**APPLICANT QUESTIONS #2**

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

While you may submit each answer as available, please

* List question number and question for each answer you provide
* Submit responses as a separate word document, using the above application title and number as a running header and page numbers in the footer
* When providing the answer to the final question, submit all questions and answers in one final document
* Submit responses in WORD or EXCEL; only use PDF’s if absolutely necessary. If “cutting and pasting” charts, provide them in a PDF so they can be clearly seen
* **Whenever possible, include a table with the response**
* **For HIPAA compliance Do not include numbers <11.**
* **When providing data, includes dates, and indicate whether it is Calendar (CY) or Fiscal Year (FY).**

**Factor 1a: Patient Panel Need**

1. **The application states while BWH and the Applicant have successfully collaborated to provide world-class cancer care for many years, the Applicant has determined that developments in cancer care require that operational and decision-making authority be vested in one entity for all licensed medical/surgical (M/S) that will serve as medical oncology beds to best serve patients and ensure the best outcomes (pg.2).**
	1. **Explain why vesting operational and decision-making authority in one entity for all licensed beds will best serve the Applicant’s Patient Panel and ensure the best outcomes over the current setup.**

Dana-Farber’s sole focus is cancer. From initial diagnosis through treatment, surveillance, survivorship, and end-of-life care, Dana-Farber patients have an oncology care team that includes specialized oncologists, physician assistants, oncology nurses, pharmacists, and patient navigators, among others. Medical oncology serves as the nucleus of the patient’s cancer treatment. The medical oncologist is responsible for coordinating the entire course of care, while a surgical oncologist or a radiation oncologist may take care of a patient for episodes of care (*i.e.*, through surgery or radiation therapy). The oncology care team is supplemented by non-cancer specialists, such as cardiologists and infectious disease specialists. In a dedicated cancer hospital with centralized operational and decision-making authority, everything, from policies and procedures to medico-administrative oversight, is organized around the care of cancer patients. All staff and clinicians are trained to understand the disease and symptoms of, and individual treatment regimens (including side effects and risks) for, cancer and are devoted to the care of cancer patients.

That specialization benefits Dana-Farber’s patients and ultimately benefits cancer patients everywhere through the development and dissemination of next-generation cancer treatments, standards, and guidelines. Research shows outcomes are significantly better for cancer patients treated in dedicated cancer hospitals compared to those treated in general hospital settings, even when that general hospital

is a National Cancer Institute-designated Cancer Care Center (“CCC”) or an Academic Medical Center (“AMC”).[[1]](#footnote-1) Dana-Farber’s multidisciplinary care teams—including social workers, nutritionists, pharmacists, genetic counselors, palliative care providers, psychosocial providers, oncology nurse navigators, oncology resource specialists, and more—specialize in the unique issues that arise in the lives of cancer patients. They provide care for the whole patient and family over their long-term cancer journey. Dana-Farber also develops infrastructure dedicated to oncology care that improves the patient experience and reduces costs. For example, by establishing an Acute Care Clinic to provide oncology-specific urgent care, Dana-Farber reduced emergency room visits by 20% for patients seen in the Acute Care Clinic. Further, 80% of these patients were treated and sent home. In contrast, 80% of cancer patients seen in emergency rooms are admitted to the hospital.

In addition, the policies of a general hospital (*e.g.*, infection control policies) do not always serve the unique interests or needs of the cancer population. Conflicting recommendations regarding infection control resulted in conflicting practices caring for patients in Dana-Farber-licensed beds and Brigham and Women’s Hospital (“BWH”)-licensed beds (*e.g.*, with respect to masking, utilization of air-controlled spaces, triage of patient locations, allocation of staff). Further, certain benchmarking data recommended and adopted for National Cancer Institute-designated comprehensive cancer centers (*e.g.*, ability to administer intravenous antibiotics within 30 minutes of presentation with fever and neutropenia (an oncologic emergency)) are not routinely collected in general acute care hospitals, including AMCs, which makes collection of these data solely for the cancer patient population more difficult. Convincing a general acute care hospital’s administration to invest resources in the collection of these nationally recommended, cancer-specific quality benchmarks is not always possible.

These are just a few of the reasons that Dana-Farber’s singular focus on cancer—and the vesting of operational and decision-making authority within a single dedicated cancer center—improves quality of care and the patient experience while decreasing cost and unnecessary inpatient care.

* 1. **What outcomes does the Applicant expect will improve as a result of this change?**

Dana-Farber expects survival rates, continuity of care, ability to benchmark and track cancer-specific quality metrics to improve and ensure quality, and inpatient patient satisfaction (*e.g.*, Press Ganey scores) to improve. Additionally, Dana-Farber expects the number of adverse events to decrease.

1. **The application states that the Applicant projects that by 2032, there will be a need by its Patient Panel for approximately 384 inpatient beds dedicated to the advanced cancer care provided by the Applicant (pg.18).**
	1. **Why is the Applicant requesting 300 beds, and not 384 beds to address projected need by 2032?**

A 300-bed inpatient hospital is all that can be accommodated on the land available, given applicable budgeting, design, and permitting constraints.

* 1. **Does the proposed facility include any shell space for future build out?**

No, it does not include any shell space for future build out.

1. **The application states that the Proposed Project will also include 20 observation beds (pg.3)**
	1. **Describe the methodology used to determine Patient Panel need for 20 observation beds**.

Dana-Farber derived the Patient Panel need for 20 observation beds using internal billing data for Dana- Farber and Center for Health Information and Analysis (“CHIA”) data for Beth Israel Deaconess Medical Center (“BIDMC”). Using the Dana-Farber internal data and CHIA data, respectively, Dana-Farber estimated the number of annual observation discharges in its licensed and managed beds and combined that with the number of annual observation discharges at BIDMC attributable to patients with a cancer diagnosis. It then applied an average growth rate assumption of 16%[[2]](#footnote-2) to arrive at an estimate of observation level discharges in 2032. Using an estimated average length of stay of 2 days for observation level patients, Dana-Farber derived an estimated average daily census of observation level patients and, in turn, an estimate of the number beds necessary to satisfy Patient Panel need.

1. **Provide projected discharges, from Year I through Year 5 of project implementation.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 51** |
| **Inpatient****Discharges** | 9,689 | 11,832 | 11,901 | 12,064 | 12,111 |

1Included on the Change of Service Form as part of the Application.

1. **The Applicant states that the identified need cannot be met by other hospitals within the Commonwealth because of the highly specialized nature of inpatient oncology care required by the Applicant’s Patient Panel and the growing demand for such care (pg.23).**
	1. **Explain why the identified need cannot be met by other hospitals within the Commonwealth.**

Other hospitals in the Commonwealth are not able to meet the need both because they lack the expertise to provide a number of services that Dana-Farber provides and because they generally lack inpatient capacity.

Cancer care is more sophisticated and complex today than it has ever been in the past. Dana-Farber is at the forefront of providing these services, nationally and internationally. Complex and novel therapies like induction therapy for acute leukemia patients, CAR T-cell therapy, bi-specific T-cell engager therapy, and stem cell transplantation, all of which require or may lead to potentially lengthy inpatient stays, are expanding significantly in their prevalence. Dana-Farber is one of the only hospitals in the Commonwealth providing these services. Dana-Farber is best equipped to oversee their expansion within the New Cancer

Hospital. Further, Dana-Farber’s “bench to bedside” approach means that it can offer access to clinical trials that cannot be offered elsewhere.

Regarding capacity, the health care ecosystem in the Commonwealth relies on Dana-Farber to treat the sickest cancer patients. Dana-Farber has the highest acuity case-mix index of all adult care hospitals in the Commonwealth. Currently, sufficient inpatient beds simply are not available for those patients. Some die or suffer unnecessarily as a result. Others obtain care in suboptimal settings—such as crowded emergency departments—that lack the specialized staff and equipment of Dana-Farber. In fact, some profoundly immunosuppressed patients spend their entire hospitalization in emergency departments with little privacy and surrounded by sick and potentially infectious patients.

1. **The application states that when the proposed Facility is operational, the Applicant expects its Patient Panel will include the cancer patients it has historically cared for, as well as cancer patients previously admitted to BIDMC but who require the sort of advanced cancer care the Applicant will provide at the Facility (pg.18). Based on the application narrative, patients that the Applicant has historically cared for include patients admitted to beds on the Applicant’s license, and patients admitted to BWH-licensed beds under the care of the Applicant’s medical oncologists.**
	1. **Given that the Applicant currently maintains a licensed bed count of 30, why is it appropriate to include patients cared for in BWH-licensed beds when projecting need for a dedicated cancer hospital that will be owned and operated by the Applicant?**

Dana-Farber cares for 200 to 230 inpatient oncology patients every day. Thirty of these beds are located in Dana-Farber-licensed space, while the remaining are located in BWH-licensed space. Regardless of licensee, these patients are all Dana-Farber patients. All have Dana-Farber medical record numbers. During their inpatient stay, Dana-Farber-employed medical oncologists and hospitalists direct the care of the patients in these beds.[[3]](#footnote-3) No oncology patient in these beds is seen by a primary attending physician other than a Dana-Farber employee. Dana-Farber employs every physician assistant providing care to these patients. BWH does not employ any medical oncologists or medical oncology advanced practice providers of its own. The only BWH employees that are part of a patient’s clinical care team are individuals without specialties in medical oncology or, during their training by Dana-Farber medical oncologists, members of the BWH house staff (residents and interns). Their care and consultations of these inpatient patients are all immediately overseen by Dana-Farber-employed clinicians. Importantly, Dana-Farber is the medical oncology provider for these patients outside of the hospital, as well. Nearly all cancer patients presenting at the BWH emergency department have been previously seen by Dana-Farber in the outpatient setting and were already established under Dana-Farber care.

1. **The application states a number of comprehensive cancer centers (its most comparable peers) have in recent years or are currently undergoing significant inpatient expansion. Further, the Applicant looks at quality and outcomes at these comparators as a driver and seeks to expand to ensure that it can continue to provide innovative, high quality, and life-saving care to its patients both within the Commonwealth and those who travel to Boston for the sole purpose of receiving care at the Applicant’s facility (pg.22).**

* 1. **What quality and outcome measures did the Applicant examine at comparator cancer centers?**

As previously described in the response to Question 1, Dana-Farber examined the medical literature assessing the impact of receiving treatment at a dedicated cancer center as opposed to other types of hospitals, including AMCs. Multiple, validated studies have found higher survival rates at dedicated cancer hospitals.[[4]](#footnote-4) Additional research shows that other outcomes are also improved when care is received at Prospective Payment System-exempt cancer hospitals (including Dana-Farber), as opposed to CCCs, AMCs, and other types of hospitals, including the decreased incidence of sepsis, acute renal failure, pulmonary failure, and failure to rescue.[[5]](#footnote-5)

* 1. **Did the Applicant compare other factors, such as populations served or existing statewide inpatient capacity for advanced cancer care, across its national peers when evaluating ways to address its Patient Panel need for adult inpatient cancer care?**

In comparing the needs of its Patient Panel with the needs of its peers, Dana-Farber considered the higher average age of New England oncology patients as compared with the national average as indicative of the need for more inpatient capacity.[[6]](#footnote-6) Dana-Farber did not consider the existing statewide inpatient capacity for advanced cancer care amongst its national peers, which comparative data were not readily available.

1. **The responses to DoN Questions #1 states that the Advisory Board projects that there will be a 28% growth in inpatient oncology patients in this age cohort (age 75+) (pg.4).**
	1. **During what period of time will the percentage increase occur and for which parts of the country?**

The Advisory Board projects this increase to occur from 2023 to 2028. Its projection was Massachusetts- specific.

1. **The Application states that approximately 26.9% of inpatients in fiscal year (FY) 2022 came from outside Massachusetts (pg. 4).**
	1. **Has the Applicant modeled its existing and projected out-of-state and international market share?**

No, Dana-Farber has not modeled its out-of-state and international market share.

1. **Explain the reason for the 22% increase in the Applicant’s Patient Panel, the 9% increase in Unique Inpatients and 16% increase in Unique outpatients between 2020 and 2022.**

Dana-Farber attributes the increase in unique inpatients and outpatients to (1) receipt of care delayed by patients during the COVID-19 pandemic; and (2) general increases in the incidence of cancer cases (*i.e.*, new patients diagnosed) and prevalence of cancer cases (*i.e.*, patients living longer with disease, requiring

ongoing care) leading patients to seek treatment at the Applicant’s facilities, including newer access points in Methuen, Chestnut Hill, and Foxborough.

