

# **Massachusetts Department of Public Health Determination of Need Application Form**

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version.	11-0-17

Application Type:	Hospital/Clinic Substantia	al Change in Serv	ice		,	Application Date: 01/08/2	2018 2:06 p	m
Applicant Name:	Baystate Health, Inc.							
Mailing Address:	759 Chestnut Street							
City: Springfield			State:	Massachusetts	i	Zip Code: 01199		
Contact Person:	Vanessa L. Smith, Esq.			Title: Vice Pres	sident &	& Chief General Counsel		
Mailing Address:	280 Chestnut Street							
City: Springfield	I		State:	Massachusetts	j	Zip Code: 01199		
Phone: 4137943	284	Ext:	E-mail	: vanessa.smit	th@bay	rstatehealth.org		
Facility Info	r <mark>mation</mark> affected and or included i	n Proposed Pro	ject					
1 Facility Name								
Facility Address:	759 Chestnut Street							
City: Springfield	l		State:	Massachusetts		Zip Code: 01199		
Facility type:	Hospital				CMS	Number: 22-0077		
	Α	dd additional Fa	cility			Pelete this Facility		
1. About the	e Applicant							
1.1 Type of organ	ization (of the Applicant):	nonprofit						
1.2 Applicant's Bu	siness Type:	ration C Limit	ted Partr	nership ( ) Par	rtnersh	ip	Other	
1.3 What is the ac	ronym used by the Applica	nt's Organization	n?				ВН	
1.4 Is Applicant a	registered provider organi	zation as the terr	n is used	l in the HPC/CH	IIA RPO	program?	Yes	○ No
1.5 Is Applicant o	r any affiliated entity an HP	C-certified ACO?					○ Yes	<ul><li>No</li></ul>
	r any affiliate thereof subje Health Policy Commission		, § 13 an	d 958 CMR 7.00	) (filing	of Notice of Material	○ Yes	<ul><li>No</li></ul>
1.7 Does the Prop	oosed Project also require t	he filing of a MCN	N with th	ne HPC?			○ Yes	<ul><li>No</li></ul>

1.8 Has the Applicant or any subsidiary thereof been notified pursuant to M.G.L. c. 12C, § 16 that it is exceeding the health care cost growth benchmark established under M.G.L. c. 6D, § 9 and is thus, pursuant to M.G.L. c. 6D, §10 required to file a performance improvement plan with CHIA?	○ Yes	<ul><li>No</li></ul>
.9 Complete the Affiliated Parties Form		
2. Project Description		
2.1 Provide a brief description of the scope of the project.		
Baystate Medical Center (BMC), an affiliate of Baystate Health, Inc. (BH) located in Springfield, Massachusetts, is a tea the region's only Level 1 trauma center. BMC operates the Baystate Orthopedic Surgery Center (BOSC), located at 50 Springfield, Massachusetts, as a satellite on BMC's hospital license. BOSC is a comprehensive outpatient orthopedic provides access to highly skilled orthopedic specialists to patients in BMC's service area.	0 Wason Av	/enue,
The original site plans for BOSC, which were approved by the Massachusetts Department of Public Health (DPH) on included space for eight operating rooms, but as indicted in BMC's submission to DPH at the time, only six were buil was opened. The plans also included 28 pre- and post-op care rooms; all 28 were built out, but only 21 were equipp original project.	t out befor	e the site
In this Proposed Project, BMC will build out the two operating rooms and equip the seven pre- and post-op care roo original plans but not built out and equipped prior to BOSC's opening.	ms include	ed in the
The Proposed Project will provide expanded space to allow BMC to satisfy anticipated growth in the demand for our surgical services and to accommodate a broader range of surgical procedures, while continuing to provide high-quate local, low-cost setting.		
2.2 and 2.3 Complete the Change in Service Form		
3. Delegated Review		
3.1 Do you assert that this Application is eligible for Delegated Review?	○ Yes	<ul><li>No</li></ul>
1. Conservation Project		
4.1 Are you submitting this Application as a Conservation Project?	○ Yes	<ul><li>No</li></ul>
5. DoN-Required Services and DoN-Required Equipment		
5.1 Is this an application filed pursuant to 105 CMR 100.725: DoN-Required Equipment and DoN-Required Service?	<ul><li>Yes</li></ul>	○No
5.2 If yes, is Applicant or any affiliated entity thereof a HPC-certified ACO?	○ Yes	<ul><li>No</li></ul>
5.3 See section on DoN-Required Services and DoN-Required Equipment in the Application Instructions		
5. Transfer of Ownership		
5.1 Is this an application filed pursuant to 105 CMR 100.735?	○Yes	<ul><li>No</li></ul>
7. Ambulatory Surgery		
7.1 Is this an application filed pursuant to 105 CMR 100.740(A) for Ambulatory Surgery?	○Yes	<ul><li>No</li></ul>
3. Transfer of Site		
3.1 Is this an application filed pursuant to 105 CMR 100.745?	○Yes	<ul><li>No</li></ul>
9. Research Exemption		

9.1 Is this an application for a Research Exemption?	(	Yes	<ul><li>No</li></ul>
10. Amendment			
10.1 Is this an application for a Amendment?	(	Yes	<ul><li>No</li></ul>
11. Emergency Application			
11.1 Is this an application filed pursuant to 105 CMR 100.740(B)?	(	Yes	<ul><li>No</li></ul>
12. Total Value and Filing Fac			
12. Total Value and Filing Fee	ding upon answe	ve abovo	
Enter all currency in numbers only. No dollar signs or commas. Grayed fields will auto calculate depend	aing upon answe	ers above	•
Your project application is for: Hospital/Clinic Substantial Change in Service			
12.1 Total Value of this project:	\$3,780,088.00		
12.2 Total CHI commitment expressed in dollars: (calculated)	\$189,004.40		
12.3 Filing Fee: (calculated)	\$7,560.18		
12.4 Maximum Incremental Operating Expense resulting from the Proposed Project:	\$3,154,107.00		
12.5 Total proposed Construction costs, specifically related to the Proposed Project, If any, which will be contracted out to local or minority, women, or veteran-owned businesses expressed in estimated total dollars.	\$100,000.00		

# 13. Factors

Required Information and supporting documentation consistent with 105 CMR 100.210 Some Factors will not appear depending upon the type of license you are applying for. Text fields will expand to fit your response.

# Factor 1: Applicant Patient Panel Need, Public Health Values and Operational Objectives

#### F1.a.i Patient Panel:

Describe your existing Patient Panel, including incidence or prevalence of disease or behavioral risk factors, acuity mix, noted health disparities, geographic breakdown expressed in zip codes or other appropriate measure, demographics including age, gender and sexual identity, race, ethnicity, socioeconomic status and other priority populations relevant to the Applicant's existing patient panel and payer mix.

