Parijaat

An initiative of Government of Medical, Health & FW, UNFPA and ARTH

Evidence based delivery and newborn care in public health facilities of 10 districts of Rajasthan

I. Objectives of the intervention: To improve the adherence to evidenced-based delivery & neonatal care practices, in selected high case load public health facilities of 10 districts of Rajasthan.

II. The intervention:

Intervention area: The intervention was carried out in selected districts of Rajasthan, which included: Bharatpur, Karauli, Sawaimadhopur, Dholpur, Udaipur, Pratapgarh, Banswara, Rajsamand, Dungarpur and Chittorgarh.

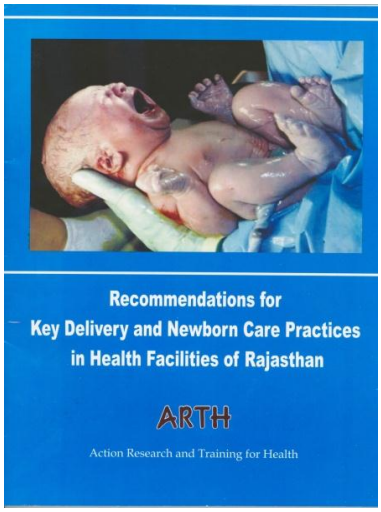
Identification of facilities: In consultation with Government health department, facilities to be strengthened were identified in the 10 selected districts. A list of the number of deliveries in year April 2009 – March 2010 was used, and facilities with high caseloads were selected. There were a total of 88 facilities, which included 9 districts hospitals, 1 sub-district hospital, 32 CHCs and 3 PHCs. The delivery caseload of these facilities varied from 465 to 10517 per year (average 2968 deliveries per year).

The intervention included:

1. ***Developing consensus on in the state on recommended practices at each stage of labour***:

   Initially an expert group consultation was held with a small group of experts in the field which included experts from obstetrics- gynecology, pediatrics, and policy makers. It was recognized that although there are several practices around the time of labour, delivery and immediate neonatal period, the effort would focus on most crucial and important practices. After this, a set of draft recommendations were developed on these practices, adapted from evidence based guidelines in WHO's reproductive health library and other documents. Subsequently, two consultations were held with faculty of medical colleges of the state, in which senior faculty members from departments of obstetrics & gynecology and pediatrics participated, and these recommendations were discussed and

finalized. It resulted in the development of a guideline titled, "Recommendations for Key delivery and Newborn practices in Health facilities of Rajasthan".



Additionally, a poster was developed to be displayed in the labour rooms of government facilities, which included selected practices at each stage of labour. A total of 18 practices were included in the poster, and it was endorsed by government of Rajasthan, UNFPA and UNICEF and ARTH.

2. *Carrying out baseline assessment for facilities of Udaipur and Bharatpur zone*

Baseline assessment included an assessment of the quality of childbirth and immediate newborn care services. Three tools were used for the assessment of quality of services:

a. *Facility assessment checklist* (based on essential requirements of equipment, supplies and amenities in a labour room and availability and training status of staff). For this, the list of items provided in "Essential care for maternal and neonatal care of WHO- IMPAC" was used as a standard. This was locally adapted. The facility assessment checklist had 43 items – including 13 items of equipment, 18 items of supplies, 3 items of other basic amenities, 3 items related to cleanliness, 5 items related to availability and training of staff.

b. *Labour and delivery observation checklist:* The labour and delivery observation checklist was developed based on a set of essential evidence based practices during labour and delivery. This checklist included 20 items of observation. To be able to use this checklist, the project personnel had to be present at a time when delivery was actually taking place in a facility.

c. *Questionnaire for interview with women in postpartum wards*: This checklist was to be used with women in postpartum ward, who

delivered in the same facility in the last 2 days. It included 12 items and was meant to measure whether women received appropriate care or not.

Baseline assessment for different facilities was carried out between December 2010 and August 2011.

3. **Scoring the facilities**: Subsequently, a scoring sheet was developed based on these tools. In the scoring sheet, the tools have been scaled back from their original lengths in order to target the most pressing indicators of inputs and practices for maternal and perinatal survival. It included a total of 18 practices and 10 items of inputs (appendix 1). The correct actions are given points ranging from 1-3 based on their impact levels for maternal and perinatal survival. For an incorrect practice or absence of a beneficial practice, the score was zero.

   The maximum potential score depended on whether a delivery could be observed during the visit of the project staff. For example, if on a visit, the delivery was observed, the maximum practice score was 25, and if it could not be observed then the maximum score was 19. The maximum score for inputs was 12. On each date of visit, a score was derived for each facility, and % rates of change of practice were assessed (either an increasing rate demonstrating more optimal actions being implemented, or a decreasing rate demonstrating the opposite.

