

Memorandum to the Public Health Council

APPLICANT: Baystate Medical Center
759 Chestnut Street
Springfield, MA 01199

PROJECT NUMBER: 1-3B36.8 (Significant Change)
BH-20062607-AM

Filing DATE: October 14, 2020

Introduction

This memorandum presents, for Public Health Council (PHC) action, the Determination of Need (DoN) Program's recommendation pertaining to a request by Baystate Medical Center (Baystate or Holder) in Springfield, MA, for a Significant Change to its previously approved DoN Project (#1-3B36). As described further herein, Baystate seeks approval for a project that includes a total of 82,254 gross square feet (GSF) to continue with the buildout of DoN approved shell space, with associated renovations and minor new construction located at 759 Chestnut Street in Springfield. The proposed project would generate an incremental increase in the maximum capital expenditure of \$69,881,577 (March 2020 dollars), and the community health initiatives (CHI) contribution will increase by \$3,494,078.

This request falls within the definition for Significant Change that includes "... Any build out of shell space that was subject to a Notice of Determination of Need" and will be reviewed pursuant to 105 C.M.R. 100.635(A), which requires that the proposed change falls within the scope of the Notice of Determination of Need and is reasonable. The Department has received no public comment on this request for Significant Change.

Background

Baystate is a licensed 716-bed academic medical center that operates the only Level 1 Trauma Center and the only Pediatric Trauma Center in western Massachusetts. In November 2007, the Department approved a DoN at Baystate for construction of an addition at its main campus at 759 Chestnut Street in Springfield, MA - what they called the "Hospital of the Future" (HOF). As part of Baystate's long-term strategic plan, the approved addition included 295,800 gross square feet (GSF) of shell space to be built out, inclusive of replacement and expansion of clinical ancillary services, over a period of 15 to 20 years. This shell space afforded design flexibility to assure for continued modernization of the physical plant and compliance with current construction standards while meeting the Hospital patients' changing needs. Since 2007, seven amendments have been approved by the Department, each authorizing build-outs designed to meet identified service needs of the Baystate patient panel. The chart below depicts the changes related to the original Approval, the most recent

amendment of the HOF build-out and the impact of this Amendment #8 including associated renovations and limited new construction. A brief summary of each amendment is in Attachment 1.

Summary of the Seven Previous Amendments						
	Approval Date	Total GSF	Approved Gross Square Footage ("GSF")			Approved MCE
			New Const GSF (without shell)	Shell Space GSF	Renovation GSF	
DoN #1-3B36	11/2007	641,250	303,300	295,800	42,150	\$239,318,527
Amendment 1	08/2009	630,504	303,300	282,304	44,900	\$239,318,527
Amendment 2	11/2009	686,086	303,300	337,886	44,900	\$239,318,527
Amendment 3	02/2011	692,276	381,857	261,445	48,974	\$314,083,474
Amendment 4	09/2012	692,276	461,973	181,329	48,974	\$359,423,474
Amendment 5	08/2014	692,276	475,616	167,686	48,974	\$366,266,390
Amendment 6	01/2017	698,634	486,749	156,553	55,332	\$373,520,390
Amendment 7	11/2018	703,560	509,389	133,913	60,258	\$411,125,829
Proposed Project	-	724,893	575,729	72,992	76,172	\$481,007,406

Approval of this project would leave 72,992 GSF of as yet undeveloped shell-space. Three areas in the HOF will remain to be built out that are eligible for subsequent consideration as an Amendment under this DoN Approval as shown in the chart below. At this time, the Applicant anticipates that these will be used for inpatient beds.

Remaining Shell Space		
Floor	Wing	GSF
3rd	North	20,777
4th	North	23,196
4th	MassMutual	29,019
Total		72,992

Proposed Amendment: To Relocate Operating Room Services to Existing Shell Space.

