

**Department of Health and Human Services
 Division of Licensing and Regulatory Services
 State House, Augusta, Maine
 Preliminary Analysis**

Date: November 13, 2009

Project: Simulation Center

Proposal by: Maine Medical Center

Prepared by: Steven R. Keaten, Healthcare Financial Analyst
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Directly Affected Party: None

Recommendation: APPROVE With Conditions

| | Proposed Per Applicant | Approved CON |
|---|-----------------------------------|-------------------------|
| Estimated Capital Expenditure | \$ 5,542,458 | \$ 5,542,458 |
| Maximum Contingency | \$ 277,123 | \$ 277,123 |
| Total Capital Expenditure with Contingency | \$ 5,819,581 | \$ 5,819,581 |
| Third Year Incremental Operating Costs | \$ 3,147,532 | \$ 3,147,532 |
| Capital Investment Fund (CIF) Impact: | \$ N/A | \$ N/A |
| Bureau of Insurance Regional Impact Estimate | | .363 % |
| Bureau of Insurance Statewide Impact Estimate | | .117 % |

I. Abstract

I. **Abstract**

A. **From Applicant**

Simulation-based Medical Education

“Maine Medical Center’s (MMC) Simulation Center addresses emerging Accreditation Council for Graduate Medical Education (ACGME) requirements to incorporate simulation-based education into residency and fellowship curricula.”

“MMC residents, fellows and nurses are the Simulation Center’s initial learner population. It is anticipated that physicians, interdisciplinary clinical care teams and other allied health professionals from MMC and throughout Maine will start using simulation-based education in the near future.”

“The Center staff includes a Manager, Medical Director (part-time), Nurse Coordinator, Simulation Technicians, Information System Analyst, Audio-Visual Coordinator and Administrative Associates.”

“Simulation technologies advance the science, safety, and cost effectiveness of medical practice. Simulation-based medical education is a teaching method in which learners practice tasks and processes in realistic, controlled environments using sophisticated models, receiving feedback from observers, peers and video cameras to improve skills. Medical simulators allow individuals to review and practice procedures as often as required to reach proficiency without involving actual patients. High fidelity simulation environments allow newly trained health professionals to practice procedural interventions and critical medical decision making on human-like patient simulators literally hundreds of times before ever touching a real patient.”

“Please refer to Exhibit 1-A for information on simulation-based medical education.”

Capital Project

“The Simulation Center project involves reusing MMC’s vacated Ambulatory Surgery Suite on the 3rd floor of MMC’s facility located on its Brighton Avenue, Portland, Maine campus. The estimated project capital expenditure is \$5,820,000. This capital cost involves facility renovation costs, medical equipment for three high-resolution clinical areas, patient mannequins and associated software, and high-quality audio-visual systems to record and broadcast the simulations for educational purposes.”

“The Simulation Center includes three fully equipped, accurate replicas of MMC clinical environments: an Operating Room, an Emergency Department Trauma Bay / Intensive Care Room and a Medical / Surgical Patient Room. These rooms are equipped and furnished in much the same fashion as MMC’s actual clinical settings. The operating room is a replica of an operating room in MMC’s recently constructed Scarborough

I. Abstract

Surgery Center; the trauma bay, which will support intensive care scenarios, resembles the trauma bays in MMC's newly expanded Emergency Department. The medical / surgical room is comparable to recently refurbished and equipped patient care rooms."

"These high resolution simulation rooms contain sophisticated mannequins, known as patient simulators. Patient simulators provide health care professionals with a computer-based patient that breathes, responds to drugs, talks, and exhibits human physiology. The simulators come in newborn, infant, pediatric or adult configuration; and can mimic both male and female anatomies."

"The Center contains a Skills Lab with task trainers to teach students and residents specific clinical tasks; e.g., how to utilize laparoscopic, minimally invasive surgical instruments, how to give a smallpox inoculation or how to insert a chest tube."

"Observation / debriefing rooms, a simulation control room, technical workshop, administrative offices and support functions are included in the space program."

"Please refer to Exhibit 1-B for the existing facility plan."

"Please refer to Exhibit 1-C for the proposed facility schematic design."

Operating Expenses

"Third full-year incremental operating expenses for the Simulation Center are estimated to be \$3,147,500."

Capital Investment Fund Debit

"Projects subject to the simplified review and approval process need not be funded within the Capital Investment Fund. (22 M.R.S.A. § 336)"

Schedule

"Projects subject to the simplified review and approval process are not subject to established review cycles. (22 M.R.S.A. § 336) MMC anticipates receiving CON approval in late 2009. Construction would be completed in spring 2010. The Simulation Center would come on line in late spring / early summer 2010."

Compliance with Applicable Zoning, Building and Life Safety Requirements

"The City of Portland Code Enforcement Office and the Maine State Fire Marshall are conducting their respective reviews of the project plans. MMC accepts as a condition of approval of this application building and life safety approvals by the appropriate authorities."

II. Fit, Willing and Able

II. Fit, Willing and Able

A. From Applicant

Overview

“Maine Medical Center (MMC) is a voluntary non-profit 501 (c) (3) organization and is a subsidiary of MaineHealth, a nonprofit organization located in Portland, Maine. MMC is licensed for 637 beds and 30 newborn bassinets. MMC is a State-licensed, Federally-certified, Joint Commission on Accreditation of Healthcare Organizations (JCAHO) accredited hospital located in Portland, Maine.”

“Please refer to Exhibit 2-A: MaineHealth”

“Maine Medical Center

22 Bramhall Street

Portland, Maine 04102

<http://www.mmc.org>”

Mission:

“The Maine Medical Center is dedicated to maintaining and improving the health of the communities it serves by:

- caring for the community by providing high quality, caring, cost effective health services;
- educating tomorrow’s care givers; and
- researching new ways to provide care.”

MMC Service Area:

“Primary: Androscoggin, Cumberland Franklin, Kennebec, Knox, Lincoln, Oxford, Sagadahoc, Somerset, Waldo and York counties;”

“Secondary: Aroostook, Hancock, Penobscot, Piscataquis and Washington counties.”

Licenses, Certifications & Accreditations

“MMC is licensed by the State of Maine, certified to participate in Medicare and accredited by JCAHO.”

“MMC’s "Statements of Deficiencies" and site visit reports from the previous three years are on file with the Department of Health and Human Services’ Division of Licensing and Regulatory Services.”

II. Fit, Willing and Able

“Please refer to Exhibit 2-B: MMC Quality of Care.”

“Please refer to Exhibit 2-C: MMC’s General Hospital License issued by the Maine Department of Health and Human Services.”

“Please refer to Exhibit 2-D: MMC’s JCAHO Certificate of Accreditation.”

MMC’s Medical Education Program

“MMC’s Medical Education Program is a key to implementing the educational component of MMC’s mission: “educating tomorrow’s care givers.” The vision of MMC’s Medical Education Program is to be the premier provider of graduate and undergraduate medical education in northern New England.”

“The Medical Education Program is composed of the following programs: Office of Medical Education, Standardized Patient Program, Tufts University School of Medicine Maine Track Undergraduate Medical Education Program, 10 Residency and 8 Fellowship Graduate Medical Education Programs, and the proposed Simulation Center (pending CON authorization).”

“MMC’s Graduate Medical Education Programs are fully accredited. The Institutional Review Committee, a standing committee of the Accreditation Council for Graduate Medical Education (ACGME), has accredited MMC’s Office of Medical Education, issuing a favorable review decision letter to MMC for its commitment to graduate and continuing medical education. The appropriate, specialty-specific Residency Review Committees of the ACGME have issued accreditation letters to each of MMC’s residency and fellowship programs. Copies of these letters are available at MMC Office of Medical Education.”

“Please refer to Exhibit 2-E: MMC Medical Education Program.”

Key Personnel and Organizational Chart

“Peter Bates, MD, MMC Chief Medical Officer and Vice President of Medical Affairs, appointed in 2008. Prior to his appointment as Vice President of Medical Affairs, Dr. Bates served as Chief of MMC’s Department of Medicine from 1999 to 2008. Dr. Bates is Board-certified in Pulmonary Disease, Internal Medicine and Critical Care Medicine. He is a Professor of Medicine, Tufts University School of Medicine (TUSM) and currently serving as Interim Dean, MMC-TUSM Medical School Program.”

“Robert Bing You, MD, MMC Associate Vice President of Medical Education, appointed in 1992. He is a member of the Transitional Year Residency Review Committee for the Accreditation Council for Graduate Medical Education, and serves as surveyor for the Accreditation Council for Continuing Medical Education. In the past he has been active in the Association of Program Directors in Internal Medicine, the Northeast Group on

II. Fit, Willing and Able

Educational Affairs, and the Maine Medical Association's Continuing Medical Education Committee. His major scholarly interest is in the area of residents as teachers. Dr. Bing You is Board-certified in Endocrinology and Internal Medicine, and is the Medical Director of the Maine Center of Endocrinology."

"John Darby, MD, Medical Director, MMC Simulation Center, appointed in 2006. Dr. Darby has coordinated MMC Department of Anesthesia's simulation program since 1994, and is a graduate of both the University of Pittsburgh WISER Simulation Center and the Harvard/MIT Institute for Medical Simulation programs. Dr. Darby is Board-certified in Anesthesiology and Pain Management, and is Associate Professor of Anesthesiology, TUSM. His scholarly interests include simulation-based medical education, aviation safety and the application of simulation in the aviation environment."

"Please refer to Exhibit 2-F: MMC's organizational chart"

B. CONU Discussion

i. CON Criteria

Relevant criteria for inclusion in this section are specific to the determination that the applicant is fit, willing and able to provide the proposed services at the proper standard of care as demonstrated by, among other factors, whether the quality of any health care provided in the past by the applicant or a related party under the applicant's control meets industry standards.

ii. CON Analysis

Maine Medical Center (MMC) has submitted a proposal to develop a Simulation Center at vacated space of their Brighton Avenue, Portland, Maine campus. The space proposed for this project is located on the third floor of the Brighton Avenue campus which once served as an Ambulatory Surgery Suite. This space became vacant upon the opening of MMC's new outpatient surgery center (ASC) in Scarborough. The applicant at the time of the approved CON dated September 19, 2005 had considerations to convert the vacated Brighton Avenue space to an Endoscopy Suite but made no definite plans to do so. The proposed area to be renovated is approximately 8,500 square feet. The simulation center would be used as an educational tool for their residency and fellowship curricula. This simulation center would address the emerging requirements towards the Accreditation Council for Graduate Medical Education (ACGME).

The Division of Licensing and Regulatory Services, Medical Facilities Unit confirms that Maine Medical Center is a fully licensed acute care hospital in the State of Maine and is MaineCare and Medicare certified. The Division's most recent survey was completed on July 10, 2006. No major deficiencies were cited that would affect licensure. MMC was cited for numerous standard level life safety code deficiencies. A plan of correction was not required; however, MMC submitted a plan of correction on October 31, 2006. The

II. Fit, Willing and Able

last Joint Commission report was completed in August 2008. MMC was fully accredited by the Joint Commission on August 13, 2008.

MMC intends to attain the appropriate accreditation for this proposed Simulation Center. To date there is not a single unifying accrediting body. MMC states they will continue to monitor the emerging accrediting bodies in an effort to become accredited.

The applicant has shown a long-standing ability to provide hospital-based services within licensing standards.

iii. Conclusion

CONU recommends that the Commissioner find that Maine Medical Center is fit, willing and able to provide the proposed services at the proper standard of care as demonstrated by, among other factors, whether the quality of any health care provided in the past by the applicant or a related party under the applicant's control meets industry standards.

III. Economic Feasibility

III. Economic Feasibility**A. From Applicant****Capital Costs**

“This capital expenditure is needed to comply with current and anticipated Accreditation Council for Graduate Medical Education accreditation standards for the teaching and training of graduate medical students (residents and fellows). As a teaching hospital, MMC must comply with ACGME standards to remain eligible for Center for Medicare and Medicaid Services’ reimbursement for medical education.”

| <u>Proposed Capital Budget (in 000s)</u> | |
|---|---------------------------|
| Construction / Renovation | \$810,000 |
| Architect & Engineering Fees | 22,000 |
| Furnishings, Furniture & Equipment | 4,192,000 |
| Information & Telecommunication Systems | 477,000 |
| Owner's Costs | <u>319,000</u> |
| Total Capital Expenditure | <u>\$5,820,000</u> |

“Note: Expenditures are rounded to nearest thousand and hundred dollars in narrative.”

Basis for Estimates

“These capital expenditure estimates have been developed by MMC Departments of Medical Education, Facilities Development, Planning, Purchasing, Information Services and Financial Planning in cooperation with SMRT Architects (project architect and design engineers), Hebert Construction (project construction manager), and various equipment vendors.”

“MMC directed its architect to design the Simulation Center and develop the construction documents as an “Add Alt” to other work being performed on the 3rd floor of the Brighton facility. As a result, all preconstruction architect and engineering services have been incurred as capitalized costs associated with that other work.”

“Furnishings, Furniture and Equipment costs include outfitting the high-resolution rooms with medical equipment comparable to that found in MMC’s clinical areas, skills lab equipment, patient simulators, professional grade audio-visual equipment for the three high resolution simulation rooms, audio-video archiving system, video conferencing capabilities for the debriefing rooms, and general office and classroom furniture.”

| Furniture, Furnishings & Equipment Costs (in 000s) | |
|---|-------------|
| Medical Equipment | \$977,000 |
| Skills Lab Equipment | \$416,000 |
| Mannequin Systems | \$1,077,000 |

III. Economic Feasibility

| | |
|--|---------------------------|
| Audio Visual / Archive Systems | \$779,000 |
| Other Furniture, Furnishings & Freight | <u>\$943,000</u> |
| TOTAL FFE | <u>\$4,192,000</u> |

Depreciation Expense

“The project’s annual depreciation expense for building, improvements, equipment and furniture is based on American Hospital Association’s Estimated Useful Lives of Depreciable Hospital Assets (American Hospital Publishing, Chicago, 2008).”

“Annual depreciation is estimated to be \$897,000 for FFE & IS/Telecom and \$58,000 for facility. Total annual depreciation cost is \$955,000.”

