

## **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.**

#### **A. OVERVIEW OF THE APPLICANT**

Tellica Imaging – Massachusetts LLC (“Applicant”), a Delaware limited liability company, is a joint venture between Tellica Imaging, LLC (“Tellica Imaging”) and BMC Health System, Inc. (“BMC Health System” or “BMCHS”). Formed in 2023, the Applicant seeks to provide outpatient diagnostic imaging services to communities in and around Middlesex County, Massachusetts.

Launched in 2021, with a focus on improving patient experience and making care more affordable, Tellica Imaging is dedicated to empowering informed healthcare decisions through high-quality diagnostic imaging services. Tellica Imaging leverages technology to provide a comprehensive suite of computed tomography (“CT”) and magnetic resonance imaging (“MRI”) services at locations throughout Idaho, New Hampshire, and Utah. Tellica Imaging is a subsidiary of Intermountain Health. As the largest nonprofit health system in the Intermountain West, Intermountain Health is dedicated to creating healthier communities and helping patients thrive. Based in Salt Lake City, Intermountain Health serves patients and communities in Utah, Idaho, Nevada, Colorado, Montana and Wyoming through 34 hospitals and 300 clinics.

BMC Health System is a Massachusetts, non-profit, integrated health care system whose mission is providing exceptional care for all. BMCHS is currently comprised of corporate affiliates that provide a variety of services. The system is the sole corporate member of the following six corporate affiliates: (1) Boston Medical Center Corporation (“BMC”), an academic safety net hospital located in Boston; (2) Boston Medical Center – South Corporation (formerly, BMC Community Hospital Corporation d/b/a Good Samaritan Medical Center) (“BMC – South”), a community hospital located in Brockton, Massachusetts; (3) Boston Medical Center – Brighton Corporation (formerly, BMC Community Hospital Corporation II d/b/a St. Elizabeth’s Medical Center) (“BMC – Brighton”), an academic medical center located in Brighton, Massachusetts; (4) Boston Medical Center Health Plan, Inc., a non-profit corporation established to administer the WellSense Health Plan, a managed care organization providing comprehensive health insurance coverage options through Medicaid, Qualified Health Plans, and Senior Care Options to Massachusetts and New Hampshire residents; (5) Clearway Health, LLC, a pharmacy management services business with expertise in the operation of advanced health system specialty pharmacy programs; and (6) BMC Insurance Co., Ltd. of Vermont, a non-profit dormant captive insurance company originally formed to provide insurance coverage for property and certain liability exposures arising from acts of terrorism under the Terrorism Risk Insurance Act of 2002.

#### **B. OVERVIEW OF THE APPLICANT’S PATIENT PANEL**

The Applicant was formed to provide high quality, low cost, outpatient diagnostic imaging services. The Proposed Project will serve Middlesex County and the surrounding communities, allowing the Applicant to satisfy the existing and future demand for outpatient diagnostic imaging

services in the primary service area (“PSA”). As the Applicant is a newer joint venture, it does not have its own patient panel, and therefore relies on certain data from its joint venture partner, BMCHS and its affiliates, BMC and BMC – Brighton to provide patient-level information.

The PSA for the Proposed Project is defined by zip codes within ten (10) miles of 168 Great Road, Bedford, MA 01730 (“Proposed Project Site”) where potential patients reside. The PSA is comprised of the following cities and towns: Acton, Bedford (including Hanscom Air Force Base), Arlington, Belmont, Carlisle, Concord, Lincoln, Sudbury, Wayland, Woburn, Burlington, Billerica, Chelmsford, Lowell, North Billerica, Reading, Tewksbury, Westford, Wilmington, Winchester, Stoneham, Lexington, Waltham, Watertown, and Weston.

### C. PATIENT PANEL DATA

#### 1. BMC’s Overall Patient Panel Demographics<sup>1</sup>

Although only certain of BMC’s patients reside in the PSA, for context, it is helpful to provide an overview of BMC’s entire patient population including demographics. BMC serves a large and diverse patient panel. In each of the last two (complete) fiscal years (“FY”) the hospital provided care to over 250,000 unique patients. With regard to gender, BMC’s patient panel consists of approximately 56.5% females and 43.5% males (based on FY2023 data), with gender unknown for less than 0.1% of the patient population. In terms of age, the majority of BMC’s patient panel is between the ages of 18-64 (69.1% in FY2023). However, there are also a substantial number of patients that are 0-17 years of age (15.7% in FY2023) and 65+ (15.2% in FY2023). Race/ethnicity data as self-reported by BMC’s patients indicate that the panel is comprised of a mix of races. Specifically, in FY2023, the predominant races served by BMC were Black/African American (34.4%) and White/Caucasian (24.0%). Additionally, patients self-identified as Hispanic/Latino (10.4%), Asian (4.7%), American Indian/Alaska Native (0.3%), Native Hawaiian/Pacific Islander (0.4%), and Other (25.8%). Finally, geographic origin demographics show the majority of BMC patients mainly reside in the Boston/Greater Boston area with “pockets” of patients in the suburbs, including Bedford, MA and Middlesex County. These noted demographic percentages are indicative of the demographic data for patients in the PSA.

---

<sup>1</sup> Please note that BMC’s patient panel information does not include utilization of patient care services at the following locations:

- (1) Codman Square Health Center (“CSHC”), including CSHC and TechBoston Academy School Health Center;
- (2) East Boston Neighborhood Health Center (“EBNHC”), including EBNHC’s 20 Maverick Square, 79 Paris Street, and 10 Gove Street locations; EBHS School Based Health Center; Winthrop Community Health Center; and South End Community Health Center, including its 1601 Washington Street and 400 Shawmut Ave locations;
- (3) DotHouse Health;
- (4) South Boston Community Health Center (“SBCHC”), including SBCHC’s 386 West Broadway, 409 West Broadway, and 505 Congress Street locations; and
- (5) Greater Roslindale Medical & Dental.

Although listed on BMC’s hospital license, these providers are freestanding and utilize distinct data collection systems. With regard to the CHCs, the Applicant notes these providers are subject to federal standards which require them to collect data on a calendar year basis, and, therefore that the data for each cannot be amalgamated with the Hospital’s data which are collected on a FY basis. With regard to Greater Roslindale Medical & Dental, the Applicant notes that the satellite utilizes an IT mechanism different from that of the Hospital which makes it difficult to achieve amalgamation without duplication of patient counts. Given these data aggregation challenges, patient panel data for each of the five (5) providers listed above are not included in the patient demographic information provided.

## 2. BMC's CT and MRI Patient Panel for the PSA

The Proposed Project will increase access to high quality, low cost, outpatient diagnostic imaging services through the acquisition of one (1) CT unit and one (1) 1.5T MRI unit to be located at the Proposed Project Site. The Applicant's new facility will allow convenient access to imaging services for those BMC patients residing in the PSA, as well as other local individuals in need of imaging services. In addition to reviewing the demographic data for the hospital overall, BMC also conducted a focused review of its patients who reside in the PSA and sought services for diagnostic imaging at the hospital.

Appendix 3 provides information on the target patient panel for the Proposed Project Site – those BMC patients who reside in the PSA and sought diagnostic imaging services at the hospital from FY22 (beginning in October 2022) to year-to-date FY25 (ending in March 2025). In FY24, the last full year of data available, approximately 1,300 unique patients who reside in the PSA sought diagnostic imaging services from BMC, accounting for 2,814 scans and 2,016 patient visit/discharges. For more information on the patient panel see Appendix 3.

Moreover, BMC evaluated the number of total scans for those patients who reside in the PSA. Table 1 provides that in FY2024, patients residing within the PSA received over 2,800 scans.

