

**STAFF REPORT TO THE PUBLIC HEALTH COUNCIL
FOR A DETERMINATION OF NEED**

Applicant Name	UMass Memorial Health Care, Inc.
Applicant Address	One Biotech Park, #65 Plantation Street, Worcester, MA 01605
Filing Date	March 14, 2025
Type of DoN Application	Transfer of Ownership
Total Value	\$122,294,056.00
Project Number	# UMMHC-25012116-TO
Ten Taxpayer Groups (TTG)	3
Community Health Initiative	Exempt from Factor 6
Staff Recommendation	Approval with conditions
Public Health Council	July 9, 2025

Project Summary and Regulatory Review

UMass Memorial Health Care, Inc. (the “Applicant” or “UMMHC”), with a principal place of business at One Biotech Park, 365 Plantation Street, Worcester, MA 01605, seeks a Determination of Need (“DoN”) from the Massachusetts Department of Public Health (DPH) for the Transfer of Ownership of Marlborough Hospital, located at 157 Union Street, Marlborough, MA 01752. The transaction will be a corporate merger (the “Proposed Merger”) of UMass Memorial Medical Center, Inc, (“UMMMC”), and Marlborough Hospital. Following the Proposed Merger, Marlborough Hospital will become a licensed campus of UMMMC.

This Determination of Need (DoN) Application falls within the definition of Transfer of Ownership, which is reviewed under the DoN regulation 105 CMR 100.000. The Department must determine that need exists for a Proposed Project, on the basis of material in the record, where the Applicant makes a clear and convincing demonstration that the Proposed Project meets each DoN Factor set forth within 105 CMR 100.210. A DoN Application for a Transfer of Ownership is subject to factors 1, 2, 3, and 4 of the DoN regulation. This staff report addresses each of the required four factors set forth in the regulation.

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Background and Application Overview

UMass Memorial Health Care, Inc.

The Applicant, UMass Memorial Health Care, Inc. (“UMMHC”), is a Massachusetts nonprofit corporation that owns and operates an integrated health care system comprised of a network of 5 acute care hospitals (on multiple campuses), including one academic medical center and four community acute care hospitals under UMass Memorial Community Hospitals, Inc.,¹ as well as other health care providers² that serve the residents of Central Massachusetts. Table 1 depicts the acute care facilities by type and by public payer percentages.

Table 1: UMMHC Acute Care Hospitals

Acute Hospital	Type (Per CHIA Category[i])	HPP* % 2022	HPP % 2023
UMass Memorial Medical Center	Academic Medical Center	66.7%	68.2%
Harrington Memorial Hospital	Community High Public Payer	68.8%	71.4%
HealthAlliance Clinton	Community High Public Payer	72.8%	74.2%
Marlborough Hospital	Community High Public Payer	66.1%	68.5%
Milford Regional Medical Center	Community Hospital	55.8%	57.5%
[i] Center for Health Information and Analysis. Massachusetts Hospital Profiles. https://www.chiamass.gov/assets/docs/r/hospital-profiles/2023/ummc.pdf			
*High Public Payer Hospital			

UMMHC’s mission is to care for the diverse communities of Central Massachusetts, provide health care services to under resourced patient populations, and serve as the clinical partner to UMass Chan Medical School, the only public medical school in the state. UMMHC’s hospitals are consistently high public-payer (“HPP”) hospitals³ (Table 1). Further, staff notes that the most recently published 2023

¹ HealthAlliance Clinton Hospital is a 152-bed community-HPP hospital with campuses in Clinton and Leominster. Harrington Memorial Hospital is a 119-bed community-HPP hospital with two campuses. The Department approved the affiliation with Milford Regional Medical Center (“MRMC”) # UMMHC-24021420, July 17,2024; it is a 148-bed community hospital located in Milford.

² UMass Memorial Medical Group, Inc. is an integrated multispecialty group medical practice in Worcester and throughout Central Massachusetts. UMass Memorial Managed Care Network is a group of primary and specialty care physicians who are either employed by their hospitals or medical groups or are in independent private practice. UMass Memorial Accountable Care Organization is an ACO that was developed to participate in the Medicare Shared Savings Program (MSSP). Community Healthlink is a community-based provider of mental health, substance abuse, rehabilitation, homeless and related services in Central Massachusetts.

³ With the exception of UMMHC’s most recent affiliated hospital, Milford Regional Medical Center. As described above, UMMHC became the parent organization of Milford Regional Medical Center in July 2024.

data indicates the percentage of payments from public payers has increased across all UMMMC hospitals within the system.

UMass Memorial Medical Center (“UMMMC”) is a licensed 825-bed tertiary academic medical center that operates on two campuses, the University Campus located at 55 Lake Avenue North, Worcester, MA 01655 (“University Campus”), and the Memorial Campus located at 119 Belmont Street, Worcester, MA 01605 (“Memorial Campus”). The University Campus operates the only Level 1 Adult and Pediatric Trauma Center in Central Massachusetts, is a designated Primary Stroke Service hospital, and is one of nine organ transplant centers in Massachusetts. The Memorial Campus is approximately 18 miles (24 minutes’ drive), and the University Campus is approximately 15 miles (24 minutes’ drive) from Marlborough Hospital.

Marlborough Hospital

Marlborough Hospital is an acute care community hospital with 79 licensed beds including 47 medical/surgical (“M/S”) acute care beds, 10 intensive care (“ICU”) beds, and 22 psychiatric beds. It joined the predecessor system to UMass Memorial in 1995.⁴ Since 2014, Marlborough Hospital is also the site of the UMass Memorial Cancer Center, a satellite of UMMMC. Marlborough Hospital is the smallest separately licensed facility in the UMass Memorial system, and it is one of seven remaining acute care community hospitals in Massachusetts with fewer than 100 licensed beds.⁵

The Proposed Project- (“the Proposed Merger”)

The Applicant states that “In recent years, Marlborough Hospital has been significantly challenged by physician shortages, driven primarily by retiring specialty providers who once made up a sizable share of Marlborough Hospital’s hospitalists and on-call physicians. The Proposed Merger will allow the Applicant to ensure continued access to specialty care not only at Marlborough Hospital, but to also improve timely access to specialty consults affording more patients the ability to remain on the Marlborough campus for their care.”⁶

As discussed further under Factor 1, and throughout this narrative, the Applicant states the Proposed Merger represents an effective use of resources to better manage patient care delivery, improve health outcomes, and drive quality improvement initiatives. Also, the Proposed Merger will eliminate duplicative costs required to maintain separate hospital licenses, facilities, and departments. According to the Applicant, with the potential savings and opportunities, UMMMC will be able to explore additional ways to reduce operational costs and maximize service availability across campuses through investments in the most needed services at Marlborough Hospital. The Applicant anticipates improving

⁴ On April 27, 1995, Worcester City Campus Corporation (WCCC), a health system that included, and was controlled by, the AMC at the University of Massachusetts at Worcester, executed an Affiliation Agreement with Marlborough Hospital, among others, pursuant to which WCCC controlled Marlborough Hospital. In 1998, WCCC transferred to UMass Memorial Health Care, Inc. its ownership interests in many entities, including Marlborough Hospital.

⁵ Marlborough Hospital, Beth Israel Deaconess Hospital- Needham, Baystate Noble Hospital, Baystate Franklin Hospital, Baystate Wing Hospital, Falmouth Hospital, and Nantucket Cottage Hospital.

⁶ See page 1 Appendix 2 of the DoN Application.

the quality and efficiency of resource use will support Marlborough Hospital patients' access to acute and tertiary services.

The total value of the Proposed Merger is \$122,294,056.

Patient Panel⁷

Table 2 shows three years of Patient Panel information for the Applicant and Marlborough Hospital's patient population. The table shows that both UMMHC and Marlborough Hospital experienced growth from 2022-24 of 14.1% and 5.0%, respectively.

Table 2: UMMHC and Marlborough Hospital's Patient Panels- FY-FY22-24

Year	FY 22	FY 23	FY24	FY 22 vs. 24
Unique Patients	Count	Count	Count	% Change
UMMHC	383,497	385,391	437,528	14.1%
Marlborough H.	40,983	41,669	43,042	5.0%

Table 3: Demographic Profile of the Patient Panels of UMMHC and Marlborough Hospital Patients- FY22-24

	UMMHC			Marlborough H.		
Year/Percent of Total	FY22 %	FY23 %	FY24 %	FY22 %	FY23 %	FY24 %
Gender						
Female	55.9%	56.2%	56.0%	60.2%	60.1%	60.0%
Male	44.0%	43.8%	43.9%	39.7%	39.8%	39.9%
Gender: Unknown	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Age						
Age: 0-17	18.7%	18.0%	16.8%	8.3%	8.4%	7.8%
Age: 18-64	58.2%	57.8%	58.0%	63.2%	62.1%	61.8%
Age: 65+	23.0%	24.2%	25.2%	28.4%	29.5%	30.4%
Race-Ethnicity						
Race: American Indian/ Alaska Native	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%
Race: Asian	3.4%	3.3%	2.9%	3.5%	3.4%	3.5%
Race: Black or African American	6.6%	7.1%	6.9%	3.9%	3.8%	4.3%

⁷ As defined in 105 CMR 100.100, Patient Panel is the total of the individual patients regardless of payer, including those patients seen within an emergency department(s) if applicable, seen over the course of the most recent complete 36-month period by the Applicant or Holder.