Sources & Uses

| | |
|--------------------------------|---------------------------|
| Uses | |
| Construction, Fees & Equipment | <u>\$5,820,000</u> |
| Sources | |
| Debt | \$0 |
| Equity | <u>\$5,820,000</u> |
| TOTAL | <u>\$5,820,000</u> |

“This project will be funded through MMC equity reserves. MMC’s most recent audited financial statements clearly demonstrate MMC’s ability to support the capital project as proposed in this application.”

“Please refer to Exhibit 3-A for MMC’s most recent audited financial statements.”

CON Financial Module

“The CONU Financial Module has been completed in accordance with instructions provided by the CON unit staff. It contains calculations that are derived as a function of the forms. This application represents the renovations of Simulation Center at MMC Brighton Campus. FY09 numbers presented in the module are projected. The projected years of 2011-2013 are based on MMC's Strategic Financial Plan developed in May 2009.”

“Note: Actual expenditures without rounding appear in the Financial Module.”

“Please refer to Exhibit 3-B for the completed CONU Financial Module for this Project.”

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Capital Investment Fund Impact

“Projects subject to the simplified review and approval process need not be funded within the Capital Investment Fund. (22 M.R.S.A. § 336)”

Staffing

“The Center staff includes a Medical Director, Manager, Nurse Coordinator, technical (simulation technicians, information systems analyst, audio-visual coordinator) and support staff. Additional faculty staff time will be devoted to faculty training in simulation, curriculum development and teaching time.”

Proposed Staffing & Salaries (in 000s), FY 2013

| Position | FTEs | Salary |
|---------------------------------|--------------|------------------|
| Medical Director | 0.50 | \$151,000 |
| Simulation center Manager | 1.00 | 80,000 |
| Admin. Assoc. I | 2.00 | 56,000 |
| Simulation Technicians | 3.00 | 178,000 |
| IS Programmer/Analyst | 0.50 | 30,000 |
| AV Multimedia Coordinator | 0.50 | 16,000 |
| Nursing Coordinator | 1.00 | 90,000 |
| Environmental Services Worker I | 2.07 | 48,000 |
| Biomedical Technician III | <u>0.50</u> | <u>26,000</u> |
| Total | <u>11.07</u> | <u>\$675,000</u> |

“As one of the largest private employers in Maine, MMC has a full-service Human Resources Department to recruit staff. MMC recruits over 800 new/replacement staff each year. MMC annually reviews its employee compensation and benefit plans and makes the adjustments necessary to remain competitive in the relevant labor market.”

Operating Expenses

| | Proposed Operating Budget (in 00s) | | | | |
|--------------------|---|---------------------------|---------------------------|---------------------------|---------------------------|
| | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> |
| Salary & Benefits | | \$616,500 | \$856,900 | \$856,900 | \$856,900 |
| Net Faculty Costs | \$126,600 | 164,400 | 418,700 | 635,300 | 806,900 |
| Purchased Services | | 78,700 | 165,200 | 183,700 | 183,700 |
| Operating Costs | | 91,500 | 182,100 | 182,100 | 182,100 |
| Miscellaneous | | 93,900 | 162,900 | 162,900 | 162,900 |
| Depreciation | | 477,500 | 955,000 | 955,000 | 955,000 |
| TOTAL | <u>\$126,600</u> | <u>\$1,522,600</u> | <u>\$2,740,700</u> | <u>\$2,975,800</u> | <u>\$3,147,500</u> |

III. Economic Feasibility

“FY2009 expenses are for initial faculty time devoted to education in simulation-based education methods. FY2010 expenses are based on an April 2010 opening with initial staff being hired in January 2010. FY 2013 represents the third full year of operation.”

Medical Education Revenue

“The Accreditation Council for Graduate Medical Education is requiring that simulation be incorporated into graduate medical education curricula. At the same time the Center for Medicare and Medicaid Services (CMS) has capped both the number of funded resident slots available nationally and has constrained the funding for those slots. In effect simulation-based education is an unfunded mandate.”

“The Council on Graduate Medical Education (COGME), which advises the Federal Secretary of Health and the Congress on graduate medical education (GME), is recommending a 15% increase in GME positions and an increase in funding levels for current positions to address an anticipated significant gap between expected physician supply and demand.”

“Medicare-supported residency training slots have been frozen at 1996 levels since the passage of the Balanced Budget Act of 1997. Section 442 of the Medicare Modernization Act of 2003 enabled the redistribution of underutilized Medicare-supported slots to other institutions. In 2005 MMC obtained Medicare funding for 24 existing training positions that were funded through other revenue sources.”

“The President has announced his intent to improve health care access, which will increase the demand for physicians. In May 2009 Majority Leader Senator Harry Reid (D-Nev.), Senator Bill Nelson (D-Fla.) and Senator Charles Schumer (D-N.Y.) introduced a Bill to increase Medicare-sponsored residency slots by 15% and to allow for unused positions to be redirected to other institutions. Passage of this Bill could increase the revenue stream available to MMC to support its medical education program.”

“CMS Direct Medical Education payments are based on the CMS-authorized number of MMC residents times a capped rate per resident which results in a total cost of direct medical education costs allowed by CMS.”

“CMS and MaineCare payments of this direct cost are determined by using the MMC number of Medicare and MaineCare patient days to total patient days as the ratios to allocate each program’s allowable costs for payment. The Simulation Center would have no impact on these payments to MMC.”

“CMS Indirect Medical Education payments are calculated by taking the number of MMC CMS-authorized residents divided by the number of MMC available beds. This ratio is then multiplied time the total Medicare payments resulting from the standard national DRG payment rate times the MMC Medicare inpatient acute care cases. This

III. Economic Feasibility

additional payment amount is treated as an add on to the Medicare payment to MMC to reflect the additional costs that teaching hospitals incur that are not included in the standard national DRG rate. The Simulation Center would have no impact on this payment for MMC.”

“Both the Direct and Indirect payments for Medicare and the Direct payment for MaineCare are reported as payments from these programs and are reflected in the Net Patient Services Revenue (NPSR) on MMC’s financials.”

“Medicare pays both inpatient and outpatient services based on prospective payment system (Diagnostic Related Groups for inpatients and Ambulatory Procedure Codes for outpatients.) so that there is no additional Medicare payment for the Simulation Center.”

“MaineCare currently pays for inpatient services on a fix rate per case which would not result in any additional payment to MMC. MaineCare currently reimburses outpatient services based on 89.3% of allowable outpatient costs. The portion of the Simulation Center costs would be included in the allowable outpatient cost and result in additional MaineCare payment to MMC for outpatient services.”

“MaineCare is required by law to implement new prospective payment systems for both inpatient and outpatient services. This change would reduce any impact of the Simulation Center on MaineCare payments in future years.”

“CMS revenue, which MMC receives for its Medical Education Program, is insufficient to support the program. As a result, MMC subsidizes its medical education endeavors with operating revenue.”

“The net costs (total costs less all additional payments from Medicare and MaineCare) of Medical Education are paid by other payors through their payments for services provided to their subscribers. The Simulation Center costs will have an impact on MMC rates in future years resulting in additional NPSR from these payors based on their respective contractual agreements.”

“Senator Harkin (D-IA), and Representatives Forbes (R-VA) and Kennedy (D-MA) are sponsors of two bills, which they introduced to the Senate and the House respectively in spring 2009. Both bills (S. 616 and H.R. 855) are designed to provide funding for the Federal government’s activities in the research, development, deployment and utilization of medical simulation technologies. Each bill has been referred to committee. If passed, the legislation would provide dedicated revenue for simulation-based medical education and research.”

“MMC estimates that operating the Simulation Center could result in an increase its rate structure by a cumulative $\frac{8}{10}$ of one percent (0.8%) over the first three full years of operation if no other sources of revenue are available. This is a “worst case” scenario that does not attempt to determine the probability or quantity of additional sources of

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revenue (e.g., federal, hospital and/or physician fees for service, etc.) to support this endeavor.”

B. CONU Discussion

i. CON Criteria

Relevant criteria for inclusion in this section are specific to the determination that the economic feasibility of the proposed services is demonstrated in terms of the:

- Capacity of the applicant to support the project financially over its useful life, in light of the rates the applicant expects to be able to charge for the services to be provided by the project; and
- The applicant's ability to establish and operate the project in accordance with existing and reasonably anticipated future changes in federal, state and local licensure and other applicable or potentially applicable rules.

ii. CON Analysis

The applicant worked with Morris-Switzer Environments for Health Architects and Hebert Construction to develop a construction schedule and cost estimate based on the specific nature of the project, which involves a significant amount of renovation to critical hospital areas as well as new construction.

Financial Ratio Analysis

In an effort to sustain readability, additional financial ratios, as well as the financial projections are on file with CONU. The following discussion relies on the information presented by the applicant. At the technical assistance meeting held on June 11, 2009, the applicant was presented a format to complete significant financial projections, including construction timelines and operating expenses. Fourteen ratios were developed with the applicant's submission to help elucidate the current financial position of the hospital and the impact of the proposed project on its operating and financial feasibility.

The years presented are 2007 through 2008 (audited) and 2009 through 2013 (projected). Also, since the third operating year of the proposed project is 2013, that year is presented as modified for the effects of the CON on hospital operations. A final column related to the difference between the third year with CON compared to third year results without the CON project is also presented. The source for Maine Industry Medians and Northeast Regional Medians is the 2009 Almanac of Hospital Financial and Operating Indicators. We are presenting 2007 reported numbers for comparison to the project.

There are four areas of financial ratio analysis related to the ability of the project to be successful. These ratios are profitability, liquidity, capital structure and activity ratios.

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Profitability ratios attempt to show how well the hospital does in achieving an excess of revenues over expenditures or providing a return. Generating revenue in excess of expenditures is important to secure the resources necessary to update plant and equipment, implement strategic plans, or respond to emergent opportunities for investment. Losses, on the other hand, threaten liquidity, drain other investments, and may threaten the long-term viability of the organization. The profitability ratios reported here include the operating margin, which measures the profitability from operations alone, the net margin (called total margin in some sources), which measures profitability including other sources of income, and the return on total assets.

Financial Performance Indicators

| Profitability | 2007 | 2008 | 2009 | 2010 | 2013 | 2007 ME State Median | 2007 Northeast US Median |
|---------------------------|--------|-------|-------|-------|-------|----------------------------|--------------------------------|
| Operating Margin | 7.94% | 6.48% | 6.73% | 6.15% | 6.83% | 1.97% | 1.88% |
| Net Margin | 11.66% | 4.26% | 8.97% | 8.10% | 9.50% | 4.30% | 2.70% |
| Return on Total Assets | 6.81% | 2.80% | 6.05% | 5.55% | 6.71% | 3.94% | 3.62% |

The additional expenditures related to this project are \$3,147,532 consisting of \$856,923 in personnel costs, \$45,000 supplies, \$806,945 facility costs, \$183,734 purchased services, \$299,958 all other, and \$954,971 in depreciation. In the financial module MMC projected \$1.1 billion in revenue in 2009 and \$1.5 billion in revenue in 2013. This project, as presented, does not materially impact the profitability of the hospital.

All three margins indicate that if the proposed project occurs then Maine Medical Center would remain profitable. Comparing operating year 2006 and 2007 indicates that operating margins were decidedly lower in 2008 (6.48%) than in 2007 (7.94%). Maine Medical Center has continued to outperform hospitals in the largest peer group in profitability. The 2009 operating margin was expected to be 6.73%. A projected operating margin of 7.20% without this project in 2013 is reasonable given the range that Maine Medical Center has operated in from 2004 through 2008. Maine Medical Center has the means to take on additional expenses based upon excess of revenues over expenditures.

The CONU financial analysis considers information contained in the 2009 Almanac of Hospital Financial and Operating Indicators and generally accepted accounting standards in determining the financial capability of a hospital to support a proposed project.

The review of financial indicators is important because they can present a fair and equitable representation of the financial health of an organization and assist in presenting appropriate comparisons. This provides a sound basis for a determination of whether the hospital has the ability to commit the financial resources to develop and sustain the

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project. While there are a number of indicators that are used in the industry, the ones applied to this review have been selected due to their direct relevance to the financial health of the applicant. The following analysis is based upon information provided by the applicant in its application. One item of terminology needs to be defined. Throughout the analysis a comparison of high-performance and low-performance hospitals is referenced. These groups are based on the uppermost and lowermost quartiles of hospitals based on their return on investments. This analysis does not specifically discuss return on investment but instead uses that ratio to group all hospitals to compare to particular project and applicant.

Non-profit hospitals need to perform at financially sustainable levels in order to carry out their public missions. An adequate operating margin is a key indicator of the financial health of a hospital. CONU considers the reasonableness of the methodology the applicant has used to determine the appropriateness of the timing and scope of the project. Over time, capital expenditures can and need to be made in order to meet the goals expressed in the State Health Plan.

Operating margins in the high performing hospital group have seen greater improvements in margins while hospitals in the low performing group continue to slide further apart. High performing hospitals are doing better now than five years ago. Over the same time, lower performing hospitals are generally doing worse than five years ago. There is a widening gap between high and low performing hospitals. Improvement in median operating profits for high-performing hospitals drives this widening performance gap. Larger hospitals tend to have an increasing ability to perform at least at a near profitable level. Even the lowest 25 percentile large revenue hospitals had a positive operating margin unlike any of the other peer groups based on operating revenues. As a comparison, operating margins in the Northeast Region continue to be considerably lower than in other regions.

The Maine state average for operating margin in 2007 was 1.97%. Maine Medical Center in 2007 was 7.94%, which puts them in the 90th percentile of hospitals in Maine.

The trend for operating margin in Maine has been improving from a low of 1.33% in 2003 to the high of 3.52% in 2006 but the trend lowered to 1.97% in 2007 for the reporting hospitals. Maine Medical Center for the past four operating years, including 2007, averaged above 7.0%. 2005 was 11.51% which helped to offset the 4.41% Maine Medical Center reported in 2004. Over the course of the projection through 2013, it is projected that the hospital will have an operating margin rising to 7.20% from 6.73% in 2009 (6.83% in 2013 if the project is approved).

The effect of this project on operating margins, as projected by the applicant, is a decrease from 7.20% to 6.83% in 2013. This project is not expected to cause a significant impact on the operating margin on the hospital.

