

STAFF REPORT TO THE PUBLIC HEALTH COUNCIL FOR A DETERMINATION OF NEED	
Applicant Name	Boston Outpatient Surgical Suites, LLC
Applicant Address	840 Winter Street, Waltham, MA 02541
Filing Date	January 31, 2024
Type of DoN Application	Ambulatory Surgery
Total Value	\$13,100,000
Project Number	BOSS-22051213-AS
Ten Taxpayer Groups	None Formed
Community Health Initiative (CHI)	\$655,000
Staff Recommendation	Approval with Conditions
Public Health Council Meeting	June 12, 2024
<p style="text-align: center;"><u>Project Summary and Regulatory Review</u></p> <p>Boston Outpatient Surgical Suites, LLC (Applicant), filed a Determination of Need (DoN) application to transfer the site of its existing ambulatory surgery center (ASC), Boston Outpatient Surgical Suites, LLC from its current location at 840 Winter Street, Waltham, MA to 71 Border Road, Waltham, MA, three miles from the current location. The Applicant is also proposing to increase the number of operating rooms from three to eight and increase the number of pre/post-procedure beds from 17 to 30 at the proposed site. The total value for the Proposed Project is \$13,100,000. The Community Health Initiative (CHI) contribution to the Statewide Initiative Fund is \$655,000.</p> <p>Review of Applications for Ambulatory Surgery is under the DoN regulation 105 CMR 100.000. The Department must determine that need exists for a Proposed Project, on the basis of material in the record, where the Applicant makes a clear and convincing demonstration that the Proposed Project meets each Determination of Need Factor set forth within 105 CMR 100.210. This staff report addresses each of the six factors set forth in the regulation.</p>	

Contents

Background: Boston Outpatient Surgical Suites, LLC; and Application Overview.....	3
Patient Panel.....	4
Factor 1a: Patient Panel Need.....	6
Factor 1: b) Public health value, improved health outcomes and quality of life; assurances of health equity.....	19
Factor 1: c) Efficiency, Continuity of Care, Coordination of Care	21
Factor 1: d) Consultation.....	22
Factor 1: e) Evidence of Sound Community Engagement through the Patient Panel	22
Factor 1: f) Competition on price, total medical expenses (TME), costs and other measures of health care spending.....	23
Factor 1 Summary	24
Factor 2: Cost containment, Improved Public Health Outcomes and Delivery System Transformation ..	24
Factor 2 Summary	26
Factor 3: Relevant Licensure/Oversight Compliance.....	26
Factor 4: Demonstration of Sufficient Funds as Supported by an Independent CPA Analysis.....	26
Factor 5: Assessment of the Proposed Project’s Relative Merit.....	29
Factor 6: Fulfillment of DPH Community-based Health Initiatives Guideline	30
Findings and Recommendations	30
Other Conditions.....	30
Appendix I: Required Measures for Annual Reporting.....	32
REFERENCES.....	35

Background: Boston Outpatient Surgical Suites, LLC; and Application Overview

Boston Outpatient Surgical Suites, LLC (Applicant) is a for-profit, Tennessee limited liability company (LLC) that owns and operates a multispecialty ambulatory surgery center (ASC), Boston Outpatient Surgical Suites, LLC (BOSS), located at 840 Winter Street, Waltham, MA. BOSS offers same-day surgery (orthopedic, spine, podiatry, and general surgery) and pain management procedures. The ASC has been in operation since 2004, and has been licensed as a clinic by the Massachusetts Department of Public Health (Department) since 2009. The Applicant is eligible to expand through the grandfathering provision of 105 CMR 100.715.¹

Application Overview

The Applicant has been running BOSS with three operating rooms (ORs) since 2004. The Applicant's current ASC site is 9,300 gross square feet and includes three ORs, one procedure room, 17 pre/post procedure beds, administrative space, sterilization space, storage space, and a patient waiting area. The building where the ASC is currently located was recently sold, and the Applicant's lease will expire, without renewal rights, in ~~May~~ March 2025. The Applicant is proposing to transfer the current site of its ASC to a site three miles away in Waltham in order to continue to meet the ambulatory surgery care needs of its Patient Panel. The Applicant asserts that it is currently experiencing capacity constraints due to the limited number of ORs. Given the capacity constraints within the existing ASC, the Applicant is proposing to increase its OR capacity in order to increase physician access to surgical time, decrease wait times to schedule surgeries and pain procedures, and address increasing need for ambulatory surgical services.

Subject to DoN review and Department approval, the Applicant will relocate the ASC to a newly constructed, state-of-the-art facility that will encompass 38,453 gross square feet and will have eight ORs, 30 pre/post procedure beds, and adequate administrative, sterilization and storage capacity to support the proposed OR capacity. The size of each OR will increase by approximately 36%, from 400 square feet to 545 square feet, on average, to accommodate specialized equipment needed to perform procedures, and to meet patient demand requiring greater OR size. The Applicant explained that many orthopedic procedures increasingly require multiple instrumentation sets, use of x-ray equipment, and microscopes and, increasingly, orthopedic procedures utilize robotic and AI-generated navigation systems all of which require space. In addition, specialized patient beds are utilized for these procedures, and the positioning devices are also larger than the traditional patient bed and positioning devices used in the past. The proposed facility will include only ORs, and no procedure rooms, because ORs allow for more versatility and flexibility for all ASC cases, which will in turn increase the Applicant's ability to accommodate increasing growth in orthopedic case volume. All cases will be performed in an OR at no additional cost to patients or payers because the Applicant is paid on an ASC fee schedule, regardless of whether the case is performed in a procedure room or in an OR. Table 1 provides an overview of the Proposed Project.

¹ An Expansion, Conversion, Transfer of Ownership, Transfer of Site, or change of designated Location for a Freestanding Ambulatory Surgery Center that received an Original License as a Clinic on or before January 1, 2017. 105 CMR 100.715(B)(2)(a)(iv).

Table 1: Overview of Proposed Project

	Current Site 840 Winter Street Waltham	Proposed Site 71 Border Road Waltham	Proposed Change
Operating Rooms	3	8	+5
Procedure Rooms	1	0	-1
Pre/Post-Procedure Beds	17	30	+13

As noted above, BOSS had been operating with three ORs since 2004. The Applicant is proposing to expand its OR capacity to provide ambulatory surgical services that address the needs of its Patient Panel. The Applicant is experiencing capacity constraints due to its limited OR capacity. Equipment needed at the ASC require more OR space. Surgeons currently on its medical staff are requesting more “block time” or OR time as BOSS’s cases have become longer and more complex, requiring more OR time to complete.² The Applicant states that these surgeons would like to perform more of their procedures at BOSS given its convenience for their patients and for themselves, however, the Applicant is unable to fill their requests for more “block time” due to BOSS’s limited OR capacity. Additionally, new surgeons interested in joining the Applicant’s medical staff, have expressed strong interest in performing ambulatory procedures at BOSS’s proposed site when more block time is available. This could allow these new surgeons to shift cases from the hospital setting, and in some cases more inconvenient ASCs out of state, to BOSS, which is a more convenient and cost effective setting for their patients. The Applicant asserts that increasing BOSS’ OR capacity at the proposed site would allow it to accommodate current and increasing patient need for ambulatory surgery care, increase efficiency by accommodating additional physician block time, keep pace with increasingly more complex surgeries performed in the ambulatory setting which require longer OR time per procedure, accommodate potentially longer post-operative recovery time, and provide sufficient OR size to accommodate specialized equipment to perform procedures.

Patient Panel³

The Applicant provided Patient Panel data based on patients who have received care at the Applicant’s current facility from January 2019 through December 2023. Patient Panel data are shown in Table 2.

² The Applicant assigns operating rooms to surgeons in half-day and full-day increments which is referred to as “block time.” Assignment of “block time” allows surgeons to schedule their surgeries more efficiently.

³ As defined in 105 CMR 100.100, Patient Panel is the total of the individual patients regardless of payer, including those patients seen within an emergency department(s) if applicable, seen over the course of the most recent complete 36-month period by the Applicant or Holder. Patient Panel also means: (1) If the Applicant or Holder has no Patient Panel itself, the Patient Panel includes the Patient Panel of the health care facilities affiliated with the Applicant; or (2) If the Proposed Project is for a new facility and there is no existing Patient Panel, Patient Panel means the anticipated patients; or (3) In the case of a Transfer of Ownership, Patient Panel also includes the Patient Panel of the Entity to be acquired.

Table 2: BOSS Patient Panel

Calendar Year (CY)	2019	2020	2021	2022	2023
BOSS Patients	3,618	3,221	2,719	3,239	3,282

Patient Information

The Applicant provided demographic data for the Patient Panel, which is presented in Table 3. Staff notes the following observations about these data below:

- **Age:** Almost 70% of the Applicant's patients are aged 45 and older, and approximately 22% are aged 65 and older.
- **Patient Origin:** In 2023, 75% of the Applicant's patients resided in 129 different cities and towns in Massachusetts.⁴ The Applicant notes that free-standing ASCs generally have broader service areas than community hospitals, and that patients are willing to travel farther distances for an elective surgery at an ASC. The top 20% of the ASC's patients reside in 12 cities/towns representing Middlesex, Suffolk, Plymouth, and Norfolk Counties.
- **Race/Ethnicity:** The Applicant does not collect race/ethnicity data from its patients. The Applicant explained that until recently, it was using a paper booking sheet to collect patient information for procedures, as well as for its Pre-operative Questionnaire, neither of which contained a questionnaire that explicitly solicited information regarding patients race or ethnicity. The Applicant states that BOSS is not required to report race/ethnicity data for accreditation purposes nor is it required to report such information to any payers. The Applicant recently converted to an electronic medical record (EMR) system, and is re-evaluating its Pre-operative Questionnaire. The Applicant plans to have its EMR and Pre-operative Questionnaire configured to collect race/ethnicity data for its patients at the proposed site. If the Proposed Project is approved, the Applicant will provide race/ethnicity data for patients through the required measures for annual reporting.
- **Payer Mix:** 65% of the Applicant's patients were covered by a commercial payer. The Applicant anticipates that its Medicare coverage will increase as the age 45 to 64 age cohort transitions into Medicare coverage, and that its Medicare and Medicaid coverage will increase with the addition of a pain management specialist, 35% of whose patients are covered by a government payer.⁵ The Applicant does not have any alternative payment method (APM) contracts.