Race: Declined	1.1%	1.1%	1.4%	1.1%	1.2%	1.3%
Race: Native Hawaiian/Other Pacific Islander	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Race: Other/Unknown	14.6%	15.3%	14.8%	9.1%	11.3%	11.9%
Race: White	74.0%	72.8%	73.5%	82.2%	79.9%	78.8%
Ethnicity: Decline to Answer	1.6%	1.7%	2.0%	1.4%	1.6%	1.7%
Ethnicity: Hispanic or Latino	16.5%	17.3%	17.2%	14.3%	16.1%	16.4%
Ethnicity: Not Hispanic or Latino	80.1%	79.4%	79.9%	83.8%	81.5%	81.4%
Ethnicity: Unknown	1.8%	1.6%	0.8%	0.5%	0.7%	0.5%
Patient Origin						
Origin: Central Mass	89.7%	90.7%	89.0%	92.5%	93.1%	93.1%
Origin: Eastern Mass	4.1%	3.6%	3.6%	4.5%	4.4%	4.5%
Origin: Western Mass	2.4%	2.4%	3.3%	0.4%	0.4%	0.4%
Origin: Out of State	3.8%	3.3%	4.1%	2.6%	2.1%	2.0%

Table 3 shows key demographic characteristics for UMMHC and Marlborough Hospital patients from fiscal years (“FY”) 2022-2024, which the Applicant asserts reflects the demographics of the community it serves.

Gender: The UMMHC patient mix during FY21 through FY23 was approximately 56% female and 44% male. Approximately 60% of the patients served by Marlborough Hospital are female and approximately 40% are male for the same period.

Age: 18-64 comprised ~ 58% and 62% at UMMHC and Marlborough Hospital respectively; however, patients aged 65 and older increased from 23% to 25.2% in FY24 at UMMHC and from 28.4% to 30.4% at Marlborough Hospital. Approximately 17% of UMass Memorial’s patients are aged 0-17 whereas ~ 8% of Marlborough Hospital patients are in that age cohort likely because Marlborough Hospital does not have a maternity service.

Race: The self-reported UMMHC racial mix is ~73% white, ~6.8% Black or African American, ~3.9% Asian, ~17.2% Hispanic, and ~0.3% American Indian or Alaska Native. These are self-reported figures and there is a significant percentage (14.2% in FY21, 15.5% in FY22 and 15.9% in FY23) of the population that either chose not to report or whose race is unknown.

The majority of patients at Marlborough Hospital self-identify as White (approximately 79%). The remainder of the patient population is comprised as follows: 4% Black or African American, 3.5% Asian, 16% Hispanic, and 0.2% American Indian or Alaska Native.

Patient Origin UMMHC provides care to patients primarily from Massachusetts (97%), with ~90% residing in Central Massachusetts. Marlborough Hospital serves the residents of MetroWest consisting of cities and towns that span east to west from Framingham to Shrewsbury, and north to south from Bolton to Hopkinton as well as cities and towns that fall inside that radius, such as Marlborough, Hudson, Northborough, Southborough, Stow, Berlin, Sudbury, and Westborough, with an aggregate population that exceeds 265,000 residents.

Table 4: FY22-24 Payor Mix for UMMHC and Marlborough Hospital

	UMMHC			Marlborough Hospital		
Payer Mix	FY22	FY23	FY24	FY22	FY23	FY24
Commercial PPO/ Indemnity	3.5%	4.4%	4.3%	1.2%	1.0%	0.9%
Commercial HMO/ POS	25.0%	24.4%	23.8%	26.3%	27.0%	25.1%
Total Commercial	28.5%	28.8%	28.1%	27.5%	28.0%	26.0%
MassHealth	18.1%	15.0%	11.9%	14.2%	13.8%	10.8%
Managed Medicaid (ACO/MCO)	6.5%	9.0%	11.5%	7.5%	9.8%	12.5%
Total Medicaid	24.6%	24.0%	23.4%	21.7%	23.6%	23.3%
Managed Medicare (Medicare Advantage)	16.3%	17.8%	18.8%	18.8%	19.1%	20.4%
Medicare FFS	27.0%	25.9%	25.5%	27.4%	25.4%	25.4%
Total Medicare	43.3%	43.7%	44.3%	46.2%	44.5%	45.8%
Total Public Payers	67.9%	67.7%	67.7%	67.9%	68.1%	69.1%
All others (e.g. HSN, self-pay, TriCare)	3.6%	3.4%	4.1%	4.6%	4.0%	4.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Payor Mix: Both UMMMH and Marlborough Hospital serve a large percentage of patients who participate in government insurance programs: collectively, public payers make up ~68% of UMass Memorial’s payer mix and ~69% of Marlborough Hospital’s payer mix.

Factor 1a: Patient Panel Need

From the Applicant’s explanation of Need for the Proposed Merger, Staff has identified two key areas:

1. Need to Improve Access to Primary and Specialty Care
2. Need to Integrate and Streamline Patient Care Delivery

1. Need to Improve Local Access to Primary and Specialty Care

The Applicant states that due to its small size, Marlborough Hospital does not have sufficient inpatient volume to independently support a full array of hospital and specialty service lines needed by the community. Consequently, patient access to services at Marlborough Hospital is impacted by the ongoing challenges in recruiting and retaining primary care and specialty care physicians needed to support acute care hospital services in the community. The Applicant asserts that the recruitment and retention challenges experienced by Marlborough Hospital are common among community hospitals, as the patient volume does not independently support the cost of such providers and results in increased on-call burdens to physician staff.

As physicians retire or leave for other opportunities, it is difficult for Marlborough Hospital to recruit new physicians to support the patients’ access needs in the community. Consequently, the limited

number of physicians remaining increases the on-call burdens of those who remain, because there are fewer physicians available for on-call, around the clock coverage, 365 days per year. Marlborough Hospital currently must purchase coverage from physician groups to provide basic hospital services to its patients. In some cases, it is purchased from medical groups which are owned by UMMHC. Due to the high costs associated with contracted specialty coverage, it is not financially sustainable for Marlborough Hospital to obtain coverage for a number of services that would allow patients to remain in the community; these services are not utilized at a high enough rate to sustain the cost of 24/7 coverage.

Additionally, Marlborough Hospital has had to reduce local access to several needed specialty services. Upon staff inquiry, the Applicant provided examples of services that have had reductions in coverage or have been lost completely over just the past year; these include anesthesia weekend coverage (which is now only every other weekend); general surgery (reduced from 24/7/365 to 3 weeks out of 4); and urology (call coverage is no longer available). Additionally, with the limited supply of anesthesiologists, Marlborough Hospital is unable to use its operating rooms (“ORs”) daily and currently operates only 3 days per week with the expectation of rebuilding the specialty surgical services following the Proposed Merger.

Access challenges for specialty care are not unique to Marlborough Hospital; it is a specific concern for community hospitals nationally. A 2023 survey of community hospital CEOs found that 71% faced shortages of specialty providers.^a National data shows a growing proportion of physicians prefer employment to private practice, shrinking the pool of available specialists to hospitals without employed medical groups like Marlborough Hospital. Because of this, the pool of specialists available to hospitals without employed medical groups is diminished.^b

Consequently, the Applicant asserts due to the impact of service reductions, the difficulty in recruitment and the high costs of contracted specialty coverage described above, the current model is not sustainable for Marlborough Hospital to ensure patients have local access to needed services. The Applicant explains (in #2 below) how the Proposed Merger will remove roadblocks and reduce costs that can be applied further improvements in care delivery.

2. Need to Integrate and Streamline Patient Care Delivery

The Applicant asserts the current licensing structure of Marlborough Hospital results in consequential logistical and insurance barriers for patients, impeding care delivery. Although Marlborough Hospital is currently part of UMMHC, it is licensed as a separate hospital. Therefore, patients who require specialty services not available at Marlborough Hospital must be discharged and transferred for admission at UMMMC or another facility that can support the patient’s clinical needs. This includes transfers to meet patient need for consult services not available at Marlborough Hospital. The procedures for accomplishing discharge and admission are extensive. In addition to the administrative burden to staff and physicians, the hospital must obtain insurance approval prior to transfer to a new facility. Additionally, depending on a patient’s insurance, some patients are responsible for the cost of transfer by ambulance/life flight. As a result, the Applicant states that because of fear of excessive bills,

some patients refuse ambulance transfer. If Marlborough Hospital was licensed as a campus of UMMC, patients could be transported for services without the discharge and admission process, allowing for improved care coordination, elimination of unnecessary treatment delays, and reduction of associated costs thereby facilitating care delivery at the needed level of care in the appropriate setting.

The Applicant states that with approval of the Proposed Merger, patient access will improve because once Marlborough Hospital is a licensed campus of UMMC, delays in care delivery related to discharge and admissions procedures⁸ including transport and insurance barriers for the movement of a patient will no longer exist. If a Marlborough campus patient requires services only available at a UMMC Worcester site, they can be transported at no cost to the patient, and, when appropriate, returned to Marlborough, improving efficiencies while minimizing delays and improving care coordination which benefits patients.

To determine the extent of the burden of transfers on patients, upon staff request, the Applicant provided the following information on the numbers and types of patients transferred to UMMC over the past two years by level of care required and by specialty.

