World Heart Day 2021: COVID-19, digital health and our opportunity to redraw the CVD battle

COVID-19 pandemic has exponentially accelerated the uptake of digital health, creating a unique opportunity to strengthen the battle against cardiovascular disease (CVD). While the number of deaths caused by the pandemic continues to climb towards 5 million (1), CVD claims around 18.6 million lives every year (2). Therefore, while not a magic bullet, the enormous advances in digital health provide an impetus to improve access and achieve greater equity in healthcare, including for CVD.

With the increasing access to the internet, and through telemedicine and artificial intelligence (AI) enabled devices, this digital transformation could be game-changing for the millions of people at risk of or living with CVD around the world (3), in particular those in lower-resource settings that have limited access to in-person treatment. This “tech-celeration” has the potential to help redraw the healthcare landscape: not only can it improve access to care for underserved populations, but there is also a potential to reduce the burden on overloaded physical healthcare systems. Digital technologies can also help to empower people, providing them with more control of their wellbeing in sickness and in health (4).

A recent trial in the UK of a digital health tool for the management of hypertension is a good example (5). The technology facilitates self-monitoring of blood pressure and includes reminders and predetermined drug changes combined with lifestyle change support. The study showed that the tool led to better control of systolic blood pressure after one year than that achieved under the usual care framework. The increasing application of AI to the electrocardiogram for CVD management is another example of the ongoing transformative effect of AI on cardiovascular medicine (6).

The potential of remote CVD management has been acutely highlighted in the last 18 months, when face-to-face consultations have not been possible. Lessons learned from the pandemic can facilitate the use of digital health for the prevention and management of CVD around the world.

Digital health also offers an opportunity to address inequalities and redraw the development of healthcare in low-resource settings. For instance, in a world where the role of digital health is expanding, there is the question of how this will affect the approach of governments to investment in medical training and in technology infrastructure and access.

Notably, awareness, accessibility, and availability of the necessary technology present challenges to be overcome along the path to greater use of digital health. Access to digital technology and network infrastructure in the developing world is limited. Currently, there are 3.7 billion people, mostly in lower-income countries, who are offline. Wherever it takes place, it is critical that advances in digital health do not exacerbate inequality in healthcare (7).

Furthermore, not all technological innovation is necessarily good and, when it comes to digital healthcare, it is important to understand what is the problem that needs solving, and how reliable, impactful and secure the data and evidence-gathering is. Most of current digital health research takes place in selected populations in high-income countries. This has concrete implications for digital health because AI derived algorithms will be influenced by gender, ethnicity, age, and socioeconomic status of the sampled population (8,9) If we are to make global recommendations, then we need the same quality of data everywhere, representing all people. Critically, in this regard, the development of digital health is an opportunity to redress this imbalance and equalise the data framework, not just for CVD but across the disease profile spectrum.

The results of a recent digital health trial in rural Kenya are an indicator of what can be achieved (10). The study took place at a community hospital that has a very limited number of doctors. Through the trial, patients were able to consult with doctors and specialists online about their health, including with regard to blood pressure. The study showed that telemedicine was effective in improving systolic blood pressure control and gave patients access to quality, affordable medication.

On a global scale, we also need to consider the impact of the growth of digital health on the relationship between patient and doctor. With patients potentially owning much more of their health data, the dialogue with doctors will change and the dynamic will shift but it should never compromise patient-doctor trust, which is essential for the implementation of good practices.

While digital health solutions are not a panacea and they can only complement a fully funded and staffed health system, the rapid increase in the use of digital health, fuelled by the COVID-19 pandemic, is an opportunity to advance the fight against CVD. However, we must do it the right way, hand-in-hand with maintaining trust between practitioners and patients Our journey along this path, to a point where “accessing digital healthcare” becomes simply “accessing healthcare”, has already started.

On September 29th, the World Heart Federation, its members, and the wider community come together to celebrate World Heart Day (11). This year the call to action is “Use Heart to Connect”. The time has come to use the power of digital to connect every heart, everywhere and thus bring us one step closer to achieving cardiovascular health for everyone.

We declare no competing interests

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