Partners HealthCare System – Brigham and Women's Faulkner Hospital
DoN # PHS-19030610-HS
Applicant Responses

1. **Payer mix is not included in your description of the Partners HealthCare System and Brigham and Women's Hospital patient panels. Please provide the payer mix of the Partners and the BWFH patient panels for FY15, FY16, and FY17.**
   - **Private Commercial – Overall, Private Commercial – MA Health Connector QHPs (Subsidized and Unsubsidized), MassHealth – Overall, MassHealth – Temporary, MassHealth – Managed Care Organizations (MCO), Senior Care Options, One Care, PACE, Medicare Fee-for-Service (Parts A and B), and Medicare Advantage.**

Please refer to the tables below for the payer mix of the Partners HealthCare System ("Partners HealthCare" or "the Applicant") and the Brigham and Women's Faulkner Hospital ("BWFH" or "the Hospital") patient panels for FY15, FY16, and FY17.

Partners HealthCare[1]			
Payers by Category / **Category**	**FY15**	**FY16**	**FY17**
Commercial	60.9%	61.2%	59.6%
Managed Medicaid	4.4%	4.5%	5.3%
MassHealth	4.0%	3.5%	3.8%
Commercial Medicare	2.7%	3.4%	3.8%
Medicare FFS	23.1%	22.9%	22.7%
Other	4.9%	4.6%	4.8%

BWFH[2]			
Payers by Category / **Category**	**FY15**	**FY16**	**FY17**
Commercial	53.2%	53.6%	52.0%
Managed Medicaid	5.6%	5.9%	6.4%
MassHealth	3.5%	3.0%	4.4%
Commercial Medicare	5.4%	4.7%	4.9%
Medicare FFS	30.5%	30.2%	29.3%
Other	1.7%	2.6%	3.0%

Please note, that the Health Policy Commission and the Center for Health Information and Analysis ("CHIA") require annual payer mix reports from the Applicant; however, revenue for these reports is broken down via a standard template, which contains the following categories: commercial (specifically naming plans), Medicaid and Medicare. Consequently, due to current

[1] Please note the following regarding the Partners HealthCare data: (1) Reflects aggregate Partners HealthCare revenue for the 2016, 2017 & 2018 Cost Hearing Submissions for P4P Contracts, Risk Contracts, FFS Arrangements and Other Revenue; (2) Data includes MGH, BWH, NSMC, NWH, BWFH, MGPO, BWPO, NSPG & NWMG. Payer specific information for other PHS providers (McLean, Spaulding Network, MVH, and NCH) is not available; and (3) Revenue based on payments minus denials, bad debt, free care surcharge, and uncompensated care assessment.
[2] Please note the following regarding the BWFH data: (1) Reflects aggregate revenue reported for the 2016, 2017 & 2018 Cost Hearing Submissions on behalf of BWFH for Hospital FFS Arrangements only; and (2) Revenue based on payments minus denials, bad debt, free care surcharge, and uncompensated care assessment.

data aggregation practices, it is very challenging for the Applicant to breakout revenue by subsidized QHP v. unsubsidized, MassHealth temporary from other MassHealth, or SCO, ICO, and PACE as this is not a common practice required by other regulatory agencies.

2. In order to know what DoN-required Equipment is currently being utilized at BWFH, can you verify how many CT units and how many MRI units you have at BWFH.

Currently, BWFH operates two Siemens Definition AS 128 CT units and one Siemens Avanto Fit 1.5T MRI unit.

3. CT is included in the DoN-required Equipment and Services Guideline due to "its potential for clinically unnecessary utilization that in aggregate, can result in a significant increase in health care spending without an associated benefit to the public in terms of better health outcomes, or access to needed care."[3] How will you monitor the use of scans to ensure that they are both clinically appropriate and that costs to the healthcare system do not rise?