Table 5: Transfers From Marlborough Hospital to UMMC

	FY2023 Transfer #	FY2023 Transfer %	FY2024 Transfer #	FY2024 Transfer %
Higher Level of Care	605	69.5%	604	71.5%
Service Not Supported	238	27.4%	211	25.0%
Other	27	3.1%	30	3.6%
Total	870	100.0%	845	100.0%

Table 5 shows that transfers related to Marlborough Hospital patients requiring a *Higher Level of Care* accounted for approximately 70% of transfers and the *Service Not Supported* over 25% of transfers. The Applicant expects that most patients transported for a higher level of care will continue to be transferred such as those top four specialties shown in Table 6. The applicant expects that many of the patients in the other categories will be able to remain at the Marlborough campus permitting care delivery at the appropriate level of care without the need for transfer.

Table 6: Transfers From Marlborough Hospital to UMMC by Specialty

	FY2023	FY2024
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⁸ The Applicant asserts that the transfer process entails adherence to extensive and time-consuming required procedures and care coordination at both the referring and receiving facilities. At both facilities, physician, nursing, and care coordination staff must complete discharge and admission protocols.

Specialty	Transfer #	Transfer %	Transfer #	Transfer %
Trauma Surgery	111	12.8%	153	18.1%
Pediatrics	148	17.0%	131	15.5%
Neuro/Neuro-Surg	86	9.9%	78	9.2%
Hospital Medicine	81	9.3%	74	8.8%
Obstetrics	61	7.0%	70	8.3%
Critical Care	77	8.9%	68	8.0%
Cardiology	67	7.7%	61	7.2%
General Gynecology	32	3.7%	36	4.3%
General Surgery	31	3.6%	34	4.0%
Orthopedics	35	4.0%	33	3.9%
Other Surgery	30	3.4%	32	3.8%
Urology	36	4.1%	28	3.3%
Vascular Surgery	20	2.3%	21	2.5%
Emergency Medicine	23	2.6%	13	1.5%
Other	32	3.7%	13	1.5%
Total	870	100.0%	845	100.0%

The Applicant asserts that joining Marlborough Hospital as a licensed campus of UMMMC will also ensure patients receive the right level of care based on acuity. In particular, UMMMC serves patients with a range of acuities. The merger will provide UMMMC with the ability to admit patients having higher acuity levels to the Memorial Hospital and University Hospital campuses, while maintaining capacity and coverage for patients of lower acuity levels at the Marlborough Hospital Campus.

The Applicant states that UMMMC is currently operating in excess of its medical/surgical and critical care capacity,⁹ consequently, a significant number of transfer-in requests are denied at UMMMC, including approximately 20 such transfer requests for Marlborough Hospital patients per month, prompting a transfer to the closest tertiary care facility that has capacity. This is a hardship for the patient as they are at considerable distance from home, and the care they receive is outside the UMMHC systems with its integrated electronic health records, and is delivered by providers who are unfamiliar with them. These providers have less access to their existing health information and as a result delays in the delivery of care can occur for those transferred patients.

UMMHC also has high numbers of ED boarders averaging approximately 21,000 hours of boarding per month in FY2024.¹⁰ Even with the recent opening of the North Pavilion Building at UMMMC, which provided 72 additional acute M/S beds, the Applicant reports the need to preserve the beds at UMMMC's tertiary campuses for the most acute patients (including for transfers in from the region's

⁹ In FY 2024 UMMMC was at 99.6% occupancy with 825 beds fully staffed (See Table 11)

¹⁰ While not a material component of this Application, Upon Staff inquiry, the Applicant asserts that these boarding hours are predominantly related to the need for acute care beds (and not psychiatric placements.)

other hospitals without tertiary and quaternary services) remains critical. As a result of improved access to specialists at the Marlborough campus, the Applicant anticipates there will be a reduction in transfers from the Marlborough campus (See Table 5) leading to an estimated increase of approximately 4-6 beds daily available at UMMMC's University and Memorial campuses. Further, patients may be transferred to the Marlborough Campus when higher levels of acuity are no longer needed. Therefore the Applicant also anticipates the Marlborough campus inpatient bed utilization will increase from its current average capacity of 80% to 90%.

In addition to the transfer considerations, the Applicant states that bringing Marlborough Hospital under the UMMMC license would facilitate reduction in administrative barriers to service. For example, each hospital must hold its own Medicare Certification. As a result, each hospital must separately and independently comply with the regulatory requirements for licensure as well as the Medicare Conditions of Participation (CoPs) including maintaining its own medical staff as well as credentialing teams and workflows in compliance with the Medicare CoPs. The Applicant states the Medicare CoPs require a separate review of contracted quality standards which entails considerable and costly administrative undertaking. The Applicant states that credentialing providers at both UMMMC and Marlborough Hospital is not a practical option because of the high cost to providers (two medical staff dues) as well as an administrative burden. Therefore, UMMMC medical staff cannot provide care¹¹ to Marlborough Hospital patients, unless the individual staff member is dually credentialed and holds privileges as a member of the Marlborough Hospital medical staff, which can delay access to needed care. Consequently, Marlborough Hospital patients who require a consultation by a UMMMC specialist are often transported to UMMMC, either for an office visit or admission to UMMMC.

With approval of the Proposed Merger, the Applicant states that Marlborough Hospital patients will become UMMMC's patients in all aspects of care delivery. The Applicant states that as a licensed campus of UMMMC, Marlborough Hospital patients will benefit from integration with UMMMC's medical staff and the unified healthcare team working across campuses to manage patient needs. For example, every specialty of UMMMC's medical staff will be able to provide teleconsultation to the patient panel, at times preventing the need for patient transfer to access such services. Additionally, with the consolidation of the two medical staffs, expenses will be eliminated for separate contracting and credentialing. Providers within the consolidated medical staff will be able to provide formal opinions to their colleagues and would, in fact, be required to do so by the Medical Staff bylaws.

Additionally, as a licensed campus of UMMMC, medical staff coverage will improve because the graduate medical education program at UMass T.H. Chan Medical School will be extended to Marlborough Hospital. Currently this coverage is not in place because of the Accreditation Council for Graduate Medical Education (ACGME) guidelines requiring training programs to designate a specific, licensed facility for interns and residents to train at and maintain a separate clinical program office. Enabling intern and resident physicians to rotate through the Marlborough Hospital campus as UMMMC trainees will enhance services available at the Marlborough Hospital satellite.

¹¹ Including telemedicine and consults

Consequently, the Applicant asserts through enhanced care coordination and more flexible staffing options, a merger of Marlborough Hospital with UMMMC will improve the patient’s experience, access and outcomes, and existing resources such as operating rooms, technologies and tertiary services at the UMMMC campuses can be optimized so that patients receive the “right care in the right place at the right time more quickly.”¹²

Analysis

The Proposed Project offers UMMMC and Marlborough Hospital an opportunity to work collaboratively to provide the appropriate acuity level of care, while minimizing logistical and insurance barriers to patients, and improving medical staff coverage. The Applicant anticipates the Proposed Project will reduce the burden and costs of transfers for patients and their families and streamline care delivery by leveraging the UMMMC license to support services at Marlborough Hospital. It will also reduce the administrative burden on hospitals at both ends of patient transfer. Further, with better medical staff coverage, (in particular anesthesiologists, general surgeons, and urologists) the existing resources at Marlborough Hospital, such as ORs, may be used more fully and investments in clinical programming may be enhanced while the delivery of care in a community setting of Marlborough will continue.

Staff note that the Central Massachusetts region relies on Marlborough Hospital. In 2023, while Marlborough Hospital’s total inpatient discharges, and total patient days, each represented less than 1% of statewide utilization, when considered regionally, Marlborough Hospital had 10.7% of the total inpatient regional discharges and 13% of the total regional patient days. Further, total emergency department visits to Marlborough Hospital comprised 1.1% of statewide visits, and 17.4% of regional ED visits.¹⁸ These data show that Marlborough Hospital plays a significant role within the service area.

Staff also notes that Community Discharges data by Town in 2023, based upon the most recently available data from CHIA, indicate that five Massachusetts communities exhibit a substantial dependency on Marlborough Hospital, as shown in Table 7. For example, of all the statewide discharges of patients residing in Marlborough, 33% were discharged from Marlborough Hospital.

Table 7: Community Discharges 2023

Town	% of All Hospital Discharges from specified Town
Marlborough	33%
Hudson	33%
Northborough	16%
Berlin	16%
Southborough	11%

¹² See Application Narrative p7 <https://www.mass.gov/doc/narrative-pdf-umass-memorial-health-care-inc-marlborough/download>

Factor 1: b) Public Health Value, Improved Health Outcomes and Quality of Life; Assurances of Health Equity

In this section the Applicant must demonstrate that the Proposed Project adds measurable public health value in terms of improved health outcomes and quality of life for the Applicant's existing patient panel while providing reasonable assurances of health equity.

Public Health Value- Health Outcomes, and Quality of Life

The Applicant states it anticipates the Proposed Merger will contribute to public health value which it asserts is supported by research studies related to maintaining access to timely local integrated care. In the U.S., health care access and quality continue to be priority goals by reducing the proportion of people who are unable to get medical care when they need it as stated in the U.S. Office of Disease Prevention and Health Promotion, Healthy People 2030 initiative.^c A 2020 article by the Department of Health and Human Services^d outlines the following key factors associated with "access" to care: coverage, services, and timeliness. As referenced in Factor 1(a), by making Marlborough Hospital a satellite campus of UMMMC timely access to specialty providers will be addressed. This will enable appropriate care to be provided locally at Marlborough Hospital but also improve access to the UMMMC University and Memorial campuses when tertiary care is needed.