1. **The Application provides the payer mix for the Longwood Medical Campus, inclusive of the Applicant’s Chestnut Hill location (pg.14).**
	1. **To better understand Patient Panel need for inpatient beds, provide the payer mix for Unique Inpatients for the most recent 3 years available**.

|  | **FY21** | **FY22** | **FY23** |
| --- | --- | --- | --- |
| Commercial | 38.6% | 39.4% | 39.9% |
| MassHealth | 1.8 | 1.3 | 1.3 |
| Managed Medicaid | 7.2 | 7.9 | 7.2 |
| Commercial Medicare | 12.2 | 9.7 | 11.6 |
| Medicare FFS | 38.4 | 39.2 | 37.2 |
| Other\* | 1.8 | 2.6 | 2.8 |

Note: Payor mix data are not available for BWH-licensed beds. This table includes data on Unique Inpatients within Dana-Farber-licensed beds only.

\*Includes Health Safety Net, out-of-state Medicaid, other governmental payor, and self-pay patients.

1. **To better understand Patient Panel need for the Proposed Project, provide a breakdown of inpatients by zip code for the most recent year available. If the count is <11 use Other and specify which cities/towns are included in that category**.

| **Zip Code & City/Town** | **State** | **Discharges (FY22)** |
| --- | --- | --- |
| 02136 Hyde Park | MA | 119 |
| 02131 Roslindale | MA | 98 |
| 02124 Dorchester Center | MA | 91 |
| 02132 West Roxbury | MA | 91 |
| 02130 Jamaica Plain | MA | 87 |
| 02026 Dedham | MA | 75 |
| 02062 Norwood | MA | 70 |
| 02169 Quincy | MA | 67 |
| 02301 Brockton | MA | 62 |
| 02081 Walpole | MA | 58 |
| 02125 Dorchester | MA | 57 |
| 02121 Dorchester | MA | 56 |
| 02446 Brookline | MA | 55 |
| 02184 Braintree | MA | 54 |
| 02155 Medford | MA | 53 |
| 02780 Taunton | MA | 52 |
| 02115 Boston | MA | 49 |
| 02474 Arlington | MA | 49 |
| 02119 Roxbury | MA | 48 |
| 02148 Malden | MA | 48 |
| 02050 Marshfield | MA | 48 |
| 02472 Watertown | MA | 45 |
| 02467 Chestnut Hill | MA | 45 |
| 02048 Mansfield | MA | 41 |
| 02043 Hingham | MA | 40 |
| 02038 Franklin | MA | 40 |
| 02360 Plymouth | MA | 39 |
| 02021 Canton | MA | 39 |
| 02090 Westwood | MA | 39 |
| 01844 Methuen | MA | 39 |
| 02478 Belmont | MA | 39 |
| 01752 Marlborough | MA | 39 |
| 01845 North Andover | MA | 39 |
| 02186 Milton | MA | 38 |
| 02072 Stoughton | MA | 38 |
| 01701 Framingham | MA | 37 |
| 02045 Hull | MA | 37 |
| 02035 Foxboro | MA | 37 |
| 02760 North Attleboro | MA | 36 |
| 02368 Randolph | MA | 35 |
| 02459 Newton Center | MA | 35 |
| 02067 Sharon | MA | 35 |
| 02445 Brookline | MA | 34 |
| 02126 Mattapan | MA | 34 |
| 02703 Attleboro | MA | 34 |
| 02116 Boston | MA | 33 |
| 02359 Pembroke | MA | 33 |
| 01757 Milford | MA | 33 |
| 01760 Natick | MA | 32 |
| 03038 Derry | NH | 32 |
| 01960 Peabody | MA | 31 |
| 02135 Brighton | MA | 31 |
| 02138 Cambridge | MA | 31 |
| 02066 Scituate | MA | 31 |
| 01453 Leominster | MA | 31 |
| 01420 Fitchburg | MA | 31 |
| 02122 Dorchester | MA | 30 |
| 02118 Boston | MA | 29 |
| 01810 Andover | MA | 29 |
| 01876 Tewksbury | MA | 29 |
| 02120 Roxbury Crossing | MA | 29 |
| 02151 Revere | MA | 28 |
| 01915 Beverly | MA | 28 |
| 02127 Boston | MA | 28 |
| 01890 Winchester | MA | 28 |
| 01830 Haverhill | MA | 28 |
| 01545 Shrewsbury | MA | 28 |
| 02302 Brockton | MA | 27 |
| 01832 Haverhill | MA | 27 |
| 01721 Ashland | MA | 27 |
| 02190 South Weymouth | MA | 27 |
| 02149 Everett | MA | 26 |
| 02324 Bridgewater | MA | 26 |
| 01702 Framingham | MA | 26 |
| 02740 New Bedford | MA | 26 |
| 02339 Hanover | MA | 26 |
| 02370 Rockland | MA | 26 |
| 02649 Mashpee | MA | 26 |
| 01880 Wakefield | MA | 25 |
| 02093 Wrentham | MA | 25 |
| 01930 Gloucester | MA | 24 |
| 02332 Duxbury | MA | 24 |
| 02421 Lexington | MA | 24 |
| 02745 New Bedford | MA | 24 |
| 02481 Wellesley Hills | MA | 24 |
| 02215 Boston | MA | 23 |
| 02563 Sandwich | MA | 23 |
| 01887 Wilmington | MA | 23 |
| 02351 Abington | MA | 23 |
| 02053 Medway | MA | 23 |
| 01776 Sudbury | MA | 23 |
| 02540 Falmouth | MA | 23 |
| 02632 Centerville | MA | 23 |
| 02139 Cambridge | MA | 22 |
| 02458 Newton | MA | 22 |
| 02347 Lakeville | MA | 22 |
| 02019 Bellingham | MA | 22 |
| 02189 East Weymouth | MA | 22 |
| 02790 Westport | MA | 22 |
| 03053 Londonderry | NH | 22 |
| 02171 Quincy | MA | 21 |
| 01913 Amesbury | MA | 21 |
| 03104 Manchester | NH | 21 |
| 01801 Woburn | MA | 20 |
| 02140 Cambridge | MA | 20 |
| 01907 Swampscott | MA | 20 |
| 02061 Norwell | MA | 20 |
| 02726 Somerset | MA | 20 |
| 01886 Westford | MA | 20 |
| 02492 Needham | MA | 19 |
| 02375 South Easton | MA | 19 |
| 02333 East Bridgewater | MA | 19 |
| 01867 Reading | MA | 19 |
| 02536 East Falmouth | MA | 19 |
| 01906 Saugus | MA | 19 |
| 02188 Weymouth | MA | 19 |
| 02465 West Newton | MA | 19 |
| 01581 Westborough | MA | 19 |
| 01923 Danvers | MA | 19 |
| 02748 South Dartmouth | MA | 19 |
| 01778 Wayland | MA | 18 |
| 01970 Salem | MA | 18 |
| 02494 Needham Heights | MA | 18 |
| 02025 Cohasset | MA | 18 |
| 01604 Worcester | MA | 18 |
| 02476 Arlington | MA | 17 |
| 01749 Hudson | MA | 17 |
| 02382 Whitman | MA | 17 |
| 02766 Norton | MA | 17 |
| 01602 Worcester | MA | 17 |
| 02719 Fairhaven | MA | 17 |
| 01949 Middleton | MA | 17 |
| 02864 Cumberland | RI | 17 |
| 02176 Melrose | MA | 16 |
| 02180 Stoneham | MA | 16 |
| 02343 Holbrook | MA | 16 |
| 01730 Bedford | MA | 16 |
| 02767 Raynham | MA | 16 |
| 01940 Lynnfield | MA | 16 |
| 02482 Wellesley | MA | 16 |
| 02777 Swansea | MA | 16 |
| 01748 Hopkinton | MA | 16 |
| 01201 Pittsfield | MA | 16 |
| 03087 Windham | NH | 16 |
| 03110 Bedford | NH | 16 |
| 02852 North Kingstown | RI | 16 |
| 02170 Quincy | MA | 15 |
| 02152 Winthrop | MA | 15 |
| 01841 Lawrence | MA | 15 |
| 02144 Somerville | MA | 15 |
| 02128 Boston | MA | 15 |
| 02056 Norfolk | MA | 15 |
| 01803 Burlington | MA | 15 |
| 02601 Hyannis | MA | 15 |
| 01742 Concord | MA | 15 |
| 02724 Fall River | MA | 15 |
| 01606 Worcester | MA | 15 |
| 02150 Chelsea | MA | 14 |
| 02451 Waltham | MA | 14 |
| 01027 Easthampton | MA | 14 |
| 01440 Gardner | MA | 14 |
| 01843 Lawrence | MA | 14 |
| 02460 Newtonville | MA | 14 |
| 02720 Fall River | MA | 14 |
| 02747 North Dartmouth | MA | 14 |
| 02769 Rehoboth | MA | 14 |
| 01610 Worcester | MA | 14 |
| 01028 East Longmeadow | MA | 14 |
| 03801 Portsmouth | NH | 14 |
| 03301 Concord | NH | 14 |
| 02134 Allston | MA | 13 |
| 02330 Carver | MA | 13 |
| 02346 Middleboro | MA | 13 |
| 01720 Acton | MA | 13 |
| 01821 Billerica | MA | 13 |
| 02453 Waltham | MA | 13 |
| 01085 Westfield | MA | 13 |
| 02723 Fall River | MA | 13 |
| 01095 Wilbraham | MA | 13 |
| 01854 Lowell | MA | 13 |
| 02895 Woonsocket | RI | 13 |
| 02837 Little Compton | RI | 13 |
| 02145 Somerville | MA | 12 |
| 02379 West Bridgewater | MA | 12 |
| 02191 North Weymouth | MA | 12 |
| 02648 Marstons Mills | MA | 12 |
| 01945 Marblehead | MA | 12 |
| 01824 Chelmsford | MA | 12 |
| 01746 Holliston | MA | 12 |
| 01938 Ipswich | MA | 12 |
| 01450 Groton | MA | 12 |
| 01532 Northborough | MA | 12 |
| 01469 Townsend | MA | 12 |
| 02842 Middletown | RI | 12 |
| 02420 Lexington | MA | 11 |
| 02461 Newton Highlands | MA | 11 |
| 01770 Sherborn | MA | 11 |
| 02738 Marion | MA | 11 |
| 02493 Weston | MA | 11 |
| 02571 Wareham | MA | 11 |
| 02660 South Dennis | MA | 11 |
| 02633 Chatham | MA | 11 |
| 01331 Athol | MA | 11 |
| 01863 North Chelmsford | MA | 11 |
| 03051 Hudson | NH | 11 |
| 02865 Lincoln | RI | 11 |
| 02891 Westerly | RI | 11 |
| 02871 Portsmouth | RI | 11 |
| Unknown | - | 343 |
| Other^ | MA, CT, ME, NH, NY, RI, VT | 2,267 |

\*Includes CHIA data for Dana-Farber and BWH.

^Includes cities and towns listed on Exhibit A attached hereto. Table excludes patients who live in states other than New England and New York.

1. **The application states that over 60% of the Applicant’s inpatients were admitted through BWH’s emergency department (ED) in FY22 (pg. 6).**
	1. **Given that 60% of the Applicant’s inpatients were admitted through BWH’s Emergency Department in FY22, what will be the source(s) of admission to the proposed facility?**

Nearly all cancer inpatients admitted through the BWH Emergency Department (“ED”) had previously obtained outpatient care from a Dana-Farber medical oncologist. If, during the course of treatment, a patient experiences side effects, complications, or symptoms that require urgent management, that patient is often directed to the BWH ED, particularly after the existing outpatient Acute Care Clinic is

closed. Such a patient can sometimes be treated and sent home, but, in many cases, is kept for observation or admitted, either to a BWH-licensed bed (managed by Dana-Farber) or to a Dana-Farber- licensed bed. Additionally, in some cases, because of capacity constraints, a patient who would otherwise be admitted to a medical oncology bed in either licensed hospital remains in the BWH ED instead, creating a suboptimal cancer treatment environment.

