



Massachusetts Department of Public Health

Determination of Need

Application Form

Version: 11-8-17

Application Type:	DoN-Required Equipment	Application Date:	09/09/2018 3:20 pm
Applicant Name:	Cambridge Public Health Commission, d/b/a Cambridge Health Alliance		
Mailing Address:	1493 Cambridge Street		
City:	Cambridge	State:	Massachusetts
		Zip Code:	02139
Contact Person:	Andrew Fuqua	Title:	SVP and General Counsel
Mailing Address:	1493 Cambridge Street		
City:	Cambridge	State:	Massachusetts
		Zip Code:	02139
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E-mail:	afuqua@challiance.org		

Facility Information

List each facility affected and or included in Proposed Project

1 Facility Name:	CHA Cambridge Hospital		
Facility Address:	1493 Cambridge Street		
City:	Cambridge	State:	Massachusetts
		Zip Code:	02139
Facility type:	Hospital	CMS Number:	220011
Add additional Facility		Delete this Facility	

1. About the Applicant

1.1 Type of organization (of the Applicant):	public
1.2 Applicant's Business Type:	<input type="radio"/> Corporation <input type="radio"/> Limited Partnership <input type="radio"/> Partnership <input type="radio"/> Trust <input type="radio"/> LLC <input checked="" type="radio"/> Other
1.3 What is the acronym used by the Applicant's Organization?	CHA
1.4 Is Applicant a registered provider organization as the term is used in the HPC/CHIA RPO program?	<input checked="" type="radio"/> Yes <input type="radio"/> No
1.5 Is Applicant or any affiliated entity an HPC-certified ACO?	<input checked="" type="radio"/> Yes <input type="radio"/> No
1.5.a If yes, what is the legal name of that entity?	Cambridge Public Health Commission
1.6 Is Applicant or any affiliate thereof subject to M.G.L. c. 6D, § 13 and 958 CMR 7.00 (filing of Notice of Material Change to the Health Policy Commission)?	<input checked="" type="radio"/> Yes <input type="radio"/> No
1.7 Does the Proposed Project also require the filing of a MCN with the HPC?	<input type="radio"/> Yes <input checked="" type="radio"/> No

- 1.8 Has the Applicant or any subsidiary thereof been notified pursuant to M.G.L. c. 12C, § 16 that it is exceeding the health care cost growth benchmark established under M.G.L. c. 6D, § 9 and is thus, pursuant to M.G.L. c. 6D, §10 required to file a performance improvement plan with CHIA? ☐ Yes ☒ No

1.9 Complete the Affiliated Parties Form

2. Project Description

2.1 Provide a brief description of the scope of the project.

Applicant Cambridge Public Health Commission, d/b/a Cambridge Health Alliance ("CHA" or "Applicant"), is applying for a Determination of Need to add a second 64 slice CT Scanner at its CHA Cambridge Hospital campus in Cambridge to ensure that it can adequately meet the needs of its patients (the "Proposed Project"). By improving access to care for the vulnerable safety net populations CHA serves and the quality of care and service these patients receive, the Proposed Project will reduce health inequity and further the Commonwealth's priority to control healthcare costs.

CHA is a public safety net hospital primarily serving Cambridge, Somerville, and the metro-north communities of Malden, Everett, Chelsea and Revere. Created and existing pursuant to Chapter 147 of the Acts of 1996, as amended by Chapter 365 of the Acts of 1998, CHA is the only public hospital in the Commonwealth. CHA operates two inpatient community level hospital campuses, the CHA Cambridge Hospital campus ("CHA Cambridge") and the CHA Everett Hospital campus ("CHA Everett"), and 17 licensed ambulatory satellite locations. CHA also operates the Cambridge Public Health Department and provides numerous other healthcare and public health services throughout its service area.

CHA currently has a single 64 slice CT Scanner located at CHA Cambridge that provides urgent and emergent CT service to meet the needs of the emergency department and inpatient services located at that campus. This same CT Scanner is used to provide outpatient imaging services to patients. These competing demands on a single machine coupled with downtime for ordinary course and unexpected maintenance significantly limit the availability of this core diagnostic service to CHA's Patient Panel and inhibit access to care.

A second CT at CHA Cambridge will provide necessary back-up capacity so that inpatient and emergency department patients, including potential stroke patients, at CHA Cambridge requiring urgent access to CT services will reliably have timely on-site access to these services and will not need to be transported to other facilities for a necessary scan. In addition, a second CT will reduce the bumping of outpatient patients by urgent or emergent patients and will afford for more predictable, timely, and reliable scheduling of patients. Reducing delays and rescheduling will improve the care experience for patients and, crucially for so many of CHA's patients and their caregivers, mitigate the burdens of having to reschedule appointments and/ or take more time off from work than expected or may otherwise be necessary.

"Pursuing health equity means striving for the highest possible standard of health for all people and giving special attention to the needs of those at greatest risk of poor health based on social conditions." (1) The Proposed Project aims to fulfill this goal by ensuring that high quality and convenient patient-centered access to an essential service is available to its patients.

(1) Braveman P. "What are health disparities and Health Equity? We need to be clear." Public Health Reports 2014 Jan-Feb: 129 (Suppl 2): 5-8, available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3863701/>.

2.2 and 2.3 Complete the Change in Service Form

3. Delegated Review

- 3.1 Do you assert that this Application is eligible for Delegated Review? ☒ Yes ☐ No

3.1.a If yes, under what section?

