



Replicating Digital Health Integration: A Longitudinal Study of Obstetric and Gynaecological Care in Urban Seychelles

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Abstract

The integration of digital health tools into specialist care is a global trend. Prior research in other contexts indicates potential benefits for obstetrics and gynaecology, particularly in patient management and data coordination. The replicability of these findings in small island developing states in Africa is not well established. This replication study aimed to examine the long-term implementation of digital health tools within urban obstetric and gynaecological care services in Seychelles. Its primary objective was to assess the sustained impact on clinical workflows and patient engagement. A longitudinal, mixed-methods replication study was conducted. Quantitative data on system usage and service indicators were analysed alongside qualitative data from semi-structured interviews with healthcare providers and a patient survey. The design closely mirrored the methodology of the original study. The replication confirmed the original finding of improved clinical data accessibility. A divergent outcome was identified regarding patient engagement: sustained use of patient portals was lower than projected, with only a minority of eligible patients consistently accessing digital records. Qualitative data highlighted persistent challenges related to infrastructural maintenance and variable digital literacy. The study replicated aspects of prior research while revealing contextual limitations in a small island urban African setting. Digital tools enhanced clinical data management, but patient-facing components did not achieve anticipated engagement levels over the long term. Future implementations in similar contexts should prioritise ongoing digital literacy support for patients and invest in sustainable technical infrastructure. Programmes should set realistic expectations for patient portal adoption. digital health, replication study, obstetrics, gynaecology, Seychelles, longitudinal study, telemedicine, electronic health records This study provides a necessary replication, testing the

transferability of digital health integration findings to a small island African state. It offers evidence on both sustained benefits and contextual challenges for clinical practice and health policy.

Keywords: *replication study, digital health integration, obstetric and gynaecological care, urban Africa, longitudinal study, patient management*



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