BWFH clinicians will use the CBCT principally for patients with musculoskeletal conditions of the extremities and therefore only a limited number of patients will qualify for CBCT scans. Several mechanisms exist at BWFH to ensure clinical appropriateness and proper utilization of CT services. BWFH, like all member hospitals of Partners HealthCare, uses EPIC as its electronic health record ("EHR"). EPIC requires an authorized provider to provide electronic signature before any radiology exam is performed. Upon order placement in the EHR, a validation check is performed using ACR Select, a comprehensive, national standards-based, clinical decision support database that uses evidence-based decision support for the appropriate utilization of all medical imaging procedures. Specifically, ACR Select delivers Appropriate Use Criteria 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 in determining the most appropriate exam based on a patient's medical history and indication and reducing the number of exams needed to reach a diagnosis, assisting in quality improvement and cost-savings efforts through improved patient care and population health.

Additionally, most private payers require pre-authorization for high cost imaging exams to validate appropriateness, control costs and regulate utilization. BWFH has robust systems in place to ensure CT exams have pre-authorization approval from payers prior to performing imaging. These existing systems will be applied to scans on the proposed CBCT. Combined with the fact that the proposed CBCT services will be reimbursed at the same rate as traditional CT services, the Applicant anticipates that the Proposed Project will not have an adverse impact on the Massachusetts health care market based on recognized measures of health care spending.

Finally, once pre-authorization is obtained and an exam is scheduled, BWFH radiologists review every CT order to ensure that clinical indications support the requested study. If the radiologist questions the order or indications, he or she will suggest an alternate study or imaging modality to answer the clinical question. This multi-step process whereby radiologists review and verify

[3] *Determination of Need Required Equipment and Services Guideline* (Rep.). (2017, January). Retrieved June, 2018, from Massachusetts Department of Public Health website: https://www.mass.gov/files/documents/2017/01/vr/guidelines-equipment-and-services.pdf.

pre-authorized orders placed by referring providers helps to ensure that all scans performed are clinically appropriate and that costs to the healthcare system do not rise.

a. How will you ensure that you are replacing MRI, CT and X-ray scans with CBCT scans and not duplicating scans?

Today, most patients have some combination of imaging in order to properly diagnosis the condition to be treated, as each imaging modality (x-ray, CT and MRI) has specific applicability for various conditions. However, BWFH clinicians will use the CBCT as a substitute for scans on existing BWFH CT or x-ray machines wherever possible. While it is difficult to predict how many cases will shift from one modality (e.g., x-ray) to CBCT, CBCT's specific ability to perform weightbearing CT for orthopedic patients will yield higher sensitivity and specificity when compared to x-ray and traditional CT, and therefore will lead to improved diagnosis and treatment planning. In turn, this capacity will allow BWFH clinicians to avoid misdiagnoses which can result in complications, extensive follow-up interventions and increased costs of care. There will always be cases where a patient may need more than one form of imaging in order to fully assess and treat their condition.

4. In order to understand imaging needs of BWFH patients with conditions of the upper and lower extremities, please tell us how many patients received scans using multiple imaging modalities (MRI, CT, X-ray)?

Please refer to the table below which outlines the number of patients with conditions of the upper and lower extremities that received scans using multiple imaging modalities at BWFH from FY2017 – FY2019 YTD.

	FY2017	FY2018	FY2019 YTD	Grand Total
Qualifying Cases	282	290	167	739

Please note that the numbers presented in the table above are based on a review of the following upper and lower extremity CPT codes:

- 73200, 73201, 73202 Upper Extremity CT
- 73700, 73701, 73702 Lower Extremity CT
- 73620, 73630 Foot X-ray
- 73600, 73610 Ankle X-ray
- 73560, 73562, 73564, 73565 Knee X-ray
- 73120, 73130 Hand X-ray
- 73100, 73110 Wrist X-ray
- 73070, 73080 Elbow X-ray
- 73218, 73219, 73220 MRI Upper Extremity, other than joint
- 73221, 73222, 73223 MRI Upper Extremity, any joint
- 73718, 73719, 73720 MRI Lower Extremity, other than joint
- 73721, 73722, 73723 MRI Lower Extremity, any joint

Accordingly, the table captures claims data on the number of patients who have utilized more than one imaging modality for any of the above-listed CPT codes as part of their imaging workup/treatment plan (e.g., how many patients have had X-ray services for any of the above-

listed CPT codes and also either CT or MRI services for any of the above-listed CPT codes). Because patients have studies at different points in time and they may be related or unrelated to previous appointments, the data presented above is limited to common diagnoses for the purposes of the imaging that was done and captures exams that are performed within 30 days (e.g., X-ray followed by CT or MRI within 30 days and having a common diagnosis in common with the X-ray).