The Holder is seeking authorization to build-out shell space to relocate 17 existing operating rooms (ORs) from the adjacent Daly Building to the second floor of the HOF. This build-out includes additional pre-procedure preparation and post-procedure recovery space. As proposed, this amendment will result in a one-for-one (1:1) replacement of these ORs on a single floor, with no increase in the number of operating rooms.

Baystate asserts the existing areas are inefficient to operate, undersized,¹ and lack a sufficient number of pre- and post- operative bays and support space. In addition to being undersized, the majority of the existing ORs are fitted with specialized equipment that is nearing the end of its useful life.

The Hospital states that because of the increased gross square footage requirements of current building standards, the alternative option of renovating existing space would yield a reduction in existing OR capacity as all 17 ORs would not fit within the same footprint.

The Hospital states that co-location of the operative areas within the previously approved (2018) heart and vascular ORs, and the critical care beds will lead to “improved communication among physicians, minimized redundancies in the provision of services and resources, more efficient staffing patterns, and improved quality outcomes for patients.” For patients within its patient panel and patient service area, consolidating these services will improve access, convenience, coordination and continuity of care.

The Applicant asserts that as the only tertiary referral center within Western Massachusetts, approval of the Proposed Project will allow it to accommodate a continued and steady demand for the in- and out-patient surgical services. Surgical volume data provided by the Hospital reports an annual 5% growth for inpatient surgical services and fluctuating but steady volume for outpatient surgery. Part of the project includes new construction to expand the lobby that includes additional space for patient registration and seating for outpatient surgical patients which is intended to improve the patient experience.

The Hospital’s projected demand is based on its strong network of local affiliated hospitals and providers who refer to it for the tertiary services that it offers in those ORs.² Baystate stated that the continued increase in demand is a result of the increased incidence of age related diseases requiring surgical intervention, pointing out that in 2015 the 65+ age cohort grew to 16% of the population in Massachusetts. Additionally, because of its location at the nexus of two interstate highways, it provides access to services from all of Western Massachusetts, and some parts of Connecticut. As a result of the aging population, their strong referral network for tertiary services, and strategic location, it is projecting a 3% year annual growth rate from 2019³ thru 2025.

Staff Findings

Staff reviewed the 2007 Staff Summary and Decision Letter of Approval for DoN #1-3B36 to determine whether the request to relocate the operating rooms to the HOF falls within the scope of that Approval and finds that it was part of the original plans for Baystate Medical Center. As such, this 1:1 replacement of ORs falls within the scope of an Amendment and Staff recommends approval of this portion of the Applicant’s request.

¹ varying in size from 386-500 GSF

² Including heart, vascular, neurology, oncology and plastic specialties.

³ The last year of actual counts for surgical cases. The ORs are expected to go online in Fiscal Year 2022.

Proposed Amendment: Need to Expand Interventional Procedure Rooms

In accordance with the original 2007 DoN Approval, which included allowance for future replacement and expansion, Baystate is requesting to expand its interventional radiology capacity on the second floor of the HOF which is co-located with the ORs and the existing cardiac catheterization and electrophysiology (“EP”) procedure area. Along with the six replacement rooms (four cardiac catheterization labs and two EP labs) approved in the 2018 Amendment, this will bring the total number of interventional procedure rooms in the HOF Building to eight. In the original DoN (2007), approval included the potentiality that radiology services would be expanded or changed to remain in alignment with the needs of the service area population. The Holder states this will meet its patients’ projected needs related primarily in two specialties: Neurology and Cardiology. One of the new interventional procedure rooms will be dedicated to neurovascular interventions, while the other will be a shared room which will provide flexibility to facilitate the timely completion of all interventional services, as described further below.

Dedicated Neurovascular Interventional Room

As the only tertiary academic medical center in Western Massachusetts, Baystate performs procedures and services that are not offered at other facilities in the region. To date, the neurovascular procedures⁴ have been provided in an existing cardiac catheterization lab by neurovascular physicians 4-5 days per week. Because neurovascular interventions are emergent by nature, this has implications for the Hospital’s other services. There are times when patients scheduled for diagnostic cardiac catheterization are delayed while neurovascular interventional cases, which can be of long duration, are completed.