#### General Overview:

The applicant is Baystate Health, Inc. (BH or Applicant), a not-for-profit, multi-institutional, integrated health care organization serving over one million people throughout western New England. With a workforce of about 12,000 employees, BH is the largest private employer in the region.

The BH system includes Baystate Medical Center (BMC), a teaching hospital and the region's only Level 1 trauma center; three community hospitals, Baystate Franklin Medical Center (BFMC), Baystate Wing Hospital (BWH), Baystate Noble Hospital (BNH); Baystate Medical Practices, Inc. (BMP) which includes a network of more than 80 medical practices; a health insurance provider, Health New England, Inc. (Health New England); and home care and hospice services.

BH provides care primarily to patients from the four western Massachusetts counties (Hampden, Hampshire, Franklin, and Berkshire Counties) and northern Connecticut. The four-county area covers approximately 2,850 square miles and has a population of approximately 830,000. Overall, the geographic breakdown of BH's patient population is localized to the each individual hospital's particular location. Consolidated for the BH regional service areas, 75.1% of patients are from Hampden County, 10.9% from Franklin County, 6.5% from Hampshire County, 2.7% from Berkshire County, 2.3% from Connecticut, and 2.5% from other geographies. The highest concentrations of patients are from Springfield (27.1%), Chicopee (7.6%), Westfield (6.3%), West Springfield (4.2%), Greenfield (4.1%), Holyoke, (3.8%), Agawam (3.6%), Ludlow (2.9%), and East Longmeadow (2.6%).

BWH and BNH have only recently joined BH, in 2014 and 2015, respectively. Their billing and other patient data systems are not yet fully integrated with the rest of BH, making it difficult to compile and analyze data concerning a single, system-wide patient panel at this time. Moreover, given the broad geographic span of BH, the varying services and physician availability in the different BH regions, and the localized nature of each BH hospital's specific patient population, such a system-wide analysis is not particularly helpful to an evaluation of the Proposed Project, which affects a discreet component of BH's services, specifically, outpatient orthopedic surgical services provided by BMC in Springfield, Massachusetts.

# Outpatient Orthopedic Surgery:

BMC operates the Baystate Orthopedic Surgery Center (BOSC), located approximately one mile from the Medical Center, as a satellite on its hospital license. BOSC was intended to, and does, serve patients in the greater Springfield area who require orthopedic surgery that can be performed on an outpatient basis. Within the BH system, the patient population for such services is highly localized; the other principal outpatient orthopedic surgery services location within the system is at BFMC in Greenfield, and BFMC serves patients primarily from Franklin County. Historically, part-time physicians have provided these services at BNH, and two full-time dedicated orthopedic surgeons have done so in the BH Eastern Region, where BWH is located.

BOSC provides care primarily to patients from the four western Massachusetts counties (Hampden, Hampshire, Franklin, and Berkshire Counties) and northern Connecticut, although the concentration of patients is much higher from Hampden County. For BOSC, 80.4% of patients are from Hampden County, 3.3% from Franklin County, 9.2% from Hampshire County, 2.8% from Berkshire County, 2.7% from Connecticut, and 1.5% from other geographies. The highest concentrations of patients are from Springfield (24.6%), Chicopee (9.8%), Westfield (6.5%), West Springfield (4.7%), Holyoke, (3.8%), Agawam (3.6%), Ludlow (4.4%), and East Longmeadow (3.5%).

The demographic profile for patients receiving care at BOSC for the period from FY2014 to FY2016 shows that the majority of patients within its patient panel are 45 years of age and older and that a significant portion of patients are 65 and older. Specifically, from FY2014 to FY2016, patients in the 45+ age cohort grew from 63.3% of BOSC's patient panel in FY14 to 67.0 % in FY16, and patients in the 65+ age cohort grew from 24.0% of BOSC's patient panel in FY14 to 27.7% in FY16. Population statistics indicate that in the four-county region, 45% of the population is 45 and older. Based on these data, the Applicant expects to see continued increases in the number of older adults receiving services at BOSC. The split of the panel by gender is 50% male and 50% female over the FY2014-FY2016 timeframe but the mix is shifting slightly toward female, going from 48.9% female in FY2014 to 51.2% in FY2016.

BOSC's payor mix includes Medicare beneficiaries, who represent 20.5% of the patient panel, and Medicaid beneficiaries, at 16.5% of the patient panel, as well as commercially insured patients who represent 61.3% of the patient panel. Blue Cross (18.3%) and Health New England (16.3%) are the top commercial payors, followed by worker's compensation insurers (10.0%).

Data based on patient self-reporting collected between FY2014 and FY2016 indicates that BOSC's patient panel is largely reflective of a Caucasian/White population (88.0%). The next largest cohort of patients self-identify as African American or Black (6.5%). A portion of the patient population (4.7%) chose either not to report their race or identified as a race that was not provided in the surveyed categories.

Based on ICD-10 coding (which became effective on October 1, 2015, FY2016) the top diagnoses for which treatment was sought at BOSC were injuries (37.0%), Carpal Tunnel Syndrome (12.3%), rotator cuff tears or impingements (12.6%), other joint disorders (11.9%), disorders of the synovium and tendon (6.9%), other soft tissue disorders (5.6%), and osteoarthritis (4.6%). The patient panel at BOSC is focused on diagnoses that can effectively be treated on an outpatient basis.

Patients treated in the inpatient operating rooms at BMC consist primarily of total joint replacement (hips, knees, and shoulders) surgeries and procedures for various orthopedic injuries resulting from trauma. Many of these patients are frail elderly who have more co-morbid conditions requiring ongoing monitoring that would not be appropriate in the outpatient environment. The average length of stay for these orthopedic trauma patients is around 5.0 days. Outpatient orthopedic surgery performed in the BMC main campus operating rooms consists of approximately 37% orthopedic trauma surgeries (injuries requiring immediate surgical intervention) that are performed by a different group of surgeons than the group operating at BOSC; 25% hand surgery performed by plastic/reconstructive surgeons; and 30% cases performed by surgeons who also provide care at BOSC but who have determined that patient acuity and co-morbidity present risks that require services be delivered in the hospital rather than at BOSC. Many of these patients require an overnight recovery that is not available at BOSC.

General System-Level Patient Panel Data for BH:

As noted above, the Proposed Project specifically relates to a narrow category of services provided at one of BH's affiliated hospitals and, for this reason, the most relevant patient panel data are those set forth above. Nevertheless, in the interests of completeness, BH provides the following general patient panel data for the system as a whole. For purposes of this section, because the patient data systems for BWH and BNH are not fully integrated into BH's, and it is not possible to fully assess their patient panel data for all services, the Applicant uses inpatient data for all four hospitals as a proxy for the overall patient panel for BH. Over the last three years, the number of patients utilizing BH's inpatient services has increased from 51,743 patients in FY2014 to 52,820 patients in FY2016. BH's patient mix consists of approximately 44.5% males and 55.5% females. The larger percentage of females is primarily due to the volume of obstetrical patients at BMC and BFMC.

