Transforming Primary Health with Scalable Digital Referral System

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Introduction/background: Poor quality of care within the Tanzanian primary health system contributes to more than 600,000 preventable deaths for under-five-year-olds and 9,000 preventable maternal deaths each year (Tanzania DHS 2015). A key contributor is the lack of coordination between three healthcare providers: Accredited Drug Dispensing Outlets, Health Facilities, and Community Health Workers. The Afya-Tek program, implemented July 2020, aims to improve coordination among providers through a digital referral system focused on maternal, child, and adolescent health, intending to strengthen primary care and ensure quality care is accessible.

Methods: The Afya-Tek digital system was designed and developed over 12 months following the Principles for Digital Development, promoting designing with the user, building on the existing ecosystem, and designing for scale and sustainability. We implemented this approach by conducting human-centered workshops with program beneficiaries, health providers, and government officials, developing in line with government requirements and end-user priorities, and utilizing open-source technology that is interoperable with existing government systems.

Results and Conclusions: Through the Afya-Tek program, we have created, as far we are aware, the first fully digitized primary healthcare referral system—supported by unique biometric identification—that provides a continuum of care spanning public and private healthcare services in sub-Saharan Africa. Over 1403,000 individuals are enrolled so far.

Recommendation: The launch of this model is a significant accomplishment because most health programs target micro-level health systems improvements—focused on one aspect of care at the facility or community level (Kruk et al., 2018), while the Afya-Tek program has succeeded in deploying a macro-level, system-wide intervention with the potential to transform the primary healthcare system at scale in Tanzania. With the system live, the program is validated and ready to scale to other locations to improve primary health care quality.