Mass General Incorporated
Brigham and Women's Faulkner Hospital
DoN# MGB-20121716-HE

APPLICANT RESPONSES

Italicized questions indicate those submitted on 7/23/2021

Responses should be sent to DoN staff at DPH.DON@State.MA.US

While you may submit each answer as available, please

- List question number and question for each answer you provide
- Submit responses as a separate word document, using the above application title and number as a running header and page numbers in the footer
- When providing the answer to the final question, submit all questions and answers in one final document
- Responses must be available in PDF and source document (excel preferred for data and word for narrative)

FACTOR 1: Patient Population Need, Public Health Values and Operational Objectives—

1. **In order to better understand the need by age group for the various services, using the data presented in Tables 1-6 in Appendix 3A, please provide counts and percentages on Patient Population age for FY19.**

Table 1.

	FY 2019									
	BWFH Patient Pop.		BWFH Endoscopy		BWFH Med/Surg IP		Observation Unit		MRI	
Age	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
0-17	1,054	1%	655	10%	0	0%	69	5%	10	0%
18-54	34,692	38%	1,951	29%	2,823	32%	385	29%	2,202	40%
55-64	19,745	22%	1,739	26%	1,814	20%	268	20%	1,258	23%
65-74	20,728	23%	1,611	24%	1,793	20%	385	29%	1,165	21%
75-84	11,322	12%	730	11%	1,397	16%	192	14%	612	11%
85+	4,125	4%	106	2%	1,046	12%	41	3%	262	5%
Unknown	1	0%	0	0%	0	0%	0	0%	0	0%
Total	91,667	100%	6,792	100%	8,873	100%	1,340	100%	5,509	100%

Footnote:

- BWH Patient Population information is produced from a live database, meaning that patient data can update over time, including age cohort. As such, this resulted in a variation across age cohorts from the previous submission.

- Additionally, the number of total unique for the BWFH Patient Population changed slightly (decrease of 4 patients), again due to the use of a database using live patient data

- In the previous submission, there were 513 patients with an age of "unknown." Due to the live database, the ages for these patients are now accessible and have been reassigned across the appropriate age cohorts.

2. **How were patients with multiple races captured in the Appendix 3 tables?**

Patients who identify with multiple races are grouped under "Other" when reporting out high level categories. As such, patients with multiple races in the Appendix 3 tables would fall within this category.

3. **You note the aging population as a driver for the need for the proposed project. BWFH patient population data shows a slight decrease in age 65 and older population and an increase in age 18–64-year-old population from FY17 to FY19. (Appendix 3A, Table 2)**
    a. **Provide an explanation for the decrease in age 65 and older population and how it supports the need for the Proposed Project.**

        Between FY17 and FY19, there was a decrease of 945 patients in 65+ age cohort of patients. This decrease represents ~1% of the total BWFH patient population. The main reason for the decline in this cohort is the number of patients aged 85+ decreased. However, this was partially offset by a 3% increase in patients aged 65 – 74.

        With the increase in the 65-74 age cohort (which currently represents 23% of the BWFH patient population), BWFH is focused through the Proposed Project on ensuring the appropriate infrastructure and capacity is in place to support their care and provide necessary services for the community.
    b. **Has there been a shift in patient origins of the age cohorts?**

        - 0-17 Age Cohort: No significant shifts in patient origin
        - 18-54 Age Cohort: The Urban Core population grew by 16% from FY17-19, representing a 2.0% increase in the proportion of BWFH patients originating from the Urban Core
        - 55-64 Age Cohort: No significant shifts in patient origin
        - 65-74 Age Cohort: The Urban Core population grew by 8% from FY17-19, representing a 0.4% increase in the proportion of BWFH patients originating from the Urban Core
        -
        - 75-84 Age Cohort: The population of the communities South of Boston decreased 4% from FY17 to 19, resulting in a -0.3% decrease in the proportion of BWFH patients originating from the South
        - 85+ Age Cohort: The population of the communities South of Boston decreased 25% from FY17 to 19 and a 16% decrease the Urban Core population, resulting in a decrease of 0.9% in the proportion of BWFH patients coming from the Urban Core and the South

4. **The Application provided projections for Medical/Surgical Inpatient (Table 4), Observation Visits (Table 5), Endoscopy Visits (Table 7), and MRI Scans (Table 8). To better understand service need**

calculation, describe how these projections were calculated, particularly for FY27 when the Proposed Project will be fully operational (e.g., provide methodology).

- **Medical/Surgical Inpatient:** Brigham and Women's Hospital (BWH) and Brigham and Women's Faulkner Hospital (BWFH) (collectively, Brigham Health) relied on external market growth forecasts for Eastern MA geographies, for each Medical or Surgical service across the BWH and BWFH campuses and applied these growth rates to its current volume. Brigham Health then evaluated how its historic growth compared to market forecasts and made adjustments where necessary. Finally, Brigham Health evaluated the overall bed needs across the system, taking into consideration the types of inpatient services at BWH that could be safely cared for at BWFH. This will ensure that patients are able to receive high-quality care for services in the most appropriate, convenient, and cost-effective care setting.
- **Observation:** BWFH projects that its OR utilization will reach a target of 85% capacity, as supported by market growth projections for both inpatient and outpatient surgical services. Conservatively assuming increased surgical volume will reflect BWFH's current mix, ~5% of the incremental increase in surgical patients will require extended recovery services.
- **Endoscopy:** BWFH relied on market growth forecasts for Eastern MA geographies and applied these growth rates to its current volume. The endoscopy component of the Proposed Project is not related to the need to increase capacity for standard endoscopy; but rather to enable BWFH to operate as a fully functional community hospital by providing a dedicated space with capability to perform advanced endoscopic procedures which are currently performed in suboptimal ORs when performed at BWFH, or require the patient to be transferred to BWH.
- **MRI:** BWFH relied on market growth forecasts for Eastern MA geographies and applied these growth rates to its current volume. The MRI unit is already operating at capacity and the Hospital requires a second MRI unit. In addition to this, BWFH believes that there will be additional MRI demand generated by its expanded inpatient capacity, which the Hospital would not be able to accommodate with one MRI. As the Hospital already is in need of a second MRI unit, adding a 3T unit will also enhance patient access and convenience for inpatients or patients that choose to receive their MRI imaging at BWFH.

a. Has COVID-19 impacted these projections?

As the COVID-19 pandemic has slowed, patients have begun to resume their usual access to care, and as such, COVID-19 has not impacted these projections. Throughout the COVID-19 pandemic BWFH demonstrated strength and resiliency in supporting the local community during a very challenging time. This has resulted in BWFH having a stronger presence in the community and patients feeling more familiar and comfortable with BWFH as a source for emergent and non-emergent health care services.

b. Where do you anticipate new patient volume will originate (e.g., local, regional, national and international; and within the MGB system or new patients)?

In terms of local growth, BWFH expects to grow through several different avenues, with the end goal of BWFH continuing to be a "community hospital that is used by the community":

1) By shifting clinically appropriate cases to BWFH from BWH

2) Continued organic growth in its local community through the ED will lead to additional growth in inpatient and interventional and diagnostic services. Patients coming to the BWFH ED would be existing or new patients to the system and would choose to receive their care at BWFH in the future.

3) Interventional and diagnostic services will allow BWFH to enhance its ability to care for emergency department patients without the need to transfer to BWH, accept more transfers from BWH, and prevent leaves of absence. This will allow BWFH to operate as full-service hospital, as opposed to relying on BWH to provide certain community-hospital level services to its patients. Further, this strategy allows for care to be accessed in the right location within the Brigham Health and MGB systems.

As for regional growth, the strategy would remain largely the same, with a special focus on the ability to accept more transfers and prevent leaves of absence.

c. Provide projections by age cohorts for each of the tables. (see tables below)

i. The next generation of aging cohort will be smaller. How will the need for this Proposed Project be sustained?

The majority of services that will be implemented through the Proposed Project, such as Advanced Endoscopy, Observation and MRI services, are not age dependent, and are services that are essential to any community hospital. Additionally, Advanced Endoscopy and the Observation unit will support evolutions in care to more appropriately serve patients in the community hospital setting. Further, the addition of inpatient beds will allow MGB to keep care local and within the appropriate care setting.

Observation					
Age Group	FY 2019 Cases	FY 2024 Cases	FY 2025 Cases	FY 2026 Cases	FY 2027 Cases
0-17	88	88	88	88	88
18-44	233	278	278	278	277
45-64	538	514	517	520	522
65 and Up	748	851	875	899	922
Total	**1,607**	**1,731**	**1,757**	**1,784**	**1,810**

Endoscopy					
Age Group	FY 2019 Cases	FY 2024 Cases	FY 2025 Cases	FY 2026 Cases	FY 2027 Cases
0-17	700	700	700	700	700
18-44	690	1,140	1,154	1,101	1,173
45-64	3,218	2,805	2,841	2,714	2,894
65 and Up	2,636	2,549	2,644	2,584	2,818
Total	**7,244**	**7,194**	**7,338**	**7,099**	**7,586**

MRI					
Age Group	FY 2019 Cases	FY 2024 Cases	FY 2025 Cases	FY 2026 Cases	FY 2027 Cases
0-17	10	10	10	10	10
18-44	1,347	1,472	1,520	1,567	1,614
45-64	2,466	2,753	2,854	2,955	3,057
65 and Up	2,273	2,411	2,558	2,710	2,866
Total	**6,096**	**6,647**	**6,942**	**7,241**	**7,546**

Med/Surg					
Age Group	FY 2019 Cases	FY 2024 Cases	FY 2025 Cases	FY 2026 Cases	FY 2027 Cases
0-17	0	0	0	0	0
18-44	1,959	3,298	3,703	4,087	4,466
45-64	3,909	3,610	4,041	4,440	4,826
65 and Up	5,427	6,379	7,312	8,216	9,133
Total	**11,295**	**13,286**	**15,056**	**16,743**	**18,425**

What will the projected impact on the expanded services be for FY24-FY27?

The impact of the Proposed Project is to ensure that BWFH provides access to community hospital services, which includes the ability to provide advanced endoscopy, adequate capacity through a second MRI unit, patient-centered post-procedure observation services and adequate inpatient capacity for its community and an aging population. For Endoscopy, BWFH expects the Proposed Project to impact both the breadth and complexity of services offered, as this addition will not provide expanded capacity for standard endoscopy. The addition of dedicated space for advanced endoscopy procedures will not only allow more patients to receive this service at BWFH. Similarly, with respect to MRI the addition of a second unit will allow for the Hospital to ensure access to MRI services on-site at all times, eliminating access issues presented by maintenance needs, in addition to providing increased capacity for inpatients and access to MRI services not delivered on a 1.5T MRI. In addition, the Proposed

Project will allow BWFH to provide improved and more patient-friendly care for certain post procedure patients through the new dedicated Observation unit. Finally, as data provided in other responses indicate, BWFH requires increased inpatient capacity to provide appropriate care in a cost-effective setting to meet the needs of its aging patient cohort.

[Inpatient Beds]

5. **One cited need addressed by the proposed project is eliminating capacity constraints for inpatient admissions at BWH by transferring appropriate patients needing secondary care to BWFH. (pgs. 9; 11)**

   a. **What type of secondary care patients are transferred to BWFH? What is the complexity level of these cases? Are there specific types of secondary care patients or are a whole range of secondary care patients transferred?**
   There is a range of secondary care patients that are transferred to BWFH. High complexity cases are not transferred to BWFH as they often don't pass the exclusion list, which is explained in question 5.b. As a result, BWFH only accepts appropriate secondary cases.

   From FY17-19, approximately 96% of patients transferred from BWH to BWFH were for Medicine services. The remaining 4% of transfers were Addiction, Breast Surgery, General/Gastrointestinal Surgery, and Orthopedics patients. The most common diagnoses for transfer patients are Pneumonia, Diabetes, Addiction/Chemical Dependency, Congestive Heart Failure and Chronic Obstructive Pulmonary Disease.

   b. **Of the total number of transfers to BWFH from BWH in FY19, how many (and percentage) higher complexity cases are transferred to BWFH from BWH?**
   How are higher complexity cases defined?

   High complexity/high acuity patients are typically not transferred from BWH to BWFH due to lack of clinical appropriateness to care for such patients at BWFH. High complexity is defined through the exclusion criteria as set forth in the BWH to BWFH Transfer Guidelines which Is attached as *Attachment 5.b*.

   c. **For transfers to BWFH from BWH, what percent of total transfers are from BWH ED and from BWH inpatient?**

   With limited exceptions, all transfer patients from BWH to BWFH originate from the BWH ED.

   d. **After the Proposed Project is completed, is it expected that patients will be presenting to BWFH ED? Or will patients go to BWH and then transfer to BWFH?**

   Yes, after the Proposed Project is completed, it is expected that patients will continue to present to the EDs of both hospitals.

   e. **The BWFH Transfer Program allows ED clinicians at academic medical centers (AMCs), including BWH, to directly admit qualifying patients to BWFH inpatient units. (pg. 53) How**

many direct admissions were made per FY, disaggregated by AMC and acuity levels? How many transfers was BWFH not able to directly admit to inpatient units?

Fiscal Year	No Exclusion[1]	% Faulkner Not Available	Screened[2]	Transferred[3]	Patients Unable to Transfer[4]	CMI[5]
FY 2017	3,968	57%	**started collecting in May 2017	695	--	1.08
FY 2018	4,071	63%	1,944	783	2,127	1.12
FY 2019	4,851	49%	2,517	1,078	2,334	1.12
FY 2020	6,549	24%	4,365	1,296	2,184	1.18
FY 2021 (Q1-Q3)	3,272	47%	1,443	764	1,829	1.16

Footnotes:

1. **No Exclusion**: any patient who is determined to be clinically eligible for transfer/meets transfer criteria
2. **Screened**: Due to BWFH not being available for transfer (capacity limitations) not all patients who meet transfer eligibility are screened
3. **Transferred**: Not all patients who are screened are transferred due to a number of reasons, including, but not limited to: patient/family preference, community MD declined, change in patient condition, and continuity of care
4. **Patients Unable to Transfer**: Represents potential missed opportunity due to the Faulkner not having availability to accommodate an eligible transfer
5. **CMI**: Measure of acuity for inpatients using MS DRG weights; data in table represents acuity level of all transferred patients. A lower value indicates a lower acuity or complexity/ a higher value indicates a higher acuity or complexity
6. Data excludes transfers from AMCs that are not BWH

In addition to the BWFH Transfer Program, patients may also be admitted when an outside hospital (non BWH) contacts the Brigham Health Access Center at BWH to accept a patient in transfer. If the Access Center determines that the patient is appropriate for a community hospital admission, they may offer a redirect to BWFH. If BWFH has an available bed and can meet the patient's needs, the patient's admission may be redirected to BWFH instead of BWH. These occurrences are not captured in the above data for the BWFH Transfer Program.

6. **It is stated in the Application that there was a 3.2% increase in the number of patients presenting to the BWFH ED from FY17 to FY19, which has impacted the ED boarding numbers as patients await inpatient beds. To better understand the impact of these patients, provide data below by age ranges (55-64, 65-74, 75-84, 85+). (pg. 10)**
    a. **Complete the table below providing information on the number of patients and what percent of total ED patients were admitted to an inpatient unit or observed. How many and what percent of these patients were behavioral health patients?**

Question 6													
Patients (Total, and Percent of ED Patients)								Behavioral Health Patients (Total, and Percent of ED Patients)					
		FY 2017		FY 2018		FY 2019		FY 2017		FY 2018		FY 2019	
Category	Age Group	Total	Percent	Total	Percent	Total	Percent	Total	Percent	Total	Percent	Total	Percent
24 Hours or Less in ED, admitted to IP Unit	<55	2,461	8%	2,267	7%	2,327	7%	429	1%	469	2%	450	1%
	55-64	1,425	5%	1,388	5%	1,255	4%	91	0%	110	0%	126	0%
	65-74	1,410	5%	1,343	4%	1,334	4%	41	0%	49	0%	62	0%
	75-84	1,397	5%	1,335	4%	1,279	4%	19	0%	17	0%	23	0%
	85+	1,179	4%	1,165	4%	1,212	4%	11	0%	9	0%	3	0%
Total		**7,872**	**27%**	**7,498**	**24%**	**7,407**	**23%**	**591**	**1%**	**654**	**2%**	**664**	**1%**
More Than 24 Hours in ED, admitted to IP Unit	<55	47	23%	32	24%	3	18%	47	23%	32	24%	2	12%
	55-64	15	7%	6	5%	1	6%	15	7%	6	5%	1	6%
	65-74	7	3%	4	3%	0	0%	7	3%	4	3%	0	0%
	75-84	2	1%	0	0%	0	0%	2	1%	0	0%	0	0%
	85+	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Total		**71**	**34%**	**42**	**32%**	**4**	**24%**	**71**	**34%**	**42**	**32%**	**3**	**18%**
In ED, Observation Only	<55	0	0%	269	1%	694	2%	0	0%	265	1%	529	2%
	55-64	0	0%	34	0%	164	1%	0	0%	34	0%	68	0%
	65-74	0	0%	12	0%	129	0%	0	0%	12	0%	23	0%
	75-84	0	0%	1	0%	94	0%	0	0%	1	0%	11	0%
	85+	0	0%	0	0%	63	0%	0	0%	0	0%	0	0%
Total		**0**	**0%**	**316**	**1%**	**1,144**	**3%**	**0**	**0%**	**312**	**1%**	**631**	**2%**

MGB Definition of a Psychiatric ED Patient:

A patient will be considered part of the Psychiatric Population for the purposes of ED reporting if one or more of the criteria below are met:

Patient has one of the following:

1. IP Consult to Pediatric Psychiatry consult order placed
2. IP Consult to Pediatric Psychology consult order placed
3. IP Consult to Psych Case Manager consult order placed
    a. For the consult orders above, the following conditions must also apply in this order for a visit to be considered a member of the ED Psych Patient Population
        i. Placed in the ED
        ii. During the ED encounter
        iii. By a user logged into an Emergency Dep
4. IP Consult to Psychiatry consult order placed
5. ED Consult to Acute Psychiatric Services (APS) consult order placed
6. ED Consult to Psych Triage SW consult order placed
7. Consult note signed with an author service of Psychiatry in the current encounter (only if the patient has never been Inpatient or Observation class)
    a. Note type ==HNO Item 34033 is “Consult” and
    b. Author Service ==HNO item 59 is “Psychiatry” and
    c. Note Status ==HNO Item 17100 is “Signed”
8. Psych legal status order (LEG1) placed while the patient is in the ED (between ED Arrival and ED Depart), even if the order is later discontinued

7. **Provide ED boarder hours as well as Code Help instances at BWH for FY18-FY19, specifically provide the count of boarders in the ED longer than 12 hours, the mean time to admission for inpatients, and the mean time to discharge for all other patients. (pg. 11)**

Table 7.

Item	FY 2018	FY 2019
ED Boarder Hours	46,570	65,777
# of Boarders in the ED > 12 hours	1,181	1,809
Avg time to Admission for inpatients (in hours)	6.73	7.68
Avg time to Discharge for all other patients (in hours)	4.33	4.38

2

a. How is Code Help implemented at BWH? How many times was Code Help declared/implemented? How many patients were generally moved out of the EDs when Code Help was implemented?

Table 7A. Number of Code Helps and Days in Code Help at BWH

Fiscal Year	FY 2018	FY 2019	FY 2020 (affected by COVID)	FY 2021 (through 7/9/2021)
# Code Help	34	95	54	72
Total Days in Code Help	12.6	58.9	36.4	71

The number of patients moved out of the EDs varies depending on the factors which triggered the Code Help. Because Code Help can be activated for different reasons, the number of patients moved will be different each time.

b. As a result, how has this impacted transfers from community hospitals?

BWH will activate Code Help when there is a surge of patients the Hospital cannot accommodate. BWH will use BWFH medicine beds to decant their ED. However, BWFH's high census has prevented transfers from BWH to be received by BWFH, which in turn prevents access for tertiary care transfers to BWH from other hospitals as BWH must care for patients that would be more appropriately cared for at BWFH.

Table 7.B.i Total Number of BWH ED Patients Transferred to BWFH During Code Help and Outside of Code Help

Fiscal Year	FY 2018	FY 2019	FY 2020 (affected by COVID)	FY 2021 (Through 7/9/2021)
During Code Help	50	217	218	207
Outside of Code Help	733	861	1,078	580
Grand Total	**783**	**1,078**	**1,296**	**787**

Table 7.B.ii Average Number of BWH ED Patients Transferred to BWFH Per Day (Combined Tables 7A and 7.B.i)

Fiscal Year	FY 2018	FY 2019	FY 2020 (affected by COVID)	FY 2021 (Through 7/9/2021)
During Code Help	4	3.7	6	2.9
Outside of Code Help	2.1	2.8	3.3	2.8

c. How has Code Help been applied at BWFH?

Before the Hospital activates Code Help, it implements activities under what it calls Extreme Census as defined below. If the activities taken under Extreme Census do not alleviate capacity or capability concerns, the Hospital activates Code Help. This is a hospital-wide activation and must be activated when the Emergency Department's capability and/or

capacity to ensure patient care in an appropriate, effective, and safe environment has been exceeded.

Extreme Census is triggered by the following events:

- Overall patient census is ≥ 32 registered patients (30% above max physical capacity)
- Admitted NBA (no bed available) patients ≥ 4
- Critical care patients ≥ 2, without imminent disposition
- Psychiatric Observation patients ≥ 5
- Patients in hard restraints ≥ 2
- If either of the following nursing or physician to patient ratios are exceeded without scheduled additional resources arriving within the next hour:
    - o 5:1 patient to nurse ratio excluding charge nurse/clinical leader
    - o 20:1 patient to physician ratio
- In addition to the triggers bulleted above, the ED Charge Nurse/Clinical Leader and ED Admin Attending may also activate ED Extreme Census status at their joint discretion if one of the above criteria is not met, but patient acuity and volume are impeding ability for ED to care for patients under usual operations.

Code Help is triggered by the following events:

- Boarding and/or Admitted patients are a preventing the ability to care for existing patients in a licensed treatment area.
- The capacity and/or capability of the Emergency Department to provide safe, appropriate outpatient services has been exceeded, such that the ED is unable to care for existing patients in a licensed treatment area or is unable to accept new patients into a licensed treatment area.
- High volume influx not manageable with existing resources.
- High acuity level not manageable with existing resources.
- Unexpected personnel shortage.

8. **The application notes that the provision of medical/surgical inpatient services are often related to treating age-related chronic diseases / conditions. Table 3 lists the top 10 diseases for BWFH Medical/Surgical Inpatient Admissions. (pg. 12). To better understand the impact of these admissions by age group, please share disaggregated data with raw numbers by age ranges (55-64, 65-74, 75-84, 85+), for these top diseases.**

Top 10 Diseases for BWFH Med/Surg Inpatient Admissions, by Age Grouping (Including RPPR)											
	Addiction/Chemical Dependency	Osteoarthritis	Congestive Heart Failure	Septicemia	Urinary Tract Infection	Breast Cancer	Pneumonia Including Aspiration Pneumonia	Chronic Obstructive Pulmonary Disease	Degenerative Spine and Disc Injury	Diabetes Mellitus	Total
FY 2017	**347**	**707**	**288**	**200**	**202**	**160**	**189**	**240**	**200**	**123**	**2,656**
55-64	251	198	40	30	34	83	27	55	69	45	832
65-74	83	298	56	53	48	59	39	84	80	37	837
75-84	11	182	73	48	61	14	52	59	44	29	573
85+	2	29	119	69	59	4	71	42	7	12	414
FY 2018	**359**	**718**	**294**	**222**	**204**	**123**	**203**	**194**	**221**	**133**	**2,671**
55-64	265	226	46	51	40	75	41	47	79	40	910
65-74	84	316	53	49	34	34	46	58	83	55	812
75-84	7	158	81	68	60	12	53	63	44	26	572
85+	3	18	114	54	70	2	63	26	15	12	377
FY 2019	**369**	**826**	**304**	**250**	**227**	**187**	**219**	**214**	**192**	**136**	**2,924**
55-64	273	282	50	44	43	86	47	70	82	51	1,028
65-74	85	363	52	59	50	67	46	59	64	44	889
75-84	11	159	73	77	67	31	59	54	35	27	593
85+	0	22	129	70	67	3	67	31	11	14	414

Footnotes:

These numbers will not tie to initial submission for two reasons:

1. The question only asked for a breakdown for ages 55-85+, which excludes patients between the ages of 0-54, as well as the unknown population
2. Routine post procedure recovery patients (RPPR) were excluded from the original submission. While these patients are billed as an outpatient they require extended recovery time causing them to be recovered in a bed. RPPR patients are included in the table above better represent the patient population requiring bed needs

9. **In the application, you state that "Addiction/Chemical Dependency" is the top disease group for BWFH Medical/Surgical Inpatient Admissions. Provide the total bed days by month (including total number of beds) for FY17-19? (pg. 12-13) How will the new inpatient capacity and clinical staffing address this need?**

   BWFH's Addiction beds are licensed Medicine beds, and as such, Medicine Inpatients will sometimes occupy these beds during times of Medicine capacity constraints. By increasing Medicine Inpatient capacity, we are ensuring continued access to the eight (8) beds for Addiction patients. Please refer to the following tables for Bed Days for specific months between FY17 and FY19.

Med/Surg Beds	125
Addiction Beds	8

Med/Surg IP Bed Days Vs. Addiction Bed Days													
Med/Surg IP Bed Days	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total Bed Days
FY 2017	2,734	2,899	3,919	3,012	2,804	3,216	2,854	2,993	2,886	2,932	3,212	3,063	36,524
FY 2018	2,995	2,917	2,961	3,232	2,897	3,478	3,231	2,965	3,059	2,898	2,897	2,940	36,470
FY 2019	3,370	3,061	3,422	3,458	3,041	3,414	3,393	3,449	3,055	3,563	3,437	3,193	39,856
Addiction Bed Days	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total Bed Days
FY 2017	226	239	219	230	211	233	236	218	226	234	239	237	2,748
FY 2018	234	239	220	227	205	223	242	245	230	243	223	218	2,749
FY 2019	215	215	227	189	215	219	224	225	230	233	233	212	2,637

10. **The Proposed Project would like to expand medical/surgical inpatient capacity with the addition of 78 beds at BWFH. How was the patient panel need and/or additional data used to determine that 78 beds will meet the BWFH's future demands? (pg. 14)**

The analysis of future demand for inpatient beds supported the need of 78 new beds as described in the response to 10.a below. In addition, the number of beds and services in the building was dictated in part by certain limiting factors of the existing campus. The clinical programs that required the most attention for expansion/relocation (MRI, Endoscopy, Observation and inpatient) fit well within what can be accommodated within the proposed building envelope. Due to the constraints of the existing campus as further described below, the BWFH building addition will be built over a portion of the existing building. The height and size of the clinical building addition is restricted by the load capacity of the existing building as well as the topography of the site. There also is a substantial ledge in the ground, some of it quite close to the existing building that cannot not be excavated. In addition, the campus has many grade changes limiting circulation options for siting a new building. For instance, an attempt was made to accommodate a larger floor plate for the upper floors, but the building protruded into the driveway and created a low overhang.

a. Describe with data the need methodology used to determine the number of additional beds needed. What factors were considered to make this determination? For example, how you factored in ED boarding, transfers, volume/utilization patterns, patient origin, etc., what data sources were used and years examined for projection.

Brigham Analytics looked comprehensively across each individual Medical and Surgical service performed at BWH and BWFH. For each service, Brigham Analytics reviewed market growth forecasts for Eastern MA geographies and applied these growth rates to the historical volume of BWH and BWFH. If historic performance for a service did not align with what the market forecasted, adjustments were made accordingly. Finally, Brigham Analytics evaluated the overall inpatient bed needs across the system, identifying services that are currently provided at BWH, that could be cared for at the BWFH's community setting in the future.

[Observation unit]

11. Currently, patients receive observation-like services in BWFH's Post-Anesthesia Care Unit (PACU), interventional radiology, recovery rooms and inpatient floors. (pg. 14). The Proposed Project includes a permanent 8-bed observation unit at BWFH. To better understand the need addressed by the proposed observation unit, please provide:

a. **In FY17-19, overall, how many unique (number) patients and visits received observation-like services in PACU, interventional radiology, recovery rooms, and inpatient floors? What was the minimum and maximum per month in the years examined? (a graph may be provided to show monthly data)**

The 8-bed observation unit will meet the recovery needs of patients after surgery, interventional nephrology and radiology procedures. Through innovative treatments and the removal of procedures from the list that CMS previously required to be performed on an inpatient basis (Medicare Inpatient-Only List), BWFH surgeons and proceduralists no longer need to send patients recovering from certain procedures to the inpatient floor for admission. However, the recovery time for these procedures is longer than a standard day surgery or outpatient procedure; therefore, the current PACU and interventional nephrology and radiology recovery spaces are inadequate for accommodating these patients' longer

recovery and post-procedure needs. Because these patients require longer recovery, caring for these patients in the current setting causes delays in OR throughput as the recovery areas remain full. This results in inefficient care and increased wait times for subsequent procedural patients waiting in the pre-procedure areas. In addition, the current setting is not ideal for patients with extended recovery times as it is loud and difficult to accommodate family or support persons for long periods of time.

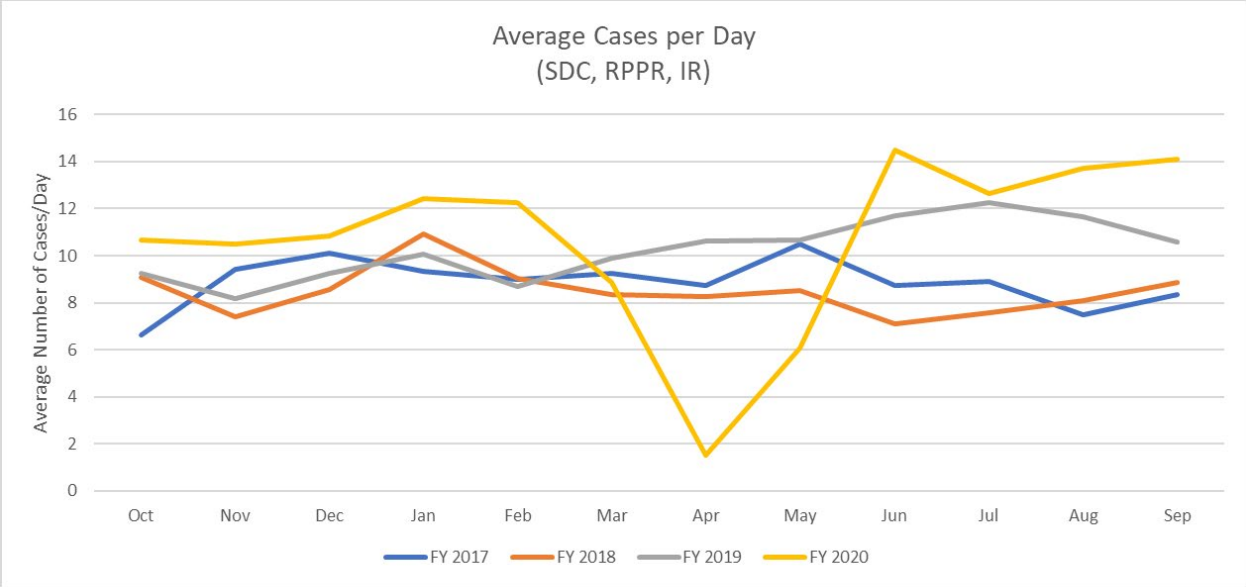
BWFH has a robust same day discharge program for patients undergoing simple mastectomies, robotic prostatectomies, and knee and hip arthroplasties.[1] These procedures were removed from the Medicare Inpatient-Only List over the past few years (prostatectomy and knee arthroplasty were removed as of CY2018 and hip arthroplasty were removed in January 2020), and the recovery locations for these procedures has evolved over time as care teams have become more efficient and patient expectations have changed. Initially, these same day discharge patients recovered in the PACU, were sent to the inpatient floor for their additional recovery (including the activities listed in question 14a) and were discharged the same day. As care delivery has evolved, these patients no longer move to the inpatient floor and instead stay in the PACU until they are discharged home later the same day.

In addition, for surgery patients, the 8-bed observation unit will be used for patients recovering from gynecological and endocrine (thyroidectomy) day surgery procedures that require greater than 4 to 6 hour lengths of stay to ensure successful voiding trials and no bleeding complications from the procedures.

The interventional nephrology and radiology services will utilize the 8-bed observation unit for patients recovering from kidney, liver, and lung biopsies that require 75-minute or greater lengths of stay to ensure that post-procedure complications do not occur. Finally, physicians will continue to evaluate other procedures appropriate for the observation unit as technologies and protocols continue to evolve.

Each year the number of extended stays in PACU continues to rise. The following graph shows demand for the observation unit based on average cases per day each month that require 75+ minutes of recovery time. Excluding FY20 due to COVID impact, the average number of surgical patients grew from 8 to 11 per day between September, FY17 to FY19. This is before the exponential growth seen in the same day mastectomy and prostatectomy programs (which began in early FY20).

[1] The Same-day discharge program is not a static list of procedures as BWHF surgeons continuously evolve discharge protocols.



Footnote:
- Data includes patient types of Sam Day Discharge (SDC) and Routine Post Procedure Recovery (RPPR)
- Services included in above graph are: Gynecology, Surgical Oncology (Mastectomies, Thyroidectomies). Robotic Prostatectomies, Hip/Knee Arthroplasties, and Interventional Radiology
- The dip in volume for April and May of FY 2020 is due to the COVID-19 Pandemic

12. Inpatient beds are utilized for observation patients who do not require admission, which contributes to increased wait times for ED boarders. (pg. 14)

a. In FY17-19, how many patients utilized inpatient beds who could have been in an observation unit?

The following chart shows patients in inpatient beds who could have been cared for in an observation unit.

	FY 2017	FY 2018	FY 2019
6 North	536	399	358
6 South	757	451	389
7 North	408	391	447
7 South	363	400	721
Total	**2,064**	**1,641**	**1,915**

Footnotes:
- Data is reflective of Routine Post Procedure Recovery (RPPR) and Admit to Observation (ATO) patient types
- All encounters listed in the table have a Length of Stay (LOS) of 1 day or less

b. Behavioral health (BH) patients can end up boarding in med/surg beds. For a clearer understanding of the patient population used to calculate the need for the proposed project. Please provide data about in FY17-19, how many of these patients were behavioral health patients who were boarding in inpatient beds? Will any of these patients be impacted by the proposed project?

Sometimes a Behavioral Health patient waiting for an appropriate Psychiatry bed cannot be boarded in the ED for an extended period of time due to a variety of factors. If they must go to an inpatient bed, they are admitted to the Medicine Service. Therefore, BWFH is unable to determine which patients on the medical unit are psychiatry boarders. There will be no impact to these patients by the proposed project as this unit is not an alternative to a medicine inpatient unit.

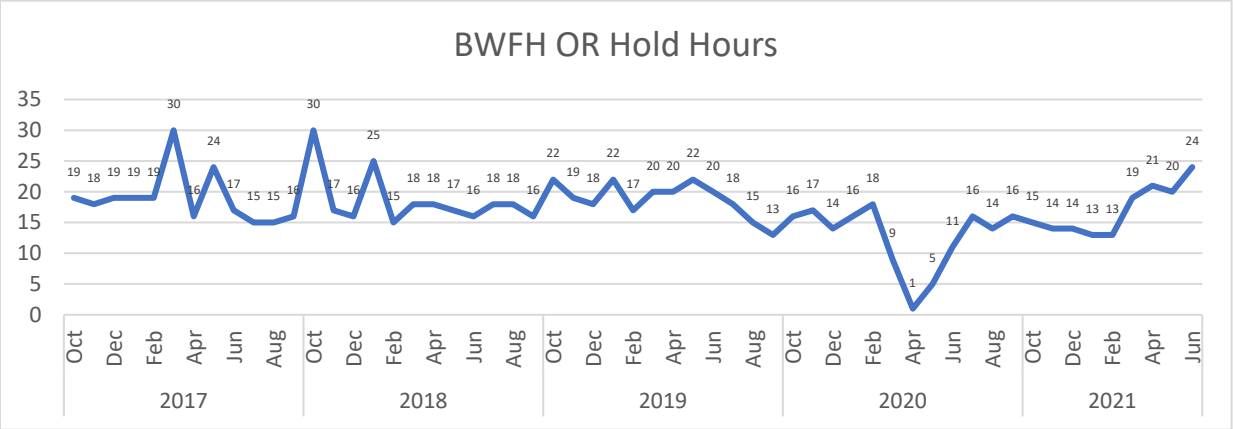
i. **In FY17-19, how many observation patients were from BWFH ED and how many were from BWH ED? Provide average, median and minimum/maximum. Please address how BH patients are represented in these numbers or not.**

As this question refers to the proposed Extended Recovery Observation Unit (ERU) which has the specific purpose of caring for post-procedural patients, there would be zero (0) patients from the BWH or BWFH ED. The proposed ERU is not planned to be utilized for observation patients originating from the ED.

c. **After the completion of the Proposed Project (Observation unit), how will observation units impact utilization of BWFH's PACU, interventional radiology, recovery rooms and inpatient floors for observation like services? (e.g., by how much will inpatient beds be used for observation)**

i. Surgical and interventional nephrology/radiology patients will go through normal acute recovery (Phase I recovery) in the respective areas (PACU for Surgery and recovery for IR/IN) and then transition to the Observation unit after the acute recovery phase has ended.

ii. PACU: The observation unit will most notably impact BWFH's PACU throughput and prevent the operating rooms from going on hold because there are not enough PACU beds available for patients leaving the operating room. When the PACU goes on hold, patients need to start the recovery process in the operating room, which is a more costly and less efficient location to deliver this post-operative care. The following graph (BWFH OR Hold Hours) highlights the number of hours each month that patients are held in the operating room to be recovered when this care could be delivered in the PACU.



The observation unit will allow patients with longer recovery times to transfer to this space for safe, efficient, and effective care while those patients needing PACU level of care will be able to move directly to the PACU from the operating rooms without delay.

iii. IR/IN: Similar to the surgery PACU, IR/IN will benefit from greater patient throughput and less delays with the ability for the observation unit to recover patients with longer lengths of stay.

13. **How was it determined that an 8-bed unit would be the appropriate number to address need and alleviate some of the PACU, interventional radiology, recovery rooms, and inpatient capacity constraints? (pg. 14)**
    a. **Describe the factors that were considered to determine this need and provide data to support the need analysis, including methodology and data sources.**
    Due to existing campus conditions as detailed in response to question #10, the proposed building had to be designed fit within a specific envelope. The building envelope is what was most appropriate for the site and it was determined that it could accommodate an 8-bed observation unit.

14. **A 'substantial' group of post-procedure mastectomy, prostatectomy and gynecological patients receive pre-discharge services. (pgs. 14-15)**
    a. **Provide a definition for pre-discharge services.**

    Pre-discharge services in the observation unit may include the following:
    1. Assessing/monitoring vital signs, level of consciousness/sedation level, pain level, post-op complications (bleeding, infection, DVT/PE, cardiac/resp/neuro problems, reaction to anesthesia), dressings.
    2. Communicating changes/issues with interdisciplinary team.
    3. Medicating for pain, nausea/vomiting, hypo/hypertension, respiratory issues etc.
    4. Providing extensive education to patient and caregivers for patients leaving with drains, catheters, dressings, extensive medication lists/changes, pain, awareness of potential post-op complications. This work requires quiet, patient and family friendly

areas that the current surgery PACU and Interventional nephrology/radiology recovery space do not provide.

5. Providing emotional support to patients with potentially recent cancer diagnosis, major lifestyle/quality of life changes (incontinence, impotence, body changes, e.g. loss of breasts/uterus). This work requires quiet, patient and family friendly areas that the current surgery PACU and Interventional nephrology/radiology recovery space do not provide.
6. Coordination of care with PT/OT/MD teams for needed care and post-discharge needs including medical supplies, obtaining medications, home services for PT etc.
7. Ambulating and toileting patients.
8. Many of the surgical patients that will receive care in the observation unit will be same day discharge program patients undergoing simple mastectomies, robotic prostatectomies, and knee and hip arthroplasties. This patient population requires extensive education of the patient and their loved ones to ensure safe home care to avoid readmissions or other complications.
    a. Mastectomy patients work with nursing and physical therapy on lymphoedema avoidance exercises
    b. Robotic prostatectomy patients work with nursing for extensive drain and catheter teaching
    c. Total arthroplasty patients (knees and hips) have a full ambulation and walking evaluation with physical therapy and must meet certain criteria before being successfully discharged

b. What percent of patients in the phase one recovery areas could have been cared for in an observation unit?

An average of 22% of patients could have received care in an observation unit.

c. **Most of the listed post-procedures are not included under Total Patient Encounters, top 10 diagnosis codes (Appendix 3A, Table 4). Provide data on patient encounters for post-procedure mastectomy and prostatectomy by age ranges (55-64, 65-74, 75-84, 85+).**

The volume in the following table includes patients of surgeons whose primary work is prostatectomy and breast cancer surgery.

Age Grouping	FY 2017	FY 2018	FY 2019
	Patient Encounters	Patient Encounters	Patient Encounters
55-64	454	505	551
65-74	442	520	617
75-84	187	196	270
85+	49	35	39
Total	**1,132**	**1,256**	**1,477**

Footnote:
- Data is reflective of RPPR and SDC patient types
- Volume is representative of Surgical Oncology and Urology services

[Endoscopy]

15. **The Application states that BWFH does not have an endoscopy room to accommodate advanced procedures, and these services have been provided in the Hospital's operating rooms one half-day per week or transferred to another hospital able to perform advanced endoscopy. To better understand the distinction related to advanced endoscopy and the need that is met by the proposed project, please provide the information below. Age-related issues are cited as a driver of demand for increased endoscopy services, so please provide data by age ranges (55-64, 65-74, 75-84, 85+). (pg. 17)**

    a. **Describe what are considered 'advanced procedures' at MGB facilities.**

    Advanced endoscopy includes Endoscopic Retrograde Cholangiopancreatography (ERCP) and Endoscopic ultrasound (EUS) because they require specialized equipment not used in standard endoscopy.

    ECRP is a procedure that combines the use of a flexible, lighted endoscope with x-ray pictures to examine the tubes that drain the liver, gallbladder, and pancreas. The endoscope is inserted through the mouth and gently moved down the throat into the esophagus, stomach, and duodenum (part of the small intestine) until it reaches the point called the ampulla, where the tubes from the pancreas (pancreatic ducts), and liver and gallbladder (bile ducts), drain into the duodenum. ERCP can treat certain problems identified during the procedure. If an abnormal growth is seen, an instrument can be inserted through the endoscope to obtain a tissue sample for further testing (biopsy). If a stone is present in the bile duct, the doctor can usually remove the stone with instruments inserted through the endoscope. A narrowed bile duct can be opened by inserting a small wire-mesh tube or plastic tube (called a stent) through the endoscope and into the duct. Advanced endoscopists use ERCP for treating stones that are trapped in the main bile duct; blockage of the bile duct; jaundice, which turns the skin yellow and the urine dark; cancer of the bile ducts or pancreas; pancreatitis (inflammation of the pancreas); and various other pancreas, liver, gallbladder, and bile duct conditions.

    EUS is an endoscopic procedure that examines the lining and the walls of the upper and lower gastrointestinal tract by combining endoscopy and high frequency ultrasound. EUS is also used to study and, when indicated, take tissue samples of the internal organs and

other structures that lie next to the gastrointestinal tract, such as the gallbladder, bile duct, pancreas, and lymph nodes.

b. Describe the additional needs of a procedure room equipped to perform "advanced endoscopy."

The advanced endoscopy proceduralist requires fluoroscopy to complete these procedures, usually with a fixed fluoroscopy machine. In addition, equipment booms are most often installed in these rooms to ensure patient and staff safety with the numerous pieces of equipment used. These booms allow for superb cord management and ability for the team to move the equipment boom to the location that best meets the needs of the patients' procedures.

The advanced endoscopy procedure room will perform Endoscopic Ultrasound (EUS) and Endoscopic Retrograde Cholangiopancreatography (ERCP) cases. Anesthesia is required for both with a Certified Registered Nurse Anesthetist (CRNA) and/or an Anesthesiologist (MD) present for the case. Therefore, this procedure room needs to have the infrastructure to accommodate this anesthesia support. EUS cases are completed under monitored anesthesia care (MAC) and ERCPs are completed under general anesthesia. Specifically, this room requires medical gases (oxygen, nitrous oxide, medical grade air, suction), and enough room to house a full anesthesia machine and Omnicell. Additional space is also required for this room as the teams bring a patient into the room in a stretcher beside the procedure table. The patient needs intubated on that stretcher and then turned over into the prone position on the procedure table.

c. Where were patients referred from/clinical origin for advanced endoscopy procedures?

For advanced endoscopic procedures, orders are only written for BWFH if there is access to an OR for the procedure as BWFH doesn't have the ability to perform these in a routine manner and most of these procedures are performed on inpatients. The majority of outpatient referrals for advanced endoscopy procedures are from our gastroenterologists within the Brigham system and Dana Farber Cancer Institute (DFCI). Direct referrals from primary care physicians do occur but are not as frequent.

d. To more fully understand overall endoscopy need at BWFH, provide wait times (day from request/order for procedure to first appointment available) for both routine and advanced endoscopy procedures for FY17-FY19 at BWFH and include methodology for calculations.

To calculate wait times for routine and advanced procedures, BWFH first used the definition of advanced endoscopic procedures found in Question 4.A.i. to break the procedures out into "Advanced" and "Routine." For each grouping, BWFH then found the difference in days between when the procedure was ordered (the order date) and the first date that the procedure was scheduled (the initial scheduled procedure date).

Average Wait Time for Endoscopy Procedures (Days)				
Age Group	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2017 - 2019 Avg**
Routine Procedures				
55-64	105	83	68	86
65-74	103	76	68	82
75-84	83	70	62	71
85+	41	33	30	35
Total	**96**	**75**	**62**	**77**
Advanced Procedures				
55-64	24	29	17	24
65-74	11	15	15	14
75-84	20	28	10	18
85+	12	21	13	15
Total	**20**	**22**	**16**	**20**

Footnotes:
- Average wait time is calculated in days
- Routine procedure wait time is inclusive of annual screening procedures, which may have significantly longer lag times between order date and schedule date

e. How many advanced endoscopy procedures have been provided in the BWFH operating room during FY17-19? How many patients needing advanced endoscopy procedures were transferred to BWH or another facility during FY17-19? Complete the table below.

BWFH ORs have been used for procedures that require C-Arm access (largely ERCPs) as they are the only access point BWFH has for these procedures. The chart below enumerates the patients who had an advanced endoscopy procedure in the BWFH OR or had to go to BWH due to limited access at BWFH to perform the procedure. This does not represent the full complement of patients who could have been cared for at BWFH but were excluded from inpatient admission or transfer because they would need this service. There is not a way to capture that historical data.

Advanced endoscopy procedure location	# of Advanced Endoscopy Procedures Completed					
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Total
BWFH operating room						
Age						
55-64	21	31	32	27	19	130
65-74	18	31	45	31	38	163
75-84	11	14	28	20	20	93
85+	5	2	6	4	3	20
Total	**55**	**78**	**111**	**82**	**80**	**406**
Transferred to BWH for Procedure						
Age						
55-64	2	14	6	6	10	38
65-74	5	3	3	13	20	44
75-84	17	2	10	8	14	51
85+	2	6	4	8	10	30
Total	**26**	**25**	**23**	**35**	**54**	**163**

Footnotes:
- BWFH Operating Volume is based on time in which the OR was available, as there was limited access and the volume is not neccisarily based on demand
- FY 2021 data is YTD through July

i. **How many ambulance transports were there in FY19? What is the estimated anticipation time to see an impact/change? By how much do you anticipate reducing ambulance transports? (pg.32)**

All transfers to/from BWH for advanced procedures require ambulance transports. The total FY2019 transfers of 23 patients, required a total of 46 transports between BWH and BWFH. Although ambulance transports will most likely not be reduced to zero due to other patient factors that necessitate performing the procedure at BWH, the vast majority of transfers should be eliminated through the Proposed Project.

16. **Table 6 provides a list of BWFH Endoscopy visits by percentage for top disease groups. (pg. 18) Please provide disaggregated data and raw numbers by age ranges (55-64, 65-74, 75-84, 85+) for these top disease groups to better understand demand.**

Top 10 Diseases for BWFH Endsocopy, by Age Grouping											
	Screenings and Follow-Up Encounters	Esoophageal Disease Including GERD	Benign Neoplasm	Abdominal Pain	Other Gastrointestinal Diagnosis	Gastrointestinal Hemorrage	Diseases of the Anus/Rectum	Inflammatory Bowl Disease	Anemia	Intestinal Obstruction and Diverticular Disease	Total
FY 2017	**1,849**	**393**	**1,015**	**122**	**201**	**138**	**197**	**122**	**72**	**169**	**4,278**
55-64	975	141	421	52	84	37	95	49	15	58	1,927
65-74	617	146	394	44	60	46	64	48	22	64	1,505
75-84	238	75	172	22	43	36	28	23	22	36	695
85+	19	31	28	4	14	19	10	2	13	11	151
FY 2018	**2,960**	**417**	**135**	**182**	**168**	**132**	**56**	**84**	**66**	**46**	**4,246**
55-64	1,373	155	58	84	58	46	27	26	15	13	1,855
65-74	1,131	172	45	70	67	44	15	36	20	18	1,618
75-84	422	68	27	27	30	29	13	19	22	9	666
85+	34	22	5	1	13	13	1	3	9	6	107
FY 2019	**2,976**	**349**	**37**	**202**	**155**	**101**	**65**	**83**	**90**	**35**	**4,093**
55-64	1,326	124	11	97	58	35	20	23	22	7	1,723
65-74	1,170	129	14	73	46	24	26	41	38	13	1,574
75-84	454	73	7	29	43	38	14	16	25	11	710
85+	26	23	5	3	8	4	5	3	5	4	86

Footnote:
This table does not reflect the full use of Endoscopy service (patients with age range between 0-54 are excluded)

17. **From FY17 (2,928, 40.4%) to FY19 (4,542, 62.7%) there has been an increase in endoscopy services for screenings and follow-up encounters. Please explain this increase. (Appendix 3A, Table 5)**
    a. **Were these screenings referred to BWFH from BWH or other MGB facilities?**

The gastroenterologists enter their procedure notes, including coding, in a propriety program called Provation. There are multiple options when selecting the indication for a procedure. During this time there was a change in coding that resulted in a standardization of "screenings and follow-up encounters" instead of "benign neoplasm." As the data highlights, the total patient encounters across the three years was flat. (FY17—7,242, FY18—7,181, and FY20—7,244).

[MRI]

18. **BWFH operates one 1.5T MRI that is fully utilized. (pg. 3) To better understand the need for additional MRI services, what is the current MRI use by specialty for FY17-19?**

The following table provides a summary of the scans ordered by specialty.

Radiology Volume by Ordering Specialty			
BWPO Department	**FY 2017**	**FY 2018**	**FY 2019**
Medicine	1,629	1,740	1,667
Orthopedic Surgery	828	1,056	933
Emergency Medicine	511	677	703
Neurology	440	495	420
Surgery	267	270	307
Anesthesiology	109	112	142
Physical Med and Rehab	129	142	138
Neurosurgery	93	118	67
Obstetrics/Gynecology	40	36	31
Psychiatry	14	11	13
Radiation Oncology	6	3	0
Dermatology	6	0	2
Radiology	3	5	1
Undefined	2,000	2,539	3,207
Total	**6,075**	**7,204**	**7,631**

Footnotes:
- Volume that falls under the Undefined category represents exams ordered by practitioners in the community not affiliated with a BWH/BWFH/BWPO clinic, as well as exams ordered by MGB practitioners and the broader community who are not mapped to a specialty for the purposes of this report
- Of the orders that fall into the Undefined category, 1,816 orders were made by BWFH providers who are not assigned a specialty (513 in FY 2017, 602 in FY 2018, and 701 in FY 2019)

In Table 18, please note that the category listed as "Undefined" represents exams ordered by practitioners in the community not affiliated with a BWH/BWFH/BWPO clinic, as well as exams ordered by MGB practitioners and the broader community who are not mapped to a specialty for purposes of this report.

19. **As stated in the Application, BWFH does not currently provide 3T MRI services. Patients either rely on the 1.5T MRI unit or wait for a referral to a 3T MRI scanner elsewhere in the MGB system, including BWH. To better understand how the 3T MRI impacts the patient panel need, please provide:**

    a. **Over the past year, by diagnosis, how many patients were referred elsewhere for a 3T MRI? How many of those were repeat scans after having had a 1.5T scan (within a less than 6 month period).**

    There is no specific data source to answer this question fully and comprehensively as BWFH is unable to know where all patients may have ultimately received a 3T scan at another facility. What is known is that, between July 2020 and June 2021, 2,258 scans at BWH sites were ordered from a BWFH site. Accordingly, the volume referred to BWH is not a complete picture of how many patients would be referred to BWFH for a 3T scan.

Table 19.A. provides detail on the 2,258 3T MRI scans that were ordered by providers working within the Faulkner when the test was ordered.

Table 19.A

Diagnosis Description	Count
Degenerative Spine and Disc Injury	458
Ungroupable	244
Headache/Migraine	158
Musculoskeletal Injury - Shoulder/Elbow/Upper Arm	144
Musculoskeletal Injury - Lower Leg/Foot/Ankle	109
Nonspecific Clinical and Laboratory Findings	79
Musculoskeletal Injury - Hand/Wrist/Forearm	78
Screenings and Follow-Up Encounters	76
Nonspecific Back and Neck Pain	73
Osteoarthritis	73
Prostate Cancer	64
Musculoskeletal Injury - Knee	59
Neurologic Disease - Other	58
Dizziness	42
Musculoskeletal Injury - Pelvis/Hip/Femur	38
Other Kidney, Bladder and Genitourinary Disease	31
Dementia and Cognitive Disorders	28
Pancreatic Disease	28
Nonspecific Musculoskeletal Pain	27
Other Endocrine Disorders	18
Other Musculoskeletal Injuries and Conditions	18
All Other	355
Total	**2,258**

Footnote:
-"Ungroupable" is made up primarily of imaging for Prostate related diagnoses

MGB data collection systems do not capture data on repeated scans performed on a 3T following a 1.5T scan.

b. Provide the average wait times for patients to receive a referral for 3T imaging services for FY17-19.

- FY17: This data for FY17 Q1 was not automated and as a result is not available. For FY17 Q2-Q4 OP Median wait time is 9.7 days (time of order to completion of exam)
- FY18: OP Median wait time is 8.3 days (time of order to completion of exam)
- FY19: OP Median wait time is 7.9 days (time of order to completion of exam)
- FY20: OP Median wait time is 8.8 days (time of order to completion of exam)

- FY21 (through June): OP Median wait time is 10.3 days (time of order to completion of exam)

i. **What is the optimal wait time?**

BWFH determines wait time based on the 3rd available appointment for MRI services. BWFH targets an optimal wait time to be within 3 days. Depending on the patient's clinical acuity, a wait time of seven days is the outer limit of clinically acceptable.

For inpatients and ED patients the optimal wait time is completion of the scan on the same day for both clinical need as well as to decrease length of stay.

c. Describe anticipated impact of additional 3T MRI units in the MGB system (e.g., Assembly Row) to meet current need?

It is not anticipated that the additional 3T MRI units in the MGB system will have an impact on the need for a second MRI unit at BWFH as those units are addressing demand within other parts of the system. To be clear, the need for the 3T unit at BWFH is three-fold: (1) to ensure continued access for all patients (and particularly for inpatients and ED patients) in the event of unexpected downtime or scheduled maintenance on the one existing MRI unit at the hospital, (2) to meet projected MRI imaging demand at the hospital as the current unit is at capacity and the additional 78 inpatient beds will increase capacity demands; and (3) to provide access on-campus to 3T imaging and avoid the need to transfer inpatients and ED patients.

20. The application states that the increased inpatient capacity in the proposed project will be a driver of future demand. After the Proposed Project has been completed, please provide projection on scan volumes for each 1.5 and 3T MRIs by specialty. (pg. 21)

a. Describe how existing 1.5T MRI imaging services be utilized after the Proposed Project is complete, including how it will be utilized to meet the needs of other patients?

Using data from BWH, BWFH projects that 59% of ER volume and 54% of inpatient volume will be performed on the 1.5T scanner, and 41% of ER volume and 46% of inpatient volume will be performed on the 3T scanner.

Through the addition of a 3T MRI, providers will be able to factor in clinical appropriateness as well as availability when determining the type of MRI scanner that will best meet the needs of each patient. Utilization by specialty is not expected to change except those conditions which currently require a 3T scanner will be performed on campus. With a 3T unit on campus, BWFH will be able to perform prostate imaging in a more patient-friendly manner, seizure imaging for brains, cardiac MRI, MR Angiography, and small part extremity because of finer image resolution and better image quality.

While 3T is the standard for some diagnoses, 1.5T continues to be appropriate for a range of patients due to its lesser magnetic field. By expanding access and shifting certain cases to the new 3T machine, those patients requiring a 1.5T (e.g., personal

equipment, monitoring needs, safety concerns, implants) will experience more timely access from the expanded imaging capacity on campus.

i. **For 1.5T MRI imaging services, what percentage of total scans do you anticipate for diagnostic, staging and follow-up purposes?**

BWFH does not track the reason for scans based on these criteria. As a result, it is not possible to project how many scans will be diagnostic, staging or for other follow-up purposes.

b. **For 3T MRI imaging services, what percentage of total scans do you anticipate for diagnostic, staging and follow-up purposes? (pg. 34)**

BWFH does not track the reason for scans based on these criteria. As a result, it is not possible to project how many scans will be diagnostic, staging or for other follow-up purposes.

c. What are the projected hours of operation for both MRI units?

The existing MRI operates from 6a-11p seven days a week.

BWFH currently plans to operate two scanners from 6a-9p with shared staff, and one between 9p-6a to reduce staffing for overnight inpatient and emergency department needs. Similar to CT, the staffing for the overnights will be enough to cover 1 scanner. The techs, working with the Radiologist who protocols the cases, will determine the best scanner to perform the exam.

d. **What systems do you have in place to support appropriate imaging and reduce low-value and overutilization of imaging?**

Physician orders for MRI tests are placed through electronic Radiology Order Entry forms in Epic, which utilize a programmed clinical decision support mechanism to guide physicians in determining the most appropriate exam based on a patient's medical history and indication. Specifically, upon order placement in the EHR, a validation check is performed using the American College of Radiology's ("ACR") "ACR Select" tool. Founded in 1923, the ACR represents nearly 40,000 diagnostic radiologists, radiation oncologists, interventional radiologists, nuclear medicine physicians and medical physicists. The ACR is guided by its core purpose to serve patients and society by empowering members to advance the practice, science, and professions of radiological care, and through its core areas – economics, informatics, education, quality and safety, research, and membership value — is leading the transition to value-based, patient-centered care.

ACR Select is a comprehensive, national standards-based, clinical decision support database that uses evidence-based decision support for the appropriate utilization of all medical imaging procedures. More specifically, the tool delivers Appropriate Use Criteria ("AUC") authored by leading medical specialty societies directly into the EHR workflow at the point of care. This capability improves performance and efficiency by guiding clinicians to the right exam and reducing the number of exams needed to reach a

diagnosis, and ultimately empowers quality improvement efforts through improved patient care and population health.

Finally, it is important to recognize that most private payers require pre-authorization for high cost imaging exams to validate appropriateness, control costs and regulate utilization

1b. Public Health Value/Health Equity

21. It is cited that the number of older adults in the United States and the Commonwealth is expected to increase into the future, with the 65+ age cohort representing approximately a quarter of the Massachusetts population by 2035.

There are additional assertions in the Application that the Proposed Project is needed to meet demand for the aging population. For example, it is stated that the demand for medical/surgical inpatient services is expected to increase with the aging population. Medical/surgical services are often related to the treatment of age-related chronic diseases/conditions. (pg. 12) Also, the prevalence of many gastrointestinal ("GI") conditions increases with age, and the higher rates of GI diseases among this older population are driving demand for endoscopy services. (pg. 17)

a. What are BWFH's plans to ensure age-appropriate care is provided to these patients?

There are a number of ways that the Proposed Project supports the safest, most appropriate care for BWFH patients. As detailed in the response to question #27, there are processes in place to identify special needs of older adults. Additionally, each BWFH direct care employee is responsible for completing age related competencies each year, based on the population they serve. To further enhance understanding and skill related to the special needs of older adults, a new training program specifically related to Alzheimer's Disease and Related Dementias is currently being rolled out. It will cover recognizing signs of the disease, management and treatment, and the relevant law. This training will be for all providers and nurses. These programs, combined with the physical layout of the new inpatient beds, will provide a superior environment and experience for older adults.

BWFH plans for endoscopy services also ensure appropriate care. As mentioned elsewhere in this document, the larger, more private space supports the presence of patient companions. Having loved ones involved in care promotes understanding of patient education and successful adherence with periprocedural instructions. It also has been associated with patient safety.

Even healthy older adult patients are at increased risk for complications during procedural sedation due to physiologic changes inherent in aging. Those with additional comorbidities require further considerations. Optimal sedation plans for these patients often include use of agents that require an anesthesiologist for administration as well as additional equipment for administration and monitoring. Within the current setting, the amount of space appropriate for anesthesia participation in these cases is very limited. The Proposed Project has planned a layout that would significantly broaden access for patients requiring anesthesia care to optimize their safety including the older, vulnerable GI population.

b. The Application states that observation units are appropriate for care alternative for the aging population and can provide settings for standardized evaluations (social work, geriatric assessments, medication reconciliation, etc.). (pg. 29). For other components of the Proposed Projects, what steps will be taken to ensure appropriate care for the aging population?

- As stated in the response to question 28, this enhanced space may facilitate holistic geriatric assessment including "functional status, gait, balance, cognition, social support, goals of care, polypharmacy and advanced directives..."
- Aspects of the environment intentionally cultivated by the Proposed Project, including the size of care areas allowing for privacy and less distraction as well as the use of natural light support the most appropriate care for this population. As an example, natural light may help reduce the risk of delirium which can be related to falls, lack of adherence with medication plans and other care.
- Family involvement is also facilitated by the Proposed Project's setting and may contribute significantly to patient safety and ability to engage successfully in the plan of care. Families can provide information that strengthens geriatric assessment as well as understanding of education. Their presence can reduce isolation which contributes to mood and mental status.

c. How do you ensure that treatment is in line with patients' health care goals as patients age?

- **Geriatric assessment** considers the whole patient in a way that is targeted for this age group. It requires a multidisciplinary process to build a coordinated plan aimed at maximizing health and quality of life. The type of assessment completed around endoscopy or imaging may focus on a targeted aspect of the patient that relates to specific diagnosis, treatment and comorbidities. However, it considers that the goals of care of a patient may be quite different as they age.
- For many patients in this demographic, **family participation** supports building a care plan that is in line with the patient's goals.
- A multidisciplinary team including case management can support this as well as they can provide **a link between the hospital-based care team and the patient's community care team**. The connection with care providers who are more longitudinally familiar with a patient can strongly support individualizing care to be in line with the patient's care goals.

22. Will there be any modifications to the hospital setting to ensure it is age-friendly? For example, how were variations in patient mobility, vision, hearing and cognition factored into the design of the building to make it accessible, safe and convenient for all users. Also, what is the plan to address transportation concerns to BWFH by this population?

The building is designed to provide a welcoming, age-friendly setting, as well as to be accessible, safe, and convenient for all users, by incorporating the following elements:

- Arrival: A convenient and safe patient drop off area is close to the front door, and staff are posted to provide extra assistance as needed. Wheelchairs will be available at the entrance.
- Easy Navigation: Upon exiting elevators, patients have a minimal number of steps or turns to arrive at destination points. Additionally, intuitive wayfinding and digital systems will be included to assist with patient flow.
- Assistance: As patients arrive on each floor, there is access within a few steps to receptionist who can assist with information, accompanying patients to their destination, and wheelchairs, if required.
- Lighting: The lighting will further be used to assist patients and families with navigation, while being intentional to not produce glare which can further limit visibility or distort perception.
- Physical Space: Corridors are spacious and uncluttered to assure ample space for patients to maneuver with mobility assistance devices. Wide doors (minimum of four feet) are provided at all patient areas to allow for movement of various wheelchair widths and other mobility devices.
- Perception: The interior finishes have been selected specifically to assist those with vision challenges. In particular, corridor flooring has a matte (non-polished) finish in order to reduce glare and deep contrasts, which lead to depth misperceptions. Additionally, Alzheimer/dementia issues with perception have been considered in the floor tile design and color.
- Patient Rooms: Patient rooms are equipped with sliding doors that are easy for patients of all mobilities to operate and maneuver through. Ceiling lifts are provided in all patient rooms to assist in transferring patients between bed and chair or stretcher safely. Translating service devices are provided in all patient care rooms. Attention has been paid to separate sound movement between patient care rooms to assure patient privacy, reduce noise and make it easier for patients to hear conversations with physicians and staff.
- Space for Family: All patient care areas have comfortable accommodations for family members so that family can accompany and assist as required. Family will be able to stay in the inpatient room with the patient as needed.
- Furniture: All pieces have been thoughtfully selected with regards to comfort and ability for patients to sit and rise with ease, safety, and stability.
- Collaboration: The inpatient room design was a collaborative effort. A life size mockup of a room was built. Clinical and support staff participated in exercises to design the room to minimize fall risk, maximize patient comfort and family access. The Patient and Family Advisory Council also reviewed the room plan.

  To address transportation, the expansion plan includes building an accessible ramp to the campus. It is currently difficult to access campus for those with mobility issues. Additionally, the hospital continues discussions with the MBTA about access to the hospital as there is only one bus line that runs sporadically. The hospital runs a shuttle to the Longwood Medical Area and to the Forest Hills train station. Patients are welcome to use those shuttles to access the hospital. The campus expansion will include increased wayfinding and signage between the Forest Hills station and the hospital, as well as a dedicated shuttle drop

off area and shelter. This will be safer and more comfortable for staff and patients. Lastly, Lastly, the Proposed Project includes an expansion of parking for the Hospital's valet service, making it easier for patients and families to take advantage of the no-charge valet service. The campus expansion includes an expansion of parking access for valeted vehicles, making it easier for patients and families to take advantage of the no-charge valet service.

a. How will staffing be adjusted to support this population? (e.g., staff for escorting patients, clinical staff trained in dementia, staff with expertise in dementia and/or aging)

The Hospital will have information desk staff at all patient entrances. These staff are available to provide directions, address concerns, and provide escort or transport (including a wheelchair) as needed. All patient-facing department staff currently complete age-related competencies as part of their annual education. Additionally, an Alzheimer's Disease and Related Dementias (ADRD) Training program is in development and should be launched later this year. This will be available to all nursing and provider staff to increase staff knowledge and expertise around aging and age-related disorders.

23. The application notes commitment to population health management (PHM) strategies aimed to ensure high quality outcomes and improved patient experience. (pg. 35-36). To better understand how these PHM strategies will impact patients, please expand on:

a. What metrics are used to assess quality outcomes and patient experience?

i. Please share data to demonstrate how the strategies have improved outcomes and patient experiences, including methodology and data sources.

The following are examples to demonstrate how PHM strategies have improved outcomes and patient experiences.

PROMS: The PROMs (Patient Reported Outcomes Metrics) program seeks to improve the care of individual patients through deeper and more meaningful engagement in the patient's reported symptoms, functional status and quality of life. The ideal example of this approach is demonstrated by a 2017 study by Basch et al that collecting PROMs (in this case, for chemotherapy oncology patients) extended patients' life expectancy. While dramatic, this illustrates the effect that Mass General Brigham believes PROMs will bring participating providers and patients. To support this, Mass General Brigham has initiated an internal incentive program based on providers achieving desired levels of paired pre- and post-operative patient reported outcomes data for patients having knee, hip and back surgery. A local example of such an approach is the use of the Preoperative PROMIS 10 physical function score to predict opioid dependence after lumbar fusion surgery.

Shared Decision-Making Program: Over the years, MGB has received patient and clinician feedback on the utility of several decision-aid tools, used to assist patients when making decisions to pursue complex therapies, interventions and procedures:

Patient feedback:

- "Thank you very much for the web site you sent me, I read its catheterization section with great interest. I understand the process better."
- "He gave me info to feel more comfortable with the decision. I felt having something to take home and review with my family, was a good way for me to ensure I was making the right decision and understanding my options."

Clinician feedback:

- "Using the decision aids helps to document preferences asked in a standardized way in the chart."
- "This has completely changed my conversations with patients about their back pain—from one driven by fear to one focused on what we can do to help with their pain."

Measurement of Shared Decision-Making Program, generally, has been based on usage: MGB tracks how many patients are prescribed a decision aid by hospital, specialty area and provider. MGB can also track how many patients open the decision aid and how many complete the tool, if active on the patient portal (Patient Gateway). MGB's plan for measuring the success of the Patient Driven Decision Aid Ordering program includes clinical outcomes measurements, such as increase in screening numbers, intervention effectiveness, patient responsiveness, and by patient and provider focus groups. The goal of the Shared Decision-Making Program is to ensure that patients are well informed, meaningfully involved in decision making and receive treatments that reflect their goals and preferences.

Integrated Care Management Program (iCMP): The iCMP has been formally evaluated for cost and utilization impact upon Medicare, Medicaid and commercial health plan patients. PHM has published the 12 months impact results for the Medicare population in Health Affairs, May 2017 and is in the process of publishing the impact results for Medicaid and commercial health plan patients. The iCMP has achieved a significant reduction in TME compared to similar patients not enrolled in iCMP:

- Medicare: Patients enrolled > 13 months have a 27% reduction in TME
- Commercial: Patients enrolled for 7-12 months: 45% reduction in TME
- Medicaid: Patients enrolled for 7-12 months: 21% reduction in TME

The Applicant generates an iCMP dashboard with targets that is reviewed on a quarterly basis with local iCMP leadership and bi-annually with the broader Performance Advisory Committee. Examples of metrics include length of time from patient identification to iCMP to enrollment and percentage of iCMP patients with a care plan. Local leadership meets weekly with the care team managers to review iCMP metrics and patient cases to ensure progress of patient goals. PHM monitors the percentage of iCMP patients who graduate and meet all of their goals. On average, patients are enrolled in the iCMP for 28 months, with some patients enrolled for greater than 5 years.

b. How will the Proposed Project specifically utilize these strategies to improve outcomes and/or patient experiences particularly for the aging population?

It is important to recognize that PHM strategies typically are implemented in the physician office setting and are not directly utilized by the hospital. The Applicant is committed to the use of PHM strategies. As such, the efficacy of the strategies is tracked at the MGB level.

24. The Proposed Project will continue to offer programs including virtual visits to patients (pg 36). Given that technology may not be accessible to all patients (e.g., due to tech literacy, limited internet access), How is BWFH specifically working to ensure equitable access to this platform (and/or alternative option for those experiencing barriers)?

MGB has widely adopted the appropriate use of virtual visits for patients in ambulatory settings. BWFH is supporting this mode of access by assessing the status and need for access to technology for patients following discharge. Currently, there is a pilot program to screen patients on one inpatient medicine unit prior to post discharge appointment scheduling, ensuring that they have a device with a working camera, access to stable internet, access to patient Gateway, and know or have someone at home to assist with successfully logging on into their appointment. By having this information, BWFH can help patients with access to post discharge care based on their needs and additional accommodations. Goals of this pilot include:

- Understanding the digital access and literacy needs of patients across the spectrum of care is critical.
- Ensuring all modes of care for patients are safe, effective, patient-centered, timely, efficient and equitable, whether upon hospital discharge or with virtual care.
- Virtual care equity matters if it helps achieve health equity.

The results of this pilot will be used to expand learned best practices across all inpatient settings, including the additional inpatient beds planned for this expansion.

Patients will continue to have access to in-person visits due to preference or medical necessity.

25. Several quality metrics measuring patient satisfaction, access and quality of care are proposed to assess the Proposed Project's impact. To better understand the specific measures proposed,

a. Provide description of numerators and denominators for all metrics (excluding ones that already have a definition in the Application).

Expansion of Medical/Surgical Inpatient Beds

1. **ALOS in the ED:** This measure reviews the amount of time a patient has to wait in the ED for a medical/surgical inpatient bed prior to being admitted to BWFH. Due to increased inpatient bed capacity, ED ALOS will be reduced.

   Measure: This measure will not have a numerator/denominator. This measure will calculate the average length of stay time based on the difference between the Arrival Date/Time and the ED Departure Date/Time for all ED patients that were admitted to an inpatient medical/surgical unit.

2. **Bed Request to Patient Departure:** This measure demonstrates when a patient has been identified by the provider and when the patient actually leaves the ED. This is an even more sensitive indicator than ALOS. Factors that affect this measure include the following: inpatient bed

is still occupied; bed assigned to bed ready time (i.e., inpatient bed needs to be cleaned); and bed ready to ED departure time (i.e., work that occurs between ED to inpatient clinicians). With increased inpatient bed capacity, there will be additional ready, clean and available inpatient medical/surgical beds, and therefore bed request to patient departure time will be reduced.

Measure: This measure will not have a numerator/denominator. This measure will calculate the average time based on the difference between the IP Bed Request Date/Time and ED Departure Date/Time for all ED patients that were admitted to an inpatient medical/surgical unit

3. **Hospital Acquired Pressure Injuries (HAPI):** BWFH will review the incidence of HAPI across its medical/surgical patients. Due to increased medical/surgical inpatient beds, resulting in timelier care in the appropriate setting, patient outcomes will improve.

Measure: This measure is collected in a random surveillance survey, therefore census reflects the census on the surveillance day. Numerator = number HAPI; denominator = total med/surg census.

Establishment of Observation Unit

1. **OR Holds:** The Proposed Project seeks to ensure timely patient movement across the peri-procedural areas to maximize patient flow for BWFH patients. Patients moving to the Observation Unit will allow a more rapid turnover of post anesthesia care unit ("PACU") beds for patients leaving the operating room.

Measure: The numerator for this metric is the total number of minutes from 'ready to recovery' to 'out of room" for all cases within a period of time and the denominator for this metric is the total expected amount of hold hours based on volume (2.5 minutes/case) for all cases within a period of time.

2. **ALOS in the PACU:** This measure reviews the amount of time a patient is in the PACU prior to discharge. Day surgery patients with a longer recovery period before discharge will move to the Observation Unit, decreasing the amount of time a patient recovers in higher intensity and cost PACU.

Measure: This measure will not have a numerator/denominator. The measure will be the PACU LOS for day surgery patients discharged from the Observation Unit compared to a baseline of PACU LOS for day surgery patients discharged from PACU.

Relocation and Expansion of Endoscopy

1. **Wait Times:** The Proposed Project seeks to ensure timely access to endoscopy services for BWFH patients.

Measure: This measure will not have a numerator/denominator. The measure will be the amount of time elapsed between when colonoscopy was initiated for scheduling in EPIC to the date of the colonoscopy procedure.

2. **Facility 7-Day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy:** BWFH will review the rate of risk-standardized, all-cause, unplanned hospital visits within 7 days of an outpatient colonoscopy among Medicare FFS patients aged 65 years and older, utilizing National Quality Forum ("NQF") Measure # 2539.

Measure: The Applicant will collect and provide data related to NQF Measure # 2539 as

follows: Numerator = Unplanned hospital visits within 7 days of a qualifying colonoscopy; and Denominator = Colonoscopies performed for Medicare FFS patients aged 65 years and older.

3. **Appropriate Follow-Up Interval for Normal Colonoscopy in Average Risk Patients:** BWFH will review the total number of patients receiving screening colonoscopy and the percentage with the appropriate follow-up interval as specified in NQF 0658.

   Measure: The Applicant will collect and provide data related to NQF Measure # 0658 as follows: Numerator = Patients who had a recommended follow-up interval of at least 10 years for repeat colonoscopy documented in their colonoscopy report; and Denominator = All patients aged 50 years and older receiving screening colonoscopy without biopsy or polypectomy. To be reported by age and race/ethnicity.

Addition of 3T MRI Imaging

1. **Wait Times:** The Proposed Project seeks to ensure timely access to MRI services for outpatient, inpatient and ED requests, as well as timely reporting of results.

   a. **Outpatient Wait Times:** Time interval (in days) from when the case was initiated for scheduling in EPIC to the next available outpatient appointment.

      Measure: This measure will not have a numerator/denominator. The measures will be (a) Median number of days between ordering elective MRI and imaging test performed; (b) Median number of hours from the completion of a patient's MRI service to finalization of radiology report.

   b. **Inpatient/ED Wait Times:** Time interval (in minutes/hours) between the exam order generation to completion of the exam.

      Measure: This measure will not have a numerator/denominator. The measures will be: (a) Median time between ordering inpatient/ED MRI and imaging test performed; (b) Median time from the completion of a patient's MRI service to finalization of radiology report.

2. **Important Finding Alert ("IFA"):** BWFH will review the percentage of MRI scans that triggered an IFA that the radiologist conducted a critical value report.

   Measure: The Applicant will collect and submit data as follows: (1) Numerator = Number of IFA; Denominator = Number of MRI exams performed; (2) Numerator = Number of critical value reports conducted; Denominator = Number of IFAs.

3. **Imaging Efficiency Measures:** As is required for payment determinations, the Applicant will report on one Centers for Medicare and Medicaid ("CMS") Outpatient Imaging Efficiency ("OIE") measure that is publicly reported within the Hospital Outpatient Quality Reporting Program.

   Measure: The Applicant will collect and provide the following: Numerator: = Number of patients who had MRI of Lumbar Spine with a diagnosis of low back pain without claims-based evidence of prior antecedent conservative therapy; Denominator = Number of patients who had MRI of Lumbar Spine with a diagnosis of low back pain on the imaging claim.

a. **For metric #3 on pg. 39 on "Follow-up Interval for Normal Colonoscopy…"confirm that you will have identified and use current cohorts of colonoscopy patients.**

Yes, BWFH will use current identified cohorts of colonoscopy patients. Colonoscopy patients with abnormal pathology results are entered into Epic by the GI physicians and PCPs via a Health Maintenance (HM) Modifier that includes when the patient is due to return for a repeat colonoscopy. Administrative teams are able to run a report out of Epic that pull together all patients due back within a certain timeframe.

26. **There are several initiatives and campaigns described in the application that focus on eliminating health and healthcare disparities. (pg. 41). To better understand the planned impact of these programs, please provide additional information regarding**:

a. **What health/health care disparities exist relating to this Proposed Project and how does the Proposed Project plan to leverage these initiatives to address these disparities?**

The disparities in health outcomes for Black and Latinx individuals relative to White individuals are well known and documented both nationally and when exploring the data included in BWFH's Community Health Needs Assessments. This is evident across the care spectrum and the Proposed Project will continue to participate in and advance the ongoing health equity campaigns being led by MGB. Additionally, BWFH will continue to lead a robust community health program that seeks to increase care access in areas of need.

b. **The Application lists initiatives focused on enhancing workforce diversity. What are the 'diversity' characteristics that are considered? Provide data on the diversity (based on your definition e.g., race, ethnicity, gender/gender identity, veteran status, disability status) by current faculty, clinical staff, non-clinical staff, and trainees. (pg. 44)**

BWFH is committed to continuously improving the diversity of our staff as measured by race/ethnicity, gender, veteran status, and age. Presently, BWFH's employees identify their race as follows: 55.4% White, 26.8% Black, 8.7% Hispanic/Latino, 7.3% Asian, 1.3% two or more races, and .5% represent Native Hawaiian, American Indian, and Undisclosed. 76.2% of employees are female and 23.8% are male. Additionally, about 1-2% of staff self-identify as veterans. With respect to generational diversity, 44.8% of employees are Millennials, 30.7% are Generation X, 22.1% are Baby Boomers and the remaining 2.4% of employees represent the eldest and youngest generations.

c. **As cited in the Application, the literature has shown that patients' trust, satisfaction, utilization of services, and involvement in decision-making have been reported higher when the patient and physician share the same race or ethnicity. What efforts have been put in place or will be implemented to address patient-physician discordance and to make BWFH more welcoming place for person of color among both patients and staff? (pg.44)**

An area of great opportunity to improving diversity is in leadership staff. BWFH is actively working to increase diversity in its leadership team to better reflect the staff they oversee and patients they serve. As of 2021, all recruitments for director level and above require a

prescribed recruitment and selection process that starts with a Search Committee that is composed of a diverse panel of staff. There is a similar process in place for faculty and trainee recruitment. Annual strategic goals include specific targets for growth of leadership staff from diverse backgrounds.

Additionally, through MGB's United Against Racism strategy, MGB recently set a goal of increasing racial diversity on the MGB and Institution Boards by 30% over the next five years. With respect to hiring, promoting, and retaining leaders of color, MGB's UAR goals are to:

- Establish hiring and promotion metrics & build diverse leader talent pools
- Generate transparency through development/sharing of diversity dashboards/ scorecards
- Diversity goals in executive compensation

Factor 1c. Operate Efficiently and Effectively

27. As stated above, the Applicant discusses the demand for inpatient, endoscopy and MRI services because of the aging population that can be attributed to increased prevalence of such conditions such as chronic and GI diseases.

a. **In addition to what you have stated above in response to questions 21 and 22, please explain how the Proposed Project will improve the care experience specifically for older adults to ensure that the care being delivered aligns with their goals (as they age) and in an age-appropriate manner, including discharge planning and coordinating transitions in care?**

All BWFH patients are screened for delirium and dementia, beginning with their presentation to the emergency department (ED); for example, ED RNs complete a Delirium Triage screening question. If positive, the provider will receive a "best practice alert (BPA)" in the EHR to complete a brief confusion assessment method (bCAM) assessment. Following their transition to the inpatient setting, BWFH has implemented a Delirium Prevention care bundle aimed at patients with or at high risk for delirium; some interventions include:

- Suspend overnight vitals (review by attending MD)
- Evening dose of melatonin offered (reviewed by attending MD)
- Evening care: warm beverage, lights down, soft music
- Frequent reorientation: by nursing and/or volunteer staff, ask for family photos, familiar objects in room, update in-room information boards
- Early ambulation
- Address sensory impairments (vision correction, hearing aids, interpreters as needed)

In preparation for discharge, all patients, particularly the most vulnerable, are assessed for home safety and, when indicated, evaluated by physical therapy, BWFH care coordination RNs, and social work to assure adequate support services are in place within the home to execute the post-discharge care plan.

b. Will Gerontologists be available to work with aging populations and/or will there be an integrated patient-centered care model that includes gerontology? If so, at what point of care?

i. Will any geriatric-specific clinical protocols be followed to ensure timely delivery of geriatric services?

Although BWFH does not have a dedicated geriatrics consult service, BWFH's Director of Hospitalist Medicine and Associate Chief of Medicine, Dr. Erin O'Fallon, is a gerontologist and has implemented several process improvement initiatives and care protocols to assure BWFH provides the most up-to-date care for the Hospital's older population. For example, Dr. O'Fallon implemented the delirium prevention care protocol outlined above (#27 a).

28. The Application mentions that the provision of care in an efficient, protocol-driven observation unit reduced the duration and inherent risks of hospitalization in elderly patients. How specifically has this happened? Describe any protocols and/or processes implemented in other observation units in MGB system to ensure care will be delivered efficiently? (pg. 29)

Hospitalization carries numerous risks for elderly patients that may be reduced by efficient, protocol-driven care with the shortest possible hospital stay. A central example is the use of Enhanced Recovery After Surgery (ERAS) protocols. Aimed at reducing perioperative stress, ERAS pathways have been shown to safely reduce length of stay in elderly patients and are utilized in MGB institutions with many of the patient populations planned for the Observation unit including breast, prostate and arthroplasty patients. Post-operative ERAS components include multimodal, opioid reducing analgesia, fluid optimization, post-operative nausea/vomiting prophylaxis, early removal of drains including urinary catheters, early ambulation and thromboprophylaxis, early resumption of enteral diet, criteria-based discharge and patient/family education. ERAS pathways are already in use, however the Observation unit environment would be more conducive to their optimal execution due to additional space and privacy.

Less constricted, quieter space of an Observation setting will allow for enhanced physical therapy, social work, and geriatric assessment. Comprehensive assessment of functional status, gait, balance, cognition, social support, goals of care, polypharmacy and advanced directives benefit from the Observation setting compared to the acute phase PACU. Additionally, family presence is facilitated by the Observation setting and may contribute significantly to these assessments as well as the extensive education required for same day discharge patients after joint replacement, prostatectomy, mastectomy, thyroidectomy, and vascular procedures.

The benefit of efficient, protocolized care like ERAS pathways with the briefest, safe stay has distinctive benefit to elderly patients. Enabling provision of protocolized care outside the inpatient floor could support reduction in the risk of delirium, pressure injury, falls, infection, adverse drug effects and mood disturbances for elderly patients.

29. The Applicant refers to F.1.b.ii, population health management strategies, including care coordination and care delivery alternatives. (pgs. 46; 35-36)

a. Please further explain how these strategies will used for this Proposed Project to improve efficiency and continuity and coordination of care.

There are a few ways the Proposed Project is expected to reduce barriers to efficiency, continuity and coordination of care:

- Within the periprocedural trajectory, the Observation unit allows for a reduction in care transitions. Previously, a patient who required extended recovery or monitoring would be sent to the inpatient floor, even for same day discharge. They would be exposed to an additional care setting and have to move through an additional handoff between nursing and provider teams. Each handoff represents an additional opportunity for the introduction of error as well as added time spent in the hospital simply due to being discharged from one unit and admitted to another. Each new setting represents an additional risk for infection, delirium etc. The Observation unit would allow patients to remain within the one setting with the same care providers and without a handoff to a new team.
- Within their broader trajectory, the Observation unit makes available a broader range of services within the community. This reduces time spent waiting, transportation and financial barriers for patients.
- The addition of the inpatient beds will improve efficiency and continuity. Currently the majority of BWFH's postprocedural patients who need to stay overnight receive their care on the surgical inpatient unit. This unit frequently experiences 100% occupancy Monday through Friday with frequent overflow onto an adjoining med/surg unit. Increasing emergency department volume and the resultant increase in inpatient occupancy clearly demonstrates the need for expanded medical surgical inpatient beds to accommodate both surgical and medical patients in a patient centered care setting. Additionally, the flow from the Emergency Department will improve as patients will have more timely access to appropriate beds and care. Finally, patients who are eligible and consent to the BWFH transfer program from BWH ED will be able to easily be transferred without having to tell them they now have to wait for a BWFH bed or not being able to offer the option at all.

b. How does case management apply to this Proposed Project?

Case management has particular importance for patient populations planned for the Observation Unit. These patients have substantial post-operative needs after discharge requiring seamless coordination between hospital care and post-disposition, community care. Mastectomy, prostatectomy and joint arthroplasty patients being discharged the same day may need services set up for nursing care of tubes, drains or dressings, physical therapy, lab draws or home health aid services to ensure safe recovery outside the hospital. There may also be a need for medical equipment including a wheelchair, special bed or raised toilet seat, to safely adapt the home environment. They also work with patients to coordinate transportation if there are needs beyond a personal vehicle. They also support understanding and navigation of insurance coverage including criteria assessment for services, equipment or transportation and patient's awareness of

potential responsibilities for these. Though much of this starts preoperatively, there may be some needs that are not possible to assess until the patient's postoperative condition is evaluated. The Observation unit provides a supportive environment for their working with patients, families and the rest of the interdisciplinary care team to ensure the plan of care after discharge is unified.

Case management is an integral part of the interdisciplinary care team on every inpatient unit. The majority of the medical surgical patients who are admitted to the hospital have complex care needs and need a coordinated discharge plan for their post hospital course. Every inpatient is assessed within twenty-four hours of admission by case management and planning for discharge is started immediately. The inpatient population are frequently elderly, have comorbid clinical conditions and need intermediate care settings such as rehabilitation or a temporary skilled nursing facility before going home. Case management also navigates and coordinates the complex discharge planning for those patients going home who require supportive services such durable medical equipment, oxygen, visiting nurse or physical therapy in their residence. A coordinated, individualized discharge plan of care for every patient optimizes healthcare resources and facilitates a patient's timely return to their home.

1e. Community Engagement

30. BWFH has both a Patient and Family Advisory Council and a Community Engagement and Advisory Committee. How representative of the PSA community and proposed patient population is the composition of the Council and Committee of the Patient Population (e.g., demographics—age, race/ethnicity, gender/gender identity, veterans status, disability status; patients with dementia; people with young children)? (pg. 42)

At this time, demographic information is not formally collected for the Community Engagement and Advisory Committee or the Patient and Family Advisory Council. Therefore, we are unable to provide an analysis of current representation in relation to how it compares to the PSA community and proposed patient population.

The Community Engagement and Advisory Committee is an open committee comprised of over 30 members and organizations. Members of the BWFH Community Engagement and Advisory Committee are from a variety of sectors, including community residents, education, healthcare, non-profit, social service, government, among others. The committee membership is based on community partnerships, priority goals as identified in the CHNA and goals of the CHIP, as well as being open to all others interested in serving and having a voice at the table. The members represent a diverse array of constituents including those of all races and ethnicities, gender/gender identities, socio-economic status, neighborhoods, ages, disabilities, diseases or conditions and all family types.

The Patient and Family Advisory Council consists of current and former patients of BWFH. To date, there has been no demographic information catalogued. Further, the Council has seen a decline in membership beginning before the pandemic. The hospital has just embarked upon a new, comprehensive recruitment plan to include a revised application process that will capture key demographic information. It is anticipated that the revised application will go live quarter one of

calendar year 2022. The goal of implementing this tool is to ensure that we can accurately recruit and retain Council members to reflect the hospital community we serve and track progress.

1f. Competition

31. The Applicant mentioned that specific efforts were recently implemented to continue to reduce costs, positively impacting the Massachusetts healthcare market. (pgs. 22)

a. Please describe the recent specific efforts.

i. **Can you provide data quantifying cost savings achieved through these efforts at BWFH?**

The Applicant continuously evaluates opportunities to reduce costs of care delivery. Some recent examples include:

- Aggressive Supply Chain work to standardize products across service lines and institutions to achieve economy of scale
- Standardize or eliminate contracted services as appropriate across campuses
- Minimize the variety of patient specific specialty items, e.g. prosthetic joints, that are available for use
- Standardize EMRs and related IT systems across MGB
- Centralize core back office support functions
- Reduce third party reference laboratory test send outs by utilizing expertise and technology across campuses

BWFH has participated in all of the above initiatives. Additionally, BWFH has instituted alterations to care paths to improve patient experience and contain costs. The same day discharge program for select surgeries as referenced throughout this document is one major initiative. Also, BWFH and BWH continuously evaluate availability of secondary services at BWFH to provide lower cost options for our community.

b. It is stated that an additional way the Applicant is impacting costs is through population health management programming. (pgs. 22-23)

i. **Please share data to demonstrate quantifying cost savings achieved through these programs at BWFH.**

As described in previous responses, PHM strategies are implemented by MGB across the system and therefore cost savings are not typically attributed to individual locations or facilities.