Baystate plans to pursue Joint Commission accreditation as a Comprehensive Stroke Center which requires the availability of two neuro-interventional radiology suites to care for two acute stroke patients simultaneously. The plans for a dedicated neuro-interventional suite in addition to a shared suite with cardiology will allow it to meet the current accreditation standards.

The historical volume and growth projections for Baystate’s neuro-vascular service are shown below. The 2019 fiscal year (FY) shows a 43% decline in cases occurred following the departure of one of the Hospital’s two physicians performing these procedures.

⁴ To treat strokes, aneurysms, vasculitis and other blockages in the arteries in the brain and carotid artery, including but not limited to diagnostic angiograms, angioplasty, insertion of intracranial stents, insertion of carotid stents, thrombectomies, coil embolizations, etc.

Historical and Projected Neurovascular Case Volume								
FY17	FY18	FY19	FY20	FY21	FY22*	FY23	FY24	FY25
335	350	198	400	450	475	500	525	550
*The new dedicated neurovascular interventional room will come online in FY22.								

Following the physician's departure, the hospital entered into a long-term arrangement for neuro-interventional radiology physician services. Prior to this arrangement the Hospital reports that annually approximately 100-150 patients were referred to other regional neurovascular centers located in Hartford, Albany, Boston, or Worcester thereby requiring patients in need of ongoing services to travel outside the Hospital's service area. The Hospital reports that this travel is inconvenient for patients and can lead to non-compliance with regular appointments and poor outcomes. The arrangement with radiology physician services will support the Hospital's existing acute stroke service that serves emergent cases, while also allowing it to develop an elective service for patients who have had, or are at risk of stroke and may require further evaluation and intervention. Once treated, such neurovascular patients require regular, follow-up radiology studies to assure that their condition remains stable. The Hospital believes that access to elective neuro-interventional radiology and related physician services will ensure improved health outcomes and quality of life for current stroke patients, patients at risk for stroke and other neurological conditions.

Shared "Flex" Interventional Room

Baystate states that the second new interventional room will be a "flex" room to meet the needs of two services, neurology and cardiology and will be equipped to accommodate overflow neurovascular, EP,⁵ and cardiac procedures.

First, the "flex" room will address the Comprehensive Stroke Center certification requirement that a facility have the capability to simultaneously perform two neurovascular interventional cases for acute stroke patients in an emergency.⁶

Additionally, Baystate states the need for the new flex interventional room is based on new patient panel demand for interventional cases in cardiology that was not anticipated when Amendment #7 for the procedure rooms was filed. The increase is attributable to improvements in technology and changes in clinical indications that have expanded the pool of patients eligible to receive these cardiac procedures. These include EP ablation procedures and structural heart procedures, such as left atrial appendage occlusion ("Watchman") and transcatheter aortic valve replacement ("TAVR").

The Watchman is a small implantable device placed into the heart that can reduce the risk of stroke in patients with atrial fibrillation. It was originally approved by the Food and Drug Administration for use only in those patients who were deemed suitable for long-term oral

⁵ electrophysiology

⁶ Of the Joint Commission

anticoagulants (“OACs”).⁷ Subsequently, studies suggest the Watchman device implantation is effective and safe for patients with a contraindication to OACs, and those with a high risk of bleeding or have bleeding while on OACs.ⁱ Consequently, it is now approved for reimbursement by the Centers for Medicare & Medicaid Services and by an increasing number of commercial insurers for an expanded number of patients, including those deemed not suitable for long-term OACs. As a result, ablation/Watchman volume has grown approximately 16% from FY17-FY19 (from 345 to 400 cases).

TAVR was previously only utilized in cases involving patients at intermediate to high surgical risk, or those who were inoperable. This procedure has been explored in the literature as an alternative to open valve replacement surgery in low risk patientsⁱⁱ. Consequently, TAVR volume has grown 28% from FY17-FY19 (from 186 to 238 cases).