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Financial Performance Indicators

| Profitability | 2007 | 2008 | 2009 | 2010 | 2013 |
|----------------------|---------------|---------------|---------------|---------------|---------------|
| Operating Surplus | \$ 46,577,000 | \$ 40,738,000 | \$ 46,179,000 | \$ 44,515,000 | \$ 58,686,000 |
| Total Surplus | \$ 68,394,000 | \$ 26,746,000 | \$ 61,542,000 | \$ 58,660,000 | \$ 81,644,000 |

This table validates that Maine Medical Center has the capacity to financially support this project as this project only encumbers 5.37% of the total surplus in 2010.

Liquidity: Current ratios and acid test ratios are indicators of the ability of a hospital to meet its short-term obligations. The acid test ratio is generally considered to be a more stringent measure because it recognizes only the most liquid assets as resources available for short-term debt; the current ratio assumes that inventory and accounts receivable can be liquidated sufficiently to meet short-term obligations. Days in accounts receivable and average payment period also are used to monitor liquidity. Respectively, they indicate the average length of time the hospital takes to collect one dollar of receivables or pay one dollar of commercial credit. Together, they can provide a cursory indication of cash management performance.

Financial Performance Indicators

| Liquidity | 2007 | 2008 | 2009 | 2010 | 2013 | 2007 ME State Median | 2007 Northeast US Median |
|--|--------|--------|--------|--------|--------|----------------------------|--------------------------------|
| Current Ratio | 2.42 | 2.82 | 2.75 | 2.72 | 3.14 | 1.93 | 1.53 |
| Days in Patient Accounts Receivable | 20.27 | 29.68 | 25.05 | 24.57 | 23.04 | 50.3 | 46.8 |
| Days Cash on Hand | 247.04 | 193.14 | 194.49 | 202.21 | 243.30 | 87.0 | 68.9 |
| Average Payment Period (Days) | 117.01 | 74.62 | 75.79 | 73.99 | 69.69 | 48.4 | 60.7 |

In terms of liquidity, Maine Medical Center currently (2008) has adequate liquidity, with a payment lag of 45 days between being paid and paying for services. The projection indicates a consistent lag over the forecasted period of between 47-51 days. The average payment period in 2007 was 117 days decreasing to 75 days in 2008. Average payment periods in 2013 are forecasted to be 70 days with or without the project, this strengthens the assurance that cash needs can be met as this hospital has shown significant payment lags in its reported figures before. Days in accounts receivable decreased by 4 days in the same forecast period between 2009-2013. Days cash on hand was in a range of 202-247 days in the 2003-2008 periods and is projected to increase significantly to more than 250 days by 2013 (243 days if the project is approved).

III. Economic Feasibility

Liquidity measures a hospital's ability to manage change and provide for short-term needs for cash. This liquidity alleviates the need for decision making to be focused on short-term goals and allows for more efficient planning and operations of a hospital.

Days Cash On Hand is a ratio that is an industry accepted, easily calculated, method to determine a hospital's ability to meet cash demands.

The year 2007 marked an increase of cash on hand nationally. Hospitals with revenue of greater than \$150 million have 107 days cash on hand. Maine Medical Center with net patient service revenue of \$600 million and days cash on hand of 247 days in 2007 clearly has significantly more cash on hand than the average hospital in its peer group. Interestingly, S & P Bond ratings showed no clear distinction between ratings and days cash on hand for investment grade ratings. This may mean that high performing hospitals do attempt to control excess levels of on-hand cash.

In 2007, the average days cash on hand for all sources for hospitals in the State of Maine was 87 days. Calculated days cash on hand for Maine Medical Center in 2007 was approximately 247 days indicating that Maine Medical Center was in the 90-100th percentile.

According to the 2009 Almanac, between 2003 and 2007 the average days cash on hand remained about 78 days in the Northeast. In 2007, days cash on hand improved from 2006. Between 2003 and 2013 average days cash on hand for Maine Medical Center is projected to increase by 48 days. In 2004, Maine had 5 less days cash on hand than the Northeast Region at 79 days. In 2007, Maine hospitals had increased their days cash on hand by 14 days in three years to be 18 days above the regional average.

The impact of the proposed project is calculated to be a decrease of 7 days cash on hand in the third operating year as compared to the non-CON operating projection (with and without this project). This is a minor decrease in days cash on hand. Based upon source information this hospital is projected to be in 75th- 90th percentile for days cash on hand, compared to today's industry averages, with or without the project. This project will not have a substantial impact on Maine Medical Center's operating ability to meet its cash demands. Even if actual cash on hand is lower, based on additional investments in programs and technology, Maine Medical Center should be able to adequately support this project.

Activity and Capital Structure: Activity ratios indicate the efficiency with which an organization uses its resources, typically in an attempt to generate revenue. Activity ratios can present a complicated picture because they are influenced both by revenues and the value of assets owned by the organization. The total asset turnover ratio compares revenues to total assets. Total assets may rise (or fall) disproportionately in a year of heavy (dis)investment in plant and equipment, or decrease steadily with annual depreciation. Thus, it is helpful to view total asset turnover at the same time as age of

III. Economic Feasibility

plant. Debt service coverage (DSC) is reviewed in greater detail. DSC measures the ability of a hospital to cover its current year interest and balance payments.

Financial Performance Indicators

| Solvency | 2007 | 2008 | 2009 | 2010 | 2013 | 2007 ME State Median | 2007 Northeast US Median |
|----------------------------|-------|-------|-------|--------|--------|----------------------------|--------------------------------|
| Equity Financing | 64.7% | 64.5% | 55.0% | 48.00% | 70.00% | 59.7% | 48.3% |
| Debt Service Coverage | 10.86 | 5.28 | 7.52 | 7.78 | 11.90 | 3.34 | 3.52 |
| Cash Flow to Total Debt | 28.4% | 18.6% | 23.5% | 25.0% | 41.0% | 22.1% | 17.8% |
| Fixed Asset Financing | 54.7% | 56.6% | 77.1% | 71.0% | 48.0% | 56.9% | 64.0% |

Many long term creditors and bond rating agencies evaluate capital structure ratios to determine the hospital's ability to increase its amount of financing. During the past 20 years, the hospital industry has radically increased its percentage of debt financing. This trend makes capital structure ratios important to hospital management because these ratios are widely used by outside creditors. Values for these ratios ultimately determine the amount of financing available for a hospital. DSC is the most widely used capital structure ratio. DSC minimums are often seen as loan requirements when obtaining financing. DSC is the ratio of earnings plus depreciation and interest expense to debt service requirements. In 2007, the median Maine hospital's (DSC) was 3.34x.

Maine Medical Center had a DSC ratio in 2007 of 10.86x which places it in the range of 90-100th percentile of Maine hospitals. The trend statewide for 2003-2007 has been increasing with a low of 3.07 in 2003 and a high of 3.71 in 2004. The trend for Maine Medical Center has been increasing faster than the state wide average for the last 5 years from 5.57x in 2003 to 10.86x in 2007. Economic conditions caused DSC to be comparatively only 5.28x in 2008. The trend as projected is that DSC is expected to increase from 7.52x in 2009 to 12.07x in 2013 (11.90 with the project in 2013). Maine Medical Center has the capacity and the ability to have adequate DSC.

According to the 2009 Almanac: "We expect fixed asset financing ratios to continue to remain stable during the next five years as hospitals curtail their growth in new capital expenditures and reduce their reliance on long term debt."

The Northeast has considerably higher rates in financing fixed assets than other regions. The 2007 average for hospitals in the State of Maine was 57%. In 2007, Maine Medical Center was at 55%, which is in the 25th-50th percentile for the state of Maine. For the years 2003-2007, for hospitals with revenues similar to Maine Medical Center, 67% is about the average. The fixed asset financing ratio over the past five years has remained relatively consistent in the state of Maine.

III. Economic Feasibility

The proposed financing is consistent with the way Maine Medical Center is spending its funds on fixed assets. It appears that MMC is expecting a significant portion of its fixed asset growth to be financed through equity. Total debt in year three of the project (2013) is expected to be approximately the same as 2006.

Efficiency Ratios: Efficiency ratios measure various assets and how many times annual revenues exceed these assets.

Financial Performance Indicators

| Efficiency | 2007 | 2008 | 2009 | 2010 | 2013 | 2007 ME State Median | 2007 Northeast US Median |
|------------------------|------|------|------|------|------|----------------------------|--------------------------------|
| Total Asset Turnover | 0.58 | 0.66 | 0.67 | 0.69 | 0.71 | 1.16 | 1.14 |
| Fixed Asset Turnover | 1.67 | 1.57 | 1.58 | 1.62 | 1.84 | 2.73 | 2.86 |
| Current Asset Turnover | 1.49 | 1.97 | 2.02 | 2.09 | 1.95 | 3.88 | 4.25 |

Total asset turnover (TAT) provides an index of the number of operating revenue dollars generated per dollar of asset investment. Higher values for this ratio imply greater generation of revenue from the existing investments of assets. Larger hospitals usually have lower values for turnover than smaller hospitals. This can be attributed to two factors: (1) larger hospitals are most likely to have newer physical plants; and (2) capital intensity is often greater in larger hospitals due to more special services and higher levels of technology.

In 2007, according to the 2009 Almanac, Maine hospitals had a TAT of 1.16 while Maine Medical Center had a TAT of 0.58. This is indicative of the capital intensive procedures that occur at MMC, its status as the largest most comprehensive medical facility and as a teaching hospital.

In the period of 2004 – 2007 there has been a steady increase in the TAT for Maine hospitals. The expected trend for Maine Medical Center is for TAT to remain stable during the time frame of this project 2009 – 2013. This is reflective of a hospital planning to spend significant funds for capital improvements or investments in technology. This project is not a capital intensive project and has no impact on the hospital's asset turnover.

Operating costs in the third operating year are expected to increase by \$3,147,532. For the Bureau of Insurance this amount is adjusted to a current value of \$2,962,134 in order to calculate the impact of this project on commercial insurance premiums. The impact on the CIF, if approved, would be \$0 as this is being reviewed as a simplified review project.

Owner's costs of 319,000 in the capital budget include project management (Facilities Development, Information Services and Purchasing costs capitalized by MMC) and incidental expenses.

III. Economic Feasibility

Financial performance indicators are forecasted to rebound in FY 2009 from the reflected dip in FY 2008. This can be contributed to MaineCare settlements that effected financials.

In completing this section of the analysis, the CONU concludes that, as proposed, the applicant can financially support the project. Demands on liquidity and capital structure are expected to be adequate to support projected operations. Financing and turnover ratios show little impact on the organization as a whole from successfully engaging in this project. The hospital has shown current earnings which are not expected to be significantly impacted by this project.

Changing Laws and Regulations

CONU staff is not aware of any imminent or proposed changes in laws and regulations that would impact the project. Maine Medical Center presently has the organizational strength to adjust to reasonable changes in laws and regulations.

iii. Conclusion

CONU recommends that the Commissioner determine that Maine Medical Center has met their burden to demonstrate: (1) the capacity of the applicant to support the project financially over its useful life, in light of the rates the applicant expects to be able to charge for the services to be provided by the project; and (2) the applicant's ability to establish and operate the project in accordance with existing and reasonably anticipated future changes in federal, state and local licensure and other applicable or potentially applicable rules.

IV. Public Need

IV. Public Need**A. From Applicant****Overview**

“The capital expenditure is needed to comply with current and anticipated Accreditation Council for Graduate Medical Education (ACGME) standards for the teaching and training of graduate medical students (residents and fellows). As a teaching hospital, MMC must comply with ACGME standards to remain eligible for Center for Medicare and Medicaid Services’ Direct Graduate Medical Education (DGME) and Indirect Medical Education (IME) Medicare reimbursement.”

“The Council on Graduate Medical Education (COGME), which advises the Federal Secretary of Health and the Congress on graduate medical education, is forecasting a significant gap between physician supply and demand over the next 15 years.”

“Governor Baldacci has acknowledged the health risk posed to Maine by this shortage and is taking steps to improve access to Maine-based undergraduate medical education programs. The Maine Department of Labor emphasizes that access to Maine-based graduate medical education is paramount to Maine’s physician recruitment and retention efforts.”

“MMC is the major provider of Maine-based graduate medical education. In 2007 MMC residency and fellowship programs accounted for 73% of all graduate medical positions in Maine. MMC is the only Maine institution providing residencies and fellowships in specialties other than primary care. MMC is expanding its Graduate Medical Program to help address anticipated physician shortages.”

“Introducing the Simulation Center will improve MMC’s ability to recruit and retain highly qualified medical students and residents. Medical student and resident expectations regarding simulation-based education are outpacing the introduction of ACGME requirements. Simulation-based education is already a key factor in the program selection decisions of many prospective medical students and residents. Today institutions without simulation-based education programs are at a distinct disadvantage in their student and resident recruitment efforts; this disadvantage is becoming more pronounced as more GME programs introduce simulation-based education to their curricula.”

“Simulation-based education will significantly improve the health and welfare of persons currently being served by MMC as well as other health care facilities in which its residents and fellows will practice in the future. Simulation-based education significantly improves patient safety by:

IV. Public Need

- Removing a substantial amount of the early education process from the bedside, which reduces unnecessary risks to patient safety;
- Providing an “error-tolerant”, “risk-free” environment in which practitioners can safely practice skills and procedures until they gain proficiency;
- Creating an environment that is conducive to teaching evidence-based best practices;
- Enabling practitioners to repeatedly experience and respond to high risk clinical situations without adverse consequences; and
- Presenting the opportunity to demonstrate, measure and document learner competency and proficiency using objective, standardized clinical scenarios.”

Area to be Served

“MMC identifies its service area in the following manner:

- Primary: Androscoggin, Cumberland, Franklin, Kennebec, Knox, Lincoln, Sagadahoc Oxford, Somerset, Waldo and York Counties.
- Secondary: Aroostook, Hancock, Penobscot, Piscataquis and Washington Counties.”

Health Need to be Addressed

“The Accreditation Council for Graduate Medical Education (ACGME) is requiring that simulation be incorporated into graduate medical education curricula. The capital expenditure is needed to comply with current and anticipated ACGME accreditation standards for the teaching and training of graduate medical students (residents and fellows).”