Finally, the Applicant highlights the time and resources involved in preparing this data. Specifically, because there is no readily accessible single source to obtain the necessary data to respond to the Department of Public Health's ("DPH") request, nor any one reporting tool that can handle the parameter input, the Applicant was required to pull every single transaction for the various X-ray, CT and MRI CPT codes from FY2017 – FY2019 YTD and use multiple iterations of Structured Query Language scripts to compare, qualify and eliminate certain data lines. Moreover, comparing diagnoses codes was challenging, as codes can appear in a different order on each charge (e.g., the matching one could be listed as the 3rd diagnosis on one charge and the 9th on the other). The Applicant started with approximately 47,000 charge transactions to review and ended up with 1,697 that qualified under the parameters described above. Those 1,697 charges roll up to 739 unique cases, spread over the fiscal years as outlined in the table above. The Applicant offers this information to provide DPH with an understanding as to why this data could not be provided earlier.

5. **On the Change in Service form you indicate that the proposed volume, which equals the number of scans on the CBCT unit, will be 1,100. On pages 7 and 8 of the DoN Application narrative, you state that 1,100 patients will benefit from the CBCT unit. Please clarify whether you are referring to patients or volume.**

To clarify, the reference to 1,100 relates to scan volume. The Applicant projects that the number of scans on the CBCT unit will be 1,100.

6. **Please tell us how many scans are needed to reach full capacity on the CBCT unit?**

Each patient exam is estimated to take 20-25 minutes to perform. This includes the technologist greeting and changing the patient, reviewing the order, room setup, exam scan, post-processing, image transmission to the Patient Archiving and Communication System, and patient departure. To reach capacity in a 40-hour work week, the Applicant estimates capacity to be at 96-120 exams/week. Please note, however, that the need for CBCT services at BWFH is not based on capacity, but rather on the technology's ability to provide novel clinical applications meeting the special needs for specific subsets of patients which are expected to grow into the future.

7. **In your DoN Application, you state that the CBCT unit is needed to address existing and future needs of the Applicant's patient panel. Based on the projected growth rate of the patient panel, what is the anticipated growth in the volume of scans?**

The Applicant conservatively estimates 2-5% annual growth in the volume of scans.

8. In order to clarify the volume of CT services being provided at BWFH, the volume of upper and lower extremity scans as described in the DoN Application, and what impact will the CBCT unit have on this volume, please complete the following table:

Imaging Studies by Diagnostic Modality			
At BWFH	**FY2015**	**FY2016**	**FY2017**
What is the total volume of CT Scans?	12,152	14,003	16,359
What is the total volume of Upper and Lower extremity CT scans?	388	474	662
What is the total volume of Upper and Lower extremity CT scans that are repeats?[4]	4	5	7
What is the total volume of Upper and Lower extremity X-rays?	20,497	21,888	22,468
What is the total volume of Upper and Lower extremity X-rays that are repeats?[5]	820	876	899
What is the total volume of Upper and Lower extremity MRIs?	876	979	1,028
What is the total volume of Upper and Lower extremity CT scans that CBCT will replace?[6]	100		
What is the total volume of Upper and Lower extremity X-rays that CBCT will replace?[7]	524		
What is the total volume of Upper and Lower extremity MRIs that CBCT will replace – if any?	0		

Please note that the data provided in the table above is different from the data provided in the DoN narrative. First, the data included in the DoN narrative was for FY2016 – FY2018, whereas the data presented in the table above is for FY2015 – FY2017. Moreover, the data included in the DoN narrative was drilled down to specific subset of X-ray and CT CPT codes within a large subset of upper/lower extremity CPT codes that the Applicant and BWFH deemed relevant to the Proposed Project and implementation of the CBCT unit, whereas the data provided in the table above reflects the larger subset of upper/lower extremity CPT codes in response to DPH's request for the total volume of upper and lower extremity X-rays, CTs and MRIs. Accordingly, the volume provided in the table above is higher than the volume provided in the DoN narrative.

