USAID FROM THE AMERICAN PEOPLE | HEALTH CARE IMPROVEMENT PROJECT

RESEARCH REPORT SUMMARY

Performance of Quality Improvement Teams in Guatemala

Introduction

Team performance in quality improvement (QI) activities is expected to improve the quality of health care provided. The Guatemalan Ministry of Public Health and Social Assistance (MSPAS) implemented a successful strategy, ProCONE (*Promoción y Cuidados Obstétricos Neonatales Esenciales*), to improve essential obstetric and newborn care. With technical support from the USAID Health Care Improvement Project (HCI), ProCONE used a collaborative improvement approach that was implemented from April 2007 through September 2008 in 28 health centers in the San Marcos health area. In November 2008, a second phase of collaborative improvement was implemented to expand activities to 130 health facilities in seven additional health areas of Guatemala.

In a collaborative approach, participant facilities organize QI teams that meet periodically to measure and monitor indicators, plan changes oriented to improve gaps identified, test and evaluate the effect obtained with implementation of changes, and decide on which ones were successful in achieving improvement in quality. Teams receive coaching from higher levels, and they share lessons learned, such as difficulties encountered and best practices implemented to overcome performance gaps, with other QI teams to speed up the learning and implementation process.

This study assessed team performance in QI activities implementing the ProCONE strategy in Guatemala, the sharing process, the mechanisms they utilized, and the relation between their performance and improvements in the quality of care.

This study had several objectives:

- Assess performance of QI teams at several levels in the health system: national, health area, and health facilities;
- Document the QI activities teams were performing, such as documenting best practices and changes, monitoring and analyzing data, and sharing successful experiences between teams in the collaborative, as well as mechanisms of communication among teams and with QI coaches.
- Provide information on results achieved by QI teams in the indicators reported during 17 consecutive months measured as absolute improvement in indicators, speed of the improvement, and maintenance of the improvement over time.

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Methodology

This cross-sectional study assessed 38 sites selected from the 130 participating in the spread phase. All 38 sites provided ambulatory care, with 35 also providing birth delivery care. Data were collected between January and September 2010, and all sites were visited at least twice to conduct interviews with one or more team members. Group discussions with the six area technical teams were conducted and recorded for further analysis. Information for the analysis was obtained in 36 of the 38 selected facilities (94.7%). One health center was not able to provide data as it was undergoing remodeling, and staff were providing care in different locations. Another center lacked a team coordinator capable of providing the requested information.

Findings

Performance at different levels of the health system. At the time of the study, the QI team at the **central level** was not functional. At the beginning of the demonstration phase of the collaborative, QI efforts at the central level were coordinated by the MSPAS Unit of Supervision, Monitoring and Evaluation, but conflicting responsibilities during the H1N1 pandemic led to discontinuation of follow-up activities. Afterwards, facilitators of the national reproductive health program received training in QI and took over coordination of QI activities in some health areas.

At the **area level**, QI technical teams were more involved in some areas than in others. Because the area level technical teams lacked resources for transportation, they relied upon visits carried out every one to three months by HCI staff to accompany them to the facilities to provide supervision and coaching. During visits to the teams, they analyzed their data bases, evaluated indicator dashboards, and reviewed changes implemented and their effect on the indicators. Half of the six area technical teams interviewed said they also verified the quality of data being registered in monitoring sheets and provided support using planning matrices.

At the **facility level**, the QI team is usually led by the local municipal health coordinator, a physician, who calls the QI meetings and requests medical records to be reviewed. Nevertheless, nurses are increasingly taking more responsibilities in the teams and becoming more empowered in the process and strategy. Teams are composed of 2-4 health professionals and 1-2 administrative personnel (secretaries, data entry, medical records, etc.).

Team performance on QI activities. The team leader (doctor) calls the team to meet 80% of the time, and team nurse does so 20% of the time. Most (84%) QI teams reported meeting monthly to review clinical records and measure indicators. All team participants considered QI activities and methods useful to provide better health services. Difficulties identified by the teams in their implementation of QI activities were: lack of resources (lab test materials, drugs, micronutrients, printed forms, etc.); time spent filling out the forms and training personnel in the correct filling of the forms; high personnel turnover; and the rigorous norms for calculation of the indicators in which all elements defined in the standard for a service had to be performed in order to be considered as compliant (i.e., "all-or-nothing" criteria).

