INNOVATIONS IN HEALTHCARE

INNOVATOR CASE STUDY

mDoc

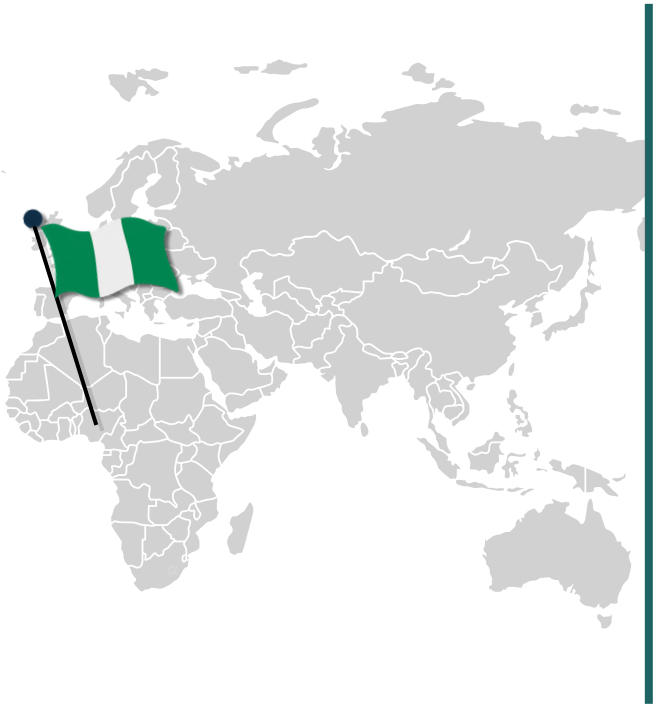
Offering an AI-Supported, "High-Tech, High-Touch" Model for Noncommunicable Disease Care in Nigeria

October 30, 2026

The Global Health Innovation Grants (GHIG) program focuses on fostering the growth and scale of health-focused innovations and social entrepreneurs in low- and middle-income countries (LMICs) through one-year grants. Since 2016, IiH has worked with grantees to identify metrics that align with their project objectives and activities. Analyzing this data, IiH provides an assessment of the portfolio in each cohort, as well as over time, to identify areas for improvement for the program. This case study is one of six from the GHIG9 grantee cohort.

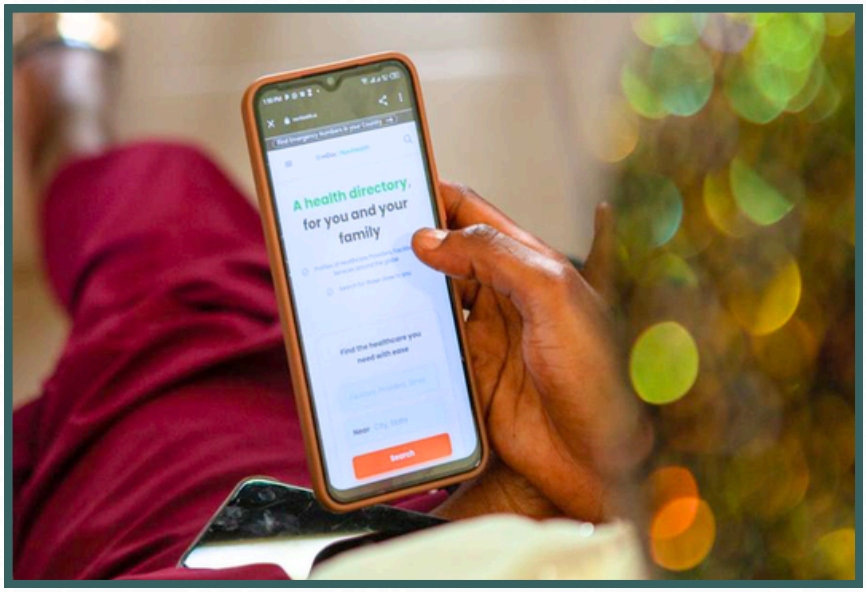
1. Company and Innovation Overview

mDoc Healthcare is a Nigeria-based digital health social enterprise that combines artificial intelligence (AI), behavioral science, and quality improvement methodologies to support individuals living with or at risk for chronic health conditions such as hypertension and diabetes, and regular health needs such as pregnancy. The company provides a **"high-tech, high-touch" self-care model**, allowing members to have access to **24/7 virtual self-care support** with a multidisciplinary team of health coaches, nutritionists, and fitness coaches, via chats, calls, and educational materials with oversight from clinicians. Among the company's digital offerings, Kem™ is mDoc's AI-powered self-care health coach, built to be available for members whenever they need it.



