



CASE STUDY

Improving labour and postpartum care at Budhlada Sub-divisional Hospital in Mansa District, Punjab, India

Summary

Mansa is a district in Punjab State, where around 7,500 women deliver every year; of these, around 18 percent experience delivery complications. The USAID ASSIST Project started working with Mansa’s Budhlada Sub-Divisional Hospital to set up an improvement team in March 2014. This hospital wanted to focus on reducing postpartum haemorrhage through active management of third stage of labour and monitoring women in the postpartum period to identify danger signs in time for proper management of complications. In a six-week period, the hospital’s improvement team introduced changes, such as posting visual reminders in the labour room, advance preparation for oxytocin administration, and engaging nursing interns in vitals monitoring, which resulted in all women delivering at Budhlada receiving oxytocin immediately to reduce bleeding and having their vital signs monitored at least four times after delivery by staff. The increased postpartum contact between each patient and staff nurses has also enabled better counselling on breastfeeding.

Introduction

Mansa is a high priority district in Punjab under the Government of India’s Reproductive, Maternal, Neonatal, Child and Adolescent Health initiative (RMNCH+A). It is home to about 900,000 people, and around 7,500 women deliver every year. According to the District Level Household Survey 2013-14 (DLHS-4), there are many opportunities for improving labour and postpartum care in the district: only 18 percent of women received full antenatal care (ANC), consisting of at least three visits for ANC check-up, tetanus toxoid, and iron and folic acid supplementation; 71 percent of the pregnant women were anaemic; 20 percent delivered at home; around 34 percent of women faced pregnancy complications; 18 percent had delivery complications; and nine percent had postpartum complications.

Table 1: Members of the Budhlada Sub-divisional Hospital Quality Improvement Team

Jaswinder Kaur	Block Senior Medical Officer
Asha Jain	Gynaecologist
Satwinder Kaur	Staff Nurse Supervisor
Virpal Kaur	Staff Nurse
Sadiya	Staff Nurse
Shinder Pal Kaur	Staff Nurse
Krishan Kumar	Block Extension Educator

The USAID ASSIST Project started working on improving care for women and babies in Mansa

District in March 2014, supporting teams at the District Hospital, Sub-District Hospital, and all the delivery points in one identified block to improve care. The sub-divisional hospital at Budhlada block is a 50-bed hospital that conducts 150-200 deliveries per month (25-30 percent of total deliveries conducted in health facilities in the district and 15 percent of all deliveries). The hospital staff consists of four medical officers,

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ten staff nurses, one gynaecologist, one paediatrician, and one surgeon. Generally, the labour room and female ward are looked after by a single staff nurse.

This hospital wanted to focus on reducing postpartum haemorrhage (PPH) as there is no blood transfusion unit in the block, and almost 90 percent of women delivering at the hospital are moderately or severely anaemic. The facility decided to address this issue by preventing PPH through active management of the third stage of labour (AMTSL) and by monitoring women in the postpartum period to identify danger signs in time for proper management of complications.

Interventions for improving maternal care services

March 5th -6th: Two staff members from the sub-divisional hospital received training on quality improvement from the USAID ASSIST Project. They were told about the six steps of quality improvement and were asked to develop an improvement plan to ensure AMTSL and the postpartum vitals are monitored in all women who have delivered at their facility so that postpartum complications can be identified early. They formed a quality improvement (QI) team (see Table 1).

March 19th: After attending the learning session, the QI team met to discuss how to administer 10 units of oxytocin within one minute of delivery to all women and how to monitor postpartum vitals four times in the first six hours post-delivery to identify danger signs in time.

Prior to the intervention, the hospital was using oxytocin to augment labour and methergine to prevent bleeding and was not monitoring the postnatal vitals very frequently (averaging less than once in the first six hours). The team came up with a number of changes to test to learn if they have improved oxytocin administration and postpartum monitoring.

