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RESEARCH REPORT SUMMARY

How Proven Improvements are Adopted by Other Facilities: A Study on the Spread of Best Practices for Maternal and Newborn Care in Guatemala

Introduction

Spreading best practices is a key to achieving results at scale. Over an 18-month period from March 2007 through September 2008, Guatemala implemented a successful program, ProCONE (*Promoción y Cuidados Obstétricos Neonatales Esenciales*), to improve the quality of essential obstetric and newborn care. ProCONE used a collaborative improvement approach in 25 health centers in San Marcos, one of the most western regions of Guatemala. In 2009, the best practices and quality improvement (QI) approach was expanded to 122 additional health units in 7 more regions of Guatemala.

This study was designed to assess the degree to which the best practices developed during the demonstration phase in San Marcos were successfully transferred to, and adopted by, other health centers and regions in Guatemala. Following the initial or demonstration phase, the learning experiences and successful activities were consolidated and incorporated into a single document, *San Marcos Best Practices*, which was published by the USAID Calidad en Salud project in November 2008. Representatives from the San Marcos teams presented their results and best practices at the national level and in each of the new health areas, and the document was disseminated at the second learning session. Of the 19 practices included in the *Best Practices* document, five were in prenatal ambulatory care, four in partograph use, three in active management of the third stage of labor (AMTSL), four in immediate postpartum care, and three in essential newborn care. Teams participating in the next phase (spread phase) were expected to document the changes they implemented, monitor indicators of the quality of care to track improvement, and periodically share with other sites what they learned.

This study had two major objectives: 1) Assess the extent to which health units in the spread regions were exposed to the experience of the first 25 centers in San Marcos, both through the *San Marcos Best Practices* document and through other mechanisms; and 2) Identify and characterize best practices that were most widely adopted by health units in the spread phase – those adopted from San Marcos as well as other innovative practices.

Methodology

This cross-sectional study assessed a sample of 29 sites selected from the 122 sites participating in the spread phase. All 29 sites provided ambulatory care as part of ProCONE, with 25 also providing birth delivery care. Data were collected between January and September 2010, and all sites were visited at least twice. Data collection included review of documentation and interviews with one or more team

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members. We obtained sufficient information for the analysis in 83% of the ambulatory care units (24 of 29) and 72% of the delivery care units (18 of 25). The other units (five ambulatory and seven delivery care units) lacked adequate written documentation and were dropped from the study sample.