A review of patients who received inpatient care for orthopedic conditions at BH during the last three fiscal years shows that the patient count declined from 7% of total inpatient admissions in FY14 to 6.5% by FY16 as orthopedic procedures shifted to the outpatient setting. Another factor that contributed to the decline in inpatient orthopedic surgery admissions was the unexpected loss of a high-volume surgeon in FY15. A replacement surgeon was hired in September, 2016, and volumes have increased in FY2017. Orthopedic surgeries performed on an outpatient basis represented 29% of all outpatient surgeries in FY14 and grew to 29.8% in FY16, growing over 260 cases over the three-year timeframe.

The demographic profile for FY2014 – FY2016 shows that the majority of patients within BH's patient population are 45 years of age and older, and that a significant portion of patients are 65 and older. Specifically, from FY2014 to FY2016, patients in the 45+ age cohort grew from 60.8% of BH's total patient population in FY14 to 62.7% in FY16, and patients in the 65+ age cohort grew from 36.4% of BH's total patient population in FY14 to 38.0% in FY16. Population statistics indicate that in the four-county region, 45% of the population is 45 and older. Based on these data, the Applicant expects to see continued increases in the number of older adults touched by the BH system.

Systemwide, BH's payor mix includes Medicare beneficiaries, who represent over 45.1% of the patient panel, followed by Medicaid beneficiaries at 27.2% of the patient panel. The combined commercial payor mix is 25.1%. Blue Cross (8.4%) and Health New England (7.2%) are the top commercial payors. The significant percentage of Medicare representation in BH's payor mix is indicative of the substantial aging population within BH's patient panel.

Data based on patient self-reporting collected between FY2014 and FY2016 indicates that BH's patient panel is largely reflective of a Caucasian/White population. The next largest cohort of patients self-identify as African American or Black (6.3%). Additionally, 1.1 % of BH's patients identify as Asian, and 0.15% as Native Hawaiian or Pacific Islander. A substantial portion of the patient population (7.9%) chose either not to report their race or identified as a race that was not provided in the surveyed categories. For this reason, the racial composition of BH's patient panel may be understated.

#### F1.a.ii Need by Patient Panel:

Provide supporting data to demonstrate the need for the Proposed Project. Such data should demonstrate the disease burden, behavioral risk factors, acuity mix, health disparities, or other objective Patient Panel measures as noted in your response to Question F1.a.i that demonstrates the need that the Proposed Project is attempting to address. If an inequity or disparity is not identified as relating to the Proposed Project, provide information justifying the need. In your description of Need, consider the principles underlying Public Health Value (see instructions) and ensure that Need is addressed in that context as well.

The need for expanded orthopedic surgery services by BOSC's patient panel is demonstrated by increasing prevalence of muscular/skeletal disease, an increase in comorbid conditions, the aging local population, historical volume trends, and the shift to outpatient settings for orthopedic surgery. The addition of two new operating rooms will also allow for the expansion of services at BOSC to include hip arthroscopy, a procedure that is not currently offered in BH's primary service area. Through the Proposed Project, the Applicant will satisfy both existing and future patient panel needs by providing additional outpatient capacity for orthopedic procedures in a highly efficient setting that is designed for the needs of this growing patient population. The additional two operating rooms and seven preand post-op bays will allow patients to receive care in a local state-of-the-art facility that provides high quality orthopedic surgery at a low cost.

National statistics indicate that the prevalence of muscular/skeletal disease is increasing at the same time as care is shifting significantly away from an inpatient to an outpatient setting. An increased prevalence of osteoarthritis, diabetes, and obesity will increase the need for orthopedic procedures across diverse segments of the population (1). In Hampden County, almost 30% of adults struggle with obesity, and 65% are overweight or obese (compared to overall rates in Massachusetts of 24% and 59%, respectively) (2). Almost one in five Hampden County residents has either pre-diabetes or diabetes (3), and approximately 26% of Medicare enrollees age 66 and older in Hampden County have diabetes (4). Meanwhile, increasing physical activity levels in younger segments of the population are expected to lead to earlier utilization of services even in healthier sub-segments (5).

According to SG2, a healthcare intelligence company, an aging US population will drive increased demand for orthopedic services over the next decade. Inpatient growth will slow as procedures shift to less costly outpatient settings. Top trends include a significant shift to the outpatient setting for total joint replacement procedures, growth in sports medicine-related injuries resulting from increases in the "active adult" population, and healthier patients shifting surgeries to ambulatory settings. These trends are driving the need for operating room efficiency and cost-effective sites of care. Projections by SG2 suggest that outpatient surgery procedures will increase by 34% over the next 10 years (6).

Local projections are in line with national forecasts. The Advisory Board outpatient orthopedics forecast for western Massachusetts suggests robust growth across all outpatient surgical orthopedics sub-services. Overall, the volumes are forecast to grow 25% in five years and 37% over 10 years (7). Given these projections, BH expects the demand for the two new operating rooms and seven pre- and post-op bays not only to be sustainable, but also to grow.

Statewide population projections provided by the University of Massachusetts Donahue Institute suggest that population growth in Massachusetts is expected to continue to increase through 2035. In the lower Pioneer Valley (comprised principally of Hampden and Hampshire Counties and a small portion of Franklin County), this growth will be primarily attributable to growth in the elderly age groups. In 2010, 14% of the region's population was aged 65 and over. By 2035, that age group is forecast to make up almost a quarter (23%) of the population. Growth is also expected in the 55-64 year old cohort (3% over the next five years) (8). Given that a majority of its orthopedic patients belong to this older population, the Applicant expects to continue to see growth in the 55+ age cohort that it serves. This growth will be amplified by the growth in demand for outpatient orthopedics forecast above.

In order to help meet increasing demand, an additional surgeon has been recruited to practice at BOSC beginning in Fall, 2018. In addition to shoulder and knee arthroscopies, this surgeon will perform hip arthroscopy, a procedure not currently performed by any orthopedic surgeons in the Applicant's primary service area. The Applicant expects that this surgeon will have 600 hip cases in his first year, and that volume will steadily increase (see volume projections below).

BOSC is currently operating at capacity, and has been since FY 2014 (with the exception of a dip in volume in FY 2015 when one surgeon was on maternity leave for part of the year). Operating room utilization in FY2017 was 93%. Due to BOSC operating at capacity there was growth of 13.5% (160 cases) in outpatient orthopedic surgery cases performed in other operating rooms at the main campus of BMC between FY2014 and FY2016. These were primarily more complex foot and ankle cases that take longer in the operating room. Such procedures could be performed at BOSC if additional operating room time were available. Volume growth expectations at BOSC are shown below.