Projected High-Acuity Specialty Interventional Case Volume						
	FY20	FY21	FY22**	FY23	FY24	FY25
Neurovascular Procedures*	400	450	475	500	525	550
Ablations/Watchman	389	480	521	582	582	582
TAVR	300	356	423	450	450	450
Total	1,089	1,286	1,419	1,532	1,557	1,582
*These neuro procedures are the same as in the chart above						
**The Flex room will come online in FY22						

As shown above, the five year projected growth of 37.5% for neurovascular cases; and 50% growth each for Ablation/Watchman and TAVR is attributable to advances in technology and clinical applications, and the increasing incidence of cardiologic and neurologic conditions associated with age.

The applicant notes that during normal business hours,⁸ 90% capacity of a room is approximately 450 cases per year.

Staff Analysis and Findings

Interventional procedure capabilities are integral for the diagnosis and treatment of cardiologic and neurologic patients. For example, in neurology its use includes diagnosis and treatment of strokes and aneurisms, and in both vascular disease and cardiology its use includes diagnosis and treatment of deep vein thrombosis, aneurisms, and placement of heart valves and stents.ⁱⁱⁱ The use of appropriate interventional radiology is associated with better outcomes due to reduced pain, less risk and shorter recovery times than conventional surgery.^{iv}

⁷ e.g., Warfarin

⁸ 7am-4pm

Staff notes that with the advances in technology and expansion of payments for these procedures, it is preferable for patients to receive their treatments closer to home as the improved outcomes have been demonstrated when care is available locally. Therefore, staff finds that the Hospital has made a reasonable argument for approval of this expansion of an existing service for two interventional procedure rooms to be located in the second floor of the HOF, that it is needed and within the scope of the original DoN approval.

Proposed Amendment: Need to Expand CT services

Baystate is requesting the addition of one additional Computed Tomography (CT) unit to its emergency department (ED). The addition of one CT unit in the ED will bring the total number of CT units in the HOF Building ED to three units and the total number of CT units on the Hospital's main campus to five. At the time of this DoN approval (2007), CT was not included on the list of DoN-required equipment, and that approval included the potentiality that radiology services would be expanded or changed to remain in alignment with the needs of the service area population.

Baystate cites four principal reasons that have driven historic growth and expects these will continue:

1. It operates the only Level One Trauma center in the region bringing in a high volume of high-acuity patients in need of CT imaging.
2. It operates a stroke center in which patients need immediate scans to determine the severity of the stroke and the appropriate treatment to mitigate the extent of the damage to the brain.
3. As a tertiary acute care hospital, it experiences high inpatient demand for CT and utilizes CT units in the ED for inpatient cases as well.
4. It has seen growth in cardiac and circulatory system CT scans system for inpatients and ED patients (and projects a growth rate of about 10% per year over the next few years).

Similar to the interventional patient panel demand, the need for CT is expected to increase as the number of patients within the 65+ age cohort grows. Both statewide and local population projections provided by the University of Massachusetts Donahue Institute suggest that the 65+ cohort will increase at a rate higher than all other age cohorts over the next 10-15 years, such that residents that are 65+ will represent roughly a quarter of the state's population by 2035. This increase in older adult patients is significant as it is well documented that CT is extremely beneficial with a variety of conditions that have higher incidence rates related to aging.

As the only tertiary academic medical center, and the only Level 1 Trauma Center in Western

Massachusetts, Baystate experiences a large volume of high-acuity patients in its emergency department (ED). Consequent to this role, the Hospital performs a high volume of critical (and non-critical) CT scans, which the hospital states, often overwhelms the two existing CT units located in the ED, causing delays. The Hospital reports that a non-critical ED CT scan at the Hospital currently averages two hours from order to completion, although its target turnaround is one hour. The Hospital anticipates that the addition of a third CT unit in the ED will reduce wait-times for non-emergent strokes to the target of one hour and improve access to care for ED patients and inpatients as well.

