Vermont and Clerkships in Family Medicine, Ambulatory Medicine, Neurology, Pediatrics, and Psychiatry) and inpatient settings (Inpatient Medicine, Ob-Gyn, Pediatrics, Psychiatry, Surgery, Internal Medicine Acting Internship, Emergency Medicine) across clinical sites. Settings are excellent and include Fletcher Allen Health Care in Burlington, Danbury Hospital in Connecticut, Eastern Maine Medical Center in Bangor, and St. Mary's Medical Center in West Palm Beach, Florida. The time students spend in inpatient setting compared to time spent in the ambulatory setting has been deemed as balanced and appropriate by the Medical Curriculum Committee, in consultation with the Associate Dean for Clinical Education and the Clerkship Directors. This judgment is informed in part by data from the 2012 AAMC GQ, where 94.4% of students felt their training in the care of hospitalized patients was appropriate and 91% of students felt their training in the care of ambulatory patients was appropriate.

C. Teaching and Assessment
10. Adequacy of supervision during required clinical experiences
During the self-study, it was determined that medical students are well supervised during clinical experiences. Responsibility for supervision and assessment of students is held by College of Medicine faculty, and rigorous guidelines ensure students are supervised and assessed by those who have faculty appointments. When students are instructed by non-faculty (graduate students, nurse practitioners, pharmacists, etc.) these individuals are supervised by the faculty preceptors.

Residents play an important role in the supervision and teaching of the medical students and are well prepared for their responsibilities. During Resident Orientation, the objectives for each Clerkship are provided and all residents receive The Vermont Integrated Curriculum, describing the competencies, learning objectives, assessment methods, and curricular structure. Objectives are also including in each course syllabus in COMET. Programs to enhance teaching and assessment skills of residents are provided by all departments and all sites. Workshops and online modules are used to provide and document the delivery and acquisition of teaching skills to residents, with attendance monitored to ensure compliance. All residency
programs have rigorous supervision requirements mandated by the ACGME and have been accredited by their respective Residency Review Committees as compliant with the requirement that residents must be prepared for their role as teachers.

Volunteer faculty are oriented to the curriculum competencies and educational program in a similar process, with access to all faculty development training sessions and workshops, complete access to the curriculum on COMET, and full online and on-site access to library resources. Course and Clerkship Directors meet regularly with volunteer faculty to review the syllabus, assessment tools and pedagogy of each educational experience. At affiliate sites, an extensive series of faculty development activities are undertaken by Clerkship Directors and pedagogical experts through the Office of Medical Student Education. Graduate student teaching assistants, utilized in Neuroscience, have an orientation with the faculty mentor to review course objectives and preview all lab sessions.

11. Adequacy of methods used to assess student attainment of program objectives

Multiple measures of knowledge, skills, attitudes, and behaviors are used to assess student attainment of curriculum competencies, and our self-study determined these methods are adequate and effective. The quality of assessment tools is evaluated by the Foundation Committee, the Clerkship Committee, educational specialists in the College, and annually by the Medical Curriculum Committee (MCC). The faculty in each discipline have set standards of achievement, and contribute to the setting of such standards in interdisciplinary and interprofessional learning experiences. Using those standards, the MCC ensures that the knowledge, skills and behaviors reflected in program objectives and assessments align with the standards in each required course and clerkship. During the Foundations curriculum, assessment methods are dictated by the varying course objectives and include lab practicals, clinical skills examinations, narrative assessment, and summative written examinations. In the Clerkship curriculum, assessment tools include computer-based modules, formal presentations, review of history and physical examinations, triple jump exercises, standardized patients/clinical scenarios (CSE, OSCE), community health projects, oral examinations, SOAP notes, reflection essays, and summative written examinations.

12. Frequency and timeliness of formative assessment, including mid-clerkship feedback

All students receive frequent formative assessment across the curriculum, and are able to examine their academic progress in real time in the online grade book. All Foundations courses over four weeks have formative quizzes and practice exams for students to gauge their understanding and progress. Students who are at risk are identified by the Director of Student Success for appropriate feedback and remediation plans. The Medical Curriculum Committee (MCC) determined that narrative feedback could be offered in several additional courses, and a system to provide formal mid-course formative feedback in the form of a grade report was implemented in fall 2012 in both Human Structure and Function and Neuroscience. All Clerkships and required electives provide both summative and formative narrative assessments. All Clerkship students receive formal mid-rotation feedback documented by the Clerkship Director. While there is objective data that 100% of students receive such feedback, this is at variance with the Independent Student Report and 2012 AAMC GQ. As a result, the mid-rotation formative assessment form has been standardized and students sign the form after meeting with the Clerkship Director.

Systems are in place to ensure timely reporting of grades to students in all courses. The grades in Foundations are reported within one week of the end of the course. As part of the self-study, we have evaluated our system for clerkships, found limitations, and made significant changes. Specifically, although all clerkships have been mandated to return grades within 6 weeks, several clerkships were not accomplishing this for all students. These areas of non-compliance came into focus following the implementation of our dashboard system, which systematically time stamps clerkship grade reports. New policies and procedures have been formulated and remedial plans are in place. These changes set rigid rules regarding the time window from the conclusion of the clerkship to the submission of faculty grades to require 100% compliance in awarding grades by the Clerkship Director before the six week window has closed. Monitoring of these data is accomplished via clerkship compliance dashboards, which are regularly reviewed at Clerkship Directors meetings and the MCC, as well as by the Associate Dean for Clinical Education. Late grades are immediately investigated and the issue is promptly remediated. This performance parameter is reviewed annually by the Medical Curriculum Committee as part of the annual Quality Assurance Report.
prepared for each Clerkship. The Senior Associate Dean for Medical Education also presents these data annually at the College of Medicine Advisory Council.

13. System for ensuring acquisition of core clinical skill

Medical students receive summative assessments of their clinical skills at various checkpoints across the curriculum, and there are clear processes in place to provide students with necessary feedback. Particularly strong is the standardized patient program, which teaches and assesses acquisition of clinical skills across the curriculum. Ambulatory clerkships are recognized by the students as models of excellent observation and teaching. Bolstering the ability to assure skill acquisition is a combination of CSEs (at each Clerkship level and summative), preceptor observations, and patient interaction tracking. In clinical skill exams students receive feedback on clinical skills across 5 domains: professionalism, communication and interpersonal skills, history taking, physical exam and patient education (if included). Faculty score student documentation on clinical reasoning.

According to the 2012 AAMC GQ, UVM medical students feel as well prepared at their peers nationally (90.7/90.0) that they have acquired the clinical skills to begin a residency program, and exceed their peers (100.00/97.6) in the assessment of their communication skills necessary to interact with patient and health professionals. They also report they received appropriate training in patient interviewing skills (91.0/90.6) and physical exam skill (89.9/86.3) vs. peers. They are on par with peers in understanding common conditions and their management encounter in the major clinical disciplines. (93.0/93.3). Finally, they feel they have the basic skills in clinical decision making and application of evidenced based information to medicine (93.0/94.2). These student opinions are affirmed in our post graduate surveillance.

While the graduating students reported strong skills in these areas, the Independent Student Report showed that 20-40% of students feel that at various times in their curriculum they were being insufficiently observed. As a result of these concerns, a Joint Student Faculty Task Force was formed to oversee solutions. This Task Force produced several important recommendations that were acted on by the MCC, clerkship directors, the Dean and department chairs. These recommendations were modified and mandated by the MCC and are currently being implemented by clerkship directors and faculty (see Report of the Joint Student Faculty Task Force, included in the Independent Student Report). Results of these recommendations have been encouraging. In the Addendum to the Independent Student Report, students noted improvements in observation in most clerkships, with dramatic turnarounds in Ob/Gyn and Psychiatry. Additional progress is anticipated as plans are modified and fully implemented.

D. Curriculum Management

14. System for planning and managing the curriculum

Our self-study noted a strong and robust system for planning and managing the curriculum. The Vermont Integrated Curriculum (VIC) is overseen by the Medical Curriculum Committee (MCC), which has sufficient authority, resources and information to ensure the curriculum is responsive, coherent and complete. The MCC is chaired by the Senior Associate Dean of Education. The MCC is supported by an advisory system that includes the two Level Committees (Foundations and Clerkships) that provide peer review to courses, a Student Education Group, which supports curriculum evaluation and innovation, and the Medical Education Leadership Team, which provides operational direction. It is further supported by a comprehensive system of online curriculum mapping and curriculum indexing, programs which are accessible to all curriculum leaders based on their role with the VIC. The MCC is comprised of elected and appointed members; elected members include curriculum and institutional leadership (including representatives of the affiliate hospitals) and students, while elected members are drawn from the faculties of the Departments of the College. The MCC meets at least monthly and has responsibility for the design, management, and assessment of the curriculum and the educational program, including sequencing the various segments of the curriculum, evaluating program effectiveness, and monitoring content and workload in each discipline. The MCC also creates ad hoc subcommittees and task forces to address specific concerns of the committee.

In 2012, the eight long-standing VIC competencies were aligned with the six ACGME competencies to allow for better teaching across the continuum of medical education. The course objectives were directly mapped to these new VIC competencies; the MCC and curriculum leadership can easily track the Curriculum
Competencies while Course and Clerkship Directors and faculty can shape the individual learning experiences within the guidelines set by the MCC. VIC courses and clerkships undergo continuous peer and MCC evaluation. Each course or clerkship is presented upon completion to the appropriate level committee, including students. That presentation and feedback is then presented to the MCC for evaluation and changes; course and clerkship directors return if needed to the MCC for approval of the next year’s plan. The complete curriculum is reviewed and evaluated (cross-walked) every five years by a broad representation of faculty and students under the direction of the MCC.