Dana-Farber does not anticipate that 60% of its inpatient patients in the New Cancer Hospital will be admitted through the BIDMC ED, though a significant percentage likely will be. Because of the increased capacity, however, Dana-Farber envisions inpatient admissions occurring through a number of additional pathways, including from the outpatient environment, elective admissions, admissions from observation beds, admissions from the (expanded) Dana-Farber Acute Care Clinic (discussed above in response to Question 1), transfers from other general acute care hospitals, and transfers from post-acute facilities and nursing homes.

**How many of the Applicant’s inpatients were transferred from another facility in FY22 and FY23?**

Dana-Farber estimates approximately 300 patients were transferred to Dana-Farber licensed or managed beds from outside facilities in each of FY22 and FY23.

1. **The application states the ALOS in the BWH ED increased from 6.9 hours in 2018 to 8.6 hours in 2022, a 25% increase (pg. 6).**
	1. **How was ALOS in the ED calculated?**

ALOS was calculated using the CHIA data available in the Massachusetts Health Data Consortium (“MHDC”), which states that “Length of Stay” is calculated by “subtracting the arrival date and time from the departure date and time and is reported in hours.” As shown in the table below, the Application inadvertently understated the BWH ED ALOS increase from 2018 to 2022. The ALOS in 2022 was actually

9.43 hours and the percent change against 2018 was approximately 38%.

| **CY** | **Encounters** | **ED ALOS in hours** | **% Change from 2018** |
| --- | --- | --- | --- |
| 2018 | 41,451 | 6.86 | N/A |
| 2019 | 41,690 | 7.26 | 5.8% |
| 2020 | 32,484 | 7.47 | 8.9% |
| 2021 | 36,791 | 8.65 | 26.1% |
| 2022 | 28,053 | 9.43 | 37.5% |

1. **Provide the location of existing imaging equipment and their proposed location after project implementation**.

Excluding imaging equipment available at its Chestnut Hill location, all of Dana-Farber’s imaging equipment on its Longwood campus (3 CT machines, 2 MRI machines, 2 PET/CT machines, and 3 LINACs) are located at 44 Binney Street, Boston, Massachusetts, 02115. All such imaging equipment is expected to remain at its 44 Binney Street location following project implementation.

* 1. **What are the current wait times (inpatient and outpatient where applicable) for existing imaging equipment and LINACs. Include a description of how wait time is calculated.**

**Outpatient Imaging and LINAC Wait Times**

For FY23, the wait times for outpatient imaging and LINAC were as follows: CT: 1.6 days

MRI: 2.8 days

PET/CT: 12.9 days

LINAC: 55.3 days (inclusive of time spent receiving other treatments/services prior to radiation therapy)

For outpatient imaging equipment, Dana-Farber calculates “wait time” by the number of hours from the time of order to third next available appointment (calendar days). This does not include same-day orders with emergency priority. For outpatient LINAC, Dana-Farber calculates “wait time” by averaging the time between a new patient consult by a radiation oncologist at Dana-Farber and the first radiation therapy treatment thereafter. This is the closest Dana-Farber could approximate “wait time” for LINAC using only its data and it includes any time spent receiving other treatments/services (*e.g.*, CT simulation and chemotherapy) prior to receipt of radiation therapy.

**Inpatient Imaging Wait Times**

For FY23, the wait times for inpatient imaging were as follows:

CT: 5.6 hours

MRI: 18.5 hours

PET/CT: 51.2 hours

For inpatient imaging equipment, Dana-Farber calculates “wait time” by measuring, in hours, the difference between the time the service is ordered by a physician and the time it is completed. Measurement includes data for Dana-Farber-licensed beds only and excludes orders with emergency priority.

* 1. **What are the anticipated wait times after project implementation?**

Following project implementation, the proposed devices are anticipated to provide same-day service for urgent appointments and will ensure same-day access for inpatients, facilitating patient progression. Dana-Farber anticipates providing outpatients with ordered imaging services within 3 days of the order.

1. **The application states the percentage of oncology admissions requiring use of Inpatient Imaging Equipment increased substantially between 2020 and 2022—by approximately 40% for MRI scans, 25% for CT scans, and 43% for PET-CT scans (pg.6).**
	1. **Explain the reason for increasing use of imaging.**

Dana-Farber attributes the increased utilization of imaging for inpatients between 2020 and 2022 to (1) receipt of care delayed by patients during the COVID-19 pandemic (including patients presenting with more advanced disease requiring imaging); and (2) general increases in the incidence and prevalence of cancer cases.

1. **The application states the Applicant saw an increased use of outpatient imaging with an approximately 81% increase in MRI scans, 38% increase in CT scans, and 22% increase in PET- CT scans between 2021 and 2023. This increase can be attributed partially to an increase in the number of outpatients following the opening of the Applicant’s site in Chestnut Hill in 2021 (pg.7).**
	1. **Explain other reasons for the increase, besides the opening of the Applicant’s site in Chestnut Hill.**

In addition to the opening of the Chestnut Hill facility and other outpatient locations, Dana-Farber attributes the increased utilization of imaging for outpatients between 2020 and 2022 to (1) receipt of care delayed by patients during the COVID-19 pandemic (including patients presenting with more advanced disease requiring imaging); (2) general increases in the incidence and prevalence of cancer cases; (3) increases in the number of commercially available diagnostic radiotracers, allowing PET/CTs to be deployed to assist in the diagnosis of more types of cancer (*e.g.*, prostate-specific membrane antigen tracers for prostate cancer imaging); and (4) the launch of an early detection program to find cancers earlier when they can more often be cured.

1. **The application states that Patient Panel utilization of LINAC therapy increased by approximately 18% between 2020 and 2022 (pg.7).**

Dana-Farber attributes the increased utilization of LINACs between 2020 and 2022 to (1) receipt of care delayed by patients during the COVID-19 pandemic (including patients presenting with more advanced disease requiring radiation therapy) and (2) general increases in the incidence of cancer cases.

1. **The application states Table 6 provides Inpatient Imaging Equipment utilization in the Applicant’s 30 licensed beds by the Applicant’s Patient Panel (pg.13).**
	1. **Why did the Applicant project imaging equipment based on historical utilization of patients in the Applicant’s licensed 30 beds when projected bed need was based on patients in the Applicant’s licensed beds and patients in BWH-licensed beds that were cared for by the Applicant?**

Dana-Farber projected inpatient imaging need based on its 30 licensed beds because the data regarding BWH-licensed beds were not available from publicly available sources and nonpublic, BWH data are proprietary to BWH.

1. **The application states that number of machines needed for each modality, was calculated by dividing the projected 2032 annual demand for scans for such modality by the estimated number of scans that can be performed per machine in one year (collectively known as “throughput”). The projected 2032 demand for scans was estimated by first multiplying projected 2032 discharges by the average number of scans per discharge for each modality based on historical data of the Applicant (pg.23).**
	1. **Why did the Applicant calculate need for imaging based on projected 2032 data where the bed need is estimated to be 384, when the proposed facility will have a licensed bed count of 300?**

Dana-Farber used 384 beds to calculate imaging need because, notwithstanding the constraints that limit Dana-Farber’s ability to build a facility with more than 300 beds, that number represents the true need of its Patient Panel. That said, the number of required machines would remain the same even had a bed count of 300 beds been used.

1. **Explain the Applicant’s plan for staffing the new facility, including where any new staff come from, the types of new staff that will be hired, and the Applicant’s plans for hiring diverse and representative staff.**

The specialized workforce for the New Cancer Hospital must be built. It does not currently exist in the market. Many of the future members of the New Cancer Hospital’s staff are currently in high school or college. Dana-Farber is committed to building a diverse and representative clinical staff with specialized oncology expertise through new and existing pipeline programs. These programs (including the existing nurse residency program with UMass Boston, Dana-Farber’s advanced practice provider fellowship program in medical oncology and palliative care, and Dana-Farber-funded scholarship programs to encourage entry level employees to pursue nursing education) provide opportunities to diverse individuals to enter the field of oncology and aim to improve economic mobility. Dana-Farber is also developing a state-of-the-art simulation center, scheduled to open in 2025, which will support these programs and training objectives. Dana-Farber does not anticipate recruiting staff away from community hospitals.

Further, Dana-Farber is committed to identifying and providing a variety of training and employment opportunities for Boston residents. Dana-Farber’s Office of Workforce Development works to ensure that underrepresented populations from Boston’s historically marginalized communities have equitable access to and opportunities for professional development experiences at Dana-Farber that offer training, employment, and mentorship. The Office of Workforce Development has two primary objectives: (1) to provide multi-level professional pathways to careers in healthcare at Dana-Farber, along with intensive and comprehensive educational, employment, and mentoring experiences; and (2) to develop and grow the pipeline programs described above, with particular focus on historically marginalized communities, through its relationships with community partners like Roxbury Community College, the Urban League, Boston Public Schools, YMCA Training Inc., and the Jewish Vocational Service. Workforce development initiatives for the New Cancer Hospital focus on (1) leveraging untapped talent sources in Boston and surrounding neighborhoods; (2) establishing pipeline programs to address needs not covered by existing programs, such as in biotechnology and clinical support; (3) offering programs to support English as a second language and job skills training, citizenship test preparation, and college readiness; and (4) expanding scholarships, mentorship programs, and other resources.

* 1. **To better understand the Applicant’s efforts to promote health equity, describe any required cultural competence training for staff and clinicians that will be working at the proposed facility.**

All Dana-Farber workforce members are required to complete the Inclusion, Diversity & Equity (“ID&E”) Foundational Education Curriculum covering six topics, including: unconscious bias, anti-racism, cultural

humility, inclusive workplaces, health equity, and allyship. Nursing staff are assigned further cultural competence training every other year. Additionally, effective Summer 2024, all staff will be required to complete disability competency care training as part of the annual education update. In addition to the all-workforce curriculum, the Cancer Care Equity Program (“CCEP”) has developed a comprehensive patient navigator onboarding program that includes clinic shadowing and evidence-based trainings as well as ongoing education to ensure staff are equipped with the skills and knowledge to best support patients of all backgrounds and with a variety of needs. Finally, Dana-Farber has an Office for ID&E that is staffed with experts who not only lead trainings but provide individual or group coaching opportunities to increase staff understanding and awareness of ID&E in the work environment. All of the above-described training will be required of any Dana-Farber employee working in the New Cancer Hospital.

* 1. **Provided the Proposed Project will support future demand for healthcare among older adults aged 65 and older, will Geriatric Oncologists be available to work with aging populations? If so, at what point in their care?**

Geriatricians will be available for consultation when needed in the New Cancer Hospital as part of the full complement of consultative services that Dana-Farber anticipates will be available. These services will complement an existing ambulatory program Dana-Farber has in place for older patients, which involves the development of care plans by geriatricians and medical oncologists to help meet the unique needs of older cancer patients.

1. **What age-friendly measures will be incorporated into the design of the building?[[7]](#footnote-7) Will there be any modifications to the hospital setting to ensure it is age-friendly?**
	1. **In addition to age-related issues, how were variations in patient mobility, vision, hearing and cognition factored into the design of the building to make it accessible, safe and convenient for users?**

The New Cancer Hospital will be designed to ensure all patients can ambulate in a safe manner as part of their clinical care and recovery from treatment, including through the use of bridges and tunnels to easily connect the New Cancer Hospital with Dana-Farber’s other facilities (including the Acute Care Clinic) and BIDMC. The New Cancer Hospital will be accessible to all persons and will comply with all applicable legal and regulatory requirements, including requirements of the Massachusetts Architectural Access Board and the Americans with Disabilities Act. Further, as part of its building design process, Dana-Farber plans to devote particular attention to facilitating safe, convenient, and patient-centered access to all patients and caregivers, including older patient populations, as well as other patients with mobility, vision, hearing and cognition deficits. In addition to aspects of building design, Dana-Farber also maintains psychosocial oncology and social work programs designed to improve the experience of patients with intellectual or developmental disabilities, among others.

1. **The application states its limited inpatient bed capacity is a constraint on use of innovative and effective procedures, and this contributes to access issues for the Applicant’s most**

**vulnerable patients (including, but not limited to, patients of color and low-income patients) (pg.16).**

* 1. **Describe the process through which the Proposed Project will address access issues for the Applicant’s most vulnerable patients over the current setup.**

Disadvantaged patients are disproportionately impacted by the lack of adult inpatient cancer care capacity in Massachusetts. The New Cancer Hospital will help address that access disparity.

