

Boston Health Equity & community-Aligned Learning Health System (HEALHS)
Scientist Training Program Application

Description: Learning Health Systems (LHS) strive to improve the quality, safety, and efficiency of health care delivery through integration of existing evidence with internal data to improve practice. Recognizing the promise of LHS requires building capacity through training scientists well versed in LHS competencies. **Boston HEALHS is an AHRQ/PCORI funded initiative to expand a community-engaged LHS focused on advancing equitable care in a safety net setting.** A key component of Boston HEALHS is building institutional capacity through training scientists with expertise in the LHS competencies. **The LHS Scientist training program targets early to mid-career research faculty and provides 50% FTE support (to the NIH salary cap) over two years.** Under mentorship of the HEALHS Research Education Core Co-Directors (Drs. Mari-Lynn Drainoni and Marc LaRochelle), and affiliated faculty and mentors, LHS Scientists will:

- Acquire skills in [AHRQ-defined LHS competencies](#) through a tailored learning program that includes seminars, courses, and immersion in mentored LHS research projects
- Lead at least one Patient Centered Outcomes Research/Comparative Effectiveness Research (CER) project. LHS Scientists will select a research topic based on a list of priorities and interventions created by our patients, community members and health system leaders, including the Health Equity Accelerator; Boston HEALHS Research Data Analytics Core leaders Drs. Nick Bosch and Bill Adams will work with scholars on the research project design.
 - The list of potential research topics is provided at the end of this notice.
- Participate in relevant career development programs and experiential learning opportunities throughout BMCHS/BU
- Following the training program, return to their respective Departments with new skills and become local leaders with the capacity to participate in and pursue funded LHS initiatives

LHS Scientists will also have the opportunity to interact with other current LHS scientists and research trainees across the institution. Following the fellowship, LHS Scientists are expected to become leaders in health system focused CER research at BMCHS/BU.

Who should apply? Clinician- or non-clinician scientists (e.g., MD, PhD, PharmD, or similar degree) with a strong interest in a research career that involves LHS work in safety net settings. Applicants will be Assistant or early Associate Professors who have previously completed research-focused fellowships or similar research training (e.g., masters-level training in epidemiology, health services research, etc.). We anticipate that most applicants will be at early career stages but will consider mid-career applicants seeking to refocus their professional activities towards embedded LHS research.

How much time is devoted to the training program? LHS Scientists will commit 50% FTE to the fellowship. The effort devoted to activities outside of the training program (including clinical work, administrative work, or other research projects) cannot exceed 50% time.

What support is included for the LHS training program? LHS Scientists receive 50% FTE support (up to the NIH max). Department/Sections must demonstrate a commitment to support the balance of salary to permit 50% FTE commitment to the training program. Scientists also will receive funding to travel to one conference, project supplies and resources to complete their LHS research projects, and support for publication fees.

Criteria for Selection

- Career development focus on LHS research
- Current areas of research interest, skills, and goals for new skills
- DEIA experiences, goals, and priorities
- Department/Section's commitment to and investment in the applicant's research career development

What is needed for the application?

- 1) [Completed LHS Scientist Application](#), including
 - a. [NIH Biosketch](#)
 - b. [A letter of support from Section Chief and/or Department Chair that outlines:](#)
 - i. Strengths of candidate for the LHS training program
 - ii. Commitment to covering any salary gap between NIH max and actual salary to permit LHS scientist to commit 50% FTE to program
 - iii. How applicant will spend non-protected time (% clinical, administrative, teaching, etc. outside of Fellowship time).

Application Due Date:	April 19, 2024
Applicant Notification Date:	Mid-Late May
Fellowship Start Date:	July 1, 2024

Questions: Please contact Lori Henault at Lori.Henault@bmc.org with questions.

The research topics below have been chosen from current health system initiatives at BMC that seek to improve care processes, patient outcomes, and health equity. The three initiatives from which potential comparative effectiveness research projects will be selected are Equity in Diabetes, Equity in Maternal Health, and Population Health. LHS Scientists will work on their chosen topic area with both their LHS research mentoring team and system leaders to identify outcomes, comparators, and the specific LHS research methodologies best suited for rigorous evaluation of the interventions.

Initiative	Summary	Clinical Context
Equity in Diabetes	Screening retinal photography in primary care to improve outcomes in diabetic retinopathy	Patients with diabetes require regular eye exams to identify early signs of damage and intervene when needed. Many patients do not get these screenings as recommended. The use of this new technology in primary care has the potential to improve screening and eventually outcomes.
Equity in Diabetes	Weight management embedded within General Internal Medicine clinic to improve BMI, HgbA1C	Weight management is an important component of diabetes treatment, but many BMC patients have not been able to access new medications and other weight loss treatments. The embedded weight management clinic should remove barriers to these treatments.
Population Health	Complex Care Management for patients with chronic medical conditions	BMC's Population Health team has deployed specialized teams for patients in Medicaid managed care plans with particularly high risk for hospitalization and other medical events. These programs seek to engage patients with their care teams proactively to reduce hospitalizations, ED visits, and the total cost of care.
Population Health	Hospital Admission Reduction Program for high-risk Medicare patients recently discharged from the hospital	This program is modelled on the transitional care management model, including home visits, medication reconciliation, and care coordination with a nurse practitioner. The specific goal of the program is to reduce 30-day readmission rates and ED return rates among this group of patients at high risk
Equity in Maternal Health	Antenatal remote BP monitoring initiative to decrease risk of hypertensive complications in pregnancy	Elevated blood pressure during pregnancy places both the pregnant person and infant at risk, and control of blood pressure differs by race. Antenatal BP monitoring offers the potential to detect increases in blood pressure and intervene early to reduce the risk of adverse pregnancy outcomes.
Equity in Maternal Health	Uterine Vacuum device to decrease peri-partum hemorrhage	After delivery, some patients develop hemorrhage, with a high risk of morbidity and even mortality. Vacuum devices have been approved by the FDA, but the studies to date have not fully addressed the issues faced by patients at BMC. These devices will be implemented at BMC later in 2024, and evaluation of their impact can both improve care local and provide generalizable information.