Table 3: Overview of BOSS Patient Population, CY2023

Total Patients	3,282
Gender	
Male	58.8%
Female	41.2%
Unspecified	0%

⁴ For the list of cities and towns, please see responses to DoN Questions #1 on the DoN website.

⁵ The Applicant notes that 35% of the pain management specialist's current Patient Panel are covered by government payers: 50% are insured through Medicare, 45% are insured through MassHealth/Medicaid, and 5% are insured through Tricare.

Total Patients	3,282
Total	100%
Age	
<18	1.7%
19-44	30.3%
45-64	46.3%
65+	21.7%
Total	100%
Patient Origin⁶	
Cambridge	3.7%
Somerville	1.9%
Waltham	1.8%
Arlington	1.8%
Quincy	1.7%
Boston	1.5%
Watertown	1.4%
Medford	1.4%
West Roxbury	1.2%
Brockton	1.2%
Belmont	1.2%
Natick	1.1%
Total	19.90%
Payer Mix⁷	
Commercial	64.8%
VA/Workers Comp/Other/Self Pay ⁸	12.9%
Medicare	18.5%
Medicaid	3.8%
Total	100%

Factor 1a: Patient Panel Need

In this section, staff assesses if the Applicant has sufficiently demonstrated need for the Proposed Project components by the Applicant's Patient Panel.

The Applicant states that the Proposed Project is needed to address BOSS' existing and future Patient Panel's need for clinically appropriate outpatient surgical services. BOSS has been operating with three ORs since 2004, and its OR capacity is no longer sufficient to serve the needs of its Patient Panel, and medical staff. The Applicant bases its need for the Proposed Project on existing case

⁶ Represents the top cities and towns where 20% of patients reside. The Applicant defines its Primary Service Area (PSA) as the following five Massachusetts counties in which 76% of the Applicant's patients reside: Middlesex, Norfolk, Suffolk, Plymouth, and Essex counties. Of the remaining 24% of patients, 17% are from other counties in Massachusetts and 7% are from other states, including outside of New England.

⁷ The count for payer mix totals 3,824 because some patients have multiple insurance plans (primary and secondary).

⁸ Self-pay was included to ensure patient privacy.

volume that has become increasingly more complex, capacity constraints due to limited OR capacity, and forecasted patient need for BOSS's services.

Existing Case Volume

The Applicant provided cases by specialty and procedures by specialty for calendar years (CYs) 2019 to 2023. The Applicant states that it had high surgical volumes until the onset of the COVID-19 pandemic, which contributed to a reduction in patient utilization; however, since that time, patient utilization has been recovering and increasing steadily with Orthopedic surgical cases increasing by 9% between 2020 and 2023. The most prevalent diagnoses at the current site are related to shoulder arthritis or injuries, followed by knee pain.⁹ Case volume by specialty is shown in Table 4. In 2023, there were 3,388 surgical cases: 91.6% of cases were Orthopedic Surgery, 4.6% were General Surgery, 1.2% were Podiatry and 2.6% were Pain Management.

Table 4: Case Volume by Specialty

	2019	2019	2020	2020	2021	2021	2022	2022	2023	2023
Specialty	#	%	#	%	#	%	#	%	#	%
Cases	Cases	Cases	Cases	Cases	Cases	Cases	Cases	Cases	Cases	Cases
Orthopedic Surgery/Neuro Spine ¹⁰	3,302	68.8%	2,841	76.6%	3,109	92.7%	3,166	95.6%	3,103	91.6%
General Surgery	65	1.4%	97	2.6%	94	2.8%	100	3.0%	157	4.6%
Podiatry	131	2.7%	83	2.2%	84	2.5%	44	1.3%	42	1.2%
Total Surgical Cases	3,498	73.0%	3,021	81.4%	3,287	98.0%	3,310	100.0%	3,302	97.4%
Pain Management	1,296	27.0%	690	18.6%	66	2.0%	0	0%	86	2.6%
Grand Total	4,794	100.0%	3,711	100.0%	3,353	100.0%	3,310	100.0%	3,388	100.0%

Surgical cases decreased by 29% between 2019 and 2023. The Applicant explained that the number of cases decreased because cases have become longer and more complex, requiring longer blocks of OR time to perform and the number of procedures that can be performed at BOSS with its limited OR capacity, decreases. The decrease in pain management cases shown in Table 4, is due to the departure of a pain management specialist in 2021. The Applicant expects that a new pain management specialist will be providing procedures at the proposed facility. Based on the new pain management specialist's current patient panel, the specialist expects to bring over 1,100 pain management cases per year to the proposed facility, and the procedures performed will be primarily for injections for spine, including cervical, thoracic, and lumbar.

The Applicant explained that the number of cases in 2023 was higher than the number of the Applicant's patients in 2023 because some patients have more than one surgery in a year. For example, a patient may require bilateral knee replacement and have surgery on the left knee in one month and return a few months later to replace the right knee. The Applicant notes that this differential occurred in prior years as well, as shown in Table 5.

⁹ Patient diagnoses listed by the Applicant include Disorders of cartilage, shoulder; Shoulder pain; Impingement syndrome of the shoulder; Complex tear of medial meniscus; Rotator cuff sprains, tears, or ruptures; Pain due to internal orthopedic devices; and Primary osteoarthritis of the shoulder, knee, and hip.

¹⁰ Orthopedic Surgery and Neuro Spine cases were combined to ensure patient privacy.

Table 5: Ratio of Cases Per Patient

Year	# Patients	# Cases	Ratio of Cases per Patient
2019	3,618	4,794	1.33 to 1
2020	3,221	3,711	1.15 to 1
2021	2,719	3,353	1.23 to 1
2022	3,239	3,310	1.02 to 1
2023	3,282	3,388	1.03 to 1

In 2023, 7,894 procedures were performed at the ASC: 94.6% were Orthopedic Surgery, 2.7% were General Surgery, 0.8% were Podiatry and 1.9% were Pain Management. This is shown in Table 6. Procedures decreased by 29% between 2019 and 2023, due to the increase in longer and more complex cases, together with BOSS' limited OR capacity, the same reasons mentioned above for the decrease in the Applicant's case volume.

Table 6: Procedures by Specialty

	2019	2019	2020	2020	2021	2021	2022	2022	2023	2023
Specialty	# Procedures	%	# Procedures	%	# Procedures	%	# Procedures	%	# Procedures	%
Orthopedic Surgery	8,959	80.0%	7,512	84.2%	7,909	96.1%	7,809	97.6%	7,466	94.6%
Podiatry	156	1.4%	116	1.3%	78	1.0%	58	.7%	63	0.8%
General Surgery	84	.8%	143	1.6%	123	1.5%	136	1.7%	217	2.7%
Pain	1,989	17.8%	1,146	12.9%	117	1.4%	0	0%	148	1.9%
Procedures	11,188	100%	8,917	100%	8,227	100%	8,003	100%	7,894	100%

The Applicant explained the number of procedures performed by a surgeon within each case can vary depending on the type of case. For example, there may be five different procedure codes used in one shoulder surgical case (e.g., arthroscopy with rotator cuff repair, sub-acromial decompression, extensive debridement, synovectomy, and biceps tenodesis- all have distinct Current Procedural Terminology (CPT) procedure codes), whereas there may be only one procedure code for a total knee arthroplasty, and one procedure code for a pain case. Therefore, the number of cases in a given year does not equal the number of procedures performed in that same year. The Applicant provided data showing that it has been experiencing a consistent ratio of procedures per case from 2019 to 2023. This is shown in Table 7.

Table 7: Ratio of Procedures Per Case

Year	# Cases	# Procedures	Ratio of Procedures per Case
2019	4,794	11,188	2.3 to 1
2020	3,711	8,917	2.4 to 1
2021	3,353	8,227	2.5 to 1
2022	3,310	8,003	2.4 to 1
2023	3,388	7,894	2.3 to 1

The Applicant states that higher last-minute cancellations is another factor that has contributed to a decrease in cases and procedures over the past few years but less so than the growth in longer and more complex cases, and BOSS' limited OR capacity, both of which are described in more detail below. The Applicant has been experiencing higher last-minute cancellation rates due to COVID infection or other illness than it experienced prior to the COVID-19 pandemic. This impacts surgical case volume and procedures because the Applicant is unable to schedule last-minute OR cases to replace the last minute cancellations. However, cancellations continue to decline, as shown in Table 8, and declining cancellation rates will put more pressure on the Applicant's OR utilization, which at 90%, is currently above expert standards.

Table 8: Cancellations at Current Site

Year	# Cancellations	Covid Related	Other Illness (unspecified)	Cancelled by Anesthesia
2018	28	0	26	2
2019	25	0	22	3
2020	244	193	38	13
2021	119	56	43	20
2022	90	14	56	20
2023	52	5	31	16
2024 YTD	17	0	15	2

Need for Additional OR Capacity

The Applicant states that although its Patient Panel, case volume, and procedures performed decreased between 2019 and 2023, BOSS is experiencing capacity constraints due to the limited number of ORs, high OR utilization, and higher acuity cases requiring longer OR time.