Currently, because of ongoing bed constraints at BWH, oncology patients experience long wait times in the BWH ED for an inpatient bed and, in some cases, leave before a bed is available. The patients that leave are often among the most vulnerable (*e.g.*, immigrant patients, patients with limited English proficiency, and patients with fewer resources). In Dana-Farber’s experience, historically marginalized patients access specialized care the least in part due to capacity constraints. The New Cancer Hospital will expand access to historically marginalized patients. Finally, through the expansion of the community- focused patient navigation program (which guides historically marginalized patients through their cancer care experience at Dana-Farber), Dana-Farber will intentionally integrate access and equity into the clinical operations of the New Cancer Hospital and all of Dana-Farber’s locations, as well as at community health centers and other community networks.

Expanded bed capacity within the Commonwealth means better outcomes for the most vulnerable patients. These groups are experiencing disproportionately high rates of hospitalization, largely owing to social determinants of health (“SDoH”) and baseline health disparities. Since these populations are overrepresented among hospitalized patients, the impacts of shortages of intensive care unit or other hospital beds disproportionately falls on them. In addition, patients from these disadvantaged groups are more likely to seek care at safety-net hospitals, which, due to resource constraints, may be less adaptable to capacity needs than other hospitals and may require patient transfer in the event certain specialized care is required. The New Cancer Hospital will be available to all patients, including those requiring transfers for more advanced, specialized care.

**1b. Public Health Value/Health Equity**

1. **As required by Factor 1b, Applicants must demonstrate how they will assess the impact of a Proper Project. The Applicants plans to assess the impact of the Proposed Project through tracking patient access to inpatient care and radiation therapy, and patient satisfaction (pg.30).**
	1. **What other measures can the Applicant track to assess the impact of the Proposed Project on health outcomes?**

Dana-Farber tracks, and will continue to track, a robust set of quality, safety, and outcomes measures, from patient experience measures to adverse events, complications of care, and a multitude of other process and outcome metrics. Examples include: (1) standardized infection ratios for Central Line- Associated Bloodstream Infections, Catheter-Associated Urinary Tract Infections, Methicillin-resistant Staphylococcus aureus infections, and Clostridioides difficile infections; (2) utilization measures, including length of stay (observed/expected), 30-day unplanned readmissions for cancer patients, admissions and emergency department visits for patients receiving outpatient chemotherapy, the proportion of patients who died of cancer and received chemotherapy in the last 14 days of life, and the proportion of patients

who died of cancer not admitted to hospice, occupancy rates, and transfer from outside hospitals; and (3) community-focused patient navigator program metrics, including barriers to care identified, barriers to care addressed, and psychosocial oncology referral rate, and all of which are regularly monitored using a data dashboard.

1. **Describe interpreting services for the Deaf and Hard of Hearing (DHH), and for patients who are blind or who have low vision.**

Dana-Farber’s Interpreter Services provides American Sign Language interpreters, certified deaf interpreters, and captioning access in real time to its deaf and hard of hearing patients. For blind and low vision patients, Dana-Farber uses braille in permanent spaces and on signage, provides materials in enlarged font and high contrast (text/color paper) for low vision patients, and provides blind patients with access to audio-recording technology so patient/provider visits may be audio-recorded and referred to post-discharge.

1. **The application states the building of the new Facility as part of the Proposed Project gives the Applicant the opportunity to take lessons learned from ongoing work to address health equity and cancer health disparities and apply those lessons in the fabric of the design of the Applicant’s Facility, its clinical programming, and its ability to reach historically underserved communities. (pg. 34).**
	1. **Describe the Applicant’s current plans for identifying and addressing cancer disparities within its Patient Panel. Include any data to demonstrate the impact of such efforts.**

The CCEP leverages Community Health Needs Assessments (“CHNAs”), including Dana-Farber’s and the CHNAs of other hospitals, to better understand health disparities in local communities and ensure its clinical access and equity interventions meet the needs of historically medically underserved populations and address cancer disparities. In addition to CHNAs, CCEP refers to medical appointment no-show and cancelation rates data stratified by patient demographics to identify and monitor trends in patient populations most at risk to delays in care across the cancer continuum due to missed appointments. Data from CHNAs and medical appointment no-shows/cancelations are leveraged during the planning phases of CCEP’s clinical interventions. They are also used to identify areas of improvement on an ongoing basis. In partnership with Dana-Farber’s Informatics and Analytics team, CEEP has developed certain program- specific data dashboards to visualize and continually monitor the impact of interventions. In addition to quantitative data, CCEP is currently planning a qualitative study of Dana-Farber’s community-focused patient navigator program, including by inviting patients and care teams to participate in structured focus groups and/or interviews to share their experiences with the program. The outcomes of this study will inform changes to the intervention’s care delivery model as needed.

CCEP holds onsite cancer diagnostic outreach clinics at federally qualified health centers in priority neighborhoods. CCEP also works closely with Dana-Farber’s Community Benefits Office to foster collaborative relationships with community organizations that offer expertise and resources to address root causes of health disparities. CCEP’s patient navigators refer patients directly to these organizations based on the social risk factors their patients report. CCEP received patient travel grants to fund rides to medical appointments after program data showed transportation was the most common barrier to cancer care reported by patients. Patient navigators work with Dana-Farber’s social workers, resource specialists, and financial counselors to maximize assistance to patients, consistent with applicable laws. In addition

to these actions, CCEP partners with the Community Benefits Office on education and training programs delivered within historically marginalized communities to promote cancer prevention and screening.

Consistent with standards of The Joint Commission and Massachusetts Health & Hospital Association,[[8]](#footnote-8) Dana-Farber prioritizes the following initiatives to address disparities: (1) the development of a unique Enterprise-Wide Patient Demographics Tableau Dashboard, to be launched in spring 2024, that will standardize patient demographics reporting across the clinical enterprise, unify operational data with health equity/social justice data (including SDoH and sexual orientation and gender identity data), and allow departments to more easily consider the access, health quality, and equity implications inherent in its decision-making; and (2) the formation in summer 2024 of a committee chaired by Dana-Farber’s Chief Clinical Access & Equity Officer to advise Dana-Farber management and its Board of Trustees on clinical access, health quality, and equity work across Dana-Farber. This committee will support prioritization, integration, and evaluation of access and equity work across the entire organization.

These efforts to address disparities have had promising results. Patients reached through the outreach clinic have a 62% faster path to diagnosis and start of treatment compared with historical averages. Twice as many patients from marginalized populations have enrolled in clinical trials at Dana-Farber than the historical average, thanks in large part to early education about the promise of new treatments. Currently, the CCEP helps more than 600 patients seek diagnosis and treatment, housing, transportation, nutritional assistance, language services, and mental health care.

Dana-Farber was also one of the first hospitals in the country, and the first in the Commonwealth, recognized as meeting The Joint Commission’s new health equity requirements. The organization met all six elements of performance by designating leaders to reduce health disparities for patients, assessing health related social needs, providing resource information and meeting identified patient needs with resources, stratifying quality and safety data by socio-demographic characteristics, developing a written action plan to address at least one health disparity, evaluating the action plan and taking action to achieve those goals, and informing leaders, practitioners, and staff about progress to reduce identified disparities.

* 1. **How will the Proposed Project improve the Applicant’s efforts to address cancer disparities within its Patient Panel over the current setup**.

Dana-Farber has an opportunity to integrate equity throughout the cancer care continuum to enhance coordination and delivery of services rather than trying to retrofit existing infrastructure.

Currently, Dana-Farber partners with community health centers in a co-location model focused on keeping care local and serving historically underserved communities. Dana-Farber plans to expand patient navigation services (which provide resources and guidance to patients throughout the course of their cancer care experience at Dana-Farber) (1) to the entire cancer center, with integration into operations and a focus on underserved communities in alignment with Dana Farber’s CHNA; and (2) in community health centers and community networks to aid in increased access to cancer care. In addition, the proposed collaboration with BIDMC will expand Dana-Farber’s access to patients needing these services. BIDMC has existing affiliations and relationships with community health centers that can expand Dana- Farber’s patient navigation and co-location model into additional communities and neighborhoods.

Integrating these services among a broader community of patients will increase the coordination and delivery of services and better connect patients, including especially historically marginalized patients, to care throughout the cancer care continuum.

Dana-Farber will also identify and pursue opportunities to improve patient financial access and reduce cost barriers for patients, including opportunities for financial assistance policy alignment with BIDMC.

1. **The application states that the ability to consolidate oncologic subspecialized care in the inpatient setting will allow for implementation of a more equitable, integrated, cancer- focused health care delivery infrastructure as described above. In addition, the Proposed Project will also facilitate enhanced coordination of cancer prevention, outreach, and screening and diagnostic services for communities (pg.36).**
	1. **Explain how the consolidation of subspecialized oncologic care in the inpatient setting will allow for implementation of a more equitable health care delivery infrastructure, than the current setup**.

Consolidation of subspecialized oncologic care in the New Cancer Hospital will allow for implementation of a more equitable health care delivery infrastructure by (1) expanding access, including access to cutting- edge treatment and clinical trials; and (2) building a diverse and representative workforce. For information on the ways in which the New Cancer Hospital will increase access, see Dana-Farber’s response to Question 23.a. For information on the ways in which the New Cancer Hospital will involve the development of a diverse and representative workforce, see Dana-Farber’s response to Question 21.

Studies have shown that patients of color are significantly underrepresented in clinical trials.[[9]](#footnote-9) Dana-Farber is working to increase recruitment of patients from historically marginalized communities in clinical trials of new cancer therapies. The New Cancer Hospital will allow for Dana-Farber to proactively grow and expand its clinical trial programs.

* 1. **How will improvements in health equity be measured?**

Dana-Farber intends to measure improvements in health equity through the following metrics: number of cancer screenings conducted with community partners for patients in Dana-Farber’s priority neighborhoods, time to initiation for treatment for patients coming from community partners, and time from when a patient presents at a community partner to the development of a care plan.

**Factor 1c: Continuity and Coordination of Care**

1. **The application states that Total Unique Inpatients is based on utilization data for the Applicant’s current licensed beds, as well as an estimate of utilization for patients admitted to BWH-licensed beds under the care of the Applicant’s medical oncologists.**
	1. **To better understand care delivery under the current affiliation agreement, describe how treatment teams and care coordination are structured, including any differences**

**for a patient in a BWH-licensed bed under the care of one of the Applicant’ oncologists vs. a patient cared for in one of the Applicant’s current licensed beds.**

See Dana-Farber’s response to Questions 1 and 6.a.

* 1. **Describe any changes in care coordination that will result from the Proposed Project, including any anticipated improvements as compared to the current setup.**

At the New Cancer Hospital, all staff will be singularly focused on cancer patients. All care team members will have a sophisticated level of expertise and appreciate the specific challenges of a cancer patient’s journey which will ultimately create efficiencies in care coordination. For more information, see Dana- Farber’s responses to Questions 1 and 6.a.

1. **Explain how the increased coordination and hospital-based services that will result from the Proposed Project will help to address inefficiencies and delays patients are currently facing concerning discharge to post-acute facilities (pg.18).**

As with many other hospitals across the Commonwealth,[[10]](#footnote-10) Dana-Farber is facing post-acute care challenges. Cancer patients discharged to post-acute facilities typically need increased coordination for the continued management of their oncology care. For instance, oncology patients discharged to post- acute sites may require daily radiation or outpatient chemotherapies that require significant coordination between Dana-Farber and the applicable post-acute sites. In the New Cancer Hospital, discharge staff with specialized expertise in discharge planning for oncology patients will work to decrease inefficiencies for patients transferred to post-acute sites. This is supported by Vizient proprietary Clinical Data Base (to which Dana-Farber has access through a subscription), accessed on May 20, 2024, which shows other hospitals in the Alliance of Dedicated Cancer Centers discharge patients more efficiently to skilled nursing facilities than the Applicant.

