

# **Enhanced health systems to improve uptake of early infant diagnosis of HIV among post-partum women in primary health care in Blantyre, District Malawi**

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In many African countries, low utilisation of health services after birth contributes to significant gaps in HIV testing for HIV-exposed infants (HEIs). Initiatives to improve early infant diagnosis (EID) have emerged.

However, health practitioners may not always achieve the implementation of evidence-based practices. In our formative assessment of the implementation of EID services in Blantyre in 2020, several factors contributed to the low uptake of EID services. We, therefore, set out to evaluate the effectiveness and acceptability of an intervention called enhanced health system (EEHS) strategy among postnatal women in primary care clinics in Blantyre, Malawi, to improve the uptake of EID. We present the formative process of co-designing the EEHS Intervention. Overall our study uses an embedded mixed-method, with a before and after design. We used stakeholder consultation to develop the EEHS intervention, which will further evaluate its effectiveness and acceptability. We had seven meetings with policy experts and the prevention of mother-to-child transmission program manager. We conducted a two-day consultation workshop guided by the Behaviour Change Wheel model. We included eight healthcare workers (HCWs), four women with HEIs, five management team members, two representatives from implementing partners, and a policy expert. Preparations for the workshop included stakeholder mapping, networking, workshop logistics, managing power dynamics, authorisation and invitations for attendees. Our discussion of the EID implementation formative study findings and stakeholders' experiences with EID services identified implementation gaps in enrollment and HIV testing of HEIs and a lack of coordination among HCWs. While; failure to identify and track HEIs, returning HEIs without HIV tests due to limited capacity of the point of care equipment, and insufficient motivation and teamwork among HCWs were underlying factors. Stakeholders proposed using unique labels to identify HEIs, active screening, a booking system for point-of-care HIV testing and an equipped focal person as the main components of the EEHS intervention. Stakeholder consultation is required when developing a context-appropriate intervention. It provides a platform for learning from stakeholders' experiences and understanding the system and aspects of the context critical for developing appropriate interventions. We will evaluate the effectiveness and acceptability of EEHS intervention.