Case Complexity

The Applicant states that as the Centers for Medicare & Medicaid Services (CMS) has approved more complex cases to be performed at ASCs (e.g. total knee arthroplasty approved in 2020, total hip arthroplasty approved in 2021, and total shoulder arthroplasty approved in 2024), surgical cases at BOSS have become longer and more complex, and because of BOSS' limited OR capacity, the number of surgeries that can be performed at BOSS has decreased. For example, a surgeon can perform eight 1-hour surgeries in an 8-hour OR block, or four 2-hour surgeries. To demonstrate increasing OR time, the Applicant provided year-over-year changes in average OR time between 2019 and 2023. This is shown in Table 9.

Table 9: Average OR Time

Year	# Cases	% YOY change	Average OR time in minutes	% YOY change
2019	4,794		39.35	
2020	3,711	-22.59%	49.25	+25.15%
2021	3,353	-9.65%	59.09	+19.98%
2022	3,310	-1.28%	62.81	+6.30%
2023	3,388	2.36%	68.00	+8.26%

The Applicant states that anticipated increases in high acuity cases, such as Arthroplasty and spine in the ASC setting will mean that more OR time will be required to address these cases. The Applicant provided examples of complex cases that have increased in volume between 2019 and 2023. This is shown in Table 10.

Table 10: Complex Case Volume

Complex Cases	2019	2023	Increase	% Increase
Total Joint Arthroplasty	44	108	64	145%
Hip Arthroscopy	16	43	27	169%
Spine	4	7	3	75%
Total	64	158	94	147%

Procedures performed at the current ASC that fall under the category “Spine” include microdiscectomies, laminectomies, hemi-laminectomies and anterior cervical discectomy and fusions (ACDF’s). The Applicant expects that moving forward, in addition to spine procedures currently performed at the ASC, more complex spine procedures such as multiple level ACDF’s, single-level lumbar fusions, and two-level lumbar fusions, among others, may be performed at the new ASC when there is more OR capacity to allow for spine surgeons to have additional designated block time.

Requests for Block Time

The current facility has a medical staff comprised of surgeons and pain specialists from independent practices and larger surgical group practices who perform procedures at the current site. The Applicant has 33 surgeons on its medical staff; 17 of the surgeons on its medical staff have medical space in the same building as the Applicant and will be moving their medical offices to the same building as the proposed ASC. The Applicant states that patients experience the efficiency and convenience of having their surgery performed in a location that is proximate to their surgeon’s office and proximate to needed therapy and other services that will be located in the same building.

Surgeons performing cases at the Applicant’s facility draw patients from across Eastern Massachusetts (and throughout New England), and have established relationships with surgery practices in Plymouth, Braintree, Dedham, Newton, Waltham, Boston, Cambridge, Somerville, Burlington, Peabody, and other communities. The Applicant states that the surgical practices in these areas are exhibiting capacity and OR block time constraints which negatively impact patient access with longer wait times.

Surgeons perform cases at the Applicant’s ASC as well as other ASCs and Hospitals and may be affiliated with large hospital systems. Patients are referred to the physicians from their respective network of primary care physicians (PCPs), third party contracts, insurers, employers, and workers compensation sources. The Applicant does not capture patients' primary care physicians (PCPs) or other entities who may refer patients to surgeons who perform cases at the Applicant’s ASC in its electronic medical record (EMR).

The Applicant assigns operating rooms to surgeons in half-day and full-day increments which is referred to as “block time.” Assignment of “block time” allows surgeons to schedule their surgeries more efficiently. The Applicant’s OR capacity has remained consistently full between 2022 and 2023. Current OR utilization rate is over 90%, which is higher than expert standards, per a citation provided by the Applicant, ~~and is above the Applicant’s limit for scheduling surgeries sooner~~. The Applicant provided an article which points to a 70% to 80% range for utilization depending on the type of ASC, with single-specialty ASCs in the higher range and multi-specialty ASCs towards the lower end.^a The Applicant has received requests from its existing surgeons for increased access to surgical time but is unable to provide more block time due to the ASC’s limited OR capacity, this results in longer wait times for patients to schedule their surgeries and pain procedures, which can negatively impact patient experience and quality of life as patients endure pain during their wait for their surgeries. The Applicant also explained that while most emergent cases are most appropriately addressed in an ED, there are some “urgent” orthopedic cases, such as fractures, and ligament/tendon ruptures, that surgeons are rarely able to book at the current ASC due to the limited number of ORs and advanced booking of ORs. ~~Some of t~~These cases could potentially be accommodated in the proposed ASC, with its expanded capacity, and this may help to relieve current capacity burdens on EDs and hospital ORs, in the Commonwealth.

The Applicant’s providers report wait times of weeks to months due to limited availability of ORs at the Applicant’s current ASC and at the Hospital ORs where they currently perform surgeries. Wait times vary from two to three weeks for sports medicine to up to six months for joint surgeons due to longer blocks of time required to perform those surgeries. In response to staff inquiry, the Applicant states that it has not been able to identify any specific sources that identify ideal wait times for procedures performed at the Applicant’s ASC and instead provided an article on prolonged wait times for routine orthopedic surgery because it reflects the concerns of and impact of wait times on providers and patient health, including for patients, significant impacts on daily living/activities, ability to perform work, etc.^b The article states, “Prolonged waits for certain orthopaedic procedures can have a major negative impact on patient health. This occurs in terms of deterioration in quality of life while awaiting surgery, as well as potential negative connotations for postoperative recovery and longer-term health in addition to reduced independence and increased social care needs.”^c The Applicant noted that the article, published in the UK, is focused on a public health system that is different from our own system.

The Applicant states that many of the surgeons currently performing surgeries at the ASC belong to larger surgical practices. Within the practices that currently employ physicians on the Applicant’s medical staff, there are other surgeons (new surgeons), who have expressed interest in performing ambulatory surgeries at the Applicant’s proposed ASC when more block time becomes available. These cases (new cases), are currently being performed in Hospital Outpatient Departments (HOPDs), and in some cases, these surgeons are performing surgeries on patients from Massachusetts in ASCs that are located in New Hampshire due to limited access to freestanding ASCs in the Greater Boston area. If the Proposed Project is approved, the Applicant intends to serve the needs of both the current and future surgeons who will provide services at the ASC. The majority of these surgeons, who will be joining the Applicant’s medical staff at the proposed site, are members of Beth Israel Lahey Performance Network (BILPN), a value-based physician and hospital

network, and operate at multiple medical facilities including New England Baptist Hospital (NEBH) and Mount Auburn Hospital (MAH).

Other Factors Impacting OR Utilization

The Applicant summarized various other factors that have the potential to increase OR time, and explained their impact on OR utilization at BOSS given its limited OR capacity.

- **Number of Procedures in a Case:** Some complex cases require multiple procedures. For example, an orthopedic surgeon may perform a shoulder arthroscopy on a patient with impingement syndrome that requires one procedure to repair the injury, for total OR time of approximately 60 minutes, while another case for a patient with impingement syndrome, synovitis, adhesive capsulitis, and a rotator cuff tear, might require five procedures to repair the injury and approximately 120 minutes of OR time.
- **Patient age, weight and/or co-morbidities:** Cases involving older patients, patients with obesity, and/or patients with comorbidities often taken longer, due to potential associated characteristics, such as adhesions in diabetic patients, potentially degraded tissue in patients of advanced age, and considerations with positioning, anesthetizing and/or navigating additional tissue of patients who are obese. As described further below, the Applicant expects that demographic changes within its PSA and projected increases in the prevalence of certain conditions such as obesity and arthritis, will result in more older patients and more patients who are obese and/or who have multiple co-morbidities requiring ambulatory surgical services.
- **Equipment Needs:** More complex cases often require additional or unique equipment which, in turn, may increase the time needed for setup, take-down, and sterilizing/processing that equipment. For example, spine procedures utilize a specific type of bed for positioning a patient in the prone position, a microscope and additional instrumentation that requires calibration for each surgery, as well as additional trays of surgical equipment. Some surgeries also require the use of imaging during the case, which also requires the use of a large C-arm x-ray device that must be calibrated and positioned uniquely to each patient multiple times during a surgical procedure.
- **Sterilization/Clean-up:** Cases that require additional or unique equipment also require additional time for sterilization and clean-up, which means more time needed to complete one case and begin the next.

Forecasted Volume Based on Need

The Applicant affirms that its forecasted case volume supports need for eight ORs. The Applicant is forecasting 4,258 new cases in Year I (2025), a 122% increase in surgical case volume from CY2023. This is shown in Table 11. Forecasted volume is based on existing case volume, increasing need from surgeons to schedule surgeries at Applicant's proposed facility, and four market factors: an aging demographic, health conditions requiring orthopedic intervention, value offered by ambulatory surgery centers over hospital-based services, and consumer choice.

Table 11: Applicant's ASC Volume Forecast

	Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029
Existing Cases	3,472	3,611	3,755	3,906	4,062
New Cases					
Joint Arthroplasty	856	916	980	1,049	1,122
Spine	320	333	346	353	360
Orthopedics & Podiatry	1,774	1,845	1,919	1,957	1,996
General Surgery	208	216	225	229	234
Pain Management	1,100	1,144	1,190	1,214	1,238
Total New Cases	4,258	4,454	4,660	4,802	4,950
Total Forecasted Cases	7,730	8,065	8,415	8,708	9,012

Forecasted surgical cases is based on the following assumptions:

- **Year 1** starting volume is based on 2023 case volume (January-June annualized).
- **Year 1** new cases assume ramp-up of cases from existing surgeons with new block time, new surgeons and pain specialists, and market shift in joint arthroplasty and spine cases from HOPDs to ASCs. The Applicant projects that 55% of new surgical cases will come from **existing surgeons** with new block time and 45% will come from **new surgeons** and **pain specialists**. This is shown in Table 12.

