







## Mass General Brigham Inc. – Multisite - 21012113-AS Application

### Question 1:

**On pg. 5 it is noted that COVID has highlighted the need for additional services. Discuss how this project will meet the needs of vulnerable populations that were highlighted during the COVID emergency.**

### Answer:

The COVID-19 pandemic has highlighted the need for more services and access to healthcare for vulnerable populations. The Center for Health Care Strategies highlighted these vulnerable populations to include “individuals with low-income, older adults, people of color, and those with complex medical, behavioral health, and social needs.”<sup>1</sup> Each of the Project Sites will address the needs of our vulnerable patients through increased access to convenient care and services.

The Project Sites will address the needs of these populations through increased access to healthcare services at healthcare centers closer to where our patients live, reducing the time patients and their caregivers spend commuting to get care. The Applicant anticipates offering an extended hours schedule to accommodate patient and caregiver schedules and needs. For older adults, reduced commuting time and extended hours will allow more flexibility for caregivers to be central to their care. In addition, Mass General Brigham IC will be hiring primary care providers (“PCPs”) at each Project Site to ensure that all of our patients have the continuity of care needed to live a healthier life.

Throughout the COVID-19 pandemic, minority populations were harder hit by COVID-19, which is consistent with data showing that, “minority populations are disproportionately impacted by diseases known to be comorbidities associated with worse outcomes.”<sup>2</sup> These chronic comorbidities include, for example, heart disease, hypertension, and diabetes. Using both digital tools and patient navigators at each Project Site, Mass General Brigham IC and AmSurg will monitor patients with these comorbidities and help them be more proactive in managing their conditions. A large part of this effort will be matching patients with a PCP and leveraging advanced practice clinicians and support staff of allied health professionals.

Mass General Brigham IC will offer team-based care bringing together PCPs and specialists to care for the whole patient. Our integrated care model emphasizes providing the Patient Panel with timely specialty care that can be delivered at the same Project Site or via video if the specialty is not offered at the Project Site where the patient receives their care. Similarly, Mass General Brigham IC will provide behavioral health services integrated with primary care and will have a complete team of psychiatrists, psychologists, and licensed social workers to serve the Patient Panel at all of the Project Sites and virtually via digital and telephonic delivery methods.

The Applicant will also offer a comprehensive suite of virtual services to the Patient Panel. In December 2020, the Center for Medicare and Medicaid Services (“CMS”) finalized telehealth expansion by adding over 60 services to the Medicare telehealth list that will be covered beyond

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<sup>1</sup> “Addressing the Needs of Medicaid Populations During the COVID-19 Pandemic,” Center for Healthcare Strategies. Updated July 24, 2020, available at <https://bit.ly/3BoxEGz>.

<sup>2</sup> Judith M. Wilder “The Disproportionate Impact of COVID-19 on Racial and Ethnic Minorities in the United States,” *Clinical Infectious Diseases*, Volume 72, Issue 4, 15 February 2021, pages 707-709, available at <https://bit.ly/3eGhgro>.

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the COVID Public Health Emergency.<sup>3</sup> This rule will allow for more services that can be provided to the Patient Panel who can, at times, have trouble going into their provider’s office, including older patients and those with complex conditions, which may reduce mobility. Finally, enhanced technological capabilities at each of the Project Sites will allow for real time communication between patients receiving services at the Project Sites and family or other supports that may not be on site at the time of the patient’s visit.

To communicate clearly with all our patients, and considering any cultural considerations to ensure the best possible care, the Applicant will offer its health communications, offerings, and materials in various languages to better serve the Patient Panel and community (including embedding interpretation services within its telehealth services). The Applicant also plans to launch campaigns within surrounding communities to raise awareness about common diseases and the availability of resources within and through the Project Sites.

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<sup>3</sup> “Trump Administration Finalizes Permanent Expansion of Medicare Telehealth Services and Improved Payment for Time Doctors Spend with Patients.” Center for Medicare & Medicaid Services. December 1, 2020, available at <https://go.cms.gov/3wSBILK>.

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### Question 2:

**2. On pg. 6, you define each PSA as within a 20-minute drive of each project site. Explain how the “20-minute drive” threshold was set.**

#### Answer:

During the initial planning stages beginning in 2017 for this project, Mass General Brigham surveyed the drive times of the patients that use Mass General Brigham’s current HOPDs that are located off of the main hospital campuses in Boston: Massachusetts General Hospital Danvers (“Danvers”), MG Waltham and Massachusetts General Physicians Organization Waltham collectively, (“Waltham”); and Brigham Health and Brigham and Women’s/Mass General Health Care Center Foxborough (“Foxborough”). Based on data from 2016, Mass General Brigham found that the average drive time for approximately 90% of these visits was 17 minutes, with variation by type of care and site location: 16 minutes for visits, including imaging and consults; 27 minutes for surgeries; and drive time for surgical specialty is 20 minutes, accounting for mix of consults and surgeries. Please see Application Project Description, footnote 3, for further information regarding determination of the Applicant’s patient panel.

**2a. Do these PSAs overlap with other MGB sites’ service areas?**

#### Answer:

Mass General Brigham defined PSAs for Mass General Brigham’s acute hospitals using CHIA data; specifically Mass General Brigham looked at CHIA’s FY19 Hospital Profiles (<https://www.chiamass.gov/massachusetts-acute-hospital-profiles/>). While there is no standard definition of a PSA, for the sake of uniformity in planning this Project, Mass General Brigham defined the “PSAs” for Danvers, Waltham and Foxborough as a 20-minute drive time from each facility location, which Mass General Brigham determined to be a reasonable new approach. When determining the need for these sites and their locations, the applicant prioritized the need for facilities that are lower cost and convenient for their patients.

- As defined by the FY19 CHIA hospital profiles:
  - Mass General Hospital’s PSA is made up of Boston, Revere, Chelsea, Lynn, Cambridge, Medford, Everett, Somerville, Malden and Charlestown.
    - The Woburn service area overlap: 2 zip codes in the town of Medford, 02153 and 02155
  - Brigham & Women’s Hospital’s PSA is Boston, Dorchester, Jamaica Plain, Brookline, Dorchester Center, Roxbury, Roslindale, Quincy, Hyde Park, West Roxbury.
    - The Westwood service area overlap: 1 zip code 02136 covers both Hyde Park and the part of the town of Milton, 1 zip code 02132 is West Roxbury
  - Faulkner Hospital’s PSA is West Roxbury, Roslindale, Hyde Park, Jamaica Plain, Dedham, Boston, Dorchester, Dorchester Center, Mattapan and Norwood.

























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**Question 9:**

Historical MRI and CT scan volume was not provided for 2017 or 2018. For each imaging modality at each site, provide the data below (if the numbers in any category (under 11) need to be amalgamated under ‘Other’ (Please footnote what is included in “other” category.)

**Answer:**

Project Site	FY19 CT Scans	FY19 MRI Scans
Westborough	5,171	4,008
Westwood	13,200	8,264
Woburn	12,590	7,627

Project Site	FY18 CT Scans	FY18 MRI Scans
Westborough	4,645	3,933
Westwood	11,492	7,880
Woburn	11,415	7,395

Project Site	FY17 CT Scans	FY17 MRI Scans
Westborough	4,002	3,483
Westwood	11,302	7,222
Woburn	10,648	6,693

**9a.** Provide the volume of MRI and of CT’s listed by Specialty and Other 2017-2019.

**Answer:**

[Over the next several pages]

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<b>Westborough MRI</b>			
<b>Specialty</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Unknown Provider Specialty	1,269	319	191
Medicine	971	1,661	1,663
Neurology	410	600	668
Surgery	225	350	352
Orthopedic Surgery	185	300	293
Neurosurgery	122	211	277
Emergency Medicine	103	159	190
Physical Med and Rehab	63	139	145
Obstetrics/Gynecology	50	67	100
Radiation Oncology	37	59	50
Anesthesiology	27	43	39
Psychiatry	12	16	27
Other	8	8	12
<b>Total</b>	<b>3,483</b>	<b>3,933</b>	<b>4,008</b>
Other: Radiology, Dermatology			

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<b>Westwood MRI</b>			
<b>Specialty</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Unknown Provider	2,688	468	274
Specialty			
Medicine	2,070	3,443	3,673
Neurology	689	975	1,069
Orthopedic Surgery	474	763	919
Emergency Medicine	388	665	766
Surgery	342	585	561
Neurosurgery	194	272	298
Physical Med and Rehab	141	305	327
Obstetrics/Gynecology	87	129	118
Anesthesiology	57	112	113
Radiation Oncology	46	91	73
Psychiatry	29	47	52
Other	15	26	22
<b>Total</b>	<b>7,222</b>	<b>7,880</b>	<b>8,264</b>
Other: Radiology, Dermatology			

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<b>Woburn MRI</b>			
<b>Specialty</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Unknown Provider Specialty	2,582	469	372
Medicine	1,914	3,257	3,554
Neurology	646	1,205	1,207
Orthopedic Surgery	399	560	626
Surgery	318	491	456
Emergency Medicine	253	458	504
Neurosurgery	214	323	308
Physical Med and Rehab	122	215	224
Obstetrics/Gynecology	88	150	101
Radiation Oncology	58	114	115
Anesthesiology	58	96	115
Psychiatry	23	33	23
Other	17	24	20
<b>Total</b>	<b>6,693</b>	<b>7,395</b>	<b>7,627</b>
Other: Radiology, Dermatology			

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<b>Westborough CT</b>			
<b>Specialty</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Unknown Provider Specialty	1,451	256	202
Medicine	1,329	2,358	2,633
Emergency Medicine	500	845	951
Surgery	396	630	720
Neurosurgery	80	152	213
Neurology	74	118	135
Orthopedic Surgery	70	91	105
Obstetrics/Gynecology	25	51	49
Anesthesiology	24	58	60
Radiation Oncology	22	23	34
Psychiatry	12	27	30
Other	16	35	40
Grand Total	4,002	4,645	5,171
Other: Radiology, Dermatology, Physical Medicine and Rehabilitation			

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<b>Westwood CT</b>			
<b>Specialty</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Unknown Provider Specialty	4,116	355	353
Medicine	2,990	4,520	5,278
Emergency Medicine	2,733	4,457	5,324
Surgery	800	1,197	1,190
Orthopedic Surgery	155	202	220
Neurosurgery	153	214	264
Neurology	144	205	213
Anesthesiology	66	116	117
Obstetrics/Gynecology	37	68	64
Radiology	29	14	21
Psychiatry	28	54	56
Radiation Oncology	24	43	50
Other	28	47	49
<b>Grand Total</b>	<b>11,302</b>	<b>11,492</b>	<b>13,200</b>
Other: Dermatology, Physical Medicine and Rehabilitation			

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<b>Woburn CT</b>			
<b>Specialty</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Unknown Provider Specialty	4,086	754	572
Medicine	3,829	6,354	7,175
Emergency Medicine	1,331	2,086	2,412
Surgery	693	1,051	1,181
Neurosurgery	170	240	293
Orthopedic Surgery	146	245	261
Neurology	134	247	238
Radiation Oncology	70	89	101
Obstetrics/Gynecology	66	111	122
Anesthesiology	45	107	103
Radiology	35	57	49
Psychiatry	22	31	36
Other	22	41	47
<b>Total</b>	<b>10,648</b>	<b>11,415</b>	<b>12,590</b>
Other: Dermatology, Physical Medicine and Rehabilitation			

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### Question 10:

For MRI and for CT patients residing in zip codes attributed to each site:

**10a. Are any of the existing facilities operating at capacity? (define capacity) Are there delays in getting appointments at any of these sites? If so, explain. Quantify the delays and provide the methodology for determining a delay.**

**Answer:**

#### **Capacity:**

From a business planning perspective, the purpose of each MRI and CT unit in the Mass General Brigham system varies depending upon the unit's patient care purpose and function, consistent with its location. There are dedicated emergency department units meant to be operated 24 hours a day, only used for patients in the emergency department. There are main hospital campus units that run 24 hours a day intended for mixed use, i.e. for both inpatient and outpatient care. Mass General Brigham tries to utilize the mixed-use units to optimize "primetime" appointments (generally Monday through Friday, between 8:00 a.m. and 6:00 p.m.) for outpatients, leaving inpatient imaging to be completed during "off hours." Due to high utilization, in many cases inpatient scans must be scheduled overnight, which may necessitate waking up inpatients in the middle of the night to receive MRI and CT services.

Due to the variability described above, any application of an arbitrary standard capacity measure across the system will yield skewed results.

Moreover, as we pointed out in the Application, Mass General Brigham's decision to include these imaging modalities at the Project Sites was not based primarily on a system-wide capacity analysis but instead on the overarching goals of the Proposed Project to utilize industry-defined best practices for efficient and effective delivery of the Clinical Services at a lower cost, non-hospital facility, closer to home. As stated in the Application, co-locating the Imaging Services (including MRI and CT) with Physician Services and Ambulatory Surgery Services at each Project Site will foster greater care coordination, improve the overall quality of the Clinical Services and promote better health outcomes for the Applicant's patients.

Nevertheless, in an attempt to answer the Department's specific question, by applying the capacity assumptions described in the Application to the FY19 MRI and CT volume in the Mass General Brigham system, the capacity for the system's units in Eastern Massachusetts would be as follows:

- MRI: 130%
- CT: 192%



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As a reminder, the following are the capacity assumptions for annual CT and MRI units at the Project Sites described in the Application:

- the units at the Project Sites will operate 10 hours per day, 6 days per week for 48 weeks annually;
- each CT scan and MRI scan will take an average of 30 minutes and 45 minutes, respectively, to complete; and
- the CT and MRI units will operate at 85% efficiency (i.e., an average of 85% of the available scanning times will be utilized).