Use of QI tools. Only 42% of the teams used the *San Marcos Best Practices* document, a compilation of successful experiences in improving maternal neonatal health found during the demonstration phase in the San Marcos region. Almost all (95%) teams had monitoring sheets to follow up indicators; 84% had a table with standards and indicators to be measured; all teams said they used the project's clinical forms to enter data; 89% regularly updated their indicators data base; and 78% had the HCI standard forms to document performance as was proposed by the project, although only 47% used the HCI documentation form with any frequency. Team members experienced difficulties documenting performance following the HCI norms for documentation and reported minimal or no training in using the HCI documentation forms (the topic was presented at the end of training sessions with limited time for practical exercises). About 81% of teams had the planning matrix but only 64% of teams ran Plan-Do-Study-Act cycles for testing improvement changes. About 78% of teams had their ProCONE

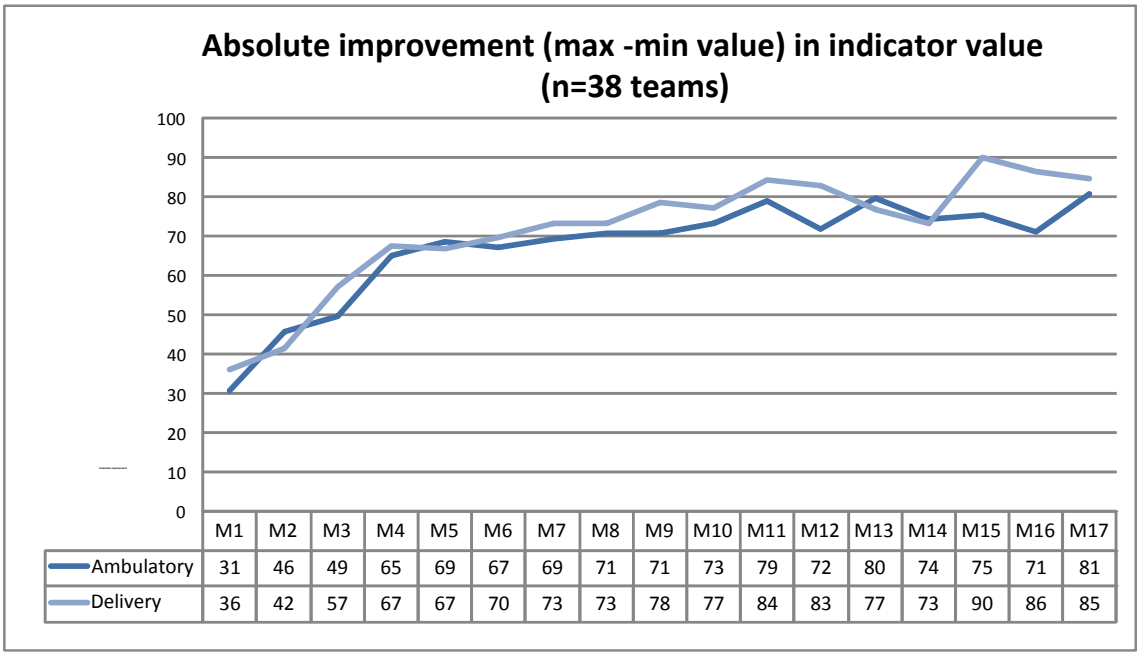
indicators dashboard up to date. Overall, the study found that only 32% of the teams were using all the QI tools.

Data analysis and monitoring. Most teams (81%) randomly selected the clinical records for indicators calculation and verified data quality. In 62% of teams, all members participated in reviewing clinical records, although results were recorded by the nurse or administrative personnel. All but one team entered results in a database monthly. Most (75%) teams planned the improvement changes based on gaps identified during the measurement of the clinical indicators and activities proposed for each change idea. Only 25% of teams assigned a person to provide follow-up for changes being implemented.

Sharing experiences. The majority (89%) of teams shared their experiences with team members while fewer shared them with other non-team member personnel. About 73% of teams presented their experiences in their monthly area meetings with the area technical team, and 60% shared with other teams in the same health area or from another area. Teams shared their experiences with other teams during monthly area meetings (91%), learning sessions (91%), visits to other teams (41%), phone calls (14%), and email (9%). QI teams also expanded QI strategies to rural health posts providing them with coaching visits frequently.

QI district coordinators also attended area meetings for updates on progress. HCI staff and area technical teams also visited QI teams in health facilities quarterly in 2009 and less frequently in 2010 to provide coaching, support, and communicate changes implemented by other teams.

Absolute improvement of maternal and newborn care indicators. Most indicators improved by 60-80 percentage points during the consecutive 17 months of this study analysis. Both ambulatory and delivery care indicators started at values around 30% (on average) at the beginning of this study and reached levels close to 80% by the end of the observation period.