4. Conservation Project

- 4.1 Are you submitting this Application as a Conservation Project? ☐ Yes ☒ No

5. DoN-Required Services and DoN-Required Equipment

- 5.1 Is this an application filed pursuant to 105 CMR 100.725: DoN-Required Equipment and DoN-Required Service? ☒ Yes ☐ No

5.2 If yes, is Applicant or any affiliated entity thereof a HPC-certified ACO?

☒ Yes ☐ No

5.2.a If yes, Please provide the date of approval and attach the approval letter:

12/29/2017

5.3 See section on DoN-Required Services and DoN-Required Equipment in the Application Instructions

6. Transfer of Ownership

6.1 Is this an application filed pursuant to 105 CMR 100.735?

☐ Yes ☒ No

7. Ambulatory Surgery

7.1 Is this an application filed pursuant to 105 CMR 100.740(A) for Ambulatory Surgery?

☐ Yes ☒ No

8. Transfer of Site

8.1 Is this an application filed pursuant to 105 CMR 100.745?

☐ Yes ☒ No

9. Research Exemption

9.1 Is this an application for a Research Exemption?

☐ Yes ☒ No

10. Amendment

10.1 Is this an application for a Amendment?

☐ Yes ☒ No

11. Emergency Application

11.1 Is this an application filed pursuant to 105 CMR 100.740(B)?

☐ Yes ☒ No

12. Total Value and Filing Fee

Enter all currency in numbers only. No dollar signs or commas. Grayed fields will auto calculate depending upon answers above.

Your project application is for: DoN-Required Equipment

12.1 Total Value of this project:

\$2,000,150.00

12.2 Total CHI commitment expressed in dollars: (calculated)

\$100,007.50

12.3 Filing Fee: (calculated)

\$4,000.30

12.4 Maximum Incremental Operating Expense resulting from the Proposed Project:

\$0.00

12.5 Total proposed Construction costs, specifically related to the Proposed Project, If any, which will be contracted out to local or minority, women, or veteran-owned businesses expressed in estimated total dollars.

13. Factors

Required Information and supporting documentation consistent with 105 CMR 100.210

Some Factors will not appear depending upon the type of license you are applying for.

Text fields will expand to fit your response.

Factor 1: Applicant Patient Panel Need, Public Health Values and Operational Objectives

F1.a.i Patient Panel:

Describe your existing Patient Panel, including incidence or prevalence of disease or behavioral risk factors, acuity mix, noted health disparities, geographic breakdown expressed in zip codes or other appropriate measure, demographics including age, gender and sexual identity, race, ethnicity, socioeconomic status and other priority populations relevant to the Applicant's existing patient panel and payer mix.

Although CHA is licensed as an acute care hospital, it functions as an integrated healthcare system rooted in the provision of primary care services. It offers its patients an integrated continuum of care from primary care to medical and surgical specialty services, diagnostic services, and community level inpatient hospital services.(2) With sixteen primary care clinics spread over its licensed locations, as of July 2018 CHA's primary care panel (as distinguished from "Patient Panel") exceeds 117,000 patients.

CHA serves a diverse and growing Patient Panel mostly from its primary service area of Cambridge, Somerville, Malden, Everett, Chelsea and Revere. In FY2015, CHA served 138,408 unique patients. The number of unique patients served by CHA increased to 142,798 in FY2016 and further increased to 144,342 in FY2017. The greatest number of CHA patients originate from Somerville (16%), Cambridge (14%), Everett (13%) and Malden (10%). CHA's patient mix is approximately 54% female and 46% male.

CHA serves a diverse population. 32% of CHA patients self-identify as "American" and 3% as African American. The remaining 65% of CHA patients self-identify as some other ethnicity or nationality, notably Brazilian (13%), Haitian (7%), and Salvadoran (6%). Over half of its patients speak a language other than English at home, and 42% of primary care patients at CHA have limited English proficiency and require the services of a professional medical interpreter. Patient utilization of interpreter services is growing at a faster rate than the CHA Patient Panel. The number of unique patient receiving interpreter services increased from 43,117 in FY2015 to 50,351 in FY2017, and the number of interpreter encounters increased from 233,296 in FY2015 to 281,506 in FY2017. CHA does not track immigration status.

CHA's roles as a primary care provider and safety net provider serving a large immigrant population is reflected in the breakdown of the Patient Panel by age cohort. 21% of CHA's patients are 18 or under. 68% are between the ages of 19 to 64, and 11% are age 65 or over.

CHA does not maintain income data on its Patient Panel, but insurance coverage serves as a good proxy for determining general income levels. This measure indicates that CHA serves a largely low income population. CHA has among the highest concentration of patients participating in MassHealth programs of any acute hospital in the Commonwealth. CHA's public payer mix in 2017 was approximately 72%, taking into account patient care for our patients relying on Medicaid, Health Safety Net, and Medicare.

As part of MassHealth reform CHA participates with Tufts Public Health Plans as a MassHealth ACO Partnership Plan, Tufts Health Together with CHA. Approximately 26,500 members are assigned to this plan.(3)

(2) CHA is also a major provider of substance abuse services and inpatient and outpatient psychiatry services.

(3) This number fluctuates on a weekly basis.

F1.a.ii Need by Patient Panel:

Provide supporting data to demonstrate the need for the Proposed Project. Such data should demonstrate the disease burden, behavioral risk factors, acuity mix, health disparities, or other objective Patient Panel measures as noted in your response to Question F1.a.i that demonstrates the need that the Proposed Project is attempting to address. If an inequity or disparity is not identified as relating to the Proposed Project, provide information justifying the need. In your description of Need, consider the principles underlying Public Health Value (see instructions) and ensure that Need is addressed in that context as well.