15. Resources and authority to achieve institutional goals and learning objectives

The chief academic officer (the Senior Associate Dean for Medical Education, William B. Jeffries, Ph.D.) of the College has sufficient authority to administer the educational program. He has routine access to the Dean (twice weekly meetings and ad hoc meetings as the situation dictates), associate deans, officials at affiliated teaching sites and University personnel needed to carry out the responsibilities of his position in the Office of Medical Student Education. He meets at least annually with each Department Chair to review department teaching outcomes and to identify and review faculty teaching. The Senior Associate Dean for Medical Education also is a member of the College of Medicine Advisory Council, meeting monthly to participate in development of College policy, report on educational matters and to get input on educational policy. He chairs the Medical Curriculum Committee (MCC) and appoints all Course and Clerkship Directors. He oversees the operation of the Office of Medical Student Education and has responsibility for planning and administering its budget. A central funding mechanism to support Course and Clerkship Directors is administered by Dr. Jeffries. Over $7 million in funding for individual teaching effort is distributed by formulas in the budgeting system. The accounting of departmental teaching time in the VIC is managed by the Office of Medical Student Education. The Office of Medical Student Education also maintains a central faculty development seminar series.

Dr. Jeffries is aided in his management of the curriculum by the Medical Education Leadership Team, additional faculty administrators who provide effective oversight of curricular operations. The MCC is actively engaged in curriculum planning and oversight, and is aided via regular examination and review of curriculum levels at the annual Mud Season Retreats, in which approximately 50 faculty from Vermont and affiliate sites gather to review competencies, objectives, teaching methods, policies and outcomes. Recommendations from this retreat have informed curriculum change instituted by the MCC. Planning is accomplished with broad participation from the Medical Education Leadership Team, the Medical Curriculum Committee and the curriculum committees, as well as the Student Education Group.

16. Educational workload – balance between education and service in clinical years

Medical student workload is clearly defined by the College of Medicine. This policy caps weekly instructional hours to 60 hours per week in the Foundations courses and 80 hours per week in the Clerkships, and defines standards for continuous on-site attendance and days worked per week to better describe the extent of students’ clinical commitments. This policy is effective, has been reviewed and is consistent with national norms.

Foundations weekly schedules are reviewed and approved annually by the MCC and always meet the policy. Methods to monitor clerkship student work hours include mandatory mid-rotation individual feedback meetings with Clerkship Directors and by anonymous course evaluation through CoursEval on COMET. The Associate Dean for Students and the Associate Dean for Clinical Education routinely evaluate student responses to assess appropriate duty hours during Clerkship year. These data are presented by Course/Clerkship Directors in their annual presentation of the quality assurance report to the level committees and the Medical Curriculum Committee (MCC). Students are made aware of how to report violations of the policy during orientation. Clerkship Directors investigate reports and adjust work schedules to ensure compliance. Students may also report violations to the Associate Dean for Clinical Education, who directs the development of a plan to ensure compliance. Clerkship Directors integrate input from student course evaluations, the Student Education Group, and other Course Directors to modify workload, schedule, and sequence of classes to improve the educational experience of students.

17. Educational quality across geographically separate campuses – N/A
18. Single standard for promotion across instructional sites

There is a single standard for promotion and graduation overseen by the Office of Medical Student Education. The College has only one campus, with Clerkship rotations at a number of outpatient and inpatient sites. To ensure comparability, a single grading standard is used across all sites. Clerkship grades are determined from identical proportions of preceptor observation, standardized clinical skills exams and objective knowledge assessments; most Clerkships also include a nationally-normed subject exam. All grades are compiled by the Clerkship Director, who determines and assigns the grades and writes the narrative assessment of performance. All students receive mid-rotation feedback following a standardized form. Adherence to standards is monitored via clerkship dashboards, which monitor grades, CSE scores, subject exam scores and student evaluations across sites. Differences are detected, investigated and remediated when difficulties are identified.

E. Evaluation of Program Effectiveness

19. Evidence that education program objectives are being achieved

The College of Medicine monitors a variety of assessment data (including nationally-normed outcomes) that are linked to our curriculum competencies, in addition to systematically obtained evaluation data that are collected online about required courses and instructors. Assessment tools (e.g., written and practical examinations, small group performance assessments, written and computer-based assignments) are designed to assess achievement of course objectives, which are derived from core competencies. In the case of standardized clinical skills examinations and direct assessment of clinical performance, student progress is also directly assessed against our six curriculum competencies relative to each stage in the medical student’s career. In this latter case, any substandard score on a global curriculum competency must be remediated for a student to progress. It is notable that in addition to assessment of competency in each course, competency at the curriculum level must also be demonstrated in summative clinical skills examinations administered at the end of Foundations and Clerkship. These examinations must be passed in order for students to progress to the next level of the curriculum. Overall, UVM students perform well on internal measures of achievement in courses and clerkships. Students in Foundations have performed well and achieved a high pass rate for their courses (99% overall pass rate, varied from 94-100% with 0% to 8% marginal pass rate). In Clerkships, overall pass rate was 99.7%.

In addition to internal assessments, students must take and pass a number of nationally normed examinations, including USMLE Steps 1, 2CK and 2CS, and NBME subject examinations in Internal Medicine, Neurology, Psychiatry, Obstetrics and Gynecology, and Surgery. The NBME basic science examination is also administered as a formative assessment near the end of the Foundations level. USMLE Step 1 and 2CK performance is similar to the national means, and has increased nearly every year since their first administration at a rate that exceeds that of the national cohort. Performance on USMLE Step 2CS has exceeded or equaled national means for each year of its administration. Performance on Step 3 has also been strong, with 96-99% passing in each of the past three years.

Global attainment of curriculum competencies is under the supervision of the Advancement Committee, which is comprised of faculty and students. All graduates must have demonstrated to the satisfaction of the assessing faculty that they have achieved the curriculum competencies. Students who cannot demonstrate sufficient progress either at the course or curriculum level must appear before the Advancement Committee and propose a formal remediation plan. Unsuccessful remediation leads to dismissal.

As a measure of validity of graduate competency attainment, a survey of residency program directors and of recent graduates asks how well graduates exhibit curriculum competencies, which are aligned with the ACGME competencies. Residency program directors report that a vast majority (87-95%) of UVM students perform as well or better than their peers in each of the six competencies. Our graduates overwhelmingly report (96-100%) that they perceive that they are as, or better prepared than their peers in meeting each competency.

20. Use of student and graduate information to improve education program

Courses and teaching are routinely surveyed electronically in the CoursEval system. Standard surveys are collected for each course, clerkship, and required educational activity as well as faculty, residents, and others who provide teaching in courses and clerkship rotations. Feedback from students on the 2012 AAMC
GQ is reviewed by the Medical Curriculum Committee and Level Committees, and are investigated and acted upon as necessary. In addition, the Student Education Group assigns one of its members to act as class liaison and evaluator for their independent analysis. These data are used to create the Quality Assurance Reports for each course.

Data collected from enrolled students and graduates are evaluated to inform improvement of the admissions process, courses, curricular levels and the curriculum as a whole. Student data such as demographics, academic outcome data and nationally normed performance data, match outcomes (specialty choice and location, practice type of graduates) and postgraduate satisfaction surveys are reported annually to the Admissions Committee to ensure that appropriate attributes are being screened for optimal success in the curriculum.

At the course level, data specific to course objectives are used by the Course Director to include in the annual Quality Assurance Report. This report forms the basis for discussion of course success and prospective changes. The course is reviewed by the Level Directors, who consider outcomes such as success on individual exams and assignments, course grades, student and success on nationally normed assessment tools (USMLE and NBME subject exams). In addition, quantitative and qualitative student evaluation data (validated questions on a Likert scale and free text comment) are available for each course and instructor as well as data from the annual AAMC Graduation Questionnaire. The final report is then considered by the Medical Curriculum Committee, which makes specific mandated changes for accomplishing course objectives and to ensure curricular competencies are achieved.

The Medical Curriculum Committee engages in ongoing review of each level of the curriculum, based on a regular and systematic review of curriculum objectives, content, pedagogy, outcomes and student course and instructor evaluations. In addition, a bi-annual review of the Foundations level and required clinical experiences (Clerkships plus required Advanced Integration courses) occurs at a faculty retreat of over 50 faculty members. Here the outcome data described above are considered, as well as discipline-specific outcomes from the Graduation Questionnaire and USMEE annual reports.

III Medical Students

A. Admissions

1. Admissions criteria, recruitment, selection of medical students

Our self-study process found an effective process of recruitment and selection of medical students. College of Medicine admissions criteria are aligned with our mission and we have been very successful in admitting a student body that is more diverse than the state of Vermont and is highly prepared and qualified leading to our high graduation rates, successful residency matches and high satisfaction of program directors with our graduates. Premedical course requirements and recommend courses are annually reviewed by the Admissions Committee; requirements include those deemed essential preparation for successful completion of our curriculum.

The College utilizes a longstanding holistic admissions process that considers personal and professional characteristics of medical school applicants. Criteria include academic record, MCAT scores, letters of reference, service and achievement including health care experience, research, extracurricular activities, diversity, life/work experiences and volunteer activities. The Admissions Committee participated in a recent AAMC Holistic Admissions Workshop where UVM was recognized by workshop organizers as an exemplar of best practices in holistic admissions. This process results in careful selection of applicants by the admissions committee that meet the pre-established and mission-centric criteria established by the committee.

The number and quality of applications is strong and sufficient for the class size. UVM is highly selective: for the Class of 2015, the College received 5859 applications, completed 614 interviews, offered 214 acceptances, and matriculated 109 new students. The large applicant pool yields a matriculating class with an academic profile at or above the national average. The median GPA has risen steadily from 3.50 in 2005 to 3.69 in 2011, and the total MCAT has averaged 30.4 over the same period. The admissions system successfully broadened matriculant diversity. The number of ALANA (African-American, Latino, Asian, & Native American) students at the College has markedly increased from 18% in 2005 to 41% in 2012.
2. Polices to ensure student selection is faculty responsibility; no conflict of interest

College of Medicine policies ensure selection of students is a faculty responsibility and there are adequate safeguards against conflict of interest in the selection process. As outlined in the College Bylaws, faculty of the Committee on Admissions are directly responsible for the selection of students, and all admissions decisions regarding acceptance and rejection are made by the Committee. Decisions of the Committee on Admissions represent a broad and diverse view which contributes to the integrity of the process.