**Factor 1e: Community Engagement**

1. **The application states that as part of the Applicant’s community engagement activities, the Applicant met with its Adult PFAC as well as held three virtual forums (pgs.40-41).**
	1. **Provide the number of people in attendance at the Adult PFAC meetings as well as each of the virtual forums.**

| **Forum** | **Date** | **Attendees** |
| --- | --- | --- |
| Adult PFAC meeting | Tuesday, October 3, 2023, 5pm | 20 |
| Virtual Patient forum | Monday, October 16, 2023, 6pm | 269 |
| Virtual Patient forum | Tuesday, October 17, 2023, noon | 170 |
| Virtual Patient forum | Wednesday, October 18, 2023, 9am | 135 |

* 1. **What feedback was received during the community engagement process?**

Dana-Farber received overall positive feedback during the community engagement process. Patients have had questions that focused on the following recurring themes: (1) impact of the New Cancer Hospital on the patient experience over the next five years (*e.g.*, impact it will have on care team structure, coordination of care, patient portal access, urgent and emergent care, and screening services); (2) impact on traffic in the Longwood Medical Area; (3) financial impact on patients; (4) expenses associated with the construction project; and (5) patient/family communications related to the New Cancer Hospital.

**Factor 1f: Competition**

1. **The application states in connection with the Proposed Project, the Applicant anticipates that a significant volume of cancer care will shift from higher-priced health sites of care to relatively lower-priced ones. A significant percentage of patients currently receiving medical oncology services at BIDMC or BWH (and some receiving medical oncology services at MGH) will begin receiving such services from the Applicant. Similarly, the Applicant anticipates that a significant percentage of patients currently receiving surgical oncology services at BWH (and some receiving surgical oncology services at MGH) will begin receiving such services from BIDMC (pg.28).**
2. **When the application states that volume of cancer care will shift from higher-priced health sites of care to relatively lower-priced ones, does that include higher-priced health sites other than BWH and MGH?**

Dana-Farber does not anticipate any additional shifts in care from higher-priced health sites.

1. **Why does the Applicant expect that a significant percentage of patients currently receiving medical oncology services at BWH will begin receiving such services from the Applicant at the proposed facility and those receiving surgical oncology services at BWH (and some at MGH) will begin receiving such services from BIDMC?**

Because the patients currently receiving medical oncology care at Dana-Farber and BWH are all under the care of Dana-Farber medical oncologists, Dana-Farber anticipates those patients will continue to be Dana- Farber patients and that, in connection with their collaboration, will receive surgical services from BIDMC, subject to patient choice. See Dana-Farber’s response to Question 6.a.

**Factor 2:**

**Delivery System Transformation**

1. **Explain the existing process for social determinants of health (SDoH) screening, including domains screened for and referral process for positive screens, and any changes to the process for patients that will receive care at the proposed facility.**
	1. **What is the top SDoH need identified through screening?**

Dana-Farber screens patients for health-related social needs (“HRSNs”) in both the ambulatory and inpatient settings. HRSNs are defined as the “immediate daily necessities that arise from inequities caused by the social determinants of health.”[[11]](#footnote-11)

Dana-Farber has screened outpatient patients for HRSNs since April 2023 as part of its New Patient Intake Questionnaire. The most frequently identified need through HRSN screening in the ambulatory setting is food insecurity (5% of responses from May 2023-May 2024), with paying bills, housing insecurity and utility costs being the next most frequently reported (each 4% of responders over the same period).

Dana-Farber has screened inpatient patients since January 2024. Analytical reporting is still under development. As such, Dana-Farber is not able to report specifically on the top SDoH identified in screenings. The results of completed questionnaires are captured in Dana-Farber’s electronic health record system, which allows members of a patient’s care team to respond to identified HSRNs by providing information to patients about community resources and support services available.

**Factor 5: Relative Merit**

1. **The Application states, it has engaged in a multi-year strategic planning process to assess how best to expand access, address the unmet need of its Patient Panel, ensure continuity of care, and further its clinical and academic mission…as part of that process, the Applicant evaluated a wide variety of options (pg.49).**
	1. **In order to better understand the alternative options considered, provide a description of the quality, efficiency, capital expense, and operating costs of the options considered to support their dismissal**.

As part of a multi-year planning process, Dana-Farber engaged in confidential discussions with BWH regarding their existing collaborative relationship, including confidential alternatives to maintaining the status quo. Those discussion did not yield viable alternatives.

Dana-Farber’s other available options were (1) pursue the New Cancer Hospital with a new clinical partner, BIDMC; or (2) establish a full-service standalone cancer hospital. The approximately $3.4 billion estimated capital cost for a full-service, stand-alone cancer hospital was cost-prohibitive (2-3 times the capital of the New Cancer Hospital). From an operating expense perspective, this scenario would require Dana Farber to add resources for surgery, radiology, pathology, and radiation oncology, which would add an estimated $340 million in annual operating costs.

Further, from an efficiency perspective, independently building a full-service cancer hospital without a clinical affiliation would result in duplication of resources in the Longwood Medical Area, requiring Dana- Farber to recruit its own surgeons and specialists (*e.g.*, cardiologists, dermatologists, pulmonologists, psychiatrists) for the oncology-related needs of the New Cancer Hospital patients. These surgeons and other specialists are better supported when part of a larger department.

Partnering with BIDMC and HMFP provides Dana-Farber patients with access to best-in-class surgeons and non-oncology specialists essential to the care of its patients at all points both during treatment and in survival.

1. **The application states through a clinical collaboration with BIDMC, the Applicant can better manage continuity of care with a consistent clinical partner for surgical oncology services and other cancer-adjacent services. Care continuity is more challenging under the Alternative Option, where the Applicant would have no consistent clinical partner with which to coordinate care. As such, the Proposed Project is the superior option on quality (pg.49)**
	1. **Explain why BIDMC is the optimal clinical partner.**

BIDMC is the optimal clinical partner because of, among many other advantages: (1) its close physical proximity to Dana-Farber and the New Cancer Hospital, allowing physical connections to its facilities and services; (2) its affiliation with Harvard Medical School and word-class clinicians; and (3) its existing relationships and affiliations (including with community health centers), which may be leveraged to expand equitable access to the care Dana-Farber provides.

**Tables**

1. **To better understand Patient Panel need for the Applicant’s services, please complete the missing information in the Tables listed below and indicate FY or CY, and when appropriate, whether the data include inpatients admitted to BWH-licensed beds under the care of the Applicant’s medical oncologists**.

**Total Unique Patients, Demographics, and Geography**

**Inclusive of all of the Applicant’s inpatients and outpatients at all sites**

Responses to DoN Questions, pg. 2

|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
| --- | --- | --- | --- | --- | --- | --- |
| **Total Unique Patients** | 73,074 | 76,789 | 79,358 | 90,754 | 96,940 | 102,921 |
| **Gender^** |  |  |  |  |  |  |
| Female | 45,860 | 47,840 | 49,370 | 56,720 | 60,480 | 64,000 |
| Male | 27,210 | 28,960 | 29,980 | 34,030 | 36,450 | 38,920 |
| Unknown & X | 0 | 0 | 0 | 0 | 10 | 0 |
| **Race & Ethnicity** |  |  |  |  |  |  |
| Asian Non-Hispanic or Latino | 1,980 | 2,175 | 2,121 | 2,510 | 2,883 | 3,199 |
| Black or African American | 2,714 | 2,870 | 2,885 | 3,375 | 3,799 | 3,981 |
| Hispanic or Latino | 2,597 | 2,790 | 3,950 | 4,919 | 5,563 | 6,190 |
| Multiracial, non-Hispanic | 531 | 572 | 661 | 861 | 1,197 | 1,417 |
| Null & Other | 11,243 | 10,495 | 9,463 | 10,057 | 10,322 | 10,508 |
| White or Caucasian Non-Hispanic or Latino | 54,009 | 57,887 | 60,278 | 69,032 | 73,176 | 77,626 |
| **Age** |  |  |  |  |  |  |
| 0-18 | 73 | 78 | 69 | 75 | 68 | 82 |
| 19-35 | 4,399 | 4,675 | 4,753 | 5,748 | 6,192 | 6,669 |
| 36-55 | 18,965 | 19,422 | 19,445 | 21,782 | 23,222 | 24,208 |
| 56-75 | 39,887 | 41,963 | 43,205 | 48,813 | 51,780 | 54,463 |
| 75+ | 10,936 | 12,031 | 13,162 | 15,763 | 17,328 | 19,450 |
| **Geography** |  |  |  |  |  |  |
| Massachusetts | 51,789 | 54,464 | 57,465 | 67,056 | 73,363 | 77,996 |
| New York | 2,389 | 2,444 | 2,250 | 2,488 | 2,272 | 2,308 |
| Outside MA (New England) | 20,352 | 21,255 | 21,246 | 23,067 | 22,735 | 23,914 |
| Outside MA (US) | 18,533 | 19,379 | 18,492 | 19,952 | 19,667 | 20,737 |
| Outside MA (International) | 1,065 | 1,143 | 676 | 678 | 947 | 1,056 |

**^**Data in subsection rounded to the nearest 10 to preserve patient anonymity.

**Total Unique Inpatient Patients, Demographics, and Geography**

**Inpatients admitted to beds on the Applicant’s license, as well as inpatients admitted to BWH-licensed beds under the care of the Applicant’s medical oncologists.**

Application Narrative, pg. 9

|   | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
| --- | --- | --- | --- | --- | --- | --- |
| **Total Unique Inpatients** | 4,524 | 4,819 | 4,521 | 4,784 | 4,887 | 5,004 |
| **Gender^** |  |  |  |  |  |  |
| Female | 2,220 | 2,370 | 2,260 | 2,370 | 2,430 | 2,500 |
| Male | 2,300 | 2,450 | 2,260 | 2,410 | 2,460 | 2,510 |
| Unknown & X | 0 | 0 | 0 | 0 | 0 | 0 |
| **Race & Ethnicity** |  |  |  |  |  |  |
| Asian Non-Hispanic or Latino | 159 | 169 | 177 | 175 | 184 | 203 |
| Black or African American | 261 | 265 | 272 | 298 | 319 | 313 |
| Hispanic or Latino | 211 | 219 | 185 | 267 | 240 | 278 |
| Multiracial, non-Hispanic | 29 | 33 | 31 | 43 | 62 | 68 |
| Null & Other | 232 | 191 | 192 | 158 | 220 | 276 |
| White or Caucasian Non-Hispanic orLatino | 3,632 | 3,942 | 3,664 | 3,843 | 3,862 | 3,866 |

|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
| --- | --- | --- | --- | --- | --- | --- |
| **Age^** |  |  |  |  |  |  |
| 0-18 | 0 | 0 | 0 | 0 | 0 | 10 |
| 19-35 | 180 | 190 | 180 | 190 | 210 | 220 |
| 36-55 | 850 | 850 | 780 | 840 | 860 | 870 |
| 56-75 | 2,500 | 2,750 | 2,590 | 2,680 | 2,850 | 2,860 |
| 75+ | 1,000 | 1,030 | 960 | 1,070 | 970 | 1,060 |
| **Geography** |  |  |  |  |  |  |
| Massachusetts | 3,233 | 3,342 | 3,280 | 3,563 | 3,578 | 3,692 |
| New York | 136 | 154 | 121 | 115 | 110 | 114 |
| Outside MA (New England) | 832 | 960 | 836 | 820 | 937 | 909 |
| Outside MA (US) | 1,171 | 1,318 | 1,124 | 1,127 | 1,213 | 1,187 |
| Outside MA (International) | 100 | 129 | 87 | 90 | 97 | 113 |

