but there is no specific mention of South Africa, the epicenter of the global HIV epidemic, nor of Nigeria or the Democratic Republic of Congo, where the burden of malaria is highly concentrated. The United States may end up overly prioritizing countries that are geopolitically important, rather than those where partnerships are most needed to fight infectious diseases.

Finally, there is the challenge of integration itself — determining how to sustainably integrate large-scale HIV, tuberculosis, and malaria programs into national health systems without losing the gains these programs have achieved. Such integration will require careful planning, strong country leadership, and clear metrics to track progress. The U.S. administration could revise its strategy to adopt expanded indicators for monitoring progress, not only for HIV, tuberculosis, malaria, and polio, but for reproductive, maternal, newborn, and child health and noncommunicable disease outcomes, which would provide opportunities to clearly measure the plan's effectiveness in supporting the construction of more resilient and integrated health systems.

A retreat from multilateralism, a geopolitical emphasis, and rushed transitions threaten the success of the new U.S. global health strategy. Renewed commitments to reformed regional and global partnerships and thoughtful transitions could strengthen shared defenses and shore up improvements in health outcomes resulting from years of investment. Whether this strategy evolves to support pragmatic cooperation and more resilient health systems or leads to a zero-sum contest for influence will determine the fate of U.S. global health leadership.

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This article was published on November 29, 2025, at NEJM.org.

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DOI: 10.1056/NEJMp2514898

From Bandwidth to Bedside — Bringing AI-Enabled Care to Rural America

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Anna, 82 years old, lives alone in a weather-worn farmhouse 2 hours from the nearest hospital. When her artificial intelligence (AI)–enabled scale and smartwatch flagged weight gain and slowed gait, the alert reached her daughter Maria by text. But false alarms, unreliable broadband, and years of fragmented care had eroded Maria's trust in these technologies. She waited until the next day to visit, arriving to find her mother in significant respiratory distress from pulmonary edema. The system had been right, technically, but the message lacked context. For Maria, deciding whether to act on the alert felt more like a gamble than a guarantee.

Rural health care has always relied more on relationships than on devices — neighbors who stop by unasked, clinicians who make house calls after hours, grown children who drive in when they can. All are part of the extended social support network of rural America, an informal but resilient web of human connection that enables older adults to age in place.[1] AI can bolster — but also fracture — the informal support network that is rural medicine's lifeline. Whether it helps depends on design choices that respect limited bandwidth, honor local culture, and maintain fragile community trust.

Critics rightfully ask: If rural health care thrives on relationships, why invest in AI rather than, say, more nurses? But rural America faces a severe nursing shortage the system cannot hire its way out

of — there aren't enough clinicians willing to relocate. And AI isn't replacing nurses; it's augmenting their care. A rural nurse managing the care of dozens of patients across hundreds of square miles can leverage AI to rapidly triage cases. Predictive algorithms can alert emergency medical technicians hours before crises strike. Automated documentation saves precious hours that can be used for human connection. The choice, in our view, isn't technology versus humanity; it's between watching rural health care infrastructure collapse and using every available tool to sustain it and help Americans thrive.

AI is increasingly being positioned as a tool for transforming rural care delivery. At Dartmouth Health, for example, where two of us work, we built an AI-powered triage system that parses thousands of patient messages each week to help clinical teams identify and prioritize urgent concerns.[2] Predictive models can flag early signs of clinical deterioration hours before symptoms are obvious. A new AI-powered ambient dictation system helps clinicians spend more time with patients and less time charting in the electronic medical record. AI-powered conversational agents offer companionship between visits, especially in areas where behavioral health services are scarce.

But the very factors that make rural populations vulnerable — uneven broadband coverage, fragmented care, overextended caregiver networks — also render them invisible to algorithms trained on urban data. Language becomes a barrier when algorithms encounter rural vernacular. AI systems trained on urban emergency department documentation might miss the urgency when a stoic farmer says, "I'm feeling a bit poorly." Rural phrases like "I'll make do" can confound natural language processing designed for the more direct communication style of many urban populations. These aren't mere dialectical quirks; they're patterns of a culture in which understatement and minimizing suffering are a virtue and "not wanting to be a bother" may mask serious symptoms.