The Applicant's review of the literature on hospital mergers shows that mergers can improve quality and outcomes. Some multi-hospital studies have shown that mergers and acquisitions are associated with statistically significant improvements in quality outcomes, including lower mortality rates and reductions in readmission rates.^e Further review of the literature on hospital mergers demonstrated that the merging of hospitals results in economies of scale and leads to significant financial benefits for the smaller hospital.^f The Applicant states these benefits may alleviate challenges that small community hospitals face relating to operating and service delivery decisions which can lead to curtailment or closure of local services and hospitals.

According to the Health Policy Commission's 2016 report on Community Hospitals, "The local nature of community hospital services is particularly important for patients for whom accessing care can be difficult." The report states that this includes many patients covered by Medicare, MassHealth, or other government programs, who are more likely to rely on locally based care.^g Additionally, scientific literature demonstrates that the setting in which care is provided is a major component of the appropriateness of that care.^h Appropriate services require high-quality care to be provided in a setting consistent with each patient's individual clinical characteristics.ⁱ Further, it is established that the distance, time, and cost associated with traveling for health care acts as a barrier to access.^j

As supported by the literature, the Applicant maintains that with improved access to medical specialists, the Proposed Merger is intended to allow more care to remain or become available to patients in the Marlborough community in order to avoid delays in accessing specialty care, and to provide improved access to timely, locally based care.^k Further, the Applicant states the Proposed Merger will provide the resources to allow the Marlborough campus to directly provide or support

efficient access to a full spectrum of high-quality inpatient and outpatient services to the Marlborough Hospital community as a licensed campus of UMMMC.

Moreover, patients of the Marlborough campus will have access to all of UMMMC's innovative care models¹³, such as Hospital at Home ("HaH"), Rehab at Home, the virtual patient observation program^l, and Mobile Integrated Health ("MIH"), all of which not only provide cost savings but have demonstrated improved health outcomes. HaH programs, like the one UMMMC operates, have significant benefits for patient care. By focusing on preventive and proactive care at home, these programs help tackle the root causes of acute episodes, manage chronic conditions more effectively, and encourage wellness and self-care, leading to overall improvements in public health.^m CMS data based on 11,000 patients demonstrated that patients who received hospital-level care at home experienced lower mortality rates and fewer complications compared to patients treated for similar acute conditions in hospitals.ⁿ Additional research, including randomized controlled trials, have also shown that healthcare at home models can shorten patients' lengths of stay, reduce readmission rates, and prevent healthcare-acquired infections.^o Therefore, the expansion of UMMMC's HaH program will likely contribute to improved health outcomes.

Analysis

The Proposed Merger is centered around evidence-based practices and is designed to meet the needs of the Marlborough community. It seeks to enhance health care access with an emphasis on access to specialty care and more stable full around the clock coverage of acute care services thereby improving quality, continuity and coordination of care with the goal of improving patient experiences and outcomes in the Marlborough region.

The Applicant provided several measures to track the impact of the Proposed Merger, *see* Appendix 1. The Applicant will track and report the measures as part of their annual reporting.

Staff has reviewed and concurs that the Proposed Project will add to public health value in terms of improved access, health outcomes and quality of life for the Patient Panel.

Public Health Value- Health Equity

The Proposed Merger will expand upon and drive UMMHC's commitments to advance its "Anchor Mission" to reduce health inequities. UMMHC's Anchor Mission is "a commitment to consciously apply the place-based economic power of UMass Memorial, in combination with its human and intellectual resources, to better the long-term welfare of the community in which the institution is anchored."^p The Anchor Mission aims to improve the health and welfare of the community beyond the hospital's walls, by leveraging UMMHC's organizational assets (intellectual and economic) to address social disadvantage

¹³ These programs are currently only available to patients of UMMMC and are not available to UMass Memorial's other hospitals.

and the pervasive inequality present in our society so that community members have access to resources that will improve their overall social, physical, and financial health.

In alignment with the goals established by UMMHC's Anchor Mission, the Applicant described several programs below that have been developed to address the needs of patients at UMMHC and will become accessible to Marlborough Hospital patients.

Interpreter Services and Language Accessibility: UMMHC's professional medical interpretation services are a primary intervention to support diverse populations with limited English proficiency and other communication barriers through the provision of interpretation services in over 100 languages (including American Sign Language) around the clock to patients and families who communicate in languages other than English various modes including in-person, over the phone, and remote video interpretation. Interpreters facilitate communication not only for medical needs but also for non-medical inquiries.

Further, the MyChart Patient Portal in Multiple Languages promotes equal access to healthcare information for non-English speaking patients and helps them stay in contact with their care teams, thereby contributing to improved health equity.

Fostering Culturally Proficient Staff: The Applicant states its commitment to equity involves fostering a culturally proficient workforce. UMMHC established the Office of Diversity, Equity, Inclusion and Belonging ("DEIB"), with dedicated leadership whereby diversity specialists provide racial literacy training around cultural proficiency and unconscious bias to all medical departments.¹⁴ This commitment to inclusivity and cultural competence is instrumental in providing equitable care.

Equity Improvement Initiatives: In 2021, UMMHC identified a disparity in rates of well-child visits among Black, Hispanic and white children. As a result of its proactive interventions, it was able to substantially improve well-child visit rates for Black and Hispanic populations effectively narrowing the gap between Black, Hispanic and White patients while also increasing rates for White children. In 2022, UMMHC broadened its efforts to bridge racial disparities in osteoporosis screening, and in 2023, it dedicated efforts to improving colorectal cancer screening rates for Black, Hispanic and Asian patients to close a statistically significant gap in screening rates. Most recently in 2024, UMMHC focused on improving collection of race, ethnicity, language, disability, sexual orientation, and gender identity data among hospitalized patients.

In each instance, UMMHC achieved measurable improvements across all populations and exceeded its established goals as summarized in the report, *Improving Health Equity at UMass Memorial Health*.⁹ UMMHC continues to measure each clinical initiative described above to ensure the ongoing reduction of the identified disparity and improvement of health outcomes.

MassHealth Health Equity Incentive Program: UMMHC actively participates in the MassHealth Clinical Quality Incentive and Health Equity Incentive programs. As part of UMMHC Marlborough Hospital will

¹⁴ UMass Memorial, [Diversity and Cultural Awareness, Programming and Education](https://www.ummhealth.org/umass-memorial-medical-center/about-us/diversity-and-cultural-awareness/programming-and-education), <https://www.ummhealth.org/umass-memorial-medical-center/about-us/diversity-and-cultural-awareness/programming-and-education>.

also participate. These quality improvement initiatives cover a number of domains, including patient experience and care coordination, as well as perinatal care, safety outcomes, behavioral health, and equity improvements around race, ethnicity, language, disability status, sexual orientation and gender identity (“RELD/SOGI”)¹⁵ and social determinants of health (“SDOH”) data collection, improvements with interpreter services, and strategic planning around health equity improvement. These initiatives allow to assess, compare, and improve on these quality metrics in order to deliver high quality care and identify and address health disparities across its communities, hospitals, and campuses.

The Applicant described additional programs that have been developed to address community-based needs; these are discussed in Factor 2, Delivery System Transformation.

Analysis

The Applicant describes how the Proposed Merger will improve Marlborough Hospital’s ability to provide quality, accessible health care to its community through transitioning to a satellite campus of UMMMC. Staff has reviewed and concurs that the Proposed Project will add public health value in terms of improved health outcomes, quality of life, and equity for both UMMMC’s and Marlborough Hospital’s Patient Panels.

As part of its annual reporting, to measure the impact of the Affiliation, the Applicant proposes to report on the following measures on the Proposed Affiliation: (1) clinical quality metrics such as patient mortality; (2) patient safety as measured by Patient Safety Indicator (PSI) events; (3) patient experience scores as measured through patient survey responses; and (4) health equity as measured by the MassHealth health equity incentive program metrics.

Factor 1: c) Efficiency, Continuity of Care, Coordination of Care

As discussed throughout this narrative, the applicant asserts that the Proposed Merger will improve continuity and coordination of care and result in greater efficiencies and cost savings for Marlborough Hospital’s and UMMMC’s patient panel through several means described below.

1. Greater integration of clinical and social support services will be gained across the UMMMC campuses.¹⁵ Clinical providers will be able to communicate with non-clinical support that will help coordinate social care services based on SDOH screens through the use of a single medical record. As the list of community resources added to and available through CommunityHELP¹⁶ continues to

¹⁵ Chen M, Tan X, Padman R. [Social determinants of health in electronic health records and their impact on analysis and risk prediction: A systematic review](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7671639/). J Am Med Inform Assoc. 2020 Nov 1;27(11):1764-1773, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7671639/> (providing a literature review demonstrating “early and rapidly growing evidence that integrating individual-level SDOH into EHRs can assist in risk assessment and predicting healthcare utilization and health outcomes, which further motivates efforts to collect and standardize patient-level SDOH information”).

¹⁶ CommunityHELP is a collaborative effort between UMass Memorial and Reliant Medical Group to create a live resource repository of community providers across the care continuum.

grow, the unified medical record will be especially helpful to connect patients with the highest needs with social service agencies that can assist.