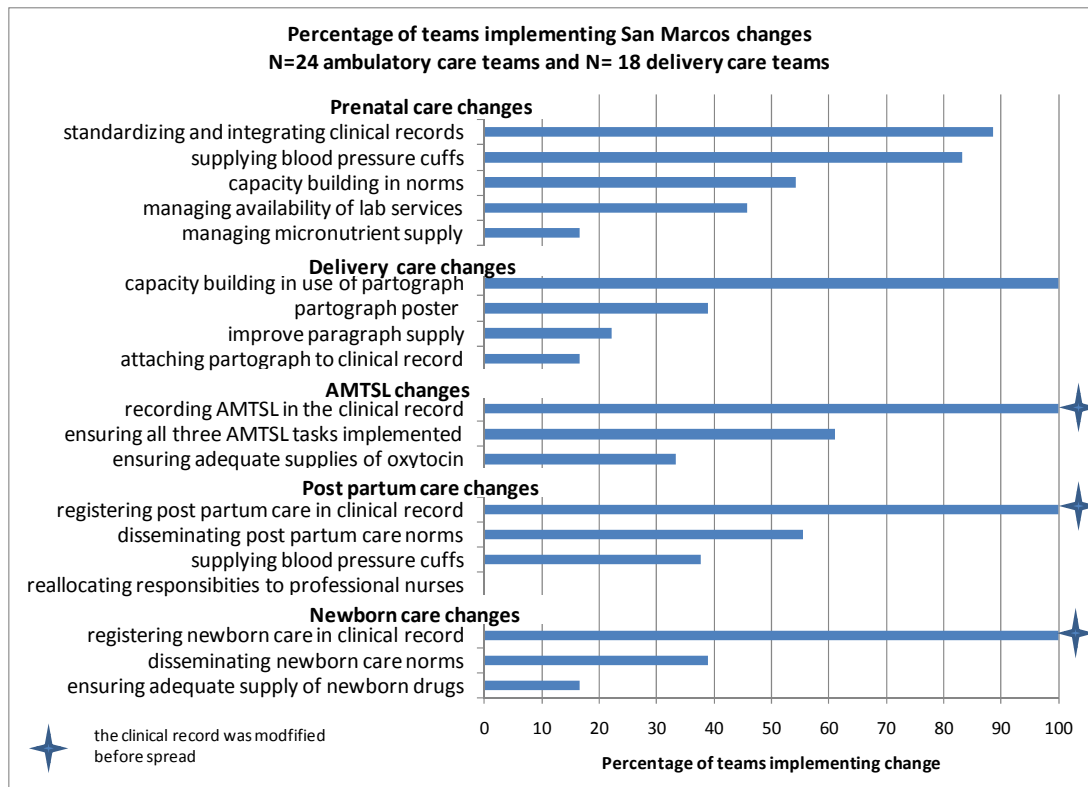
Findings

Awareness of the *San Marcos Best Practices* document: Ninety-three percent of the sampled units reported knowledge of the quality improvement activities implemented in the San Marcos health area, and 62% of them knew of the existence of the *San Marcos Best Practices* document; however, only 38% of them talked about having and making use of the document to guide their implementation of the practices. Those who had the *San Marcos Best Practices* document stated that they regarded its contents as very effective practices for improving the quality of care.

Replication of best practices: Of all the opportunities for change (averaged across all sites and changes), 53% of the prenatal ambulatory care practices listed in the *San Marcos Best Practices* document were implemented in spread sites, while inpatient maternity units replicated an average of 37% of the best practices (44% partograph, 47% AMTSL, 28% postpartum, and 28% neonatal care practices). Use of the *San Marcos Best Practices* document had no specific effect on implementing the best practices contained in the document. In fact, health teams that did not report use of the document had a slightly higher rate of implementing best practices than did teams with a physical copy of it: those without the document implemented 57% of ambulatory care practices versus 49% implemented by the teams with the document. This same pattern was seen for delivery services: Centers without the document replicated 48% of best practices compared to 31% for teams with access to the document.

Type of best practices replicated: We were also interested in which practices from the *San Marcos Best Practices* document were adopted most frequently by the health units, independent of their access to the document (see Figure 1). The practices most frequently adopted in prenatal ambulatory care

Figure 1: Percentage of teams implementing best practices derived from the San Marcos demonstration collaborative



were: standardizing how patient’s medical records are filled out (89% of teams), supplying blood pressure cuffs (83%), and training on how to provide micronutrients following clinical norms (54%). The practices replicated most frequently by birth delivery care were: training in the use of a partograph (100%), ensuring that all three key tasks are implemented for AMTSL (61%), and disseminating knowledge on norms for postpartum (56%) and neonatal (40%) care. The number of San Marcos best practices being replicated per team averaged 2.7 practices implemented by prenatal care ambulatory teams and 4.1 practices by delivery care teams.