Moreover, even when AI can parse these cultural codes, the message may never reach its destination. Broadband Internet access — which is considered a "superdeterminant" of health, influencing everything from telehealth access to employment prospects[3] — remains frustratingly scarce. Older adults in rural ZIP codes are 1.6 times more likely to lack in-home Internet service than their urban peers.[4]

For AI to synergize with and not disrupt rural care delivery, it must be integrated into the social support network that sustains patients in their homes and communities. That means systems must offer actionable insights in plain language, accommodate local caregiving norms and infrastructure gaps, and support hybrid models that combine digital tools with human follow-up — whether in the form of a neighbor's knock or a paramedic's visit. Just as important, these technologies must be governed by local stakeholders who understand the relational and logistic realities of rural life. These realities grow starker as rural hospitals close and emergency

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In our rural health system, we have seen technically sound models stumble once they collide with the lived realities of the communities they are meant to serve. An AI-powered triage tool that filters thousands of patient messages each week can misfire when people describe symptoms in indirect or context-dependent ways. An alert sent to a cell-service dead zone is an alert that goes unheard. And every missed opportunity chips away at the single most precious rural asset: trust. Design choices deepen these failures: when interfaces ignore the limitations of aging eyes by using tiny fonts and unfamiliar symbols or can't accommodate users with hearing loss, they exclude the very population most needing support — rural older adults managing multiple chronic conditions alone.

medical services agencies struggle to respond. AI must function even when traditional infrastructure fails. The table outlines four common use cases for AI in rural settings, mapping each to real-world constraints, the risks if the tool is misaligned with the culture, and strategies for embedding these tools into the trust-based systems that rural communities rely on.

Policy must evolve alongside technology if AI is to strengthen, rather than undermine, rural care delivery. We believe that federal regulators should require developers to disclose the geographic distribution of training data used to develop AI systems and reward with expedited review or enhanced reimbursement those that include rural populations. Broadband investment must move beyond infrastructure alone; federal funding should be tied to measurable digital-health access benchmarks, such as timely delivery of remote-monitoring alerts. Medicare should reimburse for AI-enabled monitoring only when it's paired with documented human follow-up, ensuring that automation complements, rather than replaces, relational care.

Rural health systems also need support to establish local AI governance boards made up of clinicians, patients, and community members who guide the adoption of tools on the basis of not only performance, but also cultural fit and social trust. Before deploying AI, communities need infrastructure assessments mapping broadband coverage, emergency-response capabilities, and caregiver networks.

Imagine a different version of Anna and Maria's story. Recent broadband-equity funds have finally reached Anna's hillside, erasing the digital dead zone that once left her community with less connectivity than its urban peers. When Anna's scale and smartwatch register a 2-lb weight gain and slowing steps, the raw data are converted into a plain-English alert, "Possible fluid build-up," which is beamed out to Maria. The message lands on Maria's phone with a single, reassuring option to request a nurse callback; it also appears on a community paramedic dashboard and pings the on-call nurse. Within a few minutes, the nurse explains the situation to Maria, assessing the risk, and confirms that a paramedic is en route. The paramedic arrives, administers IV furosemide, and schedules a same-day video check-in with Anna's cardiologist. No emergency transport, no ICU admission for pulmonary edema, just the same sensors working inside a trust-rich, human-reinforced system.

Now, Anna's survival hinges less on how finely an algorithm parses data than on whether its warning travels along a digital highway she and her daughter trust. These rural lessons about trust and human–AI partnership apply everywhere; for example, urban safety nets for immigrant communities face similar challenges. The fate of AI in rural medicine will be shaped not in sterile server farms but at kitchen tables, over backyard fences, and on front porches — the very places where social support has always done its quiet, steadfast work.

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Artificial Intelligence (AI) in Rural Care Delivery — Promise, Constraints, Risks, and Alignment Strategies.

Use of AI	Promise	Systemic Constraint	Risk if Misaligned	Recommended Alignment Strategy
Predictive monitoring	Detect early signs of clinical deterioration	Limited broadband; weak sensor integration	Alarm fatigue; delayed response	Pair alerts with local caregiver networks; use hybrid models (digital plus human); train on rural data
Triage tools	Prioritize urgent concerns from patient messages	Message ambiguity; indirect symptom reporting; rural vernacular, colloquialisms, understatement	Missed urgency; eroded trust	Train on rural communication patterns; embed human oversight; decode cultural stoicism
Conversational agents	Reduce loneliness; support mental health	Cultural mismatch; low digital literacy	Emotional detachment; loss of relational care	Codesign with older adults; align voice and tone with local norms; use large text, better fine tuning of volume control, clear interfaces
Caregiver-support tools	Assist families with decision making and reminders	Fragmented caregiving networks; variable digital access	Misinterpretation; overreliance on automation	Create context-aware prompts tailored to rural caregiving dynamics

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This article was published on November 29, 2025, at NEJM.org.

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DOI: 10.1056/NEJMp2509491