COVID-19 & digital health startups: an overview

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Introduction

The COVID-19 pandemic has been the 'perfect storm' for health care systems around the world. This unprecedented situation is spiking demand for digital solutions that support health care providers, reduce the spread of the virus and increase health accessibility in times of social distancing.

From providing accessible telemedicine, mental health platforms and remote care tools to tracing the spread of the pandemic and finding the cure - startups are rapidly developing innovative solutions in various fields. While startups are smaller economic actors, it is in their nature to respond to critical needs and demand on a tight deadline.

History shows that crises can lead to a wave of innovation, as people discover the limitations of the current solutions and are willing to embrace new possibilities. According to a global survey of the digital health industry, 53% companies expect that during the months of COVID-19 crisis, patients will become users of digital solutions and stick to them. Experts also expect an improved regulatory environment and increased acceptance within payors.

We talked to several digital health startups' founders to find out how they are contributing to solutions against COVID-19, what are their challenges and views on the future of digital health. We present their cases in this overview.

About us: Allied for Startups DTx brings together startups, policymakers and other healthcare stakeholders, with the aim of enhancing the policy environment and supporting innovation for startups in the European healthcare ecosystem.

Our mission *is to build a network of startups, policymakers and other stakeholders to*
1. *ensure that EU policies benefit startups in healthcare,*
2. *connect stakeholders, discuss challenges and share best practices,*
3. *lead policy dialogues around digital health,*
4. *facilitate and enhance cooperation among startups and stakeholders.*

To do so, we :
1. *monitor and identify opportunities for startups to engage with the European Parliament, Commission and Member State representatives,*
2. *bring startup entrepreneurs and communities together to raise awareness about EU policies and initiatives,*
3. *engage with and create opportunities for startups to engage with policymakers to raise awareness about the needs of startups in EU digital and health policies,*
4. *speak on behalf of startup communities to promote research and opinion on digital health.*

Tracing COVID-19

Velmio (Estonia)

Founders: Ilia Tikhomirov & Sophie Wharrie

Products: Pregnancy Health App and Corona Tracker

Before the pandemic, Velmio focused on the development of an AI-powered pregnancy health app. This app will offer simplified tracking of all aspects of lifestyle, including diet, symptoms, mental health, exercise, sleep and water intake. Some of the platform's innovative features include image recognition technology, sleep tracking algorithm and an AI chatbot that provides individualised answers based on users' records.

In a hackathon organised by *Accelerate Estonia* and *Garage48* to help tackle the pandemic, Velmio founders decided to utilise their technology to find solutions against COVID-19. The founders described: "When we were developing the pregnancy app, we developed it as a set of customizable modules, with the idea that if we wanted to expand our solutions to other conditions or situations, we would be able to do so".

During the 48-hour hackathon, Velmio was able to develop their solution: *Corona-tracker*, a data-driven app to help users monitor the COVID-19 outbreak and contribute to research efforts. It analyses users' symptoms anonymously and shows the risk level of nearby locations. The app, currently available in Estonia and Australia, also allows users to synchronize data to their wearable devices.

"We took a bit of a different approach to how most governments are trying to build these apps. We believe that If you want users to share their data and sacrifice some of the battery life, you have to keep them engaged. What you give back in return for sharing this data should be tangible enough to motivate users to use it. We address this with the chatbot and self-assessment system which allow people to evaluate their risk and symptoms. We received responses from people who got tested because the app informed them they had a high-risk level, and the test confirmed they had the virus", the founders elaborated.

Velmio's founders have been contacted by representatives of several governments, both in Europe and the Pacific. They are interested in utilizing the app as a potential base for their countries' own national apps. Thus, Velmio's solution has the potential to be deployed as a national level response measure across the world.

Merging mental health care & telemedicine

Psious (Spain)

Founder: Xavier Palomer

Product: Virtual reality solution for therapists

Psious is a virtual reality therapy platform which enables psychologists and mental health professionals to apply VR therapy to treat multiple conditions in their clinical practice. Therapists can choose from 70 customizable environments to adapt the experience to each patient's need and monitor the psychological responses through an integrated biofeedback sensor. The platform is used by around 2000 professionals in Spain, the United States, the U.K. and other countries.

