

# **Evaluating an mHealth SMS Intervention for Lynch Syndrome Surveillance Adherence: A Policy Analysis for Johannesburg's Healthcare Context**

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**K, a, r, i, m, A, b, d, e, l, -, M, a, l, e, k, ,, A, m, i, r, a, E, l, -, S, a, y, e, d**

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## | Abstract

Lynch syndrome, a hereditary cancer predisposition, requires regular surveillance colonoscopy to reduce colorectal cancer mortality. In Johannesburg, South Africa, adherence to recommended surveillance intervals is suboptimal, posing a significant public health challenge. Mobile health (mHealth) interventions, particularly SMS reminders, present a low-cost, scalable potential solution for resource-constrained settings. This policy analysis evaluates the potential effectiveness, feasibility, and implementation considerations of introducing an mHealth SMS reminder system to improve colonoscopy surveillance adherence for Lynch syndrome patients within Johannesburg's public healthcare context. A desk-based policy analysis was conducted. This involved a review of literature on mHealth interventions for chronic disease management and cancer surveillance, alongside an assessment of Johannesburg's healthcare infrastructure, digital literacy, and data privacy regulations. Considerations for key stakeholders, including patients, clinicians, and policymakers, were synthesised. The analysis suggests a tailored SMS reminder system could improve surveillance adherence, with evidence indicating potential gains in appointment attendance. Message personalisation and culturally appropriate content were identified as important. Key implementation barriers include patient mobile number volatility, costs of data and SMS, and the challenge of integrating the system into existing clinic workflows

without overburdening staff. An mHealth SMS intervention is a promising, cost-effective policy option to enhance Lynch syndrome surveillance in Johannesburg. Its success, however, depends on context-specific design and proactively addressing systemic barriers related to infrastructure and clinical integration. Pilot a locally co-designed SMS programme with a mixed-methods evaluation. Secure sustainable funding for message costs. Develop clear protocols for data management and patient consent. Integrate the system with clinic appointment schedules and provide training for healthcare workers on its operation. Lynch syndrome, mHealth, SMS reminders, surveillance adherence, colonoscopy, policy analysis, South Africa This analysis provides evidence-informed guidance for policymakers and clinicians considering mHealth strategies to improve cancer surveillance adherence in resource-constrained public health systems, with specific focus on the context of Johannesburg.

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