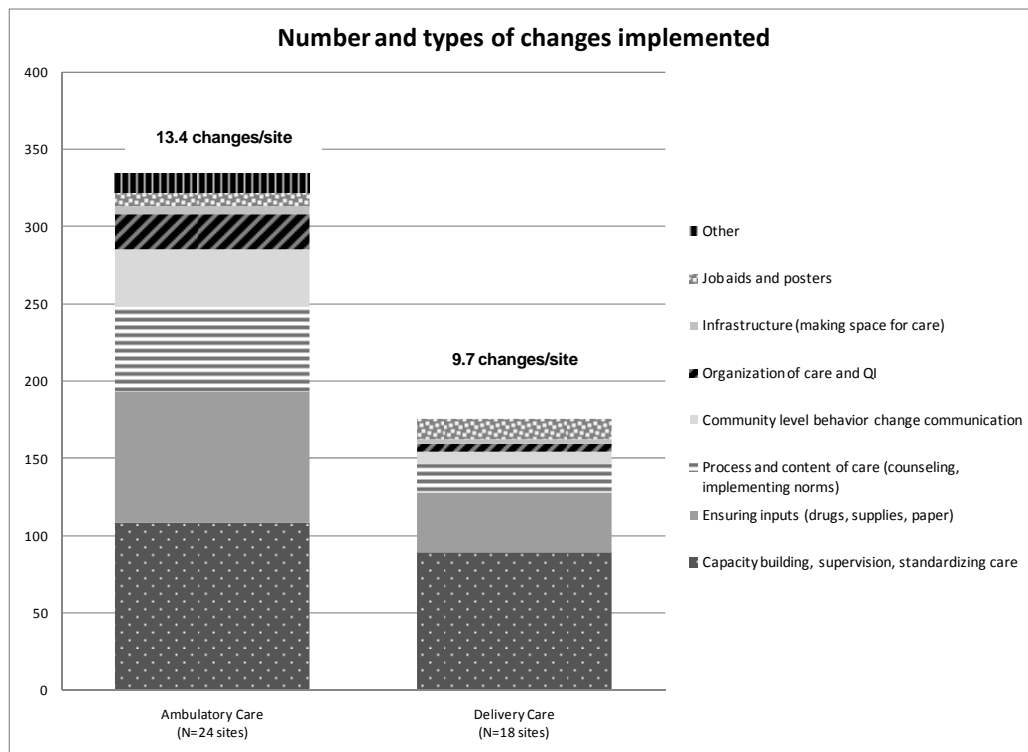
The teams considered some practices from the San Marcos collaborative so significant that they were incorporated into the ProCONE strategy that was implemented: All teams replicated inclusion of the space to record AMTSL, immediate postpartum care, and neonatal care in the partograph form. Joining the three registries into one instrument simplified the process and favored compliance with the activities in these three areas: partograph, AMTSL, postpartum and neonatal care.

Other improvements in specific domains of care: The teams did not limit themselves to those changes coming from the San Marcos experience (as listed in *San Marcos Best Practices*). Fifty-four percent of the ambulatory teams implemented additional changes related to prenatal practices. Because the *San Marcos Best Practices* document did not include best practices for postpartum and neonatal ambulatory care, the practices implemented by the teams in these areas were considered to be new (42% of ambulatory postpartum and 29% of ambulatory neonatal practices implemented by the teams).

Delivery teams also implemented new changes not included in *San Marcos Best Practices*, in the following areas: partograph (61% of teams), AMTSL (44% of teams), immediate postpartum care (56% of teams), and neonatal care (28% of teams).

Number of changes made by the teams: We also considered all practices that the teams performed, regardless of their origin (San Marcos or innovations of spread teams) and or the domain of care. In total, ambulatory teams performed an average of 13.4 changes; the average per birth delivery team was 9.7 changes. Figure 2 presents these results categorized by change and type of care.