**Appointment Wait Times:** To determine the wait times for Mass General Brigham patients living in the relevant Project Site zip codes, Mass General Brigham identified the top two locations in each Project Site’s primary service area where patients currently receive Imaging Services. Mass General Brigham pulled data for those top two locations that indicated when a patient scheduled an appointment and when the date of the appointment was complete (both Epic fields) and then calculated an average wait time for the appointment to be completed.

Using this logic, below, please find the wait times for the impacted units.

- MRI
  - Westborough Site:
    - Brigham and Women’s Hospital (“BWH) Main Campus: average wait time for patients living in the Westborough Site’s primary service area to receive an MRI scan at BWH main campus is 36.66 days.
    - Newton Wellesley Hospital (“NWH”) Main Campus: average wait time for patients living in the Westborough Site’s primary service area to receive an MRI scan at NWH main campus is 23.31 days.
  - Westwood Site:
    - BWH Main Campus: average wait time for patients living in the Westwood Site’s primary service area to receive an MRI scan at BWH main campus is 29.30 days.
    - NWH Main Campus: average wait time for patients living in the Westwood Site’s primary service area to receive an MRI scan at NWH main campus is 21.46 days.
  - Woburn Site:
    - BWH Main Campus: average wait time for patients living in the Woburn Site’s primary service area to receive an MRI scan at BWH main campus is 40.65 days.
    - MGH Main Campus: average wait time for patients living in the Woburn Site’s primary service area to receive an MRI scan at BWH main campus is 32.71 days.

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- CT
  - Westborough Site:
    - BWH Main Campus: average wait time for patients living in the Westborough Site’s primary service area to receive a CT scan at BWH main campus is 24.78 days.
    - NWH Main Campus: average wait time for patients living in the Westborough Site’s primary service area to receive a CT scan at NWH main campus is 20.57 days.
  - Westwood Site:
    - BWH Main Campus: average wait time for patients living in the Westwood Site’s primary service area to receive a CT scan at BWH main campus is 20.63 days.
    - BW Faulkner: average wait time for patients living in the Westwood Site’s primary service area to receive a CT scan at BW Faulkner is 11.13 days.
  - Woburn Site:
    - BWH Main Campus: average wait time for patients living in the Woburn Site’s primary service area to receive a CT scan at BWH main campus is 26.17 days.
    - MGH Main Campus: average wait time for patients living in the Woburn Site’s primary service area to receive a CT scan at BWH main campus is 19.07 days.

As an additional data point regarding wait times and the impact of opening new units: MGH completed an analysis to understand if the hospital had sufficient MRI capacity to meet the needs of patients referred to MGH by Mass General Brigham physicians. MGH found that on average due to a backlog of 3 weeks to get an appointment, nearly 55,000 referred MRI scans yearly were not able to be done by MGH, but rather were completed by non-Mass General Brigham providers due to long wait times at system MRI locations. This lack of timely access means that patients must leave the Mass General Brigham system, making coordination of care more challenging. Patients who receive care outside of the risk-sharing networks in which they are enrolled are less likely to benefit from population health management programs, and experience higher out-of-network costs and increased barriers to care coordination, all of which undermine the financial performance and quality metrics of the risk-sharing network.<sup>6</sup> To improve this access, MGH has recently opened two additional MRI units in Waltham. To date, after only six months in operation these units are operating at capacity during primetime appointment hours. Additionally, MGH has seen no softening of volume at the main campus or any of its satellite locations.

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<sup>6</sup> See M. Glover, et al, “Predictors of MRI Leakage Among Patients Attributed to an Academic Medical Center Commercial Risk-Shared Insurance Contract”, 17 JNLACR 2 255-261 (February 2020); See also Y. Zheng, et al, “On Designing of a low leakage patient-centric provider network”, BMC Health Serv Res; Vol. 18 (2018).

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**10b. What will the impact on your existing facilities be if patients shift to any of the three sites?**

**Answer:**

Once open, each Project Site will have a 3 year ramp up period until it is fully operational. Mass General Brigham estimates that after the 3 year ramp up period approximately 8% of MRI scans and approximately 6% of CT scans will shift from Mass General Brigham’s current imaging sites in eastern Massachusetts to the three Project Sites collectively. Mass General Brigham did not analyze the above-described shift of MRI and CT scans on an origin/destination site-specific basis.

**10c. What percent of MGB system-wide MRI and CT scans would be performed at the three sites?**

**Answer:**

MRI		
Location	FY19 PROJECTED	Percent of Total
Westborough Site	3,114	2%
Westwood Site	6,957	3%
Woburn Site	5,722	3%
Total Projected MRIs	15,793	8%
Total Actual MGB MRIs	206,185	

CT		
Location	FY19 PROJECTED	Percent of Total
Westborough Site	3,981	1%
Westwood Site	9,413	3%
Woburn Site	10,518	3%
Total Projected CTs	23,912	6%
Total Actual MGB CTs	376,139	

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**Question 11**

In recent years, the Department has approved numerous MRI, CT, PET-CT, and PET-MRI units for the Applicant at many individual sites.

- a. Please provide the department with a status update on each DoN Required Equipment Approval since 2017. In an EXCEL table for each approved site provide the total number of each type of approved imaging modality, and the volume by specialty by year for FY17-19 or the first three years of operation. Please provide a list of any approved sites that are not yet operational.
- b. For the previous approvals, the Applicant/Holder argued the new equipment would reduce wait times, cancellations, rescheduling and delays. How have these units impacted wait times and access for patients and how did that impact your need analysis for the proposed sites?
- c. As a result, by any measure is there a shortage of any of these MRI or CT services at any of your existing sites. Cite and Explain.

**Answer:**

**Brigham and Women’s Hospital (“BWH”):**

**11a Year of DoN Request and Number of Units Requested**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>Notes</u>
<b>MRI</b>		1	1			2018 7T Main campus; 2019 Foxborough
<b>CT</b>			1			At Foxborough

**11a Date Units began providing services**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>
<b>MRI</b>		7T Main campus September	Foxborough Not open yet		
<b>CT</b>					March

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**11a For units in service, volume by specialty**

**7T Unit, Open in 2018**

**10/01/2020 - 7/31/2021**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021 YTD</u>
Neuro	721	591	349	200	
Muscular Skeletal	98	73	67	4	
Total	819	664	419	204	

**CT, Open in 2021 (March - 7/31/2021)**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021 YTD</u>	<u>Notes</u>
Total					2,003	Mass General Brigham does not yet have specialty mix data on this unit.

**11b For units in service, describe how they have impacted wait times**

MRI: The 7T ultra- high field MR scanner is a unique resource, currently specific to brain and knee imaging. It was initially installed in 2017 for research imaging before being converted to patient use in 2018.

**11c For BWH, is there a shortage of any MRI or CT services at existing sites?**

CT: Currently, there is no shortage of CT units at BWH Foxborough. BWH is currently operating two CT scanners, one of which has been operational since 2009, the second of which opened in March 2021.

MRI: Mass General Brigham currently has a shortage of MRI units in Foxborough. Mass General Brigham has been operating one unit at BWH Foxborough since 2009, and the second unit, approved in 2019, is expected to open in September 2021. The current wait time for a MRI scan to be performed at BWH Foxborough is over two weeks.

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**Brigham and Women’s Faulkner Hospital (“BWFH”):**

**11a Year of DoN Request and Number of Units Requested**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>Notes</u>
MRI						
CT			1			Cone beam CT, specialized unit

**11a Date Units began providing services**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>
MRI					
CT				November	

**11a For units in service, volume by specialty**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021 YTD</u>
					10/01/2020 - 7/31/2021
Ortho					133

**11b For units in service, describe how they have impacted wait times**

The extremity CT unit at BWFH is a specialized weight bearing unit for standing foot/ankle for orthopedic specialties. Access is same day without issue. A benefit of the unit is that BWFH patients no longer have to drive to MGH for these types of scans.

**11c For BWFH, is there a shortage of any MRI or CT services at existing sites?**

BWFH is appropriately resourced with CT units. Please see DoN project BWFH-MGB-20121716-HE, which addresses need for MRI.

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**Massachusetts General Hospital/Massachusetts General Physician Organization (“MGH/MGPO”):**

**11a Year of DoN Request and Number of Units Requested**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>Notes</u>
PET/MR			1			MGH main campus (To be used for PET/MR, MRI & Research)
MRI			2	3		Waltham (2019), Somerville (2020)
CT			1			Waltham

**11a Date Units began providing services**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>
PET/MR			Not yet open		
MRI Waltham					February
MRI Somerville			Not yet open		
CT					March

**11a For units in service, volume by specialty**

**2 MRs at Waltham**

**10/01/2020 - 7/31/2021**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021 YTD</u>	<u>Notes</u>
Total					6,501	Mass General Brigham does not yet have specialty mix data on this unit.

**1 CT at Waltham**

Total					4,445	Mass General Brigham does not yet have specialty mix data on this unit.
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**11b For units in service, describe how they have impacted wait times**

MRI: The addition of two MRIs at MGPO’s Waltham MRI Clinic reduced the wait times for MGH/MGPO patients in Waltham from 7 days to same day availability at Waltham. Additionally, wait times at the MGH main campus have decreased from a wait time in excess of 7 weeks to 3 weeks. CT: Waltham has been able to maintain access with the expansion of this service, but the units are operated until 10 pm to accommodate the need. This extension has allowed for same day or next day access for MGH Cancer Center outpatients, who are prioritized for scheduling purposes.

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**11c For MGH/MGPO, is there a shortage of any MRI or CT services at existing sites?**

MRI: Yes, there is a continuing shortage of MRI scanners for MGH/MGPO patients. The MGPO Waltham Clinic is open 6 am -11 pm, 7 days a week. Following the initial 6 month ramp up period for the new units, the Waltham MRI is now consistently booked through the final slot at 10 pm. There is a 3 day wait for an appointment during the “primetime” hours (Monday - Friday 8 am – 6 pm). CT: Yes, Waltham has only been able to maintain adequate access with the expansion and by also increasing hours until 10 pm. This evening access has allowed Mass General Brigham to provide some same day appointments for outpatients at the MGH Cancer Center, while generally maintaining next day availability for CT at MGPO’s Waltham Clinic.

**Newton Wellesley Hospital (“NWH”):**

**11a Year of DoN Request and Number of Units Requested**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>Notes</u>
MRI	1					
CT				1		Cardiac CT

**11a Date Units began providing services**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
MRI			November	
CT				Not in service

**11a For units in service, volume by specialty**

	<b>MRI</b>				
	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021 YTD</u>
Neuro			146	819	1,108
Body			98	546	739
Ortho			65	364	493
Vascular			16	91	123
Total			325	1,821	2,463



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**11b For units in service, describe how they have impacted wait times**

Wait times decreased to two weeks for an appointment. Before opening the wait time was 3-4 weeks.

**11c For NWH, is there a shortage of any MRI or CT services at existing sites?**

There is not a shortage of CT with current volumes. As noted in 11b, given the current volumes, wait time for MRI at NWH remains at two weeks, which is longer than 7 days which is the outer limit of clinically acceptable depending on referring physician and radiologist judgment.

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### Question 12:

**How was system-wide capital equipment planning utilized to inform your long-term strategic planning process?**

**12a. If so, please explain how the process works. Provide any need methodologies that you use for your projections.**

**Answer:**

Mass General Brigham utilizes a rolling five-year forecast to determine capital spending capacity based on maintenance of key financial metrics that align with “Aa/AA” category credit ratings. Through this disciplined approach, Mass General Brigham links spending capacity with affordability. The annual spending capacity is allocated among routine/maintenance projects, which is tied to a percentage of depreciation expense, and new initiatives, which include projects that support Mass General Brigham’s mission and/or strategic initiatives. In addition to the annual capital spending process just described, each new initiative goes through a planning process that incorporates analysis designed to evaluate existing capacity within the system, long term market demand (utilizing external forecasting tools and expertise), impact on cost, and patient and provider experience. Management then prioritizes new initiative projects based on the assessment criteria above and spending capacity within the rolling five-year capital framework.

**12b. How did this planning inform the need for this project?**

**Answer:**

For strategic initiatives intended to reduce the cost of providing patient care services, such as this Project, Mass General Brigham assesses various factors, including demographic data to estimate demand and enhance patients’ access to healthcare services as well as technological changes and facility design features that will drive efficiencies in the delivery of care while improving the patient’s experience and the feasibility of transitioning care to lower cost sites, such as the Project Sites.

**12c. Prior to approving the acquisition of DoN required equipment do you first perform any process improvement modeling to ensure efficient operations of your existing units?**

**Answer:**

At Mass General Brigham, consistent overextension of the existing Imaging Services has demanded that throughput efficiency be a constant operational focus.

During equipment upgrade cycles and with each innovation in vendor equipment and software Mass General Brigham evaluates its Imaging Services protocols to optimize the quality, speed and efficiency of high quality patient imaging. Mass General Brigham regularly reviews all protocols to identify additional opportunities for further optimization of existing units.

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To date, Mass General Brigham has streamlined the process, both before and after patient imaging to minimize the time between patients. For both MRI and CT units, Mass General Brigham employs a two-tech evidence based model to minimize unit lost time.<sup>7</sup> At particularly high-demand sites, Mass General Brigham has added additional staff as required to further streamline patient imaging pre-and-post image capture workflows. This is beneficial for efficient utilization of the units and the overall patient experience.

A controlling constraint to room utilization is patient set-up time, specifically the variability in patient mobility. Mass General Brigham will be testing an innovative two-table MRI process in space currently under construction at Assembly Row, Somerville, Massachusetts, which Mass General Brigham hopes will compensate for this variability and greatly reduce unit lost time, while simultaneously improving patient experience.

