

## APPLICANT QUESTIONS

Responses should be sent to DoN staff at [DPH.DON@State.MA.US](mailto: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
- We accept answers on a rolling basis however, when providing the final answers, submit all questions and answers in order in one final document.
- Submit responses in an accessible format in WORD or EXCEL. **Include a table in data format (NOT pdf or picture) with the response. For HIPAA compliance Do not include numbers <11.**

In order for us to review this project in a timely manner, please provide the responses by November 17, 2023.

1. F1.a.ii In order to better understand the proposed ED Expansion, Please explain the following:
  - a. To what do you attribute the high inpatient occupancy rates? (Please confirm that Table 3 line 1 is the inpatient occupancy rate). Are all your approved and licensed beds in service? What percentage of these patients could be discharged if the appropriate site were available for them?

**Answer:** The occupancy rates reported in Table 3 Line 1 reflect all patients who require a bed at the time of the midnight census. All BCH licensed beds have been and continue to be in service to ensure continued access to care for pediatric patients in Massachusetts and throughout New England. As more acute care hospitals in the region are decreasing or eliminating inpatient and specialty pediatric services, BCH has become the regional resource for addressing pediatric medical and behavioral services. In 2018, the average acuity of care provided at BCH was 1.59. By 2022, the average acuity of care increased by 8.9%, to 1.73, indicative of the increased need of pediatric services. In 2022, patients requiring surgical services represented 30% of annual census while medical patients represented 70% of the annual census. In 2022, 9% of the census related to patient presenting with mental disorders were awaiting placement in an appropriate level of care.

- b. To what do you attribute BCH's ED volume exceeding pre-pandemic levels?

**Answer:** in addition to the decrease/elimination of pediatric services in the region, there has been an increase in pediatric patients presenting with more acute viral illness. In 2022, 26% of BCH's ED volume was referred from primary care pediatric offices or local

emergency departments. Families have limited options for critical pediatric care needs, which result in seeking care at BCH's emergency department.

- c. What percentage of patients who present to the ED could appropriately be seen in a less intensive healthcare setting?

**Answer:** A list of pediatric "ambulatory-sensitive" conditions that incorporate other key factors (e.g., age, acuity, complexity, time of day) does not exist. Our best estimate would be based on triage acuity level (ESI, Emergency Severity Index, 5 point scale, 1 = highest acuity): 1.2% are ESI 5 (lowest acuity) and 16% are (ESI 4).

- d. To what do you attribute the increase in ED patients in observation care?

**Answer:** Observation care is used for medical patients that cannot be safely discharged home after the initial evaluation, and who need ongoing monitoring and treatment. In addition, observation care has increased in our ED due to the lack of available pediatric inpatient medical and behavioral health beds, who have been determined to need inpatient level of care.

- e. What is the breakdown in diagnosis and in the reason for being there and the disposition of patients placed in Observation Care? For example, what percentage of them are admitted to an inpatient acute care bed? What percentage of are sent home? What percentage of are sent to another healthcare facility?

**Answer:** Exhibit A provides a breakdown of diagnosis for patients placed in observation care. The discharge status for these patients in 2022 is summarized below:

Destination/Outcome	% of total
Admitted to Inpatient	0.2%
Sent to another Healthcare Facility	0.4%
Sent Home / Not Specified / All Others	99.4%
Total	100.0%

- f. What is the Average length of time patients spent in observation?

**Answer:**

Medical patients: average length of stay - 7.1 hours (FY22)

Behavioral health patients: average length of stay - 89 hours (FY22)

- g. Table 3 shows a large % are seen in Alternative Care Sites. Please describe how many and what type of sites there are.

**Answer:** Due to increasing demand and the overall decrease in pediatric services throughout the region, BCH has utilized existing licensed hospital space on the main campus to provide for a temporary ED surge capacity space for triage and management of patients when our current space is at capacity. We have spaces in both the Fegan and Farley buildings that meet all ED space and equipment requirements during the temporary use.

- h. When patients leave the ED without being seen, do you have a protocol or means for follow-up to ensure that they receive care?

**Answer:** Our follow-up nurse program calls parents/guardians/caregivers if they leave against medical advice and before care has been provided (assuming the patient is not in a critical or emergency medical condition). Prior to their departure, the child is reassessed, the team attempts to discuss the need to remain, options are provided to the family for seeking alternative care, and a notice is sent to the patient primary care provider.

- i. While the volume of patients in the ED has increased, has the acuity/medical complexity of these patients increase. Please describe.

**Answer:** The acuity and complexity have both increased over time (as well as the absolute volume of patients). Over the past 5 years, the lower acuity patients (ESI 5) have decreased (4.1% to 2.2%) while the ESI 2 patients have increased (22% to 24%). Admission rate has held steady despite these trends as we have intentionally shifted care away from hospitalization when not absolutely necessary. Similarly, complexity as measured by the presence of a chronic comorbid condition (Feudtner C et al *BMC Pediatrics* 2014) has risen over time (12% of patients in 2013 as compared to 16% of patients in 2023; 42% of admissions to BCH have at least one CCC).