**^**Data in subsection rounded to the nearest 10 to preserve patient anonymity.

**Total Unique Outpatient Patients, Demographics, and Geography, Longwood Medical Campus Applicant’s Outpatients**

Application Narrative, pg. 10

|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
| --- | --- | --- | --- | --- | --- | --- |
| **Total (unique outpatients)** | 58,573 | 61,842 | 59,745 | 65,605 | 69,286 | 73,875 |
| **Gender^** |  |  |  |  |  |  |
| Female | 36,590 | 38,330 | 36,780 | 40,670 | 42,900 | 45,800 |
| Male | 21,990 | 23,510 | 22,960 | 24,940 | 26,380 | 28,070 |
| Unknown & X | 0 | 0 | 0 | 0 | 0 | 0 |
| **Race & Ethnicity** |  |  |  |  |  |  |
| Asian Non-Hispanic or Latino | 1,773 | 1,939 | 1,805 | 2,056 | 2,372 | 2,639 |
| Black or African American | 2,397 | 2,549 | 2,457 | 2,795 | 3,070 | 3,169 |
| Hispanic or Latino | 2,386 | 2,558 | 2,406 | 2,684 | 3,060 | 3,483 |
| Multiracial, non-Hispanic | 441 | 479 | 519 | 674 | 950 | 1,119 |
| Null & Other | 8,227 | 7,594 | 6,419 | 6,622 | 6,626 | 6,764 |
| White or Caucasian Non-Hispanic orLatino | 43,349 | 46,723 | 46,139 | 50,774 | 53,208 | 56,701 |

|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
| --- | --- | --- | --- | --- | --- | --- |
| **Age** |  |  |  |  |  |  |
| 0-18 | 57 | 61 | 52 | 53 | 50 | 53 |
| 19-35 | 3,874 | 4,104 | 3,884 | 4,421 | 4,645 | 4,896 |
| 36-55 | 15,931 | 16,366 | 15,347 | 16,569 | 17,491 | 18,258 |
| 56-75 | 32,233 | 34,081 | 33,126 | 36,111 | 37,913 | 40,107 |
| 75+ | 7,392 | 8,286 | 8,300 | 9,474 | 10,325 | 11,876 |
| **Geography** |  |  |  |  |  |  |
| Massachusetts | 39,235 | 41,562 | 40,698 | 45,147 | 48,922 | 52,261 |
| New York | 2,355 | 2,367 | 2,237 | 2,462 | 2,244 | 2,289 |
| Outside MA (New England) | 11,765 | 12,421 | 11,847 | 12,706 | 13,246 | 14,077 |
| Outside MA (US) | 18,454 | 19,298 | 18,433 | 19,872 | 19,558 | 20,646 |
| Outside MA (International) | 1,051 | 1,131 | 674 | 668 | 937 | 1,042 |

\*International Patient definition from STRATA, based on unique patients with at least one international encounter

**^**Data in subsection rounded to the nearest 10 to preserve patient anonymity.

**Discharges**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
|  **Discharges**  | 1,303  | 1,566 | 1,420 | 1,436 | 1,297 | 1,300 |

\*Table includes actual discharge numbers for FY18 through FY23. The calculation described in the Application used preliminary discharges for FY21 and FY22.

**Case Mix Index (CMI) for medical oncology patients**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
| **CMI** | 1.95 | 2.04 | - | 2.02 | 2.40 | - |

\*Includes CHIA data for Dana-Farber, BWH and BIDMC. Dana-Farber has omitted FY20 due to COVID-19, and FY23 is not yet available through CHIA.

**Average Length of Stay (ALOS) for medical oncology patients**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
|  **ALOS (days)**  | 7.54  | 7.61 | - | 7.94 | 8.60 | - |

\*Includes CHIA data for Dana-Farber, BWH and BIDMC. Dana-Farber has omitted FY20 due to COVID-19, and FY23 is not yet available through CHIA.

**Percent of Applicant’s inpatients admitted through BWH’s ED**

Application Narrative, pg. 6

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
| **% of Admissions** | 66.1% | 66.8% | - | 67.8% | 68.2% | - |

\*Includes CHIA data for Dana-Farber and BWH. Dana-Farber has omitted FY20 due to COVID-19, and FY23 is not yet available through CHIA. The CHIA dataset does not capture this metric directly.

Percentage of admissions from BWH’s ED is approximated by assuming that all admissions other than “direct transfers from another hospital” and “direct admissions” (including admissions from post-acute facilities, direct from clinic, or from other healthcare or government agencies) are from the BWH ED.

**Average Length of Stay (ALOS) in the BWH ED**

Application Narrative, pg. 6

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
|  **ALOS (hours)**  | 6.9  | 7.3 | 7.5 | 8.7 | 8.6 | - |

\*Includes CHIA data from MHDC for all BWH ED patients. FY23 data are not yet available. The dataset calculates Length of Stay “by subtracting the arrival date and time from the departure date and time and is reported in hours.”

**Inpatient Imaging Equipment Utilization**

Application Narrative pg. 13

| **Metric** | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
| --- | --- | --- | --- | --- | --- | --- |
| MRI |  |  |  |  |  |  |
| Inpatient Scans | 313 | 267 | 387 | 538 | 497 | 504 |
| Percentage of Inpatients Requiring Scan | 24% | 21% | 28% | 38% | 39% | 39% |
| CT |  |  |  |  |  |  |
| Inpatient Scans | 699 | 684 | 714 | 917 | 882 | 908 |
| Percentage of Inpatients Requiring Scan | 54% | 44% | 51% | 65% | 68% | 71% |
| PET-CT |  |  |  |  |  |  |
| Inpatient Scans | 32 | 38 | 38 | 68 | 56 | 50 |
| Percentage of Inpatients Requiring Scan | 2% | 2% | 3% | 5% | 4% | 4% |

**Outpatient Imaging Equipment Utilization Longwood Medical Campus**

Application Narrative, pg. 13

| **Scans** | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
| --- | --- | --- | --- | --- | --- | --- |
| MRI | 6,830 | 8,120 | 7,845 | 11,896 | 14,266 | 14,948 |
| CT | 32,228 | 33,611 | 31,505 | 38,487 | 43,593 | 44,467 |
| PET-CT | 5,465 | 5,825 | 5,610 | 6,214 | 6,828 | 8,646 |

**LINAC Therapy Utilization**

Application Narrative, pg. 14

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Metric** | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
| Total Radiation Oncology Treatments | 20,275 | 21,067 | 17,723 | 20,966 | 21,059 | 18,288 |

\*This table includes the total number of radia�on oncology treatments for FY18 through FY23. The Applica�on used preliminary data that has been updated and ﬁnalized since its submission. Dana-Farber has updated its LINAC need analysis (Tables A-1, A-2, A-3 and 18 from the Applica�on) below using ﬁnalized Dana-Farber data for FY23.

**Table A-1**

**Calculation of SSH to Longwood Medical Campus Conversion Factor**

| **Disease Center** | **Total Outpatients (SSH and Longwood Medical****Campus)** | **Share of Patients Receiving LINAC Therapy - SSH** | **Share of Patients Receiving LINAC Therapy – Longwood Medical Campus** | **Conversion Factor** |
| --- | --- | --- | --- | --- |
| Breast Oncology Center | 17,719 | 14% | 3% | 4.67x |
| Head and Neck Oncology | 3,141 | 26% | 8% | 3.25x |
| Thoracic Oncology Program | 3,903 | 21% | 4% | 5.25x |
| **Weighted Average****Conversion Factor** | -- | -- | -- | 4.58x |

**Table A-2**

**Estimate of Longwood Medical Campus LINAC Therapy Patients**

| **Disease Center** | **Percent of Patients Receiving LINAC Therapy at SSH** | **Estimated Percent Patients at Longwood Medical Campus Receiving****LINAC Therapy** | **Total Outpatients on the Longwood Medical Campus** | **Estimated LINAC Therapy Patients -- Longwood Medical Campus** |
| --- | --- | --- | --- | --- |
| Breast Oncology Center | 14% | 4% | 14,693 | 588 |
| Cutaneous OncologyCenter | 23% | 6% | 2,156 | 129 |
| Gastrointestinal Oncology | 10% | 3% | 6,881 | 206 |
| Genitourinary Oncology | 16% | 4% | 7,100 | 284 |
| Gynecology Oncology | 16% | 4% | 4,059 | 162 |
| Head and Neck Oncology | 26% | 6% | 2,964 | 178 |
| HematologicMalignancies | 5% | 2% | 16,027 | 321 |
| Hematology Service | 1% | 1% | 2,433 | 24 |
| Melanoma Center | 12% | 3% | 2,382 | 71 |
| Neuro-Oncology Center | 32% | 7% | 1,957 | 137 |
| Sarcoma and BoneOncology | 20% | 5% | 2,017 | 101 |
| Thoracic OncologyProgram | 21% | 5% | 3,478 | 174 |
| Other | 8% | 2% | 7,734 | 155 |
| **Total** | -- | -- | 73,881 | 2,530 |

**Table A-3**

**LINAC Treatments (Applicant)**

| **Metric** | **2023** |
| --- | --- |
| Total Patients with LINAC Treatment | 2,530 |
| Sessions per Unique Patient | 20.3 |
| **Total LINAC Sessions** | 51,359 |

**Table 18**

**Projected Demand for LINAC Sessions (w/ Proposed Project)**

| **Metric** | **Total** |
| --- | --- |
| ***Applicant*** |  |
| Projected 2032 LINAC Sessions | 51,460 |
| ***BIDMC*** |  |
| Projected 2032 LINAC Sessions | 18,080 |
| **Total Projected 2032 LINAC Sessions** | 69,540 |
| Throughput | 7,000 |
| **Total LINAC Need** | **10** |

**ALOS for patients admitted to the Applicant’s 30-bed inpatient hospital**

Application Narrative, pg. 16

|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
| --- | --- | --- | --- | --- | --- | --- |
| **Dana-Farber** |  |  |  |  |  |  |
| CAR T-Cell ALOS (Days) | - | - | - | - | 15.2 | - |
| Autologous Stem CellTransplantation ALOS (Days) | 18.8 | 19.1 | 18.9 | 19.1 | 19.8 | - |
| Allogeneic Stem CellTransplantation ALOS (Days) | 21.5 | 18.9 | 24.6 | 26.5 | 25.1 | - |
| **BIDMC** |  |  |  |  |  |  |
| CAR T-Cell (Days) | - | - | - | - | 26.2 | - |
| Autologous Stem CellTransplantation ALOS (Days) | 20.8 | 22.2 | 34.9 | 31.0 | 26.3 | - |
| Allogeneic Stem Cell Transplantation ALOS (Days)  | 41.0 | 37.4 | 39.1 | 34.3 | 36.8 | - |

\*Includes CHIA data for Dana-Farber, BWH and BIDMC. Data is supplied for both Dana-Farber and BWH because patients are treated in the first bed available to them, regardless of licensee. FY23 is not yet available through CHIA. No Diagnosis Related Group was available for CAR T-Cell therapy before 2022 and, as such, prior year data are not available.

**Average Daily Census (ADC) of oncology beds the Applicant manages in partnership with BWH**

Application Narrative, pg. 17

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
|  **ADC**  | 250.25  | 262.02 | - | 253.09 | 272.89 | - |

\*Includes CHIA data for Dana-Farber, BWH and BIDMC. Dana-Farber has omitted FY20 due to COVID-19, and FY23 is not yet available through CHIA.

**Patient Days**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **FY18** | **FY19** | **FY20** | **FY21** | **FY22** | **FY23** |
|  **Patient Days**  | 91,342  | 95,636 | - | 92,378 | 99,605 | - |

\*Includes CHIA data for Dana-Farber, BWH and BIDMC. Dana-Farber has omitted FY20 due to COVID-19, and FY23 is not yet available through CHIA.

In addition to responses to the above questions, Dana-Farber attaches an overview of its health equity initiatives as Exhibit B.