Table 12: Year 1 Surgical Case Growth Assumptions

	Growth in Surgical Cases	% of Net Growth
Existing surgeons with new block time	1,743	55%
New surgeons with block time	1,415	45%
Total growth in cases (excl. 1,100 pain management cases)	3,158	100%

- **Estimated 2-7%** surgical case growth rates by specialty has been applied considering the four market factors mentioned above as well as feedback and input from surgeons intending to perform more surgeries at the Applicant's proposed site. Table 13 shows the year-over-year change in forecasted cases by specialty.

Table 13: Year-over-Year Percent Change in Forecasted Cases by Specialty

	Year 1-Year 2	Year 2-Year 3	Year 3-Year 4	Year 4-Year 5
Existing Cases	4.0%	4.0%	4.0%	4.0%
New Cases				
Joint Arthroplasty	7%	7%	7%	7%
Spine	4%	4%	2%	2%
Orthopedics & Podiatry	4%	4%	2%	2%
General Surgery	4%	4%	2%	2%
Pain Management	4%	4%	2%	2%
Total New Cases	5%	5%	3%	3%
Total Forecasted Cases	4%	4%	3%	3%

The Applicant provided data supporting its market growth assumptions. This is shown in Table 14 and described further below.

Table 14: Market Growth Assumptions

Market Growth Assumptions	5-year Growth Rates	
Aging Population <ul style="list-style-type: none"> Applicant's PSA Population within 10 miles of Applicant 	Age	% Growth
	65+	17%
	45+	4%
	65+	11%
	45+	3%
Health conditions <ul style="list-style-type: none"> Obesity Arthritis 	20+	3%
	Adult	3%
Changing Care Patterns - shifts from HOPDs to ASCs <i>data source: Sg2</i> <ul style="list-style-type: none"> 2023 Impact of Change Forecast Highlights 	12% (5 yr. ASC growth rate) 18% (5 yr. OP shift total joint, spine, knee replacement) 17% (5 yr. OP shift rotator cuff)	
Patient Consumer Choice	No specific growth % - assumed to be included in changing care patterns	
Insufficient Access to Free-standing ASCs in Massachusetts	Growth assumptions from current and future surgeons interested in Applicant's new site when more ORs are available.	

1. Population Growth in the Applicant's PSA (particularly among older adults)

The Applicant used UMass Donahue Population Projections from 2022, to calculate estimated population changes in its PSA^d to assess the potential impact of these changes on need for BOSS's services. The adult population of the Applicant's PSA is projected to increase by 3% between 2020 and 2025, and by 5% between 2020 and 2030. The growth in the age 65 and older cohort will be the most significant with a projected increase of 17% by 2025 and 31% by 2030. The age 65 and older population in the communities within ten miles of Waltham, where the current and proposed ASCs are located, is projected to increase by 11% between 2020 and 2025, and by 19% between 2020 and 2030.¹¹

The Applicant maintains that growth in its PSA over the next five to ten years, will increase age-related conditions that require outpatient surgery including rotator cuff injuries (a condition often corrected by arthroscopy).^{e,f} Additionally, knee arthroscopy, usually more prevalent in older patients, is becoming more common in middle-aged patients with knee symptoms, and this, the Applicant states, will likely increase need for these services as the population in its PSA increases. Citing studies reporting that approximately half of older adults aged 65 and older have at least one

¹¹ The Applicant states communities within 10 miles of Waltham include Arlington, Bedford, Belmont, Burlington, Cambridge, Concord, Lexington, Lincoln, Medford, Newton, Somerville, Sudbury, Waltham, Watertown, Wayland, Weston, Winchester, and Woburn in Middlesex County, and Brookline, Needham, and Wellesley in Norfolk County.

surgery, and 65.9% of those surgeries are outpatient surgeries^{g,h} the Applicant estimates that population growth in its PSA could drive an increase of 39,286 additional outpatient surgeries in patients aged 65 and older over five years (2020 to 2025), and 73,203 additional outpatient surgeries over 10 years (2020 to 2030).

2. Increasing need due to increasing rates of health conditions, including obesity and arthritis.

Obesity

The Applicant affirms that population increases and the accompanying increasing prevalence of obesity among Eastern Massachusetts residents will increase need for the services offered at the proposed ASC. In Massachusetts, 24.4% of adults (aged 18 and older) reported being obese in 2020.ⁱ Obesity¹² is a risk factor for musculoskeletal conditions, for chronic overuse disorders of the foot and ankle, which cause foot and ankle pain, and is a contributor to the risk of rotator cuff tears and the size of tears. The American Academy of Orthopaedic Surgeons states that obesity contributes to soft tissue damage and osteoarthritis and estimates that individuals with obesity are 20 times more likely to need a knee replacement than those who are not overweight.^j Another study cited by the Applicant estimates that by 2029, ≥69% of primary total knee arthroplasty (TKA) patients will be obese/morbidly obese, up from 64% in 2019.^k Patients with a higher body mass index (BMI) may require greater operative time and hospital stays for surgeries tend to increase as BMI increases.^l For example, obesity is common in patients having total hip arthroplasty and obesity is the major driver of increased operative time in total hip arthroplasty.^m The Applicant notes that approximately 28% of its overall patients are obese or extremely ~~obesity~~^{obese}, and 42% are overweight.

The Applicant applied Behavioral Risk Factor Surveillance System (BRFSS) data on BMI Categories to projected population growth within its PSAⁿ and estimated that the number of adults (aged 20 and older) within its PSA who have obesity is projected to increase by 3% over five years, and the number of adults aged 65 and older who have obesity is projected to increase by 17% over 5 years (2020 to 2025) and by 31% over 10 years (2020 to 2030). These projected increases will, the Applicant asserts, contribute to increasing need for BOSS's services.

Arthritis

The Applicant maintains that prevalence of arthritis, the risk of which increases with increasing age, will increase as the aging population grows over the next five to ten years, and this in turn will increase need for BOSS's services. Annualized estimates show the prevalence of arthritis and arthritis limitations in activities has been increasing linearly from 2003-2005 to 2016-2018, and further, the prevalence of arthritis increased with increasing age and increasing BMI.^o In Massachusetts, 22% of adults (aged 18 and older) had doctor-diagnosed arthritis, and 28.3% of adults (aged 18 and older) who were obese had doctor-diagnosed arthritis in 2021.^p Further, among those with doctor-diagnosed arthritis, 9% of adults had activity limitation due to arthritis (arthritis-attributable activity limitation) and 44% had work limitation due to arthritis (arthritis-attributable

¹² The World Health Organization states that overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Body Mass Index (BMI) is the tool used to classify overweight and obesity in adults. A BMI greater than or equal to 30 is considered obese. <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>.

work limitation).^q Arthritis can reduce function, mobility, and physical activity, all of which contribute to good health. Severe joint pain and limited physical activity are common in people with arthritis. Further, joint pain, including arthritis, is a driver of replacement and pain procedures.

The Applicant applied national prevalence estimates of arthritis (23.7%) and people with arthritis having arthritis-attributable activity limitations (AAAL)(43.9%) from 2016 to 2018 to the projected population growth within its PSA and estimated that the number of adults living with arthritis in its PSA is projected to increase by 3% over five years (2020 to 2025) and by 5% over ten years (2020 to 2030).^{r,13} In addition, the number of adults with arthritis-related limitation in activities is projected to increase by 3% over five years (2020 to 2025) and by 5% over 10 years (2020 to 2030).

3. Changing care patterns that increase value for patients and payers

The Applicant considered forecasted ASC growth rates from Sg2, a company concentrating on healthcare trends, insights, and market analytics, in its forecasting assumptions to account for changing care patterns and the impact on need for ASCs. Sg2 forecasts that ASCs will see 12% and 22% growth in the next five and 10 years, due in part to the size and growth of the market.^s Further, outpatient surgical volumes are expected to increase 18% by 2033 with Total Joint Replacement, Lumbar/Thoracic Spine Fusion, and Revision Knee Replacement among the top procedures due to shifting volume to lower-cost sites of care, including ASCs.^t The Applicant notes that due to a lack of access to ASC market share data in the Commonwealth, it was not able to compare its existing market share to surrounding ASCs or to assess the potential future impact of its market share on need for BOSS's services.

The Applicant asserts that the value offered by ASCs will contribute to increasing shifts from HOPDs to ASCs, which are lower-cost sites of care. To demonstrate the value offered by ASCs, the Applicant provided data showing that a shift in procedures from hospital outpatient settings to ASCs can generate cost savings to consumers and insurers, citing Medicare Procedure Payments and Copays for Orthopedic procedures, with Medicare reimbursing ASCs 54% to 66% for the same procedures performed in a Hospital Outpatient Department (HOPD). Table 15 shows examples provided by the Applicant.

Table 15: Medicare Procedure Payments and Copays for Common Orthopedic Procedures¹⁴

Procedure	ASC Copay as % of HOPD Copay	ASC Copay vs. HOPD Copay
Arthroscopy, shoulder, surgical; with rotator cuff repair. Code: 29827	56%	-\$685
Arthroscopy, knee, surgical; with meniscectomy. Code: 29881	57%	-\$313

¹³ Arthritis was ascertained by a response of “yes” to, “Have you ever been told by a doctor or other health care professional that you have arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?” AAAL was ascertained among those with arthritis by a response of “yes” to, “Are you now limited in any way in any of your usual activities because of arthritis or joint symptoms?” <https://www.cdc.gov/mmwr/volumes/70/wr/mm7040a2.htm>

¹⁴ Prices shown are national averages, based on Medicare’s 2024 payments and copayments. Medicare.gov. Procedure Price Lookup.