- j. Please provide a breakdown of Table 3 to distinguish patients with Mental Health conditions.

Behavioral Health					
	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Observation					
Patients	13	40	248	1,366	1,244
% Waiting >2hrs	9.1%	12.7%	6.5%	26.9%	27.4%
% LWBS	0.3%	0.2%	0.1%	0.4%	0.7%
% Hallway	0.8%	1.0%	0.3%	2.7%	6.9%
% Alt Care	0.3%	0.2%	0.3%	0.6%	0.1%

Observation Patients Excluding Behavior Health					
	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Observation					
Patients	1,040	1,778	1,654	3,089	3,436
% Waiting >2hrs	6.2%	8.6%	5.3%	24.9%	17.9%
% LWBS	0.7%	0.9%	0.5%	3.5%	2.5%
% Hallway	2.6%	4.3%	3.6%	9.3%	14.4%
% Alt Care	15.7%	16.6%	8.1%	17.8%	24.7%

- k. Do you provide vaccinations to children in the ED?

**Answer:** We evaluate all patients to determine if they are in need of any clinically indicated vaccines (tetanus, rabies) as well as influenza and COVID vaccines, all of which are available in the Emergency Department. The Emergency Department does not provide routine scheduled immunizations.

2. How will you perform outreach to ensure that a larger number of patients, especially those who are vulnerable and “under resourced” receive vaccinations?

**Answer:** We will collaborate with our Primary Care, subspecialty, and community colleagues who may have relationships with vulnerable and under-resourced patients who require vaccinations to establish most effective modes of educating and encouraging vaccinations as well as decreasing any barriers to access (ie: transportation).

3. Please expand upon the Need for the ultrasound imaging suite.

**Answer:** Pediatric Specialty programs including Nephrology, Transplant, Thrombosis and Adolescent Medicine are experiencing access challenges to ultrasound services. An additional ultrasound room will be able to accommodate an additional 80 outpatient slots per week. Lead time averages above 40 days to schedule an appointment. Slot utilization is consistently above 90% and volume in Boston has surpassed pre-covid levels by 7%, reaching maximum capacity in the existing space. Most services prefer same day imaging with follow up appointments. At this time, physical space is at capacity with no opportunity to add additional exams to the current schedules.

Additional ultrasound rooms will also contribute to managing inpatient capacity by enhancing the availability of diagnosis for patients to prevent unnecessary need of the ED and also promoting earlier discharge for inpatients who can receive follow up based on an ultrasound evaluation. Current median from order to complete is approximately 100 minutes.

4. Under Outcome-oriented please provide an explanation, baselines, measures and projections with annual targets and ongoing monitoring that will occur to ensure the ongoing success of the Proposed project.

**Answer:** The COVID 19 pandemic and related stay at home orders impaired efforts to administer routine pediatric immunizations. During the 2020-2021 school year, the percentage of children who had received their required vaccines dropped. Many pediatricians continue to report challenges with children receiving immunizations related to vaccine hesitancy, vaccine exhaustion, and misinformation available in media.

The Vaccine Program will monitor the number of vaccines given per fiscal year as a measure of success with a projected goal of increasing the measure by 3% each year. The significant drop in vaccines administered in FY 23 is in part reflective of the change in recommended doses for the COVID vaccine as well as the ongoing issues with vaccine hesitancy and vaccine exhaustion.

	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>
Vaccines								
Administered	51,463	53,175	28,125	28,969	29,838	30,733	31,655	32,605
Annual % Change		3.3%	-47.1%	3.0%	3.0%	3.0%	3.0%	3.0%

The Ultrasound services will monitor the following outcome oriented metrics:

- Add and fill an additional 4,000 slots annually to be monitored on a monthly basis, to ensure additional access.
- Review turnaround time for inpatient and ED ultrasound exams quarterly (order to complete), to ensure improved throughput from current median of 100 minutes.

- Review lead time for Ultrasound appointments with high-demand services bi-annually, to ensure additional access.

Related to the ED Expansion, the following metrics will be monitored to understand the impact of the additional space:

- Wait times for ESI level 3,4,5
- Percent of patients cared for in the ED hallways
- Percent of children receiving care in alternate care sites
- “Left without being seen” rates

5. Under Equity, you describe programs in place to ensure health equity.

- a. Please provide the size of the efforts, such as how many individuals participate in the programs, such as the Building Careers in Health and STEM and the Hospital’s COACH program and how many go on to pursue such careers, given the underrepresentation of minorities in the healthcare field.