The chart below shows the three year increase volume in ED CT scans relative to ED visits and the main campus wide CT volume. The growth is not attributable solely to patients in the ED. Baystate explains that currently, there is one non-ED CT unit designated for inpatient use. Inpatient cases are frequently diverted to the ED units, due to high inpatient demand and/or the proximity of the ED CT units to critical care areas. This adds to the demands on the two existing CT units in the ED, causing delays for patients requiring CT's.

Historic Hospital-Based CT Demand			
Volume	FY17	FY19	% growth
Total ED Visits	114,060	116,392	2%
ED CT Scans	35,450	42,901	21%
All CT Scans Main Campus	54,844	63,045	15%

In addition, for inpatients and ED patients, the Hospital is seeing an increase in the number of CT scans of the heart and circulatory system. It expects this type of scan volume to grow about 10% per year over the next few years. Cardiac scans take nearly twice as long as a more routine scan (1 hour versus 30 minutes) since these scans require medications that decrease the heart rate and are administered in the CT scan area while also determining the right phases to perform the exam. These protocols prolong the amount of time spent in the CT scan area.

The number of cases by specialty at the main campus for FY19 is as follows:

Number of Scans by Specialty- 2019	
Neuroradiology	32,848
Abdomen	15,201
Cardiovascular	6,397
Chest	6,594
Musculoskeletal	1,102
CT guidance, unspecified	903
Total	63,045

The Applicant intends to acquire a dual energy or spectral CT,^v a type of CT that is becoming increasingly common in clinical practice due to advances in computer technology and expanding clinical applications.^{vi} The Applicant states that this specific technology reduces “incidental findings” that with conventional abdominal CT scans would necessitate a second scan for accurate “characterization;” it estimates a potential reduction of 500-1,000 second abdominal scans. The Applicant states that spectral CT has several unique advantages that can be particularly useful in the ED. Specifically it offers the following advantages, including: (1) use of a lower dose of IV contrast, reducing the risk of renal toxicity, and thereby improving safety for pediatric patients in particular; (2) avoidance of MRI for some types of fractures, such as hip fractures; (3) avoidance of a second scan to confirm solid masses in the liver and kidneys; (4) near elimination of artifacts on the CT associated with metallic implants and orthopedic hardware; and (5) improved quality of cardiac exams, thereby increasing the efficacy of coronary CT in triaging patients with acute chest pain.

As the table below shows, the five year projections provided by Baystate conservatively anticipates a 5% growth rate.

Projected Hospital-Based CT Demand					
Hospital-Based Volume	FY21	FY22	FY23	FY24	FY25
ED Volume	45,046	47,298	49,663	52,146	54,753
Inpatient Volume	12,563	13,191	13,851	14,544	15,271
Outpatient Volume	8,616	9,047	9,499	9,974	10,473
Total Hospital-Based Vol.	66,225	69,536	73,013	76,664	80,497

Staff Analysis and Findings

In accordance with the original DoN approval (2007) allowance for radiology services to be expanded or changed to remain in alignment with the needs of the service area population, staff finds that the Hospital has made a reasonable argument for need to expand this existing service by one additional CT in the ED and that it is within the scope of the original DoN approval.

Proposed Amendment: Need to Expand Gross Square Footage

As illustrated in the chart below, approval of the Proposed Project will increase the total approved space for the DoN Project to 724,893 GSF. The total GSF for renovation will increase to 76,172 GSF, while the new construction GSF will increase to 575,729 GSF reflecting not only the transition of shell space to new construction and a small amount of space (5,419 GSF) for a surgical lobby and infrastructure related to accomplishing the goals of the project. As a result, the remaining shell space for DoN consideration will decrease to 72,992 GSF to reflect the space remaining for future amendments following this project.