The Committee is chaired by the Associate Dean for Admissions, and comprises members of the faculty appointed to three-year terms by the Dean and non-faculty members not to exceed twenty percent of the total membership. The Dean solicits nominations from Department Chairs to fill vacancies on the Committee, which currently includes 72 members. New members participate in a multilevel training process, including mandatory training sessions on the role of the Committee, confidentiality, conflict of interest, and legal aspects of the admissions process. All committee members are required to participate in ongoing professional development throughout the admission season.

Applicant files, information and discussions and decisions of the Committee are strictly confidential. All members of the Admissions committee and admissions staff annually sign a written Confidentiality and Conflict of Interest Pledge and to view a video on Unconscious Bias. Potential breaches are reviewed by the Associate Dean for Admissions and may result in dismissal from the Admissions Committee.

Members must disclose any potential conflicts regarding applicants (e.g., family member, friend) and recuse themselves from participating in either discussion or voting. The Associate Dean decides whether the member may continue on the Committee or must temporarily withdraw to prevent any conflict of interest or the appearance of conflict of interest.

3. Number of students related to resources available for teaching

Our self-study affirmed that the College, University and clinical affiliates have adequate educational resources to accommodate the number of students of all types (medical students, residents, visiting medical students and graduate students). The Medical Education Center and Ambulatory Care Center on our academic medical center campus opened in 2005, the Clinical Simulation Laboratory in 2011, and new study spaces in the library in 2012. The addition of clinical affiliates in Maine, Connecticut and Florida in 2011 increased the faculty, educational facilities and diverse patient care opportunities for our learners. Careful assessments were done to ascertain capacity at the affiliate sites, considering faculty size, patient volume and number of learners, to ensure an optimal distribution of students across sites.

In the Independent Student Survey medical students were very satisfied with large group (97%) and small-group (97%) teaching space, computer learning resources (97%), student study space (87%) and student relaxation space (86%). Data from the 2012 AAMC Graduation Questionnaire indicate UVM students are highly satisfied with library facilities (90.3%), computer resources (93.6%), and student study (80.4%) and relaxation space (78.4%), exceeding their national peers in all areas.

4. Successes in broadening diversity among medical school applicants

The College of Medicine has been very successful in broadening matriculant diversity. The College implemented a recruitment plan in 2005 to broaden medical student racial, ethnic, and cultural diversity. As a result, the number of ALANA students at the College has increased dramatically from 18% in 2005 to 41% in 2012. The College has also dramatically increased enrollment of groups underrepresented in medicine, from 0% in 2005 to 12% in 2012. In aggregate, the ALANA groups comprise less than 6% of the population of Vermont, indicating that our admissions practices are highly effective in accomplishing our goal to create a diverse medical student body.

Outreach and recruitment programs are also in place to increase diversity in the pool of applicants to medical school, including racial, ethnic, socioeconomic, cultural, and life experience. The largest of these include two successful internal pipeline programs: the UVM Post-Bac Pre-Med Program and the UVM Premedical Enhancement Program (PEP). Since 2009, more than 60 students who participated in the Post Bac Pre Medical Program and PEP have matriculated to medical school.

The UVM Area Health Education Centers (AHEC) Program, with many partners across Vermont, encourages people to consider health care careers through outreach programs such as MedQuest career
immersion camps, Health Careers Exploration classroom visits, job shadowing, and Career Fairs. Data are collected by the AHEC office and shared with the Office of Diversity & Inclusion each year. Additional pipeline programs include: the UVM Summer Neuroscience Undergraduate Fellowship, established in 2008, provides participants, many from underrepresented groups, with hands-on training in state-of-the-art neuroscience; Project Micro, started over 10 years ago by the College’s Microscopy Imaging Center, visits classrooms around the State to foster scientific interest in elementary and middle school students; Girls Science Day is a day-long high school outreach program, run by the medical students in the UVM chapter of AMWA; Smile Docs, originally a Schweitzer Fellow medical student project, sends current medical students into local elementary classrooms to teach about health related topics.

The Assistant Dean for Diversity & Inclusion, in collaboration with the Director of Admissions and Outreach, is responsible for the oversight of all outreach and pipeline programming at the College. The Office of Diversity & Inclusion, as part of its five-year Strategic Action Plan, tracks program and participant data, assesses the efficacy of each, and set new goals for outreach and pipeline programming.

5. **Prospective student information current, accurate, and accessible**

Comprehensive admissions information for prospective students, including a video and technical standards, is regularly updated and is easily accessible on the College web site. Most materials are available online or via email on request. A printed brochure *(What kind of physician do you want to be?)* provides an overview of the College. Admitted students are sent a copy of the Technical Standards with their acceptance packages; students sign to verify that they have read and understand the materials.

6. **Impact of transfer or visiting students**

Transfer students are not accepted at the College of Medicine. The College accepts visiting students from LCME-accredited medical schools for up to eight weeks of electives between the months of May and February. Visiting seniors must have completed the required clerkships at their home institutions, and have passed the USMLE Step 1 exam. With a large number of Advanced Integration elective offerings, visiting students have not impeded UVM medical students’ elective choices.

7. **Systems to verify credentials of visiting students**

Visiting students from LCME-accredited medical schools apply through the AAMC VSAS system. After verification of good academic standing and appropriate insurance coverage, immunizations, and training in universal precautions, the Visiting Student Coordinator schedules the visiting student. The student must complete on-line training on the FAHC electronic medical record system in order to begin their elective.

B. **Student Services**

8. **Student attrition and academic difficulty**

The College has an effective system to identify early and assist students facing academic difficulty. In the last five entering classes, 33 students experienced significant academic difficulty (failed at least one course or clerkship). Of these students, three withdrew or were dismissed and 91% were remediated successfully through our support programs. This success rests on a system for early identification and intervention with students experiencing academic difficulty is overseen by the Director of Student Success (DSS), in close collaboration with the Associate Dean for Students, advisors, and tutors. The DSS is in frequent contact with course and clerkship directors, the Foundations Director and Associate Dean for Clinical Education. The DSS systematically reviews all exam results and meets with all students who receive failing or marginally passing grades to collaborate with them in formulating plans for success. In addition, the support system also includes the advising system (see below) that begins during Orientation to provide peer and faculty support. Identified students are counseled to formulate individual plans for success, which may include individual or group tutoring and/or educational evaluation. In the Independent Student Report, 88% of students were satisfied with the availability of academic counseling and 91% satisfied with the availability of tutorial help. Availability and adequacy of academic counseling, tutorial help, and personal counseling all garnered high satisfaction rates and were characterized by the students as areas of institutional strength. The DSS has no role in student teaching or assessment and thus has no conflict of interest for students being advised. The Associate Dean for Students is never in a role of assessing curricular performance and students are reminded that they may choose another author for their Medical Student Performance Evaluation (MSPE) if desired.
Per College policy, students may switch academic advisors who are in a position to assess them. Personnel used in the evaluation of academic difficulties or disabilities have no role in student assessment.

9. **Effectiveness of systems for career counseling, residency preparation, elective selection**

Effective and comprehensive systems are in place for career counseling, residency preparation, and the selection of elective courses. The process is grounded in the four Learning Communities. Each Learning Community includes four faculty members who serve as Primary Advisors, providing academic and career advice for the students in that Community during the Foundations and Clerkship Levels of the curriculum. Responsibility for formulating, operating, and evaluating the system of career and residency counseling resides with the Associate Dean for Students and Director of Student Success. Each entering student is assigned to a Learning Community with a primary academic and career advisor; that faculty member remains the student’s formal advisor through the Clerkships. Faculty training for those roles occurs regularly, overseen by the Associate Dean for Students. Students access Careers in Medicine online resources from the first week of medical school. Students are regularly encouraged by advisors to use them in individual and group meetings with advisees and via the Careers in Medicine workshops. Additionally, a series of 19 specialty panel discussions represent the range of medical and surgical specialties among which students will eventually choose to apply for residency training. In parallel with those offerings, a robust assortment of medical and surgical specialties and subspecialties are represented by Student Interest Groups in which a large proportion of the student body participates each year.

Third year students select a specialty advisor to assist with the residency training application process. Each specialty has a designated Director of Specialty Advising, who helps students learn about and seek positions in their disciplines at all stages of the curriculum. The Directors of Specialty Advising consult and participate in training with the Associate Dean for Students and the Director of Student Success. The Directors of Specialty Advising, in turn, provide training, monitoring, and quality assurance among the specialty advisors within their disciplines. UVM medical students reported significantly higher satisfaction rates than their national peers in all four career planning services parameters assessed by the 2012 AAMC GQ, including the “overall” measure (UVM 77.6%, ALL 62.1%). In addition, 79.7% of UVM students were satisfied with “opportunities during medical school to explore potential career choices” compared to 69.6% nationally. In the Independent Student Report, total satisfaction with the availability and adequacy of counseling about medical careers were 84% and 86% respectively.

On the 2012 AAMC Graduation Questionnaire, 97.6% of UVM students feel elective time was adequate, significantly above 77.7% of their national peers, and 90.7% feel prepared for residency, just above 90.0% of their national peers. Students report high satisfaction with the Advanced Integration Level of the curriculum. In the Independent Student Report, 97% of students reported begin satisfied with the overall quality of Advanced Integration. An overwhelming advantage of the 14-month Advance Integration level in the curriculum is the time for a variety of experiences to inform career choice. Students’ high satisfaction and success are supported by data from the 2012 AAMC Graduation Questionnaire, the Independent Student Report, and the NRMP match.