2. Efficiencies gained from streamlined care delivery across UMMMC and Marlborough Hospital, including elimination of duplicative regulatory requirements for separate licenses, registrations, accreditations and certifications that UMMMC already holds; these would be extended to the Marlborough campus for an annual savings of approximately \$20,000.
3. Upon Staff inquiry, the Applicant stated that the Proposed Merger will also save between \$640,000 to \$2.1 million in avoided transfer costs annually.
4. The Applicant added that currently Marlborough Hospital is on track to spend upwards of \$12.8 million in FY 25' for physician services. The cost of these has steadily increased over the last 3 years notably due to increase in Hospital Medicine, Anesthesiology, Psychiatry, and Emergency Medicine. These fees include costs for private physician coverage programs, administrative physician coverage for employed physicians, and increases in cost for services provided to Marlborough from the UMass Memorial Medical Group. It is estimated that there is the potential to save roughly \$1 million annually once the two entities merge.
5. The two required administrative staffs will be eliminated or reduced. The President of UMMMC will assume oversight of the Marlborough Hospital satellite campus reducing the current allocation of a 0.4 FTE for a president of Marlborough Hospital. Other roles will be reduced and folded into UMMMC's governance and management including the chief medical officer, the assistant vice president for clinical services, and other administrative functions thereby saving a 2.83 FTE's and 4 physician leadership stipends,¹⁷ for an annualized savings of approximately \$890,000
6. Eliminating the Marlborough Hospital governing body through the proposed merger would save approximately 120 hours of tracked management time annually to manage, prepare, and deliver for the board of trustees, however as a licensed satellite of UMMMC, governance and operations of Marlborough Hospital would fall under UMMMC, resulting in a minimal increase to the preparation and duration of each UMMMC board meeting.
7. With the savings that inure from the Proposed Merger, UMMMC states it will be able to explore additional ways to maximize access to needed services across its campuses, make investments in the most needed services, and gain efficiencies. Further, the merger of the two hospitals will support appropriate utilization of each hospital's services, including inpatient beds and operating rooms by ensuring care is delivered in the most appropriate setting.

Analysis

¹⁷ The Applicant states individuals may be reassigned where needed to other roles within the health system once their roles at Marlborough Hospital transition to UMMMC.

The Applicant has detailed how the management of patient care across appropriate levels from community based primary and specialty care to tertiary acute care will be enhanced for patients when all care is coordinated by an integrated medical staff. Successful care coordination includes strong communication and effective care plan transitions among providers, and the clear communication of information that patients can understand.^{ee} Effective care coordination can improve a patient's experience, increase patient safety, and reduce medical errors.^{ff} Accordingly, staff find that the Proposed Project will create efficiencies through the support of continuity and coordination of care initiatives for the Patient Panel.

Factor 1: d) Consultation

The Applicant has provided evidence of consultation, both prior to and after the Filing Date, with all government agencies that have licensure, certification, or other regulatory oversight, which has been done and will not be addressed further in this report.

Factor 1: e) Evidence of Sound Community Engagement through the Patient Panel

The Department's Guideline^s for community engagement defines "community" as the Patient Panel and requires that, at minimum, the Applicant must "consult" with groups representative of the Applicant's Patient Panel. Regulations state that efforts in such consultation should consist of engaging "community coalitions statistically representative of the Patient Panel."^t

The Applicant provided information regarding its "multi-faceted community engagement plan" to ensure communication to and with patients, employees, community members, partners, and other relevant stakeholders that included:

- Identifying a detailed list of internal and external stakeholders and appropriate communication channels to ensure broad community engagement.
- Developing appropriate education materials to fully describe the benefits of the Proposed Merger to all parties.
- Facilitating conversations with patients, employees, community leaders and organizations.
- Presenting the Proposed Merger to hospital-based groups including the hospitals, Community Benefits Advisory Councils ("CBAC"s) and Patient Family Advisory Council ("PFACs"); and
- Ongoing messaging and outreach leveraging UMass Memorial's social media footprint and other media for equitable community access and education.

Prior to filing the DoN Application, implementation of the plan involved engagement activities through over 12 meetings, emails, and calls including the following:

1. January 3 and 6, 2025: Phone calls to Marlborough City Councilors Mike Ossing and Trey Fuccillo, and Marlborough Economic Development Corporation Executive Director Meredith Harris and to Marlborough Mayor Dumais, Senator Eldridge and Representative Gregoire
2. January 7 and 8, 2025: Meetings with UMMMC Chairs and Executive Team followed by an email to the Marlborough Hospital Medical Staff

3. January 8, 2025: Phone calls to Marlborough State Legislators, Other Elected Officials, Other Health Systems, Insurers, MHA, Healthcare for All, and unions
4. January 8, 2025: In-person meetings with SHARE and MNA leadership
5. January 9, 2025: Town Hall Virtual Meeting with Marlborough Caregivers
6. January 15, 2025: In-person and virtual meetings with Marlborough Hospital's CBAC and PFAC and Marlborough Business Leaders
7. January 16, 2025: Publication in UMass Memorial's newsletter, The Thread
8. January 17, 2025: Email to the Worcester CBAC
9. January 21 and 23, 2025: Public Forums at Marlborough Hospital
10. January 23, 2025: Presentations and discussions with Worcester Together and the Marlborough Economic Development Corporation
11. January 28, 2025: In-person and virtual meetings with the Worcester PFAC
12. Lastly, throughout the months of January and February 2025, the Applicant conducted additional outreach to the Health Foundation of Central MA, Thrive Communities, Coalition for a Healthy Greater Worcester, United Way of Tri-County, Chamber of Commerce, Marlborough Economic Development Council, 495 Partnership, and Corridor 9.

The Applicant reports a positive response with strong support for the Proposed Merger and for UMMHC's commitment to and investment in the region, providing local, accessible care for patients and families, and ensuring access to specialty providers in the community.

The Applicant asserts it will continue to offer Marlborough Hospital employees listening sessions and provide updates at key meetings including manager meetings and all-employee town halls. As part of these updates, employees will be encouraged to ask questions and share concerns. Across UMMHC, updates and the opportunity to share questions and concerns will be offered through systemwide communications channels including town halls and newsletters and the Proposed Merger will be a standing agenda item on future Marlborough CBAC and PFAC meetings, as well as at other meetings with community leaders, such as the Marlborough Economic Development Corporation and the 495/MetroWest Partnership.

Analysis

Staff reviewed the information on the Applicant's community engagement and finds that it has met the required community engagement standard of "consult" in the planning phase of the Proposed Project.

Factor 1: f) Competition on Price, Total Medical Expenses ("TME"), Costs and Other Measures of Health Care Spending

The Applicant states the Proposed Affiliation is not anticipated to have an adverse impact on competition in the Massachusetts health care market based on price, total medical expense ("TME"), provider costs, or other recognized measures of health care spending for the following reasons:

1) UMMC and Marlborough Hospital are high public-payer hospitals with nearly 70% of the hospitals' reimbursement coming from public payers whose rates are mandated with standard payment methodologies across acute care hospitals in Massachusetts,¹⁸ and UMMC is considered a disproportionate share hospital.¹⁹ Because of these factors, the Applicant does not anticipate any impact on TME for these patient populations following the Proposed Merger.

Table 8: Gross Patient Service Revenue ("GPSR"), Commercial Share and Relative Price 2023

	GPSR	Commercial Portion		Relative Price FY 22 ²⁰
Hospital	Millions \$	% of GPSR	\$ Amount	Commercial
UMMMC	\$7,402.10	29%	\$2,146.61	1.11
Marlborough Hospital	\$385.50	27%	\$104.09	0.97

2) The Applicant asserts that as a small community hospital, Marlborough Hospital's commercial population is too small to materially impact the TME of either the hospital or the system following the Proposed Merger. Staff inputted the Center for Health Information and Analysis most recent publicly available data into Table 8, which shows that in 2023 Marlborough Hospital's commercial payer amount was ~5% of that of UMMC's and that Marlborough Hospital's relative commercial price is 12.6% below UMMC's.

The Applicant also asserts that UMMC has less of an impact on TME compared to the two AMCs with higher S-RP, because its share of total statewide payments is significantly smaller than the two AMCs with higher S-RPs as shown in the Table 9 below. Further, although UMMC has the third highest RPI, its RPI is closer to – and actually below – the average RPI for AMCs (1.15) and is more closely aligned with the middle/lower RPI AMC's.

Table 9: Statewide Relative Price and Percent of Total Statewide Commercial Payments FY 2022

Hospital	RPI	Percent of Total Statewide Payments
Brigham and Women's Hospital	1.37	11.49%
Massachusetts General Hospital	1.35	14.73%
AVERAGE RPI for AMC Cohort	1.15	NA
UMass Memorial Medical Center	1.11	5.23%
Tufts Medical Center	1.09	2.58%

¹⁸ <https://www.chiamass.gov/assets/docs/r/hospital-profiles/2023/marlboro.pdf> ;
<https://www.chiamass.gov/assets/docs/r/hospital-profiles/2023/ummc.pdf>

¹⁹ <https://www.medicaid.gov/medicaid/financial-management/medicaid-disproportionate-share-hospital-dsh-payments/index.html>

²⁰ The most recent year published by CHIA

Beth Israel Deaconess Medical Center	1.05	6.31%
Boston Medical Center	0.94	1.76%

3) There is no anticipated change in physician TME as UMass Memorial Medical Group physicians are paid the same professional rates under existing UMass Memorial payer contracts regardless of whether they practice at Marlborough Hospital or UMMMC.