Procedure	ASC Copay as % of HOPD Copay	ASC Copay vs. HOPD Copay
Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with double osteotomy, any method. Code 28299	66%	-\$497
Suture of quadriceps or hamstring muscle rupture; primary. Code: 27385	54%	-\$685

Cost savings of ASCs is discussed further in Factor 1f, and Factor 2.

4. Consumer choice

The Applicant asserts that the greater convenience and choice offered by ASCs will increase need for ASC services. ASCs offer access to high-quality surgical services, with greater convenience, and in settings that are easier to navigate than the hospital campus. The proposed facility will include amenities designed to offer convenience and accessibility and to maximize the patient and family member experience, including covered structured parking, a spacious lobby, a convenient facility entrance, dedicated workspace, and relaxing areas for comfort. This is discussed further in Factor 1b, health outcomes.

Forecasting Methodology

The Applicant is proposing to increase the number of ORs from three to eight to serve the projected case volume described above. The proposed number of ORs is based on case volumes performed at other facilities by ~~a number of~~ members of the Applicant's medical staff, as well as anticipated new members to the Applicant's medical staff, average surgical case times for each specialty, including surgical case and room turnover times, and a projected utilization rate of 72% by Year 3 of operation which the Applicant has shown is optimal.

The Applicant provided a description of the methodology used to calculate projected utilization at the proposed site. This is shown in Table 16. The following assumptions were used to calculate projected utilization rate: 250 Surgical Days, 8 ORs, 8 available block time hours per day per OR for 16,000 maximum available hours and 960,000 maximum available minutes. The Applicant then calculated Year 3 utilization in minutes by multiplying Year 3 cases by average minutes per specialty and divided by 960,000 maximum available minutes. The Applicant assumed 90 minutes surgical time and 15 minutes turnover time for Arthroplasty and Spine cases, 20 minutes total time for pain cases, and 75 minutes surgical time and 15 minutes turnover time for all other cases.

Table 16: Projected OR Utilization

	Year 3 cases	Average total minutes (surgery+turnover)	Total minutes
Arthroplasty and Spine	1,326	105	139,246
Pain	1,190	20	23,795
Other	5,899	90	530,914
Total	8,415		693,955
8 ORs at 100% utilization			960,000
Year 3 Average utilization (year 3 total minutes / 8 ORs at 100% utilization)			72%

The Applicant affirms that eight ORs are needed to fully accommodate existing and new cases in Year 1 through Year 5, as well as the anticipated increase in the complexity of cases. Existing case volume represents case volume from existing surgeons that currently perform procedures at the existing ASC. The case volume from existing surgeons is limited due to limited existing OR capacity, ~~and limitation on which limits~~ block time assignments. The Applicant estimates an additional 4,258 new cases in its Year 1 volume assumptions to account for new cases from existing surgeons, who have requested additional OR time so that they can perform more cases at the ASC, and new surgeons (this includes surgeons in the existing surgeons' practices and others), who would like to join the Applicant's medical staff to perform cases at the proposed ASC. The Applicant states increasing OR capacity ~~by to~~ eight ORs can increase access for patients who would benefit from the efficiency and convenience of having their surgery in the same location as their surgeon's office and increase access for the practices' physicians who would likely use higher cost and/or less accessible facilities. Lastly, increasing OR capacity increases opportunities to shift more complex procedures from hospital-based facilities to the ASC setting, which the Applicant states, and studies have shown, is safe, efficient, and a lower-cost setting.

Staffing at Proposed Site

The Applicant currently has 33 physicians on staff at the current ASC. As noted above, 17 of the 33 surgeons on the Applicant's medical staff have medical office space in the same building as the Applicant and these surgeons will also be moving their medical offices to the new site. There will be 66 physicians on staff at the proposed site. Thirty-five of the 66 physicians will belong to medical practices located in the same building as the new site. Table 17 shows current and projected physicians by specialty.

Table 17: Surgical Staff Current and Projected

Specialty	Current Site	Proposed Site
Sports Medicine	19	26
Joint Replacement	2	14
Spine	2	7
Foot/Ankle/Podiatry	2	6
Hand	5	6
General Surgery	2	3
Pain Management	1	4
Total	33	66

The Applicant and existing providers on its medical staff participate in Medicare and Medicaid. All existing physicians (surgeons and pain specialists) on the Applicant's medical staff accept Medicare and Medicaid beneficiaries as patients and the Applicant is expecting that the 33 new physicians joining its medical staff will also participate in Medicare and Medicaid programs. To support equitable access to BOSS's services regardless of payer, as a Condition of Approval, the Applicant will certify annually that all physicians and health professionals who practice at the facility are enrolled as participating providers of MassHealth. The Condition is outlined below in the "Other Conditions" section of this report.

The Applicant anticipates an increase in patients from all payers as a result in the increase in the number of ORs. In addition, the Applicant will focus on increasing the percentage of MassHealth in its payer mix through its recruitment of surgeons and other proceduralists, as is the case with the new pain management specialist that has a patient panel with 35% coverage by a public payer. The Applicant commits to continuing to evaluate ways in which to increase its MassHealth payer mix in the coming months. If approved, the Applicant will report on these efforts as part of the annual reporting requirements.

Analysis

Staff finds that the Applicant has shown that increasing access to outpatient surgery in the ASC setting can increase access to block time for existing and new surgeons, which can in turn decrease patient wait times for surgery. The Applicant has also demonstrated that increasing access to BOSS's services can address projected need for ambulatory surgical services over the next five to ten years within the Applicant's PSA as a result of an aging population and increasing prevalence of certain conditions that increase need for surgical intervention. Moreover, the Applicant has demonstrated with data the cost benefits of procedures performed in the ASC setting, and how expanding BOSS' OR capacity can address growing need for high-quality, cost-effective, ambulatory surgical services. As a result, Staff finds that the Proposed Project meets the requirements of Factor 1a.

Factor 1: b) Public health value, improved health outcomes and quality of life; assurances of health equity

Public Health Value: Improved Outcomes and Quality of Life

Health Outcomes. The clinical and operational efficiencies of the ASC setting, including a focus on a specific category of lower acuity surgical cases, result in the delivery of high-quality, specialized surgical services.^{u,v} Studies have shown that surgical site infections (SSIs) were lower (4.84 in 1,000 patients) in ASC patients than patients whose procedures were performed in the hospital setting (8.95 per 1,000 patients)^{w,x}, and that patients who underwent an outpatient procedure in an ASC were less likely to visit an ER or be admitted to the hospital than those treated in an HOPD, and patients at all risk levels had improved health outcomes.^{y,z} The Applicant notes patients experience improved pain levels, less nausea, and better 30-day outcomes when receiving surgery in an ASC.

The Proposed Project is designed to include all industry standards relating to quality and efficiency. All ORs will employ Single Large Diffuser (SLD) AirFrame technology that aids in minimizing particulates which contribute to surgical site infections (SSIs). The ASC's electronic medical record (EMR), Surgical Information Systems (SIS), will aid in efficiency. In addition, the ASC will use Ospitek Inc. patient tracking Radio Frequency Identification (RFID) technology, which allows for real-time patient tracking, communication with surgeons, staff, vendor representatives and patients' family members.

The Applicant is accredited by the Accreditation Association for Ambulatory Health Care (AAAHC),

and has AAAHC Advanced Orthopaedic Certification at its current site, and plans to pursue accreditation by the Centers for Medicare and Medicaid Services (CMS) as well as accreditation by the AAAHC and Advanced Certification at the proposed site, so that the facility is held to the highest standards of quality care.¹⁵ To further support the provision of high-quality of care, the Applicant will implement process improvement initiatives by reviewing quality of care outcomes, identifying best practices, and implementing necessary process changes, and many of the metrics will be benchmarked against the Ambulatory Surgery Center Association's (ASCA's) clinical and operational benchmarks. If approved, the Applicant will report on process improvement initiatives implemented at the proposed facility as part of the annual reporting requirements.

To support safe and appropriate medication use, the Applicant will capture and document patient medication use prior to surgery through an online preregistration system at the proposed site. If patients are unable to access the online preregistration system, the Applicant's staff will obtain the information by phone. Nursing staff, the surgeon and anesthesia will coordinate the post-operative use of medications and provide patients with medication reconciliation upon discharge.

Reduction in Wait Times. As noted above in Factor 1a, long wait times for surgical procedures negatively impacts patient satisfaction and quality of life. The Applicant and the physicians on the medical staff estimate that surgical wait times will be reduced significantly, by as much as 50% in most cases when more ORs are available at the proposed site. If approved, the Applicant will report on wait times at the proposed facility as part of the annual reporting requirements.

Accessibility. The proposed site is easily accessible from major highways including Routes 95, 90, 2, and 3. Easy highway access and ample access to free covered, structured parking will provide convenience for patients, and their family and friends who provide transportation.

To assess the impact of the Proposed Project, the Applicant developed quality metrics and a reporting schematic, as well as metric projections for quality indicators that will measure quality of care. The measures are presented in Appendix I and will be reported to DPH on an annual basis following implementation of the Proposed Project.

Analysis: Improved Outcomes and Quality of Life

Staff finds that increasing access to ambulatory surgery in the ASC setting has the potential to improve health outcomes and quality of life of the Patient Panel. The literature has reported on the numerous benefits of surgeries performed in the ASC setting, including the quality of care provided. As a result, Staff finds that the Applicant meets the requirements of Public Health Value: Health Outcomes as part of Factor 1b.