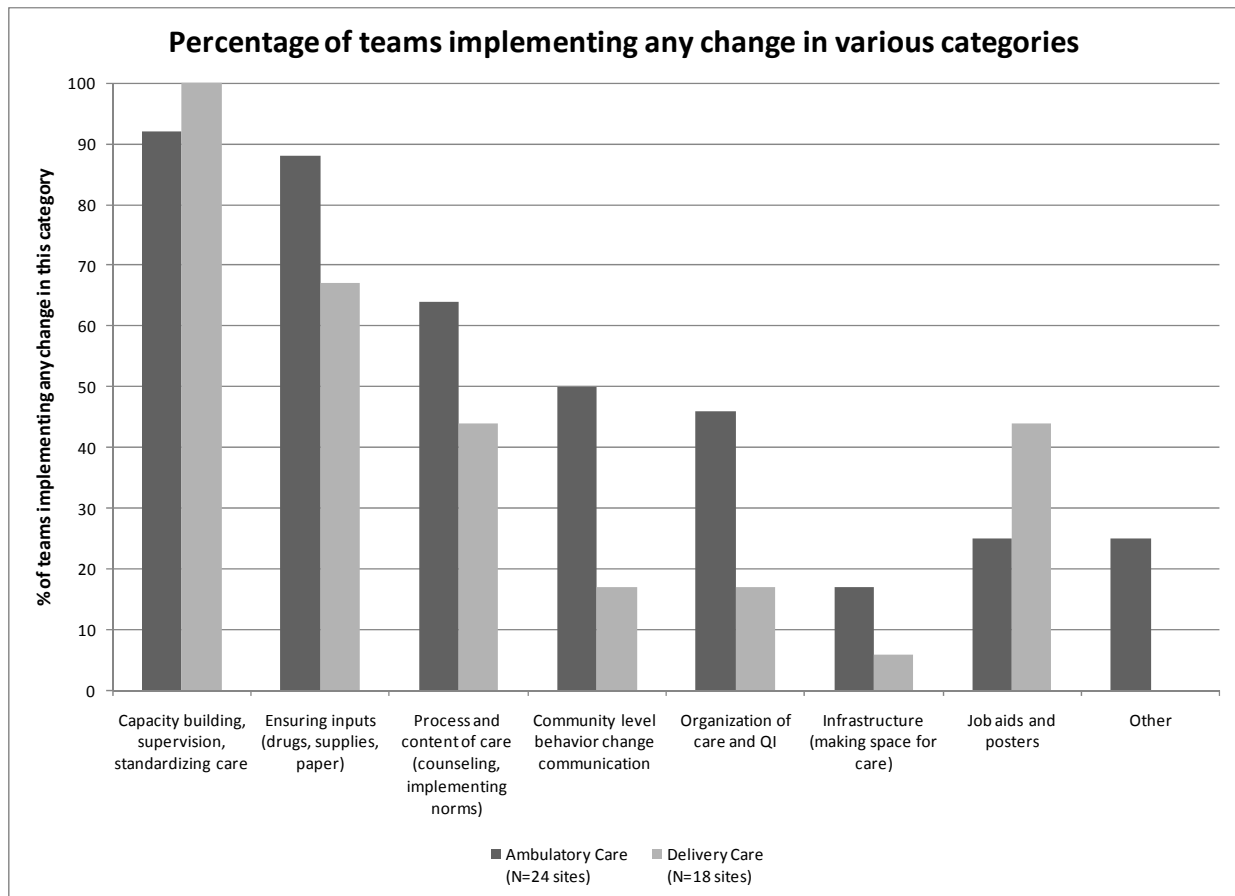
Figure 2: Number and types of changes implemented by spread teams (regardless of origin of change idea) for ambulatory and delivery care



Overall, the 24 teams providing ambulatory care implemented 334 changes, while delivery care teams implemented 175 changes. These changes were categorized as follows: Capacity building, supervision, and standardization of care (108 changes in ambulatory, 89 changes in delivery care); ensuring inputs such as drugs, supplies and paper among others (85 ambulatory, 39 delivery care); process and content of care such as counseling and implementing norms (55 ambulatory, 19 delivery care); community level behavior change communication (37 ambulatory, 7 delivery care); organization of care and QI (23 ambulatory, five delivery care); infrastructure, i.e., making space for care (five ambulatory, three delivery care); job aids and posters (9 ambulatory, 13 delivery care); and 12 additional changes by ambulatory teams which were not classified under the given categories.

Categories of changes made by teams: We analyzed the percentage of teams that implemented any change in the categories considered (see Figure 3) and found that most teams had implemented at least one change in capacity building, supervision, and standardizing care (92% of ambulatory and 100% of delivery care teams); a majority in both groups had implemented ensuring inputs to provide quality care (88% of ambulatory and 67% of delivery care teams). Changes made in process and content of care (such as counseling and implementing norms, policy, and coordination) were implemented by 63% of ambulatory and 44% of delivery care teams. Changes in activities with a community approach – such as promotion of health habits through radio messages, creation of groups of pregnant women, counseling on nutrition and lactation, or health fairs – were performed by a higher percentage of ambulatory teams (50%) than birth delivery teams (17%).

Figure 3: Percentage of teams implementing any change in a change category



Documentation of changes that have been tested or implemented: While the teams were very active in implementing changes, they were not systematic, thorough, or diligent about recording these changes. Although not a specific objective of the study, the data collection process revealed that teams

used a myriad of different mechanisms for documentation, and many teams lacked any type of documentation at all. We obtained information on implemented changes from diverse documentation sources (52% of ambulatory and 48% of delivery care teams documented in some way). Only 11 of the 29 ambulatory care teams (52%) and eight of the 25 delivery care teams (32%) of the study sample used the SES Documentation Journal to document the changes implemented. The reason presented by the teams for not using the SES was that the instrument is long and complex. In some cases, teams used an electronic matrix to keep track of the changes, but overwrote the new information into the previous record without maintaining a history of the changes previously implemented.