Table 2: Six Steps of Quality Improvement

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| <ol style="list-style-type: none">1. Define an improvement aim2. Form an improvement team3. Understand the current system4. Develop a measurement system5. Develop change ideas6. Test the change ideas and implement the successful ones |
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Changes tested to improve oxytocin administration:

- Posting visual reminders in the labour room
- Drawing a new column in the labour register to record oxytocin administration
- Pre-filling syringes with oxytocin to improve ease of administration

Changes tested to improve postpartum monitoring:

- Posting visual reminders in the labour room
- Engaging nursing interns in vitals monitoring
- Developing a new recording system with predefined times

March 31st: The QI team met again to analyse the results and saw that administration of oxytocin intramuscular (IM) had increased from zero percent to 58 percent since they started the improvement work. However, it was found that newly posted staff nurses were not using oxytocin IM because they were not adequately trained and were not very confident that IM oxytocin will be sufficient to prevent PPH. The QI team asked the staff nurses who had experienced administering oxytocin IM to train other staff nurses.

The team found no increase in the number of postpartum assessments after posting the reminders. The staff nurses were not able to do postpartum vitals checking as they were overloaded with the work of the labour room and female ward. They decided to utilize the services of nursing interns under the supervision of the staff nurse for checking postnatal vitals, and interns were provided training for the same. This idea was tested for one day and was successful. Hence, it was decided to continue the testing of this idea for another week.

April 7th: Administration of oxytocin increased further to 88 percent, and the average number of times vitals were recorded also increased from 0.6 to two. The team decided to continue with the change idea of prefilled syringes and checking of vitals by nursing interns for one more week.

April 14th: The QI team met again to analyze the results and found that administration of oxytocin had decreased. It was because more C-sections happened in the preceding week, and the gynaecologist found oxytocin administration in the thigh difficult as the female was draped for operation.

14/14

Pt. delivered at 4:25 PM

Time	BP	Pulse	Temp.
5:00 PM	116/78 mm/Hg	88/min	98°F
6:00 PM	120/75 mm/Hg	86/min	98.2°F
7:00 PM	110/70 mm/Hg	82/min	98°F

Postpartum vitals done by nursing intern under supervision of staff nurse.
Photo courtesy of Satwinder Kaur, Budhlada Sub-divisional Hospital.

The QI team came up with the idea of administration of oxytocin in the shoulder, and the operation theatre staff nurse was asked to record administration of oxytocin in the labour room register.

The team also found that the recording of vitals was not systematic and that most of the assessments were being done beyond six hours of delivery. The QI team decided that the staff nurse delivering the baby will make a table of four columns having time, blood pressure, temperature, and pulse on the delivery file. Nursing interns will note the vitals in the table under the supervision of the staff nurse who will also check for bleeding from time to time. For systematic recording, the staff nurse will write down the timings beforehand which will guide the interns to check vitals at specified times.

Initially, the new recording system was tested for one day. The test showed that the system worked well, and they decided to test for a week to make sure that all staff understood the new system. This was also successful, and the new system became the accepted way of working at the facility.