As sites reach operating capacity, Mass General Brigham tests patient demand for extended operating hours. Outpatient demand at some Mass General Brigham imaging centers located in suburban locations is so great that it supports operating 16 hours a day, 7 days per week. Demand for MRI services within the Mass General Brigham Boston locations is such that the first outpatients are regularly scheduled to be seen at 5:00 A.M.

While some patients may prefer the flexibility of protracted operating hours, many do not. The hours of 8:00 A.M. to 6:00 P.M. are always the first to reach capacity and can often be scheduled out weeks in advance. That can leave non-traditional hours as the only option for some patients who require more timely imaging. For many this can result in a less than satisfactory patient experience; for example, the latest MRI appointments can now end at 11:00 P.M.

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<sup>7</sup> Boland GW(1), Houghton MP, Marchione DG, McCormick W. 2008 'Maximizing outpatient computed tomography productivity using multiple technologists', J Am Coll Radiol. 2008 Feb;5(2):119-25. doi: 10.1016/j.jacr.2007.07.009.

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**Question 13:**

**What specialties and surgical services will be available upon opening of each proposed project site? How will you assess need for new services on an ongoing basis (pg. 2)?**

**Answer:** As noted in question 6, Mass General Brigham anticipates that the following specialties and surgical services will be available at each Project Site:

<b>Surgical Indication</b>	<b>Specialty<sup>8</sup></b>	<b>Westwood MA<sup>9</sup></b>	<b>Westborough MA</b>	<b>Woburn MA</b>
No	Primary Care		X	X
No	Allergy/Immunology	X		X
Yes Non-Invasive	Cardiology			X
No	Dermatology			X
No	Endocrinology			X
Yes	Gastroenterology		X	X
Yes	General Surgery	X	X	
No	Neurology		X	X
Yes	Neurosurgery (Spine)		X	
Yes	Ophthalmology	X	X	
Yes	Orthopedic	X	X	X
Yes	Otolaryngology	X	X	
No	Pulmonary	X		X
No	Pain Management	X	X	
No	Physiatry	X	X	
No	Psychiatry	X	X	X
No	Rheumatology	X	X	X
Yes	Urology	X	X	

**How will you assess need for new services on an ongoing basis?**

**Answer:**

The Applicant is planning to utilize a robust Performance Management Reporting platform, and has already started working with system experts on the data that will be needed to analyze many metrics to help it understand the evolving needs of the Patient Panel and community surrounding each Project Site. Some examples are as follows:

- **Patient satisfaction engagement:** Through continuous engagement with patients, the Applicant will ensure the Project Sites meet the medical needs of its patients from both a service and timing standpoint.

<sup>8</sup> At this time, the Applicant does not anticipate offering chemotherapy (oncology) infusion services at the Project Sites.

<sup>9</sup> Certain Mass General Brigham physician practices currently provide physician services in an existing medical office building at the Westwood Site. These practices will continue to provide such physician services after the Applicant develops a second, adjacent building at the Westwood Site as part of the Proposed Project. (See also, footnote 53 of the DoN application narrative.)

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- **Optimization of scheduling for both equipment and services:** The Applicant will establish processes to ensure we are optimizing each Project Site's schedule and patient flow so we can care for as many patients as possible, while helping us to understand where there is need to expand availability to meet patient needs.
- **Provider productivity and burnout:** The Applicant will track productivity to ensure that each Project Site's providers are not working to the point of burnout. This will also help Mass General Brigham IC and AmSurg determine its hiring needs for additional providers before wait lists expand and appointment backlog begins.
- **Referrals:** The Applicant will track how many patients require referrals for specialty services that are not offered at the applicable Project Site.
- **Disease prevalence among current patients:** The Applicant will use Patient Panel information to watch disease trends among its population, generally, and in the primary service areas of each Project Site to help the Applicant understand which services need expanded availability or should be added to the care mix at a particular Project Site.

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### Question 14:

We note that from the data provided on pgs. 6-8, at each site, the percent of patients with an MGB PCP has increased by 19% in Westborough, 15% in Woburn, and 12% in Westwood.

**14a. Depending on the site, you state that X% of patients who use MGB specialty services have no PCP. What data sources and methodologies were used to determine this?**

#### Answer:

The figures referenced in your question above are not consistent with the figures presented in the Application. As shown on Attachment 3 of the Application, for the Westborough Site, the number of patients with a Mass General Brigham primary care provider has grown from 21,374 in FY17 to 22,751 in FY19<sup>10</sup>, which is a 6% increase over 3 years or ~2% compound annual growth rate (“CAGR”). For the Westwood Site, the number of patients with a Mass General Brigham primary care provider has grown from 40,768 in FY17 to 44,980 in FY19, which is a 10% increase over 3 years or a ~3% CAGR. For the Woburn Site, the number of patients with a Mass General Brigham primary care provider has grown from 43,800 in FY17 to 49,882 in FY19, which is a 14% increase over 3 years or ~4% CAGR.<sup>11</sup> This data was pulled from Mass General Brigham’s electronic health records system, Epic, which has a field indicating whether a patient has a Mass General Brigham primary care provider. This Epic data was used to derive these percentages.

**14b. Explain the contributing factors to the increasing Patient Population within your designated zip codes of each site? For example, have you increased the number of MGB PCPs within the zip codes of each site, and/ or have you achieved this by acquiring existing practices, and/or some other means?**

#### Answer:

Mass General Brigham does not have information about the factors that contributed to any increase in Patient Population within the primary service areas for the three Project Sites over the period FY17 to FY19, but potential factors may include aging of the population and organic growth in these communities. With respect to any increases in Mass General Brigham primary care physicians within the primary service areas of the Project Sites, please note the following:

- **Westwood** – Mass General Brigham opened a new primary care practice in 2018 in the Westwood Site’s primary service area, which currently has 7 primary care physicians, totaling 5.83 FTE. Primary care physicians were hired from existing practices in the area;
- **Westborough** - Mass General Brigham did not add any new primary care physicians in the Westborough Site’s primary service area between 2017 and 2021; and

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<sup>10</sup> As noted in the DoN narrative FY20 data should not be used for annual comparisons because it is only representative of one quarter, and not a full year.

<sup>11</sup> FY20 data is not included on Attachment 3, as it represents only one quarter of the Applicant’s fiscal year.

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- **Woburn** - Mass General Brigham added approximately 11 FTE primary care physicians in the Woburn Site's primary service area between 2017 and 2020, by hiring primary care physicians from existing practices in the area.

### 14c. Have you increased the number of patients in risk contracts within the zip codes of each site?

#### Answer:

As noted in Attachment 3 of the DoN application:

- **Westborough** – For those patients of the Patient Panel residing in the Westborough Site primary service area, Mass General Brigham has seen a 24% increase in the number of patients in a risk contract (~7% CAGR) or a mix shift from 47% to 55% between FY17 and FY19;
- **Westwood** – For those patients of the Patient Panel residing in the Westwood Site primary service area, Mass General Brigham has seen a 19% increase in the number of patients in a risk contract (~6% CAGR) or a mix shift from 56% to 60% between FY17 and FY19; and
- **Woburn** - For those patients of the Patient Panel residing in the Woburn Site primary service area, Mass General Brigham has seen a 20% increase in the number of patients in a risk contracts (~6% CAGR) or a mix shift from 54% to 57% between FY17 and FY19.

### 14d. Have you increased the number of patients on MassHealth within any of these projected service areas?

#### Answer:

- In the Westborough Site primary service area – MassHealth payer mix of the Patient Panel has increased by 1.9 percentage points between FY17 and FY19.
- In the Westwood Site primary service area – MassHealth payer mix of the Patient Panel has increased by 4.4 percentage points between FY17 and FY19.
- In the Woburn Site primary service area – MassHealth payer mix of the Patient Panel has increased by 3.3 percentage points between FY17 and FY19.

**Question 15:**

**You state on pg. 25 that there is a shortage throughout Massachusetts of primary care providers and that these project sites and their clinical services will increase access to primary care and other specialties. To better understand this impact in the communities for the proposed project:**

**15a. Provide an explanation on where the shortages of PCPs are and if they exist within each of the three proposed service areas of the Proposed Project. Explain and cite the criteria that led to those conclusions.**

**Answer:**

In 2019, the Baker-Polito administration proposed legislation aimed at addressing key challenges in healthcare, including reforms aimed at prioritizing behavioral health and primary care.<sup>12</sup> According to the Administration’s press release announcing the proposal, “[c]onsumers consistently report long wait times for appointments, lack of treatment available at the right time and at the right place and difficulty finding providers who take insurance.”<sup>13</sup> One proposed mechanism would have required providers and insurers to increase spending on behavioral health and primary care by 30% over three years, using calendar year 2019 spending as a baseline, and measuring performance beginning in calendar year 2023. Although the legislation has not yet been adopted, it is indicative of the shortages in primary care across the Commonwealth.

According to the Primary Care Collaborative<sup>14</sup>, higher investments in primary care are associated with lower costs, higher patient satisfaction, fewer hospitalizations and emergency department visits, and lower mortality.<sup>15</sup> According to a workforce projection for Massachusetts conducted by The Robert Graham Center for Policy Studies in Family Medicine and Primary Care, in order to maintain status quo, “Massachusetts will require an additional 725 primary care physicians by 2030, a 12% increase of the state’s current (as of 2010) 5,807 practicing [primary care physicians]. The current population to [primary care physicians] ratio of 1144:1 is lower than the national average of 1463:1. The 2030 projection stands below the Northeast overall and below the nation overall. Components of Massachusetts’s increased need for [primary care physicians] include 54% (393 [primary care physicians]) from increased utilization due to aging, 43% (317 [primary care physicians]) due to population growth, and 2% (15[primary care physicians]) due to a greater insured population following the Affordable Care Act (ACA).”<sup>16</sup>

In estimating the need for primary care physicians in each proposed Project Site primary service area, Mass General Brigham used a two part analysis. The first portion of the analysis involved

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<sup>12</sup> Baker-Polito Administration Announces Health Care Legislation Aimed at Addressing Key Challenges, available at <https://www.mass.gov/news/baker-polito-administration-announces-health-care-legislation-aimed-at-addressing-key>.

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

<sup>14</sup> The Primary Care Collaborative is a not-for-profit multi-stakeholder membership organization dedicated to advancing an effective and efficient health system built on a strong foundation of primary care and the patient-centered medical home.

<sup>15</sup> <https://www.pcpcc.org/primary-care-investment>.

<sup>16</sup> <https://www.graham-center.org/content/dam/rgc/documents/maps-data-tools/state-collections/workforce-projections/Massachusetts.pdf>.



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determining and estimating patient demand using the 2020 population data and forecasted population data for 2030 provided by Sg2 Health Care Intelligence Claritas Pop-Facts. The analysis assumed an estimated average patient panel size of 1,800 per primary care physician. Mass General Brigham then took the estimated 2030 population value and divided it by the estimated patient panel size, to yield the forecasted 2030 demand for primary care physicians.

The second part of the analysis considered the current availability of primary care physicians, both Mass General Brigham and non-Mass General Brigham. To do this, Mass General Brigham used internal provider information for Mass General Brigham primary care physicians and the CHIA RPO data set for non-Mass General Brigham primary care physicians. Because most physicians do not practice 5 days a week 8 hours a day (one “full time equivalent” or “FTE”), Mass General Brigham had to estimate the FTEs for this group of physicians. For both Mass General Brigham and non-Mass General Brigham primary care physicians, Mass General Brigham used data for physicians practicing outside of the Mass General Brigham’s academic medical centers and generated a ratio of about .78 FTE per primary care physician. Applying this ratio to the count of available primary care physicians, Mass General Brigham determined that, by 2030, the Westborough Site’s primary service area will require 15 FTE primary care physicians, and the Woburn Site’s primary service area will require approximately 16 FTE primary care physicians. As discussed in the Application, certain Mass General Brigham physician practices currently provide physician services in an existing medical office building at the Westwood Site. These practices will continue to provide such physician services after the Applicant develops a second, adjacent building at the Westwood Site as part of the Proposed Project.

**15b. Is there a shortage of any other of the physician specialties, including behavioral health, within each of the three proposed service areas of the Proposed Project? Explain and cite the criteria that led to those conclusions.**

**Answer:**

For Behavioral Health, Mass General Brigham is guided by the State’s Roadmap for Behavioral Health Reform, which is available at <https://www.mass.gov/doc/stakeholder-presentation-on-the-roadmap-for-behavioral-health-reform/download>. This Roadmap outlines issues with workforce competency and insurance participation): “The Commonwealth has more qualified behavioral health providers than most states, but too few providers accept insurance or deliver evidence-based, culturally competent treatment.” (p. 26.) The Mass General Brigham Behavioral Health model seeks to address the issues laid out in the Roadmap.

**15c. Given the shortages cited, what is your plan for staffing these sites?**

**Answer:**

Reducing administrative burden, increasing time with patients, and direct access to specialists have been shown to be three of the most important factors in primary care physician job satisfaction. Demand for primary care physicians is high, and the current work environment can be challenging, so Mass General Brigham is designing a model that leverages a highly skilled team and digital tools to reduce administrative burdens and make the work of the primary care

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physician safer, more value-added, and more enjoyable. Mass General Brigham plans to use a staffing model that provides comprehensive primary care to patients by leveraging the work among a strong and cohesive team of medical assistants, nurses, social workers, pharmacists, nurse practitioners, physician assistants and physicians—allowing each provider to maximize their respective scope of practice. This care model allows for improved work-life balance for providers, while ensuring better access for patients with an efficient staffing model that does not unduly add scarce primary care provider resources. Additionally, by co-locating primary care physicians with specialists, primary care physicians can offer better, more coordinated care management to patients, which has been shown to improve primary care physicians retention. We are also designing innovative compensation models that incentivize preventive care and population health management, and allow for flexible work schedules. Models focused around this kind of teamwork have been shown to simultaneously reduce provider burden, increase provider job satisfaction, and reduce long-term healthcare costs.<sup>17</sup> We believe that this desirable practice model will attract and support new primary care physicians and other primary care providers such as nurse practitioners and physician assistants, who are looking for innovative, team-based care models.

