

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

**Date:** August 25, 2017

**Project:** Capital Expenditure to Add 128 Private Rooms and 19 Universal Procedure Rooms.

**Proposal by:** Maine Medical Center

**Prepared by:** Larry Carbonneau, Manager, Health Care Oversight  
Richard S. Lawrence, Senior Health Care Financial Analyst

**Directly Affected Party:** None

**CON Recommendation:** Approval with Conditions

	<b>Proposed Per Applicant</b>	<b>CON Adjustment</b>	<b>Approved CON</b>
Estimated Capital Expenditure	\$ 373,714,286	\$21,276,000	\$ 394,990,286
Maximum Contingency	\$ 18,685,714	\$ 1,063,800	\$ 19,749,514
Total Capital Expenditure with Contingency	\$ 392,400,000		\$ 414,739,800
Pro-Forma Marginal Operating Costs	\$ 49,674,000		\$ 49,674,000



## I. Abstract

### A. From Applicant

Please refer to **Error! Reference source not found.** for a detailed description of the project.

#### Overview

Maine Medical Center (MMC) proposes a capital expenditure of approximately \$392 million to fulfill its licensing requirements by decompressing buildings not designed for high-level care, by improving access to its services by increasing its private patient rooms and by increasing and modernizing its procedure rooms. The project does not increase the number of licensed beds at MMC.

#### Demographic and industry trends driving the need for the project

With the median age in Maine ranking as the highest in the nation, demand for services – especially those regarded as tertiary – is expected to continue to grow. The industry-wide growth in outpatient procedures means that far fewer lower-acuity patients require inpatient care. Meanwhile, technology and evolving care standards are driving patients with more complex conditions to higher volume, tertiary care hospitals such as MMC. The end result is that MMC's Case Mix Index, which is a Center for Medicare and Medicaid Services (CMS) measure of the complexity of cases at a given institution, is rising steadily. Admissions are also growing. Put simply, MMC is seeing more patients, and those patients are sicker than those of the past. As the hospital with the largest share of tertiary and non-tertiary patients in Maine, these trends are especially pronounced for MMC.

#### Meeting this growing need for care

Many of the patients treated at MMC today are simply too acutely ill to have roommates. This, combined with concerns such as matching patients in semi-private rooms with common infections or by gender, on a typical day leads to 60 or more bed closures. Capacity is further strained because many licensed beds are reserved for a specific purpose, notably patients requiring critical and intermediate care, often in emergent and urgent situations, and thus cannot be regularly used for inpatients with less urgent conditions. This project will add 128 single patient rooms, all of which will be “universal” allowing for them to be used for standard, intermediate or critical care depending on demands for inpatient admissions. This will greatly ease the constraints now placed on MMC's bed capacity.

Facilities for surgeries and other procedures are also under stress at MMC. The vast majority of procedure rooms at the hospital are more than 30 years old. These facilities do not conform to current new building construction standards of size – they are about two-thirds the size of modern rooms – and supportive infrastructure such as prep and recovery bays, family waiting rooms and sterilization facilities are not properly suited to meet patient needs in the future. The

project includes 19 appropriately-sized universal procedure rooms that can accommodate the latest technology as well as facilities that will better support pre- and post-operative care.

These capacity issues impact MMC in its role as the state's leading tertiary care hospital, its only Level 1 trauma center and only academic medical center in partnership with Tufts University School of Medicine. The shortage of available beds and procedure rooms forces an intensive triage process to manage requests from the community hospitals across the state for patient transfers. It also frequently backs up the Emergency Department, as patients who need to be admitted as inpatients to the hospital floors must wait for an inpatient bed to become available. It should be noted that MMC does not plan to remove the infrastructure currently present in its semi-private rooms, even as it converts many of those rooms to private. Patient rooms that are semi-private today will be decompressed and made private patient rooms when this project is complete. This will create an ability to better respond to a regional or statewide disaster. Decompressing these stresses on MMC's infrastructure will benefit patients from across the State of Maine who depend on the hospital as the state's largest medical center equipped to treat the most complex conditions.

Of course, having appropriate facilities is but one of the necessary elements to delivering excellent care to patients. Recruitment of talented clinicians who can leverage the latest technologies and best practices is essential to providing safe, quality healthcare. As the state's leading teaching hospital – a mission supported through an affiliation with the Tufts University School of Medicine – MMC brings talented professionals to Maine who in turn find meaningful careers across the state, many of whom remain in the State after completion of their training to provide care to Maine residents. Having modern facilities that support the latest technology will enhance MMC's ability to attract talented medical professionals to Maine.

### **Facilities considerations**

Even if an aging population and changing care models were not driving up demand for MMC's services, there would still be a need to replace facilities that are nearing the end their useful life. 62% of patient beds at MMC are in buildings more than 48 years old, and 77% are in buildings more than 30 years old. The bulk of the procedure rooms are housed in facilities that date to the 1980s and much of the imaging studies are done in a facility that dates to the 1970s. Patient and community demands have increased, but MMC's facility square footage has not kept pace. MMC's facilities need to be decompressed in order to rebalance demand and supply. Decompressing existing facilities will extend their useful life by reducing the stress on their infrastructure. The vast majority MMC's clinical facilities are due for modernization or replacement, and this project represents a major step toward meeting that need.

While MMC has a strong track record of renovating its aging facilities – the original 19<sup>th</sup> century hospital structure is still in use as an administrative wing – many of its clinical facilities are not configured in a way that will allow for retrofitting to meet modern standards (see Figure 22 - 2015 MMC Campus Building Assessment). New construction is essential, and this project will feature universal designs that can be adapted to new technologies and the changing needs of patients.

## Summary

Growing patient demand and changing technology are straining the dated infrastructure at MMC. Meeting future demand from a larger, aging patient population with more complex needs will require more private rooms and modern procedure rooms. This will enable MMC to continue to provide superior, state-of-the-art care to patients who want to remain in Maine for their care, close to their families and primary care givers. It will facilitate transfers from other Maine hospitals. It will also relieve pressure on an Emergency Department that is frequently backed up with patients waiting for inpatient beds. Many of MMC's existing clinical facilities are not configured in a way that will allow for retrofitting to meet modern standards. New construction is essential. This project will not increase the number of licensed beds at MMC, nor is it intended to increase the hospital's share of inpatient admissions among Maine hospitals, but rather position MMC to meet expected demand in the current climate.

## **Certification of Need Unit (CONU) Comment #1:**

Excerpts from Exhibit 1-a of the CON application are included below for a more complete description of the CON project:

“Maine Medical Center’s (MMC) transformation at the Bramhall Campus (MFP IIB) is comprised of the following components which are congruent with MMC’s Mission, Vision, and Values, and align with three (3) campus priorities:”

- Inpatient Beds
- Procedure Spaces
- Parking Demand

“These priorities were set with consideration to, and in the context of, MMC’s current facility and its ability to effectively utilize as many of its licensed complement of beds; continue to be the leading, high quality tertiary provider in the State of Maine; and provide adequate parking for patients and employees.”

“MMC’s objectives for MFP IIB are:”

- Maintain current licensed bed count.
- Increase access to MMC inpatient services by increasing the number of private patient rooms.
- Increase access to MMC procedural services by increasing the number of procedure rooms.
- Build 128 universal private patient rooms.
- Build 19 universal procedure rooms and space for accompanying support functions.

- Relocate MMC's helideck.

This project will encompass deconstruction and construction in two different areas of the hospital campus. Nonreviewable coordinated portions of the project include developing new parking for employees and increasing the visitor's parking lot by several floors. Where the current employee parking lot currently is will be torn down and a new "Congress Street" building will be built. This building will include one basement floor (CB) and a Congress Street ground floor (CG) and four more floors, the first C1 will have the 19 procedure rooms. Floors C2 and C3 will have completed spaces for 32 patient rooms with 32 beds. Floor C4 will be outfitted in the current plan to "stub out" parameters, with the possibility of being completed if the need arises during the time of this project. The floor above C4 is labeled as B because it matches the height of the existing hospital and the final floor of this Congress Street Building is labeled G as it is the ground floor of ground floor. Two other patient floors are being developed on the East Tower at levels 6 and 7 which will provide 32 more patient rooms each. The applicant provided the following descriptions of the floors that will be built.

### **Congress Street Building**

- Level CB MEP includes mechanical space to support the patient and public floors and storage space.
- Level CG – Pre-Op/Post-Op includes:
  - New Campus Entry and Lobby simplifying arrival and wayfinding to campus
  - Reception and admitting
  - Primary corridor for staff entering and exiting the facility via the Gilman Street parking garage
  - Patient family and visitor waiting space
  - 52 patient preparation and recovery beds
  - Required support space to support patient preparation and recovery.
- Level C1 Surgery includes:
  - 6 patient preparation and recovery beds.
  - 19 universal procedure rooms consisting of:
    - 9 universal procedure rooms of 650 square feet programmed for cardiac and vascular procedures
    - 9 universal interventional procedure rooms of 600 square feet programmed for heart catheterization and electrophysiology laboratories

- 1 hybrid operating room of nine-hundred-thirteen 913 square feet programmed for complex cardiovascular procedures requiring radiology support
  - Separate sterile and non-sterile corridors to support transport of procedural instruments and supplies to the patient
  - Required support space to support procedural activities.
- Level C2 includes:
    - 32 private universal patient rooms programmed for adult critical care that are offset to improve line-of-sight
    - Patient, family and visitor wait space
    - Non-invasive cardiology which includes stress testing, electrocardiogram (ECG) and echocardiogram (ECHO).
  - Level C3 includes:
    - 32 private universal patient rooms programmed for adult critical care that are offset to improve line-of-sight
    - Patient family and visitor wait space
    - Conference and multipurpose space to support interdisciplinary collaboration and education.
  - Level C4 includes:
    - Space for 32 private universal patient rooms programmed for adult critical care that are offset to improve line-of-sight\*
    - Vertical transport space required to connect the Congress Street Building with the existing campus.
  - Level B (Campus Level Basement) includes:
    - The roof of the proposed Congress Street building
    - Staff lounge
    - Lockers to support procedural staff
    - Administrative offices to support procedural and inpatient staff
    - Staff, material, and patient transport corridor to connect to the existing campus.
  - Level G (Campus Level Ground) includes:

- Conference space to support interdisciplinary collaboration and education
- Public corridor to connect to the existing campus
- Direct connection to the patient, family, visitor garage
- A new covered front entrance large enough for a vehicle to pass through.

### **East Tower Bed Expansion**

- Level 6 East Tower addition includes:
  - 32 private universal patient rooms that will be used to treat adult acute and intermediate care patients
  - Staff lounge
  - Conference space to support interdisciplinary collaboration and education.
- Level 7 East Tower addition includes:
  - 32 private universal patient rooms that will be used to treat adult acute and intermediate care patients
  - Staff lounge
  - Conference space to support interdisciplinary collaboration and education.
- A helideck will be added to the top of the building to support up to two medical response helicopters landing, take-off and parking.
- The existing East Tower elevators will be extended to support the additional bed floors and helideck. The expansion of the elevators will allow direct access to the Emergency Department from the helideck.

\*“Shell space” for an additional 32 beds will be addressed in the Public Need section of this analysis.

### **CONU Comment #2:**

MRS Title 22, Chapter 103-A §338 (D) states that the Commissioner may consult with persons with relevant skills and experience regarding the need to replace, renovate or upgrade health care facilities to meet current and future needs. The Commissioner hired Navigant Consulting, Inc. to develop relevant analysis to assist the CONU in conducting this analysis. Navigant describes itself as follows:

“Navigant Consulting, Inc. is a publicly traded (NYSE:NCI) independent consulting firm providing specialized professional services to assist clients in identifying strategic and operational solutions to grow and enhance our clients most important challenges. We focus on large industry sectors that are typically highly regulated and/or are exceptionally dynamic.”

“Navigant can draw on experts from all areas within Navigant’s healthcare practice to respond to its clients’ needs. Navigant’s healthcare professionals include individuals with experience as public policy experts; hospital, physician practice, life sciences, health plan, Federal and State government, and healthcare operations professionals; finance executives, healthcare analyst; and clinical professionals.”

“Navigant’s healthcare practice brings together a team of more than 600 seasoned consulting professionals and industry thought leaders to support clients in designing, developing, and implementing solutions that create high-performing healthcare organizations.”

Navigant’s role is to utilize their expertise to independently opine on the the feasibility and impact of this project in MMC’s service area. A copy of the State of Maine’s agreement to purchase services from Navigant is on file at CONU. This agreement will give a detailed summary of the services Navigant will be providing. Throughout this analysis, CONU will utilize Navigant’s findings to augment its report. CONU will clearly indicate when Navigant’s analysis is being discussed. Navigant’s full Independent Analysis is on file at CONU.



## II. Fit, Willing and Able

### A. From Applicant

#### “Overview

MMC, a voluntary non-profit 501 (c) (3) organization, 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 with its main campus located in Portland, Maine.”

#### **Maine Medical Center**

22 Bramhall Street  
Portland, Maine 04102  
<http://www.mmc.org>

#### Mission:

“MMC 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: Cumberland and York counties;

Secondary: Androscoggin, Franklin, Kennebec, Knox, Lincoln, Oxford, Sagadahoc, Somerset and Waldo counties;

Tertiary: Aroostook, Hancock, Penobscot, Piscataquis and Washington counties as well as Out of State.”

#### “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.”

#### “Fit, Willing and Able

MMC is fit, willing and able to provide the proposed services at the proper standard of care as demonstrated by, among other factors, the quality of the health care provided in the past by MMC and other MaineHealth members meeting industry standards. MMC provides the health care services that are being reviewed, is licensed in the State and MMC’s services are consistent with applicable licensing and certification standards.”

“The Certificate of Need Act states: “If the applicant is a provider of health care services that are substantially similar to those services being reviewed and is licensed in the State, the requirements of this paragraph are deemed to have been met if the services previously provided in the State by the applicant

are consistent with applicable licensing and certification standards.” (22 MRSA §335, sub-1 §7 A) MMC provides surgical and interventional cardiology services and is currently licensed by the State of Maine. Through multiple building projects during the past 30 plus years MMC has demonstrated its ability to develop new and renovated facilities that meet all licensure and certification requirements.”

“In early 2012 MMC reorganized its structure to focus care delivery on patient and family-centered service lines, which enhances care coordination and increases efficiency. All other functions are organized to support the service lines.”

“Please refer to Exhibit 2-A: MMC’s Organizational Chart

### “MMC Surgical Services

MMC’s Surgical Services’ divisions, programs and services, their organization, conditions addressed and types of procedures performed include [further information on specific surgical units can be found in the application contained in the record]:

MMC’s Bariatric Surgery Program, an American College of Surgeons Accredited Bariatric Center, addresses morbid obesity.

The MMC Cancer Institute.

The MMC Joint Replacement Center.

The Division of Ophthalmology.

The Division of Oral & Maxillofacial Surgery.

The Division of Orthopedic Trauma.

The Division of Pediatric Surgery.

The Division of Plastic & Reconstructive Surgery.

The Division of General Surgery, Trauma & Surgical Critical Care

The Division of Urology.

MMC’s Women’s Health including General Obstetrics and Gynecology, Gynecologic Oncology, Urogynecology.”

### “MMC Cardiovascular Services

MMC Cardiovascular Services’ divisions, programs and services, their organization, conditions addressed and types of procedures performed include:

Adult and Pediatric/Congenital Cardiac Surgery Services including; coronary artery bypass, valve repair and replacement; minimally invasive bypass and valve repair, transcatheter valve replacement (TAVR), arrhythmia surgery, and thoracic surgery Cardiac Interventional Services, including adult invasive diagnostic catheterization, coronary intervention, including stent implantation, cardiac biopsies, carotid and peripheral vascular interventions, and pediatric/congenital invasive diagnostic and interventional procedures.”

“The Division of Vascular Surgery addresses abdominal aortic aneurysms, carotid artery disease, mesenteric artery disease, renal artery disease, peripheral artery disease, venous diseases and blood clots, claudication, stroke, varicose veins, venous skin ulcers. Performs angioplasty thoracic and aortic aneurysm repair (open and endo repair), carotid artery stent, carotid artery endarterectomy, dialysis access, lower extremity (leg) bypass (aortobifemoral, tibioperoneal, and femoropoplital), lower

extremity amputation, varicose veins, vein stripping, and vena cava filter. Performs procedures in MMC's endovascular suite, a hybrid operating room."

"Electrophysiology Services, including invasive diagnostic electrophysiology testing, catheter ablation procedures, cardioversions, electronic implantable cardiac device, such as pacemakers and implantable defibrillators, and laser lead extractions non-invasive Cardiac Diagnostics including EKGs, exercise stress testing, nuclear cardiology stress testing, stress echocardiography, holter monitor, event recorder, echocardiography, transesophageal echocardiography, and CT angiography."

### **"MMC Maine Heart Valve Center**

MMC is the only hospital in Maine that meets the Centers for Medicare and Medicaid Services' (CMS) required qualifications to perform TAVRs. "

### **"Licenses, Certifications & Accreditations**

MaineHealth's current member affiliates' licenses, certifications and accreditations are numerous with all being State Licensed, CMS Certified and several are Joint Commission accredited. MaineHealth has demonstrated that its member organizations are capable of delivering the proposed services at the proper standard of care. MMC Surgical Services provides a scope and depth of specialty and subspecialty surgical care that is unparalleled in Maine. "

"MMC is the only Maine hospital and one of fewer than 100 in the United States reviewed and verified by the Committee on Trauma of the American College of Surgeons as an Adult Level 1 Trauma Center, providing a full range of services and equipment available 24 hours a day - including around-the-clock neurosurgical, orthopedic, surgical specialty, and surgical intensive care coverage."

"MMC has the only 24-hour orthopedic trauma service in Maine. MMC staff includes the only board-certified pediatric surgeons, pediatric cardiac surgeon, pediatric neurosurgeon and pediatric urologists in Maine."

"MMC addresses a significant portion of Maine's need for inpatient surgical care. MMC accounts for nearly one third of all Maine residents' discharges from Maine hospitals for surgical care. MMC's market share of Maine residents' discharges from Maine hospitals for surgical care is more than 60% of its primary service area, more than 26% of its nine-county secondary service area and more than 6% for residents of the five northern and eastern Maine counties."

"Transcatheter Aortic Valve Replacement procedures (TAVR) are a viable clinical alternative for patients who are considered to be at too great a risk for traditional aortic valve replacement surgery. The Medical Center is the only hospital in Maine at which such procedures are performed."

"Development of MMC's TAVR program triggers the need for a dedicated cardiac hybrid operating room to support performing minimally invasive procedures requiring intraoperative imaging capabilities provided by fixed C-Arm angiography equipment."

"To better support this work, an existing operating room and adjoining space will be turned into a dedicated "cardiac hybrid operating room" equipped with fixed C-Arm angiography equipment."

“MMC is the largest and most comprehensive cardiovascular center in Maine, performing more than 900 cardiac surgeries, 1,300 coronary interventions, and nearly 2,000 invasive electrophysiology procedures/device implantations annually. MMC accounts for nearly 30% of all inpatient cardiovascular discharges in the State of Maine.”

“MMC addresses a significant portion of Maine’s need for inpatient interventional cardiovascular care; MMC accounts for more than 40% of all Maine residents’ discharges from Maine hospitals for interventional cardiovascular care. MMC provides more than 75% of its primary service area’s inpatient interventional cardiovascular care needs, more than 45% of its secondary service area’s inpatient interventional cardiovascular care needs and more than 3% of the inpatient interventional cardiovascular care needs of the five northern and eastern Maine counties.”

“MMC’s Bramhall campus operating rooms are functioning at an unsustainably high utilization rate.”

“The current utilization rate for MMC’s existing 24 Bramhall campus operating rooms is greater than 90%, which is unsustainable. The industry standard and Department guideline for optimal efficiency is 80%. Increasing utilization much beyond 80% to 85% increases the challenges of eliminating threats to patient safety, reduces operating room availability to address emergent and urgent demand, and increases the probability of delaying and canceling scheduled cases. MMC has targeted an 85% utilization rate for its Bramhall surgical services. Delays can be the result of longer than anticipated cases, wait times until a scheduled case is completed and an operating room becomes available or other factors such as equipment or instrument problems.”