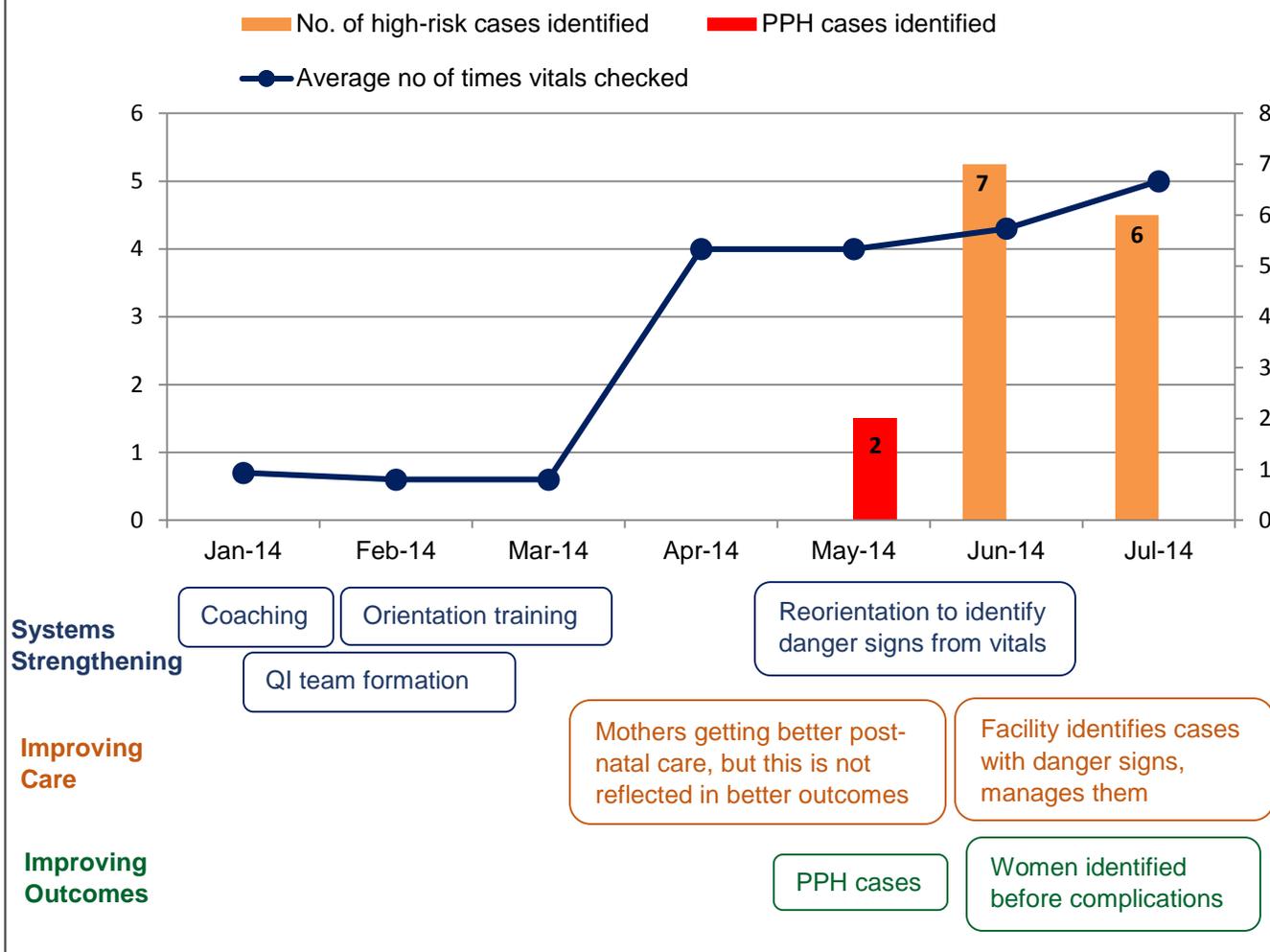
April 21st: Oxytocin was being administered to all the women delivering in the facility within one minute of delivery, and vitals were being recorded four times in six hours postpartum.

April 30th: The QI team analysed the results and found that the results were sustained. (100 percent of women were receiving oxytocin, and postnatal vitals were being monitored on average four times within the first six hours of delivery). It was decided that further data collection will be at monthly interval, rather than weekly data collection.

Results

Women delivering at Budhlada are now receiving oxytocin immediately after delivery to reduce bleeding and are also being monitored more closely after delivery. This has helped the facility staff to identify and manage women with early signs of complications. A review of 40 charts randomly selected in June and July showed that facility staff were able to identify 13 cases with danger signs (six with hypotension, three with hypertension, and three with tachycardia) (see Figure 1). All were managed appropriately and discharged with no serious complications.

Figure 1: Postpartum monitoring and identification of women with complications



Conclusions

The Budhlada Sub-divisional Hospital was able to ensure that all women were receiving oxytocin immediately after delivery. In addition, the hospital has been able to set up a system to provide better care to women in the postpartum period. The improvement in monitoring means that roughly a third of women are identified with some abnormality in vital signs which has led to a change in patient management. The increased contact has also helped in building strong relations of trust between patients and staff nurses in addition to better counselling on breastfeeding, as health staff repeatedly visit women. From August 2014 onwards, the hospital has now decided to collect the data on identification of danger signs and the outcome in all delivery cases so that they can identify additional areas that they need to improve.

The facility in charge is very happy with the results achieved so far and are ready to move to other priority areas of RMNCH+A. Currently they are working on identifying and managing women with severe anaemia.

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