   We trained postgraduate social scientists who were appointed as project staff. Some of these persons had experience of 5-6 years in research or training in delivery- newborn care, assisting training of skilled birth attendants, and required a short orientation. Additionally, 3 persons were newly appointed and were trained over 4 weeks in monitoring of delivery and newborn care, identification of equipment and supplies, use of checklists, and in working with government system.

4. **Orientation – training of doctors and program officers on evidence based delivery-newborn care**: Doctors conducting deliveries in these facilities and district level officials were invited to a 1 day orientation workshop on key quality issues. A total of 3 workshops were conducted - one workshop for Bharatpur zone covering 4 districts and 2 workshops for Udaipur zone covering 6 districts.

5. **Training of nurse midwives as skilled birth attendants (SBAs)**: ARTH has been carrying out the training of trainers of skilled birth attendants since year 2008. During this period, a total of 24 training programs for trainers of SBAs have been conducted, each lasting 15-21 days, covering a total of 384 participants.

   These trainers essentially included faculty of district level nursing-midwifery training schools and senior staff nurse-midwives of district hospitals, the TOT has allowed the participants an

opportunity to critically assess delivery and newborn care practices in their own institutions and to work towards improving them. Additionally, 45 nurse midwives from three of these districts were provided 5-7 days short intensive SBA training.

6. **Regular facility assessment, feedback, training and action system**: One or two persons visited selected facilities once in 2-3 months. At each visit, they followed a cycle of "assessment, feedback, training and action (AFTA)".
    a. **Assessment:** They carried out a quality assessment using the set of 3 checklists (facility assessment, delivery observation, interview with postpartum women in wards).

    b. **Feedback:** After each assessment, the project team members gave feedback to in-charge of that facility (e.g. Principal Medical officer, Medical Officer in Charge, Block CMHO, BPM) on shortcomings and discussed ways to improve them.

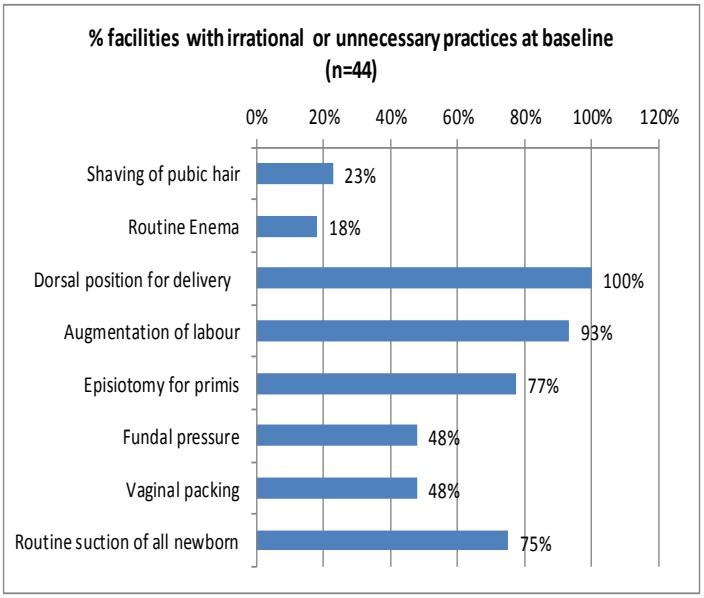
c. **Training**: Based on the specific gaps in practices, s/he also carried out a short orientation of 1-2 hours for the nursing staff on key skills. For the orientation they used presentations and guidance materials developed by the program, supplemented by practical examples in the same health facility. For example, it was observed that the nursing staff was unclear about the use of partograph, the staff clarified the doubts related to the use of partograph, sometimes using a powerpoint presentation.

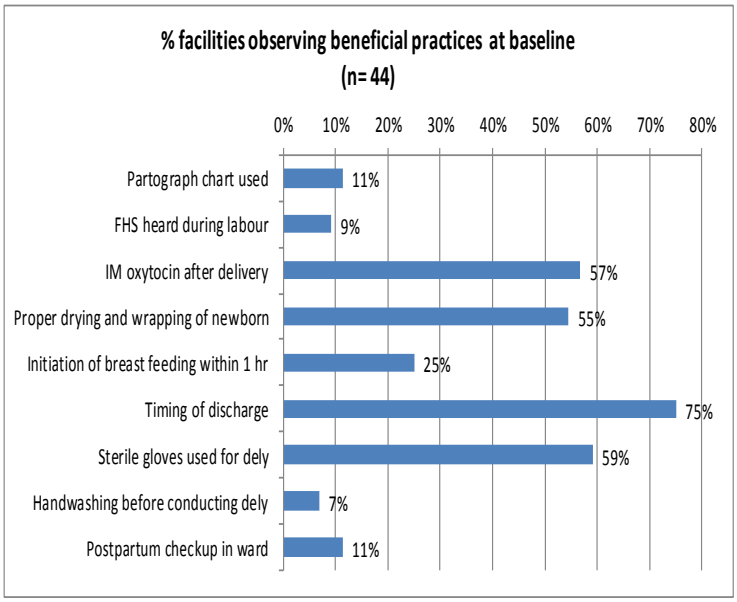
d. **Action:** In collaboration with government staff, the project person also took actions to fulfill the gaps in equipment and supplies on the spot, e.g. s/he inspected the store room of the facility and checked if any items missing in labour rooms were present in store room.

