African Biomedical Engineering (Clinical Aspects)

Development of a Digital Health Platform for Maternal Care in Nairobi's Slums: An Engineering Approach

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Abstract

Maternal care in Nairobi's slums faces significant challenges due to limited access to healthcare facilities and resources. The study employed an iterative design process involving user-centred research methods, including interviews, focus groups, and participatory workshops. Data were analysed using qualitative content analysis to identify key themes and needs. Participants expressed high satisfaction with the platform's real-time consultation feature (85%), noting its convenience and ability to connect patients directly with specialists in Nairobi's slums. The digital health platform has been piloted successfully, demonstrating potential for improving maternal care access and outcomes in underprivileged communities. Further testing should include a larger sample size and incorporate additional features such as remote monitoring devices to enhance user experience and efficacy. maternal care, Nairobi slums, digital health platform, participatory design Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \vec{\beta} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, maternal health, iterative design, digital healthcare, slum communities, mobile technology, participatory development*

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