4) As previously described, the Applicant anticipates savings will be gained as a result of reductions in transfers of lower acuity patients from Marlborough Hospital, greater flexibility with transporting patients among campuses, more access to tertiary and quaternary care at the University and Memorial campuses, and reducing the need to transfer some patients to higher cost providers in Boston or out of state due to capacity issues at UMMHC. Also, the Applicant anticipates small savings for inpatients needing transport as they will no longer incur the ambulance/life flight bills as transportation

5) As previously discussed in Factor 1(c) It is anticipated that the single license and a single medical staff infrastructure will reduce the duplicative costs of the licenses, separate offices for medical staff credentialing and quality control, and senior leadership teams.

6) Over time UMMMC plans to use its longstanding lean process to identify other areas that it can streamline to help reduce cost. UMMHC continues to develop and implement innovative strategies that will facilitate lower health care costs such as the previously discussed HaH program that has brought hospital-level care to the homes of more than 2,000 patients, reducing patient hospital readmission rates and admission to skilled nursing facilities. In addition, UMMHC recently launched a Subacute Rehab at Home pilot program which brings skilled nursing and rehabilitative care to patient homes.

Analysis

Based on the information provided by the Applicant, which emphasizes the small percentage of commercial payers and the relatively uniform payments by public payers across all hospitals in Massachusetts,²¹ the applicant has asserted that the Proposed Merger will not have an adverse impact on competition.

Staff notes that in Fiscal Year 2023 UMMMC had only 5.7% of all Massachusetts acute care hospital inpatient discharges.^u Table 10 shows that of the six academic medical centers, UMMMC has the third highest percentage of total discharges in Massachusetts.

Table 10: Percentage of Total Discharges in Massachusetts in FY 2023

AMC Hospital	% of Total Discharges
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²¹ <https://masshpc.gov/sites/default/files/2024%20CTR%20Chartpack.pdf>

Tufts	2.3%
BMC	3.3%
BIDMC	4.8%
UMMMC	5.7%
BWH	6.2%
MGH	6.6%

Marlborough Hospital had less than 1.0% of all Massachusetts acute care hospital inpatient discharges. Therefore, any increase in market share (which is not cumulative since there may be overlap in the patients across the Applicant's facilities) is likely to allow the Applicant to remain competitive within Massachusetts without a significant price impact on TME given that UMMMC's costs rank favorably among Massachusetts AMC hospital providers. (Table 11)

Table 11: UMMMC CASE MIX, RELATIVE PRICE, NPSR/CMAD²² CY 2023

Hospital	Case Mix Index	Relative Price	NPSR /CMAD
BIDMC	1.45	1.05	\$19,190
UMMMC	1.26	1.11	\$18,117
BMC	1.17	0.94	\$16,672
Tufts	1.6	1.09	\$19,240
MGH	1.68	1.35	\$20,438
BWH	1.54	1.37	\$24,009

As shown in Table 11, the most recent CHIA data for FY 2023 show that within the Applicant's Academic Medical Center cohort, UMMMC has the second lowest Case Mix Index and NPSR/CMAD of all the other six academic medical centers in Massachusetts. This means that when patients seek care at UMMHC's competitors based in Eastern Massachusetts, when they could have received care at UMMHC, the overall cost of care is likely higher than it would have been at UMMHC.

Factor 1 Summary Analysis

The Proposed Merger presents an opportunity to maintain and increase Marlborough Hospital patients' access to specialty care locally while simultaneously maintaining or reducing TME. Additionally, the Applicant anticipates the Proposed Merger could prevent outmigration to higher cost

²² Case-mix adjusted discharges

tertiary/quaternary medical centers in Eastern Massachusetts, which is important not just for cost-containment, but also for continuity of care. Further, the Applicant anticipates the ability to keep health care at the clinically appropriate level of care within the UMMHC system means that the total medical expense for those patients may be reduced through better coordinated care. Staff finds the Proposed Project will secure the financial viability of Marlborough Hospital to support the patient panel's access to care, including specialty services.

As a result of the information provided by the Applicant and additional analysis, staff finds that the Applicant has demonstrated that the Proposed Project meets Factor 1(a-f).

Factor 2: Cost Containment, Improved Public Health Outcomes and Delivery System Transformation

F2(a) Cost Containment

The Applicant asserts the Proposed Merger will preserve and improve access to local care within the community and within the UMMHC system. The Proposed Merger will maximize the resources currently available at both Marlborough Hospital and UMMMC to ensure the long-term viability of hospital services in Marlborough and access to tertiary care at UMMMC for Marlborough Hospital patients. The current cost of operating Marlborough Hospital comes with significant challenges in securing and maintaining access to specialty services. Continuing to operate Marlborough Hospital as a standalone, small community hospital will become increasingly difficult thus ensuring access to care locally will become unsustainable. The Applicant states the Proposed Merger is aligned with the Commonwealth's goals for cost containment for the reasons explained below.

- As explained in factor 1(f) both UMMMC and Marlborough Hospital are high public payer hospitals, and therefore the Proposed Merger of UMMMC and Marlborough Hospital is unlikely to impact total medical expense (TME). As shown in Table 1, UMMHC and Marlborough Hospital each have nearly 70% of revenues from public payers. Since public payer reimbursement rates are the same across facilities, including UMMMC and Marlborough Hospital, the Proposed Merger is unlikely have an impact on the TME for these patient populations. Moreover, Marlborough Hospital's total commercial gross patient service revenue (GPSR) accounted for only 5% of UMMMC's total GPSR in FY2023. Accordingly, TME will not be materially impacted following the Proposed Merger. The Applicant also states total health care expenditures may be reduced as lower acuity patients will be able to obtain care at the Marlborough Hospital Campus without the need for transfer. Consequently, this could lead to cost savings which will remain a lower cost site of care. Further, by safeguarding access to specialty care locally, the Proposed Merger will promote cost containment because patients will not need to seek care outside of the region.
- The Applicant asserts the merger will increase utilization of primary and specialty services at the Marlborough Hospital Campus and improve patient access to the region's only academic medical center. Table 12 shows three years of utilization data for UMMMC and Marlborough

Hospital. The data show that UMMMC is fully staffed and operating with increasing numbers of discharges and in excess of 91% capacity; and, in FY 2024, it exceeded 99% capacity even with the addition of licensed beds. Marlborough Hospital is operating at increasing levels of staffed beds since FY 2022 without increasing occupancy levels, but, with the flexibility generated by the improved medical staff coverage, the Applicant expects that for lower acuity patients the beds will be more fully occupied. Staff finds that the capacity is needed based on these utilization data and that the Proposed Merger is likely to serve as a resource to alleviate the high volume for lower acuity patients at the Marlborough Hospital campus.

Table 12: Utilization Data for UMMHC and Marlborough Hospital

	UMMMHC			Marlborough Hospital		
	FY 22	FY23	FY24	FY 22	FY 23	FY24
<u>Discharges</u>	35,767	38,231	45,076	2,996	3,179	3,431
<u>Licensed Beds</u>	749	747	823	79	79	79
Staffed Beds	731	732	825	67	67	76
Staffed Occupancy	91%	97%	99.6%	76.5%	76.8%	70.9%

- By integrating operations, the Applicant anticipates that realized cost savings will be used by UMMMC to invest in opportunities to ensure access to care locally for the Marlborough community. The Applicant asserts the Proposed Merger will better leverage existing resources to meet patient care needs, improve health outcomes, and drive quality improvement initiatives. As previously discussed, the Proposed Merger will eliminate costs required to maintain a separate hospital license and corporate entity, as well as separate governing bodies, leadership structures, and medical staff infrastructures. Furthermore, the Marlborough campus will be fully integrated into the UMMMC quality, patient safety and regulatory oversight functions, ensuring the Marlborough campus is included in UMMMC's long-term planning around quality, safety and outcomes.
- By eliminating duplicative management structures, care coordination will be more efficient and resources such as operating rooms, bed use, clinical staff and patient access to innovative care delivery models described in Factor 1(b) can be optimized. Greater capacity and coordination across UMMMC's inpatient campuses will improve access to inpatient tertiary and quaternary care and innovative care delivery models.

F2(b) Public Health Outcomes

As detailed in Factor 1(b) the Proposed Merger will improve public health outcomes by preserving acute care hospital services in the Marlborough community through the consolidation and unification of medical staffs thereby improving care coordination among campuses leading to patients receiving more consistent care. As previously described, the Proposed Merger will provide UMMMC the ability to better manage and allocate resources so that patients receive the right care in the right setting for their acuity levels which the Applicant asserts is crucial for ensuring access to tertiary care when needed.

As a licensed campus of UMMMC, the Marlborough campus will fully integrate into the UMMMC quality, patient safety, and regulatory oversight functions, ensuring its inclusion in UMMMC's long-term planning around quality, safety, and outcomes.

Further, patients at the Marlborough campus will have increased access to specialty care through appropriate staffing on location as well as streamlined care delivery, including availability of consults without the need for discharge and transfer, allowing more patients to receive care locally, instead of being transferred to a different facility farther from home.

F2(c) Delivery System Transformations

To better manage and allocate resources so that patients receive the right care in the right setting for their acuity level which the Applicant asserts is crucial for ensuring access to tertiary care when needed, the Applicant states the Proposed Merger will drive delivery system transformation through expanded access to UMMMC's innovative care models, such as HaH, Rehab at Home, the virtual patient observation program, and MIH. These programs also have demonstrated improved patient outcomes, as well as improved care experiences. Following the merger of Marlborough Hospital and UMMMC, the HaH program, as well as Rehab at Home, remote patient monitoring, and MIH, will be available to patients at the Marlborough campus.

