

Closing Healthcare's Last-Mile Gap

Idea In Short

Nearly 4.6 billion people still lack access to essential health services, and the fix is not another pilot program. Organizations closing this gap start with the specific constraints of a specific population, then build telemedicine, mobile health, electronic health records and Artificial Intelligence [AI] around those constraints rather than around available technology. Partnerships with governments, insurers and community providers carry innovation the last mile that a single company cannot reach alone. Governance, including data protection and clinical oversight, has to be designed in from the first day, not added once a product works. Leaders who treat underserved markets as smaller versions of developed ones will keep building tools that serve the already served. The decision in front of every healthcare executive now is whether to fund infrastructure built for the populations left out, or to keep optimizing for the ones already in reach.

Global healthcare spending is on pace to reach 12.7 trillion USD by 2027, yet close to 4.6 billion people still lack access to essential health services¹. That figure is not an abstraction. It describes a family managing a chronic illness without a specialist nearby, a pregnant woman in a region with no prenatal care, a mineworker in a remote outback town with no diagnostic equipment for hundreds of miles. The gap between what modern medicine can do and what most of the world can reach is widening, and incremental fixes are no longer enough to close it. What has changed is the nature of the response: across geographies and sectors, healthcare organizations are proving that access barriers can be dismantled through deliberate design, structured partnership and disciplined use of technology, rather than through another well-intentioned pilot that never scales.

The Scale of the Problem Demands Specific Thinking

Broad global statistics tend to flatten the texture of a crisis into something that feels manageable from a distance. In rural communities, an estimated 57% of residents face significant barriers to timely medical care because of geographic isolation and thin resources. In Sub-Saharan Africa, close to 87% of maternal deaths occur in low and lower-

middle income countries, and the majority are preventable with access to skilled care at the right moment. In Indonesia, advanced cardiovascular and cancer treatment sits concentrated on the island of Java, leaving hundreds of millions of people scattered across a 17,000-island archipelago underserved by comparison. Each of these is a distinct problem with a distinct geography, a distinct population profile and a distinct care gap, not a single global shortage that one technology can solve. Innovation efforts that ignore this specificity tend to produce tools that serve the population already being served, refining access for people who had access already. Effective healthcare strategy starts instead by mapping the real constraints of a specific population and building outward from there, rather than starting with a technology and searching for a market to apply it to.

Telemedicine Solves More Than a Distance Problem

When the coronavirus disease 2019 [COVID-19] pandemic hit, telehealth utilization for United States [US] office visits and outpatient care surged to 78 times its pre-pandemic level within two months. That step change was driven by necessity, but it forced a reconsideration of how much care had ever needed to happen in a physical exam room in the first place. McKinsey estimated that a substantial share of US healthcare spending, on the order of a quarter-trillion dollars, could shift toward virtual and home-based care given sustained adoption and deliberate redesign of care pathways². What the pandemic revealed was not a new clinical capability but a latent one:

a meaningful portion of care had long been delivered in expensive, in-person settings not because patients needed it delivered that way, but because no credible alternative had been built and adopted at scale

Telehealth programs in rural settings have since reduced average travel burden by roughly 240 miles per consultation and cut delivery costs by about 35% compared with traditional in-person visits, while patient satisfaction scores rose sharply when a remote option was available alongside an in-person one. For clinicians, virtual platforms have also improved documentation quality, and average waiting time for a specialist consultation dropped from roughly 32 days to eight days on some virtual platforms. These are not abstract efficiency gains. They represent the difference between catching a condition early and managing a

crisis once it has already progressed. Telemedicine extends the reach of clinical infrastructure that already exists; mobile health goes further, placing diagnostic tools directly into a patient's hands in places where that infrastructure barely exists at all.

Mobile Health Extends Care Into Patients' Hands

The mobile health [mHealth] applications market was valued near 58.5 billion USD in 2023 and is projected to reach roughly 158.3 billion USD by 2030³. Much of that growth is concentrated in low and middle-income countries, where smartphone penetration is expanding faster than physical healthcare infrastructure can realistically be built. The specific impact areas are worth naming individually.