The Associate Dean for Students is responsible for the MSPEs but does not author all of them. Adequate safeguards are in place related to potential conflict of interest. Students who believe that such conflicts exist need only ask the administrative assistant in charge of scheduling to make their MSPE preparation appointments with a writer with whom they do not believe they have conflicts. Students are informed that choosing an alternate author does not adversely influence the MSPE contents. The MSPE notes the Foundations Level courses in which students receive honors grades, and also includes narrative comments. The MSPE includes both narrative assessments and final grades for all Clerkships and for Advanced Integration rotations. The Summary paragraph is written to include descriptors that appear in the narrative assessments of Clerkship performances.

Match rates for our students are better than those of the nation as a whole, and our students secure residency training positions across the medical and surgical specialties at some of the most academically prestigious programs in the country. Nearly 97% of UVM students matched through the NRMP during 2010-
12, which is at the 75<sup>th</sup> percentile nationally. All graduates in the Class of 2012 matched, with 110 of 114 students receiving a categorical match.

**10. Tuition and fees related to debt; needed and available financial aid**

The self-study found that efforts to minimize medical student indebtedness were strong in a challenging financial environment. The College’s plan to manage student debt includes: restriction of the rate of growth of tuition, recognizing scholarship aid as our first priority in fundraising, and reorganizing of the student financial services for medical students. The College has aggressively limited tuition and fees increases to below the rate of increase for all other UVM Colleges and well below the average annual rate of increase for US medical schools. As a result, our ranking among medical schools for cost of attendance has improved dramatically since 2009.

Scholarship support for students from all sources in 2011-12 totaled over $4.1 million, primarily from endowed scholarship funds and direct support. While available financial aid has been constant over the last few years, the economic crisis did have an impact on our programs. A State funding constraint made the MD/PhD degree program unsustainable for future classes and no new students were accepted after 2010. In addition, the Freeman Foundation, which awarded $10,000 a year to all eligible students who planned to practice in Vermont after their residency, withdrew its support entirely after reducing scholarships for the Class of 2012. These two significant changes to available scholarships led to an increase in the average debt of our graduating students, which for the Class of 2012 was $183,171 with 38% of the students graduating with more than $200,000 in educational debt. However, the debt for our Vermont students remains below the national mean for public medical schools; we expect to see the debt for our out-of-state students decrease once the aforementioned cost-containment efforts take effect.

Scholarships are the College’s top priority in the upcoming eight-year University fundraising campaign, with a goal of $25 million, including $14 million in endowment. Additionally, our annual giving program has matching program that encourages contributions for endowed medical student scholarships. There are now 14 named endowed scholarship funds with a combined principal value over $2.5 million, and a new Freeman Legacy Scholars Program will become an endowed this year.

**11. Financial aid services and debt management programs**

The self-study found that services related to financial and debt management were adequate, available, and recently expanded. The full-time Medical Student Financial Services Coordinator resides in the Office of Medical Student Education, reporting jointly to the Senior Associate Dean for Medical Education and the UVM Director of Student Financial Services (SFS). The coordinator provides services exclusively for medical students in-person and over the phone. The College also supports two additional counselors who reside in the SFS office and are fully trained on all medical student financial aid procedures. Access to financial aid services and information is electronic and accessible by medical students whether they are on campus or at a remote site. Financial aid award details can be managed and viewed by the student electronically through a secure internet portal from the UVM website.

In addition, the College has increased efforts to raise visibility and adoption of more aggressive debt management strategies to help students reduce debt. Counselors meet with applicants during a financial aid session during the admissions interview and with accepted students during Closer Look Day each spring. Two mandatory sessions during Orientation cover strategic financial aid borrowing as well as credit and identity theft. All students are required to meet with the Financial Guidance Counselor at the beginning of their first year to discuss their budget, and are encouraged to track loan debt through the AAMC’s FIRST website (Med loans organizer) and a new website has been created for UVM students with specific debt management tools for medical students. Emails are sent to all financial aid refund recipients that include
information about canceling or reducing excess loan funds each year to reduce borrowing and accrued interest. Emails are also sent to students who have chosen to apply for a private education loan instead of using federal loans, counseling them to consider the differences in interest rates and repayment options. Clerkship Level students have a financial awareness and debt management session that is built into the curriculum, to prepare them for their final year of medical school, including the cost of residency interviews. Students in the final year are scheduled for required exit interviews, and are encouraged to meet with financial aid counselors to discuss repayment options during residency, covering consolidation benefits, income-based repayment options, and Public Service Loan Forgiveness.

Debt level is not adversely impacting the match rate or choice of specialty. On the 2012 AAMC GQ, students report that level of educational debt and income expectations had only a minor influence on helping them choose their specialty. In addition, a significant percentage of our students match in primary care each year, including 43% of the Class of 2012. In the Independent Student Report, students were satisfied with the availability and adequacy of financial aid administrative services (87% and 84%, respectively) and the availability and adequacy of debt management counseling (81% and 78%). However, it was also noted that these surveys were conducted prior to the institution of a full-time on site financial aid coordinator, who has instituted the aforementioned improvements in counseling. A more recent survey (January 2013) of all students indicates higher satisfaction rates with Availability of Student Financial Services (92.3%) and Adequacy of Student Financial Services (89.2%), and 94.6% of the Class of 2016 satisfied with both the Availability and Adequacy of Student Financial Services.

12. Student support and satisfaction in:

i. Personal counseling and mental health services

College of Medicine students have adequate access to personal counseling and mental health services and to preventive and therapeutic health services. The UVM Center for Health and Wellbeing (CHWB), in close proximity to the College and FAHC provides access to personal counseling and mental health services that are convenient, confidential and accessible. Students can access the “Let’s Talk” program at the College one afternoon each week for confidential walk-in mental health counseling. Students on remote clinical rotations can access a counselor by telephone 24-hours a day, and arrangements have been made with local (non-faculty) clinicians to be available to our students on short notice, with CHWB covering out-of-pocket expenses at the same rate as if the student were in Vermont.

The College of Medicine has a policy that providers from any discipline who provide sensitive health or mental health service to students cannot be in a position to assess student academic performance or take part in decisions regarding their advancement or graduation. If a faculty provider discovers that a student has been assigned to their service for academic assessment, they must recuse themselves and alternative equivalent experiences are arranged. As an additional precaution, faculty members are required to attest that, “I do not provide psychiatric counseling and/or medical care to this student,” which is included on all mid-rotation and clerkship summative assessment forms. Likewise, if a student discovers that they have been assigned to a service for academic assessment in which the faculty provider has performed a sensitive medical/mental health service, they are informed that they should request alternative equivalent experiences. Members of the Advancement Committee are reminded at each meeting by the chair that anyone who has provided sensitive health, psychiatric or psychological services to a medical student before the Committee must recuse himself/herself from all proceedings.

Student satisfaction rates with counseling and mental health services are very high. On the Independent Student Report, satisfaction with the availability (91%), confidentiality (92%), and adequacy (91%) of personal counseling were considered institutional strengths. On the 2012 AAMC Graduation Questionnaire, 83.4% of UVM students were satisfied with personal counseling support and 80.0% with student mental health services, both above their national peers.

ii. Preventive and therapeutic health services

UVM offers comprehensive ambulatory health services to students at multiple sites across campus that are easily accessible to medical students, including a Primary Care/Medical Clinic, a Women’s Health Clinic, and Counseling and Psychiatry Services. Services are available during regular business hours, with urgent-care telephone consultations available after hours. Urgent care appointments are available at the Primary
Care/Medical Clinic on Saturdays, from 9 AM to 1 PM, and after hours/evening appointments are available at Counseling and Psychiatry Services. For acute primary health care problems of students on clinical rotations outside of Vermont, arrangements have been made with local (non-faculty) clinicians to be available to our students on short notice, with the UVM Center for Health and Wellbeing covering out-of-pocket expenses at the same rate as if the student were in Vermont.

The College recognizes that personal wellness is integral to medical student success. Regularly scheduled wellness workshops help students maintain healthy lifestyles during medical school. The Committee on Medical Student Wellbeing provides confidential peer support and, in consultation with Committee physician advisors, connect students to mental health resources. The Professionalism, Communication and Reflection (PCR) course begins each weekly session with “check-in.” a discussion on issues facing the medical students that week and other concerns and interests. Medical students use the recreational and athletic facilities at the University, which provide extended hours for medical student use at no cost and just a short walk from the medical school campus. Student government is provided funds to support numerous student interest groups, which provide additional activities promoting wellbeing.

Student satisfaction rates with health and wellness services are high. On the 2012 AAMC Graduation Questionnaire, 91.8% of UVM students were satisfied with “student programs/activities that promote effective stress management, a balanced lifestyle and overall well-being,” well above the 71.6% satisfaction of their national peers. On the Independent Student Report, satisfaction with availability (91%), confidentiality (92%), and adequacy (91%) of personal counseling were institutional strengths.

iii. Health and disability insurance

The self-study noted that health and disability insurance were adequate. Health insurance coverage is required and the University sponsors a policy that is available to all students that provides coverage for diagnostic testing, prescription medications, hospitalizations, outpatient services, mental health care, emergency department visits, immunizations, pap tests, and contraceptives. Spouses/domestic partners and children are also eligible for enrollment.

The Independent Student Report noted that “they had easily accessible, adequate health services for students with good availability of health insurance, but a majority (58% dissatisfaction score) reported that the health insurance coverage itself was inadequate.” In response to concerns, as a part of the self-study, enhancements to the University-sponsored health insurance policy were implemented at the beginning of the 2012-13 academic year. The new plan increases the maximum coverage from $100,000 over the lifetime of the policyholder to $250,000 per policy year, and increases coverage for prescription medication from $2,500 to $100,000 per policy year, including 100% coverage for contraception. Coverage of all preventive/wellness services at the UVM Center for Health and Wellbeing, including routine/preventive laboratory tests and immunizations, has been added, and limits on coverage for physical therapy, occupational therapy, speech therapy, and durable medical equipment have been removed. Those changes clearly enhance the adequacy of the health insurance policy, and specifically focus on concerns identified by students. The addendum to the Independent Student Report (January 2013) noted that, “the school has negotiated a new plan which is more adequate for adult learners and their families though it is more expensive. The school also plans to improve communications about insurance options for students in the messages they received before matriculation so that they can make informed decisions earlier.”