<b>Table 1: Total Number of Scans for BMC's Diagnostic Imaging Patients who Reside in the PSA</b>				
	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25 Year-to-Date</b>
MRI	788	777	819	503
CT	1,554	1,751	1,995	1,088
<b>Total</b>	<b>2,342</b>	<b>2,528</b>	<b>2,814</b>	<b>1,591</b>

When sorting by patient type, BMC patients from the PSA accounted for the following outpatient scans: 1,749 in FY22; 2,064 in FY23; 2,167 in FY24 and 1,202 in FY25 year-to-date.

BMC also evaluated the ten most common CPT codes for CT Services at the hospital from FY23-24. Table 2 outlines information about these codes.

<b>Table 2: Ten Most Common CPT Codes for CT Services at BMC in FY2023-FY2024</b>	
1	74177 - CT ABDOMEN AND PELVIS W-CONTRAST MATERIAL
2	70450 - CT HEAD-BRAIN W-O CONTRAST MATERIAL
3	77014 - CT GUIDANCE RADIATION THERAPY FLDS PLACEMENT
4	71260 - DIAGNOSTIC COMPUTED TOMOGRAPHY THORAX W-CONTRAST
5	72125 - CT CERVICAL SPINE W-O CONTRAST MATERIAL
6	71275 - CT ANGIOGRAPHY CHEST W-CONTRAST-NONCONTRAST
7	71250 - DIAGNOSTIC COMPUTED TOMOGRAPHY THORAX W-O CNTRST
8	70496 - CT ANGIOGRAPHY HEAD W-CONTRAST-NONCONTRAST
9	70498 - CT ANGIOGRAPHY NECK W-CONTRAST-NONCONTRAST
10	71271 - COMPUTED TOMOGRAPHY THORAX LW DOSE LNG CA SCR C-

Table 3 provides the ten most common CPT codes for MRI Services at BMC for FY2023-FY2024.

Table 3: Ten Most Common CPT Codes for MRI Services at BMC in FY2023-FY2024	
1	70553 - MRI BRAIN BRAIN STEM W-O W-CONTRAST MATERIAL
2	70551 - MRI BRAIN BRAIN STEM W-O CONTRAST MATERIAL
3	72148 - MRI SPINAL CANAL LUMBAR W-O CONTRAST MATERIAL
4	74183 - MRI ABDOMEN W-O AND W-CONTRAST MATERIAL
5	72141 - MRI SPINAL CANAL CERVICAL W-O CONTRAST MATRL
6	73721 - MRI ANY JT LOWER EXTREM W-O CONTRAST MATRL
7	70544 - MRA HEAD W-O CONTRST MATERIAL
8	72197 - MRI PELVIS W-O AND W-CONTRAST MATERIAL
9	73221 - MRI ANY JT UPPER EXTREMITY W-O CONTRAST MATRL
10	70547 - MRA NECK W-O CONTRST MATERIAL

### 3. BMC – Brighton's Outpatient CT and MRI Patient Panel for the PSA

In October 2024, BMCHS acquired BMC – Brighton, an academic medical center located in Brighton, Massachusetts. A review of BMC – Brighton's outpatient data from October 1, 2024 through March 31, 2025 provides that over 600 unique BMC -Brighton patients reside in the PSA and accounted for 920 scans and 737 visits – see Table 4).

Table 4: BMC- Brighton's Unique Diagnostic Imaging Patients from the PSA – FY22 through FY2025-YTD <sup>2</sup>			
	Scans	Visits	Unique Patients
MRI	214	180	167
CT	706	557	491
<b>Total</b>	<b>920</b>	<b>737</b>	<b>658</b>

Accordingly, data for BMC and BMC – Brighton outline historical diagnostic imaging volume for patients who reside in the PSA. BMCHS has approximately 2,000 patients residing in the PSA who accounted for over 3,700 scans from October 2022 to March 2025.

#### **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.**

Through the Proposed Project, the Applicant will increase access to diagnostic imaging services in the PSA for the patient panel, as well as all residents in need of these services. The Proposed Project aligns with the evolving healthcare delivery system in Massachusetts by: (1) Providing

<sup>2</sup> Please note, these data come from a separate technology system (then BMC's current system) and are still being evaluated.

care in an optimal setting – shifting routine imaging services to the outpatient environment, (2) Creating efficiencies – by ensuring patients receive timely care that will ultimately lead to better health outcomes through earlier diagnosis and treatment, and (3) Reducing costs – by eliminating administrative overhead, and (4) Addressing health disparities – through increased hours of operation, including after-hours care.

#### A. Need for the Proposed Imaging Services

In considering the Proposed Project, the Applicant determined that patients in and around Middlesex County, specifically the Bedford area, will benefit from greater access to high quality, low cost, outpatient diagnostic imaging services in the community. This determination was based on a number of factors including a review of BMC's patient panel demographic data, which show an aging patient panel in need of additional imaging services especially for those individuals in the 65+ age cohort; historical and projected demand for diagnostic imaging services; as well as available imaging resources in the market.

#### B. NEED FOR IMAGING SERVICES IN THE 65+ AGE COHORT

With regard to population growth, the Applicant highlights the need for increased imaging capacity to meet the projected growth in the 65+ age cohort in Middlesex County. The Applicant notes that continued growth among its patient panel is supported by population growth estimates provided by the University of Massachusetts – Donahue Institute ("UMDI"), a public service, research, and economic organization that contracts with the Commonwealth of Massachusetts to produce population projections for Massachusetts geographies for use in both public and private planning initiatives. According to data provided by UMDI, the Massachusetts statewide population is projected to grow approximately 1% between 2025 and 2050 (with larger rates of growth from 2025-2035, between 2-3%), and Middlesex County, which comprises the PSA, is projected to grow approximately 2% between 2025 and 2050.<sup>3</sup>

Moreover, an analysis of UMDI's projections shows that growth in Middlesex County's population is segmented by age sector, with modest growth attributable to residents ages 0-64, and the highest percentage of growth attributable to residents over 65+.<sup>4</sup> For instance, between 2025 and 2050, the 0-64 age cohort in Middlesex County is projected to grow approximately 1% and the 65+ age cohort is expected to grow over 13%.<sup>5</sup>

As the number of patients across the state and Middlesex County continues to age, the Applicant anticipates that the need for outpatient diagnostic imaging services will rise. To this end, the Applicant specifically highlights literature on CT and MRI trends, which indicate that imaging rates tend to be higher among older adults as these imaging modalities are beneficial in diagnosing and treating a variety of age-related conditions.<sup>6</sup> The historical data for imaging services within the patient panel appear consistent with such literature and with the trends projected by UMDI (see Table 5).

---

<sup>3</sup> UMass Donohue Institute <https://donahue.umass.edu/business-groups/economic-public-policy-research/massachusetts-population-estimates-program/population-projections>

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> WORLD HEALTH ORGANIZATION, WORLD REPORT ON AGING AND HEALTH (2015), *available at* [http://apps.who.int/iris/bitstream/10665/186463/1/9789240694811\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/186463/1/9789240694811_eng.pdf).

Table 5: Number of Scans for BMC's Diagnostic Imaging Patients who reside in the PSA and are 65+				
	FY22	FY23	FY24	FY25 Year-to-Date
Scans	701	634	786	471
Visits	444	435	563	310
Unique Patients	245	266	314	192

While CT and MRI utilization rates are stable across all age cohorts within the patient panel, patients in the 65+ age cohort not only account for a significant portion of the patient panel (over 20% in 2024) but have increased at a higher rate over the last three fiscal years. Moreover, FY2025 YTD data suggest that these trends for the patient panel will continue into the future, with both the total number of imaging patients, as well as the number of patients over 65+ expected to increase.

#### C. MEETING EXISTING AND FUTURE NEEDS THROUGH THE PROPOSED PROJECT

Given historical and future demand for diagnostic imaging services in the PSA, the Applicant proposes the acquisition of one (1) CT and one (1) 1.5T MRI at its Proposed Project Site. Without the Proposed Project, the Applicant will not be able to meet the patient panel's long-term need (specifically, the 65+ age cohort) for increased access to high quality, low cost, outpatient imaging services. Moreover without these services, wait times and delays in diagnosis and treatment, which lead to higher costs, as well as worse health outcomes for the 65+ age cohort.