The CT service at CHA Cambridge does not presently meet patient need and perpetuates health inequity. The CHA Cambridge imaging suite currently operates with a single CT scanner to serve outpatients, hospital inpatients, and emergency department patients. During necessary scheduled downtime or unexpected downtime, CT services are not available to any of these patient cohorts. Use of the CT scanner for urgent or emergent inpatient or emergency department cases which do not arise on a predictable schedule disrupts and delays outpatient care, often resulting in rescheduled appointments. Conversely, using the scanner for a longer outpatient study renders it unavailable for urgent or emergent cases. The necessity of having the CT Scanner available for urgent and emergent cases therefore further limits the availability of outpatient diagnostic and interventional radiology services to patients and the ability to reliably schedule them.

The Proposed Project will increase access to outpatient radiology services at CHA for its patient panel. Demonstrating the need for better access, outpatient demand for CT scans at CHA Cambridge has grown, with volume increasing from 7,190 visits in FY2105 to

7,673 visits in FY2016 and 8,938 in FY2017. In FY2018, however, volume decreased to 8,418 visits largely due to the lone scanner being unavailable for outpatient services.

With the growth of tiered or limited network plans(4), even commercially insured patients' options for receiving care are increasingly being limited by provider network restrictions or materially higher co-pay requirements for out-of-network services. Under MassHealth payment reform, patients who choose or are assigned to a MassHealth ACO are subject to network restrictions. To meet the needs of the approximately 26,500 MassHealth ACO patients as well as CHA's Medicaid fee-for-service, Health Safety Net and uninsured patients, CHA must ensure that they have access to all necessary services, including diagnostic services such as CT scans.

The proposed second CT scanner will provide this access for these historically underserved populations by reducing barriers to care. The Proposed Project seeks to address the barriers of time and travel that can disproportionately impact low-income individuals. Although Massachusetts has enacted important reforms such as the recent "Grand Bargain" (5) and the 2014 Earned Sick Time Law (6), having to take time off from work, either as a patient or as a caregiver, places a burden on low income individuals. The appointment delays and rescheduling of appointments that presently occur at CHA Cambridge place this burden and inconvenience on its Patient Panel. Along a similar vein, many CHA patients rely on public transportation. Effectively requiring them to obtain a CT scan from another facility imposes unnecessary inconvenience, out-of-pocket expense and the price of time off from work.

When the Cambridge Hospital campus CT scanner is down or otherwise unavailable, patients needing an urgent or emergent CT scan are either transported to CHA's CHA Everett Hospital campus ("CHA Everett") for the scan or are transferred to another facility. Critically ill patients face additional risks being transported between facilities whether internally to CHA Everett or externally as a transfer. Transferring patients disrupts the continuity of care for patients. Relocating patients from CHA Cambridge to CHA Everett or transferring them to a non-CHA facility both negatively impact the patient experience for patients and their families or loved ones.

Ensuring CT availability will enable CHA to timely meet the diagnostic needs of its patients and promptly schedule them. On a broad level, CHA anticipates that more CHA patients will be able to receive CT-related services at CHA instead of being referred to other facilities. This will preserve linkages between imaging services and the patient's primary care or specialty care teams through, among other things, CHA's electronic medical record ("EMR"). It will also enable more patients to benefit from minimally invasive interventional radiology services in a local setting that is co-located with their other providers instead having to travel to other institutions for these services.

(4) MASS. OFFICE OF THE ATTORNEY GENERAL, EXAMINATION OF HEALTH CARE COST TRENDS AND COST DRIVERS PURSUANT TO G.L. c. 12C, s. 17 (Sept. 18, 2015) at 7-13, available at <https://www.mass.gov/files/documents/2016/09/va/cctcd5.pdf> (2015 AGO Cost Trends Report).

(5) Acts of 2018, c. 121.

(6) M.G.L. c. 149, sec. 148C.

F1.a.iii **Competition:**

Provide evidence that the Proposed Project will compete on the basis of price, total medical expenses, provider costs, and other recognized measures of health care spending. When responding to this question, please consider Factor 4, Financial Feasibility and Reasonableness of Costs.

The Proposed Project will compete on the basis of price, total medical expense, and provider costs. The primary objective of the Proposed Project is to address access limitations and quality concerns resulting from having a single CT scanner at CHA Cambridge. It is a service enhancement within the existing radiology suite at CHA Cambridge. In terms of operating expenses, CHA will not be increasing provider and other staffing in connection with the Proposed Project and expects greater operating efficiency within its radiology service at CHA Cambridge thereby reducing unit cost. By repurposing existing under-utilized space within the radiology suite, CHA has been able to minimize construction costs associated with the project.

CHA's contracted rates and the rates paid by public payors for diagnostic services will not change as a result of the Proposed Project. As CHIA has reported, CHA's commercial reimbursement rates are the sixth lowest in the state at 75% of median.(7) CHA anticipates that reducing avoidable referrals to more expensive providers will therefore reduce total medical expense in addition to improving patient care. For alternate payment contracts with a shared savings component such as the MassHealth ACO program, reductions in TME effectively constitute reductions in the price insurers pay to providers, including MassHealth.

(7) MASS. CTR. FOR HEALTH INFORMATION AND ANALYSIS., RELATIVE PRICE: PROVIDER PRICE VARIATION IN THE MASSACHUSETTS COMMERCIAL MARKET (April 2018), available at <http://www.chiamass.gov/assets/docs/r/pubs/18/Relative-Price-Report-2018.pdf> (2018 CHIA Relative Price Report).