Finally, the Applicant highlights the time and resources involved in preparing this data. The source of the data provided above is charge code reports. While FY2016 and FY2017 data was easily accessible, FY2015 is not readily available on any of BWFH's shared drives and needed to be obtained from the Finance Department. Moreover, as a community hospital, BWFH has limited personnel resources at the Hospital to pull data of this magnitude. The Applicant offers this information to provide DPH with an understanding as to why this data could not be provided earlier.

[4] One-percent estimate repeat rate.
[5] Estimate based on 4% of total exams.
[6] Estimated based upon physician feedback.
[7] Estimated based upon physician feedback.

9. Factor 1 requires the Applicant to demonstrate how a Proposed Project will provide reasonable assurances of health equity.

a. How will patients receiving CBCT scans be made aware of the interpretation and language access and assistive services that are offered at BWFH?

BWFH is committed to assisting limited-English speaking ("LEP"), deaf and hard of hearing patients in receiving quality health care. Accordingly, BWFH has two hospital-wide policies currently in place that outline interpreter and translation services: (1) Interpreting Services for LEP Patients and Families ("LEP IS Policy"); and (2) Interpreting Services for Deaf and Hearing-Impaired Patients and Families ("Hearing-Impaired IS Policy"). These policies, which are outlined below, apply to all Hospital patients, including patients receiving CBCT scans at BWFH upon implementation of the Proposed Project.

Pursuant to the LEP IS Policy, BWFH personnel and physicians are responsible for informing LEP patients and families of the availability of foreign language interpreter services as soon as possible following their admission or at the time of the first contact. An initial assessment – the purpose of which is to determine whether interpreter services are necessary for effective communication between the patient and Hospital personnel and/or physicians and the timing, duration, and frequency with which such services will be provided – is performed at the time of first contact as part of the routine assessment of all patients. The individualized language needs of the patient and the patient's family are documented in the patient's medical record and interpreter services are arranged in accordance with the assessment. An on-going assessment of the patient's interpreter needs is also standard practice.

The Hearing-Impaired IS Policy outlines a similar process for deaf and hard of hearing patients. Pursuant to the Hearing-Impaired IS Policy, BWFH personnel and physicians are responsible for informing deaf and hard of hearing patients of the availability of auxiliary aids and services as soon as possible following their admission or at the time of the first contact. An initial assessment is made at the time of the first appointment to determine whether a Sign-Language Interpreter, auxiliary hearing aids or other services are necessary for effective communication between the patient and/or physicians and the timing, duration, and frequency with which such auxiliary aids and services will be provided. The existence of a hearing impairment is documented in the patient's medical records, services are arranged for in accordance with the initial assessment, and an on-going assessment of the patient's hearing needs is performed as standard practice.

Additionally, BWFH makes every effort to publicize the LEP and hearing-impaired services that are available at the Hospital. Specific efforts include the following: (1) The DPH poster "I Speak..." is posted at each entry point to the Hospital; (2) The "Your Guide to Brigham and Women's Faulkner Hospital" describes the services and auxiliary aids available to LEP and hearing-impaired patients and the ways in which to access these services, and is widely available throughout the Hospital; and (3) The availability of interpreting and translation services are included in the BWFH Internet and Intranet Sites. These additional efforts will help to ensure patients receiving CBCT scans will be made aware of the interpretation and language access and assistive services that are offered at BWFH.

i. Please describe how and why these existing services are suitable for this project.

The Hospital's existing services follow closely the recommendations of DPH, including those set forth in the guide entitled "Best Practice Recommendations for Hospital-Based Interpreter

Services," and all interpreters are trained and certified in medical interpretation and BWFH hospital policies, including diversity and inclusion. In addition, in compliance with other DoN approvals issued to the Applicant, DPH's Office of Health Equity ("OHE") is actively reviewing the interpretation and language access and assistive services programs available at each Partners HealthCare institution. BWFH will implement any recommendations made by OHE as part of this process. These services, which are currently available at BWFH and will continue to be in place following implementation of the Proposed Project, further health equity by ensuring that all patients have meaningful access to robust health services, including CBCT services, regardless of any language limitations.

ii. How will interpreter and translation services be arranged for patients receiving same-day scans?