	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17
Ambulatory	31	46	49	65	69	67	69	71	71	73	79	72	80	74	75	71	81
Delivery	36	42	57	67	67	70	73	73	78	77	84	83	77	73	90	86	85

Speed of the improvement. The eight teams studied that implemented QI activities in the demonstration phase (April 2007-September 2008) started with higher values for their indicators (80-90%) and fluctuated around those values. Thirty teams from the spread phase (November 2009-June 2010) started with lower indicator values (20-30%) and took four to six months to reach 80-90%.

Maintenance of improvement. Teams from the demonstration phase in San Marcos maintained indicators over 80% during an average of 10 consecutive months of the 17 analyzed and over 90% during

eight consecutive months. Teams from the spread phase maintained indicators in the 80-90% range for two to four months, among those that reached these values.

Regression analysis of the performance variables (i.e., QI tools used, QI tasks performed, sharing mechanisms utilized) and quality of care (percent compliance with indicators of ambulatory maternal and neonatal care) data found no association between QI tools used, task performed and the number of sharing mechanism utilized with the absolute improvement of their indicators, time to achieve 80% of the indicator value or the maintenance of the gains over time. However, QI teams that didn't share information within their units were delayed by an average of 1.8 months to reach 80% in the ambulatory care indicators. Also, teams with four or more members performing each QI activity maintained gains over 80% in the ambulatory indicator value an average of 2.2 months longer than other teams where only one team member performed all QI activities.

Conclusions and Recommendations

At central level: Central level personnel participated intermittently in coordinating QI activities due to conflicting priorities. There was no quality improvement team specifically established at the central level of the MSPAS.

We recommend that meetings be carried out at the central level to reestablish a functional QI team, perhaps with a refresher sessions on collaborative improvement methodology. The central level QI team should perform supervision and coaching visits and external quality audits as suggested by facilities' QI teams.

At the area level: Technical teams at the area level participated regularly in the ProCONE collaborative improvement project. We recommend reinforcing its structure and assigning well established functions and responsibilities. The relationship between the area level Quality Management System quality committee and QI teams should be established. It may be possible to join both teams in one structure in which some members would have administrative/financial responsibilities and others would provide with technical assistance in improvement of clinical care.

We recommend conducting information sessions on continuous quality improvement methodology, implementation of the QI strategy through a collaborative approach, and programmatic areas where this approach has been implemented (maternal and neonatal care under the ProCONE strategy or other) as there is some confusion between these topics at both central and area levels. Coaching and support from the technical area team was limited due to budget constraints for transportation to facilities. Advocacy to provide funds for transportation should be promoted to allow technical teams to visit health facilities to provide coaching and supervision.

At facility level: Most QI teams performed well based on the criteria evaluated and results obtained in maternal neonatal quality of care indicators. The HCI documentation format has not been widely used to document best practices; teams shared information mostly during visits to area technical team meetings and training sessions and, to a lesser extent, through visits to other teams and phone calls/internet. Personnel in the same facilities but not participating in the QI team had minimal understanding of QI methods.

While teams reported improvements in indicators, they were not using the results to propose improvement changes, test the changes through Plan-Do-Study-Act cycles, and adopt changes successful in improving indicators. We recommend review of the use of the HCI standardized documentation system to determine the essential information teams need to document to ensure optimal performance. We recommend that future efforts place special emphasis on the steps in the Plan-Do-Study-Act cycle and documentation of successful changes that can be paired with time-series graphs on improvement of quality of care.

We also recommend identifying and promoting mechanisms for communication and participation within the health facilities so that all personnel know about improvement methodology, tools, measurements, and successful changes. Communication mechanisms with other health units to share experiences and successful changes also need to be strengthened. Strengthening sharing and communication mechanisms between QI team members and non-QI team personnel may improve performance and sustainability of the QI process.

A document with best practices from the demonstration and spread phases should be prepared, including successful changes made in general areas of care as well specific areas considered in the ProCONE strategy (prenatal, postnatal, neonatal, etc) and should be disseminated widely in the facilities.

It is possible that the variables used in this study to measure QI team performance are not the most appropriate. It is recommended that characteristics of teams and their performance be studied in more depth and in relation to measures of the quality of care provided.

Recommended Citation and Further Information

This summary report may be cited as:

Hurtado E, Insua M, Franco LM. 2011. Performance of Quality Improvement Teams in Guatemala. *Research Report Summary*. Published by the USAID Health Care Improvement Project. Bethesda, MD: University Research Co., LLC (URC).

It summarizes the full study report in Spanish, which is available at: http://www.hciproject.org/node/3568.

Hurtado E, Insua M, Franco LM. 2011. Desempeño de los equipos de mejoramiento continuo de la calidad en Guatemala. *Informe de Investigación*. Publicado por el Proyecto de USAID de Mejoramiento de la Atención en Salud. Bethesda, MD: University Research Co., LLC (URC).

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