“MMC believes that the demand for its complex and emergent surgical services will continue to increase and that improving timely access to MMC’s operating room capacity for the patients needing these services is essential. MMC is Maine’s only American College of Surgeons’ designated Adult Level 1 Trauma Center and offers the most extensive scope of surgical specialties and subspecialties in the state.”

“When emergent and urgent patients disrupt the operating room schedule, scheduled patients encounter delays and cancellations. These delays and cancellations often result in longer lengths of stay for inpatients or in the need to reschedule procedures and return on another day for outpatients. These delays, cancellations and rescheduled cases create disruptions in scheduling for surgeons and staff. These inefficiencies result in avoidable costs to the health care system. The project is an initial step in replacing and modernizing MMC’s interventional capacity.”

“Although they were created less than thirty years ago, MMC’s operating rooms are too small to accommodate the surgical team and equipment required to perform many advanced procedures. MMC’s surgical capacity needs to be replaced with larger operating rooms with more robust infrastructure. MMC needs to increase its hybrid operating room capacity to support minimally invasive surgery requiring intraoperative imaging. Hybrid rooms require more space and place additional demand on infrastructure than routine operating rooms.”

“MMC’s existing operating rooms are undersized. More than half of MMC’s Bramhall operating rooms, built in the early 1980s, are smaller than 500 sf. Today’s standard calls for operating rooms to be a minimum of 600 sf. (Guidelines for Design and Construction of Health Care Facilities, 2006 edition, Facilities Guideline Institute, (American Institute of Architects, Washington, DC), Section 5.3.2.2 (1), p. 78) Hybrid operating rooms are being designed and constructed in the 750 to 1,000 sf. range. MMC

cannot increase the size of its operating rooms in their current location without major disruptions in service.”

“MMC’s surgical capacity requires upgraded electrical, ventilation and air conditioning infrastructure. The infrastructure supporting MMC’s operating rooms, designed in the early 1980s, is not engineered to support the electrical loads, cooling requirements and air exchange needs of contemporary surgical practice.”

“Hybrid operating rooms combine the facility requirements of an operating room with the high level/advanced fixed imaging equipment of an interventional lab. The demand for hybrid rooms is increasing with the emergence of transcatheter devices, such as aortic endografts and transcatheter valves with relatively large French sizes. The potential for procedures involving these devices to convert from endovascular to open surgery poses too high of a patient safety risk to be performed outside an OR setting. Several of these procedures also require advanced imaging and a sterile space because of surgical cut downs. Other cardiovascular cases combine both endovascular and open procedures in a single case; for example, minimally invasive cardiac bypass of one vessel and stenting of another vessel.”

## **B. CONU Discussion**

### **i. CON Standards**

Relevant standards 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. If the applicant is a provider of health care services that are substantially similar to those services being reviewed, and is licensed in the State, the requirements of this paragraph are deemed to have been met if the services previously provided in the State by the applicant are consistent with applicable licensing and certification standards.

### **ii. CON Analysis**

MaineHealth was established to lead a community care network which provides a broad range of health care services for Maine and Northern New England. MaineHealth’s subsidiaries and affiliated organizations provide services along the full continuum of care in order to improve the health status of the population it serves. MaineHealth is the organizational parent of MMC. MMC is the state’s largest medical center. It is licensed for 637 beds and employs more than 6,000 people. MMC is located at 22 Bramhall Street, Portland, Maine.

The purpose of this project is to increase the hospital’s functional capacity through the replacement and modernization of some of its clinical facilities, and modification of its existing infrastructure. This project includes increasing the number of single patient rooms by 128 and construction of 19 universal procedure rooms. CON reviewable capital expenditures are – estimated to be \$392 million.

In order to determine if the applicant is fit, willing and able the CONU will utilize the four quality measures listed below:

- Survey of patients’ experiences
- Timely and effective care
- Complications
- Readmissions and death.

These quality measures are available at <https://www.medicare.gov/hospitalcompare/search.html>. CONU will summarize and analyze the latest data from the website. Data collected was from April 1, 2012 through June 30, 2016. (Data was downloaded from website – May 4, 2017).

**1.) Survey of patients’ experiences:**

Hospital Consumer Assessment of Healthcare Providers and Systems is a national survey that asks patients about their experiences during a recent hospital stay. The following chart summarizes results for MMC and compares them to Maine and National averages.

PATIENT SURVEY RESULTS	MMC	MAINE AVERAGE	NATIONAL AVERAGE
Patients who reported that their nurses “Always” communicated well	77%	83%	80%
Patients who reported that their doctors “Always” communicated well	78%	83%	82%
Patients who reported that they “Always” received help as soon as they wanted	65%	72%	69%
Patients who reported that their pain was “Always” well controlled	73%	73%	71%
Patients who reported that staff “Always” explained about medicines before giving it to them	59%	70%	65%
Patients who reported that their room and bathroom were “Always” clean	70%	80%	74%
Patients who reported that the area around their room was “Always” quiet at night	50%	59%	63%
Patients who reported that YES, they were given information about what to do during their recovery at home	89%	90%	87%
Patients who “Strongly Agree” they understood their care when they left the hospital	52%	58%	52%
Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)	74%	75%	72%
Patients who reported YES, they would definitely recommend the hospital	79%	76%	72%



The patient survey results shown above indicate that MMC scores below Maine averages in nine of eleven categories of patient survey results and above National averages in ten of eleven categories.

**2.) Timely and Effective Care:**

These measures show how often hospitals provide care that research shows gets the best results for patients with certain conditions. This information can help compare which hospitals give recommended care most often as part of the overall care they provide to patients. We looked at available data pertaining to the most common conditions; heart attack care, emergency department care, surgical care, emergency department, preventive care and children’s asthma care.

<b>Timely Heart Attack Care</b>	<b>MMC</b>	<b>Maine Average</b>	<b>National Average</b>
Average (median) number of minutes before outpatients with chest pain or possible heart attack who needed specialized care were transferred to another hospital	Not Available	41 Minutes	59 Minutes
<i>A lower number of minutes is better</i>			
Average (median) number of minutes before outpatients with chest pain or possible heart attack got an ECG	Not Available	7 Minutes	7 Minutes
<i>A lower number of minutes is better</i>			
Outpatients with chest pain or possible heart attack who got drugs to break up blood clots within 30 minutes of arrival	Not Available	80%	59%
<i>Higher percentages are better</i>			
Outpatients with chest pain or possible heart attack who got aspirin within 24 hours of arrival or before transferring from the emergency department.	Not Available	99%	96%
<i>Higher percentages are better</i>			
<i>Higher percentages are better</i>			
<b>Timely Emergency Department Care</b>			





Average (median) time patients who came to the emergency department with broken bones had to wait before getting pain medications	29 Minutes	48 Minutes	52 Minutes
<i>A lower number of minutes is better</i>			
Percentage of patients who left the emergency department before being seen	2%	2%	2%
<i>Lower percentages are better</i>			
Average (median)time patients spend in the emergency department before they were admitted to the hospital as an inpatient	326 Minutes	326 Minutes	335 Minutes
<i>A lower number of minutes is better</i>			
Average (median) time patients spent in the emergency department, after the doctor decided to admit them as an inpatient before leaving the emergency department for their inpatient room	106 Minutes	106 Minutes	134 Minutes
<i>A lower number of minutes is better</i>			
Average time patients spent in the emergency department before leaving from the visit.	258 Minutes	258 Minutes	171 Minutes
<i>A lower number of minutes is better</i>			
Average (median) time patients spent in the emergency department before they were seen by a healthcare professional	48 Minutes	48 Minutes	30 Minutes
<i>A lower number of minutes is better</i>			

<b>Preventive Care</b>			
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Patients assessed and given influenza vaccination	88%	96%	94%
<i>Higher percentages are better</i>			
Healthcare workers given influenza vaccination	74%	84%	86%
<i>Higher percentages are better</i>			
<b>Blood Clot Prevention</b>			
Patients who developed a blood clot while in the hospital who did not get treatment that could have prevented it.	0%	Not Available	2%
<i>Lower percentages are better</i>			
<b>Blood Clot Treatment</b>			
Patients with blood clots who were discharged on a blood thinner medicine and received written instructions about that medicine	82%	91%	93%
<i>Higher percentages are better</i>			
<b>Pregnancy &amp; delivery care</b>			
Percent of mothers whose deliveries were scheduled too early (1-2 weeks early), when a scheduled delivery was not medically necessary	0%	1%	2%
<i>Lower percentages are better</i>			
<b>Timely stroke care</b>			
Ischemic stroke patients who got medicine to break up a blood clot within 3 hours after symptoms started	97%	83%	87%
<i>Higher percentages are better</i>			

MMC is consistent with or slightly worse than Maine averages but lags behind National averages (where information is available).

### 3). Complications:

Patients who are admitted to the hospital for treatment of medical problems sometimes acquire other serious injuries, complications, or conditions, and may even die as a result of these hospital acquired conditions. Some patients may experience problems soon after they are discharged and need to be readmitted to the hospital. These events can often be prevented if hospitals follow best practices for treating patients.

Surgical Complications	MMC	National
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		<b>Rate</b>
Rate of complications for hip/knee replacement patients	B	3.0%
Serious Complications	W	0.90%
Deaths among patients with serious treatable complications after surgery	ND	136.48 per 1,000 patients discharges
<b>Healthcare-associated infections</b>		
Catheter-associated urinary tract infections in ICUs and select wards	W	NA
Surgical site infections from colon surgery (SSI: Colon)	W	NA
Surgical site infections from abdominal hysterectomy (SSI: Hysterectomy)	ND	NA
Methicillin-resistant Syaphylococcus Aureus (MRSA) Blood Laboratory-identified Events (Bloodstream infections)	ND	NA
Clostridium difficile (C. diff.) Laboratory-identified Events (Intestinal infections)	B	NA

B=Better, W = Worse, ND = No Different, NA = Not Available

Out of three measures of surgical complications, MMC scores no different than the National benchmark in one instance, better than the National benchmark in one instance and worse than the National benchmark in one instance. Out of five measures of health care associated infections, MMC scores worse than the National benchmark in two instances, no different from the National benchmark in two instances and better than the National benchmark in one instance.

**4.) Readmission/Death:**

Measures of readmission show when patients who have had a recent hospital stay need to go back into a hospital again for unplanned care within 30 days of leaving the hospital. Measures of death show when patients die, for any reason, within 30 days of admission to a hospital.

<b>Measures</b>	<b>MMC</b>	<b>National</b>
Rate of Readmission for COPD	B	20.0%
Death Rate for COPD	ND	8.0%
Rate of Readmission for Heart Attack Patients	B	16.8%
Death Rate for Heart Attack Patients	ND	14.1%



Rate of Readmission for Heart Failure Patients	B	21.9%
Death Rate for Heart Failure Patients	ND	12.1%
Rate of Readmission for Pneumonia Patients	ND	17.1%
Death Rate for Pneumonia Patients	ND	16.3%
Rate of Readmission for Stroke Patients	ND	12.5%
Death rate for Stroke Patients	ND	14.9%
Rate of readmission for coronary artery bypass graft surgery	ND	14.4%
Death rate for coronary artery bypass graft surgery	ND	3.2%
Rate of Readmission after hip/knee replacement	ND	4.6%
Rate of Readmission after discharge from hospital (hospital-wide)	B	15.6%

ND = no different than the National Rate B = better than the National Rate

The results displayed above show that MMC performed no better or worse than the national rate for complications, readmissions, or death for ten out of fourteen measures and better than the national rate for complications, readmissions, or death for four out of fourteen measures.

CONU also used the Hospital Compare website to get the overall rating of MMC. MMC received an overall rating of 2 out of 5 stars. This overall rating summarized up to 57 quality measures across seven areas of quality into a single star rating for each hospital. Hospitals report data to the Centers for Medicare & Medicaid Services (CMS) through the Hospital Inpatient Quality Reporting (IQR) Program and the Hospital Outpatient Quality Reporting (OQR) Program. The following table illustrates the national distribution of the overall star rating for the 4,598 participating hospitals:

National Distribution of Overall Star Ratings		
Overall Rating	Number of Hospitals	Percentage
5 stars	83	1.18%
4 stars	946	20.57%
3 stars	1794	39.02%
2 stars	694	15.09%
1 stars	112	2.44%
N/A	969	21.07%

The results above indicate that MMC's 2 star rating puts it in the bottom half of the national overall star ratings.



### Survey Results

The results of the most recent surveys for MMC are as follows:

#### Federal Survey

The latest full Federal CMS Survey was conducted on August 22, 2008. A summary statement of deficiencies is on file at CONU. A providers' plan of correction was submitted for all deficiencies by 12/15/2008.

#### Federal Hospital Complaint

A Federal Complaint investigation was conducted on April 4, 2016. The investigation found that Maine Medical Center, an Acute Care General Hospital, is not in substantial compliance with 42 Code of Federal Regulations Part 482, Conditions of Participation for Hospitals. The following deficiency was issued during the onsite complaint investigation:

The hospital must be constructed, arranged, and maintained to ensure the safety of the patient, and to provide facilities for diagnosis and treatment and for special hospital services appropriate to the needs of the community.

MMC submitted a Plan of Correction dated May 13, 2016 which was found to meet the requirements for an acceptable Plan of Correction consistent with the Centers for Medicare and Medicaid (CMS) requirements.

#### State Survey

On November 30, 2016, a State Licensure complaint investigation (ME00023645) was conducted at Maine Medical Partners Otolaryngology Clinic, an outpatient facility under the MMC's Hospital License. Based on the findings of the investigation it was determined that the facility was not in full compliance with the State of Maine Rules for the Licensing of Hospitals, 10-144 C.M.R. Ch 112 or with Maine law at 22 MRSA Chapter 1071 § 4011-A (reporting of suspected abuse or neglect). On September 16, 2016, a physician at Maine Medical Partners Otolaryngology Clinic witnessed the abuse of an intellectually disabled child. The physician appropriately separated the care giver from the child and would not allow the care giver to escort the patient back home. Although clinic staff provided safety for the patient and reported the incident to the home health agency, they failed to notify the Department of the suspected abuse of this minor by a care giver in compliance with statutory requirements. The provider has submitted an acceptable plan of correction and the complaint investigation should be closed in the near future.

### **Deeming of Standard**

As provided for at 22 M.R.S. § 335 (7)(A), if the applicant is a provider of health care services that are substantially similar to those services being reviewed and is licensed in the State, the requirements of this paragraph are deemed to have been met if the services previously provided in the State by the applicant are consistent with applicable licensing and certification standards.

### Navigant Analysis Fit, Willing and Able

Navigant provided CONU with a Maine Medical Center Current State Assessment containing an overview of MMC, an analysis of volume and capacity, an assessment of MMC's market share, an analysis of MMC cost and quality measures, a financial performance summary and a physician alignment summary. Navigant's conclusions are summarized below:

MMC is the largest hospital in Portland and the State of Maine and serves as the only Level 1 trauma center.

In fiscal year 2016, MMC reports that it operated at approximately 93% utilization of its bed capacity where as our experience and the literature suggest that the preferred operating range is between 75%-85% utilization. In addition, most adult medical surgical patients are being cared for in semi-private rooms when the industry standard is moving to single occupancy patient rooms.

MMC and Maine Health enjoy both a strong market position and strong stable financial performance. MMC appears financially sound with a strong margin as well as performance on other financial indicators.

There is an opportunity for improvement in some MMC publicly available quality measures. Some quality measures, such as hospital acquired conditions, may be impacted positively by the CON investment in new facilities and single patient rooms.

## **I. Conclusion**

The CONU recommends that the Commissioner find 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.

### **III. Economic Feasibility**

#### **A. From Applicant**

##### **a. Capacity of the Applicant to Support the Project**

Please refer to Exhibit III-A: MMC's audited financial statements, Exhibit III-B: CON Unit Financial Module, and Exhibit III-c. MaineHealth Credit Rating Letter. These documents demonstrate MMC's ability to support the project financially over its useful life.

MMC has a proven track record of providing high-quality and affordable healthcare to the community. Major commercial payers and large plan sponsors have engaged MMC to participate in value-based insurance products that feature the MaineHealth network of providers, and specifically leverage the value of MMC clinical services.

MaineHealth has demonstrated an ability to enable these insurance products by providing a cost-effective and high quality continuum of care emanating from MMC and its investments in creating a robust primary care network. Commercial insurers and large plan sponsors have also engaged the MaineHealth Accountable Care Organization to participate in accountable care arrangements that reward superior performance in managing costs and utilization, and improve patient safety.

MMC has promoted positive relationships with purchasers through collaboration and transparency. A commitment to these relationships combined with our dedication to health improvement leaves the organization well positioned to work with purchasers in ways that are in the best interests of the communities it serves.

MMC consistently and proactively communicates necessary board-approved price increases to all major commercial payers. In situations where requested price increases are expected to exceed those sought in recent fiscal years, MMC engages purchasers early in the process to allow for proper planning. MMC has negotiated commercial insurance contract provisions which permit reasonable rates of annual price increases and has successfully re-negotiated contracted rates of increase in past years in response to changing financial needs and challenges. MMC anticipates continued support and collaboration from commercial payers and large plan sponsors to help make the investments necessary to provide high-quality and affordable healthcare to the community. Projected price increases associated with the project will largely reflect what has been requested in recent fiscal years from commercial insurers. However, modest incremental price increases above and beyond those sought in recent years will be necessary. Keeping in mind that price increases are just one component of medical trend, MMC will continue its commitment to being a responsible steward of the health care dollar and will continue its efforts to manage overall health care spending through its accountable care activities.

MaineHealth and MMC are committed to ensuring high-quality and affordable health care as evidenced by years of working collaboratively with commercial insurers and large plan sponsors. We are committed to improving per capita health care spending through our ACO value-based contracting activities and community health improvement efforts. We believe there is sufficient capacity to work within an

economic framework that balances the need for upgraded patient care facilities with the affordability of health care.

## **b. Ability of the Applicant to Establish and Operate the Project**

The health care landscape has been in a state of change, particularly since the signing of the Affordable Care Act (ACA). Given the recent changes in the executive and legislative branches of the federal government and continued references to “repealing” the ACA, it is nearly impossible to anticipate the scope of future changes. MMC’s strategic financial plan assumes continued market basket increases at or near 3% annually. Additionally, the strategic financial plan assumes the following:

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- Little or no increase in Medicare or Medicaid payments
- Stable payer mix
- No expansion to the Medicaid program
- Achievement of operational efficiencies based on analyses of national benchmark data
- Stable utilization of hospital services
- Continuation of provider-based billing at existing locations
- Stable levels of bad debt and charity care

Minor changes in the law or regulatory environment impacting these assumptions will likely not jeopardize the overall strategic financial plan. Substantive changes, however, will need to be monitored closely to ensure support of the project.

MMC is fully licensed and accredited, and has been providing services of this scale and scope for years. The Certificate of Need Act states: “If the applicant is a provider of health care services that are substantially similar to those services being reviewed and is licensed in the State, the applicant is deemed to have fulfilled the requirements of this subparagraph if the services provided in the State by the applicant during the most recent 3-year period are of similar size and scope and are consistent with applicable licensing and certification standards.” (22 MRSA §335, sub-1 §7 B)

Please refer to Section II – Fit, Willing, and Able Subsection – Mission, Vision, and Values. Through multiple building projects throughout the history of the organization, MMC has demonstrated its ability to develop new and renovated facilities that meet all licensure and accreditation requirements. The proposed project’s program, and design, developed by a team of health care architects and engineers, and hospital



physicians and staff, are in conformance with Guidelines for Design and Construction of Health Care Facilities, 2006 Edition, Facilities Guidelines Institute, (American Institute of Architects, Washington, DC, 2006) as required by the Department of Health and Human Services' Division of Licensing and Regulatory Services. In addition, the guidelines for Design and Construction of Health Care Facilities, 2014 Edition, Facilities Guidelines Institute, (American Institute of Architects, Washington, DC, 2014) were also used in the proposed project's design. Schematic plans of the project are included in Exhibit I-a. Proposed Environment Details. MMC expects to submit plans to the State Fire Marshall and City of Portland Fire Department when construction drawings are finalized. These reviews and approvals are intended to ensure that the project meets Life Safety Code requirements and are consistent with Licensing and Certification requirements.