Industry/ Sector	Digital health; chronic disease management, noncommunicable diseases (NCDs), telehealth
Geographic Focus	Nigeria
Year Founded	2013

Business Type	For profit
Headquarters	Lagos, Nigeria
AI Innovation	AI-enabled virtual self-care coaching and digital decision support for individuals living with or at risk for chronic health conditions.



A member engages with NaviHealth.ai™, mDoc's geo-coded digital directory that helps users identify appropriate nearby healthcare providers and referral options. Photo credit: mDoc Healthcare.

The combination of expert support and personalized AI guidance allows mDoc to provide continuous, context-appropriate self-care and behavioral coaching at scale. While the AI component enhances service delivery, it does not replace human care. Instead, AI is used to redesign care models that extend the reach of human coaches, build trust, and adapt to local language and culture.

As a recipient of the 9th Global Health Innovation Grant (GHIG9), mDoc illustrates how **AI can be integrated into a for-profit noncommunicable disease (NCD) care model while prioritizing access for low-income and last-mile populations**. This case study shows that the AI-enabled, "high-tech, high-touch" self-care ecosystem can provide continuous NCD care for these populations in Nigeria when it is embedded in human-centered delivery and supported by adaptive partnerships and financing.

2. Problem Definition and Context

Along with the global shift in disease burden from communicable to noncommunicable conditions (NCDs), Nigeria is experiencing a **rapid rise in NCDs**, including cardiovascular disease, diabetes, cancer, and chronic respiratory disease. According to World Health Organization estimates, NCDs accounted for about 27% of all deaths in Nigeria in 2019.[1] Systematic reviews suggest that approximately one in three Nigerian adults has hypertension, making high blood pressure a major and widespread risk factor for cardiovascular disease.[2] At the same time, **Nigeria accounts for 20% of global maternal deaths**, with NCDs contributing substantially to those deaths and disproportionately affecting women of reproductive age.[3] Beyond disease burden, patients in Nigeria often **struggle to access continuous, affordable care**. This leads to weak continuity of care between clinic visits, low awareness and control of hypertension, and **limited health literacy** that further hinder effective NCD prevention and management, especially among women in low-income and last-mile populations.[4]

3. The Solution

To address the status quo in NCD care in Nigeria, mDoc aims to **make self-care the "new norm"** for individuals living with or at risk of chronic conditions. Complementary to clinic-based treatment, which is often hard to access and episodic, **mDoc has built a platform through which members can receive continuous behavioral coaching and AI-enabled self-care** support that fits into daily routines. By helping people living with or at risk of conditions such as hypertension, diabetes, cancer, obesity, and mental health problems to understand their health, adopt healthier habits, and stay on treatment, mDoc aims to manage NCDs and prevent complications and new NCD cases over time.

mDoc's AI innovation goes beyond a simple "digital add-on" and represents a meaningful redesign of NCD care delivery. Unlike many digital health coaching tools that provide digital-only interactions, mDoc's model explicitly **combines advanced AI with strong human and community touchpoints through its "high-tech, high-touch" approach**.

mDoc's model provides four pillars of service:

- **CompleteHealth**™ is mDoc's core digital platform and mobile app, where members track their health metrics over time, receive reminders and behavioral nudges, and take part in coach-led virtual self-care programs. Through CompleteHealth™, members also connect with their health coaches—who co-create personalized health goals and action plans with them—and with Kem™, mDoc's AI self-care coach, for daily support in between clinic visits, enabling longitudinal health monitoring and building members' self-efficacy to manage their health.
- **NaviHealth.ai**™ is a geo-coded digital directory that directs members to suitable health facilities and services. It maps hospitals, clinics, labs, and pharmacies, enabling members and coaches to identify appropriate, quality providers and referral options. Members can also provide feedback on their experiences with healthcare providers across six key quality domains (safe, effective, person-centered, timely, efficient, and equitable), informed by the National Academy of Medicine. NaviHealth.ai™ leverages member experience data to generate insights that help providers identify and focus their quality improvement efforts on the areas of care that matter most to members.
- **NudgeHubs**™ are community-based, technology-enabled hubs that provide in-person support to members and the wider community. Located within and around high foot-traffic locations such as markets, they support lifestyle and behavioral change through health education, health screenings, telehealth consultations, exercise, and nutrition group classes.
- Lastly, the **mDoc Quality Network** (MQN™) provides capacity-building opportunities through in-person training and tele-education for healthcare workers, leaders, and other groups, while supporting organizations to become training hubs. Through MQN™, mDoc also provides strategic guidance to leading international and local health organizations and policy-makers on strategy and quality improvement.