Public Health Value: Health Equity

To support its commitment to health equity, the Applicant currently and will continue to screen

¹⁵ According to AAAHC, accreditation demonstrates an organization-wide commitment to ongoing quality improvement. Certification is a 3-year specialty program that is focused on patient outcomes and built on accreditation requirements. https://www.aaahc.org/uploads/2023/04/AAAHC_Orthopaedic_Flyer_2023_FINAL.pdf

patients in advance of their surgery to assess their need for interpreter services and/or accessible accommodations. The Applicant will provide access to services through an iPad enabled translation service provided through CyraCom International, which offers interpretation and translation services in over 300 languages as well as services for people who are deaf and hard of hearing, and for people who are blind. In 2023, the Applicant filled 12 interpreter services requests. Primary languages provided included: Spanish, Chinese-Mandarin, Cape Verdean, Chinese-Cantonese, Khmer/Cambodian, Portuguese/Brazilian and adaptive services. The Proposed Project will be accessible and staff will be trained to assist patients with mobility challenges.

Currently, the Applicant's Patient Assessment and Health Questionnaire (Factor 2 Delivery System Transformation) as well as the texting tool used to support discharge planning (Factor 1c) are only available in English. For those patients who require interpreter services, are not technology literate or do not have access to computers or smart phones, the Applicant takes a "personal approach" to facilitating access and conducts the Patient Assessment and Health questionnaire, discharge planning, and other communications via phone calls with the support of interpreter services when needed. The Applicant explained further that the questionnaire and texting tool are programmed by a third party that does not yet have the capability to incorporate additional languages, but that the vendor is working on incorporating other languages, starting first with Spanish and French. The Applicant affirms its commitment to continue to explore opportunities to provide language access if the third-party's plan moves forward with incorporating additional languages and if demand for language access services increases.

In order to support equitable access to BOSS's services, as a Condition of Approval, the Applicant will report on annual efforts to promote health equity at BOSS. The Condition is outlined below in the "Other Conditions" section of this report.

Analysis: Health Equity

Staff finds that with the "Other Conditions" listed below, the Applicant has sufficiently demonstrated reasonable efforts to provide equitable access to BOSS' services. As a result, Staff finds that the Applicant meets the requirements of the Public Health Value: Health Equity part of Factor 1b.

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

Efficiency. The Applicant states that the efficiencies of an ASC permit patients to spend less time in surgery and to move to recovering rooms sooner, allowing for more procedures to be performed in a day. This also means that patients are under anesthesia for less time and have less time for exposure to potential infections. ASC design accommodates specific surgical specialties: ORs are sized to meet these needs, and the facility is equipped with equipment specific to the types of procedures being performed.

Electronic Medical Record. The Proposed Project's electronic medical record (EMR) has the

capability of interfacing with other provider networks and enabling electronic transmission of operative reports. Operating room technology will allow for the transfer of surgical images and videos to the patient through a secure portal or email. The medical record is present in the surgeon's office, and the surgeon can discuss a patient's outcomes with the patient and their primary care provider (PCP).

Remote Monitoring. The Applicant will use a technology called CareSense, a secure, digital navigation and data collection tool, to facilitate monitoring of patients from pre- to post-surgery. The Applicant will perform discharge planning for patients of the proposed ASC through its partnership with CareSense. Upon discharge, patients will be provided with access to information from a patient experience mobile application, allowing patients to receive automated phone calls, text messages, and email and alerts, as well as answer questions and learn about their condition. Providers will also be able to track patient progress through this process. The Applicant affirms that mobile applications have been shown to be successful at other ASCs and results in continuous communication with the patients, and improved patient satisfaction and quality of care.

Analysis

Staff finds that the Applicant's care coordination will contribute positively to efficiency, continuity, and coordination of care. The Applicant had demonstrated how it will maintain patient records, and facilitate communication with patients, pre- and post-operatively, and with other providers, to track patient progress and to promote better health outcomes. As a result, Staff finds that the Proposed Project meets the requirements of Factor 1c.

Factor 1: d) Consultation

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

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

The Department's Guideline^{dd} for community engagement defines "community" as the Patient Panel, and requires that at minimum, the Applicant must "consult" with groups representative of the Applicant's Patient Panel. Regulations state that efforts in such consultation should consist of engaging "community coalitions statistically representative of the Patient Panel."^{ee}

The Applicant publicized and conducted two **informational sessions/community forums** with the Mayor of the City of Waltham, Jeannette S. McCarthy, City of Waltham public officials, and area residents, in order to comply with the community engagement requirement. The sessions took place on June 23, 2022 and August 31, 2022. There were 17 attendees at the June 23rd session and 9 attendees at the August 9th session (not including Applicant personnel). At the sessions, the Applicant provided information about the Proposed Project and the benefits of ASCs and also solicited feedback from ~~participations~~participants. Participants expressed support for the

Proposed Project and the expansion of ASC services. The Applicant states that it met with Mayor McCarthy, and Massachusetts State Representative John Lawn, as part of its community engagement efforts, and both expressed support for the Proposed Project. The Applicant provided a copy of the slides that were presented at the sessions. The Applicant notes that the extended time between the completion of the community engagement activities and application submission was a result of discussions surrounding ownership of the ASC, which prolonged the DoN planning and submission process.

Analysis

Staff reviewed the information on the Applicant's community engagement and finds that the Applicant has met the required community engagement standard of Consult in the planning phase of the Proposed Project. As a result, Staff finds that the Proposed Project meets the requirements of Factor 1e.

Factor 1: f) Competition on price, total medical expenses (TME), costs and other measures of health care spending

The Applicant affirms that the Proposed Project will contribute to Massachusetts' goals for cost containment because it will offer access to high-quality surgical care through a lower-cost alternative to surgery performed in an HOPD. Savings result from lower overhead than a hospital surgical service, and from the elimination of an overnight stay. Procedure times are shorter in ASCs as compared to HOPDs due to operating efficiencies, resulting in ASCs encountering fewer costs.^{aa} The Applicant states that it will continue to be reimbursed based on its existing payor contracts and existing free-standing ASC fee schedules, and that the payor contracts for the providers performing surgical procedures at the proposed facility will not change as a result of the relocation of the facility to a new site.

As demonstrated above in Factor 1a, Medicare payments to ASCs are nearly half that of HOPD rates. As a result, the Medicare program and its beneficiaries share in more than \$2.6 billion in savings each year when surgery is provided in an ASC.^{bb} Medicaid and other insurers also benefit from lower prices for services performed in the ASC setting. The Applicant cites studies reporting that the availability of ASCs may reduce healthcare costs by as much as \$38 billion for commercially insured patients, including \$5 billion in patient copayments in-and deductibles. And, because only half of procedures commonly that can be performed in ASCs are actually performed in ASCs, shifting more appropriate procedures from the HOPD setting to lower-priced ASCs could save as much as \$55 billion annually, depending on the types of procedures, due to the fact that ASC prices are lower than those of HOPDs, regardless of payer.^{cc} CMS continues to enable the shift in outpatient services to the ASC setting, allowing for Medicare coverage of the procedures when performed in the ASC setting, including removing Current Procedural Terminology (CPT) codes for lumbar spine fusion, reconstruct shoulder joint, and reconstruct ankle joint from the inpatient only list in 2021, which allows for Medicare reimbursement for those procedures.^{dd}

The Applicant also cites reporting from the HPC supporting the cost implications of shifting

outpatient procedures to lower-cost sites of care. In its 2023 Annual Cost Trends Report, the Health Policy Commission (HPC) states that Massachusetts has fewer than half as many ASCs as the average state and that the same surgeries are typically paid 50% to 100% more when they take place in HOPDs.^{ee} In their analysis of commercial payments for ASCs and HOPDs in Massachusetts for 13 categories of procedures commonly performed in both settings (2021) the HPC found that prices were 75% higher on average at HOPDs than at ASCs, ranging from 18% to 127% higher and that differences in the facility component of pricing drove the total differences.^{ff} The HPC estimates a \$39.4 million reduction in excess commercial spending if 50% of the share of services commonly performed in both ASCs and HOPDs shifted to ASCs.^{gg}

Analysis

Staff finds the Proposed Project has the potential to reduce healthcare costs through providing a lower-cost site for outpatient surgeries. The Applicant provided data demonstrating costs savings that can result from surgeries performed in the ASC setting, versus the HOPD setting, and has further illustrated how such savings can occur for all payers, and for patients through a reduction in cost sharing. Staff finds that, on balance, the requirement that the Proposed Project will likely compete on the basis of price, TME provider costs, and other measures of health care spending and therefore, the requirements of Factor 1f have been met.

Factor 1 Summary

As a result of information provided by the Applicant and additional analysis, staff finds that with the “Other Conditions” outlined below and the standard reporting requirements, the Applicant has demonstrated that the Proposed Project has met Factor 1(a-f).

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

Cost Containment

The Applicant states that the Proposed Project will contribute to the Commonwealth’s goals for cost containment by allowing for increased patient access to high quality, cost effective surgical services in Eastern Massachusetts. The Applicant points to the HPC’s goals for cost containment, which include providing low-cost care alternatives without sacrificing high-quality services. The Applicant maintains that patients, payers, and the Commonwealth will experience cost savings as more appropriate ambulatory surgeries shift from hospitals to ASCs, including the proposed facility. As noted above, there are cost savings to insurers and to patients when surgeries are performed in an ASC due to lower levels of reimbursement and lower cost sharing.