## **B. CONU Discussion**

### **i. CON Standards**

Relevant standards 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.
- 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. If the applicant is a provider of health care services that are substantially similar to those services being reviewed and is licensed in the State, the applicant is deemed to have fulfilled the requirements of this subparagraph if the services provided in the State by the applicant during the most recent 3-year period are of similar size and scope and are consistent with applicable licensing and certification standards.

### **ii. CONU Analysis**

In order to assess the financial stability of MMC, the CONU used financial ratios to measure profitability, liquidity, capital structure and asset efficiency. Financial ratios were obtained from the Maine Health Data organization Hospital Financial Information Part 1 and Maine health Data Organization Hospital Financial Data Definitions available on MHDO's website <http://mhdo.maine.gov/imhdo/>. Additional information was obtained from the 2017 Almanac of Hospital Financial and Operating Indicators.



**PROFITABILITY RATIOS**

CONU used three profitability ratios to measure the applicant’s ability to produce a profit (excess of revenue over expenses). Hospitals cannot be viable in the long term without an excess of revenues over expenditures. Cash flow would not be available to meet normal cash requirements needed to service debt and investment in fixed or current assets. Profitability has a large impact on most other ratios. For example, low profitability may adversely affect liquidity and sharply reduce the ability to pay off debt.

**Operating margin:** The operating margin is the most commonly used financial ratio to measure a hospital’s financial performance. The operating margin measures the proportion of operating revenue retained as income, and measures the hospital’s profitability from providing patient care and other hospital operations.

This ratio is calculated as follows: *Operating Income/Total Operating Revenue*

<b>Operating Margin</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Maine Medical	6.25%	5.95%	6.46%	4.91%	7.78%
All Maine Hospital Median	.98%	2.34%	(.29%)	.07%	(.93%)
National Median	NAV	NAV	NAV	NAV	NAV

Performance implications: Increasing values are favorable

**Net Operating Income (Loss):** Net operating income is calculated by subtracting operating expense from operating revenue. This measure is used to look at how a hospital’s net operating income performed in comparison with last years’ figure and whether or not there is a positive or negative trend in the future.

<b>Net Operating Income (Loss)</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Maine Medical	\$45,012,000	\$49,442,185	\$57,064,000	\$47,011,000	\$76,986,000
All Maine Hospital Median	\$762,435	\$1,549,111	(\$108,996)	\$101,000	(\$251,339)
National Median	NAV	NAV	NAV	NAV	NAV

**Return on Equity:** This ratio defines the amount of excess revenue over expenses and losses earned per dollar of equity investment. Most not-for-profit hospitals received their initial, start-up equity capital from religious, educational, or governmental entities, and today some hospitals continue to receive funding from these sources. However, since the 1970s, these sources have provided a much smaller proportion of hospital funding, forcing not-for-profit hospitals to rely more on excess revenue over expenses and outside contributions. Many analysts consider the



Return on Equity measure a primary indication of profitability. A hospital may not be able to obtain equity capital in the future if it fails to maintain a satisfactory value for this ratio. This ratio was calculated as follows: *Excess of Revenue over Expenses/Fund Balance-Unrestricted*

Return on Equity	2010	2011	2012	2013	2014
Maine Medical	10.76%	13.29%	14.60%	10.51%	13.58%
All Maine Hospital Median	4.51%	5.70%	6.90%	6.00%	8.00%
National Median	6.30%	6.40%	5.70%	5.70%	7.30%

Performance implications: Increasing values are favorable

Trends: Nationally many hospitals were showing improvements.

### LIQUIDITY RATIOS

CONU used three liquidity ratios to measure the applicant's ability to meet short-term obligations and maintain cash position. A poor liquidity ratio would indicate that the hospital is unable to pay current obligations as they come due.

**Current Ratio:** Current ratio is a liquidity ratio that measures a company's ability to pay short-term obligations. The ratio is mainly used to determine if the hospital is able to pay back its short-term liabilities (debt and payables with its short-term assets (cash, inventory, receivables). From an evaluation stand point, high values for the Current Ratio imply a high likelihood of being able to pay short term obligations. A ratio under 1 suggests that the hospital would be unable to pay off its obligations if they came due at that point.

This ratio is calculated as follows: *Total Current Assets/Total Current Liabilities*

Current Ratio	2010	2011	2012	2013	2014
Maine Medical	2.53	2.54	2.30	2.24	2.05
All Maine Hospital Median	1.68	1.60	1.37	1.65	1.63
National Median	2.19	2.11	2.14	2.03	2.13

\*Without Board Designated/Undesignated Investments

Performance implications: Increasing values are favorable

Trends: The Current Ratio continues to show improvements across many hospitals. This continued improvement implies that hospitals are generally well managing their liquidity.



**Days Cash on Hand (Current):** Days cash on hand is a common measure that gives a snapshot of how many days of operating expenses a hospital could pay with its current cash available. High values for this ratio usually imply a greater ability to meet short term obligations and are viewed favorably by creditors.

This ratio is calculated as follows: *Cash & Investments + Current Assets Who's Use is Limited/Total Advertising + Salaries & Benefits + Other Operating Expenses + Interest/365 days*

Days Cash on Hand (Current)	2010	2011	2012	2013	2014
Maine Medical	160.2	113.6	108.6	108.6	77.3
All Maine Hospital Median	32.5	26.2	23.7	29.6	26.4
National Median	27.3	25.6	30.2	34.1	35.210

Performance implications: Increasing values are favorable

**Average Payment Period:** This ratio provides a measure of the average time that elapses before current liabilities are paid. Creditors regard high values for this ratio as an indication of potential liquidity problems.

This ratio is calculated as follows: *Total Current Liabilities/total Advertising + Salaries & Benefits + Other Operating Expenses + Interest/365*

Average Payment Period*	2010	2011	2012	2013	2014
Maine Medical	82.2	62.1	67.9	73.6	63.7
All Maine Hospital Median	60.5	62.8	78.1	73.6	76.5
National Median	48.6	50.2	51.8	52.5	55.3

\*Current Liabilities

Performance implications: Decreasing values are favorable.

Trends: Nationally, this ratio has been creeping upwards during the last five years. Large hospitals have some of the higher values as do hospitals with low operating margins.

### CAPITAL STRUCTURE RATIOS

CONU used three capital structure ratios in order to measure the applicant's capacity to pay for any debt. The hospital industry has radically increased its percentage of debt financing over the



past two decades making this ratio vitally important to creditors who determine if a hospital is able to increase its debt financing. The amount of funding available to a hospital directly impacts its ability to grow.

**Debt Service Coverage:** This ratio measures the amount of cash flow available to meet annual interest and principal payments on debt. A DSCR of less than 1 would mean a negative cash flow. This ratio is calculated as follows: *Excess of Revenue over Expenses + Depreciation + Interest/Interest + Previous Years Current LTD*

Debt Service Coverage	2010	2011	2012	2013	2014
Maine Medical	6.29	7.62	8.51	9.12	12.72
All Maine Hospital Median	2.68	4.11	2.76	2.90	2.79
National Median	2.61	2.95	3.05	2.64	2.68

Performance implications: Increasing values are favorable

**Cash Flow to Total Debt:** This coverage ratio compares a company's operating cash flow to its total debt. This ratio provides an indication of a hospital's ability to cover total debt with its yearly cash flow from operations. The retirement of debt principal is not a discretionary decision. It is a contractual obligation that has definite priority in the use of funds. Therefore, a decrease in the value of the Cash Flow to Total Debt ratio may indicate a future debt repayment problem. The higher the percentage ratio, the better the company's ability to carry its total debt. This ratio is calculated as follows: *Excess of Revenue over Expenses + Depreciation/Total Current Liabilities + Total Non- Current Liabilities*

Cash Flow to Total Debt	2010	2011	2012	2013	2014
Maine Medical	20.78%	22.93%	23.32%	26.95%	27.66%
All Maine Hospital Median	15.14%	20.51%	11.86%	12.28%	9.07%
National Median	19.60%	19.00%	21.70%	20.20%	23.40%

Performance implications: Increasing values are favorable.

**Fixed Asset Financing:** This ratio defines the proportion of net fixed assets (gross fixed assets less accumulated depreciation) financed with long-term debt. This ratio is used by lenders to provide an index of the security of the loan. This ratio is calculated as follows: *Long Term Debt/Net Plant, Property & Equipment*

<b>Fixed Asset Financing</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Maine Medical	28.17%	26.06%	23.91%	22.78%	21.62%
All Maine Hospital Median	47.59%	46.06%	52.78%	50.83%	44.85%
National Median	48.40%	50.80%	50.60%	55.10%	54.20%

Performance implications: Decreasing values are favorable.

Trends: Nationally, this ratio has declined for the last three years.

### ASSET EFFICIENCY RATIOS

CONU used two asset efficiency ratios. These ratios measure the relationship between revenue and assets.

**Total asset turnover ratio:** Provides an index of the number of revenue dollars generated per dollar of asset investment. Higher values for this ratio imply greater generation of revenue from a limited resource base and are sometimes viewed as a positive indication of efficiency. This ratio is affected by the age of the plant being used by the hospital. This ratio is calculated as follows:  
*Total Operating Revenue + Total non-operating Revenue/Total Unrestricted Assets*

<b>Total Asset Turnover</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Maine Medical	0.74	0.85	0.88	0.93	0.90
All Maine Hospital Median	1.21	1.21	1.14	1.14	1.14
National Median	1.05	1.07	0.99	1.00	0.98

Performance Implications: Increasing values are favorable

Trends: Nationally, these values have held fairly steady for the last several years.

**Fixed Asset Turnover Ratio:** Measures the number of revenue dollars generated per dollar of fixed asset investment. High values for this ratio may imply good generation of revenue from a limited fixed asset base and are usually regarded as a positive indication of operating efficiency. This ratio is calculated as follows: *Total Operating Revenue/Net Plant, Property, & Equipment*

Fixed Asset Turnover	2010	2011	2012	2013	2014
Maine Medical	1.68	1.93	2.04	2.21	2.28
All Maine Hospital Median	2.63	2.96	2.84	2.80	2.94
National Median	NAV	NAV	NAV	NAV	NAV

Performance implications: Increasing values are favorable

**CONU Summary of Financial Ratios:** Below is a chart summarizing the percentage of time MMC Meets or exceeds Maine or National medians:

MAINE MEDICAL CENTER	RATIO	MAINE	NATIONAL
Profitability	Operating Margin	100.00%	NAV
Profitability	Net Operating Income	100.00%	NAV
Profitability	Return on Equity	100.00%	100.00%
Liquidity	Current Ratio	100.00%	100.00%
Liquidity	Days Cash on Hand	100.00%	100.00%
Liquidity	Avg. Payment Period	80.00%	0.00%
Capital Structure	Debt Service Coverage	100.00%	100.00%
Capital Structure	Cash Flow to Total Debt	100.00%	100.00%
Capital Structure	Fixed Asset Financing	100.00%	100.00%
Asset Efficiency	Total Asset Turnover	0.00%	0.00%
Asset Efficiency	Fixed Asset Turnover	0.00%	NAV

NAV-Not available

MMC meets or exceeds Maine performance averages in 8 out of 11 measures and exceeds National Averages in 6 out of 8 measures.

The applicant addressed this section by submitting their Certificate of Need financial module, audited financial statements prepared by KPMG LLP, and the MaineHealth Credit Rating Letter from Moody's Investors Services as documentation for MMC's ability to support the project financially over its useful life. The applicant's Certificate of Need financial module for year 1 through year 4 of the proposed project (2018 through 2021) shows sufficient revenues to cover the incremental increase in operating expense associated with this project. The services associated with this project are expected to come fully online in 2023. Based on MMC 9/30/2016 consolidated balance sheet and consolidated statements of operations MMC has sufficient financial resources (Cash of \$107,269,000, Investments of \$323,051,000 and Income from Operations of \$61,247,000) to support this proposed project in the event that financial projections are not realized. Moody's Investors has rated MMC's Maine Health and Higher



Educational Facilities Authority's \$27,000,000 Ser. 2015A Reserve Fund Resolution Bonds as A1 with a stable outlook. This is an upper-medium grade and subject to low credit risk. This rating could be slightly downgraded subsequent to the addition of \$300,000,000 in debt associated with this project.

It should be noted that MMC has successfully completed three other capital expansion projects which required Certificate of Need approval. MMC completed a \$25,024,000 expansion of its Emergency Department and Diagnostic Imaging suite in 2007. In 2009 MMC completed a \$5,136,500 renovation of its P-6 Medical/Geriatric Psychiatry Inpatient Unit. MMC completed a \$42,689,390 dollar expansion and renovation of its OR capacity in 2014. CONU is not aware of any upcoming regulatory changes which would adversely affect this proposed project.

#### Bureau of Insurance Analysis

The Bureau of Insurance provided a written assessment of the impact of the project on the cost of insurance in the State. Based on their analysis the impact of this project on the cost of insurance will be an increase of between .1% and 1.9%. Given the magnitude of recent increases in insurance costs and the uncertainties associated with the Affordable Care Act this increase is not significant.

#### Navigant Analysis Economic Feasibility

Navigant conducted an extensive review of MMC's finances regarding the economic feasibility. Navigant's comments are summarized below:

- MMC is financially stable and we anticipate that they can finance the proposed project without any long-term negative impacts on MMC's financial performance.
- While at the higher end, the project is within the expect range of expenditure for a project of its scope and complexity in a geographically constrained area, e.g. need to build on top of existing structures as compared to greenfield location.
- There is some concern regarding the accuracy of the relatively large 7% increase in net patient revenues projected for FY 2022, despite a very moderate 0.8% increase in patient volume. If revenue were to grow at a more modest 4% annual rate it is projected that the operating margin would decline to slightly above breakeven. Fortunately if this scenario arises the organization would still be generating cash from operations because the bulk of increased expense is depreciation.

CONU evaluated the economic assessment completed by Navigant and believe it is most likely a conservative estimate of the increase in patient volume once the project completes the construction phase. The need for patient rooms to house that volume does not marginally impact

the financials in a negative way. The impact on patient need is discussed in the next section, Public Need.

**iii. Conclusion**

CONU RECOMMENDATION: CONU recommends that the Commissioner determine that the applicant 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

### A. From Applicant

This project is needed in order to meet patient care needs now and in the future. The population of Maine is aging. Patients admitted to the hospital are getting sicker. The demand for tertiary-level services is rising and more patients are coming to MMC for care. In order to provide the increasingly complex care services needed in Maine, MMC must make a significant investment to upgrade its facilities' infrastructure.

#### a. Population Need

##### i. Future Needs

MMC is proposing this project in order to provide the facilities to enable its expert care teams to continue to provide the high-acuity care for the state. As the only Level 1 Trauma Center and Academic Medical Center in the State of Maine, it is important for MMC to provide the necessary infrastructure. The population in the State of Maine is expected to decrease by 2% between 2014 and 2034 (State of Maine Office of Policy and Management). In addition, Maine's median age is the highest in the nation and its population over the age of 65 has a faster growth rate than New England and the rest of the nation as acknowledged by CONU (CONU Preliminary Analysis of Coastal Eye Surgery CON application, 2016).

Furthermore, MMC forecasts overall healthcare volumes to decline by 6% between 2017 and 2026. However, assuming recent trends of where patients receive higher acuity care, MMC estimates its number of inpatient discharges to increase roughly 8% even as state-wide volumes are decreasing. MMC developed this estimate considering the following summarized factors.

Each factor is further addressed in the following subsections.

- MMC is Maine's largest medical center, the only American College of Surgeons Level 1 trauma center, the one of three American Academy of Pediatricians Level III nurseries and the largest academic medical center, in partnership with Tufts University School of Medicine and is therefore best equipped to meet the rising patient need.
- The number of Maine Residents seeking care outside of Maine has been decreasing over the past several years.
- MMC's share of inpatient discharges has increased over the past several years.
- MMC's Case Mix Index is increasing.
- Complex healthcare services are consolidating across the country (Cutler & Morton, 2013).

(Chart begins on following page)

**Figure 1 - State of Maine Inpatient Discharge Forecast Calendar Year 2017-2026**

MMC Service Area	County	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
PSA	Cumberland	26,332	26,251	26,169	26,123	26,056	25,997	25,988	26,000	26,040	26,087
	York	17,919	17,805	17,690	17,600	17,492	17,396	17,344	17,314	17,310	17,312
	<b>Primary Total</b>	<b>44,251</b>	<b>44,056</b>	<b>43,859</b>	<b>43,722</b>	<b>43,548</b>	<b>43,392</b>	<b>43,332</b>	<b>43,314</b>	<b>43,350</b>	<b>43,399</b>
SSA	Androscoggin	12,801	12,674	12,543	12,425	12,297	12,172	12,068	11,977	11,903	11,833
	Carroll (NH)	639	633	627	624	620	616	614	612	611	610
	Franklin	3,160	3,109	3,061	3,019	2,975	2,934	2,902	2,876	2,854	2,834
	Kennebec	13,660	13,509	13,359	13,231	13,094	12,964	12,865	12,781	12,715	12,655
	Knox	4,640	4,590	4,538	4,493	4,444	4,399	4,366	4,339	4,319	4,300
	Lincoln	4,168	4,121	4,074	4,034	3,989	3,949	3,919	3,896	3,879	3,864
	Oxford	5,828	5,750	5,675	5,609	5,538	5,473	5,423	5,381	5,347	5,316
	Sagadahoc	3,924	3,878	3,833	3,796	3,757	3,720	3,690	3,665	3,646	3,628
	Somerset	5,514	5,428	5,344	5,269	5,191	5,117	5,058	5,005	4,962	4,920
	Waldo	4,050	4,006	3,963	3,928	3,890	3,856	3,832	3,813	3,799	3,788
	<b>Secondary Total</b>	<b>58,488</b>	<b>57,800</b>	<b>57,121</b>	<b>56,530</b>	<b>55,896</b>	<b>55,301</b>	<b>54,838</b>	<b>54,446</b>	<b>54,135</b>	<b>53,849</b>
TSA	Aroostook	8,903	8,744	8,590	8,451	8,308	8,175	8,071	7,984	7,911	7,843
	Hancock	6,472	6,408	6,347	6,299	6,244	6,195	6,163	6,139	6,124	6,111
	Penobscot	16,146	15,945	15,755	15,592	15,420	15,259	15,139	15,043	14,970	14,904
	Piscataquis	2,761	2,706	2,654	2,609	2,562	2,520	2,486	2,457	2,433	2,410
	Washington	4,026	3,948	3,874	3,810	3,746	3,686	3,638	3,598	3,563	3,531
		<b>Tertiary Total</b>	<b>38,308</b>	<b>37,752</b>	<b>37,219</b>	<b>36,761</b>	<b>36,280</b>	<b>35,835</b>	<b>35,498</b>	<b>35,220</b>	<b>35,002</b>
Missing		1,519	1,509	1,499	1,491	1,482	1,475	1,470	1,467	1,466	1,466
Out-Of-State		1,917	1,909	1,902	1,898	1,893	1,890	1,891	1,895	1,902	1,909
	<b>Grand Total</b>	<b>144,483</b>	<b>143,026</b>	<b>141,600</b>	<b>140,402</b>	<b>139,099</b>	<b>137,893</b>	<b>137,029</b>	<b>136,343</b>	<b>135,855</b>	<b>135,422</b>

Source: MHDO, 2014; MMC Forecast

MMC uses national healthcare consulting firm Sg2 and The Advisory Board to consider additional factors impacting the evolving healthcare industry and local demand for services. Additional factors considered in the volume estimate include:

- Changes in healthcare utilization as a result of changes in the population within the hospital's service area.
- Changes in the underlying causes of disease (i.e. incidence and prevalence of disease and the impacts of a focus on prevention) and behavioral-based impacts to health (i.e. smoking and obesity).
- Macro-economic factors affecting healthcare utilization (i.e. employment, employer-based insurance coverage, health care consumer price index).
- Legislative and market-driven healthcare reform.
- Innovations in technologies and models of care.
- Improvements in the systems of care that improve coordination among providers.
- Continuous process improvements within care models that reduce potentially avoidable admissions and 30-day readmissions.