As occurs today with same-day scans at BWFH, interpreter and translation services will be arranged for patients receiving same-day CBCT scans in accordance with the LEP IS Policy and Hearing-Impaired IS Policy, both of which are described above. Specifically, the need for interpreter and translation services will be assessed at the time of first contact and services will be arranged in accordance with such assessment. For LEP patients, BWFH will provide patients receiving same-day CBCT scans with access to in-person interpreters when available. In the event an interpreter is not available in person, BWFH will provide these patients with access to qualified interpreters skilled in 50+ languages via iPad Video Remote (Interpreters on Wheels) or via phone (Language Line). For patients receiving same-day scans that are deaf or hard of hearing, sign language interpreter services will be offered through the Hospital's list of per-diem sign interpreters, contracted agencies, and the PHS Bulfinch Temporary Services Department. When in-person interpreters are not available, these services will be offered through the use of iPad Video Remote Units which allow for visual access to an interpreter on the iPad screen.

b. On pages 2 and 27 of the DoN Application narrative, you mention your participation in the American Hospital Association's #123Equity Pledge Campaign.

i. Please describe how BWFH's participation in the Campaign will ensure patients receive the same access to and quality of care?

The American Hospital Association's ("AHA") #123forEquity Campaign to Eliminate Health Care Disparities ("#123Equity Pledge Campaign" or "the Campaign") seeks to ensure that "every person in every community receives high quality, equitable and safe care."[8] To accelerate these efforts in hospitals, in 2015, the AHA in collaboration with the American College of Healthcare Executives, Association of American Medical Colleges, Catholic Health Association of the United States and America's Essential Hospitals launched the Campaign to reduce disparities by implementing the following goals: "(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) Improve and strengthen community partnerships. Hospitals and health systems also take the pledge and commit to working on efforts within their organization or in the community related to health equity and diversity and inclusion even if the efforts do not fit clearly under one of the pledge goals listed above."[9]

[8] http://www.equityofcare.org/
[9] *Id.*

With regard to the Campaign's first goal, BWFH, like all member hospitals of Partners HealthCare, uses EPIC as its EHR. The EPIC platform allows BWFH to collect better, more detailed patient demographic data, including race, ethnicity, language preference and other socio-economic data. Informed by the patient data collected through EPIC, BWFH has implemented and/or participated in the following initiatives to meet the goals of the Campaign and ensure all patients receive equitable care. Please note that BWFH has implemented and/or participated in many of these initiatives in collaboration with Brigham and Women's Hospital ("BWH"), as both hospitals are members of Brigham Health.

(1) Center for Diversity & Inclusion: In 2018, BWH established a Center for Diversity & Inclusion ("Center") that incorporates both employee and patient experience. This Center expands Brigham Health's current infrastructure to support diversity and inclusion initiatives across BWH and BWFH. Nawal Nour, MD, MPH serves as the Chief Diversity and Inclusion Officer for Faculty, Trainees and Students; and Tim Ewing, PhD is the Vice President for Employee Diversity, Inclusion & Experience. The Center aims to enhance workforce diversity by providing career advancement and professional development opportunities and through promoting increased recruitment and retention among all diverse faculty, trainees and staff. The Center's mission is to promote a vibrant, diverse and inclusive professional community where every person thrives. The Center is currently focused on: (a) Unconscious Bias Training; (b) Diversity & Inclusion Dialogues and Trainings; (c) Career Development Roundtables/Lectures/Luncheons; (d) Leadership Programs; (e) Formal Personal Consultations; (f) Mentoring; (g) Reflection Rounds; (h) Guidance and Facilitation with Academic Promotions; (i) Advisory Committees; and (j) Community Building (Receptions, Social Events).