“ACGME Residency Review Committees (RRCs) have established program requirements for simulation-based education in internal medicine (effective 2009) and surgery (effective 2008) residency programs. Additional RRCs are releasing updated program requirements during 2009 and 2010 that also will incorporate requirements for simulation-based education. These upcoming requirements cover graduate medical education programs in anesthesiology, emergency medicine, family medicine, obstetrics and gynecology, and pediatrics.”

“As a teaching hospital, MMC must comply with ACGME standards to remain eligible for Center for Medicare and Medicaid Services’ Direct Graduate Medical Education (DGME) and Indirect Medical Education (IME) Medicare reimbursement.”

IV. Public Need

“The Institute of Medicine (IOM) identifies preventable adverse events as a leading cause of death in the United States. The IOM recommends simulation-based education as a key element in reducing practitioner errors and enhancing patient safety:

Health care organizations and teaching institutions should participate in the development and use of simulation for training novice practitioners, problem solving, and crisis management, especially when new and potentially hazardous procedures and equipment are introduced.

(Institute of Medicine, To Err Is Human: Building a Safer Health System, National Academies Press, Washington, D.C., 1999)”

“The IOM makes several notable recommendations with regard to medical simulation:

- Establish interdisciplinary team training programs, such as simulation, that incorporate proven methods of team management.
- Health care organizations should use and rely on proficiency-based credentialing and privileging to identify, retrain, remove, or redirect physicians, nurses, pharmacists, or others who cannot competently perform their responsibilities.
- Use procedures to mitigate injury through simulation training.
- Create a learning environment. “Use simulations whenever possible.”

“The American Board of Medical Specialties (ABMS) represents twenty-four member boards that cover board-certification for 145 medical specialties and subspecialties. ABMS is emphasizing a commitment to quality healthcare, transparency in physician accountability and enhanced professional development activities to improve the ABMS life-long learning evaluation.”

“By 2010, ABMS Member Boards will require physician diplomates to provide evidence of participation in practice assessment and quality improvement every two to five years. With the national movement toward performance measurement, evaluation of physician activities should include evidence of practice changes to improve quality and re-evaluation to determine the effect of a change in the practice process or structure of care.”

“The President of ABMS calls simulation-based education the future of continuing medical education. The ABMS initiative provides an opportunity to use simulation technologies to demonstrate practice proficiency.”

“Simulation has been used with practicing physicians for device-specific training and to demonstrate skill proficiency to maintain Board credentials. In response to the Food and Drug Administration requirements for carotid artery stent manufacturers to provide technical training to physicians intending to use their devices Guidant/Abbott Vascular,

IV. Public Need

Cordis and Boston Scientific made simulation a key component of their training programs. Simulation increasingly is being recognized as a valid method for completing continuing education requirements for attaining and maintaining certification.”

“Simulation-based education is making significant inroads in Nursing Education, Allied Health Professional Education and High-functioning Team Training (Surgery, Trauma, Emergency, Intensive Care and Rapid Response Teams). The Joint Commission on Accreditation of Healthcare Organizations recommends that simulation-based education is beneficial in the training of such teams.”

Population’s Need for Service

“The Council on Graduate Medical Education (COGME), which advises the Federal Secretary of Health and the Congress on graduate medical education, is forecasting a significant gap between physician supply and demand over the next 15 years. COGME recommends a 15% increase in Graduate Medical Education positions to address this gap between supply and demand. The gaps between supply and demand are forecast to be most pronounced in specialist services and specialties that predominately serve the elderly. (COGME 19th Report to Congress, Enhancing Flexibility in Graduate Medical Education, September 2007 accessed via internet <http://www.cogme.gov>)”

“In his State of the State Address (March 10, 2009) Governor John Elias Baldacci stated:

We also know that good health requires having enough high quality doctors and health care providers available when you need them. Doctors and nurses are the lifeblood of good health, and Maine doesn’t have enough of them.

...(W)e will provide needed scholarships for Maine residents to support their medical education at Maine Medical Center, Eastern Maine Medical Center or the University of New England.

Research shows that doctors tend to settle near the hospitals where they complete their training. And I know that given the chance young doctors will stay in Maine.

(Transcript accessed via internet, Maine Governor’s Office http://www.maine.gov/tools/whatsnew/index.php?topic=Gov_Speeches&id=69159&v=Article)”

“The Maine Recruitment Center (MRC), which recruits physicians for Maine Hospital Association member hospitals, is recruiting for 272 physician openings, which are distributed throughout Maine and include both primary care and specialty needs. This physician need does not represent Maine’s total physician shortage, since the MRC does not recruit for private practice groups.”

IV. Public Need

“Residency and Fellowship programs are a critical element in recruiting and retaining an adequate supply of physicians to practice in Maine. Once medical students complete their four-year undergraduate studies, they enroll in residency programs to complete their studies. MMC’s Graduate Medical Education Program will enable these medical students to complete their studies in Maine and will encourage them to stay in Maine to practice. Providing medical students the opportunity to complete their education in-state dramatically improves the likelihood that they will choose to practice in-state.”

“The Maine Department of Labor states:

(L)imited residency opportunities will have a dramatic effect on the supply of these healthcare professionals. After completion of medical school, three to eight years of internship and residency, depending on the specialty are required. Residency opportunities will have a dramatic effect on the supply of physicians and surgeons in Maine... Importantly, the residency programs report that 50% or more of their graduates remain in state after residency; this retention is paramount in ensuring an adequate supply of these healthcare professionals.

(Kruk, 2006 Healthcare Occupations Report, Maine Department of Labor, January 21, 2007, pp. 30-1.)”

“Research supports the Governor’s and Department of Labor’s statements that physicians tend to practice near the hospitals in which they complete their training. The most recent data on active physicians (allopathic and osteopathic) demonstrate that physicians that complete just their graduate studies in a state will practice in that state at a greater rate than those physicians who only complete their undergraduate education in a state, and that physicians who complete both their undergraduate and graduate education in a state are the most likely to remain in that state to practice.”

Active Physicians Practicing in the Same State in which They Trained

| Extent of In-State Training | United States | Maine |
|--|----------------------|--------------|
| Undergraduate Medical School Only | 29% | 7% |
| Graduate Medical School Only | 45% | 21% |
| Both Undergraduate & Graduate Medical School | 66% | 73% |

Center for Workforce Studies, 2007 State Physician Workforce Data Book, (American Association of Medical Colleges, Washington, DC, December 2007).

Population’s Demand on MMC for Service

“Eastern Maine Medical Center, Central Maine Medical Center and Maine General Medical Center in combination currently provide allopathic resident positions in two specialties, Family Medicine and Geriatrics. The University of New England in

IV. Public Need

cooperation with Mercy Hospital and Southern Maine Medical Center provides osteopathic residency programs in Family Medicine, Geriatrics, Neuromusculoskeletal Medicine, and Osteopathic Manipulative Medicine.”

“In 2007 these programs enrolled 78 graduate medical students; MMC GME Program enrollment totaled 207, 73% of Maine’s 2007 graduate medical education enrollment. (Center for Workforce Studies, 2007 State Physician Workforce Data Book, Association of American Medical Colleges, Washington, DC, December 2007)”

“Primary care specialties are not the only specialties needed in Maine. MMC’s Graduate Medical Education Program is vital to recruitment and retention efforts to assure an adequate supply of physicians in various specialties choose to practice in Maine.”

“By mid-2010 MMC will increase its residency and fellowship programs from 207 to 241 positions (a 16% increase) in such specialties as Anesthesiology, Cardiology, Emergency Medicine, Family Medicine, Gastroenterology, Geriatrics, Internal Medicine, Obstetrics & Gynecology, Pediatrics, Pulmonary & Critical Care, Psychiatry (Adult and Child), Radiology, Surgery and Urology.”

MMC Graduate Medical Education Program

| <u>Residency Program</u> | <u>Current</u> | <u>Expanded</u> |
|-----------------------------|----------------|-----------------|
| Anesthesiology | 15 | 19 |
| Emergency Medicine | 18 | 18 |
| Family Medicine | 22 | 22 |
| Internal Medicine | 43 | 44 |
| Medicine – Pediatrics | 6 | 10 |
| Obstetrics & Gynecology | 12 | 16 |
| Pediatrics | 20 | 20 |
| Psychiatry | 15 | 19 |
| Radiology | 12 | 17 |
| Surgery | 17 | 22 |
| Urology | - | <u>3</u> |
| Subtotal, Residency Program | 180 | 210 |
| <u>Fellowship Program</u> | <u>Current</u> | <u>Expanded</u> |
| Family Medicine | | |
| Sports Medicine | 2 | 2 |
| Integrative Medicine | 1 | 2 |
| Internal Medicine | | |
| Cardiology | 6 | 6 |
| Gastroenterology | 1 | 1 |
| Geriatrics | 1 | 1 |
| Infectious Disease | 2 | 2 |
| Nephrology | 4 | 4 |
| Pulmonary & Critical Care | 5 | 5 |
| Dartmouth MD / MPH | - | 1 |

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| | | |
|------------------------------|------------|------------|
| Child Psychiatry | <u>5</u> | <u>7</u> |
| Subtotal, Fellowship Program | <u>27</u> | <u>31</u> |
| TOTAL | 207 | 241 |

“In addition to the MMC-TUSM Maine Track Program and increased number of residents, MMC has established a Pipeline Work Group to explore methods for increasing Maine high school and college students’ interest in medical careers. Each MMC Residency Program Director has a specific set of retention strategies to encourage MMC graduates to remain in Maine, e.g., elective or required rural rotations, job fairs. MMC is exploring a resident-attending physician exchange program, where Maine physicians would spend 2-4 weeks at MMC for “refresher” training, while a resident would go to the practice to help cover the absence and learn about rural practice. MMC also supports the largest number of Continuing Medical Education programs and hours in Maine. The Simulation Center and program will enhance our CME offerings.”

“MMC believes that there is a demonstrated, ongoing need for graduate medical education capacity including MMC’s residency programs and that simulation-based education is becoming a core element of resident education.”

B. CONU Discussion**i. CON Criteria**

Relevant criteria for inclusion in this section are specific to the determination there is a public need for the proposed services as demonstrated by certain factors, including, but not limited to:

- Whether, and the extent to which, the project will substantially address specific health problems as measured by health needs in the area to be served by the project;
- Whether the project will have a positive impact on the health status indicators of the population to be served;
- Whether the services affected by the project will be accessible to all residents of the area proposed to be served; and
- Whether the project will provide demonstrable improvements in quality and outcome measures applicable to the services proposed in the project.

ii. CON Analysis

The simulation center would be used as an education tool for their residency and fellowship curricula. The applicant states that the simulation center would address the emerging requirements towards the Accreditation Council for Graduate Medical

IV. Public Need

Education (ACGME). Due to the applicant's assertion that the project would be necessary to continue existing requirements towards accreditation with ACGME, CONU concluded this project met the definition of a simplified review as a maintenance project. The applicant stated that the ACGME Residency Review Committees (RRCs) have established program requirements for simulation-based education in internal medicine (effective 2009) and surgery (effective 2008) residency program; however the applicant did not supply documentation to support this criteria. Upon further review by CONU researching the ACGME website, it was determined that simulation requirements for certain specialties are required to have simulation as part of the learning criteria.

In other research from 2008 Academic Emergency Medicine Conference it was found that "Across the country, growth in the use of high-fidelity mannequin simulators among EM residency programs increased from 29 % to 85 % over the past 5 years; entire residency curricula at some programs are now structured around simulation."

This project will comply with accreditation or certification standards that must be met to receive reimbursement under the United States Social Security Act, Title XVIII or payments under a State plan for medical assistance approved under Title XIX of that Act. The current graduate medical education program is partially funded through Medicare and MaineCare.

CONU has concluded it is necessary to build a separate Simulation Center instead of using suites at the Scarborough ASC or Bramhall Campuses as MMC's clinical suites are used for patient care and educational endeavors would most likely be canceled or postponed when competing with urgent and emergent patient care needs. Simulation suites involve high resolution audio-visual recording, an adjacent control room and debriefing rooms as well as clinical fit out. This project size is driven by need for 3 purpose specific high resolution rooms (Operating Room, Patient Room and Trauma/Intensive Care Room) and a dedicated surgical skills lab. These added requirements are not available in MMC clinical suites. Mannequin storage, set up and dismantling present a logistical challenge that would be disruptive to patient care. Attempting to share spaces would result in storage requirements for equipment while rooms are put to other uses. It is possible staff time for these activities would be more expensive over life of project than the depreciation cost of space.

The applicant in Exhibit 1-A of the application presented a bibliography of evidenced-based literature along with several website for further references.

As stated "ACGME Residency Review Committee (RRCs) have established program requirements for simulation-based education in internal medicine (effective 2009) and surgery (effective 2008) residency programs. Additional RRCs are releasing updated program requirements during 2009 and 2010 that also will incorporate requirements for simulation-based education. These upcoming requirements cover graduate medical education programs in obstetrics and gynecology, and pediatrics."

IV. Public Need

CONU has determined that this project is likely to have a significant impact on health needs in the area as it will allow MMC to better recruit and retain highly qualified medical students and residents where a percentage of those in the program are expected to stay in the State of Maine to practice their specialties. This will help in the shortage of doctors the State is experiencing in all areas of the State.

iii. Conclusion

CONU recommends that the Commissioner find that Maine Medical Center has met their burden to show that there is a public need for the proposed project as demonstrated by certain factors including, but not limited to: (1) Whether, and the extent to which, the project will substantially address specific health problems as measured by health needs in the area to be served by the project; (2) Whether the project will have a positive impact on the health status indicators of the population to be served; (3) Whether the services affected by the project will be accessible to all residents of the area proposed to be served; and (4) Whether the project will provide demonstrable improvements in quality and outcome measures applicable to the services proposed in the project.

V. Orderly and Economic Development

V. Orderly and Economic Development

A. From Applicant

Impact on Total Health Care Expenditures

“MMC estimates that the cost of operating the Simulation Center, including staff, faculty and general expenses, represents less than ½ of one percent (0.5%) increase to MMC’s annual operating expenses.”

“MMC estimates that operating the Simulation Center could result in an increase its rate structure by a cumulative $\frac{8}{10}$ of one percent (0.8%) over the first three full years of operation if no other sources of revenue are available. This is a “worst case” scenario that does not attempt to determine the probability or quantity of additional sources of additional sources of revenue (e.g., federal, hospital and/or physician fees for service, etc.) to support this endeavor.”