Given these factors and MMC's historical trends, MMC forecasts inpatient discharge volume as illustrated in **Figure 2 - MMC Historical and Forecasted Inpatient Discharge Volume.**



**Figure 2 - MMC Historical and Forecasted Inpatient Discharge Volume  
Fiscal Years 2012-2026**

Fiscal Year	Total
2012	29,995
2013	29,253
2014	29,132
2015	30,196
2016	30,889
Forecast	
2017	31,123
2018	31,359
2019	31,596
2020	31,836
2021	32,077
2022	32,320
2023	32,564
2024	32,811
2025	33,060
2026	33,310

Source: MMC Internal Data

Over the last three years, the number of Maine residents seeking care in Massachusetts has declined by approximately 3.5%. More Maine residents are seeking care within the State.

**Figure 3 - Maine Outmigration to Massachusetts Fiscal Years 2012-2014**

	MHDO - ME Patients		CHIA - ME Patients	
	Volume	% Change	Volume	% Change
<b>2012</b>	146,863	-	3,507	-
<b>2013</b>	141,170	↓ -3.9%	3,540	↑ 0.9%
<b>2014</b>	141,695	↑ 0.4%	3,379	↓ -4.5%
<b>% Change 2012-2014</b>	<b>-3.5%</b>		<b>-3.6%</b>	

Source: Maine Health Data Organization; MA Center for Health Information and Analysis

### MMC’s Share of Maine Hospitals’ Total Inpatient Discharges.

MMC addresses a significant proportion of Maine’s need for hospital-based services. MMC accounts for 20% of hospital inpatient discharges among Maine hospitals. MMC provides 45% of its primary service area’s hospital discharges, 13% of its secondary service area’s hospital discharges, and 3% of its tertiary service area’s hospital discharges. MMC’s role as a tertiary care and referral center that addresses the healthcare needs of the entire state of Maine is demonstrated by its share of Maine hospitals’ discharges and patient origin. MMC’s specialty and subspecialty clinical services have significant reach beyond Cumberland and York counties (MMC’s primary service area). One-third of MMC’s hospital discharges are patients who reside outside of its primary service area.



**Figure 4 - Maine Hospitals' Total Discharges  
Maine Medical Center Share of Hospital Inpatient Discharges by Patient Residence**

MMC_SERVICE_AREA	COUNTY	CY 2012			CY 2013			CY 2014		
		MMC D/Cs	MMC Share	All ME Hospitals	MMC D/Cs	MMC Share	All ME Hospitals	MMC D/Cs	MMC Share	All ME Hospitals
PSA	Cumberland	13,987	53.7%	26,032	13,532	54.7%	24,751	14,042	56.5%	24,834
	York	4,766	27.1%	17,578	4,586	26.3%	17,433	4,685	27.5%	17,007
	<b>PSA TOTAL</b>	<b>18,753</b>	<b>43.0%</b>	<b>43,610</b>	<b>18,118</b>	<b>42.9%</b>	<b>42,184</b>	<b>18,727</b>	<b>44.8%</b>	<b>41,841</b>
SSA	Androscoggin	1,132	9.0%	12,596	1,022	8.9%	11,459	1,040	8.6%	12,146
	Carroll (NH)	539	80.4%	670	535	81.2%	659	477	75.2%	634
	Franklin	352	10.9%	3,240	324	11.8%	2,747	337	11.0%	3,055
	Kennebec	1,680	12.8%	13,149	1,612	12.5%	12,937	1,583	12.0%	13,242
	Knox	724	16.9%	4,278	707	16.1%	4,400	743	16.6%	4,483
	Lincoln	1,013	25.2%	4,023	903	23.6%	3,828	952	23.4%	4,068
	Oxford	1,039	16.5%	6,289	999	17.8%	5,627	1,009	17.9%	5,647
	Sagadahoc	759	20.4%	3,713	681	19.3%	3,524	770	20.5%	3,753
	Somerset	452	7.9%	5,719	413	7.7%	5,355	481	9.0%	5,335
	Waldo	346	8.8%	3,915	310	8.0%	3,894	280	7.1%	3,917
<b>SSA TOTAL</b>	<b>8,036</b>	<b>14.0%</b>	<b>57,592</b>	<b>7,506</b>	<b>13.8%</b>	<b>54,430</b>	<b>7,672</b>	<b>13.6%</b>	<b>56,280</b>	
TSA	Aroostook	359	4.1%	8,846	314	3.7%	8,545	324	3.7%	8,709
	Hancock	173	2.8%	6,113	170	2.7%	6,278	163	2.6%	6,238
	Penobscot	325	1.8%	17,583	268	1.6%	16,278	362	2.3%	15,608
	Piscataquis	68	3.2%	2,113	98	3.4%	2,866	81	3.0%	2,714
	Washington	97	2.3%	4,159	84	2.1%	4,018	118	3.0%	3,919
	<b>TSA TOTAL</b>	<b>1,022</b>	<b>2.6%</b>	<b>38,814</b>	<b>934</b>	<b>2.5%</b>	<b>37,985</b>	<b>1,048</b>	<b>2.8%</b>	<b>37,188</b>
Missing		37	22.0%	168	14	11.0%	127	436	22.9%	1,907
Maine + Carroll (NH)		27,811	19.9%	140,016	26,558	19.7%	134,599	27,447	20.3%	135,309
Out-of-State		982	30.6%	3,209	922	30.2%	3,050	498	34.3%	1,452
<b>TOTAL</b>		<b>28,830</b>	<b>20.1%</b>	<b>143,393</b>	<b>27,494</b>	<b>20.0%</b>	<b>137,776</b>	<b>28,381</b>	<b>20.5%</b>	<b>138,668</b>

Source: MHDO data: 2012, 2013, 2014 (excluding DRG 795)

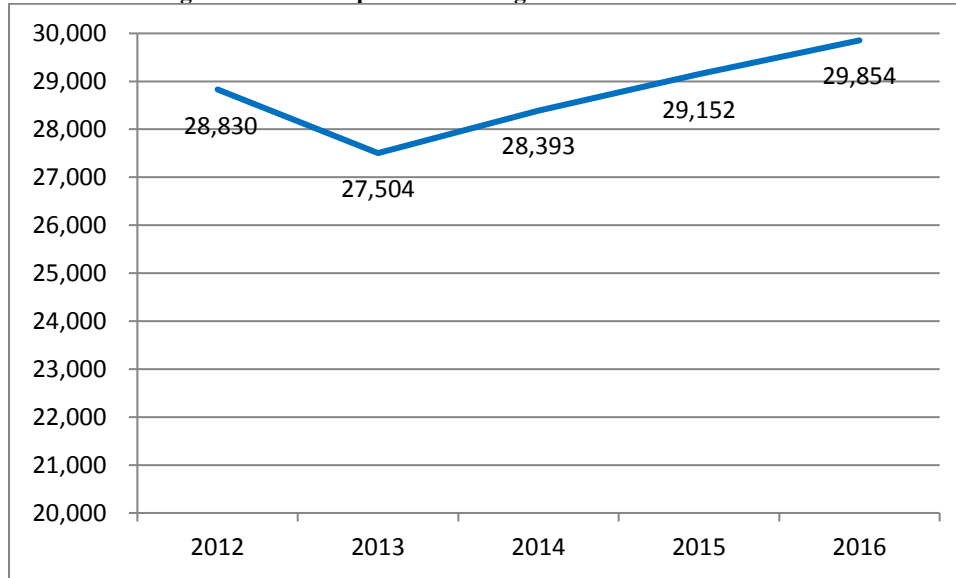
DRG 795 (“normal newborn”) is excluded from these data in order to more accurately represent volume. We believe that excluding DRG 795 more accurately represents patient volume because normal newborns are cared for in separately licensed bassinets and do not require an inpatient bed, acute care services, or complex procedures.

MMC has experienced continued inpatient discharge growth in more recent years. Between calendar years 2012 and 2016, MMC experienced 3.5% total growth and 0.7% combined average growth rate in inpatient discharges.

(Figure 5 continues on next page)



Figure 5 - MMC Inpatient Discharges Calendar Year 2012-2016<sup>1</sup>



Source: MMC Internal Data (Excludes DRG 795)

## ii. MMC's Share of Maine Hospital's Surgical Discharges

MMC's role as a tertiary care and referral center that addresses the healthcare needs of the entire state is demonstrated by its patient origin for surgical discharges. MMC accounts for 32% of all Maine residents' discharges from Maine hospitals for surgical care. MMC provides 60% of its primary service area's inpatient surgical care needs, 26% of its secondary service area's surgical needs, and 7% of its tertiary service area's surgical needs. More than 40% of MMC's total inpatient surgical care patients reside outside of its primary service area.

<sup>1</sup> There is a minor difference between MHDO and MMC internal volumes due to differing definitions of inpatient discharges.

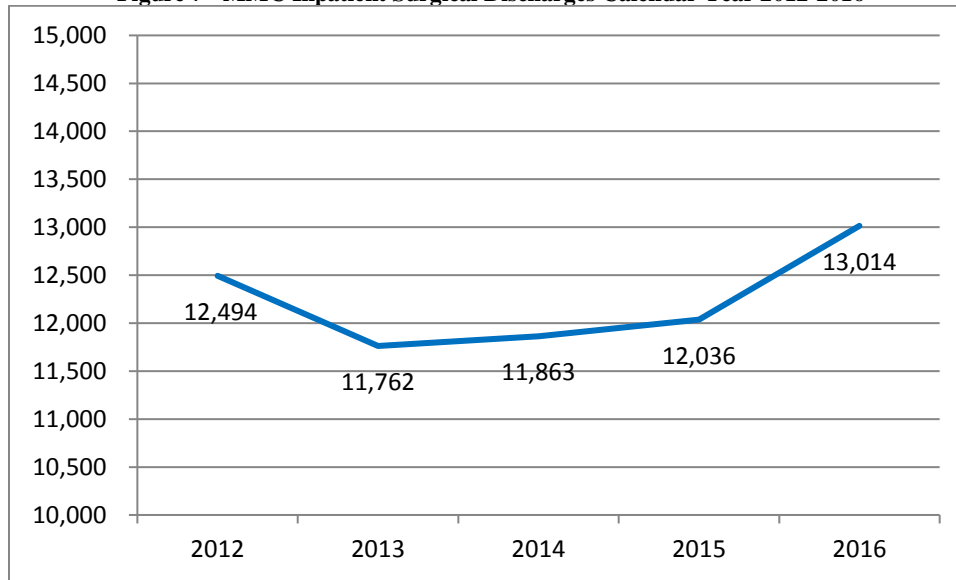
**Figure 6 - Maine Hospitals' Surgical Inpatient Discharges, CY 2012-2014**  
**Maine Medical Center Share of Surgical Inpatient Discharges by Patient Residence**

MMC_SERVICE_AREA	COUNTY	CY 2012			CY 2013			CY 2014		
		MMC Surg	MMC SURG Share	All ME Hospital Surg	MMC Surg	MMC SURG Share	All ME Hospital Surg	MMC Surg	MMC SURG Share	All ME Hospital Surg
PSA	Cumberland	4,843	69.6%	6,958	4,642	68.4%	6,787	4,623	67.2%	6,876
	York	2,150	45.6%	4,719	2,070	45.0%	4,604	2,056	47.6%	4,315
	<b>PSA TOTAL</b>	<b>6,993</b>	<b>59.9%</b>	<b>11,677</b>	<b>6,712</b>	<b>58.9%</b>	<b>11,391</b>	<b>6,679</b>	<b>59.7%</b>	<b>11,191</b>
SSA	Androscoggin	569	17.4%	3,264	473	16.7%	2,838	477	15.2%	3,141
	Carroll (NH)	273	89.5%	305	281	87.5%	321	236	79.7%	296
	Franklin	207	25.7%	804	184	24.7%	744	194	24.2%	801
	Kennebec	1,018	27.4%	3,719	957	27.2%	3,513	952	27.0%	3,529
	Knox	424	37.2%	1,140	413	35.0%	1,180	442	37.0%	1,194
	Lincoln	533	48.5%	1,100	470	45.9%	1,024	511	46.8%	1,091
	Oxford	514	30.6%	1,682	488	33.3%	1,465	469	28.7%	1,633
	Sagadahoc	415	42.3%	980	375	40.7%	921	409	39.7%	1,030
	Somerset	244	17.0%	1,435	241	17.5%	1,374	279	20.1%	1,385
	Waldo	202	16.9%	1,194	182	15.7%	1,159	167	15.3%	1,091
<b>SSA TOTAL</b>	<b>4,399</b>	<b>28.2%</b>	<b>15,623</b>	<b>4,064</b>	<b>28.0%</b>	<b>14,539</b>	<b>4,136</b>	<b>27.2%</b>	<b>15,191</b>	
TSA	Aroostook	244	11.2%	2,179	225	10.4%	2,167	217	10.1%	2,140
	Hancock	114	6.6%	1,731	115	6.9%	1,674	109	6.7%	1,639
	Penobscot	185	4.5%	4,118	158	3.8%	4,106	226	5.9%	3,855
	Piscataquis	65	8.6%	754	67	8.6%	783	46	6.4%	718
	Washington	56	5.1%	1,088	45	4.2%	1,075	67	6.6%	1,022
<b>TSA TOTAL</b>	<b>664</b>	<b>6.7%</b>	<b>9,870</b>	<b>610</b>	<b>6.2%</b>	<b>9,805</b>	<b>665</b>	<b>7.1%</b>	<b>9,374</b>	
Maine + Carroll (NH)		12,056	32.4%	37,170	11,386	31.9%	35,735	11,480	32.1%	35,756
Out of State		438	47.0%	932	372	44.0%	846	388	43.7%	887
<b>TOTAL</b>		<b>12,494</b>	<b>32.8%</b>	<b>38,102</b>	<b>11,758</b>	<b>32.1%</b>	<b>36,581</b>	<b>11,868</b>	<b>32.4%</b>	<b>36,643</b>

Source: MHDO Data: 2012, 2013, 2014

MMC has experienced growth of surgical discharges in more recent years. Between calendar years 2012 and 2016, MMC experienced 4% total growth and 0.8% combined average growth in surgical discharges.

**Figure 7 - MMC Inpatient Surgical Discharges Calendar Year 2012-2016**



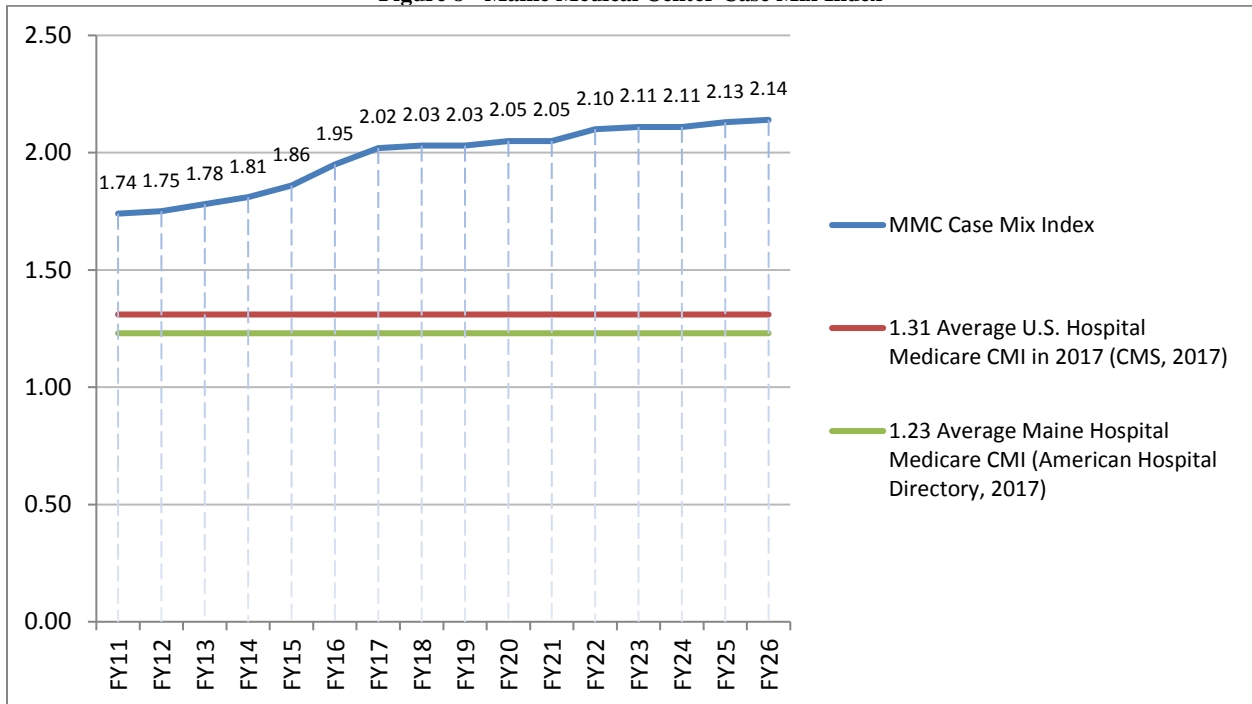
Source: MMC Internal Data

### **iii. MMC Treats Maine’s Sickest Patients**

Patient care is becoming increasingly complex as the population ages and patients present with more severe illness. MMC measures the degree of patient illness using a metric common to the healthcare industry called Case Mix Index (“CMI”). The CMI at MMC fluctuates throughout the year but the average in 2016 was 1.95. The average Medicare case mix index for a hospital in the U.S. is 1.31 (U.S. Centers for Medicare & Medicaid Services, 2017). The average Medicare case mix index for a hospital in Maine is 1.23 (American Hospital Directory, 2017). By 2020, MMC estimates that its CMI will be over 2.00 on average annually.



Figure 8 - Maine Medical Center Case Mix Index



Source: MMC Internal Data

In 2014, 42% of patients needing tertiary services in Maine came to MMC for care. Tertiary services are defined as a set of Medicare severity diagnosis-related groups (MS-DRGs) that are rare and complex, and require collaboration across treatment modalities, complex treatment decisions dependent upon unique diagnostic tests, regionalized care, and those associated with complex comorbidities and complications. MMC follows Sg2’s definition of tertiary services. Sg2 is an international data analytics, intelligence, consulting, and educational service company to which MMC subscribes. Additional information about Sg2’s tertiary definition can be found in **Error! Reference source not found.**





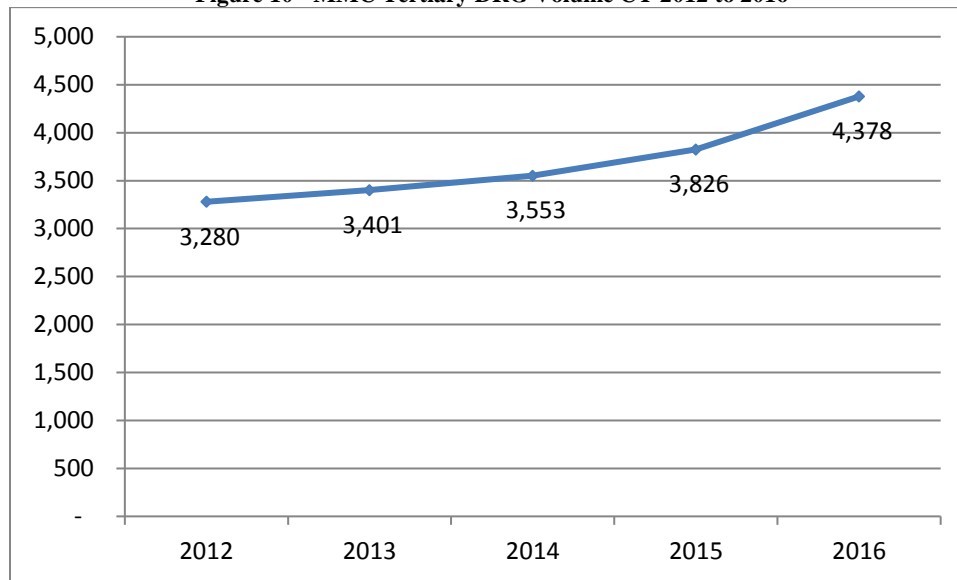
**Figure 9 - Maine Hospitals Share of Tertiary Volume CY 2012 to 2014**

<b>Tertiary Inpatient Discharges</b>						
<b>Hospital</b>	<b>Volume</b>			<b>% of Tertiary Discharges</b>		
	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
MMC	3,280	3,401	3,553	42%	42%	42%
EMMC	1,753	1,804	1,846	22%	22%	22%
CMMC	714	615	857	9%	8%	10%
MaineGeneral	419	477	478	5%	6%	6%
Mercy	313	339	329	4%	4%	4%
St. Mary's	229	254	233	3%	3%	3%
SMHC	186	211	194	2%	3%	2%
St. Joseph	135	127	153	2%	2%	2%
York	113	137	124	1%	2%	1%
Mid Coast	101	107	111	1%	1%	1%
Other	577	583	591	7%	7%	7%
<b>Grand Total</b>	<b>7,820</b>	<b>8,055</b>	<b>8,469</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Sources: Maine Health Data Organization, 2012 - 2014.