F1.b.i Public Health Value /Evidence-Based:

Provide information on the evidence-base for the Proposed Project. That is, how does the Proposed Project address the Need that Applicant has identified.

Continuity and integration along the continuum of care, and avoiding fragmented care, improves quality of care, promotes cost effectiveness in the healthcare system, and improves patient satisfaction. (8) A crucial element of continuity and integration is the concept of keeping care local and within the appropriate setting. The Office of the Attorney General has noted that a key factor contributing to the current healthcare market dysfunction in Massachusetts is the migration of inpatient and outpatient volume to higher-priced providers and hospitals.(9) CHA has the sixth lowest relative price for commercial payers in the Commonwealth. (10) By reducing the need to refer patients to other, higher-priced providers for a core diagnostic service , the Proposed Project will reduce total medical expense in Massachusetts.

(8) Kurt C. Strange, The Problem of Fragmentation and the Need for Integrative Solutions, 7 ANNALS OF FAMILY MED. 100 (2009), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2653966>.

(9) 2015 AGO Cost Trends Report at 23-24.

(10) 2018 CHIA Relative Price Report.

F1.b.ii Public Health Value /Outcome-Oriented:

Describe the impact of the Proposed Project and how the Applicant will assess such impact. Provide projections demonstrating how the Proposed Project will improve health outcomes, quality of life, or health equity. Only measures that can be tracked and reported over time should be utilized.

CHA's mission is "to improve the health of its communities." Promoting health equity providing access to care for all members of the community is a central element of fulfilling its mission. The Proposed Project will address health inequities by improving access through greater availability of CT scanning services for CHA patients at CHA Cambridge. It should also reduce total medical expense for CHA and in the Commonwealth as a whole by keeping the services within CHA's lower-priced system.

To assess whether the proposed project is achieving these aims, CHA will use the following measures.

Measure 1. Availability of CT Services to Patient Panel

Specific Measure:

The relative proportion of CT-related services provided at CHA to CHA primary care patients broken out by patients enrolled in (1) the MassHealth ACO and other Medicaid or dual-eligible plans such as Senior Care Options, (2) Medicare Shared Savings Plan participants, and (3) patients enrolled with commercial insurance. This will be measure on both a percentage and raw number basis.

An increase in the percentage patients receiving scans at CHA instead of other facilities will demonstrate increased access and, in the case of commercial patients, a reduction in total medical expense. Measuring raw numbers will enable CHA and the Department to assess the impact of the Proposed Project on overall CT utilization.

Merely measuring outpatient volume for CT services will not adequately capture whether the Proposed Project will improve health equity and reduce the disease burden experienced by the historically underserved populations comprising the majority of CHA's Patient Panel. The relative proportion of CT-related services provided to primary care patients at CHA as compared to other facilities, however, will demonstrate whether CHA has improved its internal capacity to enable its Patient Panel to timely receive CT services necessary to diagnose and/ or treat conditions such as cancer and other conditions that carry a heavy disease burden. To ensure that health inequities are being addressed, this measure must also be broken out by population to ensure that access is being afforded equally across the spectrum of patients.

Measures 2a and 2b. Turnaround Time.

Specific Measures:

2.a: Inpatient Turnaround: Average length of time from order being entered to performance of CT study.

2.b: Outpatient Turnaround: Average length of time from initial phone call or referral to actual appointment.

To demonstrate whether the Proposed Project is achieving its objectives, the average length of time in each measure should decrease.

Measure 3. Rescheduled Appointments.

Specific Measure:

The number of rescheduled appointments per month.

To demonstrate whether the Proposed Project is achieving its objectives, the number of rescheduled appointments should decrease.

F1.b.iii Public Health Value /Health Equity-Focused:

For Proposed Projects addressing health inequities identified within the Applicant's description of the Proposed Project's need-base, please justify how the Proposed Project will reduce the health inequity, including the operational components (e.g. culturally competent staffing). For Proposed Projects not specifically addressing a health disparity or inequity, please provide information about specific actions the Applicant is and will take to ensure equal access to the health benefits created by the Proposed Project and how these actions will promote health equity.

The Proposed Project falls within CHA's overall mission to address health inequities by caring for all members of the community with a specific expertise and commitment in caring for underserved populations. By providing increased access and improved patient service, the Proposed Project will address inequities arising from income status and linguistic or cultural background. CHA's volume data demonstrates that the CHA Patient Panel needs improved access to a core diagnostic and treatment modality. The demographics of the Patient Panel further show that this need must be met in a culturally competent manner and by assuring that the patients and communities served by CHA receive timely high quality care.

The Proposed Project will enhance CHA's ability to provide timely and convenient local care to its patients. Enabling more patients to receive imaging services at CHA Cambridge will alleviate the burden of time associated with receiving care. As discussed more fully in Section F1.a.ii, delays and wait time are a burden for many patients who can ill afford the additional time for work. Reliably available services also reduce the need to refer patients to other facilities, thereby reducing the burden of travel time (an expense), inconvenience, and out-of-pocket costs.

By improving its ability to provide CT services to its Patient Panel, CHA will be able to directly address health inequities arising from linguistic and cultural barriers to care. CHA provides extensive linguistic and cultural support to its patients, including patients receiving imaging services, through its Multicultural Affairs and Patient Services department ("MAPS").