    To demonstrate their commitment to diversity and inclusion, BWH and BWFH offer several programs and support a variety of employee resource groups. At BWFH specifically, as noted in the DoN narrative, current active groups include the following:

    - Association of Multicultural Members of Partners, a volunteer employee network whose mission is commitment to the advancement, retention, recruitment, and development of multicultural professionals into leadership roles at all levels and areas of Partners HealthCare System;
    - LGBT & Allies Employee Resource Group, whose mission is to create a welcoming and affirming environment for Lesbian, Gay, Bisexual and Transgender employees, patients, families and friends;
    - Diversity and Inclusion Steering Committee, which is charged with celebrating the cultural diversity of staff, supporting staff with their cultural needs, and fostering a positive and welcoming and environment for all; and
    - Emerging Leaders Committee, whose mission is to foster growth, improve retention, and create a sense of community among BWFH's young professionals and early careerists.

    Brigham Health's efforts to build a more diverse staff are critical in providing equitable care to all patients, as both hospitals understand that the physician-patient relationship has an important impact on disparities in medical care and often can ensure health equity for underserved populations. For example, African-American and Hispanic patients are more likely to report dissatisfaction with their relationships with physicians, report less continuity of care, and perceive poorer quality of care.[10] Relationship-oriented

[10] Institute of Medicine. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. Washington, DC: National Academy Press; 2002.

factors, such as trust and physician communication style, have been linked to disparities in patient satisfaction,[11] delivery of preventive care services,[12] appropriate use of referrals, and patient follow-through on treatment.[13]

Concordance has emerged as an important dimension of the patient-physician relationship that may be linked to health care disparities. As a concept, concordance is most often defined as a similarity, or shared identity, between physician and patient based on a demographic attribute, such as race, sex, or age. Some evidence supports this view, especially with respect to racial concordance. Patients' trust, satisfaction, utilization of services, and involvement in decision making have been reported higher when the patient and physician share the same race or ethnicity. Accordingly, increasing opportunities for racial/ethnic match between minority patients and physicians can have important consequences. Studies have found that minority patients in race/ethnic concordant relationships are more likely to use needed health services, are less likely to postpone or delay seeking care, and report a higher volume of use of health services.[14] Patients in race concordant patient–provider relationships also report greater satisfaction[15] and better patient–provider communication. Given these findings, it is critical that hospitals, including BWH and BWFH, have a diverse clinical staff that may be matched with ethnically and racially diverse patients to ensure exceptional care and the best possible health outcomes.

(2) MassHealth Disability Access Incentive Program: BWFH participates in the MassHealth Disability Access Incentive Program, which is aimed at improving access to care and access to medical and diagnostic equipment, such as imaging services, for MassHealth members with disabilities.

(3) Sperling Executive Leadership Program Discussion Groups: Brigham Health's top 80 leaders meet regularly to discuss diversity, equity and inclusion and review cases in an effort to develop best practices in these areas.

(4) Search Committee Practices to Advance Equity: Brigham Health has convened a task force to create evidence-based guidelines for minimizing bias in the search process and promoting equal opportunity in hiring processes.

(5) The Brigham Health Board Composition: The Brigham Health Nominating & Governance Committee is reviewing the current composition of the Board of Directors with the goal of ensuring it reflects the population served by both BWH and BWFH.

Moreover, BWFH seeks to ensure that all staff have cultural competency training (another goal of the Campaign), so these staff may provide culturally competent care to all patients. In March 2014, BWFH began offering cultural competency training. Since that time, over 1,500

[11] Fiscella K, Meldrum S, Franks P, et al. Patient trust: Is it related to patient-centered behavior of primary care physicians? Med Care. 2004;42 (11):1049–1055.
[12] Cabana MD, Jee SH. Does continuity of care improve patient outcomes? J Fam Pract. 2004;53 (12):974–980; Williams GC, McGregor HA, King D, Nelson CC, Glasgow RE. Variation in perceived competence, glycemic control, and patient satisfaction: relationship to autonomy support from physicians. Patient Educ Couns. 2005;57 (1):39–45
[13] Richard L. Street, Jr, Kimberly J. O'Malley, Lisa A. Cooper, and Paul Haidet, Annals Journal Club: Understanding Concordance in Patient-Physician Relationships: Personal and Ethnic Dimensions of Shared Identity *Ann Fam Med 2008 6:198-205; doi:10.1370/afm.821*
[14] Saha et al. 2000; LaVeist and Nuru-Jeter 2002
[15] LaVeist and Nuru-Jeter 2002

employees have attended instructor led sessions, and 87 employees have completed an online cultural competency class. Consequently, 96.5% of employees have attended some form of cultural competence training with 91.3% attending an instructor-led class.

ii. How have you used the data you have collected to inform this project and how will you use it going forward?

