

2023 Year in Review

2023 Reflections

As we prepare to launch a new year, I look back at 2023 with incredible gratitude for the passionate, goal-driven people I have the privilege to work with in the Springboard Studio. Together with our supporters, advisors, dedicated healthcare providers and the patients who we are striving to improve care for, we have accomplished much this past year.

This was the first full year of the Springboard Studio expanding its reach across the Mass General Brigham (MGB) health system with a mission of developing “an integrated academic health system of the future, with patients at the center.” We are in an increasingly time-constrained, high-stakes environment of delivering healthcare while ever-greater demands are being put on patients, providers and staff. It is time for design thinking – with empathy for the end-user, humility in seeking to better understand challenges and a test-iterate-refine methodology – to help us work smarter not harder. In addition to obtaining significant real-time successes across the even larger MGB venue with “singles and doubles,” we continue to make progress toward imbuing a culture change that translates design thinking into practical use so we can achieve sustainable “homeruns.”

In this overview of 2023, we have captured some notable highlights of our work, and shared how to access stories of our completed projects through our new “Case Studies Library.” I hope you enjoy reading through these exciting, collaborative accomplishments. Thank you for your commitment to Springboard Studio – we could not do this without our growing community of supporters. We are just getting started – as we look ahead to 2024, there is so much more we are excited to do!

Gratefully,



Kristian Olson, MD, MPH, DTM&H

Vice President, Springboard Studio

Vice President, Design Impact at Mass General Brigham

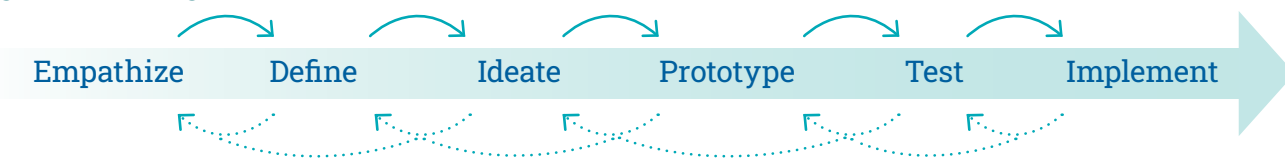
Design Thinking in Healthcare

At the Springboard Studio we are demystifying innovation by engaging people across MGB in design thinking, to solve challenges they face every day. To do this, we translate traditional “product development” methodologies and terminology for practical use in healthcare. This approach has the potential to address some of the most problematic issues in healthcare today: staff turnover, lack of capacity, the high cost of care and inequitable access to care, to name just a few. We also know the core tenants of design thinking – try, test, iterate, refine – run counter to standard medical training, in which the provider needs to “know the answer” or “follow procedures.” But as this report details, when we put out a request for proposals of challenges and ideas for solving them, 180 worthwhile ideas poured in to launch our SheSolves Awards program. Our greatest strength is the intimate knowledge our frontline providers and staff have about the challenges they face in care de-

livery, and they are motivated to solve for them. Our long-term vision is to foster a culture of collaboration and creative problem-solving across healthcare. We are getting there by engaging providers and staff in the design thinking process as we work together to solve each challenge, test new ideas for more effective ways to care for patients, and leave those who are involved inspired and skilled in using design thinking when they face future challenges.

Another concrete step toward realizing this vision is building the *Springboard Design Library* that features Springboard content videos of ‘tips n’ tricks’ for practically applying design thinking for healthcare, as well as speaker series recordings and a resource page with links to content we can all use. We believe on-demand, asynchronous content designed to fit into a busy provider’s schedule is a building block to transform MGB into a system whose ethos supports empowered, collaborative innovators at every level.

Design Thinking Process



Springboard Studio Programs + Impact

Guided by our design thinking methodology, the Springboard Studio engages with patients, providers and healthcare staff to solve a wide range of healthcare challenges. We focus our efforts to amplify our distinct strengths and expertise – design research, prototyping, practical implementation support and impact. The programs below present this year’s evolution of work.

