Massachusetts Digital Health COVID-19 Recovery Challenge #2

Innovations to Support Healthcare Providers

We seek startups, entrepreneurs, and intrapreneurs who are developing and validating digital health based solutions that help health systems and healthcare providers recover from the COVID-19 pandemic to compete in the second Massachusetts Digital Health COVID-19 Recovery Challenge. Challenge finalists will compete for $250,000 in prizes that must be used to fund validation studies at MeHI's Digital Health Sandboxes.

The COVID-19 pandemic has changed how we access and provide care, exacerbated the racial and income inequalities in healthcare, and impacted the wellbeing of our healthcare providers. There has been a huge shift in how patients access care during the pandemic. At the start of the pandemic, 70% of primary care, specialist, and behavioral health visits for commercially-insured residents in Massachusetts were provided via telehealth. While many of those visits have returned to in-person, telehealth still represented 20-30% of all office visits in September 2020, which is substantially higher than pre-pandemic. Importantly, the share of behavioral health visits performed via telehealth has remained high at 60% of visits as of September 2020.[1] As many people sought to access care remotely, others delayed or skipped care altogether. In September 2020, 28.8% of parents and 36% of adults nationwide reported delaying or forgoing healthcare for their children or themselves because of worries about exposure to the coronavirus or because of limited services.[2] Parents with lower family incomes and Black adults were the most likely to delay or skip care, indicating that the pandemic has exacerbated existing racial and economic health inequities.

In addition to the impacts on patients, the pandemic has greatly affected healthcare providers. Between May and October 2020, 38% of healthcare workers responding to an AMA survey self-reported experiencing anxiety or depression, 43% suffered from work overload, and 49% had burnout. Stress scores were highest among women, Black, and Latinx healthcare workers.[3] The impacts on healthcare providers have led to many leaving the field, leading to critical staffing shortages. Massachusetts has lost approximately 500 medical/surgical and ICU beds, due in part to staffing shortages.[4]

We launched this Challenge to find digital health solutions that can address these issues by helping healthcare providers diagnose, treat, and monitor their patients remotely, solve challenges to providing care during a pandemic, address racial and economic health inequities, and support healthcare providers in recovering from increased stress, anxiety, and burnout brought on by the

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[1] Massachusetts Health Policy Commission, "Impact of COVID-19 on the Massachusetts Health Care System: Interim Report", (April 2021): https://www.mass.gov/doc/impact-of-covid-19-on-the-massachusetts-health-care-system-interim-report/download

[2] Urban Institute, "Delayed and Forgone Health Care for Children during the COVID-19 Pandemic" (February 2021): https://www.urban.org/sites/default/files/publication/103652/delayed-and-forgone-health-care-for-children-during-the-covid-19-pandemic_1.pdf

[3] American Medical Association, "Half of health workers report burnout amid COVID-19" (July 2021): https://www.ama-assn.org/practice-management/physician-health/half-health-workers-report-burnout-amid-covid-19

[4] WBUR, "Baker orders hospitals facing bed shortages to reduce scheduled, nonessential procedures", (November 2021): https://www.wbur.org/news/2021/11/23/massachusetts-hospitals-capacity-emergency-order

pandemic. We take a broad definition of digital health and are looking for solutions at the intersection of healthcare and technology.

In addition to startups and entrepreneurs, this Challenge is also open to intrapreneurs. Intrapreneurs are innovators employed at existing, mature companies and organizations, like health systems or universities, who have ideas for a new, innovative product or service. Intrapreneurs are especially suited for this Challenge as they can draw on pre-existing resources at their organizations, like subject matter experts and networks, to quickly bring products to market.

Challenge Areas and Solutions Sought

The following are examples of challenges that we believe can be addressed by digital health solutions. This is not an exhaustive list and any applicants with ideas for supporting healthcare providers are encouraged to apply.

- As telehealth visits remain high, providers need tools to remotely diagnose, monitor, and care for patients.
- An increased number of both adults and children reported at least one adverse mental or behavioral health condition during the pandemic. Coupled with a loss of psychiatric beds in Massachusetts and an increased reliance on telehealth for behavioral health visits, mental and behavioral health providers need specialized tools to support their patients remotely.
- The pandemic highlighted hospitals' needs to more effectively control infection and reduce providers' exposure to infectious diseases.
- Healthcare providers have faced increased workloads during the pandemic and could benefit from solutions that help them more efficiently and effectively diagnose and provide care.
- Healthcare workers reported increased stress, anxiety, depression, and burnout during the pandemic and could use solutions to support their mental and emotional health.
- Racial and economic inequities in accessing and receiving care, and among healthcare workers, were exacerbated by the pandemic and are an undercurrent in all of the challenges listed above. Innovators that can address these issues should highlight this fact and explain how their solution will accomplish this.

Solutions to these challenge areas may include the following, but all applicants with relevant solutions are encouraged to apply:

- Remote monitoring devices
- Remote diagnostic tools
- Mental and behavioral health platforms
- AI solutions
- Telehealth solutions
- Care coordination tools
- Communication tools
- Mobile applications

Program Overview

The Massachusetts Digital Health COVID-19 Recovery Challenge program is designed to accelerate digital health solutions that support family caregivers and healthcare providers. The program is supported by funding from the U.S. Department of Commerce's Economic Development Agency through their SPRINT Challenge Grant.

Through two Challenges, the program will source, accelerate, and validate potential solutions to help the economies of Massachusetts and the US recover from COVID-19 more quickly. The first challenge was aimed at solutions that support family caregivers. The second challenge is aimed at solutions that help health systems and healthcare providers.