***Answer:***

- Boston Children’s Human Resources/Workforce Development runs the COACH Program- Community, Opportunity, & Advancement at Children’s.
- The COACH Program has welcomed close to 200 interns over summers 2022 and 2023 and has been in operation since 2007. Over 1000 internships have been offered to over 800 participants in that timeframe.
- Interns are primarily high school students from the city of Boston, Brookline, and Waltham with a focus on underrepresented participants in health and STEM careers. The program offers paid internships, career exploration and professional development workshops, and mentorship on the job. Graduates are invited to apply as college interns which has increased the number of COACH Alumni who return to jobs at Boston Children’s in part time and full time capacities. Currently, 100 of past COACH participants have returned in some capacity to roles at Boston Children’s and currently, there 35 COACH alumni as active employees.
- Over the last 3 years, we’ve increased our support to alumni with an annual COACH Convening where alumni can connect with Boston Children’s Human Resources regarding open roles.
- Building Careers in Health and STEM is a career exploration program for younger high school students in partnership with our youth community-based organizations and the Office of Health Equity. We’ve hosted 80 students over the last three years with this program.

- b. Given the shortage of all levels of providers in the healthcare field, how do you plan on recruiting and retaining staffing for the programs within the Proposed Project and beyond.

**Answer:**

- We have established specific goals in the Boston Children's strategy for 2024, which include expanding our talent acquisition relationships and recruiting work with other schools, conferences, job fairs, and local organizations.
- Our Workforce Development team has developed key relationships with community groups that develop talent from historically underrepresented populations and connect the newly developed talent with access to employment opportunities with Boston Children's.
- Boston Children's Human Resources/Workforce Development partners with over 20 community based organizations to run and hire program graduates in the areas of Pharmacy Tech, Sterile Processing Tech, Animal Care Techs, Behavioral Health Techs, Patient Experience Representatives, Phlebotomy Techs, Medical Interpreter students, and welcomes community referrals of job seekers.
- Once someone joins the Boston Children's employee community, we offer a host of programs to help current staff grow their skill sets, earn degrees and credentials, with the goal of upward mobility to fill critical health care roles.
- We also offer 1-1 services including education/career coaching, and internal mobility advising.
- The talent acquisition team is reviewing all job descriptions to make sure we are using inclusive language and make education requirements equitable for all candidates.
- The team is also tracking movement of talent through the hiring process to protect a balanced approach for historically underrepresented populations.
- We are expanding our current leadership development programs to increase the current number of participants who represent women and people of color.
- A new VP of Talent Management has joined Boston Children's. The new leader will build leadership competencies, development programs, and succession plans that are even more inclusive of all different backgrounds with the goal of increasing the retention of our people.

- c. Within your 2020 Declaration on Equity, Diversity, and Inclusivity six goals, explain the measures and impact the program has had to date.

**Answer:** Our Boston Children's Declaration on Equity, Diversity and Inclusion (EDI), with its six goals and underlying commitments, provides the roadmap that guides our academic pediatric medical center's work to advance pediatric health equity and foster an inclusive and supportive working and learning environment.

The four key concepts we have found essential and **most impactful** to successfully advance and sustain the goals of the Declaration on EDI have been to: 1) **Prioritize** the strategy for EDI at the levels including the Board of Trustees and senior executive hospital leadership; 2) **Collaborate** with multi-disciplinary departments, offices, programs, and subject matter experts; 3) **Take an Academic Approach** by creating educational initiatives and scholarship in EDI; and 4) **Commit to intentionality and accountability** in the work by developing and tracking metrics for EDI and health equity safety and quality disparities.

**Here is a description of examples of the intentional and impactful action steps** that we have implemented at Boston Children's under each of the six Declaration on EDI goals:

**Goal 1: Boston Children's Hospital is committed to being an inclusive environment that does not tolerate any form of racism, discrimination, or bias.**

We have taken pride in our commitment to provide a safe and welcoming hospital environment, not only to those who come to us for care, but for all employees, staff, faculty, and trainees who choose to work and train at our hospital. We committed to this by aligning our work in the Office of Health Equity and Inclusion with the Office of General Counsel, Offices of Experience and Culture, Office of Faculty Development, Office of Graduate Medical Education, and the Human Resources Department. We have been intentional in defining initiatives and programs that promote EDI. We also re-evaluated our approach to responding to reported incidents from employees, staff, faculty, trainees, patients, and families involving a lack of respect or professionalism, bias, discrimination, pay equity, and systemic barriers to promotion in the workplace. The Office of Health Equity and Inclusion worked closely with the Office of General Counsel and with the Human Resources Department to take action and respond to any of these reported incidents or issues. Collaboratively, these offices and department updated staff trainings and incident reporting procedures and reviewed the relevant policies.