In more recent years, MMC has experienced growth in tertiary volume. Calendar year 2015 tertiary service volume was 3,826; calendar year 2016 volume was 4,378. A 33% growth from 2012 to 2016 and a 6% compound annual growth rate year to year over the same period.

**Figure 10 - MMC Tertiary DRG Volume CY 2012 to 2016**



Source: MHDO 2012, 2013, 2014; MMC Internal Data 2015, 2016

Patients with complex diseases or several comorbidities and receiving tertiary-level services often require their own room. Many of MMC's existing semi-private beds are closed on a daily



basis (see Figure 13 - MMC Inpatient Bed Utilization Fiscal Year 2013-2026) in order to provide the level of privacy required or to protect other patients from drug-resistant organisms. This stresses MMC’s bed complement to high capacity (see subsection). Converting MMC’s current compliment of licensed beds to private rooms will prepare MMC to address this growing demand.

MMC expects the number of critically-ill patients seeking care from MMC will rise in the coming years. Sg2, a national healthcare consulting firm, forecasts that the demand for tertiary services in Maine will increase by 5% between 2014 and 2024.

Figure 11 - State of Maine Tertiary Volume Forecast 2014-2024

	2014 Actual	2024 Forecasted	2014-2024 Change
DRG	Discharges	Discharges	
<b>Grand Total</b>	<b>8,461</b>	<b>8,885</b>	<b>5.0%</b>

Source: Sg2

**b. Patient Need**

**i. Access to Care: Beds**

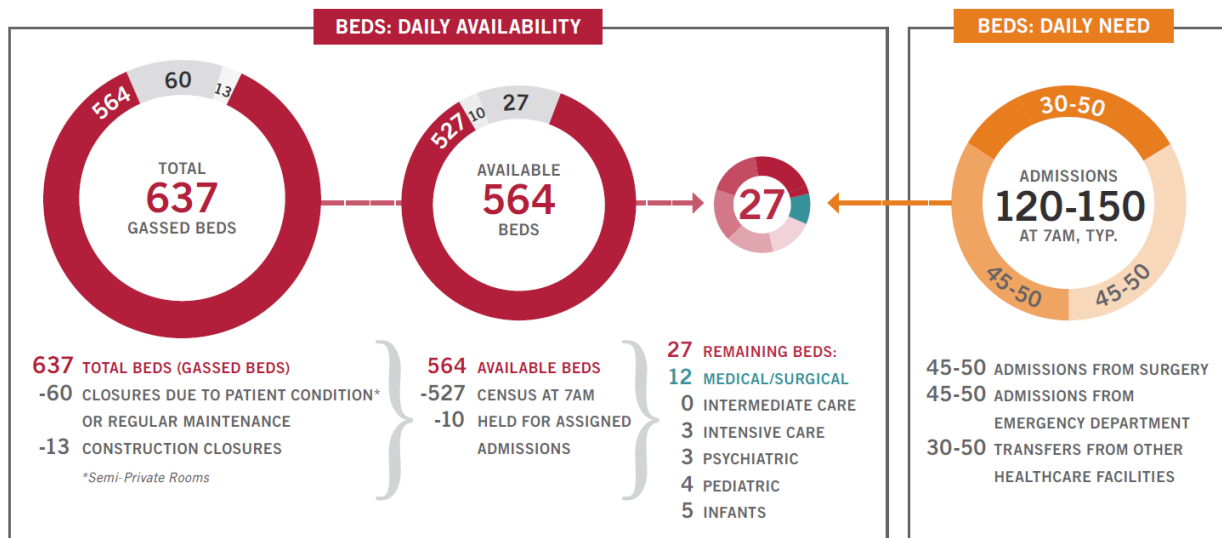
On an average day, MMC can expect over 500 patients in the hospital and over 60 beds closed. On a routine day, MMC can expect approximately 100 admissions from Surgery and the Emergency Department and 30 to 50 transfer requests per day from other healthcare and provider organizations.

MMC routinely closes inpatient beds due to patient condition such as infection from disease-resistant organisms (DROs) or behavior related issues, room sharing restrictions such as male/female, and regular building maintenance. On average more than 60 beds are closed each day for these reasons. This along with construction closures for renovations and repairs reduces MMC’s licensed bed capacity of 637 beds to an effective bed capacity closer to 560.

While MMC is licensed to operate 637 inpatient beds, the medical center operates at capacity with a census in the mid-500s. When 500 patients are in the hospital and over 60 beds are closed, a limited number of inpatient beds are available for new patients. Inpatient beds are specialized for medical/surgical, intermediate care, intensive care, psychiatric, pediatric, or infant care services. The actual number of beds available for specific populations of patients is much smaller. For example, if a patient needs a critical care bed but, the only beds that are available are general medical/surgical, then MMC struggles to meet that patient’s needs. The graphic below demonstrates a snapshot of the challenge MMC is faced with daily. Information for this graphic is from July 28, 2016 at 7:00 AM.



**Figure 12 - A Day in the Life at Maine Medical Center  
 Thursday July 28, 2016, 7:00 AM**



Source: MMC Internal Data

This poses a daily challenge for the staff at MMC to meet the needs of patients in the State of Maine. MMC Care Teams assemble each morning in a daily “huddle” to assess immediate needs and identify solutions. The huddle reviews the current number of patients at MMC and nearby healthcare organizations (Spring Harbor, Mercy, Southern Maine Healthcare, New England Rehabilitation, and Hospice of Southern Maine), the number of pending admissions and discharges, and patient safety related information. These huddles are facilitated by MMC’s Operational Excellence Team which supports patient care improvement efforts all over the hospital. More information on this team is provided in Section VI – Outcomes and Community Impact.

In addition to the daily huddle, a specialized team of clinicians called One Call Central operate like air traffic controllers to direct patient flow into the hospital. Their role is to connect with other care providers throughout the State, assess patient needs, and determine the best way to meet those needs.

In fiscal year 2016, MMC operated at close to 93% of its bed capacity for both inpatient and outpatients. Literature indicates that the most efficiently run facilities operate at 75-80% for semi-private rooms and 80-85% of private rooms. The recommended average occupancy rate allows for fluctuation between the average and the maximum number of patients in house at any time. (The Advisory Board Company, 2009)

**Figure 13 - MMC Inpatient Bed Utilization Fiscal Year 2013-2026**

FYE	Historical				Forecast											
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
Inpatient Discharges	29,253	29,401	30,196	30,889	31,123	31,359	31,596	31,836	32,077	32,320	32,564	32,811	33,060	33,310		
ALOS (Days)	5.11	5.28	5.42	5.37	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4		
ALOS (Hours)	123	127	130	129	129.60	130	130	130	130	130	130	130	130	130		
IP Patient Hours	3,587,588	3,725,695	3,927,896	3,980,974	4,033,536	4,064,087	4,094,870	4,125,885	4,157,136	4,188,623	4,220,349	4,252,315	4,284,524	4,316,976		
Outpatients in a Bed	13,921	16,991	14,620	15,730	15,746	15,761	15,777	15,793	15,808	15,824	15,840	15,856	15,871	15,887		
Outpatient ALOS (Days)	1.88	1.83	1.84	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88		
Outpatient ALOS (Hours)	45.15	43.94	44.27	45.11	45.12	45.12	45.12	45.12	45.12	45.12	45.12	45.12	45.12	45.12		
Overnight OP Hours	628,464	746,544	647,232	709,632	710,444	711,151	711,859	712,568	713,277	713,988	714,698	715,410	716,122	716,835		
Licensed Beds	637	637	637	637	637	637	637	637	637	637	637	637	637	637		
Average Bed Closures	61	61	61	61	61	61	61	30	30	10	10	10	10	10		
Beds Available	576	576	576	576	576	576	576	607	607	627	627	627	627	627		
Available Bed Hours	5,045,760	5,045,760	5,045,760	5,045,760	5,045,760	5,045,760	5,045,760	5,317,320	5,317,320	5,492,520	5,492,520	5,492,520	5,492,520	5,492,520		
Utilization	83.56%	88.63%	90.67%	92.96%	94.02%	94.64%	95.26%	90.99%	91.60%	89.26%	89.85%	90.45%	91.04%	91.65%		

Source: MMC Internal Data

When the proposed project is complete, MMC’s bed compliment will be 80% private. MMC’s current bed compliment is 49% private. Fewer bed closures are expected with more private beds.

MMC adjusted the Advisory Board target occupancy rates for adult and pediatric acute, intermediate, and critical care services. The target occupancy rate for critical care and women’s obstetrics beds are lowest to allow for the higher variation in demand experienced in these areas and the need for urgent and emergent availability. Occupancy targets for intermediate, general acute, behavioral, and newborn beds are higher because of lower variation and relative predictability in demand.

**Figure 14 - MMC Target Occupancy Rates by Service**

Bed Type	Sizing Occupancy Target
<b>Adult Beds</b>	-
ICU	75%
IMC	80%
General Acute	82%
W’s-OB AP/PP	75%
Behavioral	82%
<b>Children’s</b>	-
PICU	75%
Peds-General	82%
<b>Newborn</b>	-
NICU	82%
CCN	82%

Source: The Advisory Board; MMC Internal Data

These occupancy targets are an objective for MMC’s Master Facility Planning. The proposed project takes a major step towards reaching these targets, but does not achieve them because of financial limitations. Future phases of MMC’s Master Facility Planning will make additional progress towards these targets.



## **ii. Access to Care: Air Ambulance**

There were 450 patients transported to MMC by air between July 1, 2015 and June 30, 2016. During the same period, there were 23 instances when two helicopters were landing at MMC's helideck within the same 1 hour period. This can cause a dangerous situation and delays in patient care. In MFP IIB, MMC proposes to relocate its helideck and increase the number of decks from 1 to 2 in order to avoid these situation and delays in patient care.

## **iii. Access to Care: MMC's Access Teams**

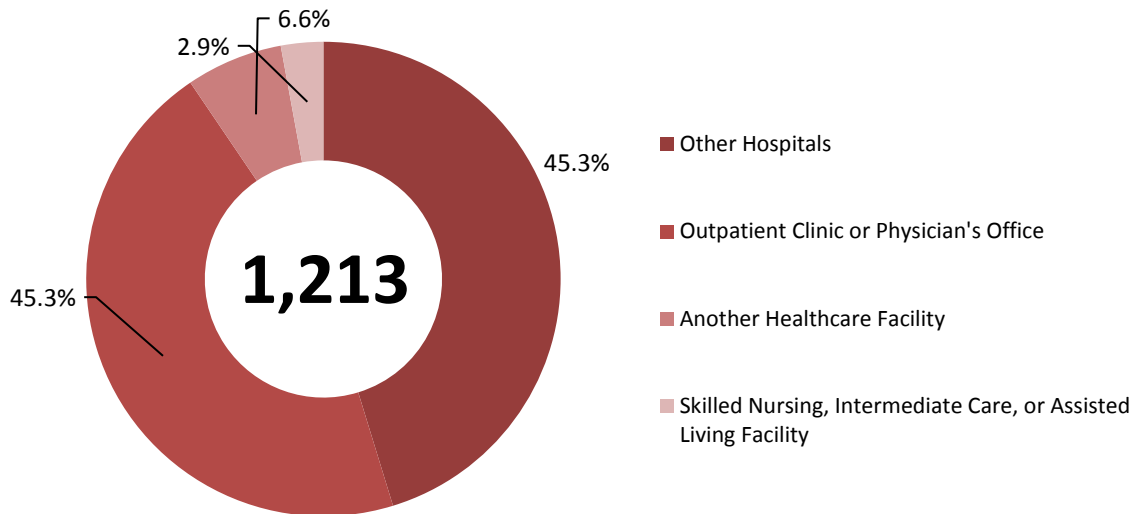
MMC's Access Teams work collaboratively with other hospitals to find the best care environment for each patient to ensure efficient use of available bed capacity at MMC. These teams actively manage all transfer requests taking into account the demand and supply for MMC's inpatient beds through a four step, patient-centered process.

One Call Centrals Process for Referrals from other Maine medical facilities:

1. Care Management and Assessment: MMC works with referring healthcare providers to define the medical necessity for a transfer request. MMC speaks with the onsite care team to further clarify the patient's individual needs.
2. Bed Management: Once the request is made and the medical necessity defined, MMC looks internally for available beds. Often, beds are not immediately available due to high occupancy and insufficient capacity.
3. Triage: If beds are unavailable, MMC maintains communication with the referring provider to determine any change in patient condition. Due to constrained capacity and a high demand for MMC's care services, an average of 5-10 patients per day are on the waiting list for transfer to MMC.
4. Transfer: Once a bed becomes available, the MMC team assists with the transfer by collecting additional information about the patient to communicate to the MMC department who will care for the patient upon arrival.

This team tracks the number of transfer requests into MMC every month. In fiscal year 2016, MMC received an average of more than 1,200 transfer requests.

**Figure 15 – Monthly Average Patient Transfer Requests from Other Medical Facilities to MMC  
Fiscal Year 2016**



Source: MMC Internal Data

MMC’s Access Teams are currently split into four groups that focus on specific patient populations. Data are collected manually by these four teams. In 2017, MMC is taking steps to consolidate the efforts of these four teams and improve data reporting by digitizing data collection. However, some data are collected that are relevant to demonstrating the challenge MMC faces when considering access to care.

In 2016, one of the four access teams at MMC recorded 434 withdrawn transfers and 107 unmet transfers. Common reasons a transfer was withdrawn include that the patient was discharged home or left the hospital against medical advice, the patient stayed at the referring hospital, or the patient was transferred to another hospital. Some reasons for a withdrawn transfer request are unknown.

**Figure 16 - MMC's Triage Access Team's Manually Recorded Patient Transfer Data  
CY 2016**

2016 Month	January	February	March	April	May	June	July	August	September	October	November	December	CY 2016 Total
Unmet Transfers	5	11	14	10	17	9	3	9	9	5	12	3	107
Withdrawn Transfers	42	35	27	40	45	31	34	40	40	35	33	32	434
<b>Reasons for Withdrawal</b>													
Discharged Home or Against Medical Advice	5	0	0	5	6	4	8	8	4	8	1	4	53
Stayed at Referring Hospital	13	8	5	5	10	8	8	11	9	11	10	5	103
Transfer to Other Hospital	20	20	13	22	17	12	11	16	22	13	14	19	199
Unknown Disposition	4	7	9	8	12	7	7	5	5	3	8	4	79

Source: MMC Internal Data



**iv. Access to Care: Operating Rooms**

MMC’s Bramhall campus’s operating rooms are functioning at greater than 90% utilization rate. Literature recommends between 75-85% utilization rate for optimal efficiency (Tyler, Pasquariello, & Chen, 2003).

MMC believes that the demand for its complex and emergent procedural services will continue to increase (refer to earlier discussion on Future Need). Improving timely access to procedure room capacity for these patients is essential. MMC is Maine’s only American College of Surgeons’ designated Adult Level 1 Trauma Center and offers the most extensive scope of procedural specialties and subspecialties in the state (refer to Section II – Fit, Willing, and Able Subsection - Scope of Services). MMC is Maine’s only provider with the resources to implant Left Ventricular Assist Devices (LVAD). A VAD offers patients suffering from advanced heart failure a viable alternative or bridge to heart transplant.

When emergent and urgent patients require surgical care, scheduled patients encounter delays and cancellations. These delays and cancellations often result in longer lengths of stay for inpatients or the need to reschedule procedures and return on another day for outpatients. These delays, cancellations and rescheduled cases create challenges for patients and families.

This project will increase the number of available procedure rooms at MMC’s Bramhall Campus from 28 and 1 minor procedure room to 36 and 1 minor procedure room. The procedure rooms are expected to open in 2022. Overall utilization will drop to between 75%-85% when the additional capacity is ready for use.

**Figure 17 - MMC Operating Room Utilization Fiscal Years 2014-2026**

MMC Bramhall Surgical Services													
FYE	2014	2015	2016	Forecast									
				2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Inpt. Cases	11,391	11,785	12,292	12,462	12,634	12,809	12,986	13,165	13,347	13,531	13,718	13,908	14,100
Outpt. Cases	9,189	9,606	10,231	10,307	10,383	10,460	10,537	10,615	10,694	10,773	10,853	10,933	11,014
Total Cases	20,580	21,391	22,523	22,769	23,017	23,268	23,523	23,780	24,041	24,304	24,571	24,841	25,114
Demand during Scheduled Hours (excludes off shift cases)													
Case Hours	53,019	55,129	60,286	60,944	61,609	62,282	62,963	63,652	64,349	65,054	65,768	66,491	67,222
Available ORs.	24	24	28	28	28	28	28	28	28	36	36	36	36
Scheduled Hrs.	57,000	57,000	66,500	66,500	66,500	66,500	66,500	66,500	66,500	85,500	85,500	85,500	85,500
Utilization	93.0%	96.7%	90.7%	91.6%	92.6%	93.7%	94.7%	95.7%	96.8%	76.1%	76.9%	77.8%	78.6%

Figure 18 Source: MMC Internal Data

**v. Access to Care: Catheterization/Electrophysiology Laboratories**

MMC’s Catheterization/Electrophysiology Laboratories (“Cath/EP Labs”) are used to provide patients with Cardiac Catheterizations (“Cath”) and Electrophysiology Studies (“EP”). Cardiac catheterization is a minimally-invasive test to check essential functions of a patient’s heart (i.e. blood flow to coronary arteries and functionality of the heart chambers, valves, and wall). Electrophysiology studies measure electrical activity in a patient’s heart. These studies can identify abnormal heart rhythms that standard



tests cannot and pinpoint the location in order for the patient’s care team to correct it. These are complex procedures requiring an operating room-like environment with anesthesia services.

MMC provided care to 13,906 patients in the Cath/EP labs in fiscal year 2016 and operated at 99.7% utilization of its 7 procedure rooms.

Cath/EP labs are currently located in MMC’s Richards Building on the 8<sup>th</sup> floor. When the new procedural platform opens, the Cath/EP labs will be relocated and total capacity will increase to 9 rooms. With the addition of these two rooms, utilization is anticipated to decrease to between 80%-90%.

**Figure 19 - Catheterization / Electrophysiology Laboratory Utilization at MMC Fiscal Years 2014-2026<sup>2</sup>**

Catheterization/Electrophysiology Laboratory Utilization													
FYE	2014	2015	2016	Forecast									
				2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Inpt. Cases	6,533	6,974	6,692	6,804	6,918	7,034	7,151	7,271	7,393	7,516	7,642	7,770	7,900
Outpt. Cases	6,689	6,771	7,214	7,289	7,365	7,441	7,519	7,597	7,676	7,756	7,836	7,918	8,000
Total Cases	13,222	13,745	13,906	14,093	14,283	14,475	14,670	14,868	15,068	15,272	15,478	15,688	15,900
Procedure Time (hours)	17,678	18,377	18,592	18,842	19,096	19,353	19,614	19,878	20,147	20,419	20,695	20,974	21,258
Available Rooms	7	7	7	7	8	8	8	8	9	9	9	9	9
Scheduled Time (Hours)	18,970	18,970	18,640	18,970	21,674	21,674	21,674	21,674	24,383	24,383	24,383	24,383	24,383
IR Room Utilization Rate	93.2%	96.9%	99.7%	99.3%	88.1%	89.3%	90.5%	91.7%	82.6%	83.7%	84.9%	86.0%	87.2%

Source: MMC Internal Data

## vi. Access to Care: Staffing

Additional staff will be required to provide patient services in the proposed spaces. MMC is prepared to attract these highly skilled clinicians and fill these roles.

MMC is Maine’s only academic medical center partnered with Tufts University School of Medicine, and home to the largest biomedical research center in northern New England. MMC partners with local academic institutions in addition to a formal affiliation with Tufts University School of Medicine to offer educational opportunities to patients and families, employees, communities, medical students, medical residents and fellows, nursing students, pharmacy students, and medical technologists. Many of Maine’s future healthcare work force is educated at MMC.