Changes in Square Footage & Maximum Capital Expenditures: Approval - Amendment #8						
	Approval Date	Approved Total GSF	New Const GSF (without shell)	Shell Space GSF	Renovation GSF	Approved MCE
		A	B	C	D	E
		(B+C+D)				
DoN #1-3B36	11/2007	641,250	303,300	295,800	42,150	\$239,318,527
Amendment 7	11/2018	703,560	509,389	133,913	60,258	\$411,125,829
This Project* ⁹		21,333	66,340	-60,921	15,914	\$69,881,577
Status following Approval*		724,893	575,729	72,992	76,172	\$481,007,406

*Amendment# 8

Impact on Cost

The regulation requires that a Holder submit a description of the proposed change along with associated cost implications. As the chart above shows, with this Proposed Project, Baystate seeks to increase its capital expenditures by a total of \$69,881,577 (March 2020 dollars) for the construction, and renovations necessary for the implementation of the proposed Amendment. The majority of this eighth Amendment is for the build out of space used for complex infrastructure and operating rooms. The infrastructure requirements for areas that are technologically oriented such as operating rooms, and radiology, come at a higher cost per square foot than, for example, medical/surgical patient rooms. Baystate asserts that the proposed project is more cost-effective than renovation of existing outdated space to meet new standards. Staff notes that the consolidation of all functions related to the impacted services described herein will also be more cost effective to operate than if they remained in disparate locations, and that timely access to the CT has the potential for cost-savings in the ED as reduced turn-around time may decrease the time spent there and there-by decrease costs.

Impact on Community Health Initiative Funding

Summary and relevant background and context for this application: The Applicant is applying for an Amendment to an approved DoN that will result in a Tier 2 CHI project. The DoN project is proposed for Baystate Medical Center, and therefore, based on previous agreements for CHI purposes this project will be considered a whole Baystate Health system activity. As part of its planning for previous CHI processes, Baystate Health established a practice for equitable and transparent distribution of CHI funds. There are four hospitals within the system, and the practice is to distribute funds

⁹ The difference between the 2018 Approval the GSF and the resulting approved GSF and MCE.

equitably across them, utilizing key criteria. Each hospital receives a base amount of funding, influenced by likelihood of funding from other sources, as well as service area and capacity. Additionally, the funds are distributed according to population volume and size. This is distributed as a per capita allocation. Lastly, the hospitals receive funds based on environmental justice indicators. These funds are determined using seven demographic, socioeconomic, and health measures. Accordingly, some CHI funds from this current project will be combined with existing CHI resources and allocated using this formula.

Through robust community engagement, Baystate Health in 2019 coordinated four Community Health Needs Assessments (CHNA) - one for each hospital - which will guide population and community health improvement efforts, including allocation of CHI resources. Each of the four hospitals has its own Community Benefit Advisory Council (CBAC). Members from those and staff from Baystate Health's Community Relations department formed an RFP Task Force responsible for crafting the final decisions about the distribution of funds for the first and future CHI processes. Each hospital has selected its own priority and conducted its own process for narrowing to that selection. These processes included community meetings, voting, sorting and summarizing in order select one or more DPH Health Priorities areas to be used as the basis for releasing requests for proposals (RFPs).

DPH staff requested and received from the applicant, a narrative further detailing information pertaining to lessons learned from community engagement activities with the CBACs and the larger community, as well as intentions for proceeding with community engagement and implementation processes in the context of the COVID-19 pandemic.

The Applicant submitted its existing Community Health Needs Assessment (CHNA) for Baystate Medical Center, and a supplemental narrative. Self and Stakeholder Assessments were not required in this case. The most recent CHNA/CHIP self-assessment and stakeholder assessments submitted correspond to the current CHNA and related processes.

The Community Health Needs Assessment was conducted in 2019 by each hospital participant in the Baystate Health system. Each hospital's report contains elements specific to its geographic service area. In creating the CHNA for this hospital, the Applicant conducted focus groups, key informant interviews, one Community Conversation and several Community Chats.