All students are automatically enrolled in a long-term disability policy. It provides a monthly cash benefit in addition to repayment of educational debt of up to $175,000 in case of total and permanent disability. In the Independent Student Report, 85% of students were satisfied with the disability insurance policy.

iv. Education about bodily fluid exposure, needle stick policy and other hazards

The self-study found that students are adequately screened for immunization status, have access to appropriate vaccinations, and are adequately instructed about infectious disease prevention and protocols for treatment after exposure, consistent with national guidelines. All matriculating students must comply with the Vermont and Centers for Disease Control and Prevention immunization requirements. Education of students about infectious and environmental hazards associated with patient care settings is extensive. Prior to the first contact with patients in year 1, students complete web-based training on infection control and
prevention of exposure to environmental hazards. This is reinforced with expanded teaching on these topics during Clerkship. Procedures to follow in response to an exposure are published in the Student Handbook, with subsequent reminders throughout the curriculum. Each student is issued an identification badge card on which “Needle-Stick Injuries or other Work-Related Exposures” information is printed. In addition, there are established policies and procedures to determine any effects of infectious and/or environmental disease or disability on medical student education activities, consistent with current Centers for Disease Prevention and Control guidelines. Together, these measures ensure the adequacy of education on these topics as corroborated by the very high level of satisfaction (91%) reported on the Independent Student Report regarding the adequacy of education about prevention and exposure to infectious and environmental hazards.

C. The Learning Environment

13. Ensuring an appropriate learning environment

The College of Medicine has demonstrated a strong commitment to creating a collaborative supportive and safe learning environment for students while maintaining the highest intellectual standards on campus and affiliated sites. Significant time in the curriculum is devoted to the development of professionalism, self-care, and self-awareness. Mechanisms are in place to support student well-being and nurture respect. Results from the Independent Student Report indicate that 94% of students are satisfied with the College’s efforts to create a collegial and respectful educational environment. Institutional commitment to professionalism can be found in the College’s Statement on Medical Professionalism and Tenets of Professionalism which describe attributes and behaviors that students and faculty are expected to develop and maintain. This has been widely promulgated to students, faculty and staff on campus and to our clinical affiliates, and are included in new faculty orientation and annual review materials. Similarly, the College’s Statement on Diversity and Inclusion articulates our unambiguous commitment to promoting diversity and maintaining a welcoming atmosphere for all students and faculty.

To promote a positive environment, the College has created and fosters a non-competitive, collegial environment for its students. Medical students are actively engaged across all missions of the College, and have significant input into and ownership of the curriculum. Student feedback is elicited formally twice during every course, and student representatives provide systematic feedback to the faculty and administration. Students are also members on many governance and strategic committees of the College, including the Committee on Admissions and the Medical Curriculum Committee as well as numerous task force, planning and outreach groups. The Gold Humanism Honor Society has a strong presence on campus, and awards for humanism and excellence in teaching are given at all clinical sites. Faculty and students participate in many community service projects together, starting with Orientation. In the Independent Student Report, 94% of students were satisfied with their representation on academic and administrative committees, 94% were satisfied with the opportunity to provide feedback on the curriculum, and 84% were satisfied with administration’s response to student concerns.

The 2012 AAMC Graduation Questionnaire results indicate 97.8% of our students report receiving adequate or better instruction on professionalism and 100% of our students report that they understand the ethical and professional values that are expected of the profession. In addition, students were significantly more satisfied with the Office of the Dean of Students than their national peers, with respect to accessibility (88.1%), awareness of student concerns (82.2%), and responsiveness to student problems (81.0%).

14. Policies for addressing allegations of student mistreatment; educating academic community about standards of conduct

At the College of Medicine, the Standards for the Teacher/Learner Relationship and the Tenets of Medical Professionalism outline expectations for professional and respectful behavior among faculty, staff and students. These standards are reviewed at Orientation, and are included in the Student Handbook readily available on the College website. Students attest that they have read and agree to abide by the rules in the handbook at matriculation. Students now have cards on their ID badges directing them to specific policies in case of mistreatment. Students have many available resources to report concerns, including mistreatment. Students are directed to report concerns regarding mistreatment to the Associate Dean for Students; reports may also be made to faculty advisors, PCR mentors, the Director of Student Success, or members of the Wellness Committee. Certain violations can be reported to the UVM Office of Affirmative Action and Equal
Opportunity, the Chief Medical Officer or Vice President of Human Resources at an affiliated institution, or confidentially through the UVM Counseling Center.

In the Independent Student Report, 94% of students report being satisfied (67% very satisfied) with the collegiality and respect in the educational environment, and 84% report being satisfied with the adequacy of policies and procedures addressing student mistreatment.

Despite having policies and procedures (including in all clinical affiliation agreements) in place to ensure awareness, set standards of conduct, and address incidents of student mistreatment, data from the 2012 AAMC Graduation Questionnaire for mistreatment of students are concerning. Only 57.8% of UVM students report being aware of mistreatment policies (versus 84.5% of their national peers), 46.3% are aware of the procedure to report mistreatment (versus 67.4% of their national peers). The incidence of medical student mistreatment at UVM more closely mirrors the national data, but our leadership, faculty, clinical partners and students all believe we can do better.

The College is committed to maintaining an environment that supports and encourages respect for every individual. Therefore, in response to the data from the 2012 AAMC GQ, a formal Learning Environment and Professionalism (LEAP) Committee was formed by the Dean, an Ombudsperson was appointed, an enhanced system of reporting and monitoring has been implemented, and the Dean has engaged the leadership at our clinical affiliates to affirm their commitment to a positive learning environment. In addition, the Student Education Group has independently begun an effort to create a new Student Honor Code, to better define the role of the student in maintaining the standards of integrity and respect in the learning environment and in the profession.

To ensure a positive learning environment, the College will continue to promulgate the Standards for the Teacher-Learner Relationship and the Tenets of Professionalism. The Office of Medical Student Education, along with the recently-appointed Ombudsperson and the joint Learning Environment and Professionalism Committee, will closely monitor the reports and observations of student mistreatment and unprofessional behavior. The LEAP Committee has also been charged with reviewing current policies and procedures and making recommendations for ongoing enhancements to the learning environment.

15. **Familiarity of students and course and clerkship directors with standards and policies for advancement, graduation, disciplinary action, appeal, dismissal**

There are effective systems for communicating standards and policies for advancement, graduation, disciplinary action, appeal and dismissal. College standards and policies for student advancement, graduation, disciplinary action, appeal and dismissal are comprehensive and clearly outlined in the Rules and Regulations of the Faculty, which are included in the Medical Student Handbook that is posted on the website and on COMET. The standards and policies are also highlighted on the Office of Medical Student Education website, with links to the full documents in the Student Handbook. Students are introduced to the Handbook during Orientation, and sign a statement indicating that they have read and will abide by its contents, and are reminded of these standards and policies again during the Clerkship Year Orientation.

Students, faculty and education administration are fully aware of the standards and processes, and the College’s Committee on Advancement reviews the total performance of each student at least twice within each curricular segment (Foundations, Clerkship Year and Advanced Integration) on the basis of grades and narrative comments by the Course and Clerkship Directors. The degree of Doctor of Medicine is granted by the UVM Board of Trustees to candidates by recommendation of the Committee on Advancement and faculty of the College of Medicine to the University Senate.

Whenever a student is to be reviewed by the Committee on Advancement (for academic difficulties) or Committee on Fitness (for professional/behavioral problems), the Associate Dean for Students sends the student a letter indicating the reason for the review, the potential for dismissal, and the rights and protections that exist. Any student who is dismissed is informed in writing and orally, of his or her right to appeal, including procedural details and required timeline.

The self-study found evidence of an effective system for confidential record review by students. Students may view their records at any time. Those kept in hard copy in files in the Office of Medical Student Education may not leave the office but may be read by students in private, within the office. Only office staff
members have access to those files and they may only allow staff and faculty members who have legitimate academic needs under FERPA to view them.

The Independent Student Report showed very high levels of satisfaction with the clarity of student advancement and graduation policies (91%), with the clarity of disciplinary action policies and procedures (90%), and with access to their records for review and challenge (85%).

16. Adequacy and quality of student study space, lounge, personal storage

Students have access to adequate study space, lounge space and storage space on the medical school campus and at the affiliate sites. Student lounge and relaxation space is available on the medical campus and across the University. The Medical Student Lounge in the Given Building is only accessible to medical students with ID card access. Students also have access to UVM Davis Student Center and the athletic facilities, which are adjacent to the medical school campus. In the 2012 AAMC Graduation Questionnaire, UVM students reported high satisfaction with study space (mean 4.0) and rated satisfaction with relaxation space higher than their national peers (mean 4.0 vs. 3.8).

A student concern in the Independent Student Report centered on the availability (72% satisfied) but not the adequacy (87% satisfied) of study space, citing competition with undergraduate students during the latter’s final exam periods. In response to these concerns, specific actions were taken:

- In summer of 2012 the library constructed a study room, comprised of 15 study carrels with power and data at each seat, which is ID card-accessible only by medical students.
- A section of the main study space (26 seats) has been designated as “Medical Students Only”.
- Reserved books for non-health sciences undergraduate classes have been transferred to the main university library. Surveys indicated that these undergraduates comprise 38% of the Dana library users and we expect a reduction in undergraduates using the library.
- An inventory of available study space within the College is posted on the website and COMET, locating the 1091 study seats (1038 with Internet access and 404 with wireless access) available to medical students.