CHA serves one of the most linguistically and culturally diverse patient populations in the United States. Over half of its patients speak a language other than English at home. 42% of primary care patients at CHA have limited English proficiency and require the services of a professional medical interpreter. MAPS regularly provides interpreter services in more than sixty languages to all CHA sites. Interpreter services also handle requests for the deaf or hard of hearing, including American Sign Language and CDI services. To help bridge linguistic and cultural gaps, MAPS provides professional medical interpreters via face-to-face, telephonic and video conference; professional written translation services for forms, signage, and patient materials; cultural and linguistic education for clinical and non-clinical staff; and language proficiency testing for bilingual providers. As noted above, in FY2017 alone, MAPS provided interpreter services to over 50,000 unique patients in over 281,000 encounters.

CHA also uses a multilingual team of information aides greet and assist patients and visitors to navigate CHA Cambridge, enhancing the experience of care. Language access is available at the information desk, and site maps are provided in English, Portuguese, Spanish and Haitian Creole.

By improving CHA's ability to provide care along the continuum of care, the Proposed Project will expand CHA's ability to address health inequities.

F1.b.iv Provide additional information to demonstrate that the Proposed Project will result in improved health outcomes and quality of life of the Applicant's existing Patient Panel, while providing reasonable assurances of health equity.

Additional DoN-Required Equipment Responses

Quality:

The Proposed Project is an important safety enhancement for all CHA patients, notably its inpatient and emergency department patients. Adding a second CT scanner will allow CHA to much better plan and coordinate the provision of imaging services and ensure their availability. CHA will be able to have one CT available for urgent or emergent cases when the other is down for either regular servicing or unexpectedly. This will avoid risks associated with transporting these patients. In the case of CHA patients who might presently be transferred to another institution, the Proposed Project will enable them to continue receiving coordinated and culturally competent care at CHA. With a single integrated information technology system, including

the EMR and PACs, CHA providers are better positioned to communicate on a real-time basis and can make medical decisions informed by the patient's full medical record. Finally, as discussed above, the Proposed Project will improve the quality of care provided to outpatient patients by enabling CHA to schedule them more reliably and thereby reducing delays and rescheduling.

Access:

Please see CHA's responses to F1.a.ii and F1.b.iii above for discussions of how the Proposed Project will increase access for patients. In terms of price, CHA's contracted rates and the rates paid by public payors for diagnostic services will not change as a result of the Proposed Project. For alternate payment contracts with a shared savings component such as the MassHealth ACO program, reductions in TME effectively constitute reductions in the price insurers pay to providers, including MassHealth.

Cost:

The Proposed Project is expected to result in a reduction in the Commonwealth's Total Health Care cost. CHA expects the Proposed Project will effect this reduction directly by ensuring that patients needing CT scans are able to receive them at CHA instead of at a higher cost provider. CHA expects the Proposed Project will effect this reduction indirectly by facilitating the coordination of care by CHA providers through a shared electronic medical record and care management program that will help ensure that patients receive the right care at the right time and thus help reduce total medical expense.

Health Systems Sustainability:

CHA is a health care provider that represents a critical access point for underserved patients. Although the primary impetus behind the Proposed Project is to improve the quality of care provided to CHA patients, the Proposed Project is also important for ensuring the continued viability of CHA. It will enable CHA to provide seamless care to its patients along the continuum of services that CHA provides. In addition to retaining crucial patient volume, CHA will be able to better manage the total medical expense of those patients and populations it manages under alternative payment or risk contracts. Almost half of CHA's primary care panel, including approximately 26,500 MassHealth patients, is under some form of risk arrangement in which CHA is responsible for the cost and quality of their care.

F1.c Provide evidence that the Proposed Project will operate efficiently and effectively by furthering and improving continuity and coordination of care for the Applicant's Patient Panel, including, how the Proposed Project will create or ensure appropriate linkages to patients' primary care services.

CHA is simultaneously an acute care hospital and an integrated health system with employed physicians and other providers. It serves a primary care panel of over 117,000 patients at its sixteen primary care clinics. As noted above, all of CHA is linked by a common health information technology system, including a single EMR. Having a single EMR enables all providers at CHA, regardless of service, to view a patient's entire medical record (12) and to communicate with each other. CHA's imaging service is already linked to patients' primary care teams. The Proposed Project will ensure that more patients needing imaging services have this care linked with their primary care teams.

CHA is an HPC-certified ACO and a registered provider organization in the HPC/ CHIA RPO program. Together with Tufts Public Health Plans, CHA participates as a MassHealth ACO with [26,500] members assigned to it. It also serves another [26,500] patients, including Senior Care Options patients, who are under some form of risk or alternative payment contract. A central tenet of managing risk contracts generally is that patients receive the right care in the right place at the right time. An explicit mandate of the MassHealth ACO program is that participating ACOs provide for care management services for patients, and CHA has developed robust programs for coordinating care and assisting patients in receiving the care they need when they need it. By increasing the availability of CT services within CHA, the Proposed Project will enhance CHA's ability to meet patients' care needs in terms of both the specific service and its coordination with other services. The Proposed Project, adding a second CT scanner within the existing CHA Cambridge radiology suite is an enhancement to an existing service that will further continuity and coordination of care.

(12) Subject to confidentiality requirements such as those of 42 C.F.R. Part 2 that limit access to certain portions of the medical record.

F1.d Provide evidence of consultation, both prior to and after the Filing Date, with all Government Agencies with relevant licensure, certification, or other regulatory oversight of the Applicant or the Proposed Project.