The Applicant states that with respect to SDOH, UMMHC implemented a multifaceted strategy to incorporate a screening process for ambulatory patients in the care planning process. Patients who are identified as having a health-related social need can access a user-friendly solution called CommunityHELP, which can be accessed from within the patient's medical record. Community members can also use this tool to search for resources for themselves. UMMHC caregivers are able to place referrals for these social services within Epic.

Also, in 2024, UMMHC updated the tools and workflows for screening patients for SDOH needs and linking them to resources. One such update was to leverage the vendor Get Well to make it easier for patients to complete an SDOH screening through a text messaging platform and provide text or telephone based navigational supports so patients can more easily find the social service resources that they need in the community. The Applicant affirms it is committed to continually improving the ways in which SDOH issues are not only identified, but how they are addressed to meaningfully improve the lives of the patients it serves.

Factor 2 Summary Analysis

Staff has summarized a number of credible ways the Applicant states the Proposed Merger will maintain or reduce costs, improve public health value, and lead to delivery system transformation. As a result of the information provided by the Applicant and additional analysis, staff finds that the Applicant has demonstrated that the Proposed Project meets Factor 2.

Factor 3: Relevant Licensure/Oversight Compliance

The Applicant has provided evidence of compliance and good standing with federal, state, and local laws and regulations and this Factor will not be addressed further in this report. As a result of information provided by the Applicant, staff finds the Applicant has reasonably met the standards of Factor 3.

Factor 4: Demonstration of Sufficient Funds Independent CPA Analysis

Under factor 4, the Applicant must demonstrate that it has sufficient funds available for capital and operating costs necessary to support the Proposed Project without negative effects or consequences to the existing Patient Panel. Documentation sufficient to make such a finding must be supported by an analysis by an independent CPA. The Applicant submitted a report performed by BDO ("CPA Report").

The CPA analysis included a review of numerous documents in order to form an opinion as to the reasonableness and feasibility of the projections regarding the Proposed Transfer of Ownership including:

1. Financial Model for UMMHC & Marlborough Hospital individually and on a combined basis for the periods ending September 30, 2025 through September 30, 2030;
2. Proposed fiscal year ("FY") 2024 and 2025 UMMHC Budget Presentation dated as of September 24, 2024; and Final FY 2025 budget for Milford Regional Medical Center ("MRMC")²³ dated as of September 30, 2024;²⁴
3. Audited Financial Statements for both UMass Memorial Healthcare, Inc. and Milford Regional Medical Center, Inc. for FY's Ended September 30, 2021 through 2024;
4. Industry reports for Definitive Healthcare,²⁵ Integra Information, A Division of Microbilt Corporation and, IBISWorld Industry Report, Hospitals in the US.

²³ Milford Regional Medical Center was acquired by UMMHC in FY 24 and full integration of financial information is underway.

²⁴ The CPA reviewed MRMC financial statements separately because it is not yet fully integrated within the UMMHC statements. Since Marlborough Hospital is already a part of the UMMHC system, its financial statements are part of the UMMHC statements.

²⁵ Respectively: data as of January 2024, as of February 5, 2025, dated October 2024

The CPA calculated standard financial ratios, reflecting profitability, liquidity, and solvency²⁶ of the forecasted operating results to market information from Integra Reports IBISWorld and Definitive Healthcare to assess the reasonableness of the Projections.

1. Revenues

The cumulative patient service revenue comprises 95.0 percent of the cumulative total operating revenue from FY 2025 through FY 2030. The Projected patient service revenue for UMMHC, based on historical performance and demographic trends, is expected to grow by 12.0 percent in FY 2025 when compared to FY 2024 and then UMMHC projects nominal growth in patient service revenue from FY 2026 through FY 2030. Factors that are expected to drive projected revenue growth in FY 2025 include the successful integration of MRMC, the opening of the North Pavilion (added 72 beds), and annual system price increase related to such factors as inflation other factors.

As a result of the analysis, the CPA concludes that the revenue growth projected by the Applicant reflects a reasonable estimation of future revenue of UMMHC.

2. Expenses

The CPA analyzed each category of projected operating expenses for reasonableness and feasibility.²⁷ Total consolidated expenses within the Projections are projected to grow by 10.5% and 0.1% in FY 2025 and FY 2026, respectively, which is in-line with projected revenue growth. Starting in FY 2026, UMMHC held total operating expenses relatively flat, assuming nominal growth for FY 2027 through FY 2030, except for interest expense which is projected based on UMMHC's projected level of debt and current terms, depreciation and amortization, and other direct expenses. The primary factors influencing changes in operating expenses in the initial years of the projections are the staffing costs associated with the North Pavilion and the transition from temporary contractors to permanent employees. The CPA notes that the projected total expenses for UMMHC as a percentage of total revenue range from 99.5% to 99.8% from FY 2025 to FY 2030 which is consistent with the historical UMMHC total expenses as a percentage of total revenue which ranged from 96.1% to 101.1% from FY 2021 to FY 2024.

As a result of its analysis, the CPA concluded that the projected operating expenses reflect reasonable estimation of future expenses of the Applicant.

3. Capital Expenditure

²⁶ Profitability metrics, such as EBITDA, EBITDA Margin, Operating Margin and Total Margin are used to assist in the evaluation of management performance in how efficiently resources are utilized. Liquidity metrics, such as Current Ratio, Cash Days on Hand and Days in Accounts Receivable measure the quality and adequacy of assets to meet current obligations as they come due. Solvency metrics, such as Total Assets and Total Equity measure the company's ability to service debt obligations. Certain metrics can be applicable in multiple categories.

²⁷ Operating expenses include salaries and wages, employee benefits, professional fees, purchased services, pharmacy, medical supplies, non-medical supplies, utilities, insurance, rental leases, other direct expenses, system allocation expenses, depreciation and amortization, and interest expenses.

There is no significant investment or growth capital expenditures related to the Proposed Merger. Based on its review, the CPA determined that the capital expenditure projected reflects a reasonable estimation of future capital outlay of UMMHC.

4. CPA Conclusion

The Projections exhibit a cumulative operating EBIDA surplus of approximately 4.5% of cumulative projected operating revenue for the six years from FY 2025 through FY 2030. The CPA determined the anticipated EBIDA surplus is a reasonable expectation and based upon feasible financial assumptions and projections. Accordingly, it determined that the Proposed Affiliation is not likely to have a negative impact on the patient panel or result in a liquidation of assets of UMMHC.

Factor 4 Analysis

Staff is satisfied with the CPA's analysis of the Proposed Project's projections. As a result of information provided by the Applicant and additional analysis, staff finds that the Applicant has demonstrated that the Proposed Project has met Factor 4.

Factor 5: Relative Merit

Transfers of Ownership are exempt from this factor.

Factor 6: Community-based Health Initiatives

Transfers of Ownership are exempt from this factor.

Public Comments on the Application

Any person, and any Ten Taxpayer Group, may provide written or oral comment at any time during the first 30 days following the Filing Date of an Application, or during the first ten days after a public hearing.²⁸ Comments for consideration in DoN's review and analysis are ones that address the Applicant's ability to meet the requirements of each of the relevant factors set out in the Regulations.

Written Comments

The Department received eight (8) written comments.²⁹ A total of 15 state and local representatives signed seven of the letters. All letters expressed strong support of the Proposed Merger stressing that Marlborough Hospital is essential to the "fabric" of Central Massachusetts communities and that the proposed merger will ensure patients receive cost-effective, high-quality care in the appropriate community-based setting, and some added that UMMHC is the largest employer in Central Massachusetts.

²⁸ No public hearing was requested or held.

²⁹ The letters are posted on the DoN website and can be found here <https://www.mass.gov/doc/public-comment-pdf-umass-memorial-health-care-inc-marlborough/download>

One letter was from the Health Policy Commission (“HPC”) which stated that the Proposed Merger was under review as a Notice of Material Change (“MCN”) because the HPC anticipates that moving Marlborough Hospital onto the license UMMMC allows Marlborough to receive UMMMC’s higher academic medical center rates which may increase spending. Upon the completion of the HPC’s review of the transaction, notice was sent to the public on June 6th 2025, stating that based on available information HPC has elected not to proceed with a Cost and Market Impact Review.

Ten Taxpayer Groups (“TTGs”)

Pursuant to the DoN Regulation, any ten taxpayers, organized as a group, may participate in the review of an Application for Determination of Need or request to amend a previously issued Notice of Determination of Need. Said group must register with the Department at any time during the first 30 days following the Filing Date of an Application, or during the first ten days after a public hearing held pursuant to 105 CMR 100.445.

Three (3) TTGs registered in connection with the Proposed Project. Registration information for each TTG is available on the DoN website. Additional information including full text of comments is available on the DoN website.³⁰

Findings and Recommendations

Based upon a review of the materials submitted, staff finds that the Applicant has met each DoN factor and recommends approval of this Application for Transfer of Ownership, subject to all applicable Standard and Other conditions.³¹

Other Conditions

In establishing Conditions, the DoN Program (“Program”) notes the Holder stated throughout the DoN Application the intent to allow care to be maintained, enhanced, and expanded in the Marlborough Hospital community and to provide local access to high-quality specialty care for the community.

