

New report shows how AI in health is critical for COVID-19 response and recovery

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A major new report led by the Novartis Foundation and Microsoft shows how investment in data and AI is critical to drive the health system improvements needed to respond to and recover from the COVID-19 pandemic and the world's other greatest healthcare challenges.

Reimagining Global Health through Artificial Intelligence: The Roadmap to AI Maturity was developed by the Broadband Commission Working Group on Digital and AI in Health, which the Novartis Foundation and Microsoft co-chair. Based on a landscape review of over 300 existing use cases of AI in health, the report shows how AI is already disrupting health and care. It then presents a roadmap to help countries use AI to transform their health systems from being reactive to proactive, predictive, and even preventive.

Low - and middle - income countries (LMIC) that grapple with systemic health challenges such as a shortage of health workers, underserved populations, rapid urbanization and disinformation have the most to gain from AI – but they also have the most to lose. The response to the COVID-19 pandemic is only an example demonstrating how global health is now data-dependent. However, most countries still need to build these data or make available datasets interoperable, and governments who do not invest risk to further widen health inequities in their populations.

There are many cases of LMICs already leading the world in their use of AI for health. For example, a virtual health consulting service in Rwanda already covers one-third of the adult population, and Indian hospitals are using AI to predict risk of a heart attack seven years before it might happen.

High-income countries also have much to gain from AI in health. For example, the health worker shortage is a global challenge, with the worldwide gap predicted to reach 18 million by 2030. This boosts the case for investment in supportive AI tools, which can help nurses and community health workers diagnose and treat illnesses traditionally seen by doctors. AI should not replace humans, but rather enhance human capabilities by performing tasks such as processing big data to accelerate and make diagnosing health issues more accurate.

“Many countries are ill-prepared to address new emerging diseases such as COVID-19 in addition to the existing burden of infectious diseases and the ever-increasing tide of chronic diseases. Digital technology and AI are essential enablers to re-engineer health systems,” said Ann Aerts, head of the Novartis Foundation and co-chair of the Broadband Commission Working Group on Digital and AI in Health. AI is boosting access and improving outcomes while also cutting costs by identifying potential health problems before they actually occur. “AI can have a big impact not just in lower-income countries, but across all health systems,” said Paul Mitchell of Microsoft, and Working Group co-chair. “It’s clear COVID-19 is driving massive change in the use of technology in health - we are seeing in a few months what I would have expected normally to take years, if not decades.”

The biggest changes in health and care delivery will be driven by partnerships of business, innovators, health professionals and government, Dr Aerts said. “We have to develop a sustainable ecosystem for AI in health in the countries where it is most desperately needed,” she said. “This has to happen while ensuring fairness and

access for all. As health systems build back after the pandemic, technological innovation has to be a core part of the agenda.”

Related story link:

- [Lower-income countries could soon leapfrog high-income countries with AI-enabled health technologies. Novartis Foundation and Microsoft backed report says](#)
- [The Novartis Foundation and the Broadband Commission Working Group for Digital and AI in Health](#)

Download the roadmap to AI maturity in health

This six-step roadmap shows how all countries can reach AI maturity in their health systems.

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