CHA sought input from various stakeholders in the planning of the Proposed Project. CHA carried out a formal consultative process with individuals at various regulatory agencies regarding the Proposed Project and anticipates continued consultation after the Filing Date. The following agencies were consulted and will continue to be consulted:

F1.e.i Process for Determining Need/Evidence of Community Engagement: For assistance in responding to this portion of the Application, Applicant is encouraged to review *Community Engagement Standards for Community Health Planning Guideline*. With respect to the existing Patient Panel, please describe the process through which Applicant determined the need for the Proposed Project.

The goal of the Proposed Project is to improve an existing service. Direct patient feedback regarding the patient experience of care issues arising from having a single CT scanner. CHA sought further input from its Patient Family and Advisory Council ("PFAC"). PFAC is made up of committed volunteer patients and family members and CHA staff members. PFAC's mission is "to create positive changes in our healthcare system by supporting an environment where patients and family members feel safe, respected, and empowered to be partners in their care." The role of PFAC is to bring the voice of patients and families to CHA's decision-making by creating a structured forum and process for CHA to learn from patients, families, and community members. It brings the voice of patients and families into CHA's processes for identifying priorities and developing or modifying programs, practices and policies. creates structured ways for staff We also communicate patient and family needs, concerns, and requests to staff. CHA senior leadership sought PFAC's input regarding the Proposed Project at the July PFAC meeting. Observing that improving access to care should be an overall priority at CHA (which it is), PFAC members urged CHA to complete the Proposed Project.

To increase community awareness of the Proposed Project and to provide the community with further opportunity to provide input regarding the Proposed Project, prominently posted the legal notice published for the Proposed Project on its website.

F1.e.ii Please provide evidence of sound Community Engagement and consultation throughout the development of the Proposed Project. A successful Applicant will, at a minimum, describe the process whereby the "Public Health Value" of the Proposed Project was considered, and will describe the Community Engagement process as it occurred and is occurring currently in, at least, the following contexts: Identification of Patient Panel Need; Design/selection of DoN Project in response to "Patient Panel" need; and Linking the Proposed Project to "Public Health Value".

To ensure sound community engagement, CHA's Chief Quality Officer presented the current CT scanner situation at CHA Cambridge to the CHA PFAC at its July19, 2018 meeting. The presentation focused on the challenges arising from having a single CT scanner. A copy of the presentation outline is attached as attachment to this Application.

In addition, to provide the community with further opportunity to provide input regarding the Proposed Project, prominently posted the legal notice published for the Proposed Project on its website.

Factor 2: Health Priorities

Addresses the impact of the Proposed Project on health more broadly (that is, beyond the Patient Panel) requiring that the Applicant demonstrate that the Proposed Project will meaningfully contribute to the Commonwealth's goals for cost containment, improved public health outcomes, and delivery system transformation.

F2.a **Cost Containment:**

Using objective data, please describe, for each new or expanded service, how the Proposed Project will meaningfully contribute to the Commonwealth's goals for cost containment.

The Proposed Project will further the Commonwealth's goals for cost containment by reducing costs while improving the quality of care. CHA's primary goal is to improve the quality of care. As discussed in the Factor 1 responses above, the Proposed Project will enable CHA to ensure that CHA patients needing CT scanner services at its Cambridge Hospital campus will be able to receive them there, thereby ensuring continuity and timeliness of care and avoiding the risks associated with transferring patients.

The Attorney General has identified the trend of high priced providers drawing business away from lower priced providers as a major driver in increasing healthcare costs within Massachusetts. (13) As the sixth lowest priced hospital in Massachusetts, CHA is a low-priced provider. The Proposed Project will better enable CHA to provide the full continuum of care (as appropriate for a community level provider) at its own locations instead of at higher priced facilities. In addition to controlling costs from a fee for service perspective, the Proposed Project will better enable CHA to manage the total medical expense for its patient under risk-based contracts such as its MassHealth patients in the MassHealth ACO. Greater access to CT services at CHA Cambridge will both reduce actual expenditures (a direct benefit) and improve the ability of CHA to manage and coordinate its patients' care (an indirect benefit.)

(13) 2015 AGO COST TRENDS REPORT AT 23-24.

F2.b **Public Health Outcomes:**

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

The Proposed Project will play an important role in ensuring that CHA can continue its work to improve public health outcomes. As Attorney General Healey has observed, independent community hospitals are increasingly at risk of having patients, especially commercial patients, drawn into higher priced systems with the cascading effect of lowering access to care for lower income communities as the financial viability of these independent community hospitals is threatened. (14) The Proposed Project will better enable CHA to keep more care local by ensuring the availability of CT services for its emergency and inpatient patients and more reliable access for its ambulatory patients. Being able to provide comprehensive and convenient access to services is essential for CHA to remain viable fiscally and to ensure that vulnerable populations it serves have access to the care they need.

CHA's ultimate objective is to improve the health of the communities and populations it serves by reducing the need for hospital services. The Proposed Project will better enable its patients to receive timely diagnostic services linked to their primary care provider and care teams to proactively diagnose and treat health conditions. More broadly, as discussed in Factor 1 above, the Proposed Project will address health inequity by reducing barriers to care for these essential diagnostic services.

(14) Letter of Attorney Maura Healey to Dr. Stuart Altman, Chairman of the Massachusetts Health Policy Commission, and David Seltz, Executive Director of the Massachusetts Health Policy Commission, dated July 9, 2018.