Availability of State Funds

“MaineCare, Maine’s Medicaid program, currently reimburses MMC for inpatient services at a rate that is below MMC’s current cost of providing care. Additional costs as a result of this project will not be reimbursed by MaineCare. MaineCare’s rate setting is independent of MMC’s fee schedule and costs of care.”

“MaineCare currently reimburses outpatient services based on 89.3% of allowable outpatient costs. Any portion of the Simulation Center costs included in the allowable outpatient cost would have resulted in additional MaineCare payment to MMC for outpatient services. However, MaineCare is required by law to implement new prospective payment systems for both inpatient and outpatient services.”

“This new prospective payment system, scheduled to effect MMC’s MaineCare reimbursement beginning in October 2010, is mandated to be budget neutral. Therefore, any additional increase in reimbursement associated with the Simulation Center will need to be offset by reimbursement reductions in the same amount. Therefore, the impact of the Simulation Center will be budget neutral for MaineCare.”

Alternatives Considered

“MMC’s Graduate Medical Education Program and Simulation Center support the State of Maine’s Physician Recruitment and Retention Initiative. The alternative to providing simulation-based medical education is for MMC residency and fellowship programs to risk the loss of ACGME accreditation. This poses an unnecessary and undesirable risk to Maine’s efforts to recruit and retain an adequate supply of physicians to practice in Maine.”

V. Orderly and Economic Development

“As ACGME increases the requirements for simulation-based education, MMC residency and fellowship programs will need convenient, priority access to high-resolution simulated clinical areas for significant numbers of residents and fellows. The ability to replicate the MMC clinical settings in which MMC’s residents and fellows will be practicing and the extent of this needed access support MMC proposal to operate its own Simulation Center.”

“The Center will improve MMC’s ability to recruit and retain highly qualified medical students and residents. Medical student and resident expectations regarding simulation-based education are outpacing the introduction of ACGME requirements. Simulation-based education is already a key factor in the program selection decisions of many prospective medical students and residents. Today institutions without simulation-based education programs are at a distinct disadvantage in their student and resident recruitment efforts; this disadvantage is becoming more pronounced as more GME programs introduce simulation-based education to their curricula.”

“MMC residency programs currently have limited access to the University of New England (UNE) Simulation Center (Emergency Medicine) and travel to Boston for simulation training (Anesthesiology). UNE’s program does not have the high-resolution clinical environments that are an important element of simulation-based education. Travel to Boston is an inefficient way to provide simulation-based education; the logistics limit MMC’s utilization of these resources. Neither of these approaches provides the unencumbered access that MMC teaching programs require, or that medical students and residents expect.”

“It is anticipated that physicians, interdisciplinary clinical care teams and other allied health professionals from throughout Maine will start using simulation-based education in the near future. MMC’s Simulation Center improves in-state availability and access, and provides economies of scale that are not possible otherwise.”

“Reusing vacant space to house the Simulation Center is the most cost effective facility alternative. Further, locating this program on MMC’s Brighton campus helps with ongoing efforts to decompress the Bramhall campus.”

V. Orderly and Economic Development

B. CONU Discussion

i. CON Criteria

Relevant criteria for inclusion in this section are specific to the determination that the proposed services are consistent with the orderly and economic development of health facilities and health resources for the State as demonstrated by:

- The impact of the project on total health care expenditures after taking into account, to the extent practical, both the costs and benefits of the project and the competing demands in the local service area and statewide for available resources for health care;
- The availability of state funds to cover any increase in state costs associated with utilization of the project's services; and
- The likelihood that more effective, more accessible or less costly alternative technologies or methods of service delivery may become available.

ii. CON Analysis

Based on the alternatives considered, CONU has determined this project is necessary in order for Maine Medical Center's residency program to continue to be certified and to continue receiving reimbursement from Medicare and MaineCare for this educational expenditure.

It is unlikely that more effective, more accessible or less costly alternative technologies or methods of service delivery will become available.

Currently, the MMC residency program is capped through Medicare and MaineCare as to the number of residency students approved for educational expenditure reimbursement. There are several bills in Congress that may allow for additional student reimbursement but at this time have not been passed. Since Medicare and MaineCare funds are currently capped, CONU has determined that the majority of funds to finance this project will be born through tuition reimbursement, self-pay and insured individuals not Medicare and MaineCare. CONU can only determine that at this time the impact to the Maine budget would be zero.

That applicant should be required to report to CONU any additional funding increases for educational expenditures affecting Medicare and MaineCare that is approved in recent bills in Congress. In addition, the applicant will be required to report any funding received from bills in Congress that might pay a portion of this Simulation project.

V. Orderly and Economic Development

iii. Conclusion

CONU recommends that the Commissioner find that Maine Medical Center has met their burden to demonstrate that the proposed project is consistent with the orderly and economic development of health facilities and health resources for the State as demonstrated by: (1) The impact of the project on total health care expenditures after taking into account, to the extent practical, both the costs and benefits of the project and the competing demands in the local service area and statewide for available resources for health care; (2) The availability of state funds to cover any increase in state costs associated with utilization of the project's services; and (3) The likelihood that more effective, more accessible or less costly alternative technologies or methods of service delivery may become available.

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VI. State Health Plan**i. Criteria**

Relevant criteria for inclusion in this section are specific to the determination that the project is consistent with the State Health Plan.

ii. Discussion

Note: The Maine Center for Disease Control (Maine CDC) did not provide an assessment for this project.

A. From Applicant**Maine's 2008 – 2009 State Health Plan****Overview**

“MMC as an applicant and the proposed project to develop a Simulation Center are consistent with the intent, goals and objectives of Maine's 2008 – 2009 State Health Plan.”

“The Governor's Office of Health Planning and Finance's Maine's 2008 – 2009 State Health Plan (pp. 78-80) declares that projects that meet more of the following attributes shall receive higher priority than projects that meet fewer of these attributes in the Certificate of Need review process.”

1. The applicant is redirecting resources and focus toward population based health and prevention.**a. Applicant's Discussion on Priority**

“Maine Medical Center actively participates in MaineHealth initiatives in chronic disease and case management. The mission of MaineHealth is “Working together so our communities are the healthiest in America”. We have made financial and human resource commitments to this mission, which are based on the following beliefs:

- Health care costs in Maine(and nationally) will continue to increase due to demographic, technological and normal inflation factors which are generally beyond our control;
- If healthcare is to remain affordable to the vast majority of our citizens, changes will need to be made to the manner in which we currently provide and finance

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that care;

- The long-term solution to balancing increased utilization is to improve the health of the people of Maine;
- The “health care challenge” requires short-term solutions which improve the quality (both care delivery and outcomes), cost-efficiency (both clinical and administrative) and access to health care.”

“MaineHealth’s approach to improving the health of its communities focuses on two major types of initiatives:

- Health status improvement initiatives which address a health issue which is amenable to intervention based on specific, scientifically based programs
- Clinical integration initiatives which seek to improve the delivery of coordinated, integrated services to selected populations, particularly those with chronic diseases or for conditions where clinical guidelines and protocols have been demonstrated to improve outcomes.”

“Management of populations with chronic diseases has become a major focus of our clinical integration initiatives. In the next 15 years, the population in Maine over the age of 65 will double. Based on national studies we can expect that 60% of the population will have at least one chronic condition and 40% will have two or more. A recent study by researchers at Johns Hopkins, the US HHS Agency for Health Research and Quality and the University of Pennsylvania predicts that by 2030, 87% of the population will be overweight, 51% will be obese and the prevalence of overweight children will nearly double. For the past 10 years, MaineHealth has been building health status improvement and clinical integration initiatives to address these challenges, funding them through a combination of MaineHealth dues, investment income and grants. Below are the MaineHealth budgets for these initiatives for FY 2008 and 2009.”

| | <u>FY 2008</u> | <u>FY 2009</u> |
|-------------------------------|------------------|------------------|
| Clinical Integration | \$3,325,000 | \$4,597,000 |
| Health Status Improvement | 2,736,000 | 3,055,000 |
| Community Education | <u>1,041,000</u> | <u>1,242,000</u> |
| Total | \$7,102,000 | \$8,894,000 |
| % of MaineHealth Total Budget | 32% | 32% |

“Beginning in FY 2006, MaineHealth began providing partial support for these initiatives through fund balance transfers from member organizations. At the time, a limit for such transfers was set at 0.4% of each organization’s net assets. The actual amounts provided through this process increased from \$385,000 in FY 2006 to \$1,058,000 in FY 2007 and FY 2008 (representing 0.06%, 0.14% and 0.12% respectively of members’ net assets). We have not asked for more than we thought

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could be well used and we have continued to be successful in securing other support through grants.”

“MaineHealth has adopted a strategy that recognizes that, while it has been reasonably successful in its initiatives, MaineHealth must step up the scope and pace of these initiatives by committing over the next several years up to 1% of its net assets annually to support these initiatives. At present, 1% of members’ net assets would represent a commitment of \$7 million which would be added to commitments of dues revenue, investment income and grant support.”

“Presented below are brief summaries of MaineHealth’s major health status improvement and clinical integration initiatives supported by these resources. Detailed descriptions of these initiatives and the outcomes they have produced to date to improve the health of communities we serve are on file with the Certificate of Need Unit as part of the public record associated with MaineHealth and Waldo County Healthcare certificate of need application for WCHI Membership in MaineHealth and are included in this application by reference.”

- “Caring for ME – designed to improve the ability of primary care providers to care for patients with depression and to educate patients and families on their roles in self management; Caring for ME helps people with depression and those who care for and about them. The program trains primary care providers in the diagnosis and treatment of patients, and many physicians use an electronic registry to track outcome measures. In 2006, the program was chosen as one of only 20 nationwide to participate in a year-long project focused on increasing patient and family involvement in chronic disease self-management.”
- “Mental Health Integration – MaineHealth, in partnership with Spring Harbor Hospital, MMC Mental Health Network, and Maine Medical Center Department of Psychiatry, developed a pilot program to improve the integration of mental healthcare into the primary care setting. The program conducts a collaborative “Learning Community” that is enhancing the effectiveness, efficiency, and cost/benefit of this integration with six paired primary care/mental health partners.”
- “AH! Asthma Health – a comprehensive patient and family education and care management program targeting childhood asthma initially and now expanded to include adults”;
- “Target Diabetes – a comprehensive diabetes education and care management program”;
- “Healthy Hearts – designed to improve the care of patients with congestive heart failure and to educate patients and families on their roles in self management”;

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- “Clinical Improvement Registry - a computer based system provided to primary care practices in the MMC Physician-Hospital Organization and several other hospital physician organizations. The Registry provides patients and physicians with data on the management of chronic illnesses including asthma, diabetes, cardiovascular disease, depression and heart failure”;
- “MMC Physician Hospital Organization Clinical Improvement Plan – the Plan includes funding 23 practice based registered nurse care managers which support 265 physicians in 71 primary care practices, currently they are focusing on diabetes, depression and asthma”;
- “Raising Readers – a health and literacy project that provides books to all Maine Children from birth to age five at their Well Child visits”;
- “Care Partners – provides free physician and hospital care, drugs and care management to over 1,000 adults in Cumberland, Kennebec and Lincoln counties who do not qualify for federal and state programs.”
- “Center for Tobacco Independence – MaineHealth through a contract with the State manages the statewide smoking cessation program.”
- “Acute Myocardial Infarction/Primary Coronary Intervention Project - collaborative effort of 11 southern, central and western Maine hospitals, and their medical staffs that standardizes and improves the care of patients experiencing a heart attack.”
- “Stroke Program - assures that all patients with stroke receive the most up to date, high quality, efficient care; provides a coordinated system of care for stroke patients who must be transferred to another facility.”
- “Emergency Department Psychiatric Care - follows a medical clearance protocol for patients seen in the ED who need hospitalization; follows medication recommendations for agitated patients; and decreases the need for restraints and seclusion, including training ED staff how best to work with agitated patients.”
- “Healthy Weight Initiative – addresses adult and youth obesity, including a 12 step action plan (“Preventing Obesity: A Regional Approach to Reducing Risk and Improving Youth and Adult Health”).”
- “Youth Overweight - MaineHealth and MMC have joined with several other organizations including Hannaford, United Way, Unum, Anthem and TD Banknorth, to design and implement a 5 year initiative on youth overweight.”

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“MaineHealth believes that these initiatives are entirely consistent with the goals of the State Health Plan regarding how to approach chronic disease. Evidence from our programs demonstrates that the Chronic Care Model can and does work.”

“Please refer to Exhibit 6-A: Letourneau, Korsen, Osgood, Schwartz, “Rural Communities Improving Quality through Collaboration,” Journal for Healthcare Quality, (National Association for Healthcare Quality, Vol. 28, No. 5, pp. 15-27).”

b. CONU Discussion

The applicant has provided information on its numerous initiatives. No new initiatives are planned as a part of this project. However, as part of this project MMC is planning on increasing the number of residents in the program from 207 to 241.

2. The applicant has a plan to reduce non-emergent ER use.

a. Applicant’s Discussion on Priority

“MMC notes that the State Health Plan goal is applicable to applicants. and that the goal as stated is not project-specific, referring to the applicant regardless of the nature of the proposed project. MMC does not claim that this particular project has a direct effect on emergency service usage.”

Portland Hospital Service Area Emergency Service Utilization

“The available evidence indicates that Portland Hospital Service Area (HSA) exhibits appropriate emergency services utilization. MMC provided the Certificate of Need Unit a series of analyses in its Bramhall Emergency Department Expansion certificate of need application, which demonstrate that Portland HSA residents’ utilization of Emergency Medical Services visits per capita rate is comparable to the national per capita rate; and is significantly below the rates for New England, Maine and other Maine HSAs. The results are summarized in the accompanying table.”

| Comparison of 2003 Emergency Visit Per Capita Use Rates | |
|--|----------------------------|
| Geographic Area | Per Capita Use Rate |
| Portland HSA | 384.2 |
| Total United States | 382.0 |
| US Census Division 1: New England | 441.9 |
| Maine | 542.5 |

“Sources: American Hospital Association, AHA Hospital Statistics, 2006 Edition, (Health Forum, Chicago, 2006) Table 3, p. 11; Table 5, p. 31, Table 6, p. 87; Maine Health Data Organization’s hospital inpatient database; and Maine Health Information Center’s Outpatient Hospital Utilization Report Package, Report # 4.”

