

# Scaling up context-tailored clinical guidelines and training to improve childbirth care in urban, low-resource maternity units in Tanzania: A protocol for a stepped-wedged cluster randomized trial with embedded qualitative and economic analyses (The PartoMa Scale-Up Study)

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## Abstract

While facility births are increasing in many low-resource settings, quality of care often does not follow suit; maternal and perinatal mortality and morbidity remain unacceptably high. Therefore, realistic, context-tailored clinical support is crucially needed to assist birth attendants in resource-constrained realities to provide best possible evidence-based and respectful care. Our pilot study in Zanzibar suggested that co-created clinical practice guidelines (CPGs) and low-dose, high-frequency training (PartoMa intervention) were associated with improved childbirth care and survival. We now aim to modify, implement, and evaluate this multi-faceted intervention in five high-volume, urban maternity units in Dar es Salaam, Tanzania (approximately 60,000 births annually). This PartoMa Scale-up Study will include four main steps: I. Mixed-methods situational analysis exploring factors affecting care; II. Co-created contextual modifications to the pilot CPGs and training, based on step I; III. Implementation and evaluation of the modified intervention; IV. Development of a framework for co-creation of context-specific CPGs and training, of relevance in comparable fields. The implementation and

evaluation design is a theory-based, stepped-wedged cluster-randomised trial with embedded qualitative and economic assessments. Women in active labour and their offspring will be followed until discharge to assess provided and experienced care, intra-hospital perinatal deaths, Apgar scores, and caesarean sections that could potentially be avoided. Birth attendants' perceptions, intervention use and possible associated learning will be analysed. Moreover, as further detailed in the accompanying article, a qualitative in-depth investigation will explore behavioural, biomedical, and structural elements that might interact with non-linear and multiplying effects to shape health providers' clinical practices. Finally, the incremental cost-effectiveness of co-creating and implementing the PartoMa intervention is calculated. Such real-world scale-up of context-tailored CPGs and training within an existing health system may enable a comprehensive understanding of how impact is achieved or not, and how it may be translated between contexts and sustained. Trial registration number: [NCT04685668](#).

**Keywords:** Africa; Obstetrics; co-creation; cost-effectiveness; de-colonizing; intervention; low dose high frequency training; perinatal death; programme theory; respectful maternity care; stillbirth; urbanization.