Through these methods, the Applicant engaged community residents and other community stakeholders alike, including the experiences of community members who gave input in focus groups or key informant interviews in other regions, which were often considered relevant to the Applicant's service area. Additionally, the Applicant conducted data analysis and

completed a review of the previous CHNA and existing assessment reports published since 2016. The CHNA for 2019 lists the following as the key priorities identified – Social Environment, Housing Needs, Transportation Access, Basic Needs Resources, Financial Health, and Violence and Trauma. Additionally, health outcomes impacting the service area include mental health, chronic conditions, infant and perinatal health, and Alzheimer’s disease and dementia. The CHNA goes on to identify barriers to improving outcomes in each of the priorities as well as priority populations for each of the health conditions. CHI staff have assessed Baystate Health’s 2019 CHNA and determined that it is an adequate and appropriate basis for CHI purposes.

The Supplemental Narrative was requested by DPH staff for additional information about ongoing community engagement activities and lessons learned from existing community health initiative planning and processes. The CBACs for each hospital were engaged in their respective processes, and the CBAC specific to this application has chosen to pursue regional initiatives in community health improvement activities and planning. The narrative outlines Baystate Health’s plans to split the CHI total between regional and system-wide initiatives. Of the total CHI, Baystate will allocate \$1,000,000 to regional initiatives. These initiatives include six distinct project areas

- The Community Health Innovation Fund, which is a matched fund between the health system and a CDFI that provides loans to support community economic development
- Health Equity Zones, linking actions to anchor investments with a focus in priority communities
- Digital Alliance, which focuses on funding connectivity, equipment, digital literacy, and policy to close the digital divide and ensure digital equity
- Elevating Dignity, which will extend an educational series on the foundations of equity to the larger community
- Regionalizing 413Cares, which seeks to enhance an existing referral hub to better account for community experience with the Social Determinants of Health
- ABCs for Equity, which seeks to build equity-related capacity through the establishment of Communities of Practice for Facilitative Leaders.

The remaining \$1,279,886 will be allocated to the system-wide work described above. The infrastructure for this is strong, and decentralizes decision making power. The supplemental narrative additionally outlines the health system’s robust and ongoing community engagement efforts, including contingency planning in the context of the pandemic. In order to make final funding decisions for the regional initiatives, the applicant will be doing intentional community engagement in the winter of 2020 and 2021 and early spring of 2021 with their networks, involving CBACs, their CHNA regional advisory committee, and possibly community forums. Baystate intends to develop a Steering committee of CBAC representatives from each region to help oversee this community engagement piece. Winter and spring will be used to narrow and focus proposals, with a desired “launch” (release funding) of these regional initiatives late spring of 2021. The \$1.2 million RFP will reopen in the fall.

With the administrative funds, the applicant's early plans are to support consultant time, capacity building workshops and trainings, and to support community engagement activities whether in person or virtual mechanisms.

Summary Analysis: As a result of information provided by the Applicant and additional analysis, DPH finds that with the conditions outlined below, and with their ongoing commitment to meaningful community engagement, all of these plans are acceptable and satisfy the requirements. In addition, the Applicant is in compliance with all previously approved DoN Projects for CHI.

Findings, Recommendations, and Conditions of Approval

Based upon the information submitted, the Department can find that the "the proposed change or modification falls within the scope of the Notice of Determination of Need as previously approved by the Department, and ... is reasonable" 105 C.M.R. 100.635(A) which are requirements for approval of an Amendment.

Conditions to the DoN

1. Of the total required CHI contribution of \$3,494,079
 - a. \$847,314 will be directed to the CHI Statewide Initiative
 - b. \$2,541,943 be dedicated to local approaches to the DoN Health Priorities
 - c. \$104,822 will be designated as the administrative fee.
2. To comply with the Holder's obligation to contribute to the Statewide CHI Initiative, the Holder must submit a check for \$847,314 to Health Resources in Action (the fiscal agent for the CHI Statewide Initiative).
 - a. The Holder must submit the funds to HRiA within 30 days from the date of the Notice of Approval⁺.
3. All other conditions in DoN 1-3B36 and subsequent Amendments remain in effect.

