

Maternal and Neonatal Service Spread in Ethiopia: An Analysis of Team Dynamics in a Quality Improvement Implementation Strategy

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Abstract

Quality improvement (QI) collaboratives are an increasingly popular approach to spread and improve the delivery of recommended health services globally. This type of strategy engages QI teams at health facilities in learning collaboratives, small tests of change, and tailored coaching. While generally considered an effective approach, extant studies have demonstrated varying levels of impact. Further, there are few rigorous assessments of the effectiveness of QI collaboratives in less developed countries. This dissertation aims to rigorously assess (1) the impact of a QI collaborative in Ethiopia on the spread of recommended services, (2) the psychometric properties of scales attempting to capture factors that drive team effectiveness, and (3) the influence of those team-related factors on the level of impact QI collaboratives have. Data to achieve these aims were drawn from primary hospitals and health centers participating in the Maternal and Newborn Health QI Collaboratives administered by Ethiopia's Federal Ministry of Health and the Institute for Healthcare Improvement.

An interrupted time series approach found that testing changes that specifically targeted delivery-related clinical bundles was associated with significant increases in the rates of women receiving all services within those bundles beyond any underlying trends. Targeting antenatal care, syphilis testing, skilled delivery, Kangaroo care, or postnatal care did not impact the proportion of patients receiving those services. Multilevel confirmatory factor analysis of survey data collected from the QI team members established the internal consistency and unidimensionality of scales capturing various team-related factors and enabled assessment of their factor structure when combined to represent broader domains. These findings were used to score the QI teams on their perceptions about QI work, organizational support, team culture, and team processes. The impacts of participating in the QI collaborative and testing changes was not moderated by any of these domains. However, having more positive perceptions about QI, a more supportive organization, or more enabling team processes, was associated with higher rates of Kangaroo care and timely postnatal care. Having a more positive team culture was associated with lower rates of syphilis testing and compliance to the delivery-related clinical bundles but slightly greater increases in these rates over time.

This dissertation contributes to a limited body of evidence on the effectiveness of QI collaboratives in less developed countries, addresses the need to assess scales that capture potential determinants of widely delivering recommended services, and begins to empirically investigate whether those factors are associated with variations in the effectiveness of QI collaboratives. Further, the QI collaboratives in Ethiopia demonstrate how detailed collection of evaluation data can be successfully incorporated into the intervention when data on key outcomes and potential moderators may be limited and also offer a promising model for scale-up that leverages local government infrastructure and resources.

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