mDoc has demonstrated **consistent growth** in reach and service activity, enrolling more than 195,000 members, logging over 2.93 million

A member interacts with Kem™, mDoc's AI-enabled self-care health coach embedded within CompleteHealth™, as part of mDoc's high-tech, high-touch self-care model. Photo credit: mDoc Healthcare.

Impact at a Glance*

195,000+	Members enrolled since deployment
2.93M+	Interactions
17,700+	Health workers trained
75%	Members with chronic health conditions showed clinical improvement

**Figures as of October 19, 2026.*

interactions across its digital and in-person channels, and training more than 17,700 frontline health workers through MQN™. Among systematically tracked members living with a chronic physical or mental health condition who recorded at least one follow-up, approximately 75% reached clinical control.

4. Implementation Strategy

mDoc partners with employers, health insurers, government programs, and patient associations, such as those for diabetes and hypertension, to reach members, with services co-financed through volume-based or subsidized arrangements. A multidisciplinary team of clinicians, machine learning (ML) engineers, behavioral scientists, and quality-improvement experts designs, validates, and refines the service based on real-world use.

5. Navigating Real-World Constraints

mDoc faced several challenges while implementing its solution in low- and middle-income countries (LMIC) health systems. A key technical challenge for mDoc has been the **paucity of high-quality, locally representative datasets** from Nigeria. Since most large language models (LLMs) are trained primarily based on Western data, adopting **generic models will not accurately reflect Nigerian culture, language,** or care pathways. Hence, mDoc had to invest heavily in **curating its local datasets** to support both English and Nigerian Pidgin and also build a multidisciplinary clinical validation process with clinicians, behavioral scientists, ML engineers, and quality-improvement specialists to review and refine Kem™'s performance over time.

Building trust among local communities and users presents an important opportunity. The key to mDoc's successful intervention lies in fostering strong relationships within communities that may have **limited exposure to AI and lower levels of health and/or digital literacy**. By emphasizing collaboration and ensuring that digital interventions complement rather than replace human engagement, mDoc helps build confidence in new technologies. For individuals with lower digital and health literacy, NudgeHubs™ offer supportive, in-person coaching and gatherings that encourage learning and address any concerns or uncertainties.

> ***"The challenge has not been regulation itself, but regulatory uncertainty. Data protection rules are relatively clear; however, AI governance is still evolving."***
> *– Rodrick Mwale, Project Associate*
> *mDoc Healthcare*

On the regulatory side, mDoc faces another challenge regarding the **rapidly changing policy environment around AI governance**. While mDoc has aligned its systems with the Nigerian Data Protection Act (NDPA) 2023 and is consistent with the General Application and Implementation Directive (GAID, 2025), regulation specific to AI is still incomplete and evolving rapidly. As a result, mDoc has adopted a proactive approach to responsible AI development and deployment, ensuring that appropriate data protection, safety, and human oversight measures are incorporated.

Lastly, as a for-profit social enterprise serving low-income communities, mDoc faces persistent

financial and structural constraints. mDoc serves people who often live on less than USD$2 a day, and the majority have no health insurance, with a fragmented payer system and high out-of-pocket rates for health spending. This makes it difficult to charge prices that fully cover the costs of a high-tech, high-touch model. Traditional **venture capital models** that are built around rapid exits and high margins **have not worked well** for similar health startups on the continent and would clash with mDoc's core goal of delivering impact for low-income members. In response, mDoc has relied on non-dilutive grants, tiered pricing in which higher-income segments help subsidize low-income members, and subsidized or volume-based contracts with employers, insurers, and government programs. However, it remains uncertain whether this mix of grants and cross-subsidies can fully sustain the model in the long term as donor funding declines and the organization continues to scale.