Program Name	Evaluation of Impact
Adult Commercial iCMP	$916.35 or 24% lower [p=0.05] Total Medical Expense per member per month over the 12 months post enrollment driven by reductions in ED visits (13% fewer ED Visits over 12 months post [p=0.08]) and hospitalizations (14% fewer Hospitalizations over 12 months post [p=0.20]).

Adult Medicaid iCMP	$310.51 or 12% lower Total Medical Expense per member per month over 12 months post [p=0.07] driven by reductions in ED visits (20% fewer ED Visits over 12 months post [p<0.01]) and hospitalizations (16% fewer Hospitalizations over 12 months post [p=0.07]).
Adult Medicare iCMP	Medicare ACO: $125 average pmpm based on 24 months of post data

c. It is noted in the application that the Proposed Project builds upon population health management programs. Please provide an example(s) how this Proposed Project will build on the current PHM programs.

It is important to recognize that PHM strategies typically are implemented in the physician office setting and are not directly utilized by the hospital. The Applicant is committed to the use of PHM strategies. As such, BWFH will participate in PHM strategies to the extent applicable in the hospital setting.

d. How will you track and evaluate decreases in healthcare spending and cost savings that you state will result from implementation of the Proposed Project?

BWFH will continue to track and evaluate cost savings from the Proposed Project as described in response to question 31.a. and b.

FACTOR 2

Cost Containment

32. **The BWFH Transfer Program allows ED clinicians at academical medical centers (AMCs), including BWH, to directly admit qualifying patients to BWFH inpatient units. (pg. 53) To better understand this program, please expand on its history and impact.**

a. When did this program begin?

The transfer program began approximately 10+ years ago.

b. How are you assessing if patients are receiving care in appropriate settings (AMCs or community)? Provide any data demonstrating this and how patient preference factors into this decision.

Patients are evaluated in BWH ED by a physician team for clinical appropriateness for admission to BWFH /a community setting. Once the patient is deemed appropriate (by utilizing the Exclusion criteria referenced in Question #5 and included as Attachment #5.b. The patient is asked if they will consent to being transferred to BWFH. Patients that do not consent to transfer remain at BWH for their care.

BWFH assesses appropriateness of cases transferred from BWH. Medicine leadership retrospectively reviews each case that was retro-transferred back to BWH for AMC level of care or because the appropriate clinical intervention was not available at BWFH. This

data is utilized to determine if system process changes need to be implemented to avoid retro-transfer potential for certain clinical presentations. Table 32.B. indicates the number and percent of transfer patients who were transferred back to an AMC (in this case BWH).

Table 32.B.

Fiscal Year	Number of Transfers	Patients Transferred back to AMC	% of Patients Transferred Back to AMC
2017	695	8	1%
2018	783	37	5%
2019	1,078	43	4%
2020	1,296	48	4%
2021	764	29	4%
Total	**4,616**	**165**	**4%**

Footnotes:
FY17 data only represents Q3 and Q4 of the fiscal year
FY21 data represents Q1-Q3

c. How have cost of care savings been tracked? Provide data demonstrating impact on cost of care.

BWFH does not track cost of care dollar savings. Instead, the system measures the success of the transfer program and patient disposition.

Public Health Outcomes

33. Table 3 lists the top 10 diseases for BWFH Medical/Surgical Inpatient Admissions (pg. 12), some of which can be impacted by prevention and management efforts. Please describe the strategies BWFH's is utilizing to help prevent hospitalization for these patients.

a. Are there any evidence-based health promotion/disease management interventions/programs implemented at BWFH to address these top diseases? What programs are being implemented in your primary care settings at BWFH?

i. Describe measures used to evaluate these programs.

BWFH, in partnership with Brigham Health, provides a breadth of services aimed at reducing the morbidity of several chronic diseases outlined in Table 3 (pg. 12). Some specific programs and initiatives include:

ADDICTION MEDICINE: BWFH offers a full spectrum of services for patients in different phases of recovery from addiction. For example, patients admitted to BWFH in crisis from addiction-related complications have access to a full addiction consult medicine team, including addiction psychiatry for those patients with a dual-diagnosis; moreover, we have a unique level-4 inpatient addiction recovery unit for detoxification of medically complex patients. For outpatients, we have several levels of addiction service, including an opiate addiction / suboxone programs (including a "bridge" clinic to allow immediate access to care), an addiction partial hospital program, and a maintenance naltrexone program for alcohol and opiate addition.

CONGESTIVE HEART FAILURE: BWFH partners with BWH to offer medically complex CHF patients an intensive in-home care and monitoring program, called the Integrated Care Management Program (iCMP). The goal of iCMP is to provide in home support to improve patient quality of life and reduce the need for acute, inpatient care. The iCMP team consists or RNs, pharmacists, social workers, and community health workers. iCMP has reduced the number of hospital admissions and total medical costs for patients in the program.

DIABETES: Patients in crisis from poorly controlled diabetes often use costly emergency services and have a poor connection to longitudinal diabetes care. BWFH Endocrinology launched a program in 2017, called the Emergency Department Diabetes Rapid-referral Program (EDRP), where patients presenting to the BWFH ED with poorly controlled diabetes are scheduled to see a BWFH endocrinologist within 36 hours. The program has captured many diabetes patients without prior consistent care and has lowered the average Hgb A1C, a diabetes control marker, in this population.

34. **While the number of unique patients and inpatient visits have decreased over the years, the average length of stay has increased partly due to higher complexity cases transferred from BWH, aging population and increased chronic disease prevalence. (pg. 9-10)**
    a. **Are there any evidence-based health promotion interventions/programs implemented at BWFH to address chronic disease prevalence?**
        i. **Describe measures used to evaluate these programs.**

In addition to the programs listed above in #33, BWFH continues to adopt innovative strategies to reduce the morbidity from poorly treated chronic diseases. For example, BWFH is launching a novel virtual heart failure optimization program, called "IMPLEMENT-HF", using BWH CHF specialists and BWFH pharmacists to identify inpatients at BWFH with a heart failure diagnosis (even if not admitted for a cardiac problem) to assure they are on the best evidenced-based CHF treatment regimen and, if not, this team will recommend modifying their home medications to match best CHF practice. In addition, BWFH's orthopedic surgery department leads an effort to intervene and treat osteopenia and osteoporosis in all BWFH patients presenting with fragility fractures – this assures that patients start on therapy for the underlying conditions leading to acute care hospitalization and are aimed at reducing future events.

Delivery System Transformation

35. **The application discusses membership in the "Boston Collaboration" and Social Determinants of Health (SDoH) screening efforts. (pg. 56)**
    a. **How is the intensity of follow-up determined for SDoH needs and circumstances?**

Responding staff (e.g., Community Health Workers, Social Workers) leverage their relationships with patients and clinical experience to assess appropriate triage based on patient needs. Additionally, MGB's SDOH screening tool asks patients if they would like help immediately and those affirming are prioritized.

    b. **Patients are referred back to their PCP for further assistance with SDoH needs. Describe this referral mechanism. What is the mechanism for patients within the MGB system and those with PCPs outside the MGB system?**

MGB's SDOH screening and referral program is currently only for patients with an MGB PCP. The SDOH screening results feed directly into the EHR for PCPs to view during appointments. Based on need, PCPs can make a referral to a community health worker or other support staff at the practice. Additionally, all patients who screen positive for a health-related social need are provided with Tip Sheets that are auto-generated as part of the after-visit summary. These Tip Sheets provide patients with up-to-date listings of resources available in the community.

i. **For patients without a PCP, how are their SDoH needs met? What is the referral process for these patients?**

Patients without a PCP may be connected to care and coverage by a Certified Application Counselors. Once connected to care, a SDOH assessment will be assigned. Patients without a PCP may also receive assistance with various SDOH through MGB's community benefit programs. Lastly, in response to COVID-19, MGB launched community based mobile testing and vaccine vans that also screen individuals for SDOH and can provide tip sheets with resources available and food assistance.

36. The Applicant states the Applicant and BWFH have been thoughtful about the implementation of a universal SDoH screening program, recognizing that there is limited capacity for community-based organizations that patients will be "linked" to for services and understanding a staggered approach to implementation is best, so that available community resources are not overwhelmed by resources.

a. Describe the staggered approach taken at BWFH and how it has impacted patients. (pg. 55)

i. **What is the implementation timeline of the staggered approach? Is there a prioritization process? Where in the process are you currently?**

MGB currently screens all Medicaid ACO patients across all practices, and 23 practices have implemented universal screening.

Additional practices and facilities will begin universal screening based on a prioritization approach that leverages CHNA and internal data to identify the communities with highest need so that those communities are rolled out first. As these sites are assessed for success/impact, resources will be allocated to support rollout at those additional sites. Lastly, MGB continues to be mindful of community resources available to accommodate the influx of referrals that would occur as a result of increased screening.

ii. **How do you address the needs for patients who are unable to get linked to organizations/services, particularly if there is a more immediate SDoH need?** The provider or SW/CHW who assisted the patient in making the referral will notify the patients PCP of the need for ongoing follow-up in order to affirmatively link the patient to the resource. Additionally, the SW/CHW will continue to work with the patient to access the services needed.

To this end, BWFH has implemented Social Work and Case Management in the ED to connect more patients to the community needs that are identified. BWFH

continues to evaluate the resources needed to support this function and provided additional resources as demand has increased. Similarly, BWFH continues to increase the resources through Home Hospital to provide care in the community.

iii. **Define "linked" to services.** BWFH defines "linked" as patients who have been referred to or connected with the resource as determined by the SDoH screening.

b. **Describe the timeline for the implementation of the universal SDoH screening program at BWFH.**

Please refer to the response provided for 36.a.i.

37. SDoH screens are conducted via iPads. Is there assistance available to those not comfortable with the technology at BWFH? (pg. 47)

a. Is this screening tool available in other languages? If yes, which languages?

The staff at BWFH are available to provide assistance to those who may not be comfortable with technology. Further, the interpreter services department is available to assist those with language access needs by offering interpretation in over 240 language via telephonic interpreting, 10 languages for in-person interpreting and 36 languages on the interpreter on wheels video interpreting program. SDOH Screening Tool is available in English, Spanish, Portuguese, Chinese, Arabic, and Russian. This is based on the most prevalent languages among MGB MassHealth patients. There is always a staff member present when a patient is using these tools and is available for technological assistance.

38. Describe efforts at BWFH to increase participation from public payers and underserved populations including from neighboring communities (e.g., Roxbury, Dorchester, Mattapan, Quincy).

BWFH determines the need for community health work based on long term partnerships, community input as well as internal and external reports. BWFH's community health program focuses on low-income neighborhoods and populations with the greatest needs. While BWFH serves the neighborhoods closest to the Hospital, such as Jamaica Plain, Roslindale and Hyde Park, it has expanded its reach into Mattapan and Dorchester due to their need level. Because of BWFH's deep roots in the community and trusted partnerships, BWFH has been successful in identifying and reaching neighbors most in need through networking and word of mouth. This work has allowed BWFH to grow its presence in the community, thereby furthering its reputation as an access point for health care services.

Since March 2020, BWFH's primary focus has been COVID and ensuring an equity-based response. Much of that work has consisted of free, accessible community COVID testing with SDOH screening and food distribution. This system of community outreach provides the community with needed testing, connection to services, and immediate access to needed resources. Additionally, BWFH's food insecurity programming includes partnerships with many community organizations in order to provide navigation services needed for the complex landscape of food access in the City. Moreover, through these partnerships, BWFH is working towards a system in which residents have greater access to free or low-cost food and are connected to more long-term supports, such as SNAP application assistance, community refrigerators, and social service education. This work takes place directly in the community with BWFH's community partners and is free to ensure the greatest accessibility and minimize barriers.

BWFH hosts a van weekly in different neighborhoods that provides fresh produce, dry goods, and hot meals. Through this program, BWFH conducts SDOH screening to connect residents with resources as well as providing application assistance for Medicaid, SNAP, and other public assistance. Furthermore, blood pressure screenings are available as well as information to link residents to other health care services such as addiction, mental health, and mammography to name a few. Lastly, residents can receive information on MGB job openings and application assistance on-site.

While the COVID response has been extensive, BWFH continues to offer regular community benefits programming based on its latest CHNA. Partnerships include: Italian Home for Children (mental health and substance abuse support for families struggling); the YMCA (chronic disease management for patients and community members needing support after their formal hospital care is complete); ESAC (housing permanency for the elderly); Jamaica Plain Neighborhood Development Corporation (job application support); and BPS (summer internships, classroom health education, and food insecurity stipends identified through the Fresh Truck).

FACTOR 5: Relative Merit

39. The Alternative Proposal, Option 2, mentions several other alternative options were considered. (pg. 58)

a. In addition to renovation to existing vacant or underutilized space at BWFH, what other options were considered? Please describe the quality, efficiency, capital expense, and operating costs of these other options.

The alternatives explored related to the renovation of existing or underutilized space. However, because those options would not provide adequate space to meet the objectives of the Proposed Project, those alternatives were dismissed without consideration of quality, efficiency and costs. Therefore, the only option that was fully considered through the evaluation of quality, efficiency and costs was the smaller addition to the North Wing as described on page 58.