Viable Reimbursement and Financing Models for mHealth Interventions in Sub-Saharan Africa: A Narrative Review

HTA356

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Key findings

The current financing landscape for mobile health (mHealth) in Sub-Saharan Africa (SSA) is defined by a public sector that is chronically underfunded and a private sector that is over-reliant on donor funding.

While the public sector is hampered by nascent regulatory frameworks and poor infrastructure, the private sector is home to exciting innovations.

Key challenges include competing health priorities, poor digital infrastructure, and an immature regulatory environment. However, widespread mobile penetration and FinTech innovation create a unique opportunity to leapfrog these traditional deficits and develop novel, scalable solutions.

Emerging financing models such as Blended Finance, Results-Based Financing (RBF), Impact Bonds, and Integrated Revenue Platforms show promise, but their success hinges on the concurrent development of supportive regulatory frameworks and adequate digital infrastructure.

Introduction

SSA accounts for a disproportionate amount of global disease burden but allocates the least amount of resources to healthcare. 1,2

Low government spending (average 7.2%, which is far below the 15% Abuja Declaration target) and the severe impact of out-of-pocket expenditure push 150 million Africans into, or deeper into, poverty.^{3,4}

Mobile health (mHealth) has emerged as a promising solution with the region's high mobile penetration and growing digital payment ecosystem.⁵

However, in order for these solutions to become sustainable, they require viable reimbursement and financing models.

Objectives

- 1. Map the current evidence on financing models for mHealth in SSA.
- 2. Determine the structural enablers and barriers that affect viability.
- 3. Identify key trends and innovations moving towards viable reimbursement and financing models.

Methods

Methodology: A narrative review of academic literature (PubMed, Google Scholar) and targeted analysis of policy documents from global health organisations.

Analysis: Thematic analysis to categorise financing models, identify trends, and elucidate structural enablers and barriers.

Results

Public sector challenges

The public sector's ability to finance mHealth is **severely constrained by a challenging macroeconomic environment**. The most pertinent challenges include:

- Persistent infrastructure gaps that create a significant digital divide⁶
- A regulatory vacuum regarding digital health and data protection⁷
- A lack of tailored cost-effectiveness methodologies to justify public budget allocation⁸

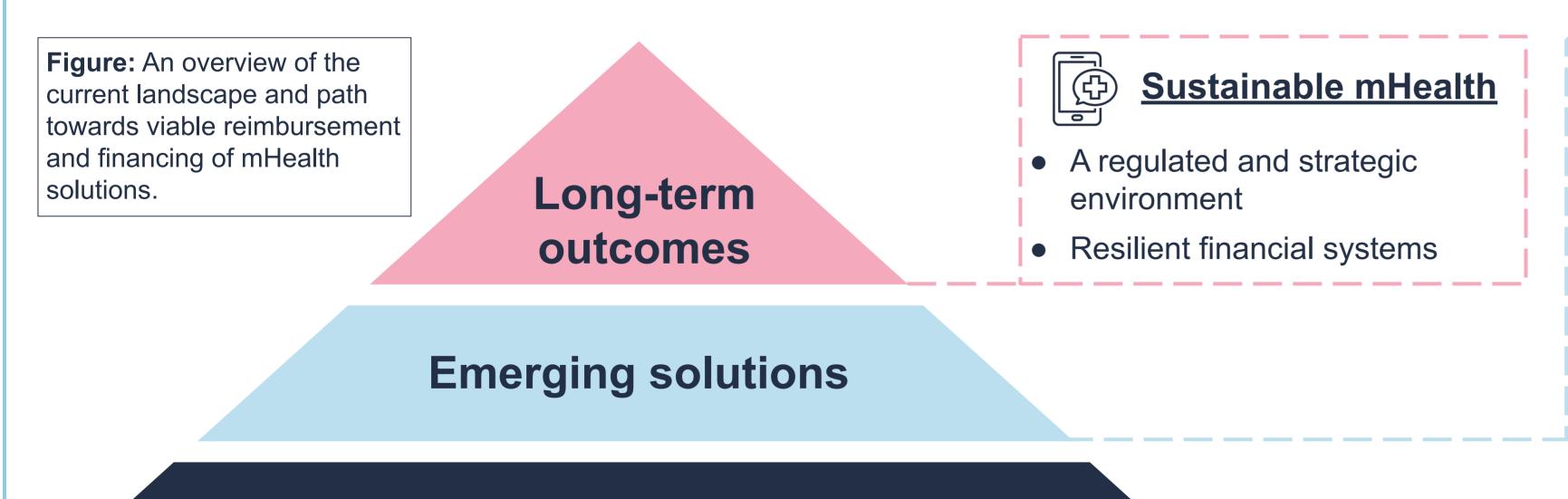
While pioneering countries like Rwanda, Kenya, and South Africa have begun integrating mHealth into national health strategies, direct public funding and reimbursement pathways remain limited and underdeveloped. Collectively, these challenges create a significant barrier, restricting the public sector's ability to sustainably fund and integrate mHealth innovations.

A donor-dependent private sector

While the private sector is a hub for innovation, it **struggles with 'pilotitis,' a cycle of donor-funded projects that do not reach sustainability after initial support ends.** This fragmentation leads to duplication of effort, a lack of interoperability between systems, and significant resource waste. Additionally, the private sector can be a powerful driver of efficiency but this must be carefully aligned with patient interest to ensure sustainable and equitable health outcomes.