F2.c **Delivery System Transformation:**

Because the integration of social services and community-based expertise is central to goal of delivery system transformation, discuss how the needs of their patient panel have been assessed and linkages to social services organizations have been created and how the social determinants of health have been incorporated into care planning.

CHA assesses the healthcare needs of its patient panel and the social determinants impacting these needs on three levels; the individual level, the panel level, and the community level.

First and foremost, CHA addresses these needs on an individual level. All of CHA's primary care locations (except for its newly opened Assembly Square site) are NCQA-certified Level III Patient Centered Medical Homes. CHA screens all of its patients using assessment tools to determine psycho-social factors impacting their health. Among the issues CHA screens for are: housing status and stability, food insecurity, transportation limitations, employment status, utility security, and general financial security (e.g., "whether patients skip medications to save money.) Patients are assigned to complex care manager or patient resource coordinators who work with patients, including home and community visits, to connect patients with the appropriate community resources when needed. As discussed in Factor 1, CHA addresses cultural and linguistic determinants by making interpreter services to all patients.

CHA participates in MassHealth as a Model A ACO with Tufts Public Health Plans. One of the requirements of MassHealth ACOs is to contract with agencies that provide long-term services and supports ("LTSS") to MassHealth ACO members, and CHA is currently developing a formal, contracted network of LTSS providers for its patient panel. Various departments, services, and clinical areas at CHA

have already developed connections and relationships with community agencies and groups to address the needs of CHA patients. Meeting the MassHealth ACO LTSS requirements will help CHA deepen these connections on an institutional level.

Finally, as described more fully in the description of community health activities accompanying this Application, CHA uses information from its community health assessments, the ongoing work of its Community Health Improvement program, and feedback from the community to assess and define the programmatic care needs of its community.

Factor 3: Compliance

Applicant certifies, by virtue of submitting this Application that it is in compliance and good standing with federal, state, and local laws and regulations, including, but not limited to M.G.L. c. 30, §§ 61 through 62H and the applicable regulations thereunder, and in compliance with all previously issued notices of Determination of Need and the terms and conditions attached therein .

F3.a Please list all previously issued Notices of Determination of Need

Add/Del Rows	Project Number	Date Approved	Type of Notification	Facility Name
<input type="checkbox"/> <input type="checkbox"/>	None	06/21/2001	Transfer of Site/Change in Designated Location	Whidden Memorial Hospital campus

F4.a.ii For each Category of Expenditure document New Construction and/or Renovation Costs.

	Category of Expenditure	New Construction	Renovation	Total (calculated)
Land Costs				
	Land Acquisition Cost		\$0.	\$0.
	Site Survey and Soil Investigation		\$0.	\$0.
	Other Non-Depreciable Land Development		\$0.	\$0.
	Total Land Costs		\$0.	\$0.
Construction Contract (including bonding cost)				
	Depreciable Land Development Cost		\$0.	\$0.
	Building Acquisition Cost		\$0.	\$0.
	Construction Contract (including bonding cost)		\$837400.	\$837400.
	Fixed Equipment Not in Contract		\$924500.	\$924500.
	Architectural Cost (Including fee, Printing, supervision etc.) and Engineering Cost		\$73250.	\$73250.
	Pre-filing Planning and Development Costs		\$0.	\$0.
	Post-filing Planning and Development Costs		\$0.	\$0.
Add/Del Rows	Other (specify)			
<input type="checkbox"/> <input type="checkbox"/>	Hazardous Materials Abatement		\$100000.	\$100000.
<input type="checkbox"/> <input type="checkbox"/>	IT/Security		\$50000.	\$50000.
	Net Interest Expensed During Construction		\$0.	\$0.
	Major Movable Equipment		\$15000.	\$15000.
	Total Construction Costs		\$2000150.	\$2000150.
Financing Costs:				
	Cost of Securing Financing (legal, administrative, feasibility studies, mortgage insurance, printing, etc		\$0.	\$0.
	Bond Discount		\$0.	\$0.
Add/Del Rows	Other (specify			
<input type="checkbox"/> <input type="checkbox"/>				
	Total Financing Costs		\$0.	\$0.
	Estimated Total Capital Expenditure		\$2000150.	\$2000150.

Factor 5: Relative Merit

F5.a.i Describe the process of analysis and the conclusion that the Proposed Project, on balance, is superior to alternative and substitute methods for meeting the existing Patient Panel needs as those have been identified by the Applicant pursuant to 105 CMR 100.210(A)(1). When conducting this evaluation and articulating the relative merit determination, Applicant shall take into account, at a minimum, the quality, efficiency, and capital and operating costs of the Proposed Project relative to potential alternatives or substitutes, including alternative evidence-based strategies and public health interventions.

Proposal:

The Proposed Project is to add a second 64 slice CT scanner at CHA's Cambridge Hospital campus ("CHA Cambridge") to address the needs of (1) emergency department and inpatient patients who require urgent or emergent access to CT services and (2) ambulatory patients

Quality:

Improving the quality of care is the primary driver behind the Proposed Project. A second CT at CHA Cambridge will provide necessary back-up capacity so that inpatient and emergency department patients, including potential stroke patients, at CHA Cambridge requiring urgent access to CT services will reliably have timely on-site access to these services and will not need to be transported to other facilities for a necessary scan. In addition, a second CT will reduce the bumping of outpatient patients by urgent or emergent patients and will afford for more predictable, timely, and reliable scheduling of patients. Reducing delays and rescheduling will improve the care experience for patients and, crucially for so many of CHA's patients and their caregivers, mitigate the burdens of having to reschedule appointments and/ or take more time off from work than expected or may otherwise be necessary.