**Exhibit A**

**Massachusetts**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Acushnet | Cotuit | Holyoke | North Eastham | South Walpole | Windsor |
| Adams | Dalton | Hopedale | North Easton | South Wellfleet | Woods Hole |
| Agawam | Deerfield | Housatonic | North Falmouth | Southampton | Worcester |
| Amherst | Dennis | Hyannis Port | North Grafton | Southborough | Yarmouth Port |
| Ashburnham | Dennis Port | Indian Orchard | North Reading | Southbridge |  |
| Ashby | Dighton | Jefferson | North Scituate | Southfield |  |
| Assonet | Douglas | Kingston | North Truro | Southwick |  |
| Attleboro Falls | Dover | Lancaster | Northampton | Spencer |  |
| Auburn | Dracut | Lanesboro | Northbridge | Springfield |  |
| Auburndale | Dudley | Lawrence | Oak Bluffs | Stockbridge |  |
| Avon | Duxbury | Lee | Orange | Stow |  |
| Ayer | East Brookfield | Leicester | Orleans | Sturbridge |  |
| Baldwinville | East Dennis | Lenox | Osterville | Sutton |  |
| Barnstable | East Freetown | Lincoln | Oxford | Templeton |  |
| Barre | East Sandwich | Littleton | Palmer | Topsfield |  |
| Becket | East Taunton | Longmeadow | Paxton | Tyngsboro |  |
| Belchertown | East Walpole | Lowell | Peabody | Upton |  |
| Berkley | East Wareham | Ludlow | Pepperell | Uxbridge |  |
| Berlin | Eastham | Lunenburg | Plainville | Village Of NagogWoods |  |
| Bernardston | Edgartown | Lynn | Plymouth | Vineyard Haven |  |
| Blackstone | Erving | Manchester | Plympton | Waltham |  |
| Bolton | Fall River | Mattapoisett | Pocasset | Ware |  |
| Boston | Feeding Hills | Medfield | Princeton | Warren |  |
| Boxborough | Florence | Medford | Provincetown | Webster |  |
| Boxford | Forestdale | Merrimac | Richmond | Wellfleet |  |
| Boylston | Grafton | Millbury | Rochester | Wenham |  |
| Brewster | Granby | Millers Falls | Rockport | West Barnstable |  |
| Brimfield | Great Barrington | Millis | Rowley | West Boylston |  |
| Brookfield | Greenfield | Millville | Royalston | West Brookfield |  |
| Bryantville | Groveland | Monson | Rutland | West Dennis |  |
| Buzzards Bay | Hadley | Montague | Sagamore | West Falmouth |  |
| Byfield | Halifax | Monterey | Sagamore Beach | West Newbury |  |
| Cambridge | Hampden | Monument Beach | Salisbury | West Springfield |  |
| Carlisle | Hanscom Air ForceBase | Nahant | Seekonk | West Stockbridge |  |
| Cataumet | Hanson | Nantucket | Shelburne Falls | West Tisbury |  |
| Charlton | Harvard | New Bedford | Shirley | West Townsend |  |
| Charlton City | Harwich | Newbury | Somerset | West Wareham |  |
| Cherry Valley | Harwich Port | Newburyport | Somerville | West Yarmouth |  |
| Cheshire | Hatfield | Newton | South Chatham | Westminster |  |
| Chicopee | Haverhill | North Adams | South Deerfield | Westminster |  |
| Chilmark | Hinsdale | North Attleboro | South Hadley | Whitinsville |  |
| Clinton | Holden | North Billerica | South Hamilton | Williamstown |  |
| Conway | Holland | North Dighton | South Orleans | Winchendon |  |

|  |
| --- |
| **Connecticut** |
| Baltic | Plainfield |
| Bantam | Plainville |
| Berlin | Preston |
| Bloomfield | Putnam |
| Bozrah | Redding |
| Bridgeport | Rocky Hill |
| Bristol | Somers |
| Brookfield | South Glastonbury |
| Colchester | South Windham |
| Cromwell | Southington |
| Darien | Stafford Springs |
| Dayville | Stamford |
| East Haven | Stamford |
| Eastford | Sterling |
| Ellington | Stonington |
| Enfield | Storrs Mansfield |
| Essex | Suffield |
| Farmington | Terryville |
| Glastonbury | Thompson |
| Granby | Tolland |
| Groton | Vernon Rockville |
| Guilford | Waterbury |
| Hampton | Wauregan |
| Hebron | West Hartford |
| Jewett City | West Haven |
| Manchester | Westbrook |
| Manchester | Westport |
| Mansfield Center | Wethersfield |
| Middletown | Willimantic |
| Milford | Wilton |
| Moosup | Windsor |
| New Britain | Windsor Locks |
| New Hartford | Winsted |
| New Haven | Wolcott |
| New London | Woodstock |
| Newington | Woodstock Valley |
| Niantic |  |
| NorthGrosvenordale |  |
| North Haven |  |
| North Stonington |  |
| Norwich |  |
| Old Lyme |  |
| Old Saybrook |  |
|  |  |

|  |  |  |
| --- | --- | --- |
|  | **Maine** |  |
| Acton | Harrison | Sangerville |
| Alfred | Houlton | Scarborough |
| Andover | Jackman | Skowhegan |
| Auburn | Jonesboro | Smithfield |
| Augusta | Kennebunk | Solon |
| Bangor | Kingfield | South China |
| Bar Harbor | Kittery | South Portland |
| Belgrade Lakes | Kittery Point | Springfield |
| Berwick | Lebanon | Springvale |
| Biddeford | Levant | Standish |
| Blue Hill | Litchfield | Stockton Springs |
| Brewer | Machiasport | Stonington |
| Bridgton | Madison | Strong |
| Bristol | Manchester | Topsham |
| Brunswick | Mars Hill | Union |
| Calais | Mechanic Falls | Unity |
| Cambridge | Millinocket | Waldoboro |
| Cape Neddick | Milo | Washburn |
| Cherryfield | Monmouth | Waterford |
| Cushing | Moody | Waterville |
| Deer Isle | Morrill | Wells |
| East Baldwin | Newport | Westbrook |
| East Machias | Norridgewock | Whitefield |
| East Waterboro | North Berwick | Windham |
| Eastport | North Yarmouth | Woolwich |
| Eddington | Northeast Harbor | Yarmouth |
| Eliot | Oakland | York |
| Ellsworth | Ogunquit |  |
| Fairfield | Old Orchard Beach |  |
| Falmouth | Old Town |  |
| Farmingdale | Oquossoc |  |
| Farmington | Orono |  |
| Freeport | Pembroke |  |
| Friendship | Plymouth |  |
| Fryeburg | Portland |  |
| Gardiner | Presque Isle |  |
| Garland | Richmond |  |
| Gorham | Rockland |  |
| Gouldsboro | Sabattus |  |
| Gray | Saco |  |
| Hampden | Saint Albans |  |
| Harpswell | Saint Francis |  |
| Harrington | Sanford |  |

|  |  |  |
| --- | --- | --- |
|  | **New Hampshire** |  |
| Alstead | Harrisville | Salisbury |
| Alton Bay | Hill | Sanbornton |
| Amherst | Hillsborough | Sanbornville |
| Atkinson | Hollis | Sandown |
| Auburn | Hooksett | Seabrook |
| Barnstead | Jaffrey | Somersworth |
| Belmont | Keene | Stoddard |
| Berlin | Kingston | Strafford |
| Bow | Laconia | Stratham |
| Bristol | Lancaster | Suncook |
| Brookline | Lee | Swanzey |
| Canterbury | Litchfield | Tilton |
| Center Tuftonboro | Littleton | Union |
| Chester | Loudon | Weare |
| Chichester | Manchester | Wentworth |
| Colebrook | Meredith | West Chesterfield |
| Concord | Merrimack | Westmoreland |
| Contoocook | Milford | Wilton |
| Cornish | Monroe | Winchester |
| Danville | Moultonborough |  |
| Dover | Nashua |  |
| Dublin | New Boston |  |
| Durham | New Castle |  |
| East Hampstead | New Hampton |  |
| East Kingston | New Ipswich |  |
| East Wakefield | New London |  |
| Epping | Newbury |  |
| Epsom | Newmarket |  |
| Exeter | Newton |  |
| Farmington | North Hampton |  |
| Fitzwilliam | Nottingham |  |
| Franconia | Orford |  |
| Fremont | Pelham |  |
| Gilford | Peterborough |  |
| Gilmanton IronWorks | Plaistow |  |
| Gilsum | Plymouth |  |
| Glen | Raymond |  |
| Goffstown | Rindge |  |
| Grantham | Rochester |  |
| Greenland | Rollinsford |  |
| Greenville | Rye |  |
| Hampton | Rye Beach |  |
| Hampton Falls | Salem |  |
|  |  |  |

|  |  |
| --- | --- |
| **New York** |  |
| Albany | North Creek |
| Amsterdam | Palatine Bridge |
| Argyle | Piercefield |
| Ballston Lake | Plattsburgh |
| Bolton Landing | Poestenkill |
| Camillus | Pulaski |
| Canaan | Putnam Station |
| Canandaigua | Ravena |
| Castleton OnHudson | Red Hook |
| Cazenovia | Redwood |
| Chatham | Rensselaer |
| Chaumont | Richfield Springs |
| Cincinnatus | Saratoga Springs |
| Clinton | Schenectady |
| Cohoes | Schuylerville |
| Congers | Selkirk |
| Corinth | Slingerlands |
| Delmar | South Glens Falls |
| Duanesburg | Taberg |
| East Amherst | Ticonderoga |
| East Chatham | Troy |
| East Greenbush | Tupper Lake |
| East Syracuse | Utica |
| Glen Head | Valatie |
| Glenmont | Voorheesville |
| Glens Falls | Walton |
| Great Neck | Waterford |
| Greenfield Center | Watervliet |
| Greenville | Watkins Glen |
| Guilderland | West Sand Lake |
| Hammondsport |  |
| Honeoye |  |
| Hoosick Falls |  |
| Hudson |  |
| Johnson City |  |
| Johnstown |  |
| Lake Luzerne |  |
| Lockport |  |
| Macedon |  |
| Millbrook |  |
| Mount Sinai |  |
| Mount Tremper |  |
| New York City |  |

|  |
| --- |
| **Rhode Island** |
| Barrington |
| Bristol |
| Charlestown |
| Chepachet |
| Coventry |
| Cranston |
| East Greenwich |
| East Providence |
| Exeter |
| Greenville |
| Harmony |
| Harrisville |
| Hope |
| Hope Valley |
| Jamestown |
| Johnston |
| Narragansett |
| Newport |
| North Smithfield |
| Pascoag |
| Pawtucket |
| Pawtucket |
| Providence |
| Riverside |
| Rumford |
| Saunderstown |
| Smithfield |
| Tiverton |
| Wakefield |
| Warren |
| Warwick |
| West Greenwich |
| West Warwick |
| Wood River Junction |
| Wyoming |
|  **Vermont**  |
| Barre | West Dover |
| Bellows Falls | Westminster |
| Belmont | White River Junction |
| Bennington | Wolcott |
| Brattleboro | Woodstock |
| Brattleboro | Worcester |
| Bridport |  |
| Bristol |  |
| Burlington |  |
| Burlington |  |
| Charlotte |  |
| Chester |  |
| Colchester |  |
| Derby |  |
| East Calais |  |
| East Thetford |  |
| Essex Junction |  |
| Grand Isle |  |
| Highgate Center |  |
| Hinesburg |  |
| Killington |  |
| Manchester |  |
| Manchester Center |
| Middlebury |  |
| Milton |  |
| Montpelier |  |
| Morrisville |  |
| Newport |  |
| North Bennington |  |
| North Hero |  |
| Perkinsville |  |
| Poultney |  |
| Proctor |  |
| Richmond |  |
| Rutland |  |
| Saint Albans |  |
| Shaftsbury |  |
| Shelburne |  |
| Stamford |  |
| Stowe |  |
| Vergennes |  |
| Waitsfield |  |
| Wallingford |  |

**Exhibit B**

**Dana-Farber: Health Equity Initiatives**

*To support enhancing patient access and improving cancer care outcomes, Dana-Farber is committed to the advancement of greater health equity across the cancer care continuum. Below is an overview of five key access and equity initiatives that exemplify the impactful work we are currently doing and planning to do in connection with the new Dana-Farber cancer hospital.*