- Medication management applications have improved treatment adherence among patients with chronic conditions, reducing complications and avoidable emergency interventions
- Remote patient monitoring through mHealth tools has meaningfully cut hospital readmission rates and lowered emergency department visits
- Preventive care engagement and health literacy scores have both risen across diverse patient populations using these tools

One example illustrates the pattern well. The HeartPrint venture in India lets a user place a finger on a smartphone camera to measure heart rate, respiratory rate, blood pressure and oxygenation, building an early-warning cardiac profile a physician can act on without requiring a clinic visit. HeartPrint has reached roughly 100,000 people to date and offers a model that is both cost-effective and genuinely scalable across other markets facing similar constraints. It is a clear example of digital health tools built deliberately to expand access rather than to add convenience for patients who already had it.

Electronic Health Records Build Continuity, Not Just Convenience

Electronic health record [EHR] adoption is sometimes framed narrowly as a back-office efficiency story, but the fuller picture is more consequential for health equity. More than 99% of non-federal acute care hospitals in the US now use a certified EHR system, up from fewer than 10% in 2008⁴. The infrastructure for shared patient records now exists at near-universal scale; what remains uneven is whether it is actually used to coordinate care across

fragmented systems. The evidence suggests it can be. Hospitals with advanced EHR capabilities report a large majority now able to share patient records seamlessly across different health systems, which has translated into a meaningful decrease in duplicate testing and a reduction in medical errors tied to incomplete information. For patients who are underserved, care is frequently split across multiple disconnected providers, so this kind of continuity is not a convenience but a determinant of outcome. When a patient in a rural clinic is referred to a specialist in a distant city, a record that is shared, accurate and accessible is often what decides whether that referral leads to treatment or to confusion and delay.

Artificial Intelligence Sharpens Where Care Is Failing

Artificial Intelligence [AI] is accelerating the ability to identify who is at risk, where care is failing and which interventions are most likely to work. AI-assisted diagnosis has reached accuracy rates exceeding 92% for specific conditions in radiology and pathology, and AI-driven mental health platforms now reach a majority of their users outside standard office hours, with most first-time users reporting they had never previously spoken with a mental health professional at all. AI is not replacing clinicians in these settings; it is reaching people who were not being reached by any clinician before. Philips has built an AI-enabled obstetric application on its Lumify handheld ultrasound device, designed to support midwives and nurses making point-of-care decisions for high-risk pregnancies, and its SmartPrint application, developed in partnership with the Gates Foundation, aims to improve pregnancy outcomes in remote settings where trained specialists remain scarce. These are specific use cases with specific, measurable stakes attached to them, not speculative technology showcases.

Africa holds just 1.3% of global data-storage capacity despite representing more than 18% of the global population, and of more than 8,000 data centers worldwide, only 152 sit on the continent

That imbalance is not a footnote to the AI story; it is central to it⁵. Limited compute infrastructure, uneven data governance and a shortage of diverse training data all risk producing AI systems that perform well in wealthy markets and fail the populations that need them most. Inclusive design, in this context, is not a values statement executives add to a

slide. It is a technical requirement that determines whether the tool works at all for the people it is meant to serve.

Partnerships Decide Whether Innovation Reaches the Last Mile

Products and platforms do not distribute themselves, and the history of healthcare innovation is full of promising technology that never reached the communities it was built for. What changes that outcome is the ecosystem built around the technology:

public-private partnerships, distribution models, financing structures and the regulatory environment a solution has to operate inside