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<sup>17</sup> Kristine Olson MD, MSc et al., *Organizational strategies to reduce physician burnout and improve professional fulfillment*, 49 CURR. PROBL. PEDIATR. ADOLESC. HEALTH CARE 12, at 18 (2019).

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**Question 16:**

**What percentage of MGB providers is currently accepting Medicaid/MassHealth patients.**

**Answer:**

100%. All Mass General Brigham providers, and facilities, accept Medicare and Medicaid/MassHealth patients. However, if the Mass General Brigham primary care provider's patient panel is closed, then no new patients can be accepted. Insurance is not taken into consideration when determining to open or close a Mass General Brigham primary care provider's patient panel. At such time as the Mass General Brigham primary care provider's patient panel reopens, patients will be accepted on a first come basis, without regard to insurance.

**Question 17:**

**How have you assessed the demand at each site for Integrated Behavioral Health (BH) services?**

**Answer:**

Consistent with the Commonwealth’s significant need for additional behavioral health care services, the Applicant’s Business Planning/Integrated Care team identified behavioral health services as a significant need for the Patient Panel. To address this need, the Applicant sought to incorporate best practices for behavioral health care management by integrating behavioral health services and staffing plan into the primary care design model at each Project Site.<sup>18</sup> Based on this information, planning for integrated behavioral health included applying a collaborative care staffing framework and a staffing model for standard behavioral health outpatient care based on examples from industry leaders utilizing innovative models for team-based care. Like many health care institutions, Mass General Brigham has based its collaborative care model staffing on the University of Washington’s (“UofW”) collaborative care model. This approach allocates behavioral health resources based on primary care patient lives in the practice to determine the number of behavioral health clinicians, psychiatrists and resource specialists needed to support the model. This model allows Mass General Brigham IC to take care of patients above and beyond the traditional collaborative care approaches and provide direct synchronous and asynchronous outpatient psychiatric services.

For Mass General Brigham IC, we used a blended model for determining staffing needs based on the UofW model and Mass General Brigham’s staffing ratios, for this model as well as staffing benchmarks from the Dimock Center in Boston, which has reported to Mass General Brigham that it is able to meet its patients’ behavioral health needs with its current staffing levels and a system of behavioral health care with many similarities to ours. The Applicant plans to continuously review demand for these services and wait times for accessing them.

As part of our model of care, the Applicant will strongly encourage all patients to have a primary care provider so that Mass General Brigham IC can coordinate all services, including behavioral health, for long-term support and stability. This is an important element of the services Mass General Brigham IC will be providing and is essential to treat and stabilize patients before those patients return to their primary care providers with supports and guidance for the future. Effectively integrating behavioral health into the patient’s plan of care is essential to meeting the needs of the Patient Panel, lessening the prevalence of burnout among our providers, and enabling our providers to successfully accept, and serve, new patients.

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<sup>18</sup> Certain Mass General Brigham physician practices currently provide physician services in an existing medical office building at the Westwood Site. These practices will continue to provide such physician services after the Applicant develops a second, adjacent building at the Westwood Site as part of the Proposed Project. (See also, footnote 53 of the DoN Application narrative.)

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### Question 17a. Will these services be provided on site?

**Answer:** Behavioral health services will be provided both on-site and virtually (through synchronous and asynchronous services), offering the flexibility to meet a combination of patient need, provider need and clinical appropriateness. The virtual asynchronous services will be incorporated through evidence-based digital solutions that will complement the care being offered. The on-site and virtual synchronous services will be scheduled in advance, with the hope to include/incorporate “walk-in” availability for the Patient Panel in the future.

### Question 17b. How will you ensure that the “Integrated Behavioral Health (BH) teams” are fully staffed to meet the demand given the documented shortage of BH providers statewide?

**Answer:** One strategy will be to use team-based models and a broader range of services, as well as a model of episode-based care, so as to expand the capacity of our staff to manage behavioral health. Mass General Brigham IC will draw on the experience of other successful models for increasing access that the Applicant has established at other provider locations. For example, Mass General Brigham IC and AmSurg will:

- leverage medical assistants and resource specialists to perform non-clinical tasks, and resource nurses to assist with calls and medication requests, so that licensed independent clinicians can spend more of their time providing direct patient care;
- utilize internet-based cognitive behavior therapy to increase access to appropriate forms of evidence-based psychotherapy;
- implement the collaborative care model in primary care (with appropriate staffing support) and electronic consults (eConsults) to manage patients with less complex psychiatric issues in primary care settings, rather than referring them all for individual psychiatric treatment;
- develop an intake/triage role so that patients can be evaluated quickly and routed quickly to the appropriate level of care, rather than waiting for full-length evaluation appointments for a service that may be less appropriate for the patient’s needs;
- use consultation-and-return and brief-stabilization-and-return models so that the time of our psychiatric treaters can be spent on patients who need evaluation and active management, rather than long-term maintenance on stable medication management. To further clarify this structure, consider how ‘traditional’ specialty referrals work. When a patient completes their cancer treatment, and has passed a defined milestone, they no longer meet with their oncology provider on a routine basis. This allows the oncologist to provide care to new patients. Historically in psychiatry, patients are in ‘forever’ care which limits the psychiatry providers ability to treat new patients; and
- embed our providers at the Project Sites in order to improve communication, care coordination, efficiency and the overall capacity of primary care and specialty practices to manage behavioral health issues.

The Applicant will prioritize provider experience with the hope of decreasing provider turnover/burnout and encouraging providers to stay in a clinical setting such as the Project Sites rather than going into private practice where they may not have the ability to accept insurance. Some of the ways in which the Applicant hopes to achieve this are through the team-based model (to support providers with tasks outside of their core training) and significant flexibility (to allow for work-life balance and prevent burnout).

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The Statewide BH staffing shortage is one that is being addressed locally, regionally and nationally. Mass General Brigham System Behavioral Health and Human Resources are working to identify a long-range plan for future workforce development in Behavioral Health. This includes training, recruiting and retaining providers and behavioral health resources at all levels. For example, can the Mass General Brigham system increase the number of psychiatry residents and fellows trained each year; can the system increase the number of psychology interns; can the system expand the supervision support and internship opportunities for master's-level social workers; and finally, can the system establish a career path for bachelor's-level team members that will enable them to continue working with this population in a role that they find meaningful and appealing. The Applicant plans to continue working closely with state and local mental health advocacy groups to manage these initiatives in a thoughtful way.

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**Question 18:**

You cite the aging population as a reason to expand into these three service areas. (pgs. 12-13). For each of the sites, provide three most recent years of historical volume of existing MGB patient panel within the target service areas segmented by the following age cohorts. Where do you see the greatest need for increase in services among these cohorts?

- 0-17
- 18-54
- 55-64
- 65-74
- 75-84
- 85+

**Answer:**<sup>19</sup>

	<b>Woburn</b>		<b>Westwood</b>		<b>Westborough</b>	
	<b>FY18</b>	<b>FY19</b>	<b>FY18</b>	<b>FY19</b>	<b>FY18</b>	<b>FY19</b>
0-17	10,413	11,425	8,867	9,489	3,946	4,308
18-54	43,668	45,485	33,608	35,595	18,591	19,001
55-64	16,649	17,222	14,212	14,356	8,300	8,360
65-74	14,534	14,985	11,382	11,411	7,055	7,140
75-84	9,002	9,186	7,041	6,883	4,320	4,226
85+	4,995	4,701	4,705	4,232	1,963	1,675
<b>Total</b>	<b>99,261</b>	<b>103,004</b>	<b>79,815</b>	<b>81,966</b>	<b>44,175</b>	<b>44,710</b>

“Statistics show that adults age 65 and older spend a lot of time in contact with the health care system. Nationally, older adults are in a health care setting 17 days a year, on average.”<sup>20</sup> The 55+ cohorts make up just under 50% of the Patient Panel for each of the Project Site primary service areas. Increasing patients’ access to the Clinical Services in an integrated care setting closer to home in a manner that is easy to navigate is central to effectively serve this population.

<sup>19</sup> Due to the established archiving process, Mass General Brigham is no longer able to refresh FY17 data at the age group requested.

<sup>20</sup> <https://www.forbes.com/sites/nextavenue/2016/02/21/which-older-americans-see-the-doctor-most/?sh=5cd2ff1b2d24>

**Question 19:**

**On pg. 13 you provide a reference that “Patient expectations” is a reason surgical procedures are increasing among 65+ rate. In order to better understand how this impacts need, provide a specific explanation of what “expectations” mean? If this relates to patients’ health care goals, how is this being determined and recorded by MGB, especially as patients advance in age? What does MGB do to ensure services received are in line with patient’s health care goals as they evolve with age?**

**Answer:**

The article referenced in the Application in connection with the discussion of patient expectations does not specifically define “patient expectations.”<sup>21</sup> However, improving the patient experience by meeting and exceeding patient expectations is an essential aspect of the Mass General Brigham’s strategy.

As patients advance in age, they require more care. On average, “older adults are in a health care setting 17 days a year.”<sup>22</sup> As noted in the Application, the number of older individuals undergoing surgical procedures has increased faster than the rate of population aging.<sup>23</sup> This population also has higher MRI and CT utilization rates.<sup>24</sup> At the same time, the rise of healthcare consumerism is driving patient expectations around experience, including access, price transparency, and general satisfaction.<sup>25</sup> Achieving peak patient satisfaction and continual high-quality patient care to meet the experience expectations of our patients encompasses various factors, including access, affordability, quality, and convenience.<sup>26</sup> As discussed in the Application, the Project Sites will offer a comprehensive suite of services closer to the communities in which the patients live, while containing costs. This is especially important for patients over age 65, who may have more limited mobility and resources but tend to require more frequent care.

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<sup>21</sup> Judith S. L. Partridge et al., Frailty in the older surgical patient: a review, 41 AGE AND AGEING 142 (2012), available at <https://academic.oup.com/ageing/article/41/2/142/47699>.

<sup>22</sup> King, Emily. “Which Older Americans See the Doctor Most?,” *Forbes*. February 21, 2016. <https://bit.ly/3yrCUY3>

<sup>23</sup> Judith S. L. Partridge et al., Frailty in the older surgical patient: a review, 41 AGE AND AGEING 142 (2012), available at <https://academic.oup.com/ageing/article/41/2/142/47699>.

<sup>24</sup> Rising Use Of Diagnostic Medical Imaging In A Large Integrated Health System, supra note 23; Kathleen Lang et al., National trends in advanced outpatient diagnostic imaging utilization: an analysis of the medical expenditure panel survey, 2000-2009, 13 BMC MED. IMAGING 40 (2013), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4222739/>.

<sup>25</sup> Lagasse, Jeff. “Bar is rising for consumerism in healthcare, but providers are still playing catch-up,” *Healthcare Finance*. August 20, 2019. <https://bit.ly/3CjW0Sf>

<sup>26</sup> Condon, Alan. “The rise of consumerism in healthcare: How real-time benefit check can help patients and providers,” *Becker’s Hospital Review*. August 5, 2019. <https://bit.ly/3rSkEVt>



**Question 20:**

**You have cited the aging population and their related health care needs as a driver for the need to expand in these areas. For each service requested in this Application, provide an explanation of how you will design care delivery processes and facilities to specifically address the needs of the senior population cohorts. 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?**

**Answer:**

During the Applicant's facility planning process, it engaged with experts across Mass General Brigham to design the Project Site buildings to be inclusive and accessible to a broad patient population. The Applicant also engaged the Institute for Human Centered Design ("IHCD") to review building plans for accessibility and inclusive design and incorporated their recommendations. Both children and adults, including patients who may have specific needs or risk factors, will obtain services at the Project Sites. Therefore, the Applicant worked very closely with system colleagues from Spaulding Rehabilitation and Mass Eye and Ear to evaluate accessibility, wayfinding, patient flow, and risk mitigation for patients with mobility, visual acuity, hearing, cognitive, or other challenges. A few examples of how guidance from Spaulding Rehabilitation and Mass Eye and Ear colleagues is incorporated into Project Site design are listed below:

- 1) A convenient and safe patient drop off area is close to the front door, and staff are posted to provide extra assistance as needed. Parking is free, convenient and close to the entrance. Wheelchairs will be available at the entrance, with a vestibule entrance rather than revolving doors for easy wheelchair (and stroller) access.
- 2) Flush curbs have been provided to allow for ease of ambulation between parking and building entry for the mobility challenged. Vestibule clear openings of 5' have been provided at the vestibule entry points. Ground floor lobby floor finishes are smooth and level with an appropriate coefficient of friction per MAAB/ADA requirements. Flooring material transitions are to be flush where possible and, in all instances, flooring transitions will meet MAAB/ADA requirements
- 3) In an effort to minimize confusion or wandering, there is one centrally located reception area with staff who will provide wayfinding and other assistance as needed very close to the entrance. Way finding signage and graphics design is being developed to help all patients navigate the facility and will include high contrast colors and braille.
- 4) The elevators are close to the entrance and provide easy access to all floors for patients with limited mobility. MAAB/ADA compliant cabs and controls are designed into the project that include braille and raised lettering to assist those with sight disabilities.
- 5) All areas have been designed with family or caregiver companions in mind. Exam rooms have generous seating and include a virtual set up so that family members can be remotely included in the visit of a loved one.
- 6) Standard exam room configurations were designed to ensure a predictable experience from one visit to the next. Single multi-specialty clinic area with single check-in for all services that will prevent wayfinding confusion and reduce cognitive load for patients.

