# Three global digital health innovations that may be here to stay

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Looking at the innovative technologies that are being rolled out across the globe to help contain and track the COVID-19 pandemic,[1,2,3,4] it is clear that these innovations are solving more than a temporary need. Marketers should harness these new technologies and leverage their speedy adoption to find new solutions for additional therapy areas and conditions and to better support overwhelmed hospitals and healthcare professionals. While many technologies have seen a quick uptake in recent weeks, we have identified three areas of importance that could build long-term change in patient care and HCP communications.

## AI-powered patient triaging

Apps in this category are able to triage and identify the symptoms of the underlying disease by asking a series of AI-powered questions. Babylon Health recently launched a symptom checker accessible via app, web, or live chat that is able to specifically recognise possible COVID-19 symptoms and suggest possible next steps, including a video consultation with a clinician (this feature is currently available in the UK only). The COVID Care Assistant provides a care plan based on the latest guidance, sends daily notifications to track symptoms, and reminds patients to measure vital signs for the 14-day isolation period. **Similar approaches could be extrapolated in other therapeutic areas, such as chronic disease management, allowing patients and their doctors to monitor treatment regimens with greater convenience and fewer in-person visits to overwhelmed facilities**. Beyond COVID-19, adopting this kind of technology may even improve adherence rates in the longterm.

Doctor on Demand is another example that streamlines "mind and body care," enabling patients to connect and discuss diagnoses and treatments with US-based doctors using built-in video call functionality. The diagnosis of respiratory disease (Asthma, IPF, COPD, etc), for example, could be improved with an AI-powered algorithm that distinguishes between patients experiencing shortness of breath or other symptoms to connect them directly with the appropriate specialist. **Whether related to COVID-19 or leveraged across other conditions, the AI can help educate patients and alleviate some burden from healthcare workers by directing people to the appropriate specialist with the appropriate level of urgency**.

## Virtual reality (VR)

Recently, an Italian hospital (Schiavonia, Padova, Italy)[5] began using VR to combat burned-out clinicians. To improve the psychological and emotional wellbeing of healthcare workers and support staff working long shifts due to COVID-19, the hospital provides VR-based visualization and guided breathing techniques led by a virtual clinician. The experience starts with a guided breathing exercise, then "teleports" the user to a place they associate with happy, positive feelings. The system pulls footage of the place in question from 3D imaging libraries, such as Google Street View, to make users feel as though they are there. By using positive memories and associated feelings of happiness, the software combats the anxiety and emotional fatigue of working in such a stressful, high-pressure environment.

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VR has a transformative power to change people's perception and how they experience healthcare. VR technology is already being used to support physical therapy, mental health, cognitive therapy, and pain management, among others. **Cognitive behavioral therapy (CBT) approaches for chronic conditions such as pain management, cancer, or other conditions, could further leverage this technology to build virtual environments enriched with games or tailored exercises specifically designed to support the treatment regimen for specific conditions**.[6]
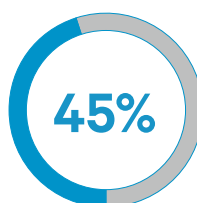
## Voice assistants

A French voice assistant, "AlloCovid," was recently developed by French research institute Inserm, the University of Paris, and French railway company SNCF, to allow callers to take a simple questionnaire over the phone.[7] Depending on their symptoms and pre-existing conditions, callers are directed to medical professionals, with the goal of helping authorities detect new infection clusters after France exits lockdown. Similarly, in the US, Apple has recently updated its voice assistant to provide users with a step-by-step questionnaire if they ask variations of "Hey Siri, do I have the coronavirus?," providing them with answers from the US Public Health Service and the Centers for Disease Control and Prevention.

**The current adoption of voice assistants might lead the way for a more widespread use of voice technology** with value-added services for overstretched physicians, including dictation of notes or medical documentation consultation, providing support for patients to manage their treatment plan or responding to common medical questions on certain conditions (eg, asthma, diabetes, etc).

A pre-pandemic report by DRG Digital[8] showed that over half of EU5 physicians surveyed (56%) use or are interested in using voice assistants in their work. Voice assistants' capabilities complement doctors' ability to practice, allowing them to quickly annotate information about a patient's medical history or search for information while they work. For consumers, the survey showed the use of voice search for health is modest, but demand is strong, with 45% of European adults online expressing interest in using voice assistants for health-related needs. In light of COVID-19, these stats are likely to grow as no-touch interfaces become particularly useful in homes or clinical settings, especially among at-risk populations.
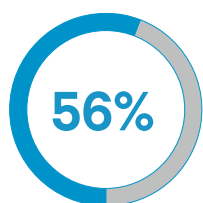
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There is no doubt that the COVID-19 pandemic has impacted our daily lives and how we interact with one another. Limited face-to-face contact, social distancing, and self-isolation measures have affected patients who still need care, as well as the way sales reps and pharmaceutical companies need to communicate with healthcare professionals. The health and medical care industries, once historically slow to digitalization, now have an opportunity to rapidly pilot digital technology that support patients and healthcare professionals in this time of need.

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8. Siri and Alexa are already changing how Europeans get health info, DRG Digital | Manhattan Research data, March 2018

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