Mobility Initiative at Salem Hospital

In partnership with Salem Hospital and the Population Health Management (PHM) Care Continuum

team, the Mobility Initiative began in spring 2022 and made great progress in 2023, all the way to implementation and measurement of its impact. Focused on improving patient mobility – the degree to which a patient moves – while in the hospital, we worked

A nurse at Salem Hospital updates the Mobility Speedometer.



to understand the challenges of mobilizing patients by leading interdisciplinary workshops with providers at Salem Hospital. These workshops transitioned from understanding barriers and pain points around mobilizing patients to eventually ideating early solutions. From those workshops, the Springboard team created low-fidelity prototypes of a visual mobility aid, called the “Mobility Speedometer.” Through an iterative and human-centered design process, we gathered feedback from Salem Hospital providers, staff and patients, and adapted the Speedometer to better serve those stakeholders.

In January 2023, we piloted the Mobility Speedometer for three months to test its efficacy, desirability and impact at Salem Hospital across three units (72 beds). The pilot centered around Speedometers that were fixed to the walls near patient beds, and used by the nursing staff. Staff training materials and patient handouts were also used to educate both staff and patients on the Initiative.

Through our Mobility Speedometer package, patients had three times the number of mobility episodes documented and 81% improved or maintained their level of mobility, as opposed to 59% in the baseline. In addition, because patients were discharged earlier, length of stay was reduced, on average, 0.17 and 0.25 days for each medical and surgical patient, respectively, an equivalent of 259 saved hospital days during the three-month pilot, a remarkable indicator of improved patient care and savings for this low-cost intervention. Based on the pilot program’s results, Salem Hospital leadership decided to engage Springboard to scale the Mobility Speedometer package across the entire hospital (224 beds). As such, this summer the Springboard team produced 250 new Mobility Speedometers that will be installed in every patient room, while the Salem team prepared training materials to assist with implementation throughout the hospital. As we move into 2024, we are supporting plans to expand this tool to other MGB institutions. **Learn more at:**

mgbspringboardstudio.org/mobility-initiative



Salem Hospital nurses provide their feedback about an early Speedometer prototype



SheSolves: Advancing Women in Healthcare Innovation

SheSolves is a Springboard initiative that aims to increase the participation of women in healthcare innovation across Mass General Brigham. Nearly 80% of healthcare is delivered formally and informally by women, and yet they are vastly underrepresented in healthcare innovation, where the tools and systems that deliver care are developed. When looking to traditional markers of innovation, such as patents filed or venture capital dollars raised, only 21% of all U.S. patents include at least one female inventor and only 2.4% of all venture capital investments went to women-led start-ups in 2021.

We believe the best solutions come from those closest to the challenges. Women innovators are more likely to be solving for health challenges faced specifically by women, which means having more women innovating in healthcare will both advance women's entrepreneurship as well as women's health. In addition, because nearly 80% of frontline healthcare providers are women, care for everyone will be improved by engaging these end-users and decision-makers in product development. In a time of unprecedented healthcare challenges and opportunities, supporting women in the innovation space is critical to both maximize social benefit and broaden financial impact.

The goals of SheSolves are to:

- Support the **individual innovator and her idea** as she traverses the product development process
- Address **infrastructure and systemic challenges** that consistently prohibit women from participating in healthcare innovation
- **Build a community** of peers and leadership that encourages women, and advocates for their participation in healthcare innovation

SheSolves Awards

We started by launching the SheSolves Awards in January 2023 with a request for proposals open to any MGB employee who identifies as a woman to submit challenges and ideas for solving them. The response surpassed our highest expectations: 180 applications from teams or individuals – more than 500 aspiring innovators – from 16 institutions across MGB. We believe the high volume of applications confirms the unmet need we are addressing; every submission defined a pressing problem or issue worth solving.