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- 7) Use of color and texture on floors and walls to make wayfinding easier and more intuitive. Ample natural light in public spaces also improves sense of place for patients experiencing cognitive decline.
- 8) Safety and minimizing risk for patients is paramount. Some examples of safety features at each of the Project Site facilities include:
  - a. “High-Low” exam tables, that sit up as a recliner, lower to chair height, and include arm rests for ease of access and limiting fall risk;
  - b. Ceiling mounted lifts in some pre- and post-operative bays for safe transfer of patients with limited mobility;
  - c. High contrast graphics and colors for easy wayfinding and safety for patients with limited visual acuity;
  - d. Cane detection devices are provided where needed to assist sight challenged patients;
  - e. Radiology sub-waiting and prep areas strategically located to allow for patient monitoring;
  - f. Step stools with handrails are provided at all imaging rooms for ease of access;
  - g. Operating room tables safety straps that reduce the risk of falls; and
  - h. Grab bars in all bathrooms, fixture, floor and door clearances are provided per MAAB/ADA regulations.

### **20a. How will staffing levels be adjusted and trained to support this population? (e.g., staff for escorting patients, clinical staff trained in dementia, staff with expertise in dementia and/or aging)**

#### **Answer:**

The staffing model includes a team of medical assistants, nurses, social workers, pharmacists, physical therapists, radiology technologists, nurse practitioners, physician assistants and physicians. Current entry to practice and continuing clinical education for these disciplines includes didactic and hands on training with aging adults, and most, if not all of the staff will have clinical experience with this patient population.

Additionally, part of what differentiates our care model is the inclusion of innovative Mass General Brigham programs like embedded Behavioral Health and the Integrated Care Management Program (iCMP). These psychiatrists, psychologists, social workers, nurses, and other clinicians have specialized expertise in patients with dementia and other co-morbidities in the aging population and will serve as a valuable resource and asset for the entire care team. The co-located team-based model gives all staff and providers direct access to these experts and will incentivize collaboration and coordination to ensure high quality care for all of patients receiving services at a Project Site, include frail elders. Furthermore, the Applicant has successfully completed a joint recruitment effort with its academic medical center partners to hire a geriatric psychiatrist starting January 2022. This specialist will be a key resource to provide and supervise clinical services for the Patient Panel as well as to educate the clinical team on unique issues for this population.

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Finally, the Applicant has coordinated a pathway for its facilities and providers to refer patients to the memory care clinic at McLean Hospital for short-term management as well being included in a newly created memory care specific collaborative care model sponsored by the Applicant's Quality and Patient Experience division as it expands throughout the system.

The care teams at each Project Site will hold daily safety huddles where the care team reviews the patients who are due to be seen that day and any issues that should be addressed during the patient visit. Patients with specific needs or risks can be identified during the safety huddle each morning, and additional resources can be assigned as needed.

All Project Site clinical staff will be educated on screening for fall risks, flagging high risk patients and protocols to prevent falls. These fall prevention protocols will be implemented throughout the Project Site's facilities including the radiology, clinic and procedural areas. Any falls or near misses are recorded and reported to the quality and safety group to complete a root cause analysis and update protocols as needed.

**20b. How will elderly patients who don't drive access the services? What is the plan to address transportation concerns to each site by this population?**

**Answer:**

Please refer to Section F1.b.iii.D, Transportation, for information regarding currently available transportation resources at each Project Site, including references to resources for the aging population. As the Project Sites are developed, the Applicant will monitor transportation resources as they develop over time to identify options for its aging patients. Additionally, to the extent that it is helpful, the Applicant will be very open to consulting with state and local officials in Westborough, Westwood, Woburn and the surrounding areas to help facilitate improvements in public transportation resources to enhance Project Site accessibility, particularly for the aging population.

**20c. Is the technology for requesting the on-demand ride age friendly?**

**Answer:**

The Applicant worked with its vendor to develop age friendly technology for requesting on-demand rides; the technology-based ride services help patients to keep their appointments and get to them in a timely manner. Such services are targeted at populations that are susceptible to missed care opportunities and at risk of deterioration in health and wellness, this includes both aging patients and other Patient Panel cohorts. If a patient needs help with the technology, one of the Project Site's patient navigators would aid them and schedule the ride for the patient. If the patient has a cell phone, the appointment is texted to them and the driver lets them know via text/phone they have arrived. The Project Site care team will also call and reminds the patient about the ride. Even if the patient does not have a cell phone, staff can help them organize the rides to and from the Project Site.

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### Question 21:

**1(f) relates to all three sites combined. For the top five procedures codes of each of the anticipated services:**

**21a. provide the top 4 payers and Medicare and Medicaid (if not in the top 4), and**

**21b. list the average procedural payments to the Applicant.**

**21c. Do you anticipate that payments will reflect the regional average prices, or will payments be negotiated based on your AMC status?**

### Answer:

Mass General Brigham interprets the Department's question to be asking for a description of Mass General Brigham's analysis supporting the cost savings statements in the Application. Based upon the available data, the top codes do not align with the higher cost services. Therefore, we focused on the codes that represent higher cost services to be provided at the Project Sites (Ambulatory Surgery, MRI and CT), for which anticipated savings would result in a material impact on cost. Below please find a description of the methodology for the analysis that was conducted to estimate the Project's cost impact for the system's largest commercial payers, BCBS, TAHP and HPHC.

As noted in the Application, Mass General Brigham is in the process of negotiating contracts with commercial payers and the goal going into those negotiations is for rates for the Project Sites to be 50% less than Mass General Brigham AMC rates and 25% less than Mass General Brigham community hospital rates. Mass General Brigham conducted a high-level analysis to estimate the financial impact of providing services in lower cost free-standing (non-HOPD) sites on cost savings. The analysis attempted to quantify what the impact, on revenue and, consequently, cost savings, would be for every 1,000 patients that shift from our current Mass General Brigham hospital main campus/HOPD locations to the proposed Project Sites.

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### Scope:

- The analysis focused on three high cost services only: Surgery; MRI; and CT.
- The analysis was conducted only for BCBS, TAHP, and HPHC, Mass General Brigham’s largest commercial payers.
  - Mass General Brigham did not conduct a cost analysis on the impact of this strategy on the system’s Medicare and Medicaid patients, as it is well documented. For example:
    - According to a RAND report, “HOPDs were paid 1.8 times more than ASCs for most procedures and 3.6 times more than the office-related portion of MPFS payments for services provided in Physician Offices.”<sup>27</sup>

### Methodology:

#### 1. Create the data set:

- a. First, Mass General Brigham pulled a large patient and visit level data set based on CPT codes. This data set was then separated to identify those patients that have a Mass General Brigham primary care physician and those that do not.
- b. The data set was then further limited down to patients that live in the attributed primary service area zip codes of the proposed Project Sites.
- c. The data set was segmented into volume currently occurring at Mass General Brigham’s AMCs/HOPDS vs. volume that is currently occurring at Mass General Brigham’s community hospitals/HOPDs.

#### 2. Critical Calculations:

- a. Understanding historical revenue per CPT by payer by historical AMC or community hospital location and calculating future estimated CPT by payer for the proposed Project Sites.
  - i. First Mass General Brigham looked at rates by CPT for the top three commercial payers (BCBS, HPHC, TAHP) by AMCs vs. community hospitals.
  - ii. Using this baseline information, Mass General Brigham then applied the logic that the Project Site rates will be 50% less than the AMC rate and 25% less than the community hospital rate – again this is Mass General Brigham’s current goal for negotiating rates for the Project Sites, measured as compared to the existing AMC and community hospital rates.

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<sup>27</sup> [https://www.rand.org/content/dam/rand/pubs/technical\\_reports/2011/RAND\\_TR979.pdf](https://www.rand.org/content/dam/rand/pubs/technical_reports/2011/RAND_TR979.pdf).

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iii. The results were 1) an average revenue per CPT by payer by location for the historical data set where the patient was seen and 2) an estimated potential revenue per CPT by payer for that same case at a Project Site.

b. Applying Payer Mix

i. Within the top three commercial payers, Mass General Brigham then applied its system-wide mix of BCBS, HPHC and TAHP to understand how much volume within the commercial mix was attributed to each specific payer.

### **3. The Analysis:**

- a. Using the historical CPT data created by location (AMC vs. community hospital), Mass General Brigham calculated what the savings would be if those cases had a payer mix of BCBS, HPHC and TAHP, and moved to a Project Site at the lower price point in order to understand the estimated savings amount in total.
- b. Mass General Brigham then took that aggregated amount and further isolated the impact to a per patient view.
- c. Using the per patient savings amount, Mass General Brigham then multiplied that amount by a per 1000 patient metric.
- d. This metric was calculated and segmented by those patients that have a Mass General Brigham primary care physician and those who do not.
- e. The analysis assumed 100% of the savings of the potential for those patients that have a Mass General Brigham primary care physician. For patients that do not have a Mass General Brigham primary care physician, the analysis assumes only 40% of potential savings are realized.

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**4. Results:**

	Major Imaging	Ambulatory Surgery
BCBS, HPHC, and TAHP Combined Savings	\$32,549,362	\$73,346,234
Per Patient	\$1,758	\$7,983
Per 1,000 Patients	\$1,757,937	\$7,982,505

<b>MRI</b>		
CPT	Description	% of Total
70553	MRI BRAIN STEM W/O & W/DYE	21%
74183	MRI ABDOMEN W/O & W/DYE	9%
72148	MRI LUMBAR SPINE W/O DYE	8%
70551	MRI BRAIN STEM W/O DYE	7%
73721	MRI JNT OF LWR EXTRE W/O DYE	7%
	Percent of Total MRI Scans	52%

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<b>CT</b>		
<b>CPT</b>	<b>Description</b>	<b>% of Total</b>
74177	CT abdomen & pelvis with contrast	22%
71260	CT thorax with dye	15%
70450	CT head/brain without dye	13%
71250	CT thorax without dye	10%
74176	CT abdomen & pelvis	5%
	Percent of Total CT Scans	64%

<b>Ambulatory Surgery</b>		
<b>CPT</b>	<b>Description</b>	<b>% of Total</b>
19301	PARTIAL MASTECTOMY	2%
38525	BIOPSY/REMOVAL LYMPH NODES	2%
58558	HYSTEROSCOPY BIOPSY	2%
29881	KNEE ARTHROSCOPY/SURGERY	2%
29826	SHO ARTHRS SRG DECOMPRESSION	1%
	Percent of Total Ambulatory Surgeries	9%



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### Question 22:

**On pg. 20 you speak of the efficiencies gained as a result of the limited number of lower acuity procedures performed in an ASC. Have you tracked the number of surgical delays for same day surgeries in your acute hospitals? What is the frequency for such delays?**

### Answer:

To track operating room efficiency for same day surgeries in its acute hospitals, Mass General Brigham focuses on two metrics:

- **First case on-time starts:** This metric tracks the percentage of first cases of the day that started at their scheduled start time. Starting the first case of the day on time is critical as it will set the pace for the rest of the day in the OR suite. For those cases that did not start on time, Mass General Brigham tracks the reason for the delay. Tracking the reasons for delays allows us to identify areas of opportunity to optimize our processes.
- **Turn around times:** This metric measures the time in minutes between when the previous patient is wheeled out of a specific OR and the next patient is wheeled into that OR. In between each case the OR staff need to complete a series of steps in order to get ready for the next case. Turn around time measures how efficient the OR team is about completing these steps. The lower the turn around the better the OR efficiency as it means the OR is idle for less time and, consequently, the higher the OR utilization.

Having similar surgeries done in an OR throughout the day improves on both of these metrics. For on-time starts it means that the surgeons, anesthesiologists and OR staff will have a replicable process to start the day which will reduce the opportunity for errors in room setup and case preparation.

For turnaround time having similar scheduled cases done in an OR throughout the day reduces the time swapping equipment between cases. In addition, the OR staff, surgeons and anesthesiologists can be grouped into high functioning teams that focus on specific types of cases gaining on efficiencies of working as a collaborative team.

Mass General Brigham tracks the turnaround times for day surgeries in the system's acute hospitals. Target turnaround times for the system's academic medical centers and community/specialty hospitals are 45 minutes and 35 minutes, respectively. For the period 10/1/2021-8/1/2021, the system's academic medical centers and community/specialty hospitals averaged actual turnaround times of 46 minutes and 29 minutes, respectively. Mass General Brigham anticipates that the AmSurg ORs will have a target turnaround time of 15 minutes.

**Question 23:**

**On pg. 20 you describe the benefits of improved accessibility of the proposed ambulatory clinics sites. You also state that you hired a design consulting firm IDEO to develop the space. What patient concerns did IDEO focus on? Given that the aging population is cited as a need for the clinics, did IDEO focus on age friendly concerns? For example, patient flow/signage/comfort?**

**Answer:**

During the experience design phase, the Applicant worked closely with IDEO to do research with patients about how to design a care model and facility to improve the patient experience. Although patients of all ages, and with different health needs were included in the research, the research focused on older patients, many with multiple co-morbidities. However, the high-level themes from this patient research were consistent across age groups, and included:

- Patients and trusted caregivers want to be listened to and included in care planning;
- Patients want their providers to collaborate to provide comprehensive care;
- Patients are seeking a relationship with the care team that spans episodes of care, and they don't want to feel "dropped" in-between episodes; and
- Uncertainty and waiting cause anxiety and negatively impact health.

These themes drove the design process to create a facility that engages patients and families in their care (extra seating in exam rooms, virtual access options), makes navigation and flow easy and seamless (intuitive wayfinding, digital systems that assist with patient flow), creates predictability and reliability (update boards for family while their loved one is in the operating room, pre-visit communication and updates, wait time notification), and improves access (diagnostic, clinical, and surgical services closer to home).