In the Addendum to the Independent Student Report (January 2013), students noted that anecdotal evidence suggests that these efforts are successful.

Medical students are assigned a large locker in the Given Building for personal possessions during the Foundations level of the curriculum. In response to the Independent Student Report indicating lower satisfaction levels with secure storage space during the Clerkship and Advanced Integration levels (98% for Foundations, 62% for Clerkship and Advanced Integration), locker space was identified or constructed at all clinical affiliate sites and all students are now provided a private locker during clinical rotations.

IV Faculty

A. Number, Qualifications, and Functions

1. Appropriateness of size, qualifications, mix of faculty

The size, qualifications and mix of the faculty of the College of Medicine are adequate for the attainment of the medical education program’s goals, and the as a result the Vermont Integrated Curriculum is functioning exceptionally well. The size of full time basic science faculty has remained stable since the last LCME survey, and the size of the full-time clinical faculty has increased 30%. There are 334 clinical faculty across our three remote affiliates and our community-based faculty, number over 700. The overall increase in clinical faculty provides additional expertise for our students and ensures adequate faculty to support the teaching mission. Faculty recruitment is robust, and there is no anticipation of a significant reduction in the number of faculty due to retirements. The current size and composition of the faculty are appropriate for the missions of the College, as evidenced by both the satisfaction and success rate of our students. In the Independent Student Report, 98% of students were satisfied with the availability and accessibility of medical school faculty, indicating an institutional strength.

2. Opportunities to improve skills in teaching and assessment
A robust variety of workshops, seminars and other learning opportunities are available through the College and University for all faculty, including volunteer faculty, to improve their teaching skills and learner assessment. The Office of Medical Student Education and the Office of Faculty Affairs provide information and opportunities for faculty to enhance and improve their teaching skills through a number of professional development events, including an annual Seminar Series, the spring Mud Season Educational Retreats, an ongoing teaching skills program, and self-paced online modules. In addition, the Director of Educational Instruction and Scholarship is charged with assisting faculty with teaching and learning training tools through workshops and individual consultation. The UVM Center for Teaching and Learning provides ongoing faculty education appropriate for College of Medicine faculty, including recent seminars on just-in-time teaching, copyrights, Power Point tips, and course design, and grantmanship. Medical students evaluate faculty in all teaching sessions for content mastery, organization, presentation, professionalism, and student engagement. These evaluations used by the course director, faculty member and their Chair to improve teaching and inform the faculty reappointments and promotions process.

3. **Faculty engagement, support, and mentoring in scholarly activities**

   Faculty on each pathway are expected to produce scholarship as an important part of reappointment and promotion. Faculty in every department publish articles in peer-reviewed journals, book and book chapters, serve as members of national study sections and committees, and are journal editors or members of editorial boards. In 2010, College faculty garnered a record $89.3 million in extramural support for research, with 153 principal investigators engaged in 342 projects.

   Department Chairs and Division Chiefs are responsible for most junior faculty mentoring, with support from the Assistant Dean for Faculty Affairs and the Office of Medical Student Education. The Office of Medicine Student Education oversees the Frymoyer Scholars Program, which funds faculty-initiated medical education innovation projects. The UVM Medical Group funds two Educator Excellence and two Research Excellence awards each year, and provides bridge funding for clinical investigators.

B. **Personnel Policies**

4. **System for appointment, renewal, promotion, tenure, dismissal**

   The Faculty Handbook and Standards and Guidelines outline the policies and procedures for appointment, reappointment, promotion, tenure, and termination of faculty. These documents were revised in 2011. Faculty were fully engaged in discussion and review over a year, culminating in the largest faculty-wide meeting in our history and near-unanimous approval. This provided an effective opportunity for wide dissemination and increased awareness and understanding, which continues through the dean’s office and the departments.

   Faculty pathways (Tenure, Research Scholar, Education Scholar, Clinical Scholar, and Volunteer), and their requirements for retention and advancement are clear, widely understood by the faculty, and followed closely. Formalized annual faculty performance reviews by the Department Chair or Division Chief include specific discussions of policies and procedures for advancement, career development and strategies for advancement.

5. **Institutional and Departmental conflict of interest policies**

   Extensive Conflict of Interest policies exist at the University level. Faculty members who are jointly employed by the College and the faculty practice adhere to policies of both UVM and Fletcher Allen, and are required to complete a conflict of interest form each year. The College has a policy around interactions with industry, and the College also abides by University and Governmental policies and regulations on research ethics, scientific misconduct, conflicts of interest, and human subjects protection.
6. Faculty feedback about progress toward promotion and/or retention
Faculty members are regularly informed about their job responsibilities and expectations for promotion and/or retention. During recruitment, expectations for teaching, research, and patient care are communicated to all candidates. The formal offer letter outlines employment terms and conditions (rank and pathway, department, FTE status and term, and annual salary). Faculty are expected to engage in the education mission of the College. The College’s policies specify that faculty performance expectations for teaching, research and service must be reviewed annually with the Department Chair or Division Chief, who provides a written summary. College and University reviews (required for promotion and tenure) are based on faculty expectations and a summary of accomplishments in the areas of teaching, advising, scholarship and service, along with evaluation and review by the Department, the Faculty Standards Committee, the Dean, and the University Professional Standards Committee. The Provost is responsible for final promotion and tenure decisions.

C. Governance
7. Mechanisms for organizational decision-making
The College of Medicine has effective mechanisms for inclusive decision-making. Bylaws outline the six standing committees of the faculty that include 120 faculty at each career stage and track who are elected and/or appointed to serve. The College of Medicine Advisory Council, comprised of the Deans, Department Chairs, and Center Directors, provides guidance, feedback and advice through monthly meetings with the Dean. The Dean also obtains input in monthly meetings of the Clinical Science Department Chairs, Basic Science Department Chairs and Research Leadership Group.

The Dean has also created additional committees and task forces to inform and provide advice and planning on specific issues. For example, more than 40 faculty participate on the Faculty Strategic Planning Committee, the Dean’s Advisory Committee on Diversity & Inclusion, the Research Committee and the Graduate Education Committee, which provide guidance and feedback to the Dean and Senior Associate Deans. Faculty also engage with the Dean through regularly scheduled full faculty meetings and individual department meetings. The faculty also have important access and influence on curricular planning. The Medical Curriculum Committee has authority over the curriculum and committee membership includes more than 50% elected faculty. However, all faculty have the opportunity to provide input and feedback through Course Directors, Level Committees, and the annual Mud Season Retreat, as well as during Department and Faculty Meetings, and directly to the Senior Associate Dean for Medical Education.

Several major initiatives that required timely and efficient decisions with significant input and approval from faculty include recent revisions to the Faculty Handbook, Standards and Guidelines, and the Bylaws. The process for input and feedback, discussion and review, and final approval by a full vote of the faculty demonstrated the efficacy and efficiency of the College’s system. Opportunities have been identified to further enhance the committee structure and integration, including enhancing awareness of the existence of committees and their roles, increasing the opportunities for faculty involvement, and increasing communication regarding the activities of the committees.

8. Methods used to communicate with and among the faculty
The College uses a variety of tools to communicate with the faculty. Department meetings are held monthly, which the Dean attends at least annually to share strategic initiatives and hear faculty concerns. The Dean’s Office also provides Department Chairs with information or slides to present on topics of importance. Full faculty meetings are held at least three times a year, with adequate notice through email and public advertisement. The minutes are posted on the website.

The Dean’s Office includes an Assistant Dean for Communications and staff who manage internal and external communications to faculty. Regular email communications are sent from the Office of the Dean to the faculty and College community, and the College has a robust and active website for news and events and key documents, forms, and faculty development materials. The College also publishes a 44-page quarterly magazine, \textit{Vermont Medicine}, with regular features on faculty accomplishments, initiatives, and contributions to the College. A monthly e-newsletter for faculty is planned for early 2013 modeled on our successful e-newsletter for students.
V Educational Resources

A. Finances

1. Adequacy, stability, balance of financial support

   Revenues for the College have shown stable growth averaging 4.2% since 2004 and 4.4% in the last three years. The revenue mix is also stable; clinical practice plan revenues is just over 60%, grants and contracts at about 16%, and facilities and administrative cost recovery, tuition, and hospital affiliations at just over 5% each. State appropriation and philanthropic support contribute about 3% each.

   Over the next five years College finances are expected to be stable with continued modest growth. Clinical revenues should grow with the formation of Fletcher Allen Partners (FAP), which our partner Fletcher Allen Health care has joined with Champlain Valley Physicians Hospital and Central Vermont Medical Center. Research revenue will most likely be flat, dependent upon the NIH budget, and we are actively looking to diversify our extramural funding by focusing on corporations and foundations. We will continue to hold tuition growth to modest levels (in the 2 to 4% range) to slow the increase in our total cost of attendance to near the cost of living. Philanthropy should increase as the University launches a new capital campaign, which prominently features the COM.

   All departments at the College are solvent and healthy and chairs meet with the Dean regularly to discuss planning and the financial health of each department. Formal mechanisms are in place to deal with unexpected exigencies.

2. Pressures to generate revenue and balance of activities of faculty members

   All faculty are expected to contribute to the educational mission of the College, and faculty productivity is incentivized across all missions within the academic medical center. The College developed the Faculty Teaching, Accountability and Rewards System (FTARS) in 1997 as a mission-based productivity system used to allocate general fund revenue to departments in proportion to their teaching, research and associated administrative activities. The allocation formula is updated annually and uses a variety of teaching, research and administrative drivers. Of the $35 million in total general fund revenue, $22.6 million is allocated to the departments for their activities. Of that, $19.3 million (85.4%) is related to the support for direct instruction and associated departmental overhead to accomplish the teaching mission. The task force considered this an institutional strength.