**Goal 2: Boston Children's Hospital is committed to recruiting, developing and retaining a diverse workforce.**

We have created "inclusive career pathway programs" (previously referred to as "pipeline programs") for all individuals to have opportunities in the fields of medicine, nursing, allied health professions, research and hospital administration, beginning as early as high school and college, and as well as for our current hospital employees, staff, and faculty. We are creating innovative programs for longitudinal mentorship, coaching, and sponsorship, and also developing career pathway initiatives and programs to promote, retain, and advance underrepresented in medicine (UiM) employees, staff, and faculty. We are also providing employees, staff, and faculty with leadership development opportunities.

Examples of the impactful programs that we have created at Boston Children's:

**Fenwick Fellows Leadership Development Program**



In October 2022, the Sandra L. Fenwick Institute for Pediatric Health Equity and Inclusion welcomed five Boston Children's mid-career inter-professional faculty and staff (including physicians, a nurse practitioner, a financial/IT professional and a researcher) into its inaugural cohort of the Fenwick Fellows Leadership Development Program. In this 2-year fellowship (2022-2024), the inter-disciplinary participants are exploring how health equity affects every aspect of pediatric medicine (i.e., health care access, delivery & outcomes). The Fenwick Fellows curriculum includes seminars, workshops and mentorship from senior executives, clinicians & researchers. The Fellows have a requirement to complete a pediatric health equity project or initiative that addresses opportunity gaps in pediatric health care. The impact of this program will be to create future leaders who incorporate the principles of inclusive excellence into their professions and contribute to the inclusive working environment of the teams that they lead.

Boston Children's Early Career Underrepresented in Medicine (UiM) Faculty Coaching and Academic Advancement Program

This innovative pilot program aims to increase the retention, development and academic advancement of our underrepresented in medicine (UiM) early career faculty. Integral to this program is its co-directorship and sponsorship by hospital senior executive leaders, and health equity, education and faculty development subject matter experts, who are committed to increasing the numbers and the academic advancement of UiM faculty. Also, as a part of this program, the 5 early career UiM faculty were supported to attend the Partnership Inc. Biodiversity Fellows Program. "The BioDiversity Fellows Program trains mid-career professionals on how to strengthen and expand their leadership capacity. This new program was created to develop underrepresented leaders in the life sciences industry. The curriculum builds competence in three key leadership areas: self leadership, relationship skills, and organizational skills." [excerpted from <https://www.thepartnershipinc.org/wpcontent/uploads/2016/05/BioDiversity-Program-Information.pdf> accessed 2-11-2022].

Scribe and Mentoring for Premedical Students (SCRIPT) Program: The Boston Children's Office of Health Equity and Inclusion has developed a mentored scribe program to promote the development of promising college students into the medical, health professions and STEM fields. This two-year, undergraduate program is particularly focused on promoting the career development of students from underrepresented populations or financially disadvantaged backgrounds in an effort to improve diversity and opportunity in the broader medical community. Students work as medical scribes with a Boston Children's faculty member, and receive career development and longitudinal mentorship through observations of patient care, participation in didactic seminars and individual mentorship with an assigned faculty mentor. This program is a collaboration with the Office of Health Equity and Inclusion, faculty from the Division of Gastroenterology, and the Boston Children's Academy for Teaching and Educational Innovation and Scholarship.

**Goal 3: Boston Children’s Hospital is committed to eliminating structural racism from all policies, guidelines and practices.**

In order to eliminate structural racism from the policies and procedures that guide our hospital’s healthcare delivery, we created the following innovations: incorporated an ancillary EDI review for all human subjects research protocols submitted to our hospital’s Institutional Review Board, reviewed our Health Insurance Portability and Accountability Act (HIPAA) policies for bias, added our Senior Vice President and Chief Equity and Inclusion Officer to our hospital’s enterprise-wide policy review committee, added our Declaration on EDI to our request for proposals and contracting process, created trainings to eliminate bias from our interviewing and hiring practices, and reviewed all clinical pathways to identify whether a race identifier was necessary in a clinical algorithm and removed race where unnecessary.

**Goal 4: Boston Children’s Hospital is committed to developing and implementing a comprehensive and widely distributed education curriculum that provides consistent and longitudinal training on the impact of racism on child health, unconscious bias, bystander / upstander awareness, and the role of difficult conversations in culturally effective pediatric health care delivery.**

As a part of our commitment to being a hospital with an inclusive working and learning environment for all employees, staff, faculty, and trainees, we developed a “Bystander to Upstander” Inclusive Workplace Workshop. This training was mandatory for all employees, staff, and faculty in our workforce to become aware of microaggressions and biases and to be accountable to each other when instances of microaggressions and/or bias are witnessed in the healthcare setting. This workshop used real scenarios from our own hospital to ensure that the circumstances portrayed in the scenarios would resonate fully for employees, staff, faculty, and trainees in our clinical, research, administrative, and operational departments. The workshop provided participants with a novel framework for responding to bias in the healthcare setting as well as definitions and shared language related to health equity and inclusion. We are currently in the process of evaluating the efficacy and sustainability of this workshop. Also, our Office of Health Equity and Inclusion collaborated with departments throughout the hospital to engage in open conversations regarding EDI and how our institution can best support employees, staff, faculty, and trainees. We did this through “reflection rounds” as safe spaces to raise discussions around EDI, and open meetings, town halls, and listening sessions.