1. – **Screening and Education –** In alignment with City of Boston public health priorities, Dana-Farber will **launch a new broad-based community screening and education campaign to increase awareness and access, with a focus on community practices and community health centers.**
	* Initiative will leverage community-based programs currently in development with partners (i.e., MassLeague, Boston Public Health Commission, etc.) to increase access to screening, reduce the age mortality gap and address the ongoing cancer disparities gap, especially in specific cancer types (e.g. colorectal).
	* A multi-level approach will increase overall access to health care by harnessing community education, screening access, and assessment of impacts. Through these efforts we will more efficiently and effectively move patients along the cancer care continuum from the community to screening and then through diagnosis.
	* Dana-Farber will leverage existing Massachusetts incidence and mortality data (i.e., Health of Boston Cancer Report1, Dana-Farber Community Health Needs Assessment (CHNA)2, etc.) as well as the new Dana-Farber Enterprise-Wide Patient Demographics Tableau Dashboard3 to determine appropriate process/outcome measures and to assess our impact on reducing screening barriers/gaps and improving patient outcomes.
2. **– Workforce and Pipeline – Expand and create workforce development/pipeline programs for Dana- Farber to increase access to sustainable jobs and careers for local community members.**
	* Dana-Farber will continue to enhance workforce hiring processes, create multi-level professional pathways to careers in healthcare and develop new programs for historically marginalized communities in collaboration with community partners (i.e., Roxbury Community College, Urban League, Boston Public Schools, YMCA Training Inc, JVS, etc.). These initiatives will support a diverse workforce and culturally competent providers in the new hospital, help address economic mobility and existing wage disparities, and mitigate any need to recruit staff away from community hospitals.
	* New initiatives over the next few years will include:
		+ Development of a Workforce Development Strategy to leverage untapped talent sources in Boston and surrounding neighborhoods
		+ New pipeline programs to fill new and evolving healthcare roles (i.e., biotech, clinical support)
		+ Programs to support ESL, citizenship, job skills, and college readiness
		+ Expansion of scholarship/resource and mentorship/sponsorship programs
	* Dana-Farber will continue to track demographics of participants for these workforce development programs as well as gather feedback from participants to better understand overall program success.
3. **– Patent Navigation – Expand community-focused patient navigation services** (1) **to entire cancer center, including regional sites,** with intentional integration of access & equity into clinical operations of the new cancer hospital and a focus on patients from priority neighborhoods (in alignment with Dana Farber’s CHNA2); and (2) **in community health centers and community networks** to aid in increased access to cancer care.
	* Dana-Farber will replicate and expand existing co-location model within a community health center4 to incorporate both cancer diagnostic services and patient navigation for expedited evaluation and resolution of potential cancer diagnoses. Integrating such services enhances coordination and delivery of services and extends navigation from prevention through survivorship/end-of-life care and better connects patients to care throughout the cancer care continuum5,7.
	* Expansion of patient navigation and extension of the patient navigation professional pathway acts as a cost-containment strategy. Data show improved navigation decreases unintended hospitalizations and associated costs6.
4. **– Patient Equity Dashboard – Implement Dana-Farber Enterprise-Wide Patient Demographics Tableau Dashboard3 to standardize reporting of patient-level equity data** and make information more accessible for integration into programs and program measurement.
	* Dana-Farber will launch an innovative health equity patient dashboard expected in Spring 2024, with planned future iterations to incorporate additional patient populations and data functionalities. This work is being done in conjunction with Dana-Farber’s Quality and Patient Safety department to better advise on clinical access, health quality, and equity work across Dana-Farber.
	* Very few cancer centers have been able to develop and launch a similar dashboard focused on cancer. The Dana-Farber Enterprise-Wide Patient Demographics Dashboard is unique in that it addresses a broad need to unify operational data with health equity/social justice data, including SDoH and SOGI data, in support of targeted interventions and program improvements.
	* Dashboard includes clinical data for patients with an encounter at any Dana-Farber location (outpatient data only).
5. **– Patient Financial Assistance —** Dana-Farber will identify and pursue opportunities to improve patient financial access and reduce cost barriers for patients.
	* Using publicly available information, Dana-Farber will initiate a process to review and compare existing financial assistance policies with Beth Israel Deaconess Medical Center and identify opportunities for alignment with the goal of reducing cost barriers for patients.
	* Currently developing an initiative to promote access to screening mammography for historically marginalized communities by reducing cost barriers for such screenings on Dana-Farber’s Mammography Van and at Dana-Farber’s Mammography Suite at Whittier Street Health Center, consistent with regulatory guidance.

Supporting Data Sources and Literature

*1Health of Boston 2023 Cancer Report (*[*Link*](https://www.boston.gov/sites/default/files/file/2023/05/HOB_Cancer_2023_FINAL_May11.pdf)*)*

“This report highlights trends in cancer screening, incidence, and mortality for Boston residents. Data sources include the US Census, MA death and cancer registries, and surveys that describe individual health conditions and behaviors of Boston residents. This data reflects much of what had been generated for the 2022 Dana-Farber Community Health Needs Assessment (CHNA), a project providing deeper understanding of cancer-related health issues facing Boston residents including cancer risks and cancer experiences.”

As noted in the 2023 Health of Boston reports, persistent health inequities in Boston were pronounced in premature mortality (death before the age of 65 years). From 2017-2021, Black residents in Boston experienced the greatest increase and specific neighborhoods with higher concentrations of Black and Latinx residents and lower median income (Dorchester, Roxbury) experienced higher premature mortality.

From 2015 to 2021, the cancer mortality rate decreased overall (specifically for breast cancer, colorectal cancer, liver cancer, and lung cancer), but the cancer mortality rate was highest among Black males and females.

Addressing these gaps and disparities has been identified as a City of Boston priority by Mayor Wu and Public Health Commissioner Dr. Ojikutu.

*2Dana-Farber Community Health Needs Assessment (*[*Link*](https://www.dana-farber.org/community-health/community-health-needs-assessment)*)*

In addition to satisfying the CHNA report requirement, this assessment also “aimed to gain a deep understanding of health issues facing Boston residents including cancer risks and cancer experiences. This report presents findings from cancer-focused data collection and analysis and also integrates key results from a larger Boston CHNA to provide a deeper dive from the perspective of residents, cancer patients, and survivors regarding their experiences, concerns, supports, and challenges related to cancer prevention, screening, treatment, and survivorship within the larger framework of the social determinants of health.”

*3Dana-Farber Enterprise-Wide Patient Demographics Tableau Dashboard (implemented May 2024)*

This dashboard is an internal initiative led by Dana-Farber’s Cancer Care Equity Program with a goal to standardize equity reporting and make information more accessible for integration into projects and program measurement. It includes internal clinical and equity data for patients with a Dana-Farber encounter (outpatient data only). Demographic data collected includes: race, ethnicity, age, language, location, sexual orientation, gender identity, sex assigned at birth, gender description, and payor.

*4The Colocation Model in Community Cancer Care: A Description of Patient Clinical and Demographic Attributes and Referral Pathways (2023,* [*Link*](https://ascopubs.org/doi/full/10.1200/OP.22.00487)*)*

Dana-Farber initiated a clinical outreach program incorporating cancer diagnostic services and patient navigation within a federally qualified health center to expedite evaluation and resolution of potential cancer diagnoses with the goal of collaboration between oncology specialists and primary care providers in a historically marginalized community in Boston, MA. This article suggests that integrating such services offers promise for enhancing the coordination and delivery of cancer diagnostic services among historically marginalized populations and could be a method to address clinical access disparities.

*5Patient navigation across the cancer care continuum: An overview of systematic reviews and emerging literature (2023,* [*Link*](https://pubmed.ncbi.nlm.nih.gov/37358040/)*)*

This review suggests that “patient navigation is effective in improving participation in cancer screening and reducing the time from screening to diagnosis and from diagnosis to treatment initiation; emerging evidence suggests that patient navigation improves quality of life and patient satisfaction with care in the survivorship phase and reduces hospital readmission in the active treatment and survivorship care phases.”

*6Best Practices for Reducing Unplanned Acute Care for Patients With Cancer (2018,* [*Link*](https://pubmed.ncbi.nlm.nih.gov/29664697/)*)*

Five strategies were identified to reduce unplanned acute care for patients with cancer: (1) identify patients at high risk for unplanned acute care; (2) enhance access and care coordination; (3) standardize clinical pathways for symptom management; (4) develop new loci for urgent cancer care; and (5) use early palliative care. Patient navigation was identified as a mechanism to enhance access and care continuity, and data from University of Alabama Birmingham’s Patient Care Connect Program, that employs non-clinical navigators, showed navigators decreased ED visits and all-cause hospitalizations.

*7Effect of an Antiracism Intervention on Racial Disparities in Time to Lung Cancer Surgery (2022,* [*Link*](https://pubmed.ncbi.nlm.nih.gov/35157498/)*)*

Timely lung cancer surgery is a metric of high-quality cancer care and improves survival for early-stage non-small-cell lung cancer. Historically, Black patients experience longer delays to surgery than White patients and have lower survival rates. This study conducted an analysis of Accountability for Cancer Care through Undoing Racism and Equity (ACCURE), an antiracism prospective pragmatic trial, at five cancer centers to assess the impact on overall timeliness of lung cancer surgery and racial disparities in timely surgery. Their findings suggested that patient navigation was likely an important driver of timely surgery, “patient navigation is a well-known intervention with demonstrated evidence for improving patient adherence to care across the cancer continuum for multiple cancer types.”

1. David G. Pfister, MD, *Risk Adjusting Survival Outcomes in Hospitals That Treat Patients With Cancer Without Information on Cancer Stage*, JAMA Oncology (2015). [↑](#footnote-ref-1)
2. Based on average historical growth of observation discharges for Dana-Farber and BIDMC over the last three years. [↑](#footnote-ref-2)
3. The management of these patients by Dana-Farber is carried out pursuant to its existing arrangement with BWH, with BWH exercising the degree of oversight required by applicable law and program requirements. [↑](#footnote-ref-3)
4. David G. Pfister, MD, *Risk Adjusting Survival Outcomes in Hospitals That Treat Patients With Cancer Without Information on Cancer Stage*, JAMA Oncology (2015). [↑](#footnote-ref-4)
5. Ryan P. Merkow, MD, MS, *Comparison of Hospitals Affiliated With PPS-Exempt Cancer Centers, Other Hospitals Affiliated With NCI-Designated Cancer Centers, and Other Hospitals That Provide Cancer Care*, JAMA Internal Medicine (2019). [↑](#footnote-ref-5)
6. Approximately 19% of New England oncology patients are 65 years of age or older as compared with approximately 17.3% nationally. The Advisory Board Company: Demographic Profiler. [↑](#footnote-ref-6)
7. Becoming Age-friendly means reliable practice of four evidence-based interventions, known as the 4Ms: asking what matters to older adults; making sure medications are helpful, not harmful to patients; attending to mentation, including delirium, depression, and dementia; and ensuring mobility so older adults can maintain their function. Institute for Healthcare Improvement Announces New Age-Friendly Action Community. [https://www.businesswire.com/news/home/20200129005105/en/Institute-for-Healthcare-Improvement-AnnouncesNew-Age-Friendly-](https://www.businesswire.com/news/home/20200129005105/en/Institute-for-Healthcare-Improvement-AnnouncesNew-Age-Friendly-ActionCommunity#%3A%7E%3Atext%3DBecoming%20Age%2Dfriendly%20means%20reliable%2Cmobility%20so%20older%20adults%20can) [ActionCommunity#:~:text=Becoming%20Age%2Dfriendly%20means%20reliable,mobility%20so%20older%20adults%20can](https://www.businesswire.com/news/home/20200129005105/en/Institute-for-Healthcare-Improvement-AnnouncesNew-Age-Friendly-ActionCommunity#%3A%7E%3Atext%3DBecoming%20Age%2Dfriendly%20means%20reliable%2Cmobility%20so%20older%20adults%20can) [↑](#footnote-ref-7)
8. [Massachusetts Hospitals Achieve First-in-the-Nation Health Equity Distinction from The Joint Commission. Massachusetts Health & Hospital Association](https://www.mhalink.org/news/massachusetts-hospitals-achieve-first-in-the-nation-health-equity-distinction-from-the-joint-commission/), available at [https://www.mhalink.org/news/massachusetts-hospitals-achieve-first-in-the-nation-health-equity-distinction-from-the-joint-commission/.](https://www.mhalink.org/news/massachusetts-hospitals-achieve-first-in-the-nation-health-equity-distinction-from-the-joint-commission/) [↑](#footnote-ref-8)
9. L. Vidal et al., *Equitable Inclusion of Diverse Populations in Oncology Clinical Trials: Deterrents and Drivers*, ESMO Open (2024); Brandon E. Turner, et al.,

*Race/Ethnicity Reporting and Representation in US Clinical Trials: A Cohort Study*, The Lancet Regional Health (2022). [↑](#footnote-ref-9)
10. Massachusetts Health & Hospital Association, [A Clogged System: Keeping Patients Moving Through their Care Journey](https://mhalink.informz.net/mhalink/data/images/ACloggedSystemMHAReport.pdf.) (June 2023), available at [https://mhalink.informz.net/mhalink/data/images/ACloggedSystemMHAReport.pdf.](https://mhalink.informz.net/mhalink/data/images/ACloggedSystemMHAReport.pdf) [↑](#footnote-ref-10)
11. [MassHealth: EOHHS Hospital Quality and equity Incentive Program (HQEIP) Performance Year 1 (PY1) Deliverable: Stratified Reporting of Quality Data,](https://www.mass.gov/doc/stratified-reporting-of-quality-data-0/download.) available at [https://www.mass.gov/doc/stratified-reporting-of-quality-data-0/download.](https://www.mass.gov/doc/stratified-reporting-of-quality-data-0/download) [↑](#footnote-ref-11)