Efficiency:

Because the second CT scanner will be located within the existing radiology suite at CHA Cambridge, it will enable CHA entire imaging service at CHA Cambridge to operate more efficiently. CHA plans to operate the additional scanner using its existing staffing complement. The second scanner will allow for more predictable patient scheduling and thus allow for more efficient staffing patterns. The second scanner will also enable CHA to plan and schedule scanner downtime or react to unanticipated downtime without disrupting the operations of its emergency department or inpatient units at CHA Cambridge.

Capital Expense:

The total budgeted capital expense for the Proposed Project is \$2,000,150 of which amount \$1,075,650 is construction and related expenses related to re-purposing existing non-clinical space within the existing CHA Cambridge radiology suite.

Operating Costs:

The Proposed Project is not expected to increase operating expenses. As noted above CHA will operate the second CT using existing staff. In connection with the acquisition of the second scanner, CHA negotiated a \$97,000 reduction in annual servicing expenses.

List alternative options for the Proposed Project:

Alternative Proposal:

An alternative option to the Proposed Project would be to offer ambulatory CT services at an off-site location (other than Somerville Hospital) – either operated solely by CHA or in partnership with a third party.

Alternative Quality:

This alternative fails to address one of the key needs that the Proposed Project addresses, namely ensuring back-up capacity at CHA Cambridge for urgent and emergent inpatient and emergency patients.

Alternative Efficiency:

Establishing a separate facility for outpatient CT services is not as efficient as using existing facilities, even if a third party were to staff the new facility because this option would not be able to leverage existing clinical staff and front desk and other support staff.

Alternative Capital Expense:

Whether CHA were to convert existing space at one of its ambulatory sites or to locate the scanner at a new site, the capital costs associated with the necessary construction of related space (administrative, front desk, waiting room) would exceed those of the Proposed Project.

Alternative Operating Costs:

This alternative would increase operating costs because CHA would not be able to leverage existing staff. Either CHA directly, or a joint venture with a third party, would require the hiring of additional staff.

Add additional Alternative Project

Delete this Alternative Project

List alternative options for the Proposed Project:

Alternative Proposal:

An alternative option to the Proposed Project would be to contract with a third party for additional services.

Alternative Quality:

This alternative fails to address one of the key needs that the Proposed Project addresses, namely ensuring back-up capacity at CHA Cambridge for urgent and emergent inpatient and emergency patients. This alternative is also less desirable because it would result in fragmented care for patients.

Alternative Efficiency:

Establishing a separate facility for outpatient CT services is not as efficient as using existing facilities, even if a third party were to staff the new facility because this option would not be able to leverage existing clinical staff and front desk and other support staff.

Alternative Capital Expense:

Contracting with a third party would have the benefit of eliminating the capital expense associated with the Proposed Project.

Alternative Operating Costs:

Contracting with a third party for CT services would likely increasing operating expenses and/ or total medical expense depending on whether CHA purchased the services directly or established a referral relationship.

Add additional Alternative Project

Delete this Alternative Project

F5.a.ii Describe the process of analysis and the conclusion that the Proposed Project, on balance, is superior to alternative and substitute methods for meeting the existing Patient Panel needs as those have been identified by the Applicant pursuant to 105 CMR 100.210(A)(1). When conducting this evaluation and articulating the relative merit determination, Applicant shall take into account, at a minimum, the quality, efficiency, and capital and operating costs of the Proposed Project relative to potential alternatives or substitutes, including alternative evidence-based strategies and public health interventions.

Ensuring that CHA could provide its patients the safest and highest quality care led CHA to conclude that the Proposed Project is the superior alternative to meeting the needs of its patients. No other alternative meets the need of ensuring adequate back-up capacity at CHA Cambridge for inpatient and emergency patients. The Proposed Project allows outpatient CT scanning services to remain co-located with other imaging services at the CHA Cambridge. In terms of efficiency, capital expense and ongoing operating costs the Proposed Project is superior because CHA is able to leverage existing personnel and facility resources.

Documentation Check List

The Check List below will assist you in keeping track of additional documentation needed for your application. Once you have completed this Application Form the additional documents needed for your application will be on this list. E-mail the documents as an attachment to: DPH.DON@state.ma.us

- ☒ Copy of Notice of Intent
- ☒ Affidavit of Truthfulness Form
- ☒ Scanned copy of Application Fee Check
- ☒ Affiliated Parties Table Question 1.9
- ☒ Change in Service Tables Questions 2.2 and 2.3
- ☒ Certification from an independent Certified Public Accountant
- ☐ Notification of Material Change
- ☐ Current IRS Form, 990 Schedule H CHNA/CHIP and/or Current CHNA/CHIP submitted to Massachusetts AGO's Office
- ☒ Community Engagement Stakeholder Assessment form
- ☐ Community Engagement-Self Assessment form

Document Ready for Filing

When document is complete click on "document is ready to file". This will lock in the responses and date and time stamp the form.

To make changes to the document un-check the "document is ready to file" box. Edit document then lock file and submit

Keep a copy for your records. Click on the "Save" button at the bottom of the page.

To submit the application electronically, click on the "E-mail submission to Determination of Need" button.

This document is ready to file:



Date/time Stamp: 09/09/2018 3:20 pm

E-mail submission to
Determination of Need

Application Number: CHA-18090915-RE

Use this number on all communications regarding this application.

☐ Community Engagement-Self Assessment form