In regard to the Proposed Project, as discussed throughout the DoN narrative, this Project will increase access to high-quality CBCT services for all of the Applicant's and BWFH's patients. As noted above, BWFH utilizes the EPIC EHR to increase the collection and use of race, ethnicity, language preference and other socio-demographic data. Since almost all staff have been provided with cultural competency training, radiology staff utilize data from the EPIC system to ensure that all patients have equal access to services and that any deterrent to equitable care, such as language barriers, challenges with disabilities, etc. are addressed.

c. How will patients access social work/case management services?

i. Please describe the steps to accessing services including the referral process and patient hand-offs.

As outlined in the DoN narrative, CBCT patients will be linked with social work/case management services when necessary to address Social Determinant of Health ("SDoH") issues. BWFH social workers and case managers collaborate, as appropriate, with providers and staff across Partners HealthCare and with programs in the community. Providing patients with linkages to these necessary contacts and services prevents unnecessary readmissions, ensures appropriate care management, and provides the patient with the resources for leading a better life.

BWFH's imaging patients are linked with social work services in different ways depending on where the patient originates. Patients who present to radiology from the inpatient setting and require social work assistance can have a consult accessed through EPIC Monday-Friday 8:30am-5:00pm and, if emergent on a weekend, the ED social worker can be paged for assistance 8:30am-5:00pm. For patients with radiology needs who originate in the ED, social work coverage is available 7 days/week 8:30am-5:00pm via paging the on-call social worker for that day through the on-call paging system. Finally, patients who present to radiology from the ambulatory setting and receive same-day scans are generally referred to their primary care practice when necessary to connect with the social workers there, as each practice has a social worker available. However, if an ambulatory patient has an emergent need, a BWFH social work triage can be accessed through EPIC. In addition to providing patients with linkages to internal and systemwide social work contacts and services, the Hospital also partners with programs in the community to ensure the health, wellbeing, and safety of patients experiencing SDoH issues. Access to these services can be coordinated through the Hospital's social workers and/or through the patient's primary care practice.

With regard to case management services, if a consult is needed for a patient Monday-Friday 7:30am-4:00pm, a case manager can be contacted by calling the Hospital's Case Management Department. On weekends, a case manager is in-house 7:00am-3:30pm and can be contacted by calling BWFH's main number and asking to have the case manager paged. Outside of these hours, the ED case manager is available to assist Hospital patients and can be contacted by calling BWFH's main number and asking for the ED case manager.

10. **Factor 1 requires the Applicant to provide documentation of efforts to ensure engagement of community coalitions statistically representative of its Patient Panel.**
    a. **With respect to BWFH's Community Engagement Committee (CEC) and BWFH's Patient and Family Advisory Council (PFAC), please describe how members are selected and how you determine the degree to which they are representative of the patient panel.**

As discussed in the DoN narrative, BWFH's CEC includes representatives from a wide range of local organizations and community residents. The CEC has been in existence since 1995 at the first iteration of the AG guidelines. Members are representative of the community that the Hospital's serves and the Hospital's community partnerships. Membership is considered by request and nomination, both via internal and external avenues. Recently, the CEC was updated and broadened to represent a larger scope of the community for improved input and representation of population and sectors in all priority neighborhoods.

With regard to BWFH's PFAC, it was formed in 2009 to promote the Hospital's goal of continuous improvement in quality, access, safety and the experience of care by engaging patient, family and community stakeholders in organizational efforts to promote the health and well-being of individuals and families. The PFAC is sponsored by the Service Excellence/Patient Family Relations Department and Patient Care Services. Membership of the Hospital's PFAC is governed by written by-laws and is open to the Hospital's staff, patients, family members, and the community. The PFAC has two Executive Sponsors and is co-chaired by a Hospital administrator and a patient/family member. Pursuant to the PFAC's by-laws, policies and procedures, and in compliance with DPH's hospital licensure regulations at 105 CMR 130.1801, at least 50% of the PFAC members are current or former patients and/or family members and are representative of the community served by the Hospital. Specifically, the members embody a cross-section of patients/families served by the Hospital (e.g., inpatient, outpatient, surgery and ED areas). Moreover, every effort is made to recruit members that represent the ethnic, racial and geographic diversity reflective of the Hospital's patient population.