**Goal 5: Boston Children’s Hospital is committed to being a leader in eliminating child health disparities in our community and in our nation.**

The impact of our work to address Declaration Goal #5 reinforces our intentional approach to supporting patients and families experiencing health-related social needs (HRSN) and collaborating with community partners to address social barriers to health in our surrounding

communities. In July 2023, Boston Children's completed successfully its inaugural health equity site visit by The Joint Commission, and HRSN were the focus of this site visit.

An important example of how Boston Children's Hospital addresses health-related barriers is through our in-house Medical Legal Partnership (MLP) program. The MLP is a collaborative effort between our clinicians and the Office of General Counsel. In fiscal year 2021, our MLP program received 201 referrals that were primarily from pediatricians, but also from Emergency Department physicians and pediatric subspecialists, for patients needing legal support to address multiple issues and health-related social needs, such as housing and homelessness, immigration status, access to benefits, family law matters including guardianships, and access to appropriate education programs. These referrals were primarily handled by an in-house MLP legal fellow functioning in our hospital's Office of General Counsel or referred to outside pro bono counsel and legal service agencies. This well-resourced, in-house MLP underscores Boston Children's Hospital's strong commitment to addressing the health-related social needs of our pediatric patients and their families.

In addition to the legal services provided by the MLP, our hospital has committed to an academic approach to eliminating disparities in underrepresented and/ or underserved populations in our communities. The academic approach has been defined by innovative educational opportunities for healthcare providers in the form of annual symposia on health equity, visiting professorship lectures, and grand rounds in pediatric health equity and inclusive excellence to improve the cultural effectiveness of our healthcare delivery. We also established health equity research collaborations between our Office of Health Equity and Inclusion and departments and divisions enterprise-wide.

Additional opportunities for impactful health equity research have been made possible by the creation of innovative funding mechanisms at our hospital in the form of three dedicated pediatric health equity grants (ranging from \$15K to \$100K). These grants are now offered yearly to encourage all faculty to conduct research that will reduce inequities in health outcomes.

In 2021, the creation of the **Boston Children's Sandra L. Fenwick Institute for Pediatric Health Equity and Inclusion** was an intentional and impactful investment in our hospital's commitment to innovations in the conduct of research with rigorous EDI principles embedded into every aspect of the pediatric clinical research process. The Fenwick Institute's focus on rigorous research methodologies, research findings, and professional development initiatives are aimed to translate into more impactful and efficacious public policy recommendations that set the standard for health equity for *all* children. In addition, the Fenwick Institute will also use its new **Diversity in Pediatric Research Awards** to build a research career pathway and lead U.S. children's hospitals in making equitable pediatric health care outcomes a national reality. This research award program will:

- Provide grants to investigators leading pioneering studies at Boston Children's.

- Hire students who are from backgrounds historically underrepresented in medicine into summer internships to help execute these research projects.
- Provide students with a meaningful biomedical research experience, and author credit in any resulting published study.
- Create an inclusive career pathway to leadership in pediatric biomedical research.

Lastly, Boston Children's Hospital is in its fourth year of funding a dedicated pediatric health equity fellowship slot within the Harvard-wide Pediatric Health Services Research Fellowship Program. This dedicated health equity fellowship provides support each year for a Boston Children's Hospital faculty member to obtain a Master of Public Health degree at the Harvard T.H. Chan School of Public Health, and to learn rigorous health equity research methodology to advance their academic career with an emphasis on pediatric EDI.

**Goal 6: Boston Children's Hospital is committed to leading in the development, implementation and tracking of metrics for equity, diversity and inclusion.**

At Boston Children's Hospital, we have committed to continually assessing EDI metrics to be intentional around our work and hold ourselves accountable by developing, implementing, and tracking metrics to assess our hospital's impact on the reduction of pediatric health inequities and in particular pediatric safety disparities. This work is a collaborative effort between our Program for Patient Safety and Quality and the Office of Health Equity and Inclusion. We developed a dashboard of health-equity-quality metrics that is stratified by patient demographics and includes race, ethnicity, language, insurance status, and missed appointments to better understand which of our patient populations were disproportionately affected by both inpatient and ambulatory safety disparities. Our hospital also collaborated in a national pilot to assess race and ethnicity disparities in pediatric patient safety, called the Solutions for Patient Safety's "Patient Harm Associated with Race and Ethnicity" (PHARE) Pilot. Our hospital's participation in these local and national collaborations heightened our urgency to improve race, ethnicity, language, and patient demographic data collection in our electronic health record and subsequently allowed us to disseminate our best practices around demographic data collection to other academic pediatric medical centers nationally. Through these efforts, we have demonstrated our commitment to leading in the development, implementation, and tracking of EDI metrics.