MMC was first recognized as a Magnet Hospital in 2006. The ANCC Magnet Recognition Program is viewed by prospective nurses and others around the world as the ultimate seal of quality and confidence. Magnet organizations are recognized for superior nursing processes and quality patient care, which lead to the highest levels of safety, quality, and patient satisfaction. MMC is one of only two hospitals in Maine with this designation. In 2017, MMC is seeking its third designation as a Magnet Hospital by the ANCC. Approximately 7% of hospitals in the United States have this prestigious designation, with approximately 2% designated for a third time.

MMC works with local, state and national partners to recruit talented people nationally and internationally. MMC’s clinical and non-clinical internship programs are promoted at many colleges

<sup>2</sup> MMC plans to complete a minor renovation and open 1 additional Cath/EP lab on the 8<sup>th</sup> floor of the Richards Building in order to alleviate capacity constraints.





throughout New England, and MMC provides onsite education for various certification programs to educate Maine’s future healthcare workforce. In 2016, 87% of all positions posted at MMC were filled and 83% of nursing positions were filled. MMC received 372 nurse applications in January 2017 alone. As demonstrated in **Figure 20 - MMC 2016 International and Domestic Recruits** MMC recruited employees from all over the U.S. and abroad in 2016.

**Figure 20 - MMC 2016 International and Domestic Recruits**

State	Number of Hires	State	Number of Hires
Alaska	1	Nevada	1
Arizona	3	New Hampshire	39
California	4	New Jersey	7
Colorado	5	New York	11
Connecticut	5	North Carolina	6
Florida	7	Ohio	3
Idaho	2	Oregon	1
Illinois	4	Pennsylvania	3
Iowa	1	Rhode Island	4
Kansas	1	South Carolina	1
Kentucky	1	Tennessee	2
Maine	1800	Texas	2
Maryland	2	Vermont	8
Massachusetts	37	Virginia	5
Michigan	3	Washington	4
Minnesota	3	Wisconsin	1

Country	Number of Hires
Brazil	1
Canada	1
Ireland	1

Source: MMC Internal Data

**vii. Access to Care: MMC’s Ongoing Community Benefit**

MMC provides a full range of healthcare services to all patients regardless of ability to pay. MMC provides care to patients who meet certain criteria under its charity care policy without charge or at amounts less than established rates. Because MMC does not pursue collection of amounts determined to qualify as charity care, they are not reported as net patient service revenue.

MMC provided charity care estimated to cost \$14,227,963 in fiscal year 2015. In addition to charitable care, MMC provided care to those either unable or unwilling to pay (bad debt) estimated to cost an additional \$14,945,004 in fiscal year 2015. The total 2015 MMC community benefit for charity care and bad debt was \$29,172,967. The 2015 MaineHealth community benefit amount and the amount of community benefit for all MaineHealth members is available in **Error! Reference source not found.**

As a not-for-profit institution dedicated to community service, MMC provides many services to the community in addition to its range of healthcare services. These include a large percentage of all free care



delivered in Maine, an International Clinic for Portland's immigrant and refugee population, the AIDS Consultation Service, the Northern New England Poison Center and the MMC Preble Street Learning Collaborative- a community based clinic in the bayside neighborhood of Portland. The Learning Collaborative, developed by MMC and Preble Street, has three main goals: 1) help improve the health of at-risk homeless patients; 2) demonstrate the effect of a population-based approach to health care for these individuals; and, 3) assure the education of future physician in health care disparities.

Maine Medical Partners' (MMP) practices provide local access to healthcare services by operating outreach clinics at various MaineHealth member and affiliate hospitals. Please refer to **Figure 25 - MMP Practice Offices and Hours outside of Portland as of December 2016** for more information. MMP surgical practices also provide call coverage at various MaineHealth member hospitals, a critical support that helps maintain local surgical care in those communities. (Orthopedic Trauma – Miles Memorial Hospital and Pen Bay Medical Center under development; Otolaryngology – Stephens Memorial Hospital and Southern Maine Medical Center; General Surgery, Trauma and Critical Care – Miles Memorial Hospital, and Urology – Stephens Memorial Hospital).

### **viii. Access to Care: Maine's Disaster Care Center**

MMC is Maine's only Level 1 Trauma Center verified by the American College of Surgeons. In the event of a major disaster, members of the community would look to MMC for care. This project adds 128 private universal rooms. This will allow MMC to increase the number of private rooms while maintaining the necessary surge capacity to accommodate our responsibility as the regions only Level 1 trauma center in case of disaster.

**c. Building Need**

**i. This project is a major step in replacing and modernizing MMC’s aging infrastructure.**

Facilities at MMC date back to the 1870’s with the construction of the Maine General Building. Since the early 1900’s, MMC has grown to meet the needs of the community.

**Figure 21 - Summary of MMC Facilities**

Facility	Year Built	Years Old	Square Feet	Current Use
Pavilion C-D*	1956	60	83,464	Outpatient Clinic, Inpatient Care
New Diagnostic Facility*	1976	40	89,147	Procedure Space, Imaging
Richards Building*	1968	48	228,920	Cafeteria, Inpatient Care
Bean Building*	1985	31	231,834	Procedure Space, Intensive Care, Barbara Bush Children's Hospital
East Tower*	2008	8	200,000	Women's and Infant Care
Maine General Building	1870	146	72,915	MMC Administration
Annex B	1880	136	36,252	MMC Administration
Annex C	1880	136	13,192	MMC Administration
Annex A	1929	87	10,111	MMC Administration
Engineering Service Building	1978	38	23,836	Facility Support
Pavilion A	1929	87	66,375	MMC Administration
Dana Center	1987	29	19,306	Conference Center
Parking Garage #1	1973	43		Employee Parking
Parking Garage #2	2008	8		Visitor Parking

\*Clinical Services

A building assessment was completed by a team of engineers in 2015 that evaluated essential systems in each of the buildings that comprise MMC’s campus. **Figure 22 - 2015 MMC Campus Building Assessment** is a summary of that report.



Figure 22 - 2015 MMC Campus Building Assessment

16 July 2015

Existing Facilities Evaluation	GARAGES		EAST TOWER		BEAN		DANA		RICHARDS		NDF		PAVILIONS		ESB		ANNEXES			MAINE	
	Parking One	Parking Two	Year	2008	1985	231,834	1987	19,306	1968	228,920	1976	89,147	1978	23,836	1929	66,375	1870+	1870+	1870+	1870+	1870+
Architecture	1-10	1-8	2008	2008	1985	231,834	1987	19,306	1968	228,920	1976	89,147	1978	23,836	1929	66,375	1870+	1870+	1870+	1870+	1870+
Foundations																					
Framing																					
Exterior Walls																					
Openings																					
Roofing																					
Interior Finishes																					
Vertical Transport																					
Barriers-Free Access																					
Heating/Aesthetics																					
Building Plate																					
HVAC																					
Piping Distribution																					
Air Distribution																					
Control Systems																					
Energy Efficiency																					
Air Quality																					
PLUMBING																					
Water																					
Sanitary																					
Storm																					
Medical Gases																					
FIRE PROTECTION																					
Standpipes																					
Sprinklers																					
ELECTRICAL																					
Normal Distribution																					
Emergency Distribution																					
Capacity																					
Separation of Systems																					
Fire Alarm System																					
Lighting																					
Communications																					
SITE ACCESS																					
Pedestrian																					
Vehicular																					
Public Transit																					
Signage																					
Grounds																					

**RATING CODE:** Excellent, Very Good, Good, Fair, Poor



Source: AKF Assessment of MMC Campus Buildings

Please refer to **Error! Reference source not found.** for more details.

Close to 77% of MMC's clinical activities occur in buildings more than 30 years old. Nearly half of MMC's operating rooms are smaller than 500 square feet and over half of MMC's inpatient beds are in semi-private rooms.

The Guidelines for Design and Construction of Health Care Facilities created by the Facility Guidelines Institute (FGI) define the minimum required space and clearances for specific programs. Section 2.1 of these guidelines defines specifically the needs for General Hospitals, including 2.1.5.3.2 for Operating and Procedure Rooms and 2.1.5.3.2 for Critical Care Units. These standards along with industry and best practices were evaluated in the design process for MFP IIB. Based upon these elements, the proposed procedure rooms are approximately 650 square feet and private inpatient rooms are approximately 350 square feet to fit the required clearances around the bed and associated programs required for staff, patients, and family members. (FGI 2014)

MMC's Care teams work collaboratively with MMC's Facilities and Engineering teams to ensure patients are cared for in the best possible environment. This requires continuous maintenance and improvements to the facilities. The remaining opportunities for improvement and retrofits in the existing buildings are marginal. It is impossible to enlarge operating rooms or make semi-private rooms private without major disruptions to the delivery of patient care, reduction in capacity, major facility expansion, or some combination.

## **ii. Health Status Impact: This project will have a positive impact on the health status indicators of the population to be served.**

This is an infrastructure investment project for MMC and an integral part of MaineHealth's health status improvement, clinical integration and quality improvement initiatives, which is expected to positively impact the health status of the population over time. MMC's inpatient rooms and procedural spaces will be partially replaced with newly designed universal inpatient and procedure rooms.

Please see section VII. Service Utilization for further information on MaineHealth initiatives.

## **iii. Health Status Impact: Inpatient Rooms**

The universal inpatient rooms proposed in this project will be private and equipped with the infrastructure to meet acute care, intermediate care, and critical care needs. Guidelines for Design and Construction of Hospitals and Outpatient Facilities" (2014 ed.) states:

**The maximum number of beds per room in a medical/surgical nursing unit shall be one unless the necessity of a two-bed arrangement has been demonstrated in the functional program. Two beds**

**per room shall be permitted when approved by the authority having jurisdiction.”(FGI 2014 2.2-2.2.2.1(1)<sup>3</sup>**

None of MMC’s programs require semi-private rooms. The addition of more private rooms will allow MMC to more effectively utilize its licensed bed complement by reducing the number of beds closed per day. See **Figure 13 - MMC Inpatient Bed Utilization Fiscal Year 2013-2026** for additional details on bed closures.

The inpatient rooms are designed to reduce the risk of infection. Patient room zones will be dedicated to patient/family traffic and staff traffic. Providing sufficient space in these rooms to accommodate these functions will reduce the risk of contamination by limiting cross-circulation of patients, visitors, and staff. Please see **Error! Reference source not found.** for more information on the design concepts that are incorporated into MMC’s new patient room design.

Studies suggest that the benefits of private rooms include reduced risk of airborne infection and infections transmitted via contaminated surfaces (Detsky & Etchells, 2008) and a significant reduction in bacterial infections and reduced length of stay (Teltsch, Hanley, Loo, Goldberg, Gursahaney, & Buckridge, 2011).

In addition, we expect these private rooms to reduce the number of facility-related complaints, improve patient confidentiality and privacy and reduce the number of daily bed closures due to drug-resistant organisms (DROs), room-mate gender matching and other factors.

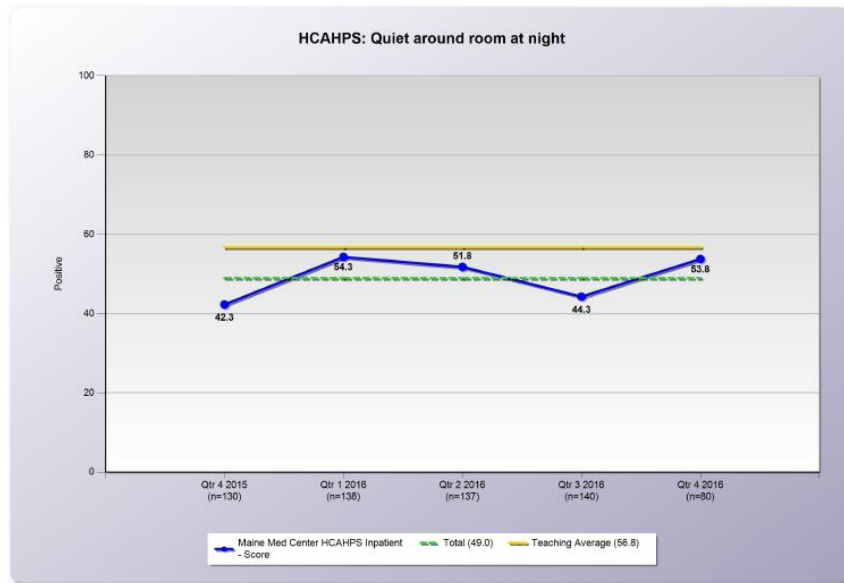
With private rooms, MMC expects that fewer beds will be closed per day. Refer to **Figure 13 - MMC Inpatient Bed Utilization Fiscal Year 2013-2026** for bed closure information.

Private rooms are anticipated to improve patient satisfaction. Patients in semi-private rooms often comment on the noise and lack of space associated with having a roommate. MMC uses National Research Corporation to monitor Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores. Valuable feedback on the care delivered here is collected through these surveys. Between Q4 2015 and Q4 2016, MMC had an average quietness HCAHPS score of 49.

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<sup>3</sup> According to the website of the Facilities Guidelines Institute, "The Joint Commission, many federal agencies, and authorities in 42 states use the Guidelines as either a code or a reference standard when reviewing, approving, financing projects for surveying, licensing, certifying or crediting newly constructed facilities." See [https://www.fgiguilines.org/#product\\_modal\\_2](https://www.fgiguilines.org/#product_modal_2)

Figure 23 - MMC HCAHPS Score: Quiet around room at night, Q4 2015 – Q4 2016



Source: MMC HCAHPS Survey

#### iv. Health Status Impact: Procedure Rooms

MMC’s Bean 2 & Cardiac Operating Room project was MMC’s first step in replacing surgical capacity. This project continues to replace existing surgical capacity following the same design principles and room size standards described in MMC’s Bean 2 CON application.

To determine the appropriate size of future operating rooms on the Bramhall campus, MMC surgeons, interventionalists, anesthesiologists, and operating room staff in cooperation with Perkins + Will, the project architect, tested staff flow, patient flow, material flow, and equipment placement for a variety of surgical case types (cardiac, neurosurgery, orthopedic, spine, etc.) and a variety of interventional angiography case types (cardiac catheterization, electrophysiology, neuro-endovascular, interventional radiology) typically completed at MMC in an interventional room mock up with movable walls to determine the appropriate dimensions of the interventional rooms capable of supporting MMC’s interventional services.

As a result of these trials, MMC is planning to construct operating rooms of 650 square feet, which meet today’s standard. The rooms are designed to accommodate a wide range of current and future technologies, support the continuing convergence of surgery and endovascular technology and are designed to easily convert to angiography service in the future if desirable.

Universal procedure rooms are designed on a modular plan of 650 square foot with space for adjacent support functions like control, equipment, and storage. Some rooms will be larger (850 square foot) to be used for cross discipline procedures like cardio-thoracic. This new design will provide flexibility over the life of the building which will greatly enhance MMC’s ability to address evolving technologies, trends and standards of care.



Newly designed procedure rooms will be universal. Universal procedure rooms will be flexible and capable of housing numerous procedural services, including normal operating room procedures, cardiac catheterizations, electrophysiology testing, interventional radiology and advanced endoscopy procedures. While these universal rooms will be equipped for specific purposes, equipment in these rooms can be exchanged to meet the needs of patients. These room designs will enable MMC to adapt to the changing demands of the population and future care delivery models yet to be adopted.

Universal procedure rooms will be connected through an interdigitated network of sterile and non-sterile corridors. Separation of these corridors is intended to reduce the risk of infection from cross contamination. Sterile supplies will be delivered to procedure rooms via sterile pathways designed to eliminate contact with non-sterile or biohazardous materials.

#### **v. Quality of Care: The project will ensure the continuation of quality healthcare service delivery at MMC.**

MMC has demonstrated the ability to provide top-quality healthcare services and make continuous improvements. **Error! Reference source not found.** provides information on where MMC exceeds national measures and where there is still room for improvement.

Please refer to Section II – Fit, Willing, and Able of this application for a list of MMC’s service lines and awards and recognitions.

Please refer to Section VI – Outcomes and Community Impact for additional explanation of MMC’s high quality outcomes.

### **B. CONU Discussion**

#### **i. CON Standards**

The relevant standard 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. CONU Analysis

The applicant has demonstrated that this project will address specific health problems as measured by health needs in the area to be served by the project. Although MMC is licensed for 637 beds its functional capacity is closer to the mid-500 bed range. This is due to MMC having to routinely close 60 inpatient beds per day due to concerns about infection control, behavioral issues, gender, building maintenance or other room sharing restrictions. With the construction of 128 new universal private rooms and the conversion of some semi-private rooms to private rooms MMC's bed complement will go from 49% private to 80% private which will alleviate many of the above issues. MMC's goal is to reduce the current 93% utilization of its inpatient bed capacity to a more acceptable industry standard utilization rate of between 75 -80% for semi private rooms and 80-85% for private rooms. In 2015 MMC added 5 new operating rooms, 20 new surgery preparation and recovery beds and completed a hybrid operating room renovation. Despite these improvements, MMC's current operating rooms are functioning at over a 90% utilization rate while industry standards recommend a utilization rate of 75-85%. Utilization beyond 85% increases the threats to patient safety, reduces operating room availability to address emergent and urgent demand, and increases the probability of delaying and canceling scheduled cases. This project will increase the available procedure rooms from 28 and 1 minor procedure rooms to 36 and 1 minor procedure room. When this additional capacity comes on line in 2022 the MMC should achieve its targeted utilization rate of 75-85%.

Another specific health problem this project will address is the 99.7% utilization of the Catherization/Electrophysiology laboratories. This project will increase the current 7 procedure rooms to 9 and is projected to decrease utilization to between 80-90%.

Adding an additional helipad will avoid potential backups and delays in patient care. MMC cited 23 instances where two helicopters were landing at MMC's only helideck within a one hour period.

MMC has provided extensive information regarding problems with their aging buildings. Close to 77% of MMC's clinical activities occur in buildings over 30 years old. This means that almost half of MMC's operating rooms and inpatient rooms are too small and do not meet industry guidelines. This creates issues with proper clearances for equipment, staff, patients and family members. The ability to retrofit and improve existing buildings is not practical without major disruptions to patient care. Constructing new universal procedure rooms and patient rooms is necessary to deliver quality patient care.

The applicant further states that there is a public need for this project because MMC is a tertiary care and referral center that addresses health care needs for the entire State of Maine. MMC is also the only Level 1 Trauma Center and Academic Medical Center in the State of Maine. MMC submitted surgical discharge data and inpatient discharge data by patient residence. This data shows that MMC provides 60% of its primary service area's (Cumberland and York counties)

inpatient surgical discharges, 26% of its secondary service area's (Androscoggin, Franklin, Kennebec, Knox, Lincoln, Oxford, Sagadahoc, Somerset, Waldo and Carroll county NH) inpatient surgical discharges and 7% of its tertiary service area's (Aroostook, Hancock, Penobscot, Piscataquis and Washington counties) surgical discharges. MMC provides 45% of its primary service area's hospital discharges, 13% of its secondary service area's hospital discharges, and 3% of its tertiary service area's hospital discharges.

Health status indicators will be positively impacted by this project. The addition of private universal procedure rooms to meet acute, intermediate and critical care needs will reduce the number of beds closed per day. The benefits of private rooms include reduced risk of airborne, surface and bacterial infection which will result in a reduced length of stay. Increased patient confidentiality and privacy will also result. The addition of newly designed universal procedure rooms will allow for increased versatility since equipment in these rooms can be exchanged to meet the needs of the patients. The design of these rooms will allow MMC to adapt to changing care delivery models to meet the ever changing needs of the population.

The services affected by the project will be accessible to all residents of the area proposed to be served. Although overall healthcare volumes are expected to decline over the next decade, MMC believes that patients who require higher acuity care will continue to utilize MMC. MMC's share of inpatient discharges has increased over the past several years, MMC's case mix is increasing and nationally complex healthcare services are becoming concentrated at larger hospitals. The demand for complex and emergent surgical and cardiovascular service is projected to increase due to an aging Maine population.