In Australia, Philips partnered with Heart of Australia to deploy the world's first solar and battery-powered low-dose CT scanner in a mobile truck, bringing lung cancer screening to remote mining communities in Queensland where stable electricity cannot be assumed. In Indonesia, a partnership between Philips and the country's Ministry of Health is establishing a nationwide network of image-guided therapy rooms across hundreds of hospitals, bringing minimally invasive treatment for heart disease, stroke and cancer to populations far outside Java. In the US, a partnership with three Medicaid plans in Georgia is providing connected blood pressure monitors, glucose meters and health coaching to high-risk pregnant women living in maternal health deserts. Virtual clinical trials show what structured access can achieve at a different scale:

rural patient participation in trials has grown sharply through virtual platforms, with the large majority of those participants reporting high satisfaction, which matters enormously for rare-disease research that site-based trials could never reach on their own

In Latin America and India, foundation-backed investments in ventures expanding digital

breast cancer screening, non-communicable disease [NCD] diagnostics and affordable primary care are moving past the pilot stage into models built specifically around communities existing systems had left behind.

Governance Must Be Built In, Not Bolted On

Universal healthcare access will not be achieved through technology alone, and regulatory frameworks, data governance and ethical oversight determine whether an innovation is deployed responsibly at scale or simply deployed fast. In mental health, where AI tools are increasingly used for screening and early support, professional bodies continue to stress that these tools should assist licensed clinicians rather than replace them, since diagnosis and treatment planning for complex cases require human judgment current systems cannot replicate. Growth in this market without accountability carries real risk:

algorithmic bias, data privacy failures and overreliance on automated tools without clinical review

Blockchain is one approach organizations are using to strengthen data integrity at scale, with research across dozens of healthcare institutions finding meaningful improvements in data integrity and reductions in healthcare data breaches where the technology has been implemented⁶. Pharmaceutical supply chain tracking through blockchain has also cut counterfeit medication incidents sharply in the markets where it has been piloted. Rwanda's data protection law, Kenya's regulatory sandbox for health AI and the European Union's AI Act each reflect an attempt to build governance proportionate to the risk involved, and the challenge ahead is ensuring compliance requirements do not become a barrier that only well-resourced organizations can clear. Governance built in from the first day of a strategy, rather than added once a technology is ready, is what makes that strategy viable in markets where the margin for error is thinnest.

What a Genuine Innovation Strategy Requires

Organizations making real progress on healthcare access share a small set of common attributes. Their strategies begin with the specific constraints of a specific population rather

than with the technology they already have on hand. They invest in partnerships that extend their reach well beyond their own organizational boundaries. They design the full care journey a patient experiences rather than a single isolated intervention, and they build financial sustainability into the model from the outset rather than assuming a grant or a pilot budget will carry it indefinitely. This level of execution demands more than good intent; it requires structured strategic capability, the discipline to translate a vision into scalable outcomes across environments that are complex and genuinely resource-constrained. Healthcare strategy is increasingly recognizing that underserved markets are not simply smaller versions of developed ones. They require different assumptions about infrastructure, different distribution models, different data architectures and, in many cases, a different definition of what success actually looks like.

- 1Universal Health Coverage [UHC]
- 2The Doctor Is In — The Video Call
- 3MHealth Market To Reach \$158.3 Billion By 2030
- 4Non-Federal Acute Care Hospital Electronic Health Record Adoption
- 5Are Africa's Power Grids Ready For The AI Data Centre Boom?
- 6Using Blockchain To Drive Supply Chain Transparency And Innovation

Summary

Healthcare access has become a strategy problem before it is a technology problem. Telemedicine, mobile health, electronic health records, Artificial Intelligence and blockchain each address a distinct piece of the access gap, and their impact depends entirely on how deliberately they are combined with distribution, financing and governance. The organizations narrowing the gap between healthcare demand and healthcare delivery are those that mapped a population's real constraints before choosing a technology, then built partnerships to carry that solution past the pilot stage. Governance built in from the outset, rather than added after deployment, is what lets these efforts scale without harming the people they are meant to serve. The tools required already exist in mature form. What remains is the strategic discipline to direct capital, partnerships and oversight toward the populations that have been left out of healthcare systems built for someone else.