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“Please refer to Exhibit 6-B: MMC’s Bramhall Emergency Department Expansion CON Application Excerpts.”

MaineHealth and MMC Initiatives Influencing Emergency Service Utilization

“Long term reductions in use of emergency services are directly related to: (1) the development of initiatives to improve the health status of the population and control chronic disease: and (2) ensure there is convenient, timely and affordable access to physicians. As described above, MaineHealth has developed and is implementing across the region a broad base of health status improvement and chronic disease management initiatives, to address such conditions as asthma, diabetes, depression, congestive heart failure and obesity. Expansion of these programs into all of MaineHealth’s eleven-county service area is a priority and will be funded through the net asset transfer mechanism described above.”

“MaineHealth has also implemented its CarePartners Program which provides primary care, referrals to specialists and care management to low income adults who are not eligible for state and federal programs. The program currently serves residents of Cumberland, Lincoln and Kennebec Counties and has demonstrated its ability to reduce emergency services utilization.”

“MMC’s participation in MaineHealth disease and care management initiatives, and MMC’s community access initiatives appear to be having a positive effect on local emergency services utilization.”

“Maine’s 2008 – 2009 State Health Plan identifies the following as some of the issues likely to be influencing the over-utilization of emergency services:

- Unavailability of primary care doctors after office hours.
- Patients without a primary care doctor.
- Availability of full service care in one stop – imaging, lab, specialists.
- Ease of ED-use – no need to make a doctor’s appointment.
- Lack of available services for people suffering from alcoholism, drug addiction, and/or mental health problems.
- Ineffective chronic care management, resulting in complications. (SHP, p. 54)”

Primary care physicians’ availability after hours

“MMC operates Family Practice Centers, large primary care practices, at two locations: Portland and Falmouth. The Portland Center provides extended evening hours (5 pm to 8 pm) three evenings per week. The Falmouth Center is open until 8 pm Monday through Thursday and from 10 am to 2 pm on Saturday.”

Patients without a primary care physician

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“CarePartners, made possible through MaineHealth, Maine Medical Center, and volunteer providers throughout the community, is a health care access program for adults in the Greater Portland Area who do not have or are not eligible for any other health care coverage, and meet certain financial guidelines. CarePartners works with volunteer physicians and other service providers to facilitate and coordinate health care services to eligible members, assisting members by completing applications to patient assistance programs through the various pharmaceutical programs, accessing network specialists, and working with patients to access community resources and programs as appropriate.”

“MMC’s Outpatient Clinics provide comprehensive, primary medical care, as well as specialized care to specific patient populations. These clinics include: Adult Cystic Fibrosis, Infectious Disease, General Pediatric, Enterostomal, International, Pediatric G.I., Endocrine, Lipid, NICU Follow-up, Nerve Block, Primary Care (Medical), Pediatric Continuity, Surgical, Urgent Care, Pediatric Pulmonary, Burn Wound Care, Spina Bifida, Cardiac, Broncho-Pulmonary Dysplasia, TB, Dermatology, Colposcopy, Teen Pregnancy, G.I., Cystic Fibrosis, Teen Clinic, Muscular Dystrophy, Cleft Lip and Palate, Developmental, Spasmodic Dysphonia, Musculoskeletal, and Feeding.”

“MMC’s Emergency Department Primary Care Linkage Program links ED patients with MMC Physician Hospital Organization and CarePartners primary care providers in the community. Referral to these programs is especially beneficial for ED patients with chronic conditions; both programs embrace MaineHealth’s Chronic Disease Model. This program provides patients with access to community-based services, reducing inappropriate ED utilization.”

Availability of full service care in one stop – imaging, lab, specialists, and Ease of ED-use – no need to make a doctor’s appointment.

“MMC’s Brighton FirstCare is a Fast Track / Urgent Care Unit, open from 9 a.m. to 9 p.m. every day. This program provides the same features of convenient, one-stop, on-demand service with a less costly charge structure than the Bramhall Emergency Department, further encouraging people to use this service instead of the main Emergency Department. All patient visits to this location are reported as emergency visits.”

Lack of available services for people suffering from alcoholism, drug addiction, and/or mental health problems

“Caring for ME and Mental Health Integration, demonstrate MaineHealth’s commitment to clinical improvement related to mental health care in the primary care setting.”

“MMC’s Outpatient Psychiatry Department provides a spectrum of psychiatric services to patients of all ages; serves as a training site for psychiatric residents, medical, nursing, social work, and psychology students; and engages in a number of innovative research

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projects, contributing state of the art knowledge to the field. Services include: the Adult, Child, and Geriatric Divisions at McGeachey Hall; Intensive Outpatient and Partial Hospital Programs at McGeachey Hall; the Anchor Program, PIER Program, and Psychology Division at 932 Congress Street; and the Access and Access Diversion Teams at 576 St. Johns Street.”

“MMC’s Geriatric Center offers medical and memory impairment assessments. All medical assessments involve a Geriatrician, Occupational Therapist, and Social Worker; memory impairment assessments are conducted by a team involving a Geriatric Psychiatrist, Advanced Practice Psychiatric Nurse, Geriatrician, Occupational Therapist, and Social Worker. The team manages any psychiatric issues relating to the aging process in cooperation with the primary doctor and family. All team members are either Board Certified or licensed.”

“MMC operates P6, a specialized geriatric psychiatric inpatient unit, alleviates the wait periods for patients entering via the Emergency Department. Additionally, patients are also admitted to P6 without having deteriorated to the extent that they require admission via the Emergency Department.”

Ineffective chronic care management, resulting in complications

“MMC has implemented several major MaineHealth initiatives in chronic disease and care management described elsewhere in this proposal. All of these programs improve the ability of patients to manage these diseases, thereby reducing the need for emergency department visits and hospital admissions where these chronic diseases cause acute episodes. As noted in Exhibit 6-A, evidence from our programs demonstrates that the Chronic Care Model can and does work.”

b. CONU Discussion

The applicant has provided information on their plan to reduce non-emergent ED use. It is expected as more residency students graduate and stay in Maine it will provide the State with primary care physicians which in turn may reduce the need for ED use.

3. The applicant demonstrates a culture of patient safety, that it has a quality improvement plan, uses evidence-based protocols, and/or has a public and/or patient safety improvement strategy for the project under consideration and for other services throughout the hospital, as well as a plan – to be specified in the application – to quantifiably track the effect of such strategies using standardized measures deemed appropriate by the Maine Quality Forum.

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a. Applicant's Discussion on Priority

Patient Safety

“A primary result of this project is to improve patient safety while improving medical education. Simulation-based education will significantly improve the health and welfare of persons currently being served by MMC as well as other health care facilities in which its residents will practice in the future.”

“Simulation-based education significantly improves patient safety by:

- Removing a substantial amount of the early education process from the bedside, which reduces unnecessary risks to patient safety;
- Providing an “error-tolerant”, “risk-free” environment in which practitioners can safely practice skills and procedures until they gain proficiency;
- Creating an environment that is conducive to teaching evidence-based best practices;
- Enabling practitioners to repeatedly experience and respond to high risk clinical situations without adverse consequences; and
- Presenting the opportunity to demonstrate, measure and document learner competency and proficiency using objective, standardized clinical scenarios.”

“Please refer to Exhibit 6-C: MMC’s 2009 Patient Safety Plan.”

Commitment to Quality

“MaineHealth is committed to being recognized by patients, payors and providers as the benchmark for quality and safety, patient and family experience and evidence based use of resources. On a quarterly basis the MaineHealth board reviews quality performance measures for all member and affiliate organizations, including:

- National Quality Forum hospitals measures
- Performance of participants in the MaineHealth Vital Network (electronic ICU monitoring system)
- Home health clinical measures
- Long term care clinical measures”

“In 2007, the MaineHealth Board adopted the following 10 year vision for quality and safety:

In 2017 MaineHealth will be a nationally recognized leader in health care quality and safe patient and family centered care. We will achieve that

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status not because we seek national prominence for its sake but rather it will be founded on an unwavering system level commitment to quality and safety and continuously improving the health of the communities we serve. Achieving and sustaining excellence starts with our belief that every single patient in the communities we serve deserves the highest quality health care services that we can provide in an efficient and cost effective manner. We will communicate publicly our quality, safety and cost information to aid patients and their families in making informed choices when seeking health care services. The core of our success will be our boards and management teams focusing at all levels on quality and safety as the critical elements driving strategic planning. Across the continuum of care our physicians, nurses, staff, patients and their families will collaborate to set high standards, monitor performance, openly share results and work together to continuously improve quality and safety.”

“In order to implement that vision, MaineHealth has established its Center for Quality and Patient Safety under the direction of Dr. Vance Brown, MaineHealth Chief Medical Officer. The Center will focus on:

- Board Engagement – All MaineHealth and member board members will complete a core curriculum in quality and safety developed by the Center. That training will enable every board member to better understand quality, safety and performance improvement and enable them to take a greater role in ensuring quality and safety in their organization
- Education and Consultation – Center staff will provide support and expertise to member organizations in developing and implementing quality and safety initiatives. Ownership and responsibility for quality improvement and monitoring will remain at the local level
- Performance Measurement and Reporting – Member organizations are overwhelmed at present by the number of organizations requesting quality and safety performance information. The Center will provide support for data collection, measurement and reporting allowing members to focus on actual quality and performance improvement.
- Accreditation and Regulatory Support – The Center will provide the support and expertise to ensure member organizations attain and maintain all appropriate licensure and accreditation standards
- System Wide Performance Targets – Working with members, MaineHealth will identify system wide performance targets to ensure consistency and accountability for major clinical processes. Included in these efforts will be clinical decision support systems that facilitate the monitoring of performance.”

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b. CONU Discussion

The applicant has demonstrated a commitment to quality and has a plan to improve upon that plan.

4. The project leads to lower cost of care / increased efficiency through such approaches as collaboration, consolidation, and/or other means.

a. Applicant's Discussion on Priority

Improved Medical Education Efficiency

“Simulation-based education allows common and rare health care events to be scheduled and repeated. Learners’ exposure to critical experiences can occur with predictable regularity. The result is more comprehensive exposure in a shorter amount of time improving the efficiency of medical education.”

MMC Internal Collaboration

“MMC’s residency and fellowship programs are administered predominately by their respective departments, and rely on those respective departments’ capital and intellectual resources. This has lead to a number of redundancies. While this approach preserves departmental autonomy and individuality, it does not capitalize on common needs, expertise and resources.”

“The effective use of medical simulators requires substantial capital investment, protocol development, coordination and clinical oversight. The Simulation Center presents an excellent opportunity for a centralized investment to benefit large number of learners at substantially reduced cost.”

“MMC’s Office of Medical Education will provide oversight of the Simulation Center. This centralized model and focused investment will allow OME leaders to effectively orchestrate this key institutional initiative, benefiting multiple departments.”

“It is anticipated that this approach will promote efficiency, cost-reduction and intradepartmental collaboration. By collaborating in the development of clinical scenarios and the adaptation of evidence-based practice in a centralized Simulation Center, a number of unnecessary redundancies can be prevented or eliminated.”

“Another emerging application of simulation-based education is multidisciplinary team training involving physicians, nurses, respiratory therapists, pharmacists, etc. These collaborative training events enhance the efficacy and efficiency of highly functioning clinical teams.”

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MMC External Collaboration

“MMC foresees several opportunities for collaboration regarding simulation-based education as the Simulation Center and simulation-based education evolve.”

“Baystate Medical Center, Springfield, MA, is a teaching hospital that serves as Tufts University School of Medicine’s western campus. Baystate’s simulation center is one of only 34 simulation centers worldwide that has attained American College of Surgeon accreditation. Through mutual affiliations with Tufts University School of Medicine, MMC and Baystate have held preliminary discussions on collaborating in the development of simulation-based curricula.”

“MMC provides southern Maine emergency medical technicians and other first responders with access to tailored education offerings and cooperates in community disaster drills. The introduction of patient simulators into this arena is being explored.”

“MMC provides Maine’s hospitals, physicians, nurses and ancillary clinicians with access to its various educational offerings. MMC anticipates providing similar access to its Simulation Center as well. As discussed in this application, team training and attending physicians’ demonstration of proficiency are emerging applications of simulation-based education. Providing in-state access to simulation-based education is another collaborative approach.”

“MMC anticipates continuing to collaborate with the simulation programs of the University of New England and the University of Southern Maine.”

c. CONU Discussion

The applicant has demonstrated a commitment to collaboration and consolidation through this simulation project. MMC will work with the University of New England and the University of Southern Maine. By introducing simulation the applicant will allow students in the residency program to be better capable of making the proper diagnosis leading to reduced errors in treating patients.

5. The project improves access to necessary services for the population.

a. Applicant’s Discussion on Priority

“In his State of the State Address (March 10, 2009) Governor John Elias Baldacci stated:

We also know that good health requires having enough high quality doctors and health care providers available when you need them. Doctors and nurses are the lifeblood of good health, and Maine doesn’t have enough of them.

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...(W)e will provide needed scholarships for Maine residents to support their medical education at Maine Medical Center, Eastern Maine Medical Center or the University of New England.

Research shows that doctors tend to settle near the hospitals where they complete their training. And I know that given the chance young doctors will stay in Maine.

(Transcript accessed Maine.gov, Governor’s Office, Speeches)”

“Residency and Fellowship programs are a critical element in recruiting and retaining an adequate supply of physicians to practice in Maine. Once medical students complete their four-year undergraduate studies, they enroll in residency programs to complete their studies. MMC’s Graduate Medical Education Program will enable these medical students to complete their studies in Maine and will encourage them to stay in Maine to practice. Providing medical students the opportunity to complete their education in-state dramatically improves the likelihood that they will choose to practice in-state.”

“The Maine Department of Labor states:

(L)imited residency opportunities will have a dramatic effect on the supply of these healthcare professionals. After completion of medical school, three to eight years of internship and residency, depending on the specialty are required. Residency opportunities will have a dramatic effect on the supply of physicians and surgeons in Maine...

Importantly, the residency programs report that 50% or more of their graduates remain in state after residency; this retention is paramount in ensuring an adequate supply of these healthcare professionals.