**Reference:**

Ward VL, Garvin MM, Tartarilla AB, Whitley M, Grice A, Melvin P, Shah SN, Katz-Wise S, Lee LK, Rufo PA, Thiagarajan RR, Laussen P, Fenwick SL, Churchwell KB. Advancing Health Equity and Inclusion in an Academic Pediatric Medical Center: Priorities Addressed and Lessons Learned. *Journal of the Pediatric Orthopaedic Society of North America (JPOSNA)* February 15, 2023; 5(S1).

- d. Please provide success with screening to date and target levels for Population Health and SDOH screening.

**Answer:** BCH currently collects self-reported race, ethnicity, and language in all clinical areas with the ultimate goal of having this information for all patients. Our current rates of screening are around 85% of all patients seen each month for whom we have this information. In addition, our staff screen for health-related social needs in our primary care clinics and in a number of additional clinical programs.

6. Under Community Engagement, explain the meeting dates, participation levels of the meetings.

**Answer:** In agreement with the MA Department of Public Health established on October 1, 2023, the Boston Children's Community Advisory Board (CAB) will serve as the CHI Advisory Committee for the related CHI activities. It was determined that this role would be appropriate for CAB members, given the CAB's involvement in conducting the 2022 Boston Children's Community Health Needs Assessment and subsequent development of the Community Health Improvement Plan and their ongoing engagement in Boston Children's community health efforts.

The Boston Children's CAB is comprised of 13 individual who broadly represent community-based organizations serving children, youth, and families, education, social services, housing, community health centers, the Boston Public Health Commission, the Boston Public Schools, and other city agency staff (see members [here](#)).

At a quarterly meeting on September 12, CAB members were informed of the filing including the purpose and scope of work being proposed and the estimated amount of funds to be available for community health initiatives pending approval. Nine out of 13 members were present at this meeting and all members received a follow up message that included a video recording of the meeting.

On November 14, CAB members will be involved in a priority setting process to identify the top health priority areas for community health initiative funding. This process will include an in-depth review and discussion of the priorities that were identified through the 2022 Boston Children's Community Health Needs Assessment with an opportunity to discuss needs that may have arisen since that time. Members will then be guided through an interactive exercise to determine health priority areas via rank ordering. At the close of the meeting, CAB members will be asked to complete and submit the Stakeholder Assessment Form.

Based on the identified Health Priorities, Boston Children's staff will review existing strategies and generate a list of potential priority strategies for review and prioritization with the CAB at a follow up meeting in Feb/March 2024.

In February/March 2024, CAB members will review, discuss, and prioritize health priority strategies based on the priority areas that were identified at the November 14 meeting. Boston

Children's will then develop a draft Allocation Plan for CAB review and approval for submission to DPH.

7. Under Factor 5 Please explain the "throughput concerns across referring hospitals" the extent of the problem and how the Proposed Project will address the issues. For example, where are the bottlenecks, is it in ultrasound?

**Answer:** ED Expansion: By increasing the clinical space, the ED would be able to better accommodate the increasing demand for receiving patients from outside ED's and referring primary care sites. During periods of surge activity, community hospitals are asked to hold transfers which creates throughput issues at the community hospital, many of whom are also dealing with surge of adult patients, overcrowding, and long wait times. Certain referral sources have closed or reduced inpatient pediatric capacity and therefore patients are remaining in their emergency room while they wait placement for a pediatric bed. Functionally, the additional space provides increase pediatric capability and resources for referring clinicians through improved patient flow and reliance on observation care.

8. By placing the Vaccine clinic in the Patient Entertainment Center, have you identified a new site for that center?

**Answer:** The Patient Entertainment Center (PEC) has been offline since the start of the pandemic. Since that time all activities have been provided virtually, within the Seacrest Studio next to the PEC, and to alternate locations that are closer to patient care areas – such as the two Hale indoor gardens, the Hale Center for Families, and the Wishingstone garden (weather permitting).

9. Under Costs and Competition, please provide additional detail on if, and by how much, the Proposed Project will impact prices, costs, and competition.

**Answer:** The primary goal of the expansion in the emergency room is to eliminate overcrowding, to provide improved patient experience with reduced wait times and to decrease in the number of patients leaving prior to initiating care. The provision of timely care in an appropriate setting reduces mortality and morbidity for vulnerable patients with chronic conditions, and leads to better patient outcomes and reduced cost. From a cost perspective, the proposed expansion is planned within the existing footprint of the main campus. The modifications to existing space are an efficient way for BCH to maintain its physical plant. From a competitive perspective, BCH is the only pediatric dedicated emergency room in the State of Massachusetts. Furthermore, BCH is contracted to provide pediatric ED physician staffing at a number of community hospital emergency departments with the goal of retaining access to care as close to home as possible. BCH expects to sustain this network of community hospital relationships post expansion of the Longwood emergency room.