Analysis: Cost Containment

Staff finds that the Applicant has adequately explained how the Proposed Project aligns with the Commonwealth’s cost containment goals through the expansion of access to ambulatory surgery in a lower-cost setting. A recent issue in the HPC DataPoints Series explains that Massachusetts has the fourth fewest ASCs per capita, due to DoN laws governing entry^{hh}, and that this is important because prices are generally lower at ASCs compared to HOPDs, across all payers, so additional

savings can be gained from expanding access to ASCs, and supporting greater shifts of care from HOPDs to ASCs. The Issue notes that ASCs are used less frequently by MassHealth patients than commercial patients.ⁱⁱ The Applicant has described MassHealth participation for the facility and its staff member physicians, as well as continuing efforts to increase MassHealth participation with the recruitment of additional physicians. DoN Staff can conclude that with the “Other Conditions” and reporting requirements concerning the Applicant’s MassHealth participation, the Proposed Project will likely meet the cost containment component of Factor 2.

Improved Public Health Outcomes

As noted above in Factor 1b, the Proposed Project can improve patient health outcomes through increasing access to freestanding ASC care, which has been shown to provide benefits to patients, including shorter wait times, high quality patient care, and improved patient experience. The Applicant also noted that the proposed facility will be accredited by the AAAHC, like the current site.

Analysis: Public Health Outcomes

Staff finds that the Proposed Project will provide the Patient Panel with increased access to ambulatory surgery in the ASC setting, a need for which is growing due to population changes and the increasing prevalence of certain health conditions. Staff find that these procedures have the ability to improve health outcomes, quality of life, and functioning status. Therefore, DoN Staff can conclude that the Proposed Project will likely meet the Public Health Outcomes component of Factor 2.

Delivery System Transformation

The Applicant states that it will continue to use an online Patient Assessment and Health Questionnaire provided by its EMR vendor Surgical Information Systems (SIS) to evaluate patients for health needs and potential safety concerns that could negatively impact post-surgical recovery. Patient health needs are also evaluated directly by the Applicant’s staff or through the patient’s surgical team. The Applicant and patients’ surgeons work to link patients with appropriate community resources to address identified needs. The Applicant notes that it requires patients to have a capable and willing caregiver to attend to the patient's needs at home during the post-operative period. The Applicant will use a Patient Care Navigator (PCN) for its more complex procedures and patients, to coordinate all aspects of the patients’ care, both pre- and post-operatively. Patients will be able to communicate through the use of the App CareSense, mentioned above in Factor 1c, and through the ASC’s care portal. The Applicant plans to evaluate a means to assess and respond to patients’ social determinant of health (SDoH) needs in the coming months. If approved, the Applicant will report on its efforts to assess and respond to the SDoH needs of its patients at the proposed facility as part of the annual reporting requirements.

Analysis: Delivery System Transformation

The Applicant has demonstrated how the proposed ASC will evaluate patients for health needs and track and communicate with patients post procedure, to improve continuity of care and health outcomes. Therefore, DoN Staff can conclude that the Proposed Project will likely meet the Delivery System Transformation component of Factor 2.

Factor 2 Summary

As a result of information provided by the Applicant and additional analysis, staff finds that with the “Other Conditions” outlined below and the standard reporting conditions, the Applicant has demonstrated that the Proposed Project has met Factor 2.

Factor 3: Relevant Licensure/Oversight Compliance

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

Factor 4: Demonstration of Sufficient Funds as Supported by an Independent CPA Analysis

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

The CPA report states that Management engaged Health Capital Consultants (HCC), an independent health care consultant, to assist in the preparation of the Forecast and Analysis of Industry benchmarks. The CPA analysis included a review of numerous documents in order to form an opinion as to the reasonableness and feasibility of the projections regarding the Proposed Project.

Sources of information used and relied upon in the report:

- Forecasted/proforma revenue and expenses for Year 1 through Year 5 of the Proposed ASC.
- Management/HCC-prepared Proforma Case Volume for the ASC for Years 1 through 5 of the Proposed ASC.
- Historical volume of procedures performed by certain physicians for the fiscal year ended December 31, 2021, and the forecasted/proforma volume for the Proposed ASC for Year 1 through Year 5 of the Proposed ASC.
- Executed Letter of Intent for a commercial lease between 1265 Main Medical Owner, LLC and Boston Outpatient Surgical Suites, LLC.
- DoN Application Instructions dated March 2017.
- DoN Narrative draft provided by Management dated August 4, 2022.
- Management/HCC provided Proforma detailed listing of FTEs for the Proposed ASC for Year 1 through Year 5.
- Estimated total capitalization costs for the Proposed Project of approximately \$29M is being provided by a related party, 1265 Main Medical Owner, LLC (Landlord), and reimbursed through Additional Tenant Improvement Rent.

- Management has represented that the required funding for the initial capitalization of the Applicant will be provided through a debt instrument with the Landlord which is supported by an executed construction loan agreement.

Revenues: The Applicant anticipates having a total of approximately 41 member surgeons, many of whom will have an ownership stake in the ASC. The Applicant anticipates that the member surgeons will perform a large proportion of their surgeries at the Proposed ASC.

The Applicant is forecasting that the proposed ASC's patients will be significantly comprised of higher-paying commercial insurance and worker's compensation beneficiaries, and less Medicare and Medicaid beneficiaries than industry standards. Table 18 presents the proposed ASC's forecasted payer mix against industry averages.

Table 18: BOSS Forecasted Payer Mix

	Forecasted Payer Mix by Procedure Volume	Industry Average	Forecasted Payer Mix by Net Revenue	Industry Average
Commercial	62.5%	44%	73%	58%
Medicare	12.3%	34%	8.3%	21%
Medicaid	0.6%	7%	0.3%	4%
Worker's Comp	23.8%	3%	17.8%	6%
Self-Pay	0.1%	3%	0.2%	3%
Other	0.7%	8%	0.4%	8%
Total	100%	99%	100%	100%

The CPA report states that the Applicant's forecasted case volume considered greater healthcare industry shift in surgical care from an inpatient setting to outpatient settings such as ASCs, due in large part to technological advancements particularly with minimally invasive surgical procedures. CMS continues to enable the shift by covering more services that can be safely provided in an ASC setting. With the expectation that Medicare will continue to remove procedures from the inpatient only list going forward, the CPA Report states that it is reasonable to assume that the types of procedures that are able to be conducted at the proposed facility will continue to grow in the future. Overall results were analyzed in relation to the profit and loss reporting, based on the reasonableness of the number of procedures contemplated by the proposed ASC, industry data, and other factors.

Expenses: Salaries, wages, and benefits expense includes the office and administrative team as well as surgical support staff including nurses, technicians, nurse assistants, and other professional staff. Management/HCC provided a detailed full-time equivalent (FTE) analysis of the proposed ASC and the forecasted staff FTEs total staff hours are within industry benchmark norms. Based on FTE analysis and forecasted surgical procedures, total payroll expense is anticipated to total \$6.8M in Year 1 and \$9.4M in Year 5, representing 16.3% to 16.8% of revenue, which is below industry averages of 21% to 23%. Payroll expense was determined to be reasonable given staffing hours and total FTEs are within industry benchmark norms, and because of the proposed ASCs higher

reimbursed cases as compared to industry standards.

Supplies and Drugs Expense: Supplies and Drug expense includes the cost of materials and other consumables required for performance of surgical procedures. The forecast anticipates these costs per surgical case to increase by 2% per year for non-arthroscopy cases. Total cost of Supplies and Drugs is forecasted to be approximately \$15.3M in Year 1 and grow to approximately \$20M in Year 5, driven by an increase in number of cases and estimated 2% increase in cost per case per year. The forecasted cost of Supplies and Drugs is higher than industry averages of 26% to 28%, because the cases in the proposed ASC require more expensive implants than the typical ASC. The Applicant explained that the need for more expensive implants is due to the market shift in higher acuity orthopedic cases to the ASC setting, including arthroscopy and spine procedures that were traditionally performed in hospital operating rooms, and the implant costs are on average 10 times the cost of implants used in lower acuity ASC orthopedic cases. The Applicant uses these implants in its existing ASC, and notes that because the Applicant is paid in accordance with a fee schedule regardless of the cost of the implants, the implant costs are not passed onto patients. Implants used in ASCs are not typically more expensive than those used in the hospital setting.

Other Variable Expenses: This includes the costs of overhead and administrative costs, including linen, cleaning supplies, medical waste, office supplies, and administrative costs. These expenses are forecasted as 5.37% of revenue, which the CPA stated is reasonable.

Building, Rent and CAM Expenses: This represents the agreed upon rent and related expenses [NNN basis] determined under the executed Letter of Intent commercial lease agreed for the Proposed Project provided by Management. It is forecasted at between 7% to 9% of revenue, which is consistent with industry averages.

Additional Tenant Improvement Rent: This represents the agreed upon fixed TI Rent under the proposed Medical Office Lease between the Applicant and 1265 Main Medical Owner, LLC as Landlord.

Forecasted Net Cash Flow: The ASC is forecasted to have positive overall cash flows. The CPA determined that the Forecast is not likely to result in a scenario where there are insufficient funds available for the ongoing operating costs required to support the ASC. The CPA Report includes a summary of cash flow per year.

Funding and Debt Agreement: The required funding for the initial capitalization of the Applicant will be provided through a debt instrument with a related party, 1265 Main Medical Owner, LLC, which is supported by an executed construction loan agreement. The Applicant provided certain guarantees that were defined in the construction loan agreement.

CPA's Conclusion of Feasibility

The CPA concluded that "the Proposed Project as defined in Note 1 of the Notes to the Financial Forecast is financially feasible and within the financial capability of the Applicant." Feasibility is defined as based on the assumptions used; the plan is not likely to result in insufficient funds

available for capital and ongoing operating costs necessary to support the Proposed Project, ~~without~~ and is not likely to create negative impacts or consequences to the Applicant's Patient Panel.