(Kruk, 2006 Healthcare Occupations Report, Maine Department of Labor, January 21, 2007, pp. 30-1.)”

“Research supports the Governor’s and Department of Labor’s statements that physicians tend to practice near the hospitals in which they complete their training. The most recent data on active physicians (allopathic and osteopathic) demonstrate that physicians that complete just their graduate studies in a state will practice in that state at a greater rate than those physicians who only complete their undergraduate education in a state, and that physicians who complete both their undergraduate and graduate education in a state are the most likely to remain in that state to practice.”

| Active Physicians Practicing in the Same State in which They Trained | | |
|---|----------------------|--------------|
| Extent of In-State Training | United States | Maine |
| Undergraduate Medical School Only | 29% | 7% |
| Graduate Medical School Only | 45% | 21% |

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Both Undergraduate & Graduate Medical School 66% 73%
Center for Workforce Studies, 2007 State Physician Workforce Data Book,
(American Association of Medical Colleges, Washington, DC, December 2007).

b. CONU Discussion

The applicant has shown a commitment to access. This project will allow greater access to care by providing additional physicians in the State.

6. The applicant has regularly met the Dirigo voluntary cost control targets.

a. Applicant's Discussion on Priority

“MMC has responded positively to Governor Baldacci's request that hospitals voluntarily hold the increases in their cost per adjusted discharge to 3.5% and hold their operating margins to less than 3.0%.”

“MMC addresses this request as an entity as demonstrated in the audited financial statements accompanying this application.”

“In 2003, the State of Maine enacted legislation to provide affordable health insurance to small businesses and individuals and to control health care costs. This legislation became known as Dirigo Health. The law provides for the development of an affordable health care plan with sliding scale premium subsidies while further increasing access to health care coverage through the expansion of eligibility for the MaineCare program. The law also covers quality and cost containment strategies such as the development of a State Health Plan, voluntary caps on the cost and operating margins of hospitals and insurers, and revised Certificate of Need regulations including a Capital Investment Fund.”

“In 2005, the Dirigo Health law was supplemented by additional legislation titled “An Act to Implement Certain Recommendations of the Commission to Study Maine's Community Hospitals.” The law requests hospitals to voluntarily hold their consolidated operating margins to 3% and to voluntarily restrain their increases in expense per case mix adjusted discharge to less than 110% of the forecasted increase in the Centers for Medicare and Medicaid hospital market basket index for the coming federal fiscal year. This law also addresses the jurisdiction of Dirigo Health, calls for the standardization of the reporting of hospital financial information, and established a workgroup to identify opportunities to streamline hospital administrative costs.”

“In its attempts to comply with the voluntary operating margin limit, the Medical Center has not fully implemented Board of Trustee approved rate increases and/or has initiated rate decreases for several years. During 2007, the combination of actions taken had the effect of decreasing the income from operations by approximately \$15,300,000 from what would have been achieved had the Board of Trustee approved rate increases been

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implemented. However, in June 2007, the Medical Center received a settlement payment from MaineCare for 2004. The settlement resulted in \$12,300,000 of unanticipated income that would result in an operating margin above the voluntary limit. The Medical Center determined that the most appropriate use of this excess income was to reduce the amounts of borrowings approved through the Certificate of Need process for the expansion of MMCRI. The reduction in debt will reduce debt service costs that will benefit the community for many years in the future. During 2008, the Medical Center did not initiate a rate decrease.”

“MMC notes that the financial forecast module submitted as part of the application (Exhibit 3-B.) relates to MMC’s hospital operation only and does not include the activity of other subsidiary operations of MMC. MMC calculates the operating margin limit based on consolidated operations. As a result, the operating margin of the hospital activity, on both a historical basis and forecast basis, exceeds the 3% limit on operating margins. The additional hospital operating margin is required to cover MMC investments to provide access to certain physician services in the community which are part of MMC’s consolidated operations.”

“MMC believes that the financial forecast module submission is completed in accordance with the instructions provided by CONU staff. Further, the historical operating margins of the consolidated operations of MMC can be calculated from the audited consolidated financial statements that are contained in the CON application (Exhibit 3-A.)”

c. CONU Discussion

The information the applicant provided through the financial forecast module shows the applicant has not met this priority. The financial forecast module is used so CONU can determine the health of the hospital and its ability to continue operations into the future. MMC has stated that additional income is needed to fund some of their other educational and research related projects so it is necessary for operating surplus be greater than those Dirigo voluntary cost targets.

7. The impact of the project on regional and statewide health insurance premiums, as determined by BOI, given the benefits of the project, as determined by CONU.

a. Applicant’s Discussion on Priority

“The Bureau of Insurance (BOI) and the Certificate of Need Unit (CONU) make this determination. MMC is happy to respond to any concern, issue, question or request for additional information to assist BOI and/or CONU in making this determination.”

b. Bureau of Insurance Assessment

“The attached assessment is based on the expectation, noted in the application, that Medicare and Medicaid will not contribute to the cost of the Simulation Center because

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the currently authorized Medicare/MaineCare residency positions at MMC are fully funded, leaving no funding available for the additional residency positions for the Simulation Center. Even with that expectation, which results in the full cost of the project being borne by private health insurance, the assessment of the regional premium impact of the project (at 0.363%) is less than half of the 0.8% worst case "charge scale" adjustment calculation by the applicant."

"The Bureau of Insurance applied an enhanced version of the assessment model that was previously developed internally with support from its consultant, Milliman, Inc., of Minneapolis, MN, in order to develop an estimate of the impact that this CON project is likely to have on private health insurance premiums in Maine Medical Center's service area and in the entire state of Maine. I have worked with you and your staff at the CON Unit, using data and support from the U.S Census Bureau, the Centers for Medicare & Medicaid Services, the State Planning Office, the Office of Integrated Access and Support, the Certificate of Need Unit of the Department of Licensing and Regulatory Services, the Bureau of Insurance, and information submitted by the applicant through your agency to perform this assessment."

"The assessment compares the CON project's Year 3 incremental operating and capital costs per person (adjusted to the year ending December 31, 2009) to the estimated private health insurance average claims cost per person for the same period. Based on the model, and the expectation outlined in the application that Medicare and MaineCare funding will not be available to support this project, I estimate that the maximum impact of this CON project on private health insurance premiums in Maine Medical Center's service area for the project's third year of operation will be approximately 0.363% (\$0.363 per \$100) of premium. I further estimate that this project, in its third year of operation, will have an impact on statewide private health insurance premiums of approximately 0.117% (\$0.117 per \$100) of premium."

c. CONU Discussion

The additional impacts to regional and statewide insurance premiums are minimal. The applicant has met this priority.

8. Applicants (other than those already participating in the HealthInfoNet Pilot) who have employed or have concrete plans to employ electronic health information systems to enhance care quality and patient safety.

a. Applicant's Discussion on Priority

Inpatient Electronic Medical Record

"MMC is in the seventh year of the implementation of its electronic medical record/patient management system, which includes computerized order entry and results reporting for medication, lab and imaging. It provides clinical decision support, e.g.,

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drug interactions, standing orders/protocol sets. Physicians at the hospital, in their offices and at home have access to an electronic version of the record which is updated after discharge.”

Ambulatory Electronic Medical Record

“In 2007, the MaineHealth Board approved a plan recommended by management to make available an ambulatory electronic medical record system to employed and independent physicians on the medical staffs of all MaineHealth member hospitals. The system is also being offered to physicians on the medical staffs of MaineHealth’s affiliate hospitals. The plan calls for bringing 400 physicians (180 employed and 220 independent) at Maine Medical Center, Miles Memorial Hospital, St. Andrews Hospital, Stephens Memorial Hospital and Spring Harbor Hospital on to the system by 2010. MaineHealth is investing \$10.4 million, its member hospitals \$2.5 million and the independent physicians \$2.7 million (\$15 million total) to bring these 400 physicians on to the system.”

“MaineHealth has selected Epic, one of the nation’s leading information technology organizations, as its strategic partner to implement the MaineHealth ambulatory electronic medical record. Epic allows healthcare providers the ability to address a variety of information needs, and will help MaineHealth, and its member organizations, build strong relationships with patients, facilitate an exchange of information across episodes of care, and allow anytime/anywhere data access for physicians. Epic is consistently ranked as the top EMR in its category by respected industry evaluators. The system allows clinicians to improve care, protect patient safety and enhance financial performance. With Epic, providers have the right information at the right time.”

Picture Archiving and Communications System

“MaineHealth has developed a PACS (imaging archiving and retrieval system) project for Maine Medical Center, Stephens Memorial Hospital, Miles Memorial Hospital, St. Andrews Hospital, St. Mary’s Regional Medical Center, Southern Maine Medical Center and 12 other sites.”

Vital Network (Electronic ICU Monitoring)

“In 2005, MaineHealth began offering to Maine hospitals an electronic system for monitoring real time patients in intensive care units. The system is staffed at a central location by critical care trained/certified physicians and nurses. The Leap Frog Group has determined that electronic monitoring systems satisfy its quality/safety standard for care of ICU patients by Board Certified critical care physicians. The system provides continuous monitoring of selected patient conditions and has a video system which allows the VitalNetwork Staff to view the patients. Because of its capabilities, the system has proved to reduce ICU mortality and morbidity. MaineHealth was the first health care

VI. State Health Plan

system in New England to implement the system, and has invested in excess of \$4 million in the project.”

“Currently, the VitalNetwork is operational for all critical care beds (except neonates) at Maine Medical Center, Miles Memorial Hospital, St. Mary’s Regional Medical Center, Waldo County General Hospital, Pen Bay Medical Center, MaineGeneral Medical Center, and Southern Maine Medical Center. Implementation is in the planning stages at Mercy Hospital and Franklin Memorial Hospital.”

HealthInfoNet

“MaineHealth has supported HealthInfoNet since its inception:

- MaineHealth leaders were active participants in developing the HealthInfoNet.
- MaineHealth has contributed \$ 250,000 over two years to underwrite the project.
- Bill Caron and Frank McGinty MaineHealth’s President and Executive Vice President have served on the Board of Directors of HealthInfoNet.
- MaineHealth acted as the guarantor for the initial eighteen-month engagement of the HealthInfoNet’s Executive Director.
- MaineHealth is negotiating to make its proprietary MaineHealth information system available to HealthInfoNet.”

“OneMaine Health (MaineHealth, MaineGeneral and Eastern Maine Health) selected and funded HealthInfoNet as the data bank for medical records to share statewide patient information such as medications, allergies and health problems regardless of where care is delivered.”

b. CONU Discussion

MMC and MaineHealth are one of the original founding sponsors of the HealthInfoNet Pilot and have committed significant resources to enhance deployment of electronic medical records.

9. Projects done in consultation with a LEEDS certified-architect that incorporate “green” best practices in building construction, renovation and operation to minimize environmental impact both internally and externally.

a. Applicant’s Discussion on Priority

“MMC has engaged SMRT as the project’s architectural firm. The Principal-in-Charge and Project Architect are LEEDS-certified. The renovation project is being designed and constructed in manner to minimize environmental impacts.”

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c. CONU Discussion

The applicant has hired a LEED-accredited firm committed to designing this project, however, they have stated that their level of commitment to incorporate “green” involves best practices in building construction, renovation and operation.

iii. Conclusion

CONU recommends that the Commissioner find that Maine Medical Center has met their burden to demonstrate that the project is consistent with the State Health Plan priorities.

VII. Outcomes and Community Impact

VII. Outcomes and Community Impact**A. From Applicant****High Quality Outcomes**

“The Best Evidence Medical Education Collaborative (BEME) Guide 4, which reviews the simulation-based medical education research published through 2003, states:

While research in the field of high-fidelity medical simulations needs improvement in terms of rigor and quality, the evidence suggest that high-fidelity medical simulations are educationally effective; and simulation-based education complements medical education in patient care settings.

There is documented value in respect of the provision of feedback, repetitive practice, integration of simulators into the curriculum, graded levels of difficulty, the use of simulation as one of multiple learning strategies, the provision of clinical variation, a controlled environment, individualisation of learning, definition of learning outcomes and ensuring validity as a learning tool.

Issenberg S B, McGaghie W C, Petrusa E R, Gordon D L and Scalese R J. (2005). What are the features and uses of high-fidelity medical simulations that lead to most effective learning? BEME Guide No 4. *Medical Teacher* 27, 1, pp 10-28.”

Accessed on the internet:

<http://www.bemecollaboration.org/beme/pages/reviews/issenberg.html>

“MMC agrees with the BMME assessment that much of the medical simulation-based education research published before 2004 is inconclusive. As simulation-based education proliferates, the research agenda is evolving. ACGME accreditation requirements are also a driving factor for MMC to establish a Simulation Center.”

“With the exception of one article, MMC cites research literature published between 2006 and 2008 supporting simulation based medical education. (Exhibit 1-A)”

“In November 2006 the Agency for Healthcare Research and Quality (AHRQ) awarded more than \$5 million for 19 new grants under its "Improving Patient Safety through Simulation Research" request for applications. The projects focus on assessing and evaluating the roles that simulation can play to improve the safe delivery of quality health care. The research program addresses the need for more rigorous, higher quality research efforts.”

“These projects will inform providers, health educators, payers, policy makers, patients, and the public about the effective use of simulation in preventing medical errors and

VII. Outcomes and Community Impact

improving patient safety. (Accessed on the internet: *AHRQ Awards more than \$5 Million to Study the Safe Delivery of Health Care through Medical Simulation*. Press Release, November 14, 2006. Agency for Healthcare Research and Quality, Rockville, MD, <http://www.ahrq.gov/news/press/pr2006/medsimpr.htm>)”

“Research issues include demonstrating the validity of simulation-based education, determining the optimal applications of simulation, developing simulation-based education outcome-based criteria and curricula, and integrating simulation-based education with the apprenticeship model.”

“The National Institutes of Health announced in March 2009 that it is providing new funding opportunities made possible through the American Recovery and Reinvestment Act (ARRA). One billion dollars has been allocated for federal awards to institutions seeking to construct, renovate or repair biomedical or behavioral research facilities. The National Center for Research Resources, a part of NIH, will administer these categories of grants.”

“The Maine Medical Center Research Institute has demonstrated its capabilities of securing funding support for MMC’s research initiatives in other areas. Until MMC establishes its Simulation Center, its efforts to pursue grant funding related to simulation-based education and research are severely hampered.”