A group of expert reviewers will recommend up to 8 applicants to participate in a 12-week, virtual accelerator run by Lever and sponsored by the Massachusetts eHealth Institute at the Massachusetts Technology Collaborative. Reviewers will evaluate applications on the proposed solution's uniqueness in the market, its opportunity to support recovery from the pandemic, its potential impact on healthcare systems or providers, and its potential commercial viability.

During the accelerator, Lever will use their proven curriculum of lean startup workshops and tailored expert mentoring to help participants develop their solution, business plan, and go-to-market strategy. Participants will also be matched with Sandboxes, cutting edge research and development organizations, from the Massachusetts Digital Health Sandbox Network. The Sandboxes will assist participants in scoping projects to test and validate their solution to bring it to market faster. Lever and MeHI will support participants in preparing detailed project plans outlining how the award funding would be used to complete the scoped Sandbox project. Two months into the accelerator, participants will take part in a semi-final pitch event where a panel of judges will narrow the 8 companies down to the top 4, who will move on to the final pitch event.

At the final pitch event, one winner will be awarded **$100,000** in tuition to cover the fees for their validation project with their Sandbox partner. The three runners-up will receive **$50,000** each in tuition to cover the fees for their Sandbox projects. The funding will go directly to the Sandboxes. This level of tuition can typically cover extensive user experience testing, access to cutting edge lab facilities and subject matter experts, or a pilot in a healthcare setting.

Benefits to Participants

While only the top four solutions in each Challenge will receive tuition to complete their Sandbox projects, all participants will benefit from the program. Benefits include:

- De-risk your business model – “look before you leap”
    - Have confidence in your product-market fit
    - Get access to potential investors and buyers
    - Gain knowledge of the market opportunity
- Accelerate time from R&D to production
    - Participate in rapid build-measure-learn cycles
    - Benefit from cohort learning
    - Work with experts to assess your testing needs and scope detailed validation projects
- Gain Funding Access
    - $100,000 in Sandbox tuition for 1st place
    - $50,000 in Sandbox tuition for 2nd, 3rd, 4th place
    - Everyone will be prepared for investor meetings

Timeline

Release RFA: Tuesday, January 4
Information Session: Wednesday, January 19
Early Application deadline: Friday, February 4
Application deadline: Friday, February 25
Finalists selected: Friday, March 18
Kickoff meeting*: Friday, April 1
Workshop 1*: Friday, April 15
Workshop 2*: Friday, April 29
Workshop 3*: Friday, May 13
Workshop 4*: Thursday, May 26
Workshop 5 / Semi-Final Pitch*: Friday, June 3
Final Pitch Mentoring: Friday, June 17
Final Pitch Event*: Thursday, June 23

*Finalists must attend each of these sessions. The kickoff meeting will take one hour. Workshops will take two hours.

Eligibility

- Applicants must propose a new solution that is not yet widely commercially available.
- Applicants may be located anywhere in the US. However, participants must be willing to participate in a pitch event at the end of the accelerator. Winners of the Challenge must be willing to participate in a promotional event at the conclusion of the program. The pitch event will take place in June 2022 and the promotional event is likely to take place in 2023. Both events are currently being planned as in person events in Massachusetts.
- Participants in the accelerator must agree to track and report on the following metrics for five years after the program ends to comply with federal reporting requirements:
    - Number of jobs created at your company
    - Number of new customers gained
    - Number of new patents, copyrights, or trademarks obtained
    - Diversity of your board members and/or executive team

How to Apply

Click here to apply:
In submitting an application, you acknowledge that the application is a public record as per the Public Records Law, M.G.L. c. 66, and may be disclosed if requested. Please do not include any proprietary or confidential information in this application.

For more information:
Visit www.massdigitalhealth.org/covidchallenge
Contact Program Manager, Katie Green, at green@masstech.org

About the Massachusetts eHealth Institute at the Massachusetts Technology Collaborative

The MassTech Collaborative is a quasi-public economic development agency that strengthens the competitiveness of the tech and innovation economy by driving strategic investments, partnerships, and insights that harness the talent of Massachusetts. MeHI is a division of MassTech and the Commonwealth's entity for healthcare innovation, technology, and competitiveness. MeHI partners with industry, government, and healthcare organizations to support the Massachusetts Digital Health Initiative. MeHI also helps all the Commonwealth's providers harness the benefits of electronic health records and the Mass HIway, the statewide health information exchange. For more information, please visit https://mehi.masstech.org and follow @MassEHealth. Learn more about the Massachusetts Digital Health Initiative at www.massdigitalhealth.org.

About Lever

Founded in 2014, Lever is an economic development non-profit focused on innovation-driven job creation. Lever supports entrepreneurs with startup expertise, an investment fund, research, mentors, and access to talent. Lever has helped launch dozens of companies that have attracted more than $10M in equity investment and have created more than 200 jobs. Lever supports existing companies by helping their intrapreneurs “innovate from within” using proven entrepreneurial methods to generate top-line revenue growth and job creation.

About the Massachusetts Digital Health Sandbox Network

In April 2019, Massachusetts Governor Charlie Baker announced the Digital Health Sandbox Network and Grant Program, administered by the Massachusetts eHealth Institute at MassTech. The program is designed to support digital health companies in their product development and expand the user base for cutting-edge research and development facilities. There are currently nine Sandboxes in the Network offering a variety of real world and simulated environments, state of the art equipment, subject matter expertise, and consulting services to digital health companies to support their clinical, technical, and user product validation. The Sandbox Network is open to all companies and Massachusetts digital health companies may apply for grant funding from MeHI to offset the costs of accessing services at a Sandbox.