SheSolves Awards Applications By the Numbers

16

Mass General
Brigham
institutions

180

applications
received

500

community
members
represented

From 180 applications representing a diverse range of innovative solutions to complex challenges, a panel of judges with expertise in digital health, medical devices, investment and healthcare delivery selected seven teams for the inaugural SheSolves



Awards cohort. Purposefully, women comprised the majority of the judging panel; increasing the number of women decision-makers for funding opportunities is an important component to having more successful women innovators and women-led solutions. We are providing up to \$25,000 in funding to each team and product development support from the Springboard Studio. Beyond our inaugural cohort, the Springboard Studio is also providing smaller amounts of funding and support to five additional teams that needed video and graphic design assistance to advance their solutions.

The Springboard team and our panel of judges found each challenge identified in the 180 applications to be something that should be solved in our health system. To that end, we have offered 'office hours' to every applicant to brainstorm ideas with us and are hosting community-building events to bring together like-minded creative problem-solvers across Mass General Brigham. We end the year energized by the momentum we are building toward the vision of fostering a culture of collaborative, creative problem-solving across Mass General Brigham.

Inaugural SheSolves Awards Cohort

The first SheSolves Awards cohort has received funding and nine months of product development support from the Springboard Studio. All SheSolves teams are starting with the question "What does success look like?" to identify impact metrics that measure and evaluate their solutions.

Accessibility in Audiology

Team Lead: Rachel Hammond, AUD, CCC-A

Institution: Mass Eye and Ear

Solution Type: Care Redesign

Challenge: Lack of mechanisms for hearing-impaired patients to communicate at medical appointments

Solution: To improve exchanges at front desks, this team would like to set up a system where patients indicate their "communication preferences" (examples:

written communication, need for an interpreter, use of clear masks by a provider, etc). Once indicated, this method will be used by front desk staff and clinicians for the remainder of their visit. For patients that require written communication, the team would like to provide portable computers with screens that can swivel for a patient to view; this can be used at check-in and by clinicians during appointments to communicate with patients more easily and compassionately. To improve the patient experience in their waiting rooms, they would like to implement a pager system that provides a vibration alert for when a clinician is prepared to see the patient; this will benefit patients that are hard of hearing, patients with vision restrictions and patients whose primary language is not English.

Collaborative Speech Language Pathologist (SLP) Training

Team Lead: Audrey Kurash Cohen, MCSO, MS, CCC-SLP

Institution: Mass General Hospital

Solution Type: Care Redesign

Challenge: Treatment of dysphagia – difficulty with swallowing – is impeded by the lack of speech language pathologist (SLP) training in videofluoroscopic (VFSS) and fiberoptic endoscopic (FEES) swallowing diagnostic procedures, resulting in significant patient backlog and an unmet need for diagnosis and treatment.

Solution: This team is creating an innovative, remote training program to increase the number of clinicians trained to conduct VFSS and FEES and provide best-practice care to patients with swallowing disorders. This program provides standardized skills development and a competency model delivered by Mass General dysphagia specialists within the academic medical centers. Additionally, this solution will improve patient access to VFSS and/or FEES, reduce time in the hospital waiting for the procedure, increase the number of procedures performed in the outpatient setting, and improve speed to, and access to, treatment options, thus improving the overall care of these patients.

Eating Disorder Care Collaborative

Team Lead: Jennifer Leah Goetz, MD

Institution: McLean Hospital

Solution Type: Care Redesign

Challenge: Eating disorder care in Massachusetts is presently limited to a single inpatient unit at a small for-profit program in Dedham, MA, which lacks a behavioral health component. This results in hundreds of young people, predominantly women, each year receiving eating disorder care via the emergency room or medical inpatient units that are not equipped to meet their needs.

Solution: This team aims to create an eating disorder “pathway” or “track” within an already-existing inpatient unit at McLean Hospital. They will train the staff in eating disorder care and treatment and create group programming specific to this population. Once the inpatient pilot is running, they will conduct internal reviews and analyses to determine what is working, what changes need to be made, and officially launch as an independent unit. The goal is to increase the number of patients receiving customized care for eating disorders and reduce or eliminate care being provided in the emergency room.