   Medical student teaching is tracked by the Office of Medical Student Education; undergraduate, graduate and non-degree teaching is tracked by individual departments in conjunction with the University Registrar. Research success is measured by a three-year rolling average of direct and indirect awards to each department. The FTARS formula is transparent and departmental general fund allocations are publicly available to all departments. FTARS has been reviewed and the methodology reconfirmed regularly to ensure that the formula continues to incentivize the College’s education and research goals. In addition to FTARS, Course and Clerkship Directors have paid, protected time for their work in the medical curriculum, and there are many faculty development opportunities to enhance teaching skills. There are a number of faculty development opportunities for protected time for faculty development for teaching; for example, the UVM Medical Group has committed $130,000 annually for faculty development for simulation; the chairs have also committed $500,000 annually to form a teaching academy, which is scheduled for fall 2013.

3. Planning related to clinical enterprise

   Fletcher Allen Health Care and the University of Vermont Medical Group (UVMMG) practice plan are well positioned to lead innovation in the local health care environment. Fletcher Allen Partners (FAP) was created in 2011 to oversee the health care system which includes Central Vermont Hospital, Champlain Valley Physicians Hospital and Fletcher Allen Health Care. FAP will help develop a coordinated health system in Vermont to deliver high-quality efficient care, in alignment with state and federal health care reform agendas that promote enhanced integration. FAP has positioned itself and its affiliates as the single health care system for Vermont and Northern New York, with a catchment area population of over 1 million people. It has developed a statewide Medicare Accountable Care Organization in partnership with Dartmouth Hitchcock, and has partnered with the state of Vermont to lead in the state’s Blueprint for Health. The College is intimately involved in this process; the Dean is a member of the Board of both Fletcher Allen
Health Care and Fletcher Allen Partners, and participates in all oversight and planning activities and the CEO of FAP is a longstanding member of our Ob-Gyn faculty.

UVMMG, the practice plan, is a wholly-owned subsidiary of Fletcher Allen Health Care. UVMMG roles and responsibilities are codified in the Affiliation Agreement between UVM and FAHC. The Agreement outlines that all UVMMG physicians are faculty members, and the UVMMG is responsible for the operations and finances of the clinical enterprise. The UVMMG President also serves as the Senior Associate Dean for Clinical Affairs of the College. UVMMG has a board of directors which includes the 12 clinical departmental chairs, two health care service leaders, five elected members of the faculty, plus the College of Medicine Dean, the FAHC CEO, and the UVMMG President. For daily and routine matters, UVMMG functions on a quasi-independent basis. However, the strategic planning process is fully integrated with the hospital and is tracked by the medical group board on a quarterly basis. The medical group board, through its committees Patient Care and Operations, Finance, and Research and Education committees, oversees and implements the strategic initiatives approved by the board.

4. Addressing present and future capital needs
The Dean submits key projects for ranking in the annual University Capital Plan. Ranking criteria include mission alignment, benefits to students and faculty, improving academic quality and enhancing the study of health. Ranked projects are brought to the UVM Board of Trustees for approval and funding. UVM also has a plan for managing deferred maintenance for campus buildings. The College is well supported by these processes, most recently through the Courtyard at Given (opened in 2009), the Clinical Simulation Laboratory (2011), and the Given Laboratory Upgrade (2012). A $2.8 million laboratory renovation in the Stafford Building was approved for 2013. The College continues to identify capital projects that will maintain the high quality of our education and research, including collaborative efforts such as the State Health Laboratory that broke ground in December 2012.

B. General Facilities
5. Adequacy of facilities for teaching, research and service
   Facilities for education are an institutional strength. General facilities at the College have undergone significant expansion and upgrade since the last LCME visit in 2005. The Medical Education Center, new in 2005, includes 15 small group rooms and two lecture halls that easily accommodate the classroom teaching and technology needs of our class size of 114 students. The Dana Medical Library is also located in the Medical Education Concourse that connects to the Fletcher Allen clinical facilities. The adjacent Given Building houses Carpenter Auditorium (upgraded in 2009, with seating for 266 with power and data ports), the Anatomy Teaching labs (upgraded in 2011, with room for 120 students), the Plante Student Lounge (opened in 2006) and the 12,000 sq. ft. Clinical Simulation Laboratory (2011) and Outpatient Rooms and Classroom (renovated in 2011). The Courtyard at Given, constructed in 2010, houses the Office of Medical Student Education and Admissions, along with other administrative and research operations. A new 120 seat team-based learning classroom is planned for 2014. In the Independent Student Report, 97% of students were satisfied with both lecture hall/large-group classroom facilities (79% very satisfied) and small-group teaching space (80% very satisfied).

   Laboratory space at the College totals over 133,000 square feet, with additional space for research administration. Research and administrative facilities are housed in the Given Building, where a 10,000 square foot laboratory upgrade was completed in 2012, as well as the adjacent Health Science Research Facility and Stafford Hall, and the Colchester Research Facility. Accredited animal care facilities are adequate and appropriate for the medical school’s needs. Through the strategic planning process, proposals for expanded and enhanced research laboratory space over the next five years are planned.

6. Adequacy of security systems
   The University of Vermont and all affiliated clinical sites have adequate security systems (including electronic lockdown systems on buildings) and disaster response plans. UVM has a fully accredited Police Services Department with enforcement powers comparable to the Burlington Police Department. Each clinical site provides students with the same security and support as faculty and staff of the hospital, and they receive security training including disaster drills and incident command systems control.
C. Clinical Teaching Facilities

7. Adequacy of resources for clinical teaching

Inpatient and ambulatory sites are sufficient for clinical teaching. Most of the clinical training our students receive is at College’s primary teaching hospital partner, FAHC, adjacent to the UVM campus. The only tertiary care hospital in Vermont, it serves a catchment area of more than 1,000,000 people. FAHC has four main campuses across Chittenden County, plus ten primary care clinics across the state and more than 30 patient sites in Vermont and northern New York. Services include the Vermont Children’s Hospital, the Vermont Cancer Center, a Level I Trauma Center, and primary, secondary and tertiary services across every major area of medicine. In addition, more than 700 volunteer faculty serve as medical student preceptors and provide clinical education in ambulatory settings throughout the region.

Prior to March 2011, 36 clerkship students rotated each block through Maine Medical Center in Portland. At the end of that affiliation agreement, new affiliations with Danbury Hospital in Danbury, Ct., Eastern Maine Medical Center in Bangor, and St. Mary’s Hospital in West Palm Beach, Fl. were established to complement the clinical experiences offered at Fletcher Allen. The new clerkship sites enhanced the clinical experience with a more diverse faculty and patient mix, while offering a comparable education. Patient and faculty numbers at these sites are more than adequate and their modern facilities are comparable to Fletcher Allen.

8. Clinical Facilities

FAHC and all clinical affiliates provide adequate and appropriate physical facilities and access to resources to support medical students’ educational needs. Libraries, lecture or conference rooms, study areas, computer resources, lockers, call rooms and showers/changing areas are available and accessible for medical students at each inpatient site during their clinical rotations.

Students get appropriate exposure to residents during their clinical experiences. At FAHC, Clerkship students participate in multidisciplinary care teams that include both faculty physicians and residents. Students are assigned to medical teams led by residents for the OB/Gyn, Surgery, Inpatient Internal Medicine, Inpatient Pediatrics, Neurology, and Psychiatry rotations. At Danbury Hospital, students work with medical teams that include residents in OB/Gyn, Surgery and Inpatient Internal Medicine; at Eastern Maine students work with Family Medicine residents. St. Mary’s Medical Center has no residency program at this time and medical students work directly with attending faculty physicians.

9. Interaction between administrators of clinical affiliates and medical school administrators

The Dean and primary teaching hospital partner Fletcher Allen are physically connected, and interactions are frequent and comprehensive. The Dean and CEO communicate regularly about the shared educational mission, as do the Senior Associate Dean for Medical Education, the Senior Associate Dean for Clinical Affairs, who is also President of the faculty practice, and the clinical Department Chairs. The Dean and Senior Associate Dean meet at least annually with the President/CEO and educational leadership of each remote affiliate, and enjoy a strong collegial working relationship.

The Associate Dean for Clinical Education and the Clerkship Directors communicate directly with each affiliate Site Director at least weekly to review Performance Dashboards and to resolve any issues that may arise. Reports are generated every seven weeks, upon completion of each Clerkship rotation, and are shared among Clerkship Directors, clinical sites, and the Medical Curriculum Committee.

Formal affiliation agreements with Fletcher Allen Health Care and the three clinical affiliates clearly delineate the responsibilities of UVM and the clinical teaching sites. Expectations for student and faculty access to appropriate resources for medical education, governance of academic affairs and evaluations, the appointment and assignment of faculty members, and follow-up if a medical student is exposed to an infectious or environmental hazard or other occupational injury are each specified. All affiliation agreements include specific expectations about promoting the positive and mitigating negative influences on the learning environment.

10. Interaction and cooperation between staff members of clinical affiliates and medical school

The College of Medicine and Fletcher Allen jointly appoint clinical department chairs and service leaders; the College does not appoint clinical service leaders at the other teaching affiliates but may play an
advisory role. Through the Medical Curriculum Committee, faculty have control and authority for the medical education program, which is carried out at the affiliate sites as outlined in each affiliation agreement.

Several avenues exist for interactions between the College and the affiliates that facilitate communication, collaboration and cooperation between the institutions. Regular ongoing communications with the satellite sites outside of Vermont occur via email, phone conference, and by Live meeting web conferencing or in person as needed. Affiliate sites are represented on the Curriculum Committee.