	FY14	FY15	FY16	FY17 (Projected)	FY18 (Budget)	FY19	FY20	FY21
BOSC	5,108	5,009	5,117	5.039	5,118	5,800	6,400	6,600

Note: Outpatient orthopedic volumes at BWH and BNH have been flat in recent years, while the volume at BFMC has grown. It is

expected the BH community hospital orthopedic volumes will rise in coming years in parallel to the increases forecast at the Springfield site.

- (1) Advisory Board Orthopedic Market Trends 2017
- (2) CDC Behavioral Risk Factor Surveillance System (BRFSS), 2011
- (3) BRFSS, 2010-2012
- (4) Medicare 2014, one-year estimate
- (5) Advisory Board Orthopedic Market Trends 2017
- (6) SG2 2017 Orthopedics Service Line Forecast
- (7) Advisory Board Market Estimator Tool
- (8) http://pep.donahue-institute.org/downloads/2015/new/UMDI LongTermPopulationProjectionsReport 2015%2004%20 29.pdf

#### F1.a.iii Competition:

Provide evidence that the Proposed Project will compete on the basis of price, total medical expenses, provider costs, and other recognized measures of health care spending. When responding to this question, please consider Factor 4, Financial Feasibility and Reasonableness of Costs.

The addition of two operating rooms and seven pre- and post-op bays will allow more patients to receive orthopedic surgery on an outpatient basis and thereby take advantage of BH's competitive pricing and high-value care. The cost of the project is very reasonable on a cost-per-operating-room basis. The proposed project cost is approximately \$3,780,000 which equates to approximately \$1,890,000 per operating room. By comparison, the recently completed operating room project at BFMC had a maximum allowable cost of \$22,892,100 for 4 operating rooms, a cost of \$5,723,000 per operating room. Building out the new operating rooms in the existing building, where the infrastructure is already in place, is much more cost-effective than building in a new facility.

In order to insure that costs are optimized, BH participates in the Premier Alliance group purchasing arrangement, which enables it to get many volume pricing discounts. Surgeons and others at BOSC participate in the BH Value Analysis Committee for Orthopedics. Value Analysis is a systematic process to review and approve clinical products and equipment and evaluate their clinical efficacy, safety, and impact on organizational resources. This process is applied by a collaborative team consisting of Clinical, Finance, and Supply Chain members. The Committee's goal is to "strive towards standardization of products that provide the highest quality care and safety to our patients in the most cost effective manner." All requests for new equipment and supplies require a thorough review involving an evaluation of cost, clinical efficacy, and ease of use for clinicians.

The team at BOSC is dedicated to continuous quality improvement and finding ways to reduce the cost of care. Since 2015, BH has set an annual cost containment goal in order to support the provision of high-value care. In 2017, BOSC achieved its cost containment target by assessing supply costs and selection of supplies, which led to an annual savings of \$70,000.

The Proposed Project will not impact the price of orthopedic services. The Applicant will utilize the same contracted rates for services that have been previously negotiated. It is highly unlikely that the Applicant's contracting relationships with commercial payors will be impacted by the addition of two operating rooms and seven pre- and post-op care rooms. In addition, the Proposed Project will have no material impact on provider price, total medical expenses ("TME"), or provider costs because orthopedic surgery services are already being provided at BOSC.

The Proposed Project will facilitate the addition of a new procedure type, hip arthroscopy, which is not currently offered by any provider in the local market. As a result, patients will have a local and more convenient option for care. In addition to being priced lower than other providers (as suggested by the above statistics), BOSC's ability to provide increased surgery capacity will save time and travel costs for local patients who would otherwise have to seek hip arthroscopy out of the area. The Proposed Project will have little to no effect on existing competition in the marketplace. The expected growth will come from an expanded need for services given the aging demographics of the population. The expanded needs of the patient population will allow for other hospitals, including the community hospitals affiliated with BH, to maintain and most likely grow their volumes as well.

The 2017 CHIA Relative Price report demonstrates that BMC and Baycare Health Partners (Baycare) maintain relatively low pricing compared to much of the state, thus establishing the Applicant as a high-value care provider. BMC's statewide relative price (S-RP) of 1.01 hovers around the average for the state (1.00) and is lower than all the other Massachusetts academic medical centers, with the exception of Boston Medical Center. Baycare has a lower than average relative price (42nd percentile) compared to provider groups across the state and is also lower than area competitor Riverbend (58th percentile) (1).

Regarding the competitiveness of the overall capital expenditure, the Applicant based its selection of contractors and suppliers on an evaluation of vendor quotes received for both the construction and equipment needed for the Proposed Project.

(1) CHIA 2017 Relative Price Report http://www.chiamass.gov/assets/docs/r/pubs/17/Relative-Price-Report-2017.pdf

#### F1.b.i Public Health Value /Evidence-Based:

Provide information on the evidence-base for the Proposed Project. That is, how does the Proposed Project address the Need that Applicant has identified.

As set forth above, the Proposed Project responds to needs based on a growing aging population with a high incidence of muscular/ skeletal disease, alongside rising prevalence of diabetes, obesity, and osteoarthritis. For example, according to the 2017 County Health rankings, Hampden County's diabetes prevalence increased 5.71% from the previous year (1). Obesity prevalence is 27.5%. Increased weight has been linked to increased osteoarthritis, increased likelihood of wear and tear on joints, and increased odds of sustaining a musculoskeletal injury (2).

Research has shown that outpatient orthopedic patients, as compared to inpatients, report increased satisfaction with the care they receive. BH's patient satisfaction scores affirm that this is the case. The patient satisfaction score for BOSC patients has been greater than 90% for "Overall Quality" and "Willingness to Recommend" since BOSC opened. Outpatient procedures are also less expensive. Additionally, for patients who do not require hospital-level monitoring following surgery, outpatient orthopedic procedures have been shown to be a safe alternative to inpatient surgery (3).

Reduced risk for hospital-acquired infections is another reason many patients prefer to have orthopedic procedures in an outpatient setting. One study focused specifically on outpatient ankle procedures demonstrated that outpatients had lower rates of urinary tract infections, pneumonia, bleeding requiring transfusion, and venous thromboembolic events. Outpatients also had reduced 30-day medical morbidity. There was no difference in readmissions or surgical morbidity (4).

By building out two additional operating rooms at BOSC, the Proposed Project will help to facilitate the continued shift of orthopedics to the outpatient setting. It will also ensure that the growing population in need of orthopedic procedures can access high quality, local care in a timely fashion. As described above, this will lead to increased patient safety and patient satisfaction, in a lower cost setting of

- (1) https://datausa.io/profile/geo/hampden-county-ma/#category\_health\_risks
- (2) http://newsroom.aaos.org/media-resources/Press-releases/obesity-link-to-increased-risk-for-orthopaedic-conditions-and-surgicalcomplications.htm
- (3) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4703913/ Crawford, D., et al. Orthopedics Reviews. 2015. "Clinical and Cost Implications of Inpatient Versus Outpatient Orthopedic Surgeries: A Systematic Review of the Published Literature"
- (4) https://www.ncbi.nlm.nih.gov/pubmed/27869620. Qin, C. et al. The Journal of Bone and Joint Surgery. 2016. "Safety and Outcomes of Inpatient Compared with Outpatient Surgical Procedures for Ankle Fractures"

# F1.b.ii Public Health Value / Outcome-Oriented:

Describe the impact of the Proposed Project and how the Applicant will assess such impact. Provide projections demonstrating how the Proposed Project will improve health outcomes, quality of life, or health equity. Only measures that can be tracked and reported over time should be utilized.