Specific examples of how IDEO's research informed facility design:

- Large monitors in every exam room to include patients and their remote care givers in education and shared decision-making. Shared decision-making was particularly important to the older patients, and their care givers, involved in the IDEO research. Many care givers are balancing competing demands on their time (i.e. work, childcare, etc.) and remote, real-time, shared decision-making resources facilitate their ability to be involved the care and treatment of the patient. This same technology will facilitate multi-specialty collaboration with specialists based elsewhere at the time of the visit.
- Shared co-working spaces for provider teams to facilitate easy and timely collaboration, for example between primary care provider and social work, primary care provider and mental health provider, primary care provider and cardiologist.<sup>28</sup>
- Public areas designed more as 'community living rooms' rather than typical waiting rooms (that induce stress even for healthy patients).

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<sup>28</sup> Iain Smith, et al., *Adapting Lean Methods to Facilitate Stakeholder Engagement and Co-Design in Healthcare*, BMG Vol. 368, m35 (2020), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7190378/> (last visited Jul. 20, 2021).

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- The large multi-use meeting room on the 1<sup>st</sup> floor of the Westborough Site and Woburn Site will be used not only for meetings, but also for patient group visits and education. The room is designed to open up into the lobby to allow for larger community events to promote health and wellness education.
- Use of materials, colors and textures that intentionally promote calmness, predictability, and optimism.
- Ample natural light in public spaces to improve sense of place for patients experiencing cognitive decline.

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### Question 24:

**On pg. 22 you state the existing “robust Clinical Quality Assurance Program” will be applied to all three sites. Please clarify:**

#### **24a. If this only applies to imaging and for MRI and CT**

##### **Answer:**

Yes. The Clinical Quality Assurance Program described on page 22 of the Application is specific to Mass General Brigham’s Imaging Services. Mass General Brigham currently uses a uniform Clinical Quality Assurance Program across all locations where Imaging Services are provided, and plans to implement the Clinical Quality Assurance Program at the Project Sites.

#### **24b. How this program currently functions and how it will be implemented relative to:**

##### **i. Standards of treatment**

##### **Answer:**

The Project Sites will use the same CT and MRI imaging protocols and standards, including for administration of IV contrast, as utilized at Mass General Brigham’s hospitals. All CT and MRI exam requests will be reviewed by a radiologist before the exam is performed to ensure that the exam is clinically appropriate and that the optimal imaging protocol has been assigned before the patient is scanned.

##### **ii. Quality reviews**

##### **Answer:**

All safety reports, peer learning/peer review learning opportunities, and patient experience of care comments/feedback will be reviewed following processes similar to those in place at Mass General Brigham’s hospitals. All Project Sites will follow an American College of Radiology- (“ACR”) approved peer learning/review program and radiologists will follow the peer learning/review program of the primary institution at which they perform services.

##### **iii. Evaluation measures**

##### **Answer:**

Consistent with all Mass General Brigham hospitals, all Project Sites will utilize RL Solutions, Mass General Brigham’s system-wide safety reporting and tracking software. All safety reports, including the key metrics listed below, will be tracked in RL Solutions and improvements will be implemented as needed. There will be formal Collaborative Case Review for significant safety events.

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**Formal Metrics (Experience/Access/Communication of Results)**

<b>Document/Action</b>	<b>Responsible Party</b>	<b>Due Date</b>
<b>1. Patient Experience/ Satisfaction</b>	IC	Annually from Project Site implementation
a. Overall satisfaction of care provided (fair or lower only)	IC	Annually from Project Site implementation
b. Satisfaction rate for patients by modality	IC	Annually from Project Site implementation
c. Patient response rate with a breakdown of respondents by race	IC	Annually from Project Site implementation
<b>2. Access Times</b>	IC	Annually from Project Site implementation
a. Median number of days between ordering elective imaging test till performed by modality	IC	Annually from Project Site implementation
b. Median number of days from the completion of a patient’s imaging service to finalization of radiology report by modality	IC	Annually from Project Site implementation
c. Any policy changes instituted as a result of MGB evaluation of access times	IC	Annually from Project Site implementation
<b>3. Clinically Significant Results</b>	IC	Annually from Project Site implementation
a. Percentage of exams by modality that trigger a Clinically Significant Radiology Result (CSRR) per MGB policy	IC	Annually from Project Site implementation

**iv. Elimination of unnecessary scans for safety and cost purposes**

**Answer:**

The Project Sites will follow a process similar to the process in place at Mass General Brigham’s hospitals. The radiology review process set forth in response to question 24b.i is aimed at eliminating unnecessary scans. Epic-embedded clinical decision support tools, further described below, will also be implemented at the Project Sites to help reduce inappropriate use 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.

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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 – advocacy, 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

### **v. Staff training**

#### **Answer:**

The Project Sites will use the same content and processes for staff training as are utilized by Mass General Brigham’s hospitals.

**Question 25:**

**On pgs. 26-27 you describe at a high level four programs that are designed to improve outcomes: PROMS, Shared Decision-Making Program, eConsult Program, and Integrated Care Management Program (iCMP) that includes Patients Linked to Urgent Supports. We are trying to get a better understanding as to how these programs are administered, and their perceived effectiveness. For each, provide a more thorough explanation and include the following information:**

**Patient Reported Outcome Measures (“PROMs”) Platform**

**25a. How frequently is each program used? How are patients evaluated for inclusion into the programs?**

**Answer:**

Patient Reported Outcome Measures (PROMs) appointment questionnaires are consistently and automatically assigned, via the EHR, to all visit types used for a particular questionnaire’s application. (i.e.: Knee questionnaires assigned to all “new patient” visits and certain “recall” visits types of a participating Orthopedics clinic) Likewise, a *series* of PROMs questionnaires are assigned also automatically by the EHR whenever a procedure is scheduled to which PROMs are specified (i.e., Knee questionnaire assigned to all Knee arthroplasty patients of a participating surgical location). In the case of such procedural series questionnaires, typically, they are assigned from 30-0 days prior to the procedure; as well as after the procedure at +90, +180, +365 days (or later) post-op. Through these methods of assignment, individual patients are not evaluated for inclusion in PROMs; rather, appointment types and specified procedures are the basis for PROMs assignment so that *all* patients having such appointments or procedures are included. Mass General Brigham believes that it has funded and built the nation’s largest PROMs program, having collected 10.3 million individual PROMs questionnaires, working in over 70 EHR-defined specialties and with a program presence in almost all of our clinical locations.

To help capture patient responses, questionnaires are first assigned to the patient via the Epic EHR patient portal, called “Patient Gateway.” If at the time of the appointment a patient has not completed the questionnaire on the Patient Gateway website/mobile app; the patient is presented a tablet when they check in at the waiting room prior to the appointment. An icon appearing next to the patient’s name on the clinical location’s check-in screen prompts the staff to present the icon to patients who have not completed the questionnaire.

**25b. How are these programs are operationalized to ensure their effectiveness? For example, in the Shared Decision-Making Program at what point do patients watch the video, and when and how does the follow-up decision-making occur?**

**Answer:**

Mass General Brigham has found that the availability of the tablet modality of completion is an essential part of efforts necessary to reduce ethnic disparities that we have detected in patient reported outcome collection. The Patient Gateway, while often a very effective method of

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collecting patient PROMs questionnaire responses, does so at dramatically lower rates for Black/African American and Hispanic/Latino populations as compared to white/Caucasian patients. Mass General Brigham surfaced this learning in the aftermath of a 2020 pandemic-driven temporary suspension of PROMs tablet use in our clinics. The aforementioned disparities then became apparent when looking at the ethnic distribution of patient responses in the months immediately following tablet suspension. Mass General Brigham believes it has the largest PROMs tablet deployment of Epic Systems' customer health systems, having invested in approximately 2,000 tablets currently in clinics.

To further support inclusion and minimize disparities, Mass General Brigham, as part of its "United Against Racism" investment, anticipates that as of October 1, 2021, translation of all of over 500 PROMs questionnaires will be completed for Spanish, Portuguese, Haitian Creole, Arabic, Traditional Chinese and Russian. Mass General Brigham believes this level of support to PROMs language availability is novel nationally.

For PROMs data to be used effectively, it must also be easily available to the provider. Mass General Brigham worked with Epic Systems for five years - initially advocating for, and later to collaborate on the design of a newly-available clear and graphical provider's display of Patient PROMs data. This display became live on the EHR during the pandemic, so provider rollout was delayed; however Mass General Brigham expects this to be a key development in the still-progressing national and international introduction of PROMs in direct patient care. As we look forward, Mass General Brigham also leads a consortium of major Epic-using PROMs health systems, including the Cleveland and Mayo Clinics, Northwestern and Dartmouth-Hitchcock and has coordinated the group's advocacy with Epic for the development of a patient's own view of their PROMs responses. This would allow for more effective patient-provider engagement in the patient's reported outcome responses.



**25c. How do you measure success of the programs and do you track tests and procedures avoided and why? Is part of the process ensuring that the patient’s healthcare goals are addressed as appropriate?**

**Answer:**

Rather than measuring reduction of tests and procedures, the PROMs 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 and by using aggregate data and enabling quality improvement by identifying novel provider or hospital outcomes that can be emulated to improve care for all. The ideal example of this is 2017 research by Basch et al<sup>29</sup> that the collection of 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. To support this, Mass General Brigham has initiated an internal incentive (presently for clinics in hip, knee, and back surgery) based on achieving desired levels of paired pre- and post-operative paired PRO data. A local example of such analysis is Doorly, Sisodia: O18. Preoperative PROMIS 10 physical function scores help predict opioid dependence after lumbar fusion surgery.<sup>30</sup>

**25d. Will all four programs be available with trained staff at each site?**

**Answer:**

The Mass General Brigham PROMs program is supported by a program staff who are a part of the system’s Division of Quality and Patient Experience, based at Mass General Brigham’s system offices in Somerville, MA. PROMs program personnel train clinic staff, both remotely and in-person, on basic program workflow and provide technical support and training to providers in each clinic focused on the use of the data and its location within the EHR. Support for clinical staff is also available via a help desk ticketing system that is supported by Mass General Brigham Information Services that facilitates the direct receipt of requests by on-duty PROMs staff members who can either resolve questions or issues themselves, or pass the issue to Information Services, EHR support or others as needed. The system’s PROMs staff also is available to support system colleagues, including new staff and provider hires, either remotely or in-person.

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<sup>29</sup> <https://jamanetwork.com/journals/jama/article-abstract/2630810>

<sup>30</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6877673/>.

**Shared Decision-Making Program**

**25a. How frequently is each program used? How are patients evaluated for inclusion into the programs?**

**Answer:**

The Applicant's Shared Decision-Making Program utilizes the Healthwise® Shared Decision-Making aid. In the first half of calendar year 2021 alone, almost 4,300 Healthwise® aids have been ordered across the Mass General Brigham system. This usage exceeds all aids ordered in all of calendar year 2020, which totaled approximately 2,750 aids. The top five topics for aids orders in the last quarter of calendar year 2021 included quitting smoking, knee osteoarthritis, hip osteoarthritis, lung cancer screening and breast cancer screening. Use of decision aids does not take into consideration the patient's insurance coverage; aids are ordered for patients enrolled in Medicare, MassHealth (Medicaid) and commercial plans. Primary care and specialist clinicians can order the aids for any patient through the patient's medical record in EPIC. The decision to order an aid is based on clinical judgement. In general, the order is tied to an in-person or e-Consult visit. While the decision aid order is based on the clinician's clinical judgment, other members of the staff (for example, medical assistants or schedulers) can facilitate the ordering process.

**25b. How these programs are operationalized to ensure their effectiveness. For example, in the Shared Decision-Making Program at what point do patients watch the video, and when and how does the follow-up decision-making occur.**

**Answer:**

More than 125 decision aids can be ordered through the EPIC EHR in several ways:

- Decision aids can be ordered directly through Best Practice Alerts in the EHR or through the EPIC decision aid ordering process.
- On the order by the primary care provider or specialist:
  - Schedulers can order decision aids when they schedule new visits (this is mostly done by orthopedic specialists); and
  - Providers, medical assistants and other staff can order the decision aids the day of the patient's visit or before the visit if the provider determines that such order is appropriate. All orders are placed at the provider's discretion. In orthopedics, some of the providers have incorporated decision aids as part of their standard workflow.
- Soon patient-driven ordering will be available in which patients are provided with an iPad questionnaire that lets them choose which decision aids they would like to receive (see next chart for the list of decision aids that can be ordered). These decision aids will be available in six languages.

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The decision aids are provided as a print version or they can be sent to the Patient Gateway. Decision aids provided through Patient Gateway can be completed online, with the patient responses returned to the provider's in box to review. The logic has been built into the ordering system to allow for a more patient-specific approach.

### **25c. How do you measure success of the programs and do you track tests and procedures avoided and why? Is part of the process ensuring that the patient's healthcare goals are addressed as appropriate?**

#### **Answer:**

Over the years, Mass General Brigham has received patient and clinician feedback on the usefulness of the decision aids:

#### Patient feedback:

- *“Thank you very much for the web site you sent me, I read its cath 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: Mass General Brigham can track how many patients are prescribed a decision aid by hospital, specialty area and provider. Mass General Brigham can also track how many patients open the decision aid and how many complete the tool if active on the Patient Gateway. Mass General Brigham'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 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. Mass General Brigham has referenced published studies that demonstrate the impact of the decision aid.<sup>31</sup>

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<sup>31</sup> See, for example, Sepucha et al, Patient Decision Aids Improve Decision Quality and Patient Experience and Reduce Surgical Rates in Routine Orthopaedic Care: A Prospective Cohort Study, J Bone Joint Surg Am. 2017 Aug 2;1253-1260, <https://www.ncbi.nlm.nih.gov/pubmed/28763411>.