Each major affiliate site has a Site Director who closely works with the UVM Associate Dean for Clinical Education. The Site Directors are also members of the Clerkship Directors Committee and attend committee meetings via teleconference or in person when at the main campus. In addition, Site Directors visit UVM in October and March to meet students, faculty, and administrative leadership, to participate in student site selection and faculty development, and to attend the annual curriculum retreat. Clerkship Directors communicate directly and regularly with affiliate site clerkship directors to assess comparability and to discuss grading and evaluations, and make visits to each site at least annually to meet with affiliate faculty and leadership. Affiliated sites are also supported by Clerkship Coordinators (1 FTE at Danbury and 0.5 FTE at Eastern Maine and St. Mary’s) who communicate directly with the Clerkship Coordinator to aligning schedules, policies, and orientations.

D. Information Resources and Library Services

11. Quantity, quality, accessibility of print and non-print holdings of the library

The Dana Medical Library is conveniently located in the Medical Education Center, adjacent to medical school classrooms and Fletcher Allen clinical space. The Library is open until Midnight Sunday through Thursday and until 9 pm on Friday and Saturday during the College’s academic year. There are adequate seating, small group rooms, and computing available in the Library, complementing additional study seating and small group meeting rooms available to students in the medical complex. In addition, new quiet study space for medical students only opened for fall 2012, with 15 individual study carrels fitted with lighting, power and data connections.

Library holdings in Medicine and Health Sciences are extensive and relevant for medical students, as well as faculty, residents and fellows. Resources for active, self-directed learning, such as virtual patient cases, have been added to the library collection in the last two years. Collection development librarians are responsive to the needs of the medical curricula and to clinical and research needs. Librarians or qualified staff are available whenever the Library is open to assist students. Students and faculty can access the Libraries’ electronic collections from off campus, whether from home or hospitals through multiple means, including seamless integration with the College's online learning system, COMET.

12. Participation of library and information technology professionals in development and implementation of the educational program

Leadership of the Dana Medical Library and Information Technology is involved in curriculum governance, including the Foundations and Medical Curriculum Committees. Librarians and the IT Director participate in several courses, including Introduction to Clinical Decision Making and Public Health Projects, teaching literature search and information retrieval skills as well as mentoring student projects. IT professionals provide instruction in computer use and applications. Both the Dana Library and Information Technology provide remote assistance to students and faculty at affiliated clinical sites to facilitate access to information resources, in addition to local faculty and staff. Medical students rated all aspects of library services and electronic learning resources highly, and it is considered to be a strength of the institution.

13. Adequacy of information technology resources and services

The Information Technology group is well funded and staffed by certified IT professionals who serve only the College. Support is available through a walk-in center in the Medical Education Center adjacent to the Library and off-hours through an online reporting system. IT supports custom education application development for faculty. All medical curriculum materials are available through COMET, the College's online learning system; students access IT resources remotely from any Internet connection. Synchronous and asynchronous didactic and interactive sessions are supported through Microsoft Lync and video conferencing.
Self-Study Summary – Institutional Strengths and Challenges

Summary
The institutional self-study process at the College of Medicine has been beneficial and productive, enabling many College of Medicine faculty, students, and staff to work collaboratively to identify areas for improvement, and facilitating strengthening of current efforts in many areas. Institutional and student self-study reports were conducted in parallel to ensure identified concerns were addressed. The Independent Student Report (Addendum 2013) noted that, “The UVM College of Medicine has also demonstrated the effectiveness of its existing feedback systems at addressing student concerns in a timely manner and as well as at assessing those changes that are made.” The self-study will be utilized for a February 2013 curriculum retreat to conduct the 5-year curriculum review and identify additional strategic initiatives for the next 5 years. During the self-study process we have identified the following strengths and areas for continued focus and action.

Institutional Strengths
1. The VIC curriculum provides a highly integrated educational experience for students. Many of the 168 strengths identified in the Independent Student Report survey included specific aspects of the VIC. Excellent match results; high ratings of our graduates from residency program directors and high student satisfaction with the curriculum all provide evidence of curriculum strength.
2. The system for curriculum oversight is robust and supports a highly effective system of centralized curricular oversight and management.
3. There are excellent and transparent institutional resources for support of the educational and research programs. Faculty Teaching Accountability Rewards System (FTARS), a mission-based productivity system, is an effective mechanism for promoting active faculty participation in the educational program. The facilities for teaching and learning are modern and well-equipped. A dedicated information services department serves the needs of the College.
4. There is a collaborative spirit within and across the College of Medicine that directly benefits all missions of the College. In addition, the close connection between the College of Medicine and the Vermont community and supportive culture create an ideal environment to foster student engagement in the community.
5. Faculty and administrators are very responsive to medical student concerns/issues. The Independent Student Survey Report and the self-study both agreed that this area was a key strength of the institution.
6. Departmental leaders are engaged in all missions of the College and are highly supportive of medical student education and the Vermont Integrated Curriculum.
7. Student diversity has been significantly improved by the implementation of institutional diversity enhancement programs. A diverse group of highly qualified, caring, and dedicated students attend the College of Medicine. Since 2007, the College has admitted the most academically prepared and diverse student body in its history.
8. There is an effective system for career counseling and support for residency application/selection. The 14-month Advanced Integration level in the curriculum supports time for experiences to inform career choice. Students’ high satisfaction and success are supported by data from the 2012 AAMC Graduation Questionnaire, the Independent Student Report, and the NRMP match.
9. There is positive and productive relationship between the College of Medicine and its clinical affiliates.

Areas of Continued Focus and Action
1. Continued improvements in specific clinical rotations. The Independent Student Report identified needs for improvements in some clinical rotations, which have been addressed and strengthened as noted in the addendum to the Independent Student Report. As a result of the self-study process, and subsequent creation of the Joint Student Faculty Task Force, faculty and administration have worked in partnership to develop specific steps to further strengthen these areas. Direct observation of clinical skills is an area of continued attention.
2. Enhancements in specific content areas including pharmacology and medical economic subjects are ongoing.
3. Continued promotion of a positive learning environment. This has been an area of focus for the College over the last several years. This includes creation of a Learning Environment Committee with representatives from across the spectrum of the learning environment, appointment of an ombudsperson, clarification of existing policies and procedures, creation of a secure reporting system and alignment of our efforts across all teaching sites. Future emphasis will be directed toward promoting and celebrating positive aspects of the learning environment and making UVM a model for promoting respect and collegiality in the profession.

4. Continued debt management strategies for students have been a priority since our last LCME site visit. Since 2009, the College has aggressively limited tuition increases to below the rate of increase for other UVM Colleges and well below the average annual rate of increase for US medical schools. The decision to restrict tuition increases has contributed to a dramatic improvement in the ranking of the UVM College of Medicine in total cost of attendance relative to our peers. We have greatly expanded education efforts to counsel students on wise borrowing practices. Medical student scholarships are the top fundraising priority for the College of Medicine. The goal for raising College of Medicine scholarships in the next campaign is $25 million, with $14 million in endowment and $11 million for current use, over an eight-year comprehensive fundraising campaign, which began in 2012.

5. Promote innovative teaching and learning. The VIC has a national reputation as a leader in education innovation. Moving forward, we intend to build on that foundation by introducing additional opportunities for active and team oriented learning. We have secured philanthropic support for a new large group classroom specifically devoted to active modalities such as Team-Based Learning. This will require widespread planning and faculty development and will form the cornerstone of our new Teaching Academy.

A list of the members of the Self-Study Task Force is an appendix to this document.
APPENDIX: 2012 LCME Self-study Task Force

LCME Task Force Chair
Frederick C. Morin, MD
Dean, College of Medicine
Professor, Pediatrics & Physiology

LCME Self-study Coordinator
Jan K. Carney, MD, MPH
Associate Dean, Public Health
Professor, Medicine

LCME Administrative Coordinator
Susan Ligon
Assistant Dean Facilities Admin & Projects

Subcommittee I: Institutional Setting Chair:
Russell Tracy, PhD
Director, Laboratory for Clinical Biochemistry Research
Professor, Pathology & Biochemistry

Subcommittee II: Educational Program Chair:
William Jeffries, PhD
Senior Associate Dean, Medical Education
Associate Professor, Pharmacology

Subcommittee III: Medical Students Co-Chairs:
Janice Gallant, MD
Associate Dean, Admissions
Associate Professor, Pediatrics & Radiology
Tiffany Delaney
Admissions Director

Subcommittee IV: Faculty Chair:
Polly Parsons, MD
E.L. Amidon Professor and Chair, Medicine

Subcommittee V: Educational Resources Chair:
Richard Galbraith, MD, PhD
Associate Dean, Patient Oriented Research
Professor, Medicine

Student Task Force Chair:
George Vana, Medical Student, Class of 2014
Ramin Ahmadi, MD, MPH
Chair & Director, Medical Education & Research, Danbury Hospital
Adjunct Assistant Professor, Medicine
Anne Bantle, MD
3rd Year Resident in Medicine (incoming Chief Resident In July)
John Brumsted, MD
President & CEO, Fletcher Allen Health Care
Professor, Obstetrics & Gynecology
Harry Chen, MD
Vice Chair, UVM Board of Trustees
Commissioner of Health, State of Vermont

Brian Cote, MBA
Senior Associate Dean, Finance & Administration

Lewis First, MD
Chair & Chief, Pediatrics & VT Children's Hospital
Professor, Pediatrics

Mayo Fujii
Medical Student, Class of 2013

Felix Hernandez, Jr, MD
Director, Undergraduate Medical Education, Eastern Maine Medical Center
Clinical Assistant Professor, Surgery

Armin Kiankhooy, MD
Chief Resident in Surgery
Clinical Instructor, Surgery

Jane Knodell, PhD
Senior Vice President and Provost; Professor
UVM Provost’s Office

Steve Leffler, MD
Chief Medical Officer, Fletcher Allen Health Care
Associate Professor, Surgery

Charlotte Reback, MD
Associate Professor of Family Medicine

Steve Schultz, MD
Director, Pediatric ICU, The Children's Hospital at St. Mary's Medical Center
Clinical Associate Professor, Pediatrics

Paul Taheri MD, MBA
President & CEO, UVM Medical Group
Professor, Surgery