Emerging innovative financing models

- Blended finance uses catalytic capital, usually from a public or philanthropic source, to improve the risk-return profile of an investment. This aims to attract a larger pool of private investors that would otherwise not participate. The Transform Health Fund (THF) is an exemplar of this model.¹⁰
- **Results-Based Financing (RBF)** is where payment of funding is directly linked to the achievement of pre-agreed and verified results. This creates incentives for efficiency and quality care. Successful RBF schemes have been implemented across Burundi and Nigeria. 11,12
- **Impact Bonds** are a novel form of outcomes-based contracts that leverage private capital to address social challenges. Impact investors are paid by an "outcome funder" only if pre-agreed, measurable outcomes are achieved. The outcome funder can either be the government (Social Impact Bond) or a donor or foundation (Development Impact Bond). ¹³
- Integrated revenue blending platforms operate at the intersection of financial technology (FinTech) and health. These sophisticated platforms allow for managing multiple, diverse funding streams through a digital platform. M-Tiba is the archetype of this model with a dedicated health wallet that can receive funds from multiple sources (family, employer, donors, etc.).¹⁴





- Blended finance
- Results-Based Financing
- Impact Bonds
- Integrated revenue-blending platforms



Public sector

- (-) Chronic underfunding
- (-) Nascent regulatory frameworks
- (-) Poor foundational infrastructure



Private sector

- (-) Reliant on donor funding (Pilotitis)
- (-) Fragmented, unsustainable projects
- (+) Hub of innovation and agility

Conclusion

Viable financing and reimbursement for mHealth in SSA requires a fundamental shift from donor-reliant projects to a new architecture of sustainable financing. The emerging innovative financing models explored here offer promising pathways to achieving this goal. However, their success is contingent upon simultaneous, government-led investment in digital infrastructure, the establishment of clear regulatory frameworks, and the integration of mHealth into national policy.

Current environment

References

1. Wagstaff A, Flores G, Smitz MF, Hsu J, Chepynoga K, Eozenou P. Progress on impoverishing health spending in 122 countries: a retrospective observational study. Lancet Glob Health. 2018;6(2):e180–92. 2.Gouda HN, Charlson F, Sorsdahl K, Ahmadzada S, Ferrari AJ, Erskine H, et al. Burden of non-communicable diseases in sub-Saharan Africa, 1990–2017: results from the Global Burden of Disease Study 2017. Lancet Glob Health. 2019;7(10):e1375–87. **3**. OAU. Abuja Declaration on HIV/AIDS, Tuberculosis and Other Related Infectious Diseases [Internet]. Abuja, Nigeria: Organisation of African Unity; 2001 Apr. Available from: https://au.int/sites/default/files/pages/32894-file-2001_abuja_declaration.pdf. 4. Asante A, Wasike WSK, Ataguba JE. Health Financing in Sub-Saharan Africa: From Analytical Frameworks to Empirical Evaluation. Appl Health Econ Health Policy. 2020 Dec 1;18(6):743–6. 5. Herve. mHealth to Improve Access to Telemedicine in Africa [Internet]. Capmad.com. 2025 [cited 2025 Oct 17]. Available from: https://www.capmad.com/healthcare-en/mhealth-to-improve-access-to-telemedicine-in-africa/ 6. Cuadros DF, Kiragga A, Tu L, Awad S, Bwanika JM, Musuka G. Unpacking social and digital determinants of health in Africa: a narrative review on challenges and opportunities. mHealth. 2025 July 8;11:41. 7. Sekalala S, Rawson B, Andanda P. A socio-legal critique of the commercialization of digital health in Sub-Saharan Africa. Policy Stud. 0(0):1–21. 8. Gentili A, Failla G, Melnyk A, Puleo V, Tanna GLD, Ricciardi W, et al. The cost-effectiveness of digital health interventions: A systematic review of the literature. Front Public Health [Internet]. 2022 Aug 11 [cited 2025 Oct 17];10. Available from: https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2022.787135/full 9. Dharmayat KI. Sustainability of 'mHealth' interventions in sub-Saharan Africa: a stakeholder analysis of an electronic community case management project in Malawi. Malawi Med J. 2019 Sept 3;31(3):177-83. 10. FSD AFRICA. Transform Health Fund. [cited 2025 Oct 17]. Transform Health Fund. Available from: https://fsdafrica.org/investment/transform-health-fund/ 11. Global Financing Facility. Nigeria: Results Based Financing [Internet]. Global Financing Facility; Available from: https://www.globalfinancingfacility.org/sites/default/files/Nigeria-case-study-results-based-financing.pdf 12. OKR. Verification of Performance in Result-Based Financing: The Case of Burundi [Internet]. Open Knowledge Repository; 2014 [cited 2025 Oct 17]. Available from: https://openknowledge.worldbank.org/entities/publication/26fdc32a-5658-5da7-846b-7467a2968252 13. Geral D. Bowmans. [cited 2025 Oct 17]. Social impact bonds- an option to address Africa's most pressing challenges. Available from: https://bowmanslaw.com/insights/social-impact-bonds-option-address-africas-pressing-challenges/ 14. Seo M. Can a mobile health payment platform reshape Kenya's health care system? [Internet]. Kaiser Permanente; 2019. Available from: https://international.kaiserpermanente.org/wp-content/uploads/2019/08/Carepay-MTiba_final_080519.pdf