



A Data Descriptor on the Evolution of Digital Health in Nigerian Urban Centres,

Oluwaseun Balogun^{1,2}, Adebayo Adeyemi^{1,3}, Chinwe Okonkwo⁴, Ngozi Eze^{1,5}

¹ Federal University of Technology, Akure

² University of Ilorin

³ Department of Internal Medicine, University of Ilorin

⁴ University of Lagos

⁵ Agricultural Research Council of Nigeria (ARCN)

Published: 18 December 2025 | **Received:** 02 July 2025 | **Accepted:** 24 October 2025

Correspondence: obalogun@aol.com

DOI: [10.5281/zenodo.18527404](https://doi.org/10.5281/zenodo.18527404)

Author notes

Oluwaseun Balogun is affiliated with Federal University of Technology, Akure and focuses on Medicine research in Africa.

Adebayo Adeyemi is affiliated with Federal University of Technology, Akure and focuses on Medicine research in Africa.

Chinwe Okonkwo is affiliated with University of Lagos and focuses on Medicine research in Africa.

Ngozi Eze is affiliated with Federal University of Technology, Akure and focuses on Medicine research in Africa.

Abstract

The digitalisation of healthcare in urban Africa presents distinct opportunities and challenges. In Nigeria, rapid urbanisation and technological adoption have accelerated the shift towards digital health solutions. A lack of comprehensive, longitudinal data documenting this evolution within the country's urban centres has hindered systematic analysis and evidence-based planning. This data descriptor presents and documents a structured dataset that captures the longitudinal development of digital health infrastructure, service adoption, and policy frameworks across major Nigerian urban centres. Its objective is to provide a foundational resource for researchers and policymakers to analyse trends, disparities, and impacts. The dataset was constructed through the systematic aggregation of historical records, policy documents, and institutional reports. Quantitative metrics on telemedicine adoption, electronic health record (EHR) implementation, and mobile health (mHealth) application availability were compiled. Qualitative data on regulatory changes and key stakeholder interviews were thematically coded and integrated. The curated dataset reveals a non-linear trajectory of digital health maturation. A prominent finding is the significant lag between infrastructure deployment and widespread clinical utilisation, with only a minority of available digital tools being routinely used in patient care. Thematic analysis highlights persistent challenges related to interoperability and sustained funding. This dataset provides a verified, multi-faceted record of digital health evolution in a key African context. It confirms that while technological penetration has increased, integration into core clinical practice remains an ongoing process, characterised by uneven progress across different urban centres and health domains. Future research should utilise this dataset for comparative studies between cities and to model the impact of specific policies. Policymakers are encouraged to use the data to identify effective implementation models and to address the identified gaps in utilisation and interoperability. Digital health, health informatics, urban health, Nigeria, telemedicine, electronic health records, health policy, dataset.

This data descriptor contributes a structured, longitudinal dataset documenting the evolution of digital health in Nigerian urban centres, filling a critical evidence gap for researchers and health system planners in similar contexts.

Keywords: *digital health, Sub-Saharan Africa, health informatics, urbanisation, electronic health records, telemedicine, data integration*



ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.



REQUEST FULL PAPER

 **Email:** info@parj.africa

Request your copy of the full paper today!



SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.



Submit at: app.parj.africa



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge