



INNOVATIONS IN
HEALTHCARE™

Penda Health Case Study

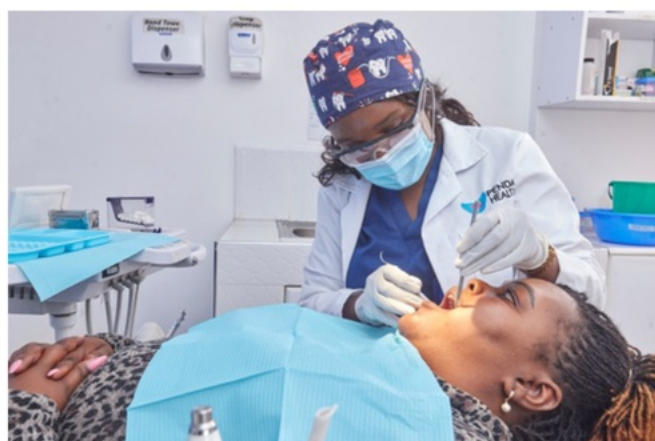
Strengthening Primary Care through Clinical Decision Support and GHIG Partnership

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Executive Summary

Penda Health, a Nairobi-based network of outpatient medical centers, has emerged as a leader in delivering affordable, high-quality primary care in Kenya. Through its participation in the Global Health Innovation Grants (GHIG) program, funded by the Pfizer Foundation, Penda Health significantly advanced its capacity to improve clinical outcomes, reduce unnecessary antibiotic use, and develop scalable digital health solutions. The GHIG program is designed to support health innovations that address critical challenges in low- and middle-income countries (LMICs) by providing catalytic funding and technical support to social enterprises and local implementers. For Penda Health, GHIG was not simply a source of funding, but it served as a foundational partner in strengthening the organization's clinical systems and enabling its continued innovation and expansion.



Between 2020 and 2022, Penda Health leveraged GHIG funding to design and deploy clinical decision support (CDS) tools integrated into its electronic medical records (EMR) system. These tools directly addressed Kenya's growing crisis of antimicrobial resistance and helped embed evidence-based clinical practices across Penda Health's network. In parallel, Penda Health conducted extensive provider training and patient education to support responsible antibiotic use and build a culture of quality care. The achievements made possible through GHIG funding not only improved patient outcomes and institutional capacity, but also positioned Penda Health for continued growth, including a large-scale randomized controlled trial now funded by the Gates Foundation. This case study explores Penda Health's vision, accomplishments, and the broader implications of GHIG's investment in health system strengthening through innovation.

Background

Penda Health operates a network of medical centers in urban Kenya, serving hundreds of thousands of patients annually. As a social enterprise, Penda Health is committed to making high-quality healthcare accessible while remaining financially sustainable. Over the past several years, the organization has embraced digital transformation and evidence-based clinical protocols to raise the standard of care in primary health facilities.



In 2012, Penda Health joined the Innovations in Healthcare (IiH) network, through which IiH provided ongoing strategic support, peer learning opportunities, and visibility—including regular invitations to the IiH Annual Forum. IiH also provided direct support to Penda while the organization participated in five cohorts of the Global Health Innovation Grants (GHIG) program (GHIG1 in 2016, GHIG2 in 2017, GHIG4 in 2019, GHIG5 in 2020, and GHIG6 in 2021), helping position Penda Health to implement GHIG funding effectively and achieve the results described in this case study. During GHIG6, Penda focused specifically on reducing the overprescription of antibiotics, a leading contributor to antimicrobial resistance in Kenya.

The GHIG program, led by the Pfizer Foundation, supports early- and mid-stage health innovations that aim to improve healthcare delivery in LMICs. The program seeks to advance patient outcomes through context-relevant, locally-led solutions with the potential for scale. Penda Health was selected to participate in multiple GHIG cohorts, with its most recent grant concluding in late 2022 during GHIG's sixth cohort. This partnership focused specifically on addressing the overprescription of antibiotics, a leading contributor to antimicrobial resistance in Kenya.

Vision and Strategic Focus

At the outset of its GHIG6 engagement, Penda Health identified antimicrobial resistance as a critical threat to the communities it serves. Studies show that nearly half of all antibiotic prescriptions in Kenya are deemed unnecessary, contributing to an urgent public health issue. Penda Health aimed to address this by strengthening clinical decision-making, building clinician capacity, and educating patients on the responsible use of antibiotics.

The project centered on integrating national and World Health Organization (WHO) treatment guidelines into Penda Health's EMR system. In doing so, Penda Health sought to institutionalize adherence to clinical best practices across its provider network. To support this shift, the organization developed a comprehensive training program for clinicians, combining case-based learning with communication skills tailored to help patients understand when antibiotic use is not necessary. Patient-facing education also played a central role, reinforcing behavior change and trust in provider decisions.