Operationalizing two additional operating rooms and seven additional pre- and post-op bays at BOSC will allow BH to meet the growing needs of an aging population. The Proposed Project will also allow BOSC to recruit and retain surgeons and continue to offer a full range of outpatient surgical procedures to patients in BMC's service area. The Project will allow BOSC team members to increase the amount of quality, high-value surgeries while continuing to improve health outcomes and quality of life for its growing panel of patients. BH will assess the impact of the Proposed Project through a variety of measures that are regularly tracked and reported over time, including, but not limited to, patient satisfaction, clinical outcomes, and functional assessments.

In 2016, BOSC received PRC's 5-Star Award for Overall Quality of Care for Outpatient Surgery Services, scoring in the top 10% nationally for "Excellent" patient ratings. In 2015, BOSC was recognized for 10 consecutive years above the 90th percentile for Overall Quality of Care. In 2017, the Applicant established Press Ganey as its patient satisfaction vendor. As of September 2017, BOSC's patient "Willingness to Recommend" satisfaction rate was 92.50%, which puts the site in the 95th percentile of organizations assessed by Press Ganey. This will continue to be a measure of performance, and maintaining this high level of performance is the goal for BOSC.

The rate of complications and adverse events, including surgical site infections (SSIs) following orthopedic surgeries in the outpatient setting, ranges from 0.05% to 20% (1). BOSC's average rate of SSIs between FY 2014 and FY 2017 was .26%. All-cause inpatient admissions following surgery within 30 days at BOSC is very low, at .5-.75%. These measures of quality will continue to be monitored in the future.

In 2014, BOSC developed a Falls Prevention Team. Implementation efforts to date include the development and continuous refinement of a "Falls Risk Assessment Tool"; addition of a Fall Risk Assessment check box on the BOSC post-operative instruction form, which automatically results in education and review with patients and family; routine use of yellow socks, yellow wristbands, and yellow chart markers to identify patients at high risk for post-operative falls; and assistance to patients and families to complete a Home Safety Checklist and identify ways to make the patients' homes safer to decrease fall risk. BOSC continues to partner with other BH outpatient

sites to ensure standardization of patient education and assessment related to falls across the health system.

The falls documented at home (FDAH) rate for BOSC patients to date in 2017 (January-August) is .36%. In 2016 the FDAH rate was .18%; in 2015 at .5%; and 2014 at .7%.

Cost per case will continue to be monitored and compared to the financial projections for the Proposed Project. This is part of BH's quarterly service line financial report, with any changes in financial performance investigated in detail and improvement plans put into place.

In multiple additional areas, BOSC continues to lead the way to promote better health outcomes and quality of life for its patients. These include BOSC's selection as a pilot site for Kordova, a new software program that captures and tracks implant usage in the operating room and seamlessly connects the surgeon, hospital, and implant vendor. BOSC also has developed a successful collaboration with Baystate Children's Hospital Child Life Specialists to care for select pediatric patients undergoing outpatient surgery and their families.

(1) Charles A. Goldfarb, MD, et al, Journal of the American Academy of Orthopaedic Surgeons, Ambulatory Surgical Centers: A Review of Complications and Adverse Events, 2016

### F1.b.iii **Public Health Value / Health Equity-Focused:**

For Proposed Projects addressing health inequities identified within the Applicant's description of the Proposed Project's need-base, please justify how the Proposed Project will reduce the health inequity, including the operational components (e.g. culturally competent staffing). For Proposed Projects not specifically addressing a health disparity or inequity, please provide information about specific actions the Applicant is and will take to ensure equal access to the health benefits created by the Proposed Project and how these actions will promote health equity.

The Proposed Project does not specifically address a health disparity or inequity. However, BH strives to ensure equal access to its services and will continue to do so with regard to the health benefits created by the Proposed Project. Two ways in which BH does so are through culturally competent staffing and easy-to-use translation services. Several staff members at BOSC are bilingual (English and Spanish, English and Russian). It is standard practice to determine ahead of time whether patients will need a translator while accessing services. If a translator is needed, one is scheduled in advance in order to ensure that the patient can move seamlessly through the system. If for some reason a translator is not available in person, video interpreter technology (Stratus) is available for BOSC patients via iPad. Interpreter services are available for all pre- and post-op visits and phone calls. Pre- and post-op documents are routinely available in Spanish and can be translated into other languages as needed.

BH values diversity and inclusion not only as strategies, but as fundamental ways of life imbedded in its organizational DNA. BH appreciates and embraces the wealth of diversity reflected in its patients, employees, and the communities it serves. Doing so makes BH a more compassionate and innovative organization. Through diversity and cultural humility, BH is able to better understand and respond to the health needs of patients and its communities. BH is committed to being inclusive of everyone who passes through the doors of its facilities— patients, their families and visitors, vendors, and employees. The diversity of BH's employees reflects the patients BH cares for and the community with which BH partners.

- F1.b.iv Provide additional information to demonstrate that the Proposed Project will result in improved health outcomes and quality of life of the Applicant's existing Patient Panel, while providing reasonable assurances of health equity.
- In addition to the information provided above, through the build-out of two additional operating rooms and seven pre- and post-op care rooms at BOSC, the Applicant will expand access by patients in BMC's service area to a low- stress environment for outpatient orthopedic surgery. The BOSC site offers easy access to abundant free parking and a small, easy-to-navigate clinical environment away from the main hospital campus. Undergoing a medical procedure in a hassle-free environment helps to minimize patient stress, which is beneficial from both a health outcome and a patient experience perspective.
- F1.c Provide evidence that the Proposed Project will operate efficiently and effectively by furthering and improving continuity and coordination of care for the Applicant's Patient Panel, including, how the Proposed Project will create or ensure appropriate linkages to patients' primary care services.

Given BOSC's narrow focus on outpatient orthopedic surgery services, many of the activities related to continuity and coordination of care occur outside of BOSC, at the offices of the surgeons who perform procedures at BOSC.