Through the Proposed Project, the Applicant seeks to help alleviate these issues. Table 6 illustrates the Applicant's future annual CT and MRI volume projections following implementation of the Proposed Project.

Table 6: Projected Number of Scans per Year at the Proposed Project Site					
	FY2026	FY2027	FY2028	FY2029	FY2030
CT	1,273	2,590	5,270	7,560	7,560
MRI	848	1727	3,515	5,040	5,040
Total	2,121	4,317	8,785	12,600	12,600

The expansion of CT and MRI services through the Proposed Project will allow for organic patient population growth at the Proposed Project Site particularly with regard to patients over 65+; allow for timely access to high-quality imaging services; and ensure timely diagnosis and treatment for patients. Specifically, the Applicant anticipates that the Proposed Project Site will operate six days per week, Mondays-Saturdays from 7:00am – 7:00pm. Accordingly, the Applicant proposes to expand diagnostic imaging capacity through the addition of one CT and one 1.5T MRI unit at the Proposed Project Site.

#### 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 Proposed Project competes on the basis of price, total medical expenses ("TME"), provider costs, and other recognized measures of health care spending by ensuring the availability of high quality, low cost diagnostic imaging services in the outpatient setting. A recent study published in

the American Journal of Roentgenology (“AJR”) highlights the potential for billions in healthcare savings by reallocating non-emergent care “to various non-hospital sites of service that previously demonstrated improvement in patient access with non-inferior clinical outcomes.”<sup>7</sup> The study found that shifting 10% of non-emergent hospital-based care to outpatient settings could save an estimated \$125 billion per year.

Radiology is a unique specialty with the ability to shift non-emergent imaging services to outpatient centers. Standardized image protocols across radiology providers allow for “similar levels of diagnostic image quality despite different sites of image acquisition.”<sup>8</sup> Savings are realized in the outpatient diagnostic imaging setting as unlike hospitals, these sites of care do not have overhead related to “stand-ready capacity for emergencies,” and therefore services are less costly. In fact, numerous studies have found that non-emergent imaging conducted in the outpatient setting is 30-50% less than in the inpatient setting (depending on the imaging modality and test).<sup>9</sup> Tellica Imaging has a history of providing value-based care, and providing consumers with flat rate pricing for imaging services, allowing for transparency and lower-cost services in the community setting. Accordingly, the implementation of an outpatient diagnostic imaging center will allow for more timely access to care, as well as cost-effective imaging for certain of BMC’s patients, as well as other patients in need of these services in the area.

Moreover, the study in AJR also notes other access and financial benefits of shifting hospital-based imaging services to the outpatient setting. “Shifting appropriate imaging examinations away from hospital-based sites may create a dual advantage for patient access to radiology, creating more efficient access for outpatients and potentially more efficient access for inpatients in need of urgent or emergent imaging. Greater efficiency in inpatient imaging examinations has the potential to also improve key performance indicators, such as length of hospital stay (noting the high cost of long stays).”<sup>10</sup> When patients have timely access to appropriate imaging modalities, clinicians can improve health outcomes through expedited diagnoses and more accurately screen for certain conditions, such as cancer, leading to more appropriate therapeutic interventions and the effective monitoring of the efficacy of treatment, all of which lead to reduced costs.<sup>11</sup>

Medical imaging modalities such as MRI and CT have “revolutionized healthcare so profoundly that most physicians would have trouble imagining how [to] take proper care of patients without access to these essential diagnostic tools.”<sup>12</sup> It is well established that noninvasive imaging tests, such as MRI, have led to a significant reduction of invasive testing, such as exploratory surgery, leading to reduced costs.<sup>13</sup> Imaging also can be valuable merely by contributing information that is needed to guide patient management, optimizing patient care. In fact, MRI and CT scan costs account for less than 3% of Medicare spending in the US especially since frequently these

---

<sup>7</sup>David A. Rosman, and Robert J. French. Beyond the AJR: Shift Towards Imaging Outside the Hospital Takes Sense to Save Dollars. AJR, Oct. 2, 2024. DOI.org/10.2214/AJR.24.32093.

<sup>8</sup> *Id.*

<sup>9</sup> National Institute for Health Care Reform. Location, Location, Location: Hospital Outpatient Prices Much Higher than Community Settings for Identical Services.” NIHCR Research Brief No. 16 (2014).

<sup>10</sup> David A. Rosman, and Robert J. French. Beyond the AJR: Shift Towards Imaging Outside the Hospital Takes Sense to Save Dollars. AJR, Oct. 2, 2024. DOI.org/10.2214/AJR.24.32093.

<sup>11</sup> Chandrajit.P. Raut et al., High Rates of Histopathologic Discordance in Sarcoma with Implications for Clinical Care, J. OF ONCOLOGY PRAG. 29, 10065, 10065-10065 (2011).

<sup>12</sup> van Beek EJR, Kuhl C, Anzai Y, Desmond P, Ehman RL, Gong Q, Gold G, Gulani V, Hall-Craggs M, Leiner T, Lim CCT, Pipe JG, Reeder S, Reinhold C, Smits M, Sodickson DK, Tempny C, Vargas HA, Wang M. Value of MRI in medicine: More than just another test? J Magn Reson Imaging. 2019 Jun;49(7):e14-e25. doi: 10.1002/jmri.26211. Epub 2018 Aug 25. PMID: 30145852; PMCID: PMC7036752.

<sup>13</sup> *Id.*

modalities replace more invasive and expensive tests.<sup>14</sup> Given that additional scanning capacity will be available at the Proposed Project Site, wait times will be reduced for some BMC patients, leading to more timely care, allowing the Proposed Project to compete on the basis of price and other cost factors. Accordingly, the Proposed Project is reasonable and competes on the basis of recognized measures of health care spending.

**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.**

Through the Proposed Project, the Applicant seeks to provide increased access to timely, high-quality, outpatient MRI and CT services. Specifically, the Proposed Project is designed to meet the growing demand for MRI and CT services among residents in the PSA (especially residents who are in the 65+ age cohort), including members of BMC's and BMC – Brighton's patient panels; increase patient satisfaction and improve health outcomes; and ensure timely access to care. Factors F1.a.ii and F1.a.iii describe how the Proposed Project will contribute to these goals and meet the Applicant's patient panel need in a cost-effective manner. As detailed herein, the Proposed Project is also supported by evidence-based literature that details the utility of MRI and CT, as well as the importance of timely access to care.

**A. EVIDENCE SUPPORTING THE IMPLEMENTATION OF A NEW OUTPATIENT IMAGING CENTER**

**1. MRI Technology**

MRI is a non-invasive imaging technology that is used to investigate anatomy and function of the body without the use of damaging ionizing radiation.<sup>15</sup> Rather than emitting ionizing radiation, MRI relies on a magnetic field and radio frequencies, making it a safe alternative to many other imaging modalities.<sup>16</sup> Specifically, MRI uses a powerful magnetic field and pulses of radio waves to create detailed images of the body's internal organs, tissues, and structures.<sup>17</sup> MRI images provide anatomical and functional information that can be used for disease detection, diagnosis, and treatment monitoring.<sup>18</sup>

**2. Advantages of 1.5T MRI Technology**

Since MRI entered the clinical arena in the 1980s, it has experienced dramatic advances associated with higher field strengths and an increasing number of clinical applications.<sup>19</sup> Across the industry today, most clinical MRIs are 1.5T or 3T, although there are varying units above and below these field strengths.<sup>20</sup> The 1.5T MRI is the standard imaging method for most routine

---

<sup>14</sup> Lee DW, Duszak R Jr, Hughes DR. Comparative analysis of Medicare spending for medical imaging: sustained dramatic slowdown compared with other services. *Am J Roentgenol* 2013;201:1277–1282.

<sup>15</sup> *Magnetic Resonance Imaging (MRI)*, NAT'L INST. BIOMEDICAL IMAGING & BIOENGINEERING, <https://www.nibib.nih.gov/science-education/science-topics/magnetic-resonance-imaging-mri> (last visited May 13, 2023); Moser, et al., *Magnetic resonance imaging methodology*, 36 *EUROPEAN J. NUCLEAR MED. & MOLECULAR IMAGING* 30 (2009), available at <https://link.springer.com/article/10.1007/s00259-008-0938-3>.

<sup>16</sup> NAT'L INST. BIOMEDICAL IMAGING & BIOENGINEERING, *supra* note 46; Moser, et al., *supra* note 46.

<sup>17</sup> NAT'L INST. BIOMEDICAL IMAGING & BIOENGINEERING, *supra* note 46; Moser, et al., *supra* note 46.

<sup>18</sup> NAT'L INST. BIOMEDICAL IMAGING & BIOENGINEERING, *supra* note 46; Moser, et al., *supra* note 46.

<sup>19</sup> Moser, et al., *supra* note 46.

<sup>20</sup> *Technology Trends: MRI Time to Upgrade? — Considerations for the Move From 1.5T to 3T*, 17 *RADIOLOGY TODAY* 22 (2016), available at <https://www.radiologytoday.net/archive/rt0216p22.shtml>; *What Does Tesla Mean*



scans. There are several benefits to a 1.5T MRI including the ability to scan the largest number of patients and still obtain high quality images.<sup>21</sup> MRI enables high resolution evaluation of soft tissues without the use of ionizing radiation.<sup>22</sup> Given these capabilities, MRI is the imaging modality of choice for diagnosing neurologic, musculoskeletal, and cardiovascular disease.<sup>23</sup>

Although MRI has many uses, this modality has long been considered a contraindication in patients with cardiovascular implanted electronic devices (“CIEDs”), such as cardiac pacemakers and cardioverter defibrillators, as well as other foreign objects (shrapnel, etc.) because the MR field may interact with the device/object with catastrophic consequences, leading to severe complications and even death.<sup>24</sup> However, within the last decade, studies have found that some implants or foreign objects are safe for insertion in a 1.5T MRI, but are not appropriate for placement in higher magnet machines, such as 3T MRIs, due to the potential interaction of the implanted device(s) and/or foreign object(s) with the external magnetic field which may cause movement and dislocation of the device or other severe reactions because of the magnetic force.<sup>25</sup> The lower strength of the 1.5T MRI enables patients with implanted devices/foreign objects to have necessary scans. Moreover, artifacts from devices or foreign objects are less prominent in 1.5T MRIs, allowing for higher quality images.<sup>26</sup>

Additionally, 1.5T MRIs are efficient and are associated with faster exam times (than machines with magnets of lesser strengths), which facilitate improved throughput, workflow, and accessibility, as well as quicker diagnosis, treatment, and increased patient and/or provider satisfaction.<sup>27</sup> This efficiency is particularly significant with regard to outpatient diagnostic imaging centers that provide greater access and more timely care to a variety of patients, including vulnerable populations, such as seniors and under-resourced residents.

### 3. Clinical Applications of MRI Technology

In terms of clinical application, the Applicant notes that the utility of MRI technology is extensive and that MRI has gained widespread acceptance in diagnosing, evaluating, and monitoring treatment of a variety of conditions that fall within several fields of medicine.<sup>28</sup> Significant with regard to the Proposed Project, as outlined in Factor F1.a.i, some of the most prevalent conditions for which BMC and BMC – Brighton’s patients, and older populations in general, seek MRI services for include the brain, spine, musculoskeletal system, abdomen, pelvis, breast, chest, and

---

for an MRI and its Magnet?, GE HEALTHCARE (2019), <https://www.gehealthcare.com/insights/article/what-does-tesla-mean-for-an-mri-and-its-magnet>.

<sup>21</sup> Jung JI. Magnetic Resonance Imaging for Patients with Cardiac Implantable Electronic Devices: Reduced Concerns Regarding Safety, but Scrutiny Remains Critical. Korean Circ J. 2016 Nov;46(6):765-767. doi: 10.4070/kcj.2016.46.6.765. Epub 2016 Nov 1. PMID: 27826333; PMCID: PMC5099330.

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

<sup>25</sup> Saman Nazarian, Roy Beinart, Henry R. Halperin. Magnetic Resonance Imaging and Implantable Devices 2013. Circulation: Arrhythmia and Electrophysiology 419-428. Vol. 6 doi:10.1161/CIRCEP.113.000116 <https://www.ahajournals.org/doi/abs/10.1161/CIRCEP.113.000116>

<sup>26</sup> *Id.*

<sup>27</sup> Tanenbaum, 3T MRI in clinical practice, 34 APPLIED RADIOLOGY 8 (2005), available at <https://appliedradiology.com/articles/3t-mri-in-clinical-practice>; Loria, *supra* note 46; *What Does Tesla Mean for an MRI and its Magnet?*, *supra* note 19.

<sup>28</sup> Tanenbaum, 3T MRI in clinical practice, 34 APPLIED RADIOLOGY 8 (2005), available at <https://appliedradiology.com/articles/3t-mri-in-clinical-practice>

heart. The imaging capabilities of a 1.5T MRI technology make this machine the preferred imaging modality for certain of these areas and the conditions that impact them.<sup>29</sup>

For instance, MRI is the imaging modality of choice for brain and abdomen imaging, with the 1.5T MRI superior for these scans given that artifact(s) may occur in these two locations.<sup>30 31</sup> MRI also is the most sensitive imaging test available for the spine and is usually the preferred imaging modality for musculoskeletal and orthopedic conditions due to its ability to provide high-definition images of the bones, cartilage, joints, and soft tissues of the extremities (i.e., muscles, tendons, and ligaments).<sup>32</sup> Specifically, MRI is used to assess spine anatomy and alignment; detect defects, infection, compression, inflammation, and tumors in the vertebrae, discs, spinal cord, meninges, nerves, bones, and soft tissues as well as trauma injury to the bones, discs, spinal cord, ligaments, and tendons; diagnose or evaluate joint disorders such as degenerative arthritis; and plan procedures such as decompression of a pinched nerve, spinal fusion, or steroid injections; among other uses.<sup>33</sup> In these areas, MRI technology often provides high quality images for better diagnosis and prognosis.<sup>34</sup>

Additionally, MRI has become an essential tool for imaging the abdomen, pelvis, and breast. In the abdomen, MRI is performed to evaluate the liver, biliary tract, kidneys, spleen, bowel, pancreas, and adrenal glands.<sup>35</sup> Specific indications include diagnosing or monitoring treatment for conditions such as tumors of the abdomen, diseases of the liver (e.g., cirrhosis), abnormalities of the bile ducts and pancreas, and inflammatory bowel diseases such as Crohn's disease and ulcerative colitis.<sup>36</sup> In the pelvis, MRI is performed to evaluate the bladder and the reproductive organs such as the uterus, ovaries, and prostate.<sup>37</sup>

While MRI can be used for all age cohorts across these areas of the body, it is particularly important for older adults as many of the conditions discussed herein are tied to aging.<sup>38</sup> The Applicant highlights this point in connection with the aging population for the proposed service

---

<sup>29</sup> Technology Trends: MRI Time to Upgrade? — Considerations for the Move From 1.5T to 3T, 17 RADIOLOGY TODAY 22 (2016), available at <https://www.radiologytoday.net/archive/rt0216p22.shtml>; What Does Tesla Mean for an MRI and its Magnet?, GE HEALTHCARE (2019), <https://www.gehealthcare.com/insights/article/what-does-tesla-mean-for-an-mri-and-its-magnet>; and What does Telsa Mean for an MRI and its Magnet (2019), <https://www.gehealthcare.com/insights/article/what-does-tesla-mean-for-an-mri-and-its-magnet>

<sup>30</sup> <https://www.touchstoneimaging.com/mri-machines-101-understanding-the-differences/#:~:text=1.5%20T%20MRIs%20are%20great,is%20a%20much%20safer%20option>.

<sup>31</sup> Yasaka K, Tanishima T, Ohtake Y, Tajima T, Akai H, Ohtomo K, Abe O, Kiryu S. Deep learning reconstruction for 1.5 T cervical spine MRI: effect on interobserver agreement in the evaluation of degenerative changes. Eur Radiol. 2022 Sep;32(9):6118-6125. doi: 10.1007/s00330-022-08729-z. Epub 2022 Mar 29. PMID: 35348861.

<sup>32</sup> Tanenbaum, *supra* note 58; *Magnetic Resonance Imaging (MRI) - Spine*, RADIOLOGYINFO.ORG, <https://www.radiologyinfo.org/en/info/spinemr> (last updated Apr. 15, 2022); Winegar, et al., *Magnetic resonance imaging of the spine*, 85 POL. J. RADIOLOGY 550 (2020), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7571515/>; *Musculoskeletal MRI*, RADIOLOGYINFO.ORG, <https://www.radiologyinfo.org/en/info/muscmr> (last updated Jul. 30, 2021); Deyle, *The role of MRI in musculoskeletal practice: a clinical perspective*, 19 J. MANUAL & MANIPULATIVE THERAPY 152 (2011), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3143009/>; Maravi et al., *Role of MRI in Orthopaedics*, 21 ORTHOPAEDIC J. M.P. CHAPTER 74 (2015), available at <https://ojmpc.com/index.php/ojmpc/article/view/18/18>.

<sup>33</sup> Tanenbaum, 3T MRI in clinical practice, 34 APPLIED RADIOLOGY 8 (2005), available at <https://appliedradiology.com/articles/3t-mri-in-clinical-practice>

<sup>34</sup> *Id.*

<sup>35</sup> Tanenbaum, *Abdominal and Pelvic MRI*, RADIOLOGYINFO.ORG, <https://www.radiologyinfo.org/en/info/mri-abdomen-pelvis> (last updated Jun. 1, 2022); Caraianni, et al., *Indications for abdominal imaging: When and what to choose?*, 20 J. ULTRASOUND 43 (2020), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7266076/>.

<sup>36</sup> Tanenbaum, 3T MRI in clinical practice, 34 APPLIED RADIOLOGY 8 (2005), available at <https://appliedradiology.com/articles/3t-mri-in-clinical-practice>

<sup>37</sup> *Id.*

<sup>38</sup> WORLD HEALTH ORGANIZATION, *supra* note 5.

area, including those individuals 65+. Specifically, given that the demand for these types of scans increases with age and given the projected continued growth among the older adult cohort within the PSA, the Applicant anticipates that demand for MRI services for certain of the noted clinical categories will increase into the future. In consideration of these impacts, the Applicant proposes implementation of the Proposed Project.

#### 4. CT Technology

A computerized tomography (“CT”) scan is a type of diagnostic imaging that utilizes x-ray techniques to create detailed images of the body.<sup>39</sup> The modality then uses a computer to create cross-sectional images, also called slices, of the bones, blood vessels and soft tissues inside the body.<sup>40</sup> CT scan images show more detail than plain x-rays, and therefore, a CT scan has many uses. CT is a valuable resource in diagnosing disease, trauma or abnormality; plan and guide interventional or therapeutic procedures; and monitor the effectiveness of therapies (e.g., cancer treatment).<sup>41</sup>

#### 5. Advantages of CT Technology

CT images allow physicians to identify internal structures and see their shape, size, density, and texture.<sup>42</sup> This detailed information can be used to determine if there is a medical problem, provide the extent and exact location of the problem, and reveal other important details that can help a physician determine the best treatment.<sup>43</sup> The images may also show if no abnormality is present. “The benefits of CT imaging include more effective medical management by: (1) Determining when surgeries are necessary; (2) Reducing the need for exploratory surgeries; (3) Improving cancer diagnosis and treatment; (4) Reducing the length of hospitalizations; (5) Guiding treatment of common conditions such as injury, cardiac disease, and stroke; and (6) Improving patient placement into appropriate areas of care, such as intensive care units, etc.”<sup>44</sup> Moreover, CT scanning provides medical information that is “different from other imaging examinations, such as ultrasound, MRI, SPECT, PET or nuclear medicine.”<sup>45</sup> Each imaging technique has advantages and limitations. The principal advantages of CT are its abilities to: (1) Rapidly acquire images; (2) Provide clear and specific information; and (3) Image a small portion or all the body during the same examination.<sup>46</sup> No modality combines these advantages into a single session.<sup>47</sup>

#### 6. Clinical Applications of CT Technology

CT scans can be used to identify disease or injury within various regions of the body.<sup>48</sup> For example, “CT has become a useful screening tool for detecting possible tumors or lesions within the abdomen. A CT scan of the heart may be ordered when various types of heart disease or

---

<sup>39</sup> Mayo Clinic. Tests and Procedures. <https://www.mayoclinic.org/tests-procedures/ct-scan/about/pac-20393675> (2025).

<sup>40</sup> *Id.*

<sup>41</sup> United States Food and Drug Administration. Medical Imaging – Computed Tomography. <https://www.fda.gov/radiation-emitting-products/medical-x-ray-imaging/computed-tomography-ct> (2025).

<sup>42</sup> What are the benefits of CT Scans. Radiology Information. [https://www.radiologyinfo.org/en/info/safety-hiw\\_04](https://www.radiologyinfo.org/en/info/safety-hiw_04) (June, 2024).

<sup>43</sup> *Id.*

<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> *Id.*

<sup>47</sup> *Id.*

<sup>48</sup> National Institute of Biomedical Imaging and Bioengineering. Computed Tomography (2022).

abnormalities are suspected. CT can also be used to image the head in order to locate injuries, tumors, clots leading to stroke, hemorrhage, and other conditions. A [CT] scan of the lungs is done in order to reveal the presence of tumors, pulmonary embolisms (blood clots), excess fluid, and other conditions such as emphysema or pneumonia. A CT scan is particularly useful when imaging complex bone fractures, severely eroded joints, or bone tumors since it usually produces more detail than would be possible with a conventional x-ray.”<sup>49</sup> Accordingly, access to this imaging modality in the outpatient, community setting is vital for timely diagnoses.

**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.**

To assess the impact of the Proposed Project, the Applicant has developed the following outcome measures. The Applicant will report this information to the Department’s DoN Program staff as part of its annual report required by 105 CMR 100.310(A)(12) beginning one (1) year following implementation of the Proposed Project.

- 1. MRI and CT Wait Times:** The Proposed Project seeks to address the existing and future needs of the Applicant’s patient panel in the PSA by providing increased access to timely, high-quality MRI and CT services.

**a. Outpatient Access to Care:** Time to next available appointment.

**Measure:** This measure will collect data based on the following calculation: Time interval (in days) from when the outpatient case was initiated for scheduling to the next available outpatient appointment. The Applicant will provide the following data to the MA Department of Public Health (“DPH”): Median number of days between initiating outpatient case for scheduling and performing a scan.

**MRI Projections:** Baseline: 7 days; Year 1: 7 days; Year 2: 7 days; and Year 3: 7 days.

**CT Projections:** Baseline: 7 days; Year 1: 7 days; Year 2: 7 days; and Year 3: 7 days.

**Monitoring:** The Applicant will collect and provide data to DPH on an annual basis beginning one (1) year following implementation of the Proposed Project.

**b. Time to Scheduling a Scan/Exam.**

**Measure:** This measure will collect data based on the following calculation: Time an order is indexed (is sent for scheduling) to time the exam is scheduled.

**MRI Projections:** Baseline: 6 hours; Year 1: 6 hours; Year 2: 5.5 hours; and Year 3: 5 hours.

---

<sup>49</sup> *Id.*

**CT Projections:** Baseline: 6 hours; Year 1: 6 hours; Year 2: 5.5 hours; and Year 3: 5 hours.

**Monitoring:** The Applicant will collect and provide data to DPH on an annual basis beginning one (1) year following implementation of the Proposed Project.

2. **Timeliness of Scan Interpretation:** The Proposed Project seeks to ensure timely access to high-quality diagnostic imaging services for the identified patient panel. The Applicant will review the amount of time between when a routine scan is completed to the time review and interpretation are completed.

**Measure:** This measure will collect data based on the following calculation: Time from completion of a routine scan to time of completed review and interpretation by a radiologist.

**MRI Projections:** Baseline: 2-3 business days; Year 1: 2-3 business days; Year 2: 1-2 business days; and Year 3: 1-2 business days.

**Monitoring:** The Applicant will collect and provide data to DPH on an annual basis beginning one (1) year following implementation of the Proposed Project.

**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.**

As outlined throughout this narrative, through the Proposed Project, the Applicant seeks to Increase access to community-based, high-quality, low cost, outpatient diagnostic imaging services for individuals in the PSA. There are a number of ways the Proposed Project will ensure equal access to the health benefits created by the Proposed Project and promote health equity, including after-hours care, acceptance of as many forms of insurance as possible (e.g., MassHealth, Medicare, commercial payors, etc.), providing transparent pricing, and ensuring implementation of modalities that offer high quality images (similar to that of hospital imaging services). Details on these efforts are detailed below .

**A. EFFORTS TO PROVIDE EQUITABLE CARE**

Efforts to provide equitable care at the Proposed Project Site include:

1. **After-Hours Appointment Availability**

This new outpatient diagnostic imaging facility will have extended hours of operation during the week and on Saturdays (7:00am to 7:00pm). After-hours outpatient imaging is very impactful on accessibility and health equity, ensuring under-resourced populations have access to needed

care.<sup>50</sup> A recent study by Rossi, et al. evaluated outpatient utilization of after-hours mammography appointments and how these extended hours impacted access among various demographic groups.<sup>51</sup> The authors observed an increase in weekend and evening appointments towards the end of the COVID-19 public health emergency.<sup>52</sup> These after-hours appointments allowed patients who were unable to visit during regular hours due to scheduling challenges or other concerns to be accommodated.<sup>53</sup> The study found that younger patients, non-White races, non-English speakers, and individuals from lower-income zip codes were more likely to utilize after-hours appointments.<sup>54</sup> Younger patients benefit from after-hours appointments given they have more demanding work or family commitments during regular daytime hours.<sup>55</sup> Non-White races had a higher utilization of after-hours appointments highlighting a potential inequality in access to traditional healthcare services and pointing to the importance of after-hours scheduling in resolving these inequalities.<sup>56</sup> “Non-English speakers showed a preference for after-hours appointments due to barriers during regular hours such as needing a family member or interpreter to accompany them, and those individuals may have other daytime responsibilities.”<sup>57</sup> Those from lower-income zip codes were more likely to utilize after-hours appointments, suggesting an economic inability to take time off from work.<sup>58</sup> Offering after-hours appointments could significantly improve access for underserved populations and provide more opportunities for these groups to receive essential imaging services.”<sup>59</sup>

A comparable study by Miles, et al. in 2022 drew similar conclusions.<sup>60</sup> Here, the researchers evaluated over 53,000 patients who underwent screening mammography and over 10,000 patients who underwent diagnostic breast imaging between January 2016 and December 2017.<sup>61</sup> “Importantly, 5,135 screening mammogram patients and 209 diagnostic patients were imaged on a Saturday, while the remainder were imaged during traditional Monday through Friday business hours. The researchers found that racial/ethnic minorities and patients who spoke English as a second language were more likely to be imaged on Saturday.”<sup>62</sup> Again, these data reinforce that after-hours appointments can significantly improve access for under-resourced populations. Accordingly, providing after-hours care at the Proposed Project Site will impact overall equitable care.

---

<sup>50</sup> Cohen L, Cohen E. Evaluating the Pros and Cons of Evening and Weekend Outpatient Medical Imaging: Implications for Patients and Radiology Professionals. J Radiol Oncol. 2024; 8(2): 078-084. Available from: <https://dx.doi.org/10.29328/journal.jro.1001069>

<sup>51</sup> Rossi J, Mullen LA, Oluyemi ET, Panigrahi B, Myers KS, DiCarlo P, et al. Patient utilization of weekend/evening appointments for screening mammography: An 8-year observational cohort study. J Am Coll Radiol. 2024. Available from: <https://doi.org/10.1016/j.jacr.2024.04.029>

<sup>52</sup> *Id.*

<sup>53</sup> *Id.*

<sup>54</sup> *Id.*

<sup>55</sup> *Id.*

<sup>56</sup> *Id.*

<sup>57</sup> *Id.*

<sup>58</sup> *Id.*

<sup>59</sup> *Id.*

<sup>60</sup> Miles RC, Lehman CD, Chou SS, Sohn YJ, Guerrier CE, Wang GX, et al. Patient sociodemographic characteristics associated with Saturday breast imaging clinic utilization. J Breast Imaging. 2022;4(4):378-383. Available from: <https://doi.org/10.1093/jbi/wbac035>

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*

## 2. Transparent Pricing and the Acceptance of Various Insurance Coverage

The Applicant is committed to access, affordability, and quality care. Consequently, the Applicant provides diagnostic scans at a flat-rate for those patients paying cash, and provides this pricing via the Tellica Imaging web site. Allowing potential patients to understand the cost of care. Additionally, the Applicant is committed to accepting as many payors as possible, including MassHealth, Medicare, TriCare, commercial payors, and other insurance coverage for services. The Applicant is committed to making high-quality care affordable for the community. Price transparency is another way the Applicant provides equitable care, ensuring the patient is offered the most affordable payment option.

## 3. CULTURALLY APPROPRIATE CARE AND LANGUAGE ACCESS

To further ensure equal access to outpatient imaging services, the Applicant provides interpretation services, taking reasonable steps to ensure patients who speak a different language or are differently abled have meaningful access and equal opportunity to receive care. Staff strive to meet this goal by providing interpreter services at all points of contact, and accommodations during hours of operation. Caregivers provide onsite interpretation services at certain locations. If no certified caregiver is available who can interpret for a patient, the Applicant utilizes Stratus Video services for language interpretation through video via an iPad. This service is available in over 200 languages, including American Sign Language. Interpretation is available to patients at all points of care, including registration, check-in, administration of services, and discharge. Additionally, if a patient contacts the Applicant via phone and needs language interpretation services, the Applicant partners with Intermountain Health's Language Services Team for telephonic interpretation in 200+ languages, available continuously during operating hours. Accordingly, these efforts will allow the Applicant to provide equitable care to all patients.

### **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.**

The Applicant is committed to providing services to a diverse patient population. To this end, the Proposed Project is an example of how the Applicant seeks to carry out this pursuit by providing patients with timely access to care, thereby improving clinical outcomes and ensuring whole-person treatment. Part of providing holistic care is addressing both the physical needs of a patient, as well understanding any social drivers that may impact their health, as well as health disparities that may cause gaps in their care. Accordingly, the Applicant participates in the following processes.

First, the Applicant has established processes for screening patients for social determinants of health needs. This will ensure patients' clinical and social needs are met.

Second, the Applicant has adopted Intermountain Healthcare's equity strategy. This strategy includes the following five components:

- Because fairness and inclusion have a place in healing, the Applicant sees equity as both a Fundamental and a Value. Establishing equity as a fundamental – along with safety, quality, patient experience, access, and stewardship – is an important acknowledgement of existing disparities in health and access to quality healthcare resources. Equity, along

with other fundamentals that drive the Applicant's strategy, is integral to helping people live their healthiest lives possible.

- Because accountability has a place in healing, the Applicant seeks to hire leadership focused on equity. Intermountain has a chief equity officer to lead and manage equity work across the system, including at Tellica locations. This role consults with executive leadership to develop an intentional strategy and cohesive approach, cultivating an environment that values and demonstrates commitment to equity.
- The Applicant uses equity advocates. This individual serves as an advocate and mediator, supporting equity among caregivers and patients.
- Because growth has a place in healing, the Applicant has dedicated funding to support equity opportunities.
- Because collaboration has a place in healing, the Applicant works with other organizations in the community to address racism as a public health crisis. The Applicant believes systemic racism is a danger to the health of patients, families, and communities. This means that, with partners, the Applicant and Intermountain address a complex array of economic and resource inequalities found throughout significant parts of U.S. society, including clinical care, social determinants of health, healthcare access, and career opportunities.

Accordingly, these components will ensure the Proposed Project will result in improved health outcomes for all and assure health equity.

**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.**

To ensure continuity and coordination of care for the patient panel, the Applicant offers a provider portal that utilizes two factor authentication for security compliance. Community-based providers can register and gain access to test results for their patients and view their patient's images in the Applicant's Visage Viewer Picture Archiving and Communications System ("PACs"). Providers may also place orders and work on other administrative processes via this system. For larger hospitals and health systems, the Applicant establishes electronic medical record ("EMR") connections to ensure continuity and coordination of care. For those providers without technical resources, the Applicant receives orders via fax.

**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.**

In planning and designing the Proposed Project, the Applicant sought input from a variety of stakeholders associated with the joint venture, including clinical staff, patients and families, and community members that may be impacted by or have an interest in the Proposed Project. Details regarding these engagement efforts are described in Factor F1.e.i below. In addition to these efforts, the Applicant also conducted a formal consultative process with individuals at various regulatory agencies with relevant licensure, certification, and other regulatory oversight of the Applicant and the Proposed Project. Specifically, the following agencies and individuals are some of those consulted regarding the Proposed Project:

- Massachusetts Executive Office of Health and Human Services



- Department of Public Health, including, but not limited to: Dennis Renaud, Director, DoN Program; Lynn Conover, Analyst, DoN Program; Jennica Allen, Manager of Community Engagement Practices, Bureau of Community Health Planning and Prevention;
- Massachusetts Office of Attorney General
- Health Policy Commission, including but not limited to: Sasha Hayes-Rusnov, Associate Director, Market Oversight and Monitoring; Sydney Birnbaum, Senior Associate, Market Oversight and Transparency; and Kathy Mikk, Project Manager.
- Center for Health Information and Analysis
- The Centers for Medicare & Medicaid Services
- MassHealth

**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.**

In contemplation of preparing its DoN Application for the Proposed Project and ensuring appropriate community engagement, the Applicant sought to engage community members, patients, families, and staff that may be impacted by or have an interest in the Proposed Project. Specifically, the Applicant's engagement efforts focused on soliciting feedback on the need for the Proposed Project, as well as the design details and layout in order to maximize the Applicant's ability to meet its patient panel need, promote high-quality outcomes, and ensure patient satisfaction. Engagement efforts are described in detail below.

**A. ENGAGEMENT OF BMC'S PFAC**

The Applicant engaged BMC's Patient Family Advisory Committee ("PFAC") around the Proposed Project. Sponsored by BMC's Patient Experience Department, BMC's PFAC aims to improve operations across BMCHS and achieve its mission for patient-centered and equitable care. In compliance with DPH's Hospital Licensure Regulations, BMC's PFAC is co-chaired by a staff member and a patient/family member, and at least 50% of PFAC members are current or former patients and/or family members and are representative of the community served by BMC. Specifically, BMC's PFAC is currently comprised of ten (10) patient/family advisors. Moreover, BMC's PFAC leaders are committed to continuously recruiting new members with the goal of creating diverse and collaborative partnerships with BMC patients, families, and caregivers that are representative of BMC's diverse patient population, as well as with staff from different areas across BMC.

In terms of function, BMC's PFAC is dedicated to creating open, trusting partnerships, and empowering its members to help achieve meaningful change and create accountability for BMC Health System. As a strong and transparent group, the PFAC follows and strives to fulfill BMC's three cornerstone values:

- (1) Build on Respect, Powered by Empathy – BMC's PFAC cares about the Hospital's patients, employees, and community, and is committed to doing right by them each and every day.
- (2) Move Mountains – Impossibility doesn't live here. Instead, BMC's PFAC is motivated by what can be and it will move mountains to make it happen.
- (3) Many Faces Create Our Greatness – Diversity is BMC's heart and soul and when it comes

to inclusion, BMC's PFAC is all in.

In furtherance of its values and goals, the PFAC has regular meetings to discuss wide-ranging work across BMC. Input from the PFAC provides Hospital leadership with a better understanding of patient, family and staff experiences, perspectives, and insight, and PFAC recommendations inform decision-making and the development of programs, services, and strategic projects at the Hospital.

On May 16, 2024, managers and staff from the Applicant (including Brad Isaacson, President & Chief Operating Officer, Tellica Imaging; Stephanie Kaufusi, Senior Operations Director, Tellica Imaging; Josh Latson, Executive Director, Strategy, BMC; Nina Kalluri, Strategy Implementation Manager, BMC), as well as counsel for BMCHS (Nicole Sexton, Associate General Counsel, BMC and Kate Harrell, Associate General Counsel, BMC) met with the PFAC to present an overview of the Proposed Project.<sup>63</sup> The presentation included a summary of the DoN process, as well as a description of the Proposed Project components, the needs of patient panel that the Proposed Project is designed to address, and the associated public health value and community benefit. A majority of PFAC members were present for the meeting.

Following the presentation, PFAC members were given the opportunity to comment on the Proposed Project and ask questions of the Applicant's staff. There was substantial dialogue amongst attendees, and PFAC members asked important questions about the Proposed Project. Specifically, there was discussion around the Proposed Project modalities and how this technology will meet patient needs. In support of the Proposed Project, PFAC members asked questions around accessibility, interpreter services, and the need for additional scanning capacity. The Applicant's representatives expressed their belief that the Proposed Project will allow the needs of the aging patient panel in the PSA to be met and provide BMC patients with additional access to diagnostic imaging services via a community-based outpatient facility, furthering efforts to provide accessible care throughout BMCHS.

## **B. COMMUNITY MEETINGS**

The Applicant also sought to engage potential patients, staff, community members, and local neighborhood stakeholders around the Proposed Project. Accordingly, the Applicant hosted two community meetings – one at Boston Medical Center on May 22, 2024 and the other at the Milton Public Library on June 4, 2024. The meetings were publicized via flyers within BMC's service area and sent out via multiple channels, as well as through outreach to local residents and community members. Moreover, the meetings were held over Zoom at different times of the day to accommodate different schedules and promote increased participation.<sup>64</sup>

**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".**

---

<sup>63</sup> The Applicant notes that the PFAC meeting was held virtually over Zoom as has been the case since the onset of the COVID-19 pandemic.

<sup>64</sup> The Applicant notes that the community meetings were held virtually over Zoom as this is the standard way for these meetings to occur to obtain a larger audience.

To ensure sound community engagement throughout the development of the Proposed Project, the Applicant took the actions detailed in Factor F1.e.i. For materials related to these activities, please refer to Appendix 4, which includes a copy of the meeting presentation. In addition, for transparency and to ensure appropriate awareness within the community regarding the Proposed Project, the Applicant published a Notice of Intent associated with the Proposed Project in the *Boston Herald* on February 14, 2025, and also posted a copy of this legal notice prominently on the JV partners' websites. Please refer to Appendix 9 for a copy of the Notice of Intent.