Lithe Surgery

Team Lead: Brittany Powell, MD, MPP

Institution: Brigham and Women’s Hospital

Solution Type: Hardware

Challenge: Operative built environment and surgical tools are not designed for women

Solution: This team is founding a surgical ergonomics company, believing that no surgeon should have to “make do” with the equipment they are given. They will work on their first product prototype as part of the SheSolves program. They believe that radical re-design of procedural and peri-procedural tools, using new and emerging technology, will enhance performance, reduce workplace injury and improve satisfaction of users of all genders. Ultimately, their team intends to design a portfolio of functional surgical

Meet some of our SheSolves Awards 2023 Participants



Meaghan Reed, AuD,
CCC-A
Team: Accessibility
in Audiology



Rachel Hammond,
AuD, CCC-A
Team: Accessibility
in Audiology



Colleen Griffin, MPH
Team: SLP Training



Audrey Kurash Cohen,
MCSO, MS, CCC-SLP
Team: SLP Training



Jennifer Leah Goetz,
MD
Team: Eating
Disorder Care



Sarabeth Spitzer, MD
Team: Lithe Surgery



Megan Sulciner, MD
Team: Lithe Surgery



Brittany Powell, MD,
MPP
Team: Lithe Surgery



Shonali Gaudino, OT,
BCG
Team: Trauma
Survivorship



Juan Hererra-Escobar,
MD, MPH
Team: Trauma
Survivorship



Geoffrey Anderson,
MD, MPH
Team: Trauma
Survivorship



Brittney Sorbello,
PharmD, BCOP
Team: Women’s Sexual
Health & Supportive
Care Program



Kailey Mandigo,
PharmD
Team: Women’s Sexual
Health & Supportive
Care Program



Lori Hooley, RN-CARN
Team: Women’s SUD
Group

instruments that are best-in-class, not only preferred by female surgeons, but preferred by all surgeons.

Trauma Survivorship

Team Lead: Shonali Gaudino, OT, BCG

Institution: Spaulding Rehabilitation Network

Solution Type: Care Redesign

Challenge: Lack of care coordination for trauma survivors

Solution: The Trauma Survivorship team will formulate a Survivorship Clinic that provides trauma survivors with a range of longitudinal, connected services that will range from medical and mental healthcare to nutrition, education, preventative care, social care and peer support. The plans will be developed by a leadership team that includes survivors and addresses strategies for financial sustainability, program evaluation and quality improvement.

Women's Sexual Health and Supportive Care Program

Team Lead: Brittney Sorbello, PharmD, BCOP

Institution: Wentworth-Douglass Hospital

Solution Type: Care Redesign

Challenge: Supporting women with cancer medication-related side effects causing sexual dysfunction

Solution: This will be a pharmacist-led program to recognize potential adverse effects, interactions and pharmacology of oncology drugs in order to discuss and manage sexual health concerns with patients, and tackle what is currently a significant gap in care. This novel approach aims to include discussing the impacts treatment may have on patients' physical and emotional health and providing strategies and therapy to improve quality of life while undergoing cancer treatment.

Women's Substance Use Disorder (SUD) Group

Team Lead: Wei Sum Li, MD

Institution: MGH Charlestown HealthCare Center

Solution Type: Care Redesign

Challenge: There are no women-centered substance

use disorders (SUD) treatment options to aid in recovery.

Solution: This team is working to start a Women's Group at Charlestown HealthCare Center to engage women with SUD. The current SUD groups are mixed-gender and led by a male recovery coach. The female group participants have shared there are certain topics they are uncomfortable addressing in that environment, and some challenges are more specific to women, such as reuniting with a child. The care team aims to use a combination of psychoeducational, skills development, cognitive behavioral and support group elements to promote recovery. They hope to include elements of art therapy and movement therapy, such as yoga. This clinic will expand access to SUD treatment and reach women who, to date, have not participated or fully realized the benefit of SUD groups.