To ensure continuity of care, improved health outcomes, and enhanced quality of life for BOSC's orthopedic surgery patients, all patients are required to complete a questionnaire soliciting information on a number of topics that could affect the patient's outcome. The questionnaire is reviewed by the nurse and the anesthesia provider prior to surgery, and any questions are addressed with the patient

before the actual surgery date. There are a number of questions around the clinical state of the patient, including experience with previous surgeries (e.g., reactions from anesthesia), history of bleeding disorders, and DVT/pulmonary embolisms, as well as a health history with questions requesting details on previous illnesses and treatments. Other information requested includes identification of the person escorting the patient home, who will be with the patient once the patient arrives at home, questions around abuse (prompting need for interventions), and requests for health care proxy documents and primary language if not English. The form also asks for information on the patient's primary care physician as well as any other specialists who provide care to the patient on an ongoing basis. It is typically the surgeon's office, rather than BOSC staff, that makes contact with the patient's primary care physician, and if there are responses on the questionnaire requiring follow-up (as determined by the pre-operative nurse), the primary care physician is contacted. It is the experience of the pre-admission staff, who review the questionnaire, that a high majority of patients have a primary care provider, and the surgeons who operate at BOSC send the primary care providers copies of the operating notes and results of office visits pre-and post-surgery. All patients require clinical clearance and a history and physical (H&P) prior to surgery; some H&Ps are completed at the surgeon's office and others at the primary care provider's office.

For each patient, the staff nurse identifies and addresses patient social needs (e.g., a patient living in a walk-up who will require additional assistance, patients who will need transport to and from appointments), at times coordinating with the surgeon's office. In addition, BOSC 's process includes each patient being called at home by a nurse the day after surgery. Translators are utilized if needed for this post-op phone call. Inquiries are made about pain, mobility, medication, diet, nausea and vomiting, problems with ambulation or dressing, and whether the patient has fallen; and patient questions and concerns are addressed. For most patients, recovery goes smoothly and the patient transitions to outpatient rehabilitation services. All patients have access to follow-up calls with the physician on an as-needed basis.

Another convenient feature of BOSC is that there is a pharmacy on the first floor of the building where BOSC is located, so patients can leave the site on the day of their procedures with their prescriptions in hand. BOSC's consistently high patient satisfaction scores (93% "Willing to Recommend" in FY 2017) are strong evidence of the success of the patient-focused care delivery team at providing an exceptional experience. The addition of the operating rooms and pre-and post-op care rooms will not cause any change in these current efficient and well-coordinated care processes.

F1.d Provide evidence of consultation, both prior to and after the Filing Date, with all Government Agencies with relevant licensure, certification, or other regulatory oversight of the Applicant or-the Proposed Project.

Because the Proposed Project is primarily the fit-out of space in an existing building, there are no requirements to consult with any government agencies until after the Determination of Need application is approved. After approval, the project will require DPH review and approval of the plans. In addition the project will require a building permit from the City of Springfield, which will be obtained by the selected contractor. As a fit-out inside the existing building footprint and consistent with the approved zoning use of the building, the Proposed Project requires no other local approvals.

Following completion of the building, BMC will obtain a Certificate of Compliance (formerly known as a Certificate of Occupancy) from the City of Springfield, a Certificate of Inspection from the Springfield Fire Department, and a Certificate of Inspection from the Department of Public Safety. BMC will then request a survey of, and approval to utilize the facility by, DPH.

F1.e.i Process for Determining Need/Evidence of Community Engagement: For assistance in responding to this portion of the Application, Applicant is encouraged to review Community Engagement Standards for Community Health Planning Guideline. With respect to the existing Patient Panel, please describe the process through which Applicant determined the need for the Proposed Project.

With respect to the existing patient panel, the Applicant determined the need for the Proposed Project as a result of historical volume trends for the current site, the growth in the number of patients currently seeking care at the site, and the forecasted increase in the number of patients with underlying orthopedic and muscular/skeletal conditions requiring surgical interventions. Local, state, and national population projections, as detailed in section F1.a.ii, also support the need for the Proposed Project.

The Proposed Project is a Tier 1 CHI project. The Applicant has complied with DPH Community Engagement Standards through its submission of its 2016 community health needs assessment and local community health improvement plan efforts, including the Hampden County Heath Improvement Plan and the Franklin County and North Quabbin Community Health Improvement Plan. In addition, the Applicant invited six community stakeholders to complete the Community Engagement Stakeholder Assessment form, and the Applicant has completed the Community Engagement Self-Assessment form.

In addition to fulfilling the Tier 1 CHI DPH Community Engagement Standards, the Applicant presented an overview of the Proposed Project to the BMC Community Benefits Advisory Council on September 14, 2017, the New North Citizens' Council (NNCC) Neighborhood Sub-Committee on September 27, 2017, and subsequently to the full NNCC Board of Directors on October 10, 2017. The NNCC Board of Directors unanimously voted to endorse the Proposed Project and will submit a letter of support on behalf of the Applicant.

F1.e.ii Please provide evidence of sound Community Engagement and consultation throughout the development of the Proposed Project. A successful Applicant will, at a minimum, describe the process whereby the "Public Health Value" of the Proposed Project was considered, and will describe the Community Engagement process as it occurred and is occurring currently in, at least, the following contexts: Identification of Patient Panel Need; Design/selection of DoN Project in response to "Patient Panel" need; and Linking the Proposed Project to "Public Health Value".

The Proposed Project is unique in that it does not involve the construction of a new building, but just the build-out of shell space in an existing facility consistent with original site plans. The original construction did not require a Determination of Need under the old Determination of Need regulations and community engagement standards, and the Applicant did not apply community engagement standards in the identification of Patient Panel Need or the design/selection of the Proposed Project in response to "Patient Panel" need.

The Applicant completed a community engagement process as part of its 2016 community health needs assessment (CHNA). The CHNA community engagement process is detailed in the Applicant's Community Engagement Self-Assessment form. The Applicant, with support from the BH Office of Community Relations and Community Benefits, and in partnership with the BMC Community Benefits Advisory Council, will implement DPH's new Community Engagement Standards for Community Health Planning when it oversees the investment of the CHI funding tied to the Proposed Project.

Chronic health conditions remain an area of prioritized health need for Hampden County residents. Residents continue to experience high rates of chronic health conditions and associated morbidity, particularly for obesity, diabetes, cardiovascular disease, and asthma. In Hampden County, almost 30% of adults struggle with obesity, and 65% are overweight or obese (MA: obese - 24%; overweight/obese - 59%) (1). Obesity is a national epidemic and contributes to chronic illnesses such as cancer, heart disease, and diabetes. An estimated 30% of adults in the population are obese with high rates also observed among children. Approximately 20% of the population has prediabetes or diabetes. Almost one in five Hampden County residents has either pre-diabetes or diabetes (2). Approximately 26% of Medicare enrollees age 66 and older in Hampden County have diabetes (3). Latinos and Blacks experienced over three times the rates of diabetes hospitalizations compared to Whites in Hampden County and the statewide rate overall (4). Rates were also high among Latinos and Blacks in Springfield and among Latinos in Holyoke. BMC will incorporate these findings from its CHNA when overseeing the investment of the CHI funding associated with the Proposed Project.