6. Business Model and Expected Impact

To create a sustainable for-profit model in Nigeria, mDoc diversified its revenue streams by establishing several channels. Through direct contracts with employers and member-based associations (B2B), mDoc enables employees and members to access CompleteHealth™ and related services. The **business-to-business-to-consumer (B2B2C) approach extends reach** to individuals who may otherwise be unable to enroll independently. Increasingly, mDoc is partnering with state health insurance agencies and public programs (B2G) to provide services for defined populations. Grants and non-dilutive funding have also supported product development and the early scaling of the CompleteHealth™ platform, especially during and after the COVID-19 pandemic.

mDoc's model delivers both short- and long-term impact. In the short term, members experience improvements in health literacy, self-efficacy to manage health, healthy behaviors (diet, exercise, medication adherence), and clinical outcomes such as blood pressure and glucose control, achieved through ongoing digital and human coaching. Retrospective analyses indicate that highly engaged users see greater reductions in blood pressure over six months compared to less-engaged users, demonstrating direct clinical benefit. The long-term vision is to reduce complications, hospitalizations, and maternal deaths related to NCDs, particularly among women of reproductive age, while simultaneously building provider capacity through MQN™ and strengthening primary care responses to NCDs.

mDoc members at a Kem™ user testing event in Lagos, Nigeria. Photo credit: mDoc Healthcare.

mDoc members receive health checks during a community outreach at Bariga Market, Lagos, Nigeria. Photo credit: mDoc Healthcare.

7. Government Adoption and Public Sector Role

By expanding business-to-government (B2G) relationships, mDoc is increasingly operating within Nigeria's public health system. The company **collaborates with state health insurance agencies and other government entities** to enroll large groups of low-income, hard-to-reach members through public insurance and government programs, reducing reliance on individual out-of-pocket payments. These partnerships offer subsidized per-member rates and volume targets, allowing governments to share financial responsibility while integrating mDoc's AI-enabled self-care, coaching, and referral tools into public benefit packages. This approach supports government efforts to expand NCD prevention and primary care, while advancing mDoc's goals of scale and equity.

8. New Areas to Explore

Looking ahead, mDoc has multiple opportunities to strengthen and extend AI-enabled self-care coaching through its high-tech, high-touch ecosystem. To deepen equitable access, mDoc is working on rolling out Kem™ in **more local languages, such as Hausa, Yoruba, and Igbo,** so more Nigerians can engage with the service in their preferred language. Another area of focus is **deeper integration with the health system**, including integrating mDoc's AI-enabled and digital self-care with the Lagos State primary healthcare system to enable closed-loop referrals, so there is visibility on referral completion and outcomes. For long-term sustainability, mDoc can continue to **refine pricing and access models** across its B2B, B2B2C, B2C, and B2G channels, ensuring affordability for low-income and last-mile populations as the service scales through employers and public health systems. Together, these steps can strengthen the reach and continuity of mDoc's high-tech, high-touch model while supporting more coordinated NCD and cancer care in Nigeria. ★

Sources

1. World Health Organization Regional Office for Africa. Nigeria: country disease outlook [Internet]. [cited 2026 Jul 19]. Available from: https://www.afro.who.int/sites/default/files/2023-08/Nigeria.pdf.
2. Ogboye A, Rahman KMJ, Odukwe A, Mobisson N. Digital interventions to drive self-management in people with hypertension. J Hypertens [Internet]. 2022 [cited 2026 Jul 19]. Available from: https://www.ovid.com/jnls/jhypertension/fulltext/10.1097/01.hjh.0000837432.81318.9f~digital-interventions-to-drive-self-management-in-people.
3. World Health Organization. Maternal health in Nigeria: generating information for action [Internet]. 2019 Jun 25 [cited 2026 Jul 19]. Available from: https://www.who.int/news/item/25-06-2019-maternal-health-in-nigeria-generating-information-for-action.
4. Nwankwo M, Makena W, Idris A, et al. Prevalence of hypertension among adults in Nigeria: a systematic review and meta-analysis. BMC Cardiovasc Disord. 2026;26:330. Available from: https://doi:10.1186/s12872-026-05722-y.

AI Disclosure

During the preparation of this case study, the authors used Zoom's built-in AI transcription to transcribe interviews and Claude Opus 4.8 to improve the readability and flow of the manuscript. The editor used Canva AI tools to generate and edit maps. After using these tools, the authors and editor reviewed the content as needed to ensure accurate representation of the information.

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