## **Factor 2: Health Priorities**

### **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 Commonwealth's goals for cost containment are focused on creating high-quality, low-cost care alternatives. To this end, the Health Policy Commission ("HPC") seeks to control health care spending while improving access and quality of care. The provision of timely care in an appropriate setting has proven to reduce mortality and morbidity for chronic conditions, which translates to better patient clinical outcomes and reduced costs.<sup>65</sup>

The Proposed Project will meet the noted goals in the following ways: First, an increase in CT and MRI capacity in the outpatient setting will allow the patient panel, including the 65+ cohort to seek services in a lower cost environment that does not compromise the quality of care. Studies provide that non-emergent imaging conducted in the outpatient setting is 30-50% less than in the inpatient or hospital-outpatient department settings without sacrificing high resolution image quality. Second, additional outpatient imaging capacity will allow for more timely access to care and treatment. When patients have access to services earlier in the disease phase, both health outcomes and overall health care costs are improved based on staging and the efficacy of treatment. Third, the Applicant, after much consideration, determined that a 1.5T MRI is the better option for the new outpatient facility – given that a greater number of patients may be scanned on this machine, offering more timely access to care for the majority of patients. For these reasons, the Applicant asserts that the Proposed Project meets Massachusetts' goals for cost containment.

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

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

As more fully detailed throughout Factor 1, the Proposed Project will improve public health outcomes by improving access to CT and MRI services for the Applicant's patient panel (including aging residents in the PSA). Specifically, the Applicant anticipates that additional scanning capacity will improve access to timely services and patient experience. When patients have convenient access to and reduced wait times for diagnostic imaging services, they seek care sooner and are more apt to attend appointments. Expedited imaging can ensure appropriate

---

<sup>65</sup> *Chartbook on Access to Health Care, Elements of Access to Health Care: Timeliness*, AGENCY FOR HEALTHCARE RESEARCH AND QUALITY, <https://www.ahrq.gov/research/findings/nhqrdr/chartbooks/access/elements3.html> (last visited Jul. 20, 2022); Kaplan & Porter, *The Big Idea: How to Solve the Cost Crisis in Health Care*, HARVARD BUSINESS REVIEW (2011), <https://hbr.org/2011/09/how-to-solve-the-cost-crisis-in-health-care>.

staging of a disease and more timely access to therapies, as well as lead to less stress for a patient. Accordingly, through the Proposed Project, public health outcomes will be improved.

**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 one of the joint venture partners, BMCHS can leverage its existing programming to ensure appropriate linkages for the Applicant's patient panel to social service organizations. One of BMCHS' goals is not only to treat disease, but also to understand and address its root causes. Research has shown that health is shaped by more than just quality health care; social and environmental factors known collectively as the social determinants of health ("SDoH") (e.g., lack of employment, income, stable housing or food, limited education, and the built and social environments, etc.) also have an impact, contributing to chronic disease and mental health issues and creating barriers to accessing health care. In recognition of this, BMCHS has numerous processes and programs in place to ensure linkages to services beyond the traditional medical model to address gaps created by SDoH, meet the unmet basic needs of the many diverse, vulnerable individuals it serves, and improve health outcomes for its patients.

BMC has integrated robust SDoH programming into its clinical models. Efforts around SDoH screening are aimed at understanding the social needs impacting patients' health, improving patient care by communicating social needs to care teams, partnering with community-based organizations to eliminate systemic barriers that prevent patients from thriving, and providing patients with information on hospital-based and community resources that can mitigate their social needs. Examples of hospital-based and community programs and resources that BMCHS connects its patients and families to include investments in housing, food-related programs, job training, programs related to education, and employment programs and services that support financial wellness (e.g., programs that help people apply for health coverage, access no- or low-cost medications, obtain food and groceries, pay their utility bills, file tax returns and secure refunds, etc.), programs related to violence and building safer communities, and more. In the event that the Applicant's patient panel needs to access SDoH screening and services, the patient will be instructed to seek assistance at any hospital or community organization he/she chooses; however, in the event a patient seeks guidance from the Applicant's staff about screening resources, information regarding BMC's SDoH programming will be available. If a patient requests assistance with SDoH needs on the day of a scan/exam, the Applicant's staff will provide information on BMC's programming.

**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:** The Proposed Project involves the acquisition of one (1) CT unit and one (1) 1.5T MRI unit to be located at a new outpatient facility at 168 Great Road, Beford, MA.

**Quality:** The Proposed Project will ensure access to high quality, low cost diagnostic, outpatient imaging services for the Applicant's patient panel. The Applicant anticipates that additional CT and MRI capacity will improve health outcomes and quality of life by providing more timely diagnosis and treatment.

**Efficiency:** As detailed throughout this narrative, the Proposed Project is designed to create additional CT and MRI capacity, which will help alleviate access challenges and ensure that patients receive timely care.

**Capital Expense:** The total capital expenditure of the Proposed Project is \$5,849,992. However, this initiative represents a cost-effective approach to addressing the needs of the Applicant's patient panel for more accessible diagnostic imaging services. The Proposed Project aims to meet the current and future needs of the Applicant's aging patient panel by providing community-based access to imaging services, offering various testing options for specific conditions and diseases, and ensuring suitable technology for different modalities (e.g., specific coils) to allow for high resolution images.

**Operating Costs:** The average incremental operating costs of the Proposed Project are anticipated to be approximately \$611,490.00

#### **List alternative options for the Proposed Project**

**Alternative Proposal #1:** Establish mobile scanning service and move modalities to different locations.

**Alternative Quality:** Although mobile modalities bring advanced imaging to a variety of healthcare environments without the need for permanent construction, this technology has challenges including design, performance, and workflow limitations. Frequently, mobile units have power and cooling restrictions, as well as weight and design configuration differences from fixed units. These variations may impact image quality and lengthen scanning times. However, fixed suites tend to have higher outputs and faster rotations allowing for high resolution images, and reduced scan times. Permanent scanners also have minimal mechanical interference (reducing artifact), and allow for the use of specialized applications.

**Alternative Efficiency:** This alternative is inefficient as mobile units have longer scan times and frequently more artifact. Consequently, scans may be a lesser quality and need to be repeated.

**Alternative Capital Expense:** This alternative is costly. For example, a leased mobile MRI unit may cost \$20,000-\$75,000 per month depending on the manufacturer, Telsa strength, and capabilities. Over the leased period, monthly fees alone may be equivalent to the construction and implementation of equipment at a fixed site without accounting for operational costs.

**Alternative Operating Costs:** Operational costs for mobile modalities include transport, fuel, the loss of revenue for downtime while the unit is traveling, and other costs.

Given increased scan times, the potential for lesser quality scans, and additional operational costs, this alternative is not the best alternative for increasing capacity in the community.

**Alternative Proposal #2:** Do not establish an outpatient diagnostic imaging facility and continue to serve patients through existing imaging resources.

**Alternative Quality:** This alternative does not allow the Applicant to address the aging patient panel's need for accessible, community-based CT and MRI services. Without the Proposed Project, aging residents from the noted PSA will continue to travel for diagnostic imaging services at more costly venues with longer wait times. These factors will have a negative impact on patient health outcomes and quality of life.

**Alternative Efficiency:** This alternative is inefficient as it does not provide additional access to necessary CT and MRI services in the PSA. Without additional capacity for these services, access challenges may ensue, and patients will face longer wait times, as well as delays in diagnosis and treatment.

**Alternative Capital Expense:** This alternative is not associated with any capital expenses. However, it does not address the need for additional CT and MRI capacity in the PSA, and, therefore, quality outcomes, operational efficiencies, and cost containment measures anticipated to be achieved through the Proposed Project will not be realized.

**Alternative Operating Costs:** Although this alternative is not associated with any operating costs, it does not address the need for additional CT and MRI capacity in the PSA.