“MMC is committed to providing a high-quality simulation-based medical education program, and intends to attain the appropriate accreditation for its proposed Simulation Center. MMC continues to monitor the emerging accrediting bodies in its effort to become accredited. To date there is not a single, unifying accrediting body.”

“Currently the American College of Surgeons and the American Society of Anesthesiology are the principal accrediting bodies. Other specialty boards (Emergency Medicine, Family Practice) and the Society of Simulation in Healthcare are considering the development of accrediting programs. The American Board of Medical Specialties, representing twenty-four member boards covering board-certification in 145 specialties and subspecialties, is mentioned as another potential sponsor for an accrediting program, especially for multi-specialty simulation-based medical education programs.”

Potential Impact on Other Providers

“Approval of this project does not negatively affect the volume of services, quality of care and/or costs of other existing service providers. The project addresses medical education needs.”

“MMC believes that the project will benefit existing service providers and their local communities. MMC GME Program currently enrolls 73% of graduate medical students in Maine and is increasing its number of positions. MMC is the only Maine GME program offering training in other specialties than primary care.”

VII. Outcomes and Community Impact

“Research indicates that physicians are more likely to practice in states in which they complete their training. MMC GME Program improves the ability of all Maine health providers to recruit physicians to practice in their communities.”

Current and Projected Utilization

“This project addresses medical education needs, not clinical services. Therefore, there is no direct impact on current and projected utilization of services.”

B. CONU Discussion

i. CON Criteria

Relevant criteria for inclusion in this section are specific to the determination that the project ensures high-quality outcomes and does not negatively affect the quality of care delivered by existing service providers.

ii. CON Analysis

CONU has determined that this project will allow more physicians that do their studies at MMC to continue to stay in the State and practice. This can help the possible quality of care delivered by MMC and other existing service providers.

iii. Conclusion

One purpose of simulation-based medical education is to improve high-quality outcomes for patients. Patients are not put at unnecessary risks with an inexperienced practitioner. Physicians are given the opportunity to practice repeatedly in a “Risk-free” environment while gaining valuable hands-on experience.

The applicant has stated that this project will not negatively effect existing service providers. The applicant argues that any effects on existing providers will be positive. The applicant states that “MMC’s GME Program currently enrolls 73% of graduate medical students in Maine and is increasing its number of positions.” Research suggests by having training available in Maine, physicians are more likely to stay and practice in Maine upon graduation. The applicant expects this project to “improve the ability of all Maine health providers to recruit physicians to practice in their communities”

CONU recommends that the Commissioner find that Maine Medical Center has met their burden to demonstrate that this project will ensure high-quality outcomes and does not negatively affect the quality of care delivered by existing service providers.

VIII. Service Utilization

VIII. Service Utilization**A. From Applicant****Quality & Outcome Measures**MMC Institutional Measures

“MMC participates in the following Institutional-wide Patient Safety and Quality Initiatives”:

“Specific Initiatives at MMC to Prevent Errors”

“Blame-free reporting: Example: cardiovascular surgeons all receive their own numbers and self-monitor.”

“Robotics in the Pharmacy: Automated dispensing trial in process; error rate of less than 1%.”

“Computerized Physician Order Entry: This major investment in information systems achieved 100% of orders entered by physicians. Part of \$3 million Sunrise Clinical Manager initiative, also operational. Better records, automatic “flags” for problems, physician access from outside hospital for better monitoring of care.”

“Adverse Drug Event Analysis: 1,200 each year out of 3 million doses”

“Root Cause Analysis: Determining the actual cause(s) of errors”

“Nursing Screening of High-Risk Patients: Example: patients at risk for pressure ulcers.”

“Improved Communications Models in the Operating Rooms: Modeled on lessons learned in the airline industry that have increased safety in the cockpit.”

“Maryland Quality Indicators Initiative: MMC participates.”

“Sentinel Events Monitoring and Root Cause Analysis: Part of JCAHO standards.”

B. CONU Discussion**i. CON Criteria**

Relevant criteria for inclusion in this section are specific to the determination that the project does not result in inappropriate increases in service utilization, according to the principles of evidence-based medicine adopted by the Maine Quality Forum.

VIII. Service Utilization

ii. Maine Quality Forum Analysis

The CONU did not receive an assessment from the Maine Quality Forum in regards to this project.

iii. CON Analysis

This is an educational project and CONU has determined it will not have an impact on service utilization of clinical healthcare services.

iv. Conclusion

CONU recommends that the Commissioner find that Maine Medical Center has met their burden to demonstrate that the project does not result in inappropriate increases in service utilization, according to the principles of evidence-based medicine adopted by the Maine Quality Forum.

IX. Capital Investment Fund

IX. Capital Investment Fund**A. From Applicant**

“Projects subject to the simplified review and approval process need not be funded within the Capital Investment Fund. (22 M.R.S.A. § 336)”

Qualification for Simplified Review as a Maintenance Project

“This project primarily involves the maintenance of a health facility as defined in 22 M.R.S.A. § 336 (1). The proposed project is for the education of health professionals, not clinical care. The equipment acquired will be used for simulation-based education, not clinical services. There is no development or offering of new health services. There is no change in MMC’s licensed bed complement. The only change is the introduction of simulation-based education technology to MMC’s existing medical education programs.”

“The project addresses the requirements (in emboldened, italicized text) to qualify for simplified review as a maintenance project in the following manner”:

- (A) ***“Will result in no or a minimal additional expense to the public or to the health care facility's clients.”***

“MMC estimates that the cost of operating the Simulation Center to be approximately \$3,000,000 in annual operating expense. This includes Simulation Center staff, additional faculty time and general expenses. This is less than ½ of one percent (0.5%) increase in MMC’s annual operating expenses.”

- (B) ***“Will be in compliance with other applicable State and local laws and regulations.”***

“MMC currently operates in compliance with applicable State and local laws and regulations; this project will not change that compliance. The project will be in compliance with applicable State and local laws and regulations.”

- (C) ***“Will significantly improve or, in the alternative, not significantly adversely affect the health and welfare of any person currently being served by the health care facility.”***

“The Institute of Medicine (IOM) identifies preventable adverse events as a leading cause of death in the United States. The IOM recommends simulation-based education as a key element in reducing practitioner errors and enhancing patient safety.”

“(Institute of Medicine, To Err Is Human: Building a Safer Health System, National Academies Press, Washington, D.C., 1999)”

IX. Capital Investment Fund

“Simulation-based education will significantly improve the health and welfare of persons currently being served by MMC as well as other health care facilities in which its residents will practice in the future.”

Qualification for Simplified Review as a Capital Expenditure

“The project qualifies for simplified review as a capital expenditure as defined in 22 M.R.S.A. § 336 (4). The proposed project is required so that MMC complies with Accreditation Council for Graduate Medical Education (ACGME) accreditation standards that must be met in order for MMC to qualify for Centers for Medicare and Medicaid Services’ reimbursement as a teaching hospital.”

“The project addresses the requirements (in emboldened, italicized text) for simplified review as a capital expenditure in the following manner”:

- (A) ***“The capital expenditure is required to eliminate or prevent imminent safety hazards, as defined by applicable fire, building or life safety codes and regulations; to comply with State licensure standards; or to comply with accreditation or certification standards that must be met to receive reimbursement under the United States Social Security Act, Title XVIII or payments under a State plan for medical assistance approved under Title XIX of that Act.”***

“The capital expenditure is needed to comply with current and anticipated Accreditation Council for Graduate Medical Education accreditation standards. MMC must comply with ACGME standards to remain eligible for Center for Medicare and Medicaid Services’ reimbursement for medical education.”

- (B) ***“The economic feasibility of the project is demonstrated in terms of its effects on the operating budget of the applicant, including its existing rate structure.”***

“MMC estimates that the cost of operating the Simulation Center represents less than ½ of one percent (0.5%) increase to MMC’s annual operating expenses.”

“MMC estimates that operating the Simulation Center could result in an increase its rate structure by a cumulative $\frac{8}{10}$ of one percent (0.8%) over the first three full years of operation if no other sources of revenue are available. This is a “worst case” scenario that does not attempt to identify additional sources of revenue to support this endeavor.”

- (C) ***“There remains a public need for the service to be provided”;***

IX. Capital Investment Fund

“In his State of the State Address (March 10, 2009) Governor John Elias Baldacci launched a state initiative to address Maine’s need for additional physicians to practice in Maine.”

“Residency and Fellowship programs are a critical element in recruiting and retaining an adequate supply of physicians to practice in Maine. Research indicates that physicians tend to practice near the hospitals in which they complete their training.”

(D) ***“The corrective action proposed by the applicant is the most cost effective alternative available under the circumstances.”***

“MMC believes that reusing vacant space for this project is the most cost effective alternative. Further, locating this program on MMC’s Brighton campus helps with ongoing efforts to decompress the Bramhall campus.”

“As the Accreditation Council for Graduate Medical Education increases the requirements for simulation-based education, MMC residency and fellowship programs will need convenient, priority access to high-resolution simulated clinical areas for significant numbers of residents and fellows.”

B. **CONU Discussion**

i. **CON Criteria**

Relevant criteria for inclusion in this section are related to the needed determination that the project can be funded within the Capital Investment Fund.

ii. **CON Analysis**

CONU has determined that this project meets the following criteria to be reviewed as a simplified review and is therefore exempt from the Capital Investment Fund limits:

- Will result in no or a minimal additional expense to the public or to the health care facility's clients;
- Will be in compliance with other applicable state and local laws and regulations; and
- Will significantly improve or, in the alternative, not significantly adversely affect the health and welfare of any person currently being served by the health care facility.

iii. **Conclusion**

CONU has determined that there are no incremental operating costs to the healthcare system there and will be no Capital Investment Fund (CIF) dollars needed to implement this project.

X. Timely Notice

X. Timely Notice**A. From Applicant**

“MMC has incurred and continues to incur obligations for predevelopment activities associated with this project. The total capital obligations for these activities while MMC awaits the Department’s decision are estimated to be less than the Maine Certificate of Need threshold currently in effect.”

“MMC has followed the appropriate procedures regarding timely submission of the Letter of Intent, scheduling of the mandatory Technical Assistance meeting, submission of the Application and certifying the Application Completeness outlined in the Maine Certificate of Need Procedures Manual for this type of project.”

“MMC will cooperate with the Department in arranging the required Public Informational Meeting.”

“MMC is willing and reserves the right to submit information that is responsive to any concern, issue, question or allegation of facts contrary to those in the application made by the department or any other person.”

“For informational purposes MMC presents the following schedule based on requirements outlined in the Maine Certificate of Need Manual currently in effect.”

| Responsible Party | Task | Actual Date |
|--------------------------|---|--------------------|
| MMC | File Letter of Intent: | May 11, 2009 |
| MMC / DHHS | Hold technical assistance meeting: | June 11, 2009 |
| MMC | File and certify as complete application accompanied by filing fee: | August 12, 2009 |

B. CONU Discussion

| | |
|------------------------------------|---------------|
| Letter of Intent filed: | May 11, 2009 |
| Technical Assistance meeting held: | June 11, 2009 |
| CON application filed: | Aug 12, 2009 |
| CON certified as complete: | Aug 12, 2009 |
| Public Notice Published | Sept 16, 2009 |
| Public comment period ended: | Oct. 16, 2009 |

XI. Findings and Recommendations

XI. Findings and Recommendations

Based on the preceding analysis, including information contained in the record, the CONU recommends that the Commissioner make the following findings and recommendations subject to the conditions below:

- A. That the applicant is fit, willing and able to provide the proposed services at the proper standard of care as demonstrated by, among other factors, whether the quality of any health care provided in the past by the applicant or a related party under the applicant's control meets industry standards.
- B. The economic feasibility of the proposed services is demonstrated in terms of the:
1. Capacity of the applicant to support the project financially over its useful life, in light of the rates the applicant expects to be able to charge for the services to be provided by the project; and
 2. The applicant's ability to establish and operate the project in accordance with existing and reasonably anticipated future changes in federal, state and local licensure and other applicable or potentially applicable rules;
- C. The applicant has demonstrated that there is a public need for the proposed services as demonstrated by certain factors, including, but not limited to:
1. The extent to which the project will substantially address specific health problems as measured by health needs in the area to be served by the project;
 2. The project has demonstrated that it will have a positive impact on the health status indicators of the population to be served;
 3. The project will be accessible to all residents of the area proposed to be served; and
 4. The project will provide demonstrable improvements in quality and outcome measures applicable to the services proposed in the project;
- D. The applicant has demonstrated that the proposed services are consistent with the orderly and economic development of health facilities and health resources for the State as demonstrated by:
1. The impact of the project on total health care expenditures after taking into account, to the extent practical, both the costs and benefits of the project and the competing demands in the local service area and statewide for available resources for health care;

XI. Findings and Recommendations

2. The availability of State funds to cover any increase in state costs associated with utilization of the project's services; and

3. The likelihood that more effective, more accessible or less costly alternative technologies or methods of service delivery may become available was demonstrated by the applicant;

In making a determination under this subsection, the commissioner shall use data available in the state health plan under Title 2, section 103, data from the Maine Health Data Organization established in chapter 1683 and other information available to the commissioner. Particular weight must be given to information that indicates that the proposed health services are innovations in high quality health care delivery, that the proposed health services are not reasonably available in the proposed area and that the facility proposing the new health services is designed to provide excellent quality health care.

E. The applicant has demonstrated that the project is consistent with and furthers the goals of the State Health Plan;

F. The applicant has demonstrated that the project ensures high-quality outcomes and does not negatively affect the quality of care delivered by existing service providers;

G. The applicant has demonstrated that the project does not result in inappropriate increases in service utilization, according to the principles of evidence-based medicine adopted by the Maine Quality Forum; and

H. That the project need not be funded within the Capital Investment Fund.

For all the reasons contained in the preliminary analysis and in the record, CONU recommends that the Commissioner determine that this project should be **approved with conditions**.

1. The applicant should be required to report to CONU any bills passed by Congress that increases the number of slots funded under Medicare and MaineCare that Maine Medical Center is allowed to charge for educational reimbursement.
2. The applicant should be required to report to CONU any bills passed by Congress that will fund capital expenditures for this Simulation Center.