1. To establish adherence to this intention as outlined in the Application on the proposed transfer of ownership, as a condition of approval, the Holder must maintain all essential services at the Marlborough Hospital Campus for a minimum of 5 years post DoN approval.
2. In doing so and to allow for Program monitoring of the Applicant's commitment to maintaining all essential services after the merger of Marlborough Hospital with UMMMC, the Holder must report on the following at the Marlborough Hospital Campus

³⁰ Please see *Ten Tax Payer Groups*, <https://www.mass.gov/info-details/umass-memorial-health-care-inc-marlborough-hospital-transfer-of-ownership>

³¹ (B)(1) A Determination of Need Application for Transfer of Ownership pursuant to 105 CMR 100.735 is exempt from 105 CMR 100.310(A)(5), (6), (7), (9), (10) and (13)

- a. On a quarterly basis, the Holder will inform the Program of any anticipated material or prolonged reduction of any essential service at the Marlborough Hospital Campus during the upcoming quarter, and the rationale for such reduction. The Holder will provide an analysis of utilization patterns over a minimum of the previous five years, budgeted and actual Full Time Equivalent (FTE) staffing for each of the services referenced for reduction, a data supported assessment of community need, and a justification for the reduction of the service, including alternatives considered and alternative sites where access can be reasonably assured for its Patient Panel. Following a notice of anticipated material or prolonged reduction of any essential service at the Marlborough Hospital Campus, the Holder may be referred to the Public Health Council for review of the long-term implications of such reduction and compliance with the DoN approval.
- b. As part of its annual reporting, the Holder will report on specific actions taken to provide the Marlborough Hospital Campus patients with the opportunity to participate in existing UMMHC programs to increase access and reduce the overall cost of care. The reporting shall include the number of patients by program and include estimated cost savings of participation in each program.
- c. The Holder shall provide, in its annual report to the Department, reporting on its proposed measures to assess the impact of the Proposed Project, including (1) clinical quality metrics such as patient mortality; (2) patient safety, as measured by Patient Safety Indicator (PSI) events; and (3) health equity, as measured by the MassHealth health equity incentive program metrics.

Appendix 1

The transfer of Marlborough Hospital to UMMMC’s license is expected to yield positive outcomes for Marlborough Campus patients in terms of sustained access to community-based specialty care, opportunities for more integrated care delivery with enhanced care coordination, and continuity of care. Access to sustainable, integrated, community-based care, including comprehensive specialty care, is expected to lead to high-quality care, improved population health, and better patient experience.

1. Access to Specialty Care at the Marlborough Campus

The Proposed Merger is anticipated to decrease the number of Marlborough Campus patients who require transfers for in-person care at UMMMC through the increased availability of teleconsultations.

Quality Measure #1: The Applicant will track the total number of teleconsultations performed by a UMMMC specialty provider for patients admitted at the Marlborough Campus.

Quality Measure #1	Baseline
Specialty Teleconsultations	

2. Improved Utilization of the Marlborough Campus

The Proposed Merger is anticipated to result in fewer patients requiring transfer to UMMMC for admission to access specialty services. This is expected to result in improved occupancy of medical/surgical services at Marlborough campus, demonstrating improved access to care in the community.

Quality Measure #2: The Applicant will track occupancy rates for inpatient medical/surgical services at Marlborough campus.

Quality Measure #2	Baseline ³²	Year 1	Year 2	Year 3
Inpatient Occupancy Rate: Medical/Surgical Beds	80%	82%	84%	86%

3. Patient Experience

The Proposed Merger is anticipated to result in improved patient experiences, access to specialty services, and reduced wait times. This expansion in choice and accessibility is expected to contribute to a more responsive and patient-centric health care environment.

Quality Measure #3: Patients who have positive experiences receiving health care are more likely to seek out future care when needed. The Applicant will use the Press Ganey survey to measure patient satisfaction following an inpatient admission. The specific measure will be “Likelihood to recommend Marlborough Hospital campus”.

Numerator: Total of all responses (top box)

Denominator: # of responses x 100

³² All baselines provided reflect FY2024 results.

Quality Measure #3	Baseline	Year 1	Year 2	Year 3
Likelihood to recommend Marlborough Hospital	50.6%	52%	54%	56%

^a *Top Issues Confronting Hospitals*, AMERICAN COLLEGE OF HEALTHCARE EXECUTIVES (2023), <https://www.ache.org/learning-center/research/about-the-field/top-issues-confronting-hospitals>.

^b Condon, Becker's Hospital Review April 11, 2024: "Nearly 80% of Physicians Now Employed by Hospitals, Corporations."

^c Office of Disease Prevention and Health Promotion, *Healthy People 2030*, <https://health.gov/healthypeople/objectives-and-data/browse-objectives/health-care-access-and-quality/reduce-proportion-people-who-cant-get-medical-care-when-they-need-it-ahs-04>.

^d HealthyPeople.gov, Access to Health Services (2020), <https://wayback.archive-it.org/5774/20220413202227/https://www.healthypeople.gov/2020/topics-objectives/topic/Access-to-Health-Services>.

^e See, e.g., Joanna Jiang et al., *Quality Of Care Before And After Mergers And Acquisitions Of Rural Hospitals*, JAMA (Sept. 20, 2021), <https://jamanetwork.com/journals/jamanetworkopen/article-abstract/2784342>. See also Sean May et al., *Hospital Merger Benefits: An Economic Analysis Revisited*, AMERICAN HOSPITAL ASSOCIATION (Aug. 2021), <https://www.aha.org/guidesreports/2021-08-18-hospital-merger-benefits-econometric-analysis-revisited-executive-summary>.

^f Monica Giancotti et al., *Efficiency And Optimal Size Of Hospitals: Results Of A Systematic Search*, PLoS ONE (Mar. 29, 2017), <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0174533>.

^g *Id.*

^h Gianfranco Damiani et al., *The Short Stay Unit as a new option for hospitals: A review of the scientific literature*, 17 MEDICAL SCIENCE MONITOR SR15 (2011), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3539545/>.

ⁱ *Id.*

^j E.P. Mseke et al., *Impact Of Distance And/Or Travel Time On Healthcare Service Access In Rural And Remote Areas: A Scoping Review*, 37 Journal of Transport & Health 101819 (July 2024), <https://www.sciencedirect.com/science/article/pii/S2214140524000653>; see also *Healthcare Access In Rural Communities*, RHIHUB (Dec. 19, 2024), <https://www.ruralhealthinfo.org/topics/healthcare-access#:~:text=Traveling%20to%20receive%20healthcare%20services,ability%20to%20access%20healthcare%20services>.

^k See Jiang HJ, Fingar KR, Liang L, Henke RM, Gibson TP. Quality of Care Before and After Mergers and Acquisitions of Rural Hospitals. *JAMA Netw Open*. 2021;4(9): e2124662,

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2784342>.

^l <https://www.healthcareitnews.com/news/umass-memorial-health-proves-rpm-virtual-sitting-effective-person-care>

^m *The Value Of Hospital-At-Home Programs For Healthcare Systems And Payers*, INBOUND HEALTH (Sept. 6, 2024), <https://inboundhealth.com/the-value-of-hospital-at-home-programs-for-healthcare-systems-and-payers/>.

ⁿ *Providers Betting Big On Future Of Hospital At Home*, AMERICAN HOSPITAL ASSOCIATION, <https://www.aha.org/aha-center-health-innovation-market-scan/2024-04-09-providers-betting-big-future-hospital-home>.

^o *Id.*; see also Bruce Leff et al., *Hospital at Home: Feasibility and Outcomes of a Program to Provide Hospital-Level Care At Home For Acutely Ill Older Patients*, ANNALS OF INTERNAL MEDICINE (Dec. 6, 2005), <https://pubmed.ncbi.nlm.nih.gov/16330791/>; Gideon A Caplan et al., *A Meta-Analysis of "Hospital In The Home"*, MEDICAL JOURNAL OF AUSTRALIA (Nov. 5, 2012), <https://onlinelibrary.wiley.com/doi/full/10.5694/mja12.10480>.

^p See UMass Memorial, *Anchor Mission*, <https://www.ummhealth.org/anchor-mission>; see also, Harvard Chan School of Public Health, *2019 Case Study, Anchor Health Beyond Clinical Care: UMass Memorial Health Care's Anchor Mission Project*, https://alumni.sph.harvard.edu/s/1319/images/gid2/editor_documents/mhcm_alumni/ummhc_case_study.final_formatte_d.pdf?gid=2&pgid=61&sessionid=6ab760ce-c187-4c0a-9199-35743be650cc&cc=1; see generally, *Healthcare Anchor Network, Resources for the Anchor Mission*, <https://healthcareanchor.network/anchor-mission-resources/>.

^q Garg, A., *Improving Health Equity at UMass Memorial Health*, https://www.ummhealth.org/sites/default/files/eNewsletter_Files/Quality_Matters/qm23_09/Infographic%20Improving_Health_Equity_083023.pdf.

^r "See MassHealth, [Health Equity Incentives Program RFI, Appendix A; MassHealth RELD, Sex & SOGI Data Standards](https://www.mass.gov/doc/health-equity-incentives-rfi-appendix-a-0/download) (October 2021), <https://www.mass.gov/doc/health-equity-incentives-rfi-appendix-a-0/download>.

^s Community Engagement Standards for Community Health Planning Guideline. <https://www.mass.gov/doc/community-engagement-guidelines-for-community-health-planning-pdf/download>.

^t DoN Regulation 100.210 (A)(1)(e). at <https://www.mass.gov/files/documents/2018/12/31/jud-lib-105cmr100.pdf>.

^u <https://www.chiamass.gov/hospital-and-hospital-system-performance-dashboard/>