The primary goal of the establishment of a hospital based vaccine program is to ensure expanded access to childhood and seasonal immunizations for chronically ill and/or vulnerable patient populations who do not have easy access to pediatricians. As documented in response to Factor 1, the provision of childhood immunization has greatly reduced the lifetime cost of care. It has been reported that routine childhood immunizations prevented over 17 million cases of disease and 31,000 deaths; 853,000 life years and 892,000 quality adjusted life years were gained. Societal disease related cost savings totaled \$63.6b, with the highest savings being cause by averted cases of diphtheria, measles and pneumococcal disease.<sup>1</sup> The COVID 19 pandemic and related stay at home orders impaired efforts to administer routine pediatric immunizations. During the 2020-2021 school year, the percentage of children who had received all required vaccines dropped from 95% to 94%.<sup>2</sup> Inequities experienced by communities of color exist. Among 24 month olds, vaccine rates for the combined 7 vaccine series, influenza and rotavirus are lower for non-Hispanic Black and Hispanic toddlers compared to White toddlers.<sup>3</sup> Based on the 2017 birth rate in Massachusetts, extrapolated results suggest at \$.1b societal disease cost savings. Improved access to these immunizations, particularly for the medically complex patient, is likely to lower the overall cost of care. From a competitive perspective, patients receiving these immunizations are receiving ongoing care by BCH and its specialists.

BCH proposed expansion of the ultrasound imaging suite to accommodate pediatric patients who require low dose imaging provides a lower cost alternative to CT or MRI imaging. The co-location of the expansion within the existing ultrasound suite allows BCH to achieve efficiency in staffing, size of public space and support space. The majority of the referrals for ultrasound services are from BCH specialists and/or emergency room patients. Given the unique requirements for imaging of pediatric patients, BCH does not anticipate any impact to other providers of ultrasound.

10. Under Competition, please provide an explanation of how the Proposed Project will expand upon efforts to address the social determinants of health and how these ultimately lead to cost reductions.

**Answer:** Individuals with social determinants of health needs such as food insecurity and housing instability have greater likelihood of emergency department (ED) visits, hospitalizations, and

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<sup>1</sup>See, Carrico, et al, *Value of the Immunization Program for Children in the 2017 US Birth Cohort*. Pediatrics, (September 2022) available at [Value of the Immunization Program for Children in the 2017 US Birth Cohort - PubMed \(nih.gov\)](https://pubmed.ncbi.nlm.nih.gov/36111111/)

<sup>2</sup> See, Seither, et al, *Vaccination Coverage with Selected Vaccines and Exemption Rates Among Children in Kindergarten*, MMWR (2022) available at [Vaccination Coverage with Selected Vaccines and Exemption Rates Among Children in Kindergarten — United States, 2021–22 School Year | MMWR \(cdc.gov\)](https://www.cdc.gov/mmwr/preview/mmwrhtml/6501a1.htm)

<sup>3</sup> See, Hill et al, *Vaccination Coverage by Age 24 Months Among Children Born During 2018-2019 – National Immunization Survey Child*, MMWR (January 2023) available at [Vaccination Coverage by Age 24 Months Among Children Born During 2018–2019 — National Immunization Survey–Child, United States, 2019–2021 | MMWR \(cdc.gov\)](https://www.cdc.gov/mmwr/preview/mmwrhtml/6901a1.htm)

hospital readmissions than those without such needs <sup>456</sup> At Boston Children's, we do anticipate surges related to mental health, respiratory illness, and homelessness to continue. Under the current space configuration, these surges result in overcrowding, long wait times, and an increase in patients leaving before being seen. Expansion of the emergency room will allow us to reduce these barriers to care and allow providers and support personnel time and space to work with those families who need assistance to housing, etc. Efforts to address social determinants of health will lead to cost savings.

The overarching goal for the CHI Engagement Program is to focus on evidence-informed and impactful projects to address social determinants of health and reduction of health inequities for children who live in Boston, particularly for children and families of color, from low- and moderate-income households, LGTBQ children and adolescents, and other systematically underserved groups of children and adolescents. As demonstrated in Table 2 of the completed application, the Emergency Department serves an under resourced patient population as evidenced by the diversity of the patient panel in terms of age, race/ethnicity and level of public funding. The number of unique patients treated in the BCH emergency department has grown by 3.3% from 2018 to 2022. Children under the age of 10 make up 67.3% of this patient panel. The majority of the patient panel in the Emergency Department identify as Asian, Black, or Multi-racial. The portion of revenue attributed to the treatment of patients enrolled in Medicaid and seeking care in the Emergency Department has increased from 45.1% in 2018 to 51.3% in 2022. Improved access to care for this population facilitated by the proposed expansion will enhance efforts to address the social determinants of health.

