

Africa can lead on health AI; If we invest in the basics

Recent advances in Artificial Intelligence (AI) have the potential to transform healthcare as we know it. Today, AI chatbots are being used to support people with depression, and AI analysis of X-rays can predict TB more accurately than a human expert.

While these advances are truly remarkable, bringing the promise of AI into practice remains a major challenge in low- and middle-income countries (LMICs), a hurdle that even high-income countries (HICs) continue to grapple with. In the global scramble for AI dominance today, health settings in Africa risk being left behind. Without equitable access to AI and in the continued presence of structural, ethical, and evidentiary barriers, the existing health gap between the rich and the poor is likely to widen.

For the responsible and successful implementation of AI, we need relevant, clean, high-quality data, computing power, and cloud data storage. Unfortunately, in Africa, we are lagging behind in all these areas, risking a future in which AI tools are developed for HICs.

Let us make sure we come together across the health spectrum to ensure no one gets left behind in the great AI leap forward.



Rosalind Parkes Ratanshi
Artificial Intelligence

Currently, those working in health AI on the African continent have limited access to data for local model training. As a result, there is an increased risk of serious bias in AI tools, which could make results for our local population inaccurate. This could be addressed by retraining HIC tools on local, contextually relevant data or by developing relevant tools in place.

Within Africa, much of health care is low-cost and

limited to primary or community settings. Donor-led programming is often short-term, leading to "pilotitis" in digital health and AI, with many short-term projects producing tools that are not fully tested or deployed and do not scale. Given the high burden of disease, limited resources, and risk profile in LMICs, while at the same time there is a high need for AI tools, it is tempting for AI innovators to make grandiose claims about the use of their tools.

Despite these huge challenges, there is hope that AI can help Africa close the health care equity gap. To develop contextually appropriate AI tools, health workers and patients should identify a clear problem to be solved, and solutions should be developed by multidisciplinary teams. The solution needs to be trained on data appropriate for the population, and implementation needs to be feasible in the proposed context.

First, to develop our own AI tools, we need to grow and support a workforce of computer and data scientists. Additionally, to incorporate AI into practice, the health workforce must be adequately prepared through training in the use of AI tools, as well as in the ethical, clinical, and governance principles of AI in health.

Second, health care workers need to understand the benefits and risks of AI, and in particular, they need reassurance that AI will not increase their already heavy workload or take their jobs. They also need to be provided with the hardware and software to support this work.

Third, we need researchers to undertake substantive evaluations, including clinical trials of new AI tools, and to ensure that ethical review bodies and national governance bodies are confident in scrutinizing AI tools as rigorously as any new medical tool, device, or intervention.

We are at a tipping point, with investment in this area by donors such as IRDC Canada and FCDO-UK through the AI for Development and the Bill and Melinda Gates Foundation Global Challenges programs. But we also need local leadership within the health community to support investment in electricity and internet access in our health facilities, so that our unique and diverse population can be represented in global health data.

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This article was written by Dr. Victoria Mukami and Prof. Rosalind Parkes Ratanshi, Co-Chairs of the HASH network steering committee at the Infectious Diseases Institute, University.