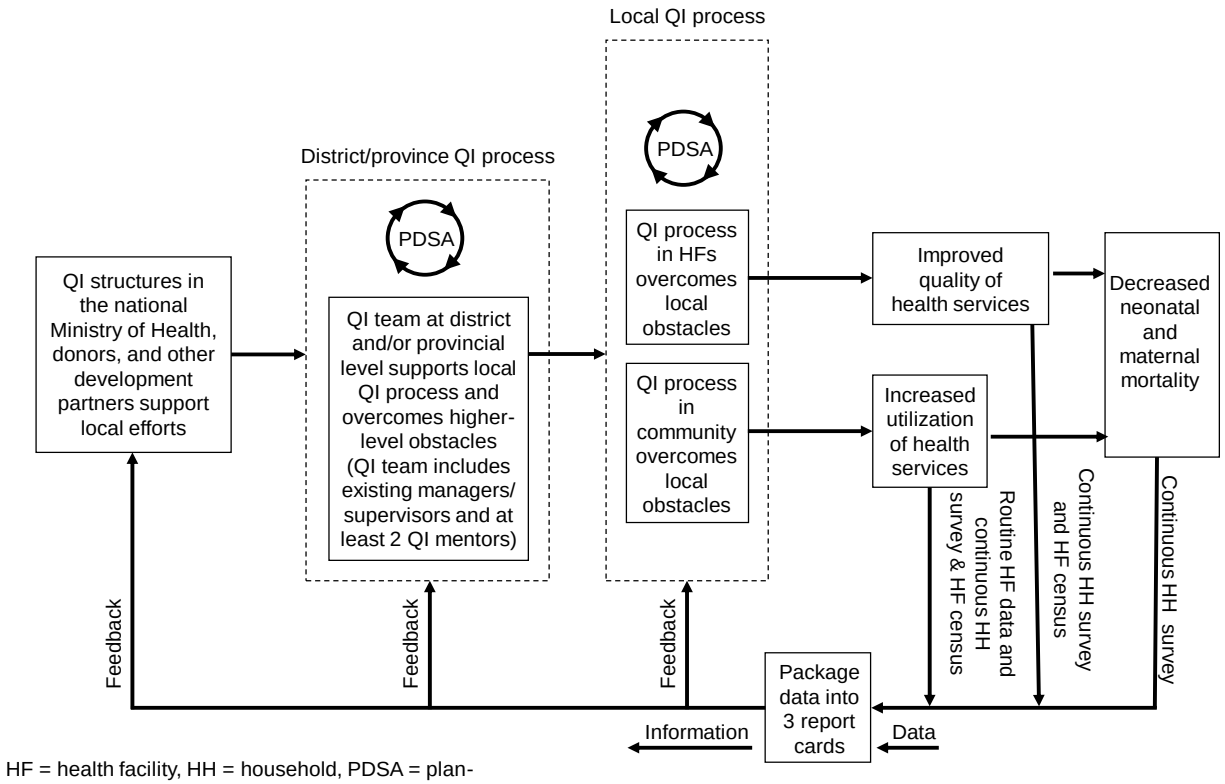
1: EQUIP: Project Summary

Introduction: Why EQUIP?

The Expanded Quality Management Using Information Power (EQUIP) Project was created in response to an FP7 EU call to investigate the **feasibility and community effectiveness of innovative intervention packages for maternal and newborn health in Africa.** EQUIP was designed in the context of persistently high rates of maternal and newborn mortality, despite the availability of evidence-based, affordable and appropriate technical interventions. Obstacles to improved survival exist on both the demand (e.g. low utilization) and supply side (e.g. low quality and lack of services). Quality management and quality improvement, defined as structured problem-solving methodology using plan-do-study-act (PDSA) cycles, are increasingly promoted to improve the quality of care. We hypothesized that quality management supported by improved data use, reaching out to communities, and including district managers in the process could improve both utilization and quality of care (*Figure 1*).

Methods: What did EQUIP do?

