How Cell Phones Are Transforming Health Care in Africa

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In a little over a decade, Africa has gone from a region with virtually no fixed-line telecoms infrastructure to a continent where one in six of the billion inhabitants now owns a cell phone. But as this mass adoption of technology continues to gather momentum, it is causing a fundamental shift that goes beyond merely connecting people; it is creating one of the largest, low-cost distributed sensor networks we've ever seen, one which has the potential to completely transform global health care.

Since 2000, when the number of cell phone subscriptions in Africa outstripped landlines, the enthusiasm with which people across the continent have embraced this technology has been unparalleled. Nigeria alone has gone from a nation of just 30,000 cell subscriptions in 2000 to more than 140 million today, or roughly 87 percent penetration. Given how vast Africa is and the entrepreneurial nature of its people, perhaps that's not so surprising. But what is unexpected is the life-saving role these handsets are beginning to play in helping to bridge gaps in our knowledge.

Historically we have had very little solid real-time disease surveillance and monitoring data on Africa, and as such have had to rely upon a few sentinel sites and modeling estimates to track the spread and prevalence of disease. As a medical doctor and an epidemiologist who spent some years working in Uganda in the 1980s, I can tell you this is extremely frustrating. You can see all the evidence around you, but in most places there is no infrastructure to monitor and evaluate it. Since then it has been clear to me that one of the biggest obstacles to improving the lives of the world's poorest people is the ability to accurately measure in real time the burden of ill-health. Because if we can't measure it, how can we do anything about it?

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