Psious' product was originally designed to be used in face-to-face sessions, so the team had to quickly adapt to the new reality and enable users to use the platform remotely. Xavier Palomer, Psious' founder, said, "A couple of years ago we developed a remote session feature but almost nobody was using it. Less than 5% of the sessions were being done remotely. Since the pandemic began, our main focus has been to improve and update our teletherapy solution, Psious@home, and introduce it to our users. Today, it is the most used feature of our product."

In addition to the solution that enables therapists to launch the VR session on the patient's remote devices, Psious is developing additional VR environments to address the growing demand for mental health care and a shift in the type of problems the therapists are currently treating. The startup has also started offering free VR teletherapy sessions to those in need of psychological support during the pandemic. To do this, they connected the therapists in their clinical network who were willing to help with the health care workers who needed support. This initiative has been so successful that it was also extended beyond health care workers.

Palomer says that the biggest challenge is uncertainty about what is going to happen in the coming months. He is optimistic about the prospects of increased use of telemedicine, but he also points out that behavioural change takes time, "Nobody knows for sure how long the pandemic situation is going to last. One of my guesses is that if things go back to normal after a few months and the situation allows people to go back to seeing their physicians in person, then the use of telemedicine might still grow, maybe from 5% to 10% in our case, but not much more. The key factor in accelerating the growth of telemedicine further is increasing its acceptance within payors - public systems, private insurances - and patients themselves."

Empowering remote care
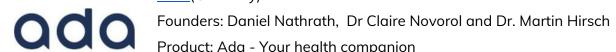
Brain+ (Denmark)

Founder: Kim Baden-Kristensen

Product: Brain+ RECOVER

Brain+ RECOVER, a digital mobile platform, helps people who have cognitive issues due to brain injury, psychiatric disorders or selected brain disorders. The main features of the app include science-based gamified cognitive exercises and a virtual behavioural therapist. The platform adapts to individual needs and the state of a person's cognitive function. Patients can use the app in the comfort of their own home, enabling health care professionals to monitor their cognitive development and well-being remotely.

To support the solutions against the pandemic, Brain+ is offering their platform free of charge to municipalities in Denmark. According to the founder, Kim Baden-Kristensen, there has also been an increased focus on mental health care in the society during this time. The startup already has several new pilot customers to use the mental health aspects of the Brain+ platform.

Enabling virtual assessments

Ada (Germany)

Founders: Daniel Nathrath, Dr Claire Novorol and Dr. Martin Hirsch

Product: Ada - Your health companion

Ada's product is an AI-driven personal healthcare app – a virtual companion that helps its users understand symptoms and receive personal health assessments. The app's conversational interface taps into a knowledge base of thousands of symptoms and conditions and provides relevant guidance on next steps.

To address the COVID-19 pandemic, Ada released a COVID-19 assessment and screener, which helps people identify their symptoms and provides guidance on the next steps. The tool provides a thorough assessment to indicate the likelihood of a COVID-19 infection by establishing the user's medical history, exposure and risk factors.

Ada aims to ease the pressure being put on health systems so medical professionals can focus their support on those in most urgent need, while also enabling users to better understand their own symptoms from home. This solution can be easily embedded and integrated into any website or a mobile app.

Observations

- Startup founders agree that the COVID-19 outbreak has clearly <u>accelerated the interest and demand for digital health innovation</u>. At the same time, a meaningful shift towards digital solutions in the long term would require an increase in acceptance and flexibility within health care systems and payors - something which takes time.

- The pace of adoption of new solutions and trials in public health care systems is usually slow and resource-consuming. While many health care providers are interested in startups' products, they often lack time and resources for trying out new solutions. One solution could be <u>a mechanism to support the health care providers in the implementation of digital technologies</u>.

- In terms of the regulatory landscape, founders often cited a lack of clarity about the delayed Medical Device Regulation, and the classification of software as a medical device. To prevent hurdles to innovation, founders would like to see <u>a more differentiated regulatory approach based on the actual risk and type of digital health products</u>.

At Allied for Startups, we are supporting the voice of startups and digital innovation throughout and beyond the COVID-19 outbreak

- [COVID-19-STARTUP TOOLBOX](#)

We have crowdsourced a number of measures with our members that can be applied both nationally and internationally to react to the challenges raised by the COVID-19 outbreak.

- [Joint letter from startup communities to the European Commission](#)

We called on the Commission to put startups at the centre of their solution to COVID-19 and to their growth plans coming out of the crisis. We also speak up for better coordination and cooperation of the relief programmes across member states.

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