Analysis

Staff is satisfied with the CPA's analysis of the Applicant's decision to proceed with the Proposed Project. As a result, staff finds the CPA analysis to be acceptable and that the Applicant has met the requirements of Factor 4.

Factor 5: Assessment of the Proposed Project's Relative Merit

The Applicant has provided sufficient evidence that the Proposed Project, on balance, is superior to alternative and substitute methods for meeting the existing Patient Panel needs identified by the Applicant pursuant to 105 CMR 100.210(A)(1). Evaluation of 105 CMR 100.210(A)(5) 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.

The Applicant considered and rejected two alternatives to the Proposed Project.

- **Alternative #1**: Relocate to another site in the primary service area (PSA) that is smaller and/or that would not accommodate the volume and case mix that is contemplated by the Proposed Project. The Applicant dismissed this alternative because it would not allow the Applicant to meet Patient Panel need for low-cost and high-quality outpatient surgical services in the community. This alternative does not address the need to upgrade ORs and equipment to keep operational access to the ASC for some members of the Applicant's medical staff. The result is that access to the ASC's services could decrease, and patients could receive surgical services at higher cost hospital outpatient settings. The Applicant states that this alternative would result in continued clinical and operational inefficiencies to the limitations on providing ASC services. The Applicant states that it could not assess the capital and operating costs of this alternative.
- **Alternative #2**: Partner with a freestanding ASC. The Applicant explored and ultimately dismissed this alternative because it was not able to generate interest in this opportunity or identify another potential ASC partnership opportunity. Since this alternative was not available to the Applicant, it was unable to assess quality, efficiency, capital expenses, and operating costs of this alternative.

Analysis

Staff finds that the Applicant has appropriately considered the quality, efficiency, and capital and operating costs of the Proposed Project relative to potential alternatives. As a result of information provided by the Applicant and additional analysis, staff finds the Applicant has reasonably met the standards of Factor 5.

Factor 6: Fulfillment of DPH Community-based Health Initiatives Guideline

Overall Application Summary and relevant background and context for this application:

This is a DoN project for a freestanding ASC that is not affiliated with a hospital. In turn, the proposed project does not require the submission of CHI forms. As an ASC, BOSS, LLC, will fulfill Factor 6 requirements by directing their full CHI contribution to the Statewide Community Health and Healthy Aging Funds (CHHAF).

With fulfillment of the below conditions, the Applicant will have demonstrated that the Proposed Project has met Factor 6.

Findings and Recommendations

Based upon a review of the materials submitted, Staff finds that, with the addition of the recommended Conditions detailed below, the Applicant has met each DoN Factor for the Proposed Project and recommends that the Department approve this Determination of Need, subject to all applicable Standard and Other Conditions.

Other Conditions

1. The total required CHI contribution of \$655,000 will be directed to the Massachusetts Statewide CHHAF and will be paid by BOSS, LLC in **two installments** of \$327,500.

Payments should be made out to:

Health Resources in Action, Inc. (HRiA)

2 Boylston Street, 4th Floor

Boston, MA 02116 Attn: MACHHAF c/o Bora Toro

DoN project #: _____

2. The first payment of \$327,500 will be due to HRiA **within 30 days** from the date of the Notice of Approval. The second installment is due to HRiA within 1 year of the Notice of Approval date.

3. Please send a PDF image of the check or **confirmation of payment** to DONCHI@Mass.gov and dongrants@hria.org

If you should have any questions or concerns regarding the payment, please contact the CHI team at DONCHI@Mass.gov.

4. In addition to BOSS ASC's obligation to participate in MassHealth, pursuant to 105 CMR 100.310(11), the Holder must certify annually that all physicians and health professionals who practice at the facility are enrolled as participating providers of MassHealth to support equitable access to all clinicians at the facility regardless of payer.
5. In order to support equitable access to BOSS's services, the Applicant will report on

annual efforts to promote health equity at BOSS, including but not limited to efforts to identify and address disparities in access to BOSS' services, and efforts to advance the provision of culturally and linguistically appropriate services at BOSS.

Appendix I: Required Measures for Annual Reporting

The Holder shall, on an annual basis, commencing with approval of this DoN, and continuing annually for a period of five years after the Project is complete, report on the following data elements, pursuant to 105 CMR 100.310(A)(12). Reporting will include a description of numerators and denominators. If applicable, include baseline data for measures (a year prior to implementation of DoN-approved project).

- 1. Patient Satisfaction:** Patient experience will be one of the Applicant's primary concerns. The Applicant believes it is the patient's right to have a positive experience. The Applicant will review patient satisfaction levels with the ASC's surgical services.

Measure: The Outpatient & Ambulatory Surgery Community Assessment of Healthcare Providers and Systems (OAS-CAHPS)¹⁶ survey will be provided to all eligible patients; through a partnership the Applicant will maintain with Press Ganey. The OAS-CAHPS survey focuses on the following areas:

- Preparation for the surgery or procedure.
- Check-in and pre-operative processes.
- Cleanliness of the surgery facility.
- The surgery facility staff.
- Discharge from the facility.
- Preparation for recovering at home.
- Communication
- Overall experience and recommendation

Monitoring: Quarterly reports provided by Press Ganey will be reviewed at both the employee and Governing Board level. Areas for improvement based on scores will be analyzed with changes in policy and practice instituted. Monitoring of improvements will occur.

- 2. Clinical Quality:** Surgical Site Infection Rates (SSRIs): This measure evaluates the number of patients with surgical site infections and aims to reduce or eliminate such occurrences.

Measure: The number of patients with surgical site infections.

Projections: The ASC plans to achieve or be better than the national benchmark of 0.10% surgical site infection rates.

Monitoring: SSRI's and all fallouts will be reported within the RL6 software system on a

¹⁶ According to CMS, "OAS CAHPS is designed to measure the experiences of care for patients who visited Medicare-certified HOPDs or ASCs for a surgery or procedure to inform quality improvement and comparative consumer information about outpatient facilities." <https://www.cms.gov/data-research/research/consumer-assessment-healthcare-providers-systems/outpatient-and-ambulatory-surgery-cahps#:~:text=OAS%20CAHPS%20is%20designed%20to,consumer%20information%20about%20outpatient%20facilities.>

monthly, and as needed basis. Root cause analysis required by the software will allow trending analysis to occur. These results will be reported at quarterly Quality Assurance Performance Improvement (QAPI) meetings and reported up to the Governing Board. All trends, and comparison to national benchmarks, will be included in reporting detail.

- 3. Patient Satisfaction, Cost Effectiveness – On-Time Start:** Research shows that delays in the OR can lead to reduced efficiency, scheduling disruption, and increased costs (as the most widely accepted cost estimate of an OR minute is \$62),¹⁷ as well as patient and provider dissatisfaction. From the patient perspective, starting their operation on time is essential. It avoids anxiety and dissatisfaction.¹⁸ This measure ensures that surgeries are starting on time to optimize efficiency.

Measure: The surgery begins at its scheduled time.

Projections: The ASC will achieve a utilization of 72% or higher.

Monitoring: Reviewed quarterly by clinical staff.

- 4. Clinical Quality – All Cause Hospital Transfer/Admission:** This measure evaluates the number of post-operative patients who were transferred to the hospital from the ASC and aims to reduce or eliminate such occurrences.

Measure: The number of patients transferred from the ASC to the hospital.

Projections: The ASC plans to achieve or exceed the national benchmark of 0.851 hospital transfers/admissions per 1,000 ASC admissions.¹⁹ While some level of hospital transfer/admission is expected, as not all medical conditions requiring a hospital transfer/admission can be anticipated in advance and not all conditions requiring a transfer/admission result from the care the patient received in the ASC, the ASC will strive for zero hospital transfers/admissions.

Monitoring: Reviewed quarterly by clinical staff.

- 5. Clinical Quality – Patient Falls:** This measure, which is consistently assessed by CMS, the National Quality Foundation, and AAAHC, evaluates the number of patients who fall while in the ASC and aims to reduce or eliminate such occurrences.

¹⁷ Shippert, Ronald D. "A Study of Time-Dependent Operating Room Fees and How to save \$100 000 by Using Time-Saving Products." The American Journal of Cosmetic Surgery 22, Issue 1 (2005).

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¹⁸ Han SJ, Rolston JD, Zygorakis CC, Sun MZ, McDermott MW, Lau CY, Aghi MK. Preventing Delays in First-Case Starts on the Neurosurgery Service: A Resident-Led Initiative at an Academic Institution.

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¹⁹ "ASC Quality Collaboration Quality Report: Fourth Quarter, 2021. "

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Measure: The number of patients who fall in the ASC.

Projections: The ASC plans to conduct a fall risk assessment screening on 100% of ASC patients. The ASC plans to achieve or be better than the national benchmark of 0.166 falls per 1,000 ASC admissions²⁰, ultimately reaching a target of zero falls.

Monitoring: Clinical staff will monitor incidence of falls and injuries due to falls and compare rates over time at the quarterly Quality Assurance Performance Improvement (QAPI) meetings or sooner as needed.

6. The Holder shall report on progress in reduction of wait times for scheduling surgical procedures, by specialty. The Holder shall provide a description of how wait time is calculated.
7. The Holder shall report on BOSS ASC patients stratified by race and ethnicity, patient origin (zip code), and payer mix.
8. The Holder shall report on ongoing efforts to increase MassHealth in its payer mix, detailing the strategies being implemented to achieve this goal.
9. The Holder shall report on implementation of process improvement initiatives at the proposed ASC.
10. The Holder shall report on its efforts to assess and respond to SDoH needs of its patients.

²⁰ "ASC Quality Collaboration Quality Report: Fourth Quarter, 2021."
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