Sharing of changes and results in the spread phase: Most teams had shared their learning experiences with others in the same facility (83%). They acquired information on other teams' activities through coaching visits from the technical assistance personnel in the health area (48%), by attending learning sessions (45%), and by mingling with other teams (21%). Other communication media such as telephone were rarely used (2 teams; 7%) due to the high cost of phone services; and Internet/email was used by only one team (3%).

The teams identified several gaps in applying the quality improvement methodology to implement best practices: difficulty in procuring materials and drugs to provide quality health care; and the “all or none” methodology for reporting quality indicators – i.e., requiring compliance with *all* the criteria in each indicator to report it as “fulfilled.”

Study limitations: We had to rely on oral information for teams that were unable to produce documentation (31% ambulatory, 24% delivery care). Due to this circumstance, we assume that the changes (replication from San Marcos and new ones) implemented by the teams of the sample were underreported.

Conclusions and Recommendations

Teams participating in the spread phase of ProCONE were able to obtain results similar to those in the demonstration phase in terms of quality of prenatal, delivery, AMTSL, postpartum, and newborn care. Most teams in the study sample knew about the previous experiences implementing the ProCONE strategy in the health area of San Marcos, regardless of whether those interviewed had seen the document containing San Marcos' best practices. Those who had the *San Marcos Best Practices* document found it useful in helping them implement standards and norms proposed in ProCONE.

Only 38% of the teams had the best practices document in their facility, and its presence or absence did not influence the number of practices that spread phase teams replicated from the San Marcos experience. Coaching and supervisory visits to the facilities by the project technical assistant personnel were an equally important mechanism for disseminating the best practices implemented in San Marcos, as well as for presenting the San Marcos experience at learning sessions. As a result, spread teams without the document demonstrated similar or higher levels of implementing San Marcos' best practices. It appears that information disseminated via other mechanisms played a greater role than possession and use of the document.

Most of the teams providing ambulatory care replicated changes from San Marcos such as the standardization of clinical records in prenatal care and procurement of blood pressure cuffs in the facilities; about half trained their personnel to comply with micronutrients administration norms. In addition, the ambulatory teams implemented new practices in prenatal care (53% of teams) and in areas not included in the best practices document, such as ambulatory postpartum care (42% of teams) and ambulatory neonatal care (29% of teams). The influence and expertise of coaching and technical assistance may have been decisive in orienting the spread teams to implement new changes. In addition, 90% of the teams shared information and best practices among personnel in the same unit and with other teams in their health area (65%).

San Marcos' best practices replicated by the birth delivery teams varied from 100% (teams replicating training of personnel in the use of the partograph) to 60% (replicating standardization of AMTSL), 55% (dissemination of clinical norms for postpartum care), and 39% (neonatal care).

In general the teams implemented an average of 13.4 changes per ambulatory unit and 9.7 changes per delivery care unit. Of those changes, most were in the areas of capacity building, supervision, and standardizing care; and in ensuring that the services provide the necessary inputs to perform the improved quality care. Almost all teams in both ambulatory and delivery care implemented at least one change in capacity building, supervision, and standardization. Ambulatory care teams were more proactive than delivery care teams in implementing practices oriented toward the community and in organizational changes. On the other hand, delivery teams were more likely to display job aids (giant partograph posters, cards, etc.) in the workplace than were ambulatory teams.

Documentation of implemented practices has been challenging for the teams. This area requires more thought about how to facilitate the recording and monitoring of changes implemented by the teams. If teams are to assess their performance on quality indicators in light of changes implemented, they need to document what they have done and annotate their time series charts accordingly, in order to assess what does and does not work. Particularly because spread teams are continuing to innovate and test new changes, documentation is critical and important for future spread.

The results of this study suggest that an improved best practices document could be proposed to facilitate the spread of best practices of ProCONE implementation nationwide. This document and its content should be disseminated more widely than the previous one, using a variety of formats and occasions. We also recommend having more diverse opportunities for teams to share experiences, mostly through contact with other teams, but also through new mechanisms such as the Internet and interactive training sessions. The results of this study should be presented at a meeting with teams that are implementing the ProCONE strategy.

Recommended Citation and Further Information

This summary report may be cited as:

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It summarizes the full study report in Spanish, which is available at: <http://www.hciproject.org/node/3520>:

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