Learn more at:

www.mgbspringboardstudio.org/shesolves/

Addressing Provider Well-Being with Radiation Oncology

Springboard Studio was asked to work with Mass General's high-traffic and high-stress Radiation Oncology department to provide department leadership with an in-depth and nuanced view of the various strategic, managerial and cultural attitudes impacting care delivery and workplace satisfaction. Over a three-month period between February and May, the Springboard team interviewed 11 physicians, nurses and administrators working in Mass General's Department of Radiation Oncology. Based on this preliminary data, we proposed a survey for wide-scale feedback collection. Once we developed the survey, the project was placed on pause due to changes in leadership and other staff in the department. The data collected thus far, as well as further data that could come from administering the survey may be useful to help inform strategies for

improved well-being and workplace satisfaction once new leadership is established.

Design Research with Population Health Management

Mass General Brigham's Population Health Management (PHM) team is focused on providing affordable resources and offerings to consumers that improve their overall healthcare experience and engages them in their care.

Medicaid

Springboard supported the PHM team's effort toward improving services for Medicaid patients by conducting stakeholder interviews with providers across the system to understand patients' needs and the pain points around their specific care needs. This design research provided the PHM team with insights that could inform their path forward in providing new services for patients that could easily integrate into the current workflows of providers and staff.

Chronic Kidney Disease

We have been working with the Population Health Management team on improving care and services for patients with chronic kidney disease (CKD). We have been learning the landscape of care across our MGB system by speaking with providers and patients. To date, we've interviewed more than 25 providers – including nephrologists, primary care providers, end-stage renal disease (ESRD) nurses and surgeons – and more than 10 patients who are currently going through the diagnosis and treatment process. We have synthesized our insights from these conversations into “journey maps” visualizing the diagnosis and treatment process as it is and how it could be. Springboard's engagement with this CKD program will continue into 2024 to test,

validate and iterate components of a comprehensive solution for continued refinement to meet the needs of providers and patients.

Global Innovation

We have continued to work with partners in Uganda and India to further develop innovations – and leverage skills from these relationships to further our approach to developing solutions that are designed to be at the intersection of desirability, feasibility and viability.

Convening

The Consortium for Affordable Medical Technologies (CAMTech) Uganda has continued to be a platform for healthcare innovation in Africa. This consortium hosted the 9th CAMTech Uganda Medtech Hackathon on October 27-29 in 2023.

Disseminating Innovations – Augmented Infant Resuscitator (AIR) Device

Through a spin-out company, EB Innovations, LLC, Springboard collaborated with Mbarara University of Science and Technology, CAMTech Uganda, Mass General Brigham and two design firms – Eleven, in Boston, and Lattice Innovations, in Delhi – to advance



Dr. Data Santorino, Director of CAMTech Uganda, visits the Springboard Studio and showcases the latest AIR device and app.

the next generation AIR device model. Bluetooth enabled and linked to an app with a web-dashboard, the new model further facilitates attaining and maintaining newborn resuscitation skills. Multi-national studies of this next-generation, first-of-its kind device are underway in Uganda, Kenya and India. The impact

of the earlier AIR model in the U.S. and Uganda was highlighted in Pediatrics, the journal of the American Academy of Pediatrics. **See the video abstract and article in the following link: Real-Time Digital Feedback of Simulated Newborn Ventilation Quality – Pediatrics Nov 2023.**

Springboard Studio Case Studies

As we continue to grow, we've been capturing stories of projects that highlight the way we work and our attention to practical results – like reducing the number of days patients stay in the hospital (Mobility

Speedometer) or saving millions of dollars during the beginning of the COVID-19 pandemic (Hexapod Booth). **Experience the Case Studies at: www.mgbspringboardstudio.org/case-studies/.**

Our Team



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Get in Touch

Are you interested in making healthcare more user-friendly with us? We want to hear from you. **Contact us via our website at mgbspringboardstudio.org or email mgbspringboardstudio@mgb.org.**