⁺The Holder must promptly notify DPH (CHI contact staff) when the payment has been made.

Attachment 1

Amendment 1: August, 2009 - filed as a result of refinements to the original design for the Project eliminating two floors thereby changing the total GSF approved from 641,250 to 630,504 GSF and increasing the renovation GSF from 42,150 GSF to 44,900 GSF.

Amendment 2: November, 2009 - filed to restore the two (2) floors of shell space eliminated by the previous minor amendment as a result of further changes in planning. It brought the approval back to the plans contemplated in the original DoN. Amendment 2 increased the total GSF for the Project from 630,504 GSF to 686,086 GSF.

Amendment 3: February, 2011 - build-out 76,441 GSF of shell space to replace, inadequately sized ED; also 3 included construction of a connecting corridor and an increase of 6,190 GSF in the overall approved GSF to include renovation of the existing lobby/main entrance and add a covered walkway from the helipad.

Amendment 4: September, 2012 - build-out 80,116 GSF of shell space; included 70,383 GSF build-out of three (3) floors to replace 96 medical/surgical beds on the 5th, 6th, and 7th floors; 2,500 GSF for a construction management office; and 7,233 GSF for basement and roof infrastructure systems.

Amendment 5: August, 2014 - build-out of 13,643 GSF of shell space for a new pharmacy in proximity to patient care areas and renovation of the existing pharmacy areas for conversion to administrative and support space.

Amendment 6: January, 2017 - build-out of 11,133 GSF of shell space, and renovation of an additional 6,358 GSF for the pediatric procedure and infusion suite, the intermediate care step- down unit, nurse training room, gift shop and emergency department storage areas.

Amendment 7: November - build-out of 22,640 GSF of shell space for one-for-one replacement of an existing electrophysiology lab cardiac catheterization procedure rooms, one operating room and associated related support functions, including pre- and post-op care bays, staff support space, waiting room, and elevator and switchgear installation.

ⁱ David Nehemiah Majule, *The Efficacy and Safety of the WATCHMAN Device in LAA Occlusion in Patients with Non-Valvular Atrial Fibrillation Contraindicated to Oral Anticoagulation: A Focused Review*, 24 ANNALS THORACIC & CARDIOVASCULAR SURGERY 271 (2018), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6300422/>

ⁱⁱ Nicole Napoli, *TAVR Outperforms Surgery in Younger, Low Risk Patients with AS*, AMERICAN COLLEGE OF RADIOLOGY

(Mar. 17 2019), available at [https://www.acc.org/about-acc/press-releases/2019/03/16/20/51/tavr-outperformssurgery-](https://www.acc.org/about-acc/press-releases/2019/03/16/20/51/tavr-outperformssurgery-in-younger-low-risk-patients-with-as)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7044101/>.
in-younger-low-risk-patients-with-as; J. Braghiroli et al., *Transcatheter aortic valve replacement in low risk patients: a review of PARTNER 3 and Evolut low risk trials*, 10 CARDIOVASCULAR DIAGNOSIS & TREATMENT 59 (2020),

available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7044101/>.

ⁱⁱⁱ Lakhan SE, Kaplan A, Laird C, Leiter Y. The interventionalism of medicine: interventional radiology, cardiology, and neuroradiology. *Int Arch Med*. 2009 Sep 9;2(1):27. doi: 10.1186/1755-7682-2-27. PMID: 19740425; PMCID: PMC2745361.

^{iv} <https://www.sirweb.org/patient-center/what-is-interventional-radiology/>

^v <https://radiopaedia.org/articles/dual-energy-ct-2?lang=us>

^{vi} <https://radiopaedia.org/articles/dual-energy-ct-clinical-applications-2?lang=us>