Over a period of 30 months (November 2011-April 2014), EQUIP worked on improving utilization and quality along the continuum of care in Tandahimba district in southern Tanzania and Mayuge district in eastern Uganda **(see brief 2**) . Using the "collaborative" approach to quality management **(see brief 3**), and working with district, health facility, and community quality improvement teams **(see briefs 5-7)**, we initiated the work by highlighting priority areas in ante- intra- and postpartum care during "learning session" meetings. Local teams at each level used Plan-Do-Study-Act cycles to identify and test strategies for improvement, called "change ideas" (Photo 1). Simultaneously, EQUIP implemented a continuous survey in the intervention districts and in one comparison district in each county **(see brief 4).** Data from these surveys were synthesized on "report cards" **(see brief 4)** for use by the quality improvement teams (intervention districts), and analyzed for effect evaluation (intervention and comparison districts) **(see brief 2 & 8)** for a set of pre-defined primary indicators as well as for purposefully chosen secondary indicators which reflected specific improvement topics.



HF = health facility, HH = household, PDSA = plan-do-study-act cycles, QI = quality improvement

Figure 1: The EQUIP conceptual framework

Results: What did we achieve?

Results for primary indicators are presented in **brief 8**. The results indicated an improved coverage of women receiving uterotonics within one minute after birth in both countries, the so-called Active Management of Third Stage of Labor (AMTSL). In Tanzania, the proportion of women with a livebirth in the year prior to the survey who received AMTSL was 26 percentage points higher (95% CI: 25%–28%) at the end of the project period in the intervention compared to comparison district, adjusted for initial differences. In Uganda, the difference smaller but still statistically significant at eight percentage-points (95% CI: 6%–9%). There was some evidence of an increase in preparation of clean birth kits for home deliveries in Tanzania, with the difference adjusted for baseline at 31% (95% CI 2%–60%).

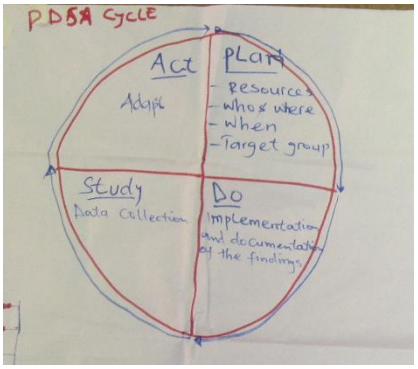


Photo 1: A Plan-Do-Study-Act cycle during the project

In Tanzania, there was weak evidence of more deliveries in facilities in the intervention than in the comparison district (difference adjusted for baseline 7%, 95% CI: -7% , 21). There was no evidence of an effect of the EQUIP quality improvement intervention on any other primary indicators, immediate breastfeeding, or knowledge of danger signs (**see Brief 8**); however teams did not prioritize work on this.

The learning sessions every four months at the community, health facility and district levels were resource intensive. Although much appreciated by the quality improvement teams, the coaching and mentoring visits were at times difficult to operationalize, as skilled mentors are rare. The teams prioritized improvement topics together with the district and EQUIP mentors, although some areas were pre-determined.

Discussion and policy implications

We saw improvements where district health managers were strongly involved (supply side improvement, **(see brief 5),** and more mothers coming to deliver in facilities and preparing for birth (demand side improvement, **see brief 7**), which in some cases health facilities had difficulties to cope with given resource constraints. Our work underlines the need for *systemic* approaches and highlights the need to work on both the demand and supply sides simultaneously.

Our study suggests that teams in communities and health facilities can use both quality improvement techniques and locally generated data to inform decision making. Positive changes were achieved, although not for all the topics that teams worked on. Simultaneous strong involvement of the district managers seems to be the key to having any impact. The difference in response to the intervention between Tanzania and Uganda suggests that the district's financial resources could be important for quality improvement, particularly having "non-earmarked" funds to overcome local constraints. Quality improvement needs robust support in the form of mentoring and coaching, which requires sufficient human and financial resources. In this project, the advantage of the collaborative model was that new technologies and new strategies could be implemented using the learning sessions so that additional health priorities could be integrated over time. These systems need to be sustained over time: as a health provider from Uganda said: "EQUIP has ended when we are just starting to like it"!

Publication

Hanson C, Waiswa P, Marchant T, Marx M, Manzi F, Mbaruku G, Rowe AK, Tomson G, Schellenberg J, Peterson S, and the EQUIP Study Team. Expanded Quality Management Using Information Power (EQUIP): protocol for a quasi-experimental study to improve maternal and newborn health in Tanzania and Uganda. Implement Science, 2014. 9(1): p. 41. PMID: 24690284

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Tancred T, Mandu R, Hanson C, Okuga M, Manzi F, Peterson S, Waiswa P, Schellenberg J, Marchant T. How people-centred health systems can reach the grassroots: experiences implementing community-level quality improvement in rural Tanzania and Uganda. Health Policy and Planning. 2014:1–13.

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