- (1) CDC Behavioral Risk Factor Surveillance System (BRFSS), 2011
- (2) CDC BRFSS, 2010-2012
- (3) Medicare, 2014, one year estimate
- (4) Massachusetts Department of Public Health, 2012

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# Factor 2: Health Priorities

Addresses the impact of the Proposed Project on health more broadly (that is, beyond the Patient Panel) requiring that the Applicant demonstrate that the Proposed Project will meaningfully contribute to the Commonwealth's goals for cost containment, improved public health outcomes, and delivery system transformation.

#### F2.a Cost Containment:

Using objective data, please describe, for each new or expanded service, how the Proposed Project will meaningfully contribute to the Commonwealth's goals for cost containment.

The goals for cost containment in Massachusetts center on providing low-cost care alternatives without sacrificing high quality. The Proposed Project aligns with these goals by providing a lower cost option for patients in western Massachusetts seeking outpatient orthopedic surgery services. The Applicant, through the Proposed Project, seeks to expand an existing site designed and used for orthopedic surgery procedures.

The price of outpatient orthopedic surgery services will remain consistent with current payment arrangements with all payors, including Medicare, Medicaid, and commercial payors. Currently the cost, as determined by internal cost accounting data, are lower at BOSC than at BMC's main hospital campus. For example, the cost of a shoulder arthroscopy at BOSC is \$3,755 while it is \$4,161 in the Chestnut operating room at BMC; a knee arthroscopy at BOSC is \$2,370 while it is \$ \$3,353 at Chestnut. BH expects that the Proposed Project will result in a decrease in the costs of providing services at BOSC. Although there will be costs associated with adding direct patient care staff, as well as increased supplies and facility costs, volumes are anticipated to increase, resulting in a lower overall cost per case. Specifically, it is anticipated that the cost per case will decrease by 8.5% by 2021. Cost containment strategies (without declines in quality), such as standardization of supplies and vendors, are part of the culture at BOSC. Ongoing efforts to improve the efficiency of the site will continue. The Proposed Project will impact total healthcare expenditures within the Commonwealth only in the sense that the increasing number of patients expected to require outpatient surgery services going forward will be able to access these services in their community in a site that is designed to provide optimal care in a lower-cost setting.

#### F2.b **Public Health Outcomes:**

Describe, as relevant, for each new or expanded service, how the Proposed Project will improve public health outcomes.

Given the nature and limited scope of the Proposed Project, improvement in public health outcomes will likely be subtle and difficult to measure. The expansion of BOSC is a small component of the overall efforts of BH to improve the health of patients and promote healthy lifestyles by improving, among other things, the mobility and overall quality of life of the patient panel.

Through its community benefits and various community health planning efforts, BH has a demonstrated history and commitment to strategically invest its limited charitable resources and determination of need CHIs in upstream public health interventions. Current and future investments made by the Applicant address health priorities identified in the 2016 community health needs assessment, with a focus on social determinants of health. A single organization cannot, by itself, address the myriad public health needs in a community, but by leveraging its investments in and partnerships with local community-based organizations, BH will continue to strategically focus its resources into the community with the goal of improving public health outcomes.

#### **F2.c Delivery System Transformation:**

Because the integration of social services and community-based expertise is central to goal of delivery system transformation, discuss how the needs of their patient panel have been assessed and linkages to social services organizations have been created and how the social determinants of health have been incorporated into care planning.

As noted in Section F1.c, the patient questionnaire used prior to surgery contains a number of questions needed to evaluate the social service needs of BOSC's patient panel. Requested information includes information about the patient's living situation and social supports, identification of the person escorting the patient home, who will be with the patient once the patient arrives at home, questions around abuse (prompting need for interventions), and primary language if not English. Ensuring that the patient is safe at home is a priority for BOSC staff. Home health services are arranged as necessary prior to release from the site on the day of surgery. If a patient is in need of transportation to or from the surgery appointment, arrangements are made for taxi services, including for the patient's family or support person. If abuse is indicated, patients are connected with hospital social service providers, who work with the patients to find appropriate community-based services. When English is not the patient's primary language, interpreter services are arranged. Depending on the language needed, interpreters may be on site or may be accessed via either a video-based service on an iPad (Stratus) or a telephone-based service.

Home safety is an important social determinant of health for the orthopedic population because of its potential impact on falls. Fall prevention a primary focus area at the BOSC. In 2014, the Applicant initiated a "Falls Risk Assessment Tool Plan" to better screen patients pre-operatively by addressing pertinent questions relative to falls that could make the patient at a low, moderate, or high risk for falls. This ultimately led to increased awareness of high-risk patients, and the understanding of that risk is incorporated into the plan of care.

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More recently, the team has developed a script for post-operative questions to be asked of patients who have sustained a fall and has worked on initiatives to incorporate information learned into care planning in order to decrease number of falls (i.e. better lighting in the home, arrangements for pets, clearing furniture and throw rugs out of the path to the bathroom, and getting help before attempting a bathroom trip). The BOSC team has shared with other units within BH its successful fall reduction strategies and has provided education to patients and care providers about risks and proper home safety strategies

Going forward, the Applicant plans to expand on current programming; for example, preventive measures (such as prehab) are being considered for implementation to reduce risk of falls. The team also plans to begin using an online screening tool and a home safety checklist.

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<b>Factor</b>	3:	Compliance

Applicant certifies, by virtue of submitting this Application that it is in compliance and good standing with federal, state, and local laws and regulations, including, but not limited to M.G.L. c. 30, §§ 61 through 62H and the applicable regulations thereunder, and in compliance with all previously issued notices of Determination of Need and the terms and conditions attached therein.

F3.a Please list all previously issued Notices of Determination of Need

Add/Del Rows	Project Number	Date Approved	Type of Notification	Facility Name
+ -				

# Factor 4: Financial Feasibility and Reasonableness of Expenditures and Costs

Applicant has provided (as an attachment) a certification, by an independent certified public accountant (CPA) as to the availability of sufficient funds for capital and ongoing operating costs necessary to support the Proposed Project without negative impacts or consequences to the Applicant's existing Patient Panel.

F4.a.i Capital Costs Chart:

For each Functional Area document the square footage and costs for New Construction and/or Renovations.

	Foot	Footage	odnai	Square Footage Involved in Project	olved in Pr	oject	Resulting Square Footage	g Square age	Total	Total Cost	Cost/Square Footage	- Footage
			New Construction	struction	Renovation	ation						
Add/Del Functional Areas	Net	Gross	Net	Gross	Net	Gross	Net	Gross	New Construction	Renovation	New Construction	Renovation
+ - Operating Rooms	0	0	0	1,000	0	0	0	0	\$975,000.00	\$0.00	\$975.00	\$0.00
+ Scrub	0	0	0	44	0	0	0	0	\$35,000.00	\$0.00	\$795.45	\$0.00
+ Sub Sterile	0	0	0	131	0	0	0	0	\$65,000.00	\$0.00	\$496.18	\$0.00
+ - Electrical	0	0	0	17	0	0	0	0	\$5,000.00	\$0.00	\$294.12	\$0.00
+   -     Equipment Storage	0	0	0	0	0	95	0	0	\$0.00	\$25,000.00	\$0.00	\$236.16
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	Catagon, of F 1!t	Now Construction	Damayeti - :-	Total
	Category of Expenditure	New Construction	Renovation	(calculated)
	Land Costs			
	Land Acquisition Cost	\$0.	\$0.	\$0.
	Site Survey and Soil Investigation	\$0.	\$0.	\$0.
	Other Non-Depreciable Land Development	\$0.	\$0.	\$0.
	Total Land Costs	\$0.	\$0.	\$0.
	Construction Contract (including bonding cost)		·	
	Depreciable Land Development Cost	\$0.	\$0.	\$0.
	Building Acquisition Cost	\$0.	\$0.	\$0.
	Construction Contract (including bonding cost)	\$950000.	\$25000.	\$975000.
	Fixed Equipment Not in Contract	\$80000.	\$0.	\$80000
	Architectural Cost (Including fee, Printing, supervision etc.) and Engineering Cost	\$50000.	\$0.	\$50000.
	Pre-filing Planning and Development Costs	\$0.	\$0.	\$0.
	Post-filing Planning and Development Costs	\$0.	\$0.	\$0.
Add/Del Rows	Other (specify)			
+ -		\$343644.	\$0.	\$343644.
	Net Interest Expensed During Construction	\$0.	\$0.	\$0.
	Major Movable Equipment	\$2331444.	\$0.	\$2331444.
	Total Construction Costs	\$3755088.	\$25000.	\$3780088
	Financing Costs:			
	Cost of Securing Financing (legal, administrative, feasibility studies, mortgage insurance, printing, etc	\$0.	\$0.	\$0.
	Bond Discount	\$0.	\$0.	\$0.
Add/Del Rows	Other (specify			
+ -				
	Total Financing Costs	\$0.	\$0.	\$0
	Estimated Total Capital Expenditure	\$3755088.	\$25000.	\$3780088.

# **Factor 5: Relative Merit**

F5.a.i Describe the process of analysis and the conclusion that the Proposed Project, on balance, is superior to alternative and substitute methods for meeting the existing Patient Panel needs as those have been identified by the Applicant pursuant to 105 CMR 100.210(A)(1). When conducting this evaluation and articulating the relative merit determination, Applicant shall take into account, at a minimum, the quality, efficiency, and capital and operating costs of the Proposed Project relative to potential alternatives or substitutes, including alternative evidence-based strategies and public health interventions.

# **Proposal:**

BMC plans to build out the last two operating rooms (of eight originally planned) and equip the last seven (of 28 originally planned) preand post-op care rooms at BOSC, a hospital-based outpatient orthopedic surgery center listed on BMC's hospital license.

#### **Quality:**

With the proposed expansion, BOSC will continue to provide high-quality, cost-effective outpatient orthopedic surgical services in a state-of-the-art facility.

# **Efficiency:**

The Proposed Project expands a setting specifically designed to handle the unique needs of orthopedic surgery patients and staff with specialized training. The site design optimizes patient flow, the location provides adequate onsite parking, and on-site pharmacy services are provided so that patients can leave with their prescriptions in-hand. In 2017, the BOSC team achieved 95% on-time 7:30 a.m. case starts. The consistently high patient satisfaction scores (93% "Willing to Recommend" in FY 2017) evidence the success of the patient-focused care delivery team.

# **Capital Expense:**

Capital costs of the Proposed Project relate primarily to construction, fixed equipment, and major movable equipment. The original site plans included the spaces to be developed, and BMC determined that building out and equipping this expansion in the existing building was by far more cost-effective than building a new facility or converting space at another existing location.

# **Operating Costs:**

Operating costs are anticipated to be incremental and are associated primarily with additional staff and supplies for the additional cases that will be performed in the new space. These expenses are expected to be offset by increased case volumes, and the overall cost per case is expected to decline 8.5% by 2021, demonstrating significant economy of scale achieved by the addition of the two operating rooms.

List alternative options for the Proposed Project:

# **Alternative Proposal:**

As indicated above, it is more cost-effective to expand the existing space, which will permit the consolidation of the bulk of outpatient orthopedic surgical procedures performed at BMC in a single, accessible location, which enhances efficiency, convenience, and patient experience. A new building would be significantly more expensive, and doing nothing would not be an acceptable means of addressing increased demand for the services.

1 .	demand for the services.	
Alternative Quality	:	
Alternative Efficien	су:	
Alternative Capital	Expense:	
Alternative Operati	ng Costs:	
	Add additional Alternative Project	Delete this Alternative Project
E5 a ii Doscribo tho	process of analysis and the conclusion that the	Proposed Project on balance is superior to alternative and

F5.a.ii Describe the process of analysis and the conclusion that the Proposed Project, on balance, is superior to alternative and substitute methods for meeting the existing Patient Panel needs as those have been identified by the Applicant pursuant to 105 CMR 100.210(A)(1). When conducting this evaluation and articulating the relative merit determination, Applicant shall take into account, at a minimum, the quality, efficiency, and capital and operating costs of the Proposed Project relative to potential alternatives or substitutes, including alternative evidence-based strategies and public health interventions.

# **Documentation Check List**

The Check List below will assist you in keeping track of additional documentation needed for your application.

Once you have completed this Application Form the additional documents needed for your application will be on this list. E-mail the documents as an attachment to: DPH.DON@state.ma.us

- Affidavit of Truthfulness Form
- Scanned copy of Application Fee Check
- Change in Service Tables Questions 2.2 and 2.3
- Certification from an independent Certified Public Accountant
- Articles of Organization / Trust Agreement
- ☐ Current IRS Form, 990 Schedule H CHNA/CHIP and/or Current CHNA/CHIP submitted to Massachusetts AGO's Office
- Community Engagement Stakeholder Assessment form
- Community Engagement-Self Assessment form

# **Document Ready for Filing**

When document is complete click on "document is ready to file". This will lock in the responses and date and time stamp the form. To make changes to the document un-check the "document is ready to file" box. Edit document then lock file and submit Keep a copy for your records. Click on the "Save" button at the bottom of the page.

To submit the application electronically, click on the "E-mail submission to Determination of Need" button.

This document is ready to file:

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Date/time Stamp: 01/08/2018 2:06 pm

E-mail submission to Determination of Need

**Application Number: BH-18010311-HS** 

Use this number on all communications regarding this application.

Community Engagement-Self Assessment form