The applicant lists several benefits resulting from this project that will provide demonstrable improvements in quality and outcome measures applicable to the services proposed in the project:

- Improve availability of care for complex inpatient, emergency and trauma surgery patients.
- Improve timely access to MMC's operating rooms for patients with emergent and urgent surgical needs
- Minimize delays and cancellations experienced by scheduled inpatients and outpatients when emergent and urgent cases disrupt the operating room schedule
- Reduce disruptions in scheduling for surgeons and staff, and the associated avoidable cost to the health care system caused by delays and cancellations.
- Decompress strain placed on MMC's surgical services capacity due to higher than recommended utilization and enable MMC to manage the utilization of its operating rooms to be more sustainable and in line with industry standards.
- Reduce the risk of infections and cross contamination by increased use of private rooms.

- Reduce backups in the emergency departments while people who need to be admitted wait for an inpatient bed to become available.
- Reduce the need to divert patients from MMC to other hospitals due to capacity constraints.

OR and Inpatient Bed Need Computations

In order to provide a more detailed analysis of the need for both operating rooms and inpatient beds CONU will illustrate the methodology used to calculate the required number of operating rooms and inpatient rooms associated with this project.

Methodology used to determine needed operating room capacity

Operating Room Utilization

FYE	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Scheduled Hours	66,500	66,500	66,500	66,500	66,500	66,500	66,500	85,500	85,500	85,500	85,500
Available OR's	28	28	28	28	28	28	28	36	36	36	36
Scheduled Hours per OR*	2,375	2,375	2,375	2,375	2,375	2,375	2,375	2,375	2,375	2,375	2,375

Projected Demand	60,286	60,944	61,609	62,282	62,963	63,652	64,349	65,054	65,768	66,491	67,222
Scheduled Hours	66,500	66,500	66,500	66,500	66,500	66,500	66,500	85,500	85,500	85,500	85,500
Utilization %	90.66%	91.65%	92.65%	93.66%	94.68%	95.72%	96.77%	76.09%	76.92%	77.77%	78.62%

\*Equates to 9.5 hours per day, 250 days per year

The above chart shows the calculation of the scheduled hours per OR and the utilization pre and post project. Using MMCs projections CONU uses the following formula to calculate the number of OR's needed by 2026 based on the projected demand for services:

$$NOR = \frac{HOSY}{DPY \times HPD \times .80}$$

Where:

NOR = number of operating rooms needed

HOSY = hours of surgery including prep and clean-up time per year in scheduled OR hours

DPY = days per year of scheduled surgery

HPD = hours per day scheduled

.80 = desired average OR utilization percentage (per DHHS guidelines)



$$\text{NOR} = \frac{67,222}{250 \times 9.5 \times .80}$$

$$\text{NOR} = \frac{67,222}{1,900 \text{ or } 35.38}$$

This result shows the need for 36 OR's by 2026.

Methodology used to determine needed adult inpatient bed need.

CONU utilized Navigant's calculation of bed need. Their calculations are shown below:

MMC Total Adult Bed Need	2016 Estimate	2021 Projected	2026 Projected
MMC Inpatient Days Service Area Residents	125,981	125,265	126,268
Observation Days	29,572	36,251	44,437
Total MMC bedded days in service area	154,653	161,516	170,705
In Migration: MMC Days from non-service area residents	4,987	5,005	5,056
MMC Days	159,640	166,521	175,761
MMC average daily census	437	456	482
MMC Bed Demand (82% occupancy)	533	556	587
MMC Adult Beds with Project			572
Difference Between MMC adult Bed Need and Available Beds			(15)

Based on Navigant's analysis this project will likely not be able to meet projected demand in 2026. As noted in CONU Comment #1, Level C4 of MMC's Congress Street building contains "shell space" for 32 additional universal private patient rooms. This space will have all mechanical/plumbing stubbed-in and all infrastructure necessary to serve the floor will be available. This will minimize the impact on adjacent floors when the fit-out occurs. The cost to complete the build out of the shell space is approximately \$19.7 million.

Navigant Analysis Public Need:

Navigant completed an extensive review of MMC's health service area in the Theory of the Portland and Maine Market section of their Independent Cost Analysis. This section includes a demographic analysis of MMC's service area, information on total health care expenditures in the region, and a summary of key drivers of the health care industry (government, payers, employers and providers. Their conclusions are summarized below:

Provider consolidation is likely to produce "Haves and Have Nots"



- Maine Health is a market leader both in Portland and Statewide and has been pursuing a strategic growth direction.
- Providers not consolidated/ing, not integrated/ing, and capital poor are vulnerable.

Payers are aligning with providers in new value based relationships

- Payers are still highly consolidated although more fragmented than providers
- Anthem holds market share lead.

Employers have not been a key driver of new health care delivery models historically

- This may change as employers become dissatisfied with rising cost of health care.

Maine as a State has not been aggressive in moving to new payment models for Medicaid

- No Medicaid expansion
- Medicaid managed care has not evolved to transfer risk from the State.

Navigant's independent cost analysis further addresses the impact of the project on health status indicators and indicators of quality and outcomes. Their conclusions follow:

- The project is expected to positively impact health status indicators of the population served by MMC by increasing access to services and providing demonstrable improvements in quality and patient safety outcome measures through the benefits of single occupancy patient rooms. Single bed rooms are becoming the U.S. standard of care particularly in hospitals providing high acuity complex care.
- The proposed project positions MMC to meet its expected demand by increasing patient access to MMC inpatient and procedural services.

CONU agrees with the position of the applicant and Navigant that there is a need for more available beds at Maine Medical Center. The applicant has the right to propose a methodology to meet those needs. In this particular case, the applicant has chosen not to complete the floor labeled C4 for budgetary and financial reasons at this time. Based on the analysis above, CONU would recommend approval of this floor of 32 single bed capacity floor based on the application submitted. It is likely that MMC will determine in the intervening five years of this project that the hospital would need to complete the buildout of this floor. Accordingly, in order to avoid a new application to complete this floor, which can and has been easily included in this application analysis by CONU, we are proposing to increase the award amount by \$21.275 million (\$19.7 estimate plus allowable 8% contingency) on the condition that these funds cannot be appropriated until the CONU is notified in writing at least 30 days before the completing construction / outfitting of this floor (C4) commences.

**Condition:** If the holder of this certificate determines it will complete the C4 floor at any time before 3 years are completed after the project is fully operational, the holder will inform the

CONU in writing of its decision to complete construction / outfitting the C4 floor as described in the application, at least 30 days before this portion of the project commences.

**iii. Conclusion**

The Certificate of Need Unit recommends that the Commissioner find that the applicant has met their burden to show that there is a public need for the proposed project.

## V. Orderly and Economic Development

### A. From Applicant

#### i. Impact on Health Care Expenditures

The benefits of this project are discussed throughout this application. The project provides an appropriate environment to support MMC's provision of necessary inpatient and procedural care to residents of Maine and Northern New England.

Approval of this project does not affect the cost of care delivered by other Maine service providers. There are no changes to the clinical services provided by MMC. This project seeks to replace and modernize facility infrastructure.

This project does not alter referral patterns that may impact the viability of rural providers. Maine Medical Partners practices continue to support local access to care through clinics and call coverage at various MaineHealth members and affiliate health care delivery locations that include rural sites. Please refer to Figure 25 - MMP Practice Offices and Hours outside of Portland for additional details.

#### ii. Project's Potential Impact on Other Providers

MMC inpatient discharge volume stayed relatively flat over the past ten years while the volume in the State of Maine has been decreasing. In 2005, MMC had 20.2% share of Inpatient Discharges. In 2015, MMC had 21.7% share of Inpatient Discharges.

MMC's inpatient surgical volume increased over the past ten years while inpatient surgical volume in the State of Maine decreased. MMC's 2005 share of total surgeries was 14.6%. MMC's 2015 share of total surgeries was 20.4%.

The acuity of patients in the state requiring inpatient care is rising as described in Section V – Public Need. Additionally, the trend of patients requiring services only available at MMC is expected to continue.

Figure 24 - Inpatient Acute and Surgical Volume in Maine and at MMC, Calendar Years 2005 - 2015

Hospital	Inpatient Acute Discharges		Inpatient & Outpatient Surgeries	
	MMC	Total Maine	MMC	Total Maine
CY05	28,421	140,372	23,881	163,356
CY06	28,459	140,518	25,094	162,979
CY07	28,010	142,674	25,912	168,686
CY08	28,709	140,695	30,865	177,805
CY09	29,630	144,521	27,919	163,153
CY10	28,639	139,241	28,247	159,746
CY11	28,723	140,906	27,839	160,685
CY12	28,404	136,000	27,580	156,698
CY13	25,470	131,653	27,855	151,738
CY14	27,727	131,666	27,996	148,154
CY15	28,440	130,817	29,588	145,151
N Change CY05-CY15	19	(9,555)	1,592	(3,003)
% Change CY05-CY15	➔ 0.1%	⬇ -6.8%	⬆ 23.9%	⬇ -11.1%
CAGR CY05-15	➔ 0.0%	⬇ -0.7%	⬆ 2.2%	⬇ -1.2%
CY05 Mkt Shr	20.2%	100.0%	14.6%	100.0%
CY15 Mkt Shr	21.7%	100.0%	20.4%	100.0%
Change in Mkt Shr Pts CY14-CY15	⬆ 1.5%	➔ 0.0%	⬆ 5.8%	➔ 0.0%

Source: MHA Quarterly Financial & Statistical Report (2005-2015)

In 2013 and 2014, MMC implemented a new electronic medical record system and experienced short-term challenges with patient classification. This issue is reflected in understated CY13 Inpatient Acute Discharges volume.

Maine Hospital Association provided the data for this table. A known feature of MHA inpatient discharge data is that they include newborns. A pregnant woman entering the hospital for delivery is 1 admission but 2 discharges (mother & baby). This inflates the total inpatient discharge volume for hospitals with high birth rates.

### iii. Availability of State Funds: Impact on MaineCare

Approval of this project has no impact on MaineCare. MaineCare currently reimburses MMC at rates less than 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. As a result, there is no impact on the availability of state funds to cover any increase in state costs associated with utilization of the project's services.





#### **iv. Alternatives: Potential for more effective, more accessible, or less costly technologies or methods.**

##### Project Alternatives

MMC engaged Perkins + Will Global to support its Master Facility Planning process. Perkins + Will is an international architecture firm with experience in the Academic Medical Center environment.<sup>4</sup>

MMC explored other options to improve facility infrastructure and found this project to be the most cost-effective and best for patient care. Alternatives to this project were either too costly, negatively impacted patient care during construction, or would not fully meet future patient needs.

Full replacement of the hospital on another site was eliminated early in the planning process due to estimated cost. A new 637 bed hospital would cost an estimated \$1.5 Billion according to our architecture partners. This cost does not take into account the cost of property or cost associated with decommissioning the existing hospital campus.

Upgrading MMC's existing buildings is not a feasible alternative. The effective average age of the MMC campus is 49 years. Renovations to existing buildings would provide neither sufficient capacity nor needed infrastructure to meet the present and future demand for services.

##### MaineHealth Population Health Efforts

MMC has supported MaineHealth in implementing several effective, accessible, and less costly methods of addressing its capacity and infrastructure prior to proposing this project.

MaineHealth is committed to improving chronic disease care throughout the care continuum. These disease-specific efforts described below target reducing disease incidence and reducing rehospitalizations through patient education, care standardization and collaboratively meeting patient needs in the outpatient and inpatient settings.

MaineHealth's Cardiovascular Health Program provides education and tools for patients and caregivers to manage heart health. A Hypertension Control Toolkit provides tools for caregivers to care for patients with high blood pressure. A patient guide provides information about day-to-day self-management of heart disease including information about medications, diet, and exercise.

MaineHealth's Chronic Obstructive Pulmonary Disease (COPD) program works to establish evidenced-based inpatient and outpatient care practices. The program started in 2016 and seeks to assist patients to manage their disease and avoid costly hospitalizations and ensure the integration of work being done across our system. MaineHealth plans to achieve greater success improving the care for patients with COPD by applying our multiple resources to specific chronic diseases with a defined scope. The initiative looks across the healthcare continuum, including ambulatory, inpatient, and post-acute settings as well as work being done to support transitions of care.

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<sup>4</sup> Perkins+ Will has been involved in construction and renovation projects for the following institutions: Rush University Medical Center; The John's Hopkins Hospital; Baylor Charles A. Sammons Cancer Center; Lucile Packard Children's Hospital-Stanford; Einstein Medical Center-Montgomery; Spaulding Rehabilitation Hospital; Piedmont Newnan Hospital; Cabell Huntington Hospital; Children's National Medical Center; and Chinook Regional Hospital. See <http://perkinswill.com/work/Healthcare>

MaineHealth's Center for Tobacco for Independence (CTI) increases access to evidenced-based tobacco treatment in Maine. CTI brings a team of highly qualified individuals with a proven record of cutting edge research, delivery of treatment and nationally recognized tobacco treatment training. The goal of CTI is to establish a standard for care for treating tobacco dependence with the ultimate aim of reducing the smoking prevalence among Maine residents.

MaineHealth's Target Diabetes program leverages nationally- and locally-developed best practices to provide education and care tools to patients with diabetes and their care providers. MMC has been a leader within the MaineHealth system in adopting these best practices.

MMC also focuses on local population health efforts.

The Let's Go! program is a nationally recognized childhood obesity prevention program of The Barbara Bush Children's Hospital. The program's goal is to increase physical activity and health eating for children from birth to age 18. The program works in a variety of settings including schools, out of school and early childhood programs, healthcare practices, workplaces, and communities.

MMC's Palliative Care Program provides care and support to patients and families facing serious illness. Palliative care teams work together with primary care physicians and specialists to create individualized care plans. The goal of care is to make the quality of life better for both the patient and the family. For adults, palliative care services typically include care for patients suffering from advanced cancer, lung disease, heart disease, or neurodegenerative diseases such as dementia and ALS.

#### MaineHealth Shared Decision Making

The MaineHealth Shared Decision Making Resource Center defines Shared Decision Making (SDM) as an integrative process between a patient and a clinician. The process involves the patient and clinician in making health decisions together that take into account both the scientific evidence and patient objectives and preferences. The patient is fully informed of all treatment options and their potential benefits and risks and is provided with the support to make an informed individualized treatment decision.

The process is especially beneficial in decisions involving sensitive conditions. Most clinical trials show a net reduction in demand for more invasive surgical options as a result of SDM programs.

The following MMC Surgical Services physicians, practices and programs have collaborated with the MaineHealth Shared Decision Making Resource Center to develop a coordinated approach to shared decision making within the MaineHealth system:

- The Maine Medical Center Joint Replacement Center offers decision aids to patients who are considering knee or hip replacement surgery, and also has a nurse educator-based decision support model.
- Maine Medical Partners Neurosurgery and Spine has implemented a SDM program using decision aids to improve quality of care for patients considering herniated disc surgery.
- MMC Surgical Services participation in SDM programs has the potential to reduce the patient population's surgical utilization rate, which reduces the demand placed on MMC's surgical capacity.
- Maine Medical Partners practices provide care in communities throughout Maine.

**Figure 25 - MMP Practice Offices and Hours outside of Portland as of December 2016**

Specialty	Region	Schedule	Specialty	Region	Schedule
Diabetes	Augusta	Every Friday	Maternal Fetal Medicine	Lewiston	1/Month
Diabetes/Endocrinology	Augusta	1/Month	Neurology	Lewiston	EEG reads
Maternal Fetal Medicine	Augusta	Daily; 1/Month	Neurology	Lewiston	EEG reads
Neurology	Augusta	EEG reads	Pediatric Endocrinology	Lewiston	3 days/Month
Genetics	Bangor	2 days/Month	Pulmonary	Lewiston	2/Month
Maternal Fetal Medicine	Bangor	Daily, 1/Month	Urology	Lewiston	1 day/Month
Neurology	Bangor	NICU	Cardiology	Norway	2 days/Month
Cardiology	Belfast	1 day/Month	Otolaryngology	Norway	1/Week
Otolaryngology	Biddeford	3 days/Week	Urology	Norway	1 day/Week
Cardiology	Boothbay	1 day/Month	Genetics	Oakland	2 days/Month
Otolaryngology	Bridgton	2/Month	Gastroenterology	Oakland	4 days/Month
Diabetes/Endocrinology	Brunswick	Every Monday	Nephrology	Oakland	3 days/Month
Diabetes/Endocrinology	Brunswick	Every Thursday	Neurosurgery	Oakland	2 days/Week
Neurology	Brunswick	24/7 - Telestroke	Pediatric Diabetes/Endocrinology	Oakland	3 days/Month
Urology	Brunswick	3 days/Week	Pulmonary	Oakland	3/Month
Genetics	Caribou	1-2 days/Year	Neurology	Rockport	24/7 - Telestroke
Genetics	Caribou	1/mth - Telemedicine	Cardiology	Rumford	0.5 days/Week
Gastroenterology	Caribou	1 day/Month	Maternal Fetal Medicine	Saco	Daily, 1/Month
Nephrology	Caribou	2 days/Quarter	Cardiology	Sanford	0.5 days/2/Month
Neurology	Caribou	EEG reads	Cardiology	Skowhegan	1 day/Week
Cardiology	Damariscotta	1 day/Week	Maternal Fetal Medicine	Waterville	Daily, 1/Month
Cardiology	Farmington	5 days/Week	Diabetes/Endocrinology	York	2 day/Week
Diabetes	Lewiston	Every Monday			
Diabetes/Endocrinology	Lewiston	Every Weds/Thurs			
Genetics	Lewiston	2 days/Month			
Gastroenterology	Lewiston	1 days/Month			
Maternal Fetal Medicine	Lewiston	Daily			

Source: MMP Internal

MMC Surgical Services provides support to other MaineHealth system hospitals, enabling those hospitals to offer services locally. This allows patients to receive specialty care in their community rather than seeking their care in Portland.

### Tele-Tracking

A specialized team of clinicians called One Call Centrals (previously mentioned in Section IV – Public Need) operates like air traffic controllers to coordinate patient flow into the hospital. Their role is to connect with other care providers in the State to assess patient needs and identify the best way to provide those needs. Currently, the Access Team operates using many manually administered tools. MMC has made an investment that will increase the efficiency of this team in 2017 by centralizing and digitizing the Access Team’s work.

### Scarborough Surgery Center

In 2007 MMC opened the Scarborough Surgical Center (SSC) and shifted half of its outpatient surgery from the Bramhall campus to the SSC, moving approximately four operating rooms of outpatient surgery cases from the Bramhall campus to the SSC. That project improved access for all patients seeking surgical care at MMC by decompressing MMC’s Bramhall surgical capacity and improved ease of access for those patients receiving their care at the SSC.

Surgeons continue to perform ambulatory surgery at the Bramhall campus in cases when it is clinically indicated by virtue of the patient’s medical condition, the procedure requires the use of specialized equipment that is not available at SSC, or there is the potential for an unplanned procedure.



Additional surgeries are being performed on an inpatient basis on the Bramhall campus due to CMS policies. CMS has identified a number of procedures that it will not reimburse if the procedures are performed on an outpatient basis. As a result of this CMS policy, Medicare, MaineCare and other insurers do not reimburse hospitals and physicians for these procedures unless they are performed on an inpatient basis. MMC and other hospitals continue to perform these procedures in an inpatient facility in order to receive compensation for services delivered.

While further expansion of SSC capacity may become necessary in the future, SSC expansion does not address the current and increasing demand for surgical capacity on MMC's Bramhall campus.

## **B. CONU Discussion**

### **i. CON Standards**

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**

MMC provided a detailed analysis of its primary, secondary and tertiary service areas and included utilization data for inpatient beds and universal procedure rooms. This data shows that the increase in proposed services outlined in MMC's CON application are a necessary component of health care in Maine. Total projected 1<sup>st</sup> through 3<sup>rd</sup> year operating costs in the CONU financial model show minimal additional cost. The 4<sup>th</sup> and 5<sup>th</sup> year operating expenses rise between 1.3% and 4.1% as new services are brought online beginning in 2022. Increased use of MaineCare funds will be mostly due to inflation or changes in volume unrelated to this transaction through the 5<sup>th</sup> year of this project.

State funds should not be materially impacted by this transaction. Based on historical and projection utilization increased utilization due to this project should be minimal.