Impact at a Glance



82%

Adherence to National
Guidelines

vs. 40% National Average



90%

Clinical Visits Supported
by CDS Tools



60+

Standardized Treatment
Protocols



80%

Repeat Patient Rate



72

Net Promoter Score
(2022)



10,000+

Patients in Gates
Foundation RCT

Key Achievements and Impact

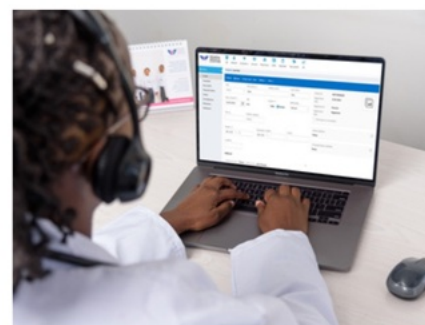
During the GHIG6 grant period, which spanned from December 2021 to November 2022, Penda Health achieved several significant outcomes. The organization successfully developed standardized treatment guidelines for more than sixty conditions, aligned with WHO and the Kenyan national protocols. These guidelines were fully integrated into Penda Health's EMR system, resulting in an impressive 82 percent adherence rate to national medical guidelines - more than twice the national average. By the end of the project period, 90 percent of all clinical visits were supported by CDS tools, enhancing diagnostic accuracy and reducing unnecessary prescriptions.

The implementation of these systems was complemented by rigorous provider training. Clinicians received ongoing support to ensure that they not only understood the guidelines but were also equipped to communicate effectively with patients about appropriate care. This was particularly important in shifting both provider habits and patient expectations around antibiotic use. Patient satisfaction remained high throughout the process, with 80 percent of monthly visits coming from repeat clients and an average net promoter score of 72 in 2022.

These improvements had a lasting institutional effect. According to Robert (Rob) Korom, MD, Chief Medical Officer at Penda Health, the CDS innovations developed under GHIG laid the groundwork for future growth and influence. The organization is now leading one of the largest randomized controlled trials of AI-powered clinical decision support in primary care, with more than 10,000 patients enrolled and funding from the Gates Foundation. This expansion was made possible by the organizational capacity and credibility developed during its GHIG projects.

Institutional Learning and Capacity Building

Beyond immediate programmatic success, GHIG funding contributed to Penda Health's broader institutional development. Working with GHIG introduced the organization to a more structured model of project management, characterized by clear timelines, quarterly check-ins, and consistent reflection on progress. This helped establish a cadence for internal accountability and adaptive learning, which now informs Penda's broader operational strategy. While the project faced challenges, including regulatory delays in securing licenses for new clinic models, GHIG's flexibility allowed the team to modify timelines and adjust deliverables without sacrificing quality. Additionally, GHIG's design as an entrepreneur-friendly program was repeatedly praised by Penda Health's leadership. The application and reporting requirements were seen as appropriately rigorous yet accessible for growing organizations.



Scaling Innovation and Community Impact

Penda Health's CDS initiative had a ripple effect beyond its own facilities. As a respected provider in Kenya's private health sector, Penda Health's adoption of tech-enabled care raised the bar for quality among its peers. As more patients experienced structured, evidence-based care, expectations around service quality and clinical accuracy began to shift. This dynamic, according to Dr. Korom, created market incentives for other providers to improve their own standards, fostering a healthier and more accountable care ecosystem. Additionally, GHIG-supported initiatives required engagement with multiple regulatory bodies, including the Kenya Ministry of Health and the Pharmacy and Poisons Board. These relationships enhanced Penda's ability to influence and align with national policy, while also increasing its credibility and reach within the health innovation landscape.

Conclusion

GHIG funding played a pivotal role in helping Penda Health advance its mission of delivering quality, affordable healthcare in Kenya. By enabling the design and implementation of clinical decision support tools, GHIG not only improved Penda Health's internal systems but also positioned the organization to secure larger grants and scale its innovations. The program's flexibility, funding, and reporting design made it a particularly effective tool for supporting early-stage health system improvements. Looking ahead, Penda Health recommends that funders continue to prioritize organizations with a clear path to sustainability, especially those generating earned revenue alongside grant funding.

Penda Health's experience demonstrates the far-reaching potential of well-designed catalytic funding. Through GHIG, this investment helped lay the foundation for Penda Health's digital health leadership enabling the organization to contribute to a more responsive and resilient primary care system, while offering a powerful model of how localized, systems-level innovation can drive measurable impact in global health.



Authorship and Affiliations

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About Innovations in Healthcare

[Innovations in Healthcare](#) is a nonprofit organization hosted by Duke University and founded in 2011 by Duke Health, McKinsey & Company, and the World Economic Forum. Our mission is to increase access to quality, affordable healthcare worldwide by scaling leading innovations. We work with over 100 healthcare entrepreneurs in more than 90 countries and provide capacity-building training and consulting to healthcare systems throughout the world. We work closely with our partner, the Duke Global Health Innovation Center, toward our shared vision of a world where innovation improves health for all. By combining academic excellence and global engagement to improve health, we improve access to quality, affordable healthcare worldwide.