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**25d. Will all four programs be available with trained staff at each site?**

**Answer:**

Mass General Brigham offers onsite training to practices on available decision aids and how to order the decision aids in EPIC. A 3-hour online training webinar is available to all MGB clinicians: “Shared Decision Making: Skills for Clinical Practice” to support clinical conversations. Participants learn how to use the Shared Decision-Making Program in clinical practice to improve their ability to communicate risks and benefits to patients, to communicate the likelihood and probability of risks and benefits of tests and treatments, and to elicit patient preferences.

**eConsult Program**

**25a. How frequently is each program used? How are patients evaluated for inclusion into the programs?**

**Answer:**

Use of the eConsult Program varies system wide and depending on specialties being requested. Academic Medical Centers (“AMC’s”) such as Massachusetts General Hospital and Brigham and Women’s Hospital have high volumes and typically see eConsults daily. Other sites have a lower volume of eConsults. For FY20, Massachusetts General Hospital had a total of 13,059 eConsults, Brigham and Women’s Hospital had 6707, Newton Wellesley Physician Hospital Organization had 2409, North Shore Medical Center had 751, and Massachusetts Eye and Ear had 235. For FY20, the total number of monthly eConsults ranged from 1,297 in April to 2,376 in August. The top five responding specialties for eConsults in fiscal year 2020 were endocrinology, hematology, dermatology, infectious disease, and cardiology.

Consults are available to Mass General Brigham’s full patient population. Patients are evaluated for utilization of eConsults based on provider assessment, which may be done by a primary care provider or specialist. The eligibility criteria for eConsults are (i) the patient must not be medically complex, (ii) the medical question being asked must not be urgent/emergent, and (iii) the patient must not have established care with the specialty with which the order is being placed within the past 2 years.

**25b. How these programs are operationalized to ensure their effectiveness. For example, in the Shared Decision-Making Program at what point do patients watch the video, and when and how does the follow-up decision-making occur.**

**Answer:**

The eConsults program is operationalized to ensure its effectiveness by employing both system and site program staff that perform functions such as selecting new specialties for the program and ensuring that the eConsult workflow is built correctly into the electronic health record (EHR). Staff also work with site teams to review program data, in particular the response times to eConsults. If specialties are dropping below the required response window of 2 business days, staff will contact the specialists to ensure eConsults are completed. In addition, Mass General Brigham tracks visits within the specialty that happen after the eConsult. In addition to ongoing review, on an annual basis, eConsults staff review and perform cumulative data reviews and quality assessments.

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**25c. How do you measure success of the programs, and do you track tests and procedures avoided and why? Is part of the process ensuring that the patient’s healthcare goals are addressed as appropriate?**

**Answer:**

Mass General Brigham would like eConsults to replace some of the in-person consultations that don’t need to occur in the office. Mass General Brigham utilizes the eConsult Program to assist with more difficult to access specialties by providing an eConsult specialist consultation earlier in the process. As a result of an eConsult, in some cases there may not need to be a follow up specialist visit. In addition, Mass General Brigham is looking into assessing the impact on other diagnostic tests and procedures that may also be avoided by an eConsult. The outcome metric currently utilized is “avoided visits”, which is a proxy metric that looks for the presence of an in-person specialty consultation in the 4 months after an eConsult (of the same specialty) takes place.

eConsults can efficiently address the patient’s healthcare goals by obtaining recommendations from specialists, increasing access to specialists, and allowing the primary care provider to manage more complexity without adding more in person visits to the patient’s schedule. Mass General Brigham is currently working to ensure shared decision making and open communication with patients are incorporated into all aspects of care, and the eConsult Program is an important part of that goal. Accordingly, Mass General Brigham is raising patient awareness regarding the availability of eConsults.

**25d. Will all four programs be available with trained staff at each site?**

**Answer:**

eConsults are available system-wide with trained staff members at participating sites, and will be available at the Project Sites.

**Integrated Care Management Program (iCMP)**

**25a. How frequently is the iCMP used? How are patients evaluated for inclusion into the iCMP?**

**Answer:**

The iCMP was established in 2012 for the Mass General Brigham adult population and in 2014 for the Mass General Brigham pediatric population. Since 2012, approximately 89,000 system patients have been identified for iCMP, including approximately 80,000 adult patients and approximately 10,000 pediatric patients. Patients are identified for the program in two ways. First, a machine learning algorithm using claims data and the John Hopkins ACG System<sup>32</sup> grouper. The algorithm predicts the patients with multiple chronic conditions and high utilization of health care services with a predicted risk of becoming high cost and high utilizers in the future. The algorithm uses historical claims data of successfully enrolled and graduated patients to predict what new patients would do well in the iCMP. The algorithm is run every 3-4 months. Second, primary care providers refer patients in real time into the iCMP. Primary care providers have the final decision making authority for which patients are contacted regarding enrollment in the iCMP. The choice of whether to enroll in the iCMP rests with the patient.

As of July 1, 2021, approximately 41,000 Mass General Brigham patients, including approximately 38,000 adult patients and 3,000 pediatric patients, have been successfully enrolled and managed in the iCMP. On average, there are approximately 16,500 system patients actively enrolled in iCMP on a monthly basis.

**25b. How is the iCMP operationalized to ensure their effectiveness?**

**Answer:**

The iCMP was developed at the central Mass General Brigham Population Health (“PHM”) level and is overseen by PHM leadership and accountable to the Performance Advisory Committee. The iCMP is implemented and managed at the Regional Service Organization (“RSO”) provider entity level. Each RSO has an iCMP leadership team consisting of a medical director, clinical lead (usually a registered nurse (“RN”), but social workers and community health workers also serve as clinical leads), and administrative lead (generally a program or project manager). The care team consists of RNs, social workers, community health workers, community resource specialists and pharmacists. Community health workers and community resource specialists work in the community, meeting the patients in their homes. These care team members help address and eliminate social determinants of health gaps by accompanying patients to appointments and assisting with accessing state agencies and other community organizations as needed. Pharmacists serve in a consulting role on the care team, supporting the team leads by educating patients on medication management and medication adherence. They also review patient medication lists to address medication issues and identify counter-indications. The number of care teams needed by an RSO is determined by the number of patients enrolled in the iCMP, and the panel sizes vary depending on the team lead. RNs typically have approximately

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<sup>32</sup> The Johns Hopkins ACG System is the world’s leading population health analytics software. <https://www.hopkinsacg.org/advantage/#features>.

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180 patients, social workers have approximately 80 patients, and community health workers have approximately 30 patients. iCMP policies and protocols are established at the PHM level using an Operations Governance committee with representatives of each of the local RSO iCMP leadership. The iCMP is held to a set of key performance metrics with targets to ensure efficiencies in patient identification, enrollment, engagement and impact on healthcare utilization.

### **25c. How do you measure success of the programs and do you track tests and procedures avoided and why? Is part of the process ensuring that the patient’s healthcare goals are addressed as appropriate?**

#### **Answer:**

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<sup>33</sup> 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<sup>34</sup>

The Applicant generates an iCMP dashboard with targets that is reviewed on a quarterly basis with local RSO iCMP leadership and bi-annually with the 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 RSO 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.

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<sup>33</sup> Hsu J., Price M., Vogeli C., Brand R., Chernew M.E., Chaguturu S.K., Weil E., Ferris T.G. *Bending The Spending Curve By Altering Care Delivery Patterns: The Role Of Care Management Within A Pioneer ACO*, HEALTH AFFAIRS (Millwood), 2017 May 1. The study used data for the period 2009-2014.

<sup>34</sup> The study referenced in footnote 5, above, included an analysis of the data through 26 months of enrollment. The resulting data was not published but is reflected here.



**25d. Will all four programs be available with trained staff at each site?**

**Answer:**

All Mass General Brigham primary care practices, including the practices currently providing physician services at the existing medical office building at the Westwood Site, have access to the iCMP. The number of a practice's patients enrolled in iCMP determines if a practice has a full time embedded iCMP care team or if the practice shares a care team with another practice. The Applicant intends to implement the iCMP at all of the Project Sites. All staff involved with the iCMP go through a formal onboarding process including a standard curriculum of training and education. The iCMP Manual, which all iCMP care teams follow, includes standard forms for documenting iCMP work. iCMP provides ongoing training and education sessions for the care teams that includes an annual training survey. For example, in calendar year 2021, iCMP teams are enrolled in a 3 phase asynchronous disparities training program. When possible, training and education is structured to provide continuing education unit credits for licensed staff.

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### Question 26:

**What other quality and outcomes oriented programs do you have planned for the three sites? Provide a description of any planned and how they will be measured.**

#### **Answer:**

The Project Sites will be supported by a quality and safety team through the Mass General Brigham Quality and Patient Experience (“QPE”) department. This team will report in to the system Chief Patient Experience and Equity Officer, and will focus on ambulatory quality, including safety, patient experience, equity, and efficiency.

Mass General Brigham’s Ambulatory Quality Program will be implemented at each of the Project Sites. The Ambulatory Quality Program mission statement is “to provide exceptional care in the ambulatory setting at Mass General Brigham by defining quality, measuring it, improving it to exceptional levels, and communicating [Mass General Brigham’s] methods and results to the industry.” The Ambulatory Quality Program combines EHR-sourced, Evidence-Based Measures (“eCQMs”) and real-time performance metrics to measure its success in two key areas: chronic disease measures and prevention measures. Chronic disease measures are focused on patients with diabetes, hypertension, cardiovascular disease, and asthma, with the goal of keeping the chronic disease under control. Prevention measures focus on cancer screenings, vaccines, and hearing/vision screening, with the goal of prevention or early diagnosis and treatment. The Ambulatory Quality Program utilizes and supports a team of population health coordinators at the practice level to support the required to address gaps in quality performance.

Mass General Brigham also anticipates adopting some aspects of its Specialty Care Quality Program at the Project Sites. Clinical collaboration is one of the main areas of focus of the Specialty Care Quality Program, and there are currently 18 active collaboratives that are organized into three clinical categories:

- Surgery: anesthesia, bariatric surgery, colorectal surgery, interventional cardiology & cardiac surgery, ortho/spine surgery, surgical chiefs
- Medicine: critical care, gastroenterology, general cardiology, infection control, Ob/Gyn, palliative care
- Disease: chronic kidney disease, multi-drug resistant organisms, pulmonary/COPD, sepsis, stroke, surgical site infections.

To date, the collaboratives have had variability in their goals, projects, and deliverables, with previous deliverables centered around Epic tools, consensus building/guidelines, and registries. While not all of the current collaboratives are applicable to the Project Sites, Mass General Brigham plans to tap into this framework as appropriate for each Project Site.

The Project Sites will also participate in the Center for Medicare and Medicaid Services (“CMS”) Ambulatory Surgery Center Quality Reporting (“ASCQR”). This program “focuses on measures that support the National Quality Strategy’s goal of better healthcare for individuals, better health for populations, and lower costs for healthcare by creating transparency around the quality of care

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provided by ASCs to support patient decision-making and quality improvement.”<sup>35</sup> Patient outcome data and quality measures such as appropriate follow up intervals, post-operative hospitalizations, and clinical improvement after surgery at the Project Sites will be submitted via the web-based tool on the QualityNet Secure Portal.

Other quality programs that will be implemented at the Project Sites and supported by the QPE team will include frequent surveys, surveillance, and auditing to identify areas of risk or opportunities for improvement. Outcomes and findings from these programs will drive prevention and improvement strategies. To measure patient experience, the Project Sites will use the Consumer Assessment of Healthcare Providers and Systems (“CAHPS”) surveys that ask patients to report on their health care experiences.<sup>36</sup> Each CAHPS survey produces several measures of patient experience. Mass General Brigham works with a trusted vendor to administer real-time patient experience surveys to our patients, gather results and opportunities for improvement, and share the survey results both internally with clinicians and publicly on the internet. Individual clinician performance is assessed with Ongoing Professional Practice Evaluation (“OPPE”), a screening tool to evaluate all practitioners who have been granted privileges and to identify those clinicians who might be delivering an unacceptable quality of care. Focused Professional Practice Evaluation (“FPPE”) is the follow up process to determine the validity of any positives (whether true or false) found through OPPE. The Project Sites will also have processes to monitor and identify tests and procedures that are disproportionately frequent, may jeopardize the safety and quality of care, and/or may impact access to services due to high cost. Assessing appropriateness and monitoring overuse is an important area of focus at the Project Sites, and will be guided by recommendations such as those provided by the *Choosing Wisely Campaign* from the ABIM Foundation.<sup>37</sup> Finally, a team of Infection Prevention specialists will actively conduct infection control surveillance and implement strategies to prevent nosocomial or healthcare-associated infections.

The Project Sites will also follow the Mass General Brigham standards for collecting data, ensuring closed loop follow up, and reporting for safety. Multiple evidence-based recommendations and guidelines are being used to design the safety framework and prevent medical errors for the Clinical Services provided at the Project Sites, such as the National Patient Safety Goals published by the Joint Commission<sup>38</sup> and CRICO Risk Management Foundation Guidelines.

The Project Sites are also implementing structure, process, and training to be an Equity-Informed High Reliability Organization (“HRO”). The commercial airline industry and other champions for safety developed a method for analyzing and responding to risk events called “High Reliability.” This method requires constant analysis of risk, near-misses, and events and applying scientifically proven, yet simple principles and practices that help the organization see and understand risk differently.

Several years ago, several Mass General Brigham hospitals (Brigham & Women’s Hospital, Brigham and Women’s Faulkner Hospital, and North Shore Medical Center) embarked on a High

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<sup>35</sup> <https://qualitynet.cms.gov/asc/ascqr/measures>.

<sup>36</sup> <https://www.ahrq.gov/cahps/index.html>.