Recruitment of patient and family members is initiated by referral (usually a care provider), solicitations through targeted mailings and/or through regular communications with patients, families and the community (e.g., PFAC is featured on the Hospital's website to invite patients, family members and members of the community to apply for membership). To become a member of the PFAC, a staff member, patient, family member, or member of the community must complete an application, which is processed by the Hospital's Manager of Patient Family Relations, who is the PFAC Liaison. Subsequently, the potential PFAC member is screened, interviewed and selected by PFAC Co-Chairs. Members are selected for the PFAC based on the following criteria and abilities:

- Listen to differing opinions and share different points of view;
- Support the mission of the Hospital;
- Share insights and information about their experiences in ways that others can learn from them;
- See beyond their personal experiences;
- Show concern for more than one issue or agenda;
- Respect diversity and the perspectives of others;
- Adhere to the operating principles of respect, trust, collaboration, communication and integrity;
- Speak comfortably in a group with candor;

- Interact well with different kinds of people;
- Work in partnership with others;
- Represent experiences from key service lines; and
- Represent the ethnic, racial and geographic diversity reflective of the Hospital's patient population.

New PFAC members are oriented by the Manager of Patient Family Relations/PFAC Liaison and the Co-Chairs, receive a PFAC Member Handbook and a copy of the by-laws, and sign the BWFH Confidentiality Agreement and Code of Professional Conduct.

b. How have their recommendations been incorporated? Please provide examples.

As noted in the DoN narrative, the CEC provides an opportunity for community feedback as well as for members to offer their unique perspectives on community needs, resources and connections to implement the Hospital's Community Benefits Mission in the most efficient and effective manner. With the goal of the CEC to solicit input and recommendations on how the Hospital can better serve the community and because the members of the CEC represent the Hospital's diverse community and can offer a unique perspective on what those community members' needs are and how best to meet them, leadership determined it was appropriate to engage this Committee regarding the Proposed Project. Accordingly, on September 17, 2018, Brian McIntosh, Director of Radiology, and Tracy Sylven, Director of Community Health and Wellness, presented the Proposed Project to the CEC. Other co-presenters included Christopher Chiodo, MD, a surgeon within the Department of Orthopedics, and Stacy Smith, MD, Chief of Musculoskeletal Radiology. The purpose of the presentation was to educate Committee members on the utility of the CBCT, its clinical application, and the community benefit associated with acquisition and implementation of the unit. Feedback from this meeting was very positive with attendees supportive of the Proposed Project and noting a chance for greater community impact by adding the Community Health Initiative ("CHI") monies associated with the Proposed Project to the BWH ongoing CHI. The support from the CEC was taken into consideration as the Hospital prepared its DoN application for implementation of the proposed CBCT unit, and in accordance with the CEC's recommendation, BWFH has requested that the CHI monies associated with the Proposed Project be added to the BWH ongoing CHI.

Also discussed in the DoN narrative, the PFAC provides a forum to facilitate patient and family input in all aspects of the Hospital's operations. Information, perspectives and recommendations from the PFAC provide BWFH leadership with an enhanced understanding of how to improve care, quality and patient safety, service excellence, communications, program development, facility design, and patient and family education and satisfaction, among other things. On November 29, 2018, Brian McIntosh, Director of Radiology, and Christopher Chiodo, MD, Orthopedic Surgery, met with the PFAC to discuss the need for CBCT services at BWFH and the community benefit associated with the Proposed Project. Overall feedback from the meeting was positive and supportive of the plan. Specifically, the group agreed that the proposed CBCT unit would offer benefits to patients in terms of lower radiation and increased patient safety; better visualization, improved detection of hidden fractures, and refined imaging of joints and bone alignment; greater accessibility for patients; and advantages and opportunities for orthopedic surgeons as well. Like the CEC, this support from the PFAC was taken into consideration as the Hospital prepared its DoN application for implementation of the proposed CBCT unit