The applicant considered and rejected several alternatives:

- A) Full replacement of the hospital. This alternative was too costly at \$1.5 billion.
- B) Upgrade MMC's existing building. This alternative would not provide sufficient capacity nor needed infrastructure to meet current and future demand for services.
- C) Increased utilization of the Scarborough Surgery Center. This alternative is not available at all times due to the need for specialized equipment and the patient's clinical status. In addition CMS policies identify a number of procedures that will not be reimbursed if performed in an outpatient setting.

Navigant Analysis Orderly and Economic Development:

Navigant's comments are summarized below:

- The project will not result in inappropriate or unintended increased expense to the State as the State sets the price for services for which it is the payer, i.e. Medicaid
- The capital investment will create new permanent healthcare jobs in the Portland area in addition to the positions required for construction.

**iii. Conclusion**

CONU recommends that the Commissioner find that the applicant 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 subject to including the recommended condition.

## VI. Outcomes and Community Impact

### A. From Applicant

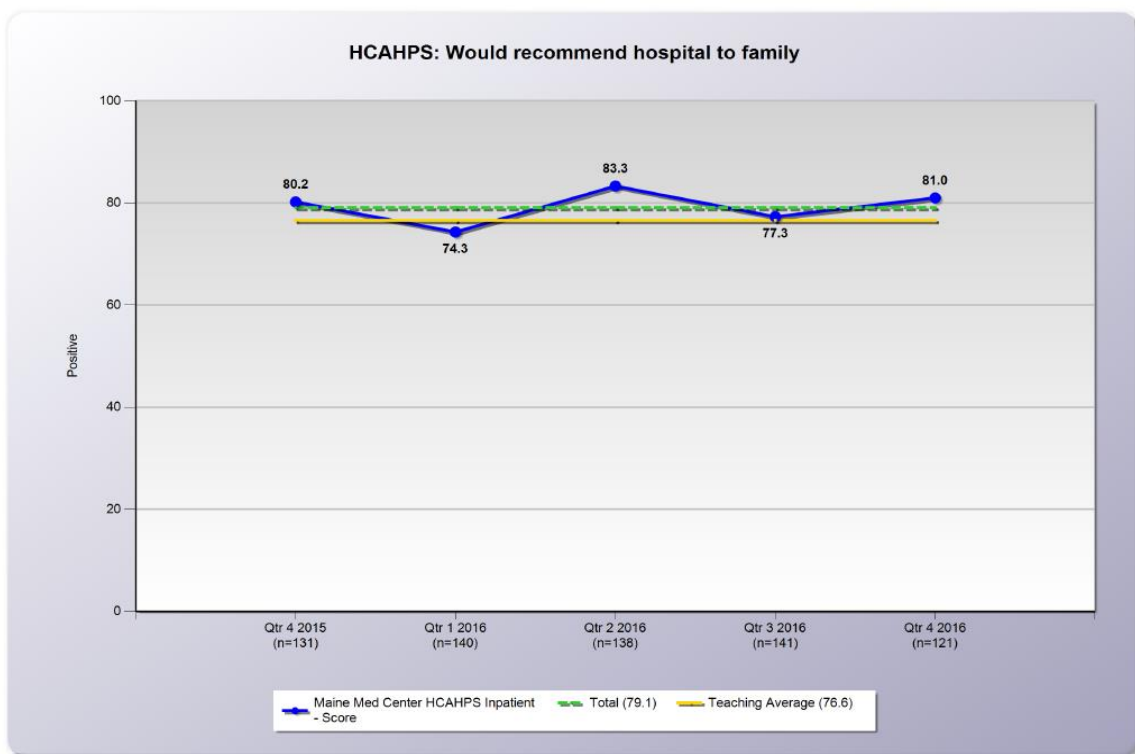
#### vi. MMC High Quality Outcomes

MMC is a patient-centered organization and strives to deliver the highest quality care to every patient. Our culture values continuous quality improvement in patient safety, quality of care, patient experience, and operational performance. Approval of MFP IIB will allow MMC to continue providing high-quality care to the patients who need it in the State of Maine. Refer to **Error! Reference source not found.** for more details.

#### Patient Experience

MMC provides an excellent patient experience. In the most recent HCAHPS survey MMC scored 81 on the questions related to whether or not the patient would recommend the hospital to family. The average for hospitals in Maine is 74.3 and the average for teaching hospitals is 76.6.

Figure 26 - MMC HCAHPS: Would Recommend Hospital to Family Score Calendar Q4 2015 - Q4 2016



Source: NRC Picker

#### MMC Chronic Disease Care

MMC provides quality care to the sickest patients in Maine. MMC ranks “Better than the National Rate” in COPD readmissions, heart attack readmissions, heart failure readmissions, and the rate of readmission after discharge. MMC ranks “No Different than the National Rate” in mortality rate for COPD patients, mortality rate for heart attack patients, mortality rate for heart failure patients, readmission and mortality

rate for pneumonia patients, mortality rate for stroke patients, readmission and mortality rate for coronary artery bypass graft (CABG) patients, and readmission rate after hip/knee replacement (U.S. Centers for Medicare & Medicaid Services).

MMC is Maine's premier tertiary care center and is an essential component in MaineHealth's fully integrated Population Management programs described in Section V – Orderly and Economic Development of this application.

#### MMC Surgical Services

MMC Surgical Services participates in the MaineHealth Surgical Quality Collaborative (MHSQC), which is a voluntary collaboration of MaineHealth hospitals that provides professional competence review activities including analysis and feedback in support of the quality review, outcomes review, and provider education activities in participating hospitals.

This program is described in detail in MMC's Certificate of Need application for the Bean 2 & Cardiac Hybrid Operating Room Project on file with the State of Maine.

#### MMC Cardiovascular Services

The MMC Cardiovascular Surgery program continues to be on the forefront of innovation in cardiac surgery and the provision of superior quality of care and outcomes. Patients undergoing cardiovascular surgery are assured a high-quality care experience through the following:

- Maintenance of a rigorous quality and patient safety program, including a data infrastructure to analyze and interpret measures of quality.
- Use of Clinical Microsystems improvement tools with demonstrated success in care process redesign.
- Commitment to defining, measuring, and adhering to standard processes for cardiac surgery that will ensure reliable and safe care.

MMC continues as a founding member of the Northern New England Cardiovascular Study Group (NNECSG), a regional voluntary consortium founded in 1987 to provide information about the management of cardiovascular disease in Maine, New Hampshire, and Vermont. NNECSG maintains registries for all patients receiving coronary artery bypass grafting (CABG), percutaneous coronary intervention (PCI), and heart valve replacement surgery. During the last thirty years, data on over 190,000 procedures were collected and analyzed.

The consortium tracks the clinical outcomes of all revascularization procedures performed by the participating institutions. Regional and center-specific data for isolated CABG procedures are available on the NNECSG website, [www.nnecsdg.org](http://www.nnecsdg.org), along with data collection tools, including CABG, valve, PCI, cardiovascular anesthesia and perfusion. From these databases regional outcomes have been tracked and risk-adjusted models have been developed and are used to develop decision-making tools for clinicians and their patients/families.

MMC also submits clinical data regarding its cardiovascular surgery program to the Society of Thoracic Surgery Database (STS). The STS National Database was established in 1989 as an initiative for quality improvement and patient safety among cardiothoracic surgeons. The Database has grown exponentially over the years, both in terms of participation and stature.

MMC outcomes as reported in both the NNECSG and the STS compare favorably to regional and national benchmarks, including top quartile performance for overall quality in the STS Registry. Most recent data from STS show MMC risk-adjusted operative mortality rates for all cardiac procedures for 2015 is 2.5% compared to STS similar hospitals 2.1% and all STS hospitals 2.4%.

Although quality is of utmost importance, the MMC Cardiovascular Surgery program has expanded its sights to include overall value. The “value equation” focuses on improving quality while at the same time reducing costs, inefficiencies, and waste. In addition to pursuing the highest quality in patient outcomes, the MMC program looks to optimize value by:

- Use of a multidisciplinary model of care to ensure the most efficient use of physician and advanced practice professional resources;
- Collaboration with the ambulatory and post-acute care to limit the episode of care;
- Focus on reducing complications such as infections and hospital readmissions;
- Standardization of clinical processes, including use of vendors and supplies; and
- Commitment to the implementation and measurement of decision making for complex cases, ensuring appropriate patient selection to limit overuse of medical care.

#### Operational Excellence

The morning huddle, mentioned previously in Section IV – Public Need, demonstrates MMC’s commitment to high-quality care. The huddle is facilitated by MMC’s Operational Excellence team. After morning huddle, senior leaders “round” on departments and daily updates on progress towards improvement goals, key learnings, and challenges. Information gathered in one department is commonly shared with other departments in order to leverage the work of others and increase the rate of quality improvement at MMC.

#### **vii. Potential Impact on Existing Provider’s Quality of Care**

This project has no impact on other provider’s quality of care.

Community demand for MMC inpatient and procedural services continues to grow. Refer to Section IV – Public Need for more details. MMC’s Bean 2 project represented the first component of the Master Facility Plan Phase II. MMC’s inpatient and procedural capacity needs to be replaced with modern infrastructure. Inpatient and procedure rooms are undersized and MMC’s existing building cannot be renovated to meet current and projected needs.

Addressing these facility needs should have no impact on other providers’ quality of care.



**B. CONU Discussion**

**i. CON Standards**

The relevant standard for inclusion in this section is 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**

MMC's procedure rooms and existing inpatient rooms are operating at an unsustainably high utilization rate while demand for these services continues to increase. Replacing and modernizing aging infrastructure will increase the likelihood of higher quality outcomes. The applicant describes numerous quality and outcome initiatives that it is currently pursuing throughout this application.

Patients and referring physicians from throughout Maine and northern New England utilize MMC due to its clinical capabilities and outcomes. As illustrated in previous sections of this analysis, while overall health care utilization continues to decline MMC's utilization continues to rise. This project is addressing a current need and should not cause a shift in market share that would adversely affect the quality of care delivered by existing service providers or other facilities.

Navigant Analysis Outcomes and Community Impact

Navigant listed many high quality outcomes associated with this project. Navigant's conclusions are summarized below:

- Private rooms reduce the risk of infections, reduce patient transfers, reduce length of patient stay and reduce the likelihood of falls for elderly patients. Enhanced hospital design will have many therapeutic benefits including increased privacy, lower noise level, and fewer sleep disturbances. This will ultimately lead to greater patient satisfaction and higher quality outcomes.

CONU agrees with the applicant and Navigant that there is a likelihood of higher quality outcomes arising from this project and will monitor this by implementing the following condition:

**Condition:** The applicant is to report improvements in quality and outcome measures for services affected by the project on an annual basis, within 90 days of its fiscal year end, beginning with the time period when the Certificate of Need was approved until a full three years have elapsed since the date of project completion.

**iii. Conclusion**

CONU recommends that the Commissioner find that the applicant 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.

## VII. Service Utilization

### A From Applicant

#### **Risk of Inappropriate Increases in Service Utilization**

This project meets a documented health care need as opposed to creating a health care demand. This project will not increase health care utilization unnecessarily and will not create inappropriate or unnecessary demand.

MMC and MaineHealth are dedicated to transforming the healthcare delivery system to reduce the demand for inpatient services. See subsection below on MaineHealth Population-Based Initiatives. See **Figure 25 - MMP Practice Offices and Hours outside of Portland as of December 2016.**

MMC has demonstrated lower healthcare utilization than other healthcare providers around the country. In quarter 4 of 2016, the total expenditure by assigned beneficiary for the MaineHealth Accountable Care Organization's (MHACO), which includes MMC<sup>5 6</sup> was \$9,714. During the same period, the total expenditure by assigned beneficiary Medicare enrollment type for all Medicare Shared Savings Program Accountable Care Organizations (MSSP ACOs) was \$10,046. MHACO total expenditures by assigned beneficiary was \$332 less per assigned beneficiary than all MSSP ACOs.

MMC works in cooperation with insurers and third-party payers to avoid unnecessary surgeries. MMC works with insurers through utilization review to ensure that surgical services are not over-utilized. As a part of the utilization review process MMC uses Milliman Care Guidelines, Inpatient and Surgical Care as a resource to help in determining if a patient's condition meets criteria for surgical care. Milliman's Surgical Optimal Recovery Guidelines are used to identify patients who require an operative procedure, to plan the appropriate surgical setting and to manage the perioperative care.

MMC involves patients in Shared Decision Making programs addressing three preference sensitive conditions: prostate cancer, knee or hip osteoarthritis and lumbar herniated disc. Research indicates that SDM programs reduce the demand for surgery. Please refer to the discussion under Section V: Orderly and Economic Development, Subsection Alternatives: Potential of More Effective, More Accessible or Less Costly Technologies or Methods.

MMC is a leader in low readmission rates for patients with chronic diseases like COPD, Heart Attack, and Heart Failure. Please refer to Section VI: Outcomes and Community Impact, Subsection MMC High Quality Outcomes.

MMC's Care Access Teams focus on the right care setting for patient needs. MMC has developed this team out of the need for adequate access to critical or advanced care services. This team works with

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<sup>5</sup> Total expenditures and total expenditures by Medicare enrollment type are annualized, weighted for months of beneficiary ACO eligibility, and truncated. Total expenditures are calculated as a weighted average of the expenditures by Medicare enrollment type, with person-years in each enrollment type as weights. Reported expenditures are the beneficiary expenditures per month amount multiplied by 12. Total expenditures take into account, if available, individually identifiable non-claims based payments made for beneficiaries under a demonstration, pilot or time-limited program, such as care management fees.

<sup>6</sup> Indirect Medical Education, Disproportionate Share Hospital, Uncompensated care payments from Medicare paid to Medicare Disproportionate Share Hospitals, and pass-through payments are excluded from total and hospital inpatient facility expenditures for Shared Savings Plan ACOs.

MaineHealth members, affiliates, and non-members alike. Please refer to Section IV: Public Need, Subsection Access to Care: MMC’s Access Teams.

MaineHealth Population-Based Initiatives

MMC participates in MaineHealth’s health status improvement, clinical integration and quality improvement initiatives, which should over time impact utilization positively.

The vision of MaineHealth and MMC is “Working together so our communities are the healthiest in America.” MMC is dedicated to maintaining and improving the health of the communities it serves by:

- Caring for our community
- Educating tomorrow's caregivers
- Researching new ways to provide care

We proudly carry our unique responsibility as Maine's leader in patient care, education and research. We are dedicated to the traditions and ideals of not-for-profit healthcare. Our care is available to all who seek it.

The MaineHealth and MMC approach to improving the health of its communities focuses on two major types of initiatives:

- Health status improvement initiatives which address a health issue that 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 chronic disease is a major focus of these clinical initiatives. Maine’s median age is the highest in the nation. Based on national studies, it may be anticipated that 60% of the population will have at least one chronic condition and 40% will have two or more. Since 1999, MaineHealth has been building health status improvement and clinical integration initiatives to address these challenges, funding them through a combination of MaineHealth dues, and grants.

MaineHealth and its members are committed to prevention and improved management of chronic disease and MaineHealth has been building health status improvement and clinical integration initiatives to address these challenges.

Below are MaineHealth budgets for these initiatives for fiscal years 2014 – 2017.

**Figure 27 - MaineHealth Clinical Integration / Health Status Improvement Budgets (in 000s)**

	FY 2014	FY 2015	FY 2016	FY 2017
Clinical Integration	7,438	7,577	8,550	7,190
Health Status Improvement	6,347	4,817	4,731	5,081
Community Education	2,999	2,887	2,959	2,529
<b>Total</b>	<b>16,784</b>	<b>15,281</b>	<b>16,240</b>	<b>14,800</b>

Source: MH Internal Information

Presented below are brief summaries of the 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 MaineHealth serves are on file with the Certificate of Need Unit as part of previous CON submissions.

- 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;
- 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;
- 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;
- Clinical Improvement Registry – a computer-based system provided to primary care practices in the MaineHealth Accountable Care 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;
- 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 – a 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 Bank, to design and implement a multi-year initiative on youth obesity;
- Blood Transfusion – system protocols to reduce blood transfusions
- Hand Hygiene - system plan to reduce hospital infections through hand hygiene monitoring.
- Let’s Go! – MaineHealth and MMC partner to administer this program that has been in place for 10 years and recently received multi-year funding from the State of Maine.
- The MaineHealth Cancer Resource Center – MaineHealth’s major initiative focusing on cancer. Goals for this new initiative include:
  - For the five most prevalent cancers, adopt evidence-based clinical care guidelines, identify quality metrics and reporting methodology, and provide a range of educational support to promote consistent use of guidelines.
  - Support each MaineHealth organization in attaining or maintaining the appropriate level of cancer care accreditation, including appropriate level of credentialing necessary for delivering care in accordance with desired accreditation
  - Improve access to clinical trials.

- Improve access to genetic counseling services.
- Support the development of patient navigation and survivorship programs to improve patient access, engagement and satisfaction.
- Improve the Network Registry to support increased access and data review for outcomes and quality metrics.
- Coordinate services regionally to provide maximum access to care (i.e. improve access to specialists.)

MaineHealth and its members are committed to population based health and prevention and are committing meaningful resources to support those initiatives. MaineHealth believes that these initiatives are entirely consistent with the best evidence-based practices regarding how to approach chronic disease. Evidence from our programs demonstrates that the Chronic Care Model can and does work (Letrouneau, Korsen, Osgood, & Swartz, 2006).

## **B. CONU Discussion**

### **i. CON Standard**

The relevant standard 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 as established in Title 24-A, section 6951, when the principles adopted by the Maine Quality Forum are directly applicable to the application.

### **ii. CON Analysis**

MMC is undertaking this project to meet an existing health care need to improve access to inpatient services by increasing the number of private patient rooms. MMC's current licensed capacity of 637 beds will not be changed until future need requires it. In addition, new procedure rooms will be built to modernize and expand capacity. This project does not result in the addition of new health services or the intended expansion of existing services. MMC works with third-party payers and insurers to avoid unnecessary surgeries through a utilization review process. MMC participates in MaineHealth's population-based initiatives (health status improvement, clinical integration and quality improvement) which will have a positive impact on utilization.

The applicant refers to Milliman Care Guidelines (MCG). MCG is a tool developed to support and document effective care. This process is achieved by identifying quality care practices. These practices marshal treatment resources, and when properly utilized avoid the overuse of medical resources. These tools should provide an evidence-based foundation for care management, case management and utilization review.

Navigant Analysis Service Utilization:

In order to complete this section of their analysis Navigant confirmed internal CON and MMC projections. Navigant's conclusions are summarized below:

- Based upon Navigant's independent analysis, the project will not result in inappropriate or unintended increases in health care utilization.

CONU agrees with the applicant and Navigant that this project is not likely to result in an inappropriate increase in service utilization. In order to monitoring this CONU is implementing the following condition:

Condition: The applicant is to report operating room utilization and inpatient room utilization for facilities affected by the project on an annual basis, within 90 days of its fiscal year end, beginning with the time period when the Certificate of Need is approved until a full three years have elapsed since the date of project completion.

### **iii. Conclusion**

CONU recommends that the Commissioner find that the applicant 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.

### **VIII. Timeline Criteria**

Letter of Intent filed	September 13, 2016
Technical Assistance Meeting held on	October 6, 2016
CON Application filed	March 14, 2017
CON Application certified as complete	March 14, 2017
Public Hearing held	June 14, 2017
Close of Public Record	July 14, 2017



IX. CON Findings and Recommendations

**IX. CON 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;
  - 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;

IX. CON Findings and Recommendations

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 ensures high-quality outcomes and does not negatively affect the quality of care delivered by existing service providers; and
- F.** 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.

**Condition:**

- If the holder of this certificate determines it will complete the C4 floor at any time before 3 years are completed after the project is operational, the holder will inform the CONU in writing of its decision to complete construction / outfitting the C4 floor as described in the application, at least 30 days before this portion of the project commences
- The applicant is to report improvements in quality and outcome measures for services affected by the project on an annual basis, within 90 days of its fiscal year end, beginning with the time period when the Certificate of Need was approved until a full three years have elapsed since the date of project completion.
- The applicant is to report operating room utilization and private room utilization for facilities affected by the project on an annual basis within 90 days of its fiscal year end beginning with the time period when the Certificate of Need was approved until a full three years have elapsed since the date of project completion.