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<sup>4</sup> Berkowitz SA, Seligman HK, Meigs JB, Basu S. Food insecurity, healthcare utilization, and high cost: a longitudinal cohort study. *Am J Manag Care*. 2018;24(9):399–404. [Food insecurity, healthcare utilization, and high cost: a longitudinal cohort study - PubMed \(nih.gov\)](#)

<sup>5</sup> Sastre L, Wynn D, Roupe M, Jacobs M. Link between redemption of a medical food pantry voucher and reduced hospital readmissions. *Preventive Medicine Reports*. 2021;23: 101400. [Link between redemption of a medical food pantry voucher and reduced hospital readmissions - ScienceDirect](#)

<sup>6</sup> Berkowitz SA, Kalkhoran S, Edwards ST, Essien UR, Baggett TP. Unstable Housing and Diabetes-Related Emergency Department Visits and Hospitalization: A Nationally Representative Study of Safety-Net Clinic Patients. *Diabetes Care*. 2018;41(5):933–9. [Unstable Housing and Diabetes-Related Emergency Department Visits and Hospitalization: A Nationally Representative Study of Safety-Net Clinic Patients | Diabetes Care | American Diabetes Association \(diabetesjournals.org\)](#)





**Exhibit A. Primary Diagnoses for FY22 ED Visits that Became Observation Cases**

	Diagnosis (ICD 10)	% of total
1	R45.851 - Suicidal ideations	5.3%
2	E86.0 - Dehydration	3.6%
3	U07.1 - COVID-19	3.1%
4	J45.901 - Unspecified asthma with (acute) exacerbation	2.9%
5	K35.80 - Unspecified acute appendicitis	2.6%
6	F32.A - Depression unspecified	2.5%
7	J21.9 - Acute bronchiolitis unspecified	2.1%
8	R50.9 - Fever unspecified	1.9%
9	J45.902 - Unspecified asthma with status asthmaticus	1.7%
10	J21.0 - Acute bronchiolitis due to respiratory syncytial virus	1.7%
11	J05.0 - Acute obstructive laryngitis [croup]	1.5%
12	J06.9 - Acute upper respiratory infection unspecified	1.4%
13	J95.830 - Postprocedural hemorrhage of a respiratory system organ or structure following a respiratory system procedure	1.2%
14	S42.412A - Displaced simple supracondylar fracture without intercondylar fracture of left humerus initial encounter for closed fracture	1.2%
15	J45.909 - Unspecified asthma uncomplicated	1.1%
16	A08.4 - Viral intestinal infection unspecified	1.1%
17	F91.9 - Conduct disorder unspecified	0.9%
18	J18.9 - Pneumonia unspecified organism	0.9%
19	K52.9 - Noninfective gastroenteritis and colitis unspecified	0.9%
20	R68.13 - Apparent life threatening event in infant (ALTE)	0.8%
21	F34.81 - Disruptive mood dysregulation disorder	0.8%
22	S42.411A - Displaced simple supracondylar fracture without intercondylar fracture of right humerus initial encounter for closed fracture	0.8%
23	N39.0 - Urinary tract infection site not specified	0.7%
24	R11.10 - Vomiting unspecified	0.7%
25	E10.65 - Type 1 diabetes mellitus with hyperglycemia	0.6%
26	B34.9 - Viral infection unspecified	0.6%
27	E10.9 - Type 1 diabetes mellitus without complications	0.6%
28	R56.9 - Unspecified convulsions	0.6%
29	E10.10 - Type 1 diabetes mellitus with ketoacidosis without coma	0.6%
30	R45.1 - Restlessness and agitation	0.5%
31	Q40.0 - Congenital hypertrophic pyloric stenosis	0.5%
32	F32.9 - Major depressive disorder single episode unspecified	0.5%
33	J45.42 - Moderate persistent asthma with status asthmaticus	0.5%
34	G40.909 - Epilepsy unspecified not intractable without status epilepticus	0.5%
35	J21.8 - Acute bronchiolitis due to other specified organisms	0.5%
36	T78.2XXA - Anaphylactic shock unspecified initial encounter	0.5%
37	J45.21 - Mild intermittent asthma with (acute) exacerbation	0.5%

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38	J45.31 - Mild persistent asthma with (acute) exacerbation	0.5%
39	T78.05XA - Anaphylactic reaction due to tree nuts and seeds initial encounter	0.5%
40	J45.22 - Mild intermittent asthma with status asthmaticus	0.5%
41	F91.8 - Other conduct disorders	0.5%
	All Others	49.7%
		<hr/>
<b>Total</b>		<b>100.0</b>
		<b>%</b>