<sup>37</sup> <https://www.choosingwisely.org/>.

<sup>38</sup> <https://www.jointcommission.org/standards/national-patient-safety-goals/ambulatory-health-care-national-patient-safety-goals/>.

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Reliability journey using the “Sequence of Reliability” framework. The sequence was adapted to address risks that are inherent in healthcare and apply a framework that leads to more reliable systems, human performance, and behaviors. Based on the success and safety improvement, Mass General Brigham will use the same High Reliability methods to design for better safety and quality while still managing every-day risks and performing our mission at other system hospitals, as well as at the Project Sites.

As part of the HRO framework, patient safety events are defined as any process, act of omission or commission that results in a hazardous healthcare condition and or unintended harm to a patient. Any safety events will be reported and trending through our electronic Safety Event Reporting System. These reporting systems, first introduced in high risk industries such as aviation and nuclear are used to improve safety, identify trends, and enhance organizational learning from errors. Event analysis is carried out after an error to evaluate systems, performance and behaviors to identify causal and contributing factors associated with a near miss or harm patient safety event.

As part of the overall patient safety climate, the Project Sites will also measure employee perceptions or attitudes about the norms, policies, and procedures related to patient safety using the AHRQ Culture of Safety surveys, which assess domains such as communication, teamwork and training, organizational learning/response to errors, standardization, work pressure and pace, and management support.<sup>39</sup> Results from these surveys will be used to assess the overall safety culture amongst the team and identify areas for improvement.

Finally, Mass General Brigham has committed that the Project Sites will participate in the *CRICO Closing the Loop on Missed Diagnoses* initiative. This initiative, developed in partnership with Ariadne Labs, aims to reduce failures or significant delays in high-risk diagnoses attributed to missed opportunities. Each CRICO member organization that has committed to participate will develop an intervention to reduce locally-identified gaps in the timely diagnosis of breast, colorectal, prostate, or lung cancer attributed to missed opportunities to:

1. appropriately screen asymptomatic patients; and
2. work up patients with symptoms or complaints, including the appropriate communication of test results, consultation assessments, and follow-up care plans.

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<sup>39</sup> <https://www.ahrq.gov/sops/index.html>.

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### Question 27:

Regarding Public Health Value/Health Equity focused, on pg. 33 you state that you “launched the *United Against Racism* initiative which includes a roadmap for achieving equality within the Applicant’s system, and eliminating racism and oppression faced by the Applicant’s patients, communities, and staff.” Please provide an explanation of this program including:

**27a. How long has the program been in place and is being operationalized within all of your service areas, patients and staff.**

#### Answer:

Mass General Brigham’s United Against Racism (“UAR”) initiative launched in November of 2020 as a system-wide priority. As part of this initiative, Mass General Brigham:

- is investing in cross-cutting infrastructure - like translator services and translated materials - that will be deployed in all patient-facing activities across the system, including the Project Sites;
- is rolling out a staggered implementation of SDoH screening and referral across all primary care practices and supporting a robust community health worker initiative to respond to identified needs; and
- in specialty care practices, providing grants for department level projects that will reduce inequities or disparities in the field. Examples include:
  - increasing access to prostate cancer screening, diagnosis and treatment for underserved populations;
  - reducing disparities in birth outcomes through cultural- and language-concordant doula care; and
  - applying process improvement principles to characterize and mitigate racial disparities in emergency psychiatry.

Additionally, all proposed new system initiatives are required to articulate how equity and community will be embedded in their development, and there is a system leadership level directive to embed equity in all organizational processes.

**27b. How you will address areas identified as needing “interventions” and how you are determining what those need to be.**

#### Answer:

An organizational commitment of \$30M has been made towards identifying inequities across the system and developing action plans to address them. At the system level, Mass General Brigham is able to harness EHR and utilization data to identify areas needing improvement; for example, improving the accuracy and completeness of REaL (Race, Ethnicity and Language) data. At the local level, individual departments must identify disparities in their respective field and develop action plans with associated outcome measures to determine impact.

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**27c. What specific needs have you identified within the towns of each of three proposed service areas of this project.**

**Answer:**

The results from CHNAs conducted in Westborough, Westwood, and Woburn identified similar needs across all three communities:

<b>Westborough</b>	<b>Westwood</b>	<b>Woburn</b>
Coronavirus/ COVID-19 (specifically related to testing, transmission, disease mitigation, etc.)		
Financial Insecurity / Unemployment		
Housing		
Transportation		
Systemic Racism and Racial Injustice		
Mental Health		
Alcohol/Substance Use		
Issues related to Older Adults		Issues related to Older Adults
	Access to Services	Access to Care

In addition, once SDoH screening is implemented across all system primary care practices, including the primary care practices provided in the existing Mass General Brigham medical office building at the Westwood Site, Mass General Brigham will be able to assess those needs within the patient population served by these three Project Sites. Mass General Brigham is currently conducting SDoH screening of MassHealth ACO patients across all practices. Universal screening is being rolled out on a staggered basis, starting with practices serving the communities identified as having the highest need based on CHNA and internal data. As the initial sites are assessed for success and impact, funding will be allocated to support rollout to additional sites. The Westwood medical office building primary care practices have implemented SDoH screening for MassHealth ACO patients and will expand to universal screening following the staggered approach taken across Mass General Brigham.

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**27d. How it will be measured for success and provide us with those measures.**

**Answer:**

Each work stream within UAR is required to have structure and process measures in year 1 and defined patient outcome measures in future years. There are many such efforts happening across Mass General Brigham. Some examples include:

- the impact of deploying multilingual digital access coordinators that build bridges to clinical care will be measured by assessing the degree of improved clinical access; and
- a year 1 goal of less than 5% missing data for Mass General Brigham's 1.1M patients system-wide, Mass General Brigham created standardization in definitions for REaL data and implementing required trainings for staff collecting data

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### Question 28:

**For each of the three sites, based on the CHNA and on data collection efforts (pg. 35) from your existing patient population that resides in those areas,**

#### **28a. What health care disparities have been identified?**

##### **Answer:**

Data available for the CHNA reports were available at the town level, but outcomes data by race data and by town is not available. However, the disparities in health outcomes for black and Latinx individuals relative to white individuals are well known and documented.

Within all of the priority areas identified in the CHNAs, Mass General Brigham's focus will be in supporting programs that target the most vulnerable in the communities served by the Project Sites.

Additionally, as these Project Sites begin the provision of care, Mass General Brigham will be able to track and analyze patient utilization and outcomes data, stratified by race and ethnicity and apply Mass the UAR framework to reducing disparities in outcomes.

#### **28b. How will the project address them?**

##### **Answer:**

As previously stated, as part of Mass General Brigham's UAR initiative, there is a system leadership level directive to embed equity in all organizational processes, and at the local level individual departments must identify disparities in their respective field and develop action plans with associated outcome measures to determine impact.

#### **28c. With respect to Language access, and all pre-registration and screening (including SDOH), how will MGH support the variation in access to technology and digital literacy among its anticipated patients?**

##### **Answer:**

Digital access coordinators will assist patients in accessing services, and Mass General Brigham is also providing iPads to patients for their convenience and use during a visit to a Project Site.

Mass General Brigham's workflows, which will be in place at the Project Sites, include many potential touchpoints to collect these data to ensure access and completion. Pre-visit via Patient Gateway, at the time of appointment via iPad or paper, and verbally during the appointment.



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**Question 29:**

**On pg. 34 you state that “All of the Applicant’s hospitals participate in the American Hospital Association’s #123Equity Pledge Campaign, as will the Project Sites...[and] the campaign requires hospital leaders to accelerate progress in the following areas: (1) Increasing the collection and use of race, ethnicity, language preference and other socio-demographic data; (2) Increasing cultural competency training; (3) Increasing diversity in leadership and governance; and (4) Improving and strengthening community partnerships.”**

**This is not a new initiative for the Applicant as it has been referenced in many prior DoN Applications submitted by the applicant. For each of the four items referenced above describe your progress to date, including examples, with the four areas referenced above where progress is necessary,**

**29a. what concrete steps have been taken to achieve it,**

**29b. what measures are used to evaluate the programs, and**

**29c. what is the success/progress since beginning participation in the program?**

**Answer:**

The AHA #123Equity Pledge provided an important framework towards our commitment to equity and was foundational to the development of United Against Racism (“UAR”). The UAR strategies being implemented are aligned with the 4 AHA #123Equity Pledge areas. Some concrete examples of progress and measures that will be used to evaluate the programs, including goals and early evidence of success include:

- REaL (Race, Ethnicity and Language) data: Mass General Brigham created standardization in definitions for REaL data and developed trainings for staff who collect these data. The Year 1 goal is less than 5% missing data for Mass General Brigham’s 1.1M patients.
- Increasing cultural competency training:

Mass General Brigham is working to move from cultural competency to Cultural Humility education. Spaulding Rehabilitation Network is utilizing Cultural Humility as an approach to working more effectively cross culturally. Mass General Brigham provides cultural competency education to all new employees during New Employee Orientation. With a goal of moving to Cultural Humility in the next few years, as Mass General Brigham re-envisions what employee orientation looks like in a remote/online setting.

- Increasing diversity in system leadership and governance:
  - Through the UAR strategy, Mass General Brigham has created the goal of increasing racial diversity on the Mass General Brigham and Institution Boards by 30% over five years starting FY21, and is on target to achieve this goal.

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- For hiring, promoting and retaining leaders of color Mass General Brigham’s UAR goals are to:
  - establish hiring and promotion metrics & build diverse leader talent pools;
  - generate transparency through development/sharing of diversity dashboards/ scorecards; and
  - include diversity goals in executive compensation.

### **29d. how will the Campaign be applied to each of the three new sites?**

#### **Answer:**

The UAR strategies discussed, above, will be implemented at each of the Project Sites.

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### Question 30:

**On pg. 34 – you state that some community-based providers have limited capacity to accept new referrals for SDOH services and that you are taking a “staggered approach” for referrals.**

**30a. Because of this referrals challenge, describe what currently happens to those patients for whom need cannot be met.**

#### Answer:

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.

**30b. Identify where those needs are for the Applicant and including within the PSA of each proposed site.**

#### Answer:

Across Mass General Brigham, the top health-related social needs of our patients from January 2020 – May 2021 were education – 23%, employment – 22%, food – 18%, paying for utilities – 12%, and housing – 11%.

While there is some variation across the system’s service areas with regard to the percentages, the top needs are consistent. As SDOH screening is implemented at the Project Sites, data specific to the primary service area of each Project Site will become available.

**30c. Describe what process the Applicant intends take to resolve these shortcomings.**

#### Answer:

As part of Mass General Brigham’s commitment to the communities we serve, Mass General Brigham and our system hospitals align efforts to address the SDOH of patients with the programs and organizations we support as directed by our CHNAs and community health improvement plans (“CHIPs”). Through its community benefit programs, Mass General Brigham provides substantial support to social service organizations that help to sustain these organizations and build capacity. Examples include: My Brother’s Table (Lynn), Community Servings (Boston), The Innovative Stable Housing Initiative (“ISHI”) and LISC Boston (Local Initiatives Support Corporation). Community health initiative funds will also be used to support community-based programming in each Project Site’s primary service area.

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### Alternatives – Factor 5

Given that historically patients have been willing to travel to existing sites from a broad range of locations, please describe the capacity constraints of these existing locations that are helping to drive the need for each of these additional sites.

#### Answer:

Mass General Brigham did not undertake the planning and proposal for the Westborough Site and Woburn Site and expansion at the Westwood Site due to capacity constraints at existing locations. As discussed in the Application, Mass General Brigham is seeking approval of the Proposed Project to further its strategic goal of providing our patients with convenient, community-based, lower cost, high quality care, all in a single location. As part of ongoing patient engagement efforts, Mass General Brigham conducted a broad survey of all Mass General Brigham patients willing to respond and found that 70% of respondents would prefer to see their health care providers in one location closer to home. Additionally, 87% find “One Stop” care very appealing, and 65% of reported that traffic and parking costs make it difficult to get care at Boston hospitals.<sup>40</sup>

With rising costs of healthcare, affordability is an important concern for patients overall, including older patients. In addition to more frequent interaction with the healthcare system, the number of older people undergoing surgical procedures has increased faster than the rate at which the population is aging.<sup>41</sup> Patients age 65 and over also have higher MRI and CT utilization rates.<sup>42</sup> Providing a lower cost-option is especially important for patients over age 65, who require more care and may have more limited resources. Mass General Brigham is committed to providing lower cost options, but currently does not have any free-standing, non-HOPD, surgical facility options.

The Project Sites will include free-standing, non-HOPD based ambulatory surgery centers, with pricing and reimbursement that is consistent with this type of designation. The Project Sites will provide Mass General Brigham its first opportunity to proactively shift patients within its system to non-hospital locations that include services beyond basic physician/provider visits. Adding this capability within the Mass General Brigham system will further more efficient coordination of care and population health management consistent with risk-based contracts, thereby significantly reducing total medical expense for our patients and the Commonwealth, while at the same time maintaining high quality and providing an exceptional patient experience.

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<sup>40</sup> Mass General Brigham collected information about difficulties related to traffic and parking costs in connection with its community engagement efforts in connection with the Application.

<sup>41</sup> Judith S. L. Partridge et al., Frailty in the older surgical patient: a review, 41 AGE AND AGEING 142 (2012), available at <https://academic.oup.com/ageing/article/41/2/142/47699>.

<sup>42</sup> Rising Use Of Diagnostic Medical Imaging In A Large Integrated Health System, supra note 23; Kathleen Lang et al., National trends in advanced outpatient diagnostic imaging utilization: an analysis of the medical expenditure panel survey, 2000-2009, 13 BMC MED. IMAGING 40 (2013), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4222739/>.