At a few places, the facilitator found that several sets of delivery instruments, or large quantities of macintosh were present in store room, and s/he helped to get them to labour room. At some places, labour tables that had been bought for the facility and were kept in store room, were brought to the labour room and older rusted labour tables were sent for repairs. At one place, the neonatal nursery with several neonatal trolleys was locked for several months since its key was missing. The facilitator helped to get a person from market to open the lock.

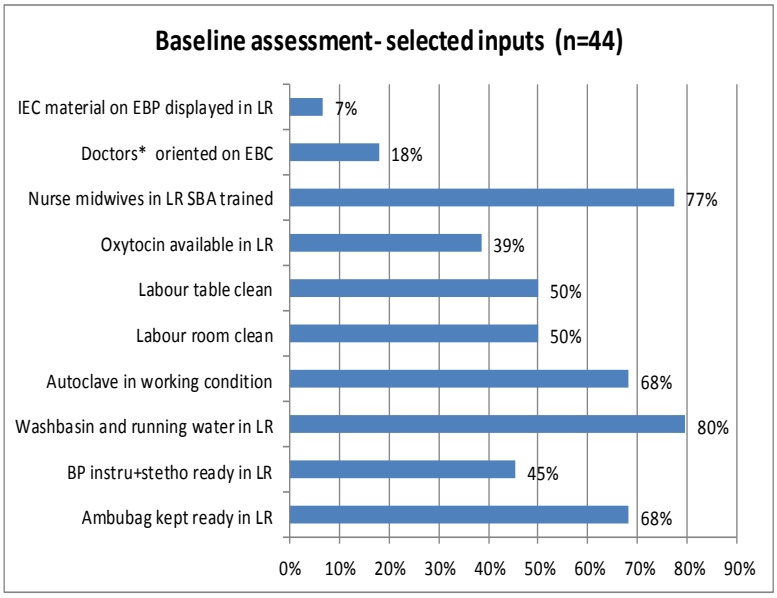
III. Results:

Results of baseline study: Baseline assessment, which was carried out between December 2010 and August 2011, showed that several irrational practices were being followed in the facilities, most importantly, dorsal/ lithotomy position for delivery, augmentation of labour, routine episiotomy for primigravidas. Some other harmful practices such as fundal pressure ad vaginal packing are also being practiced frequently.





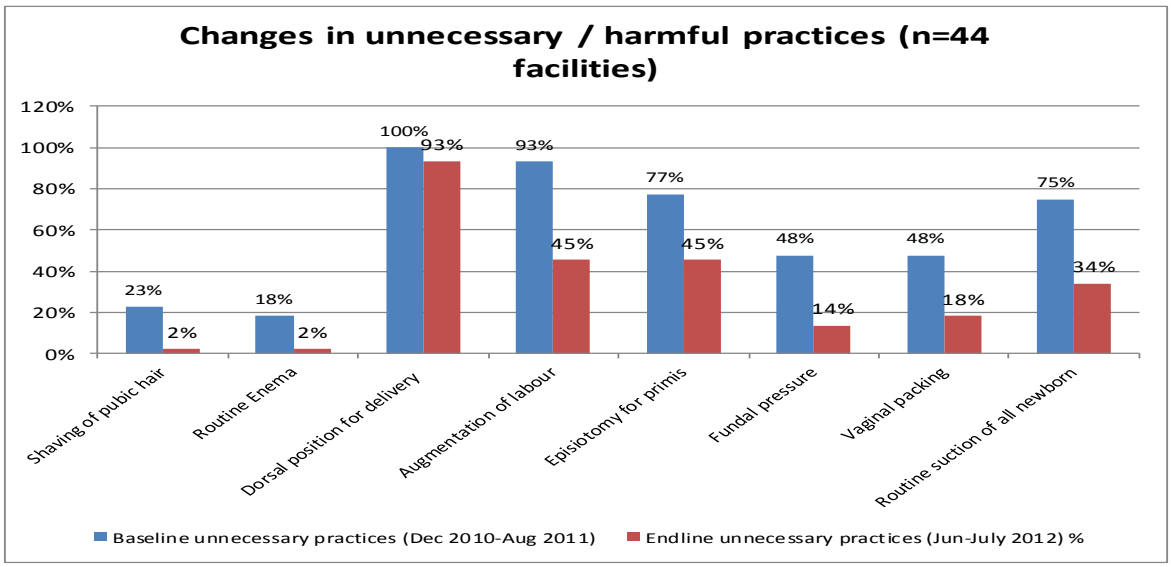
The baseline study also showed that several beneficial practices were not being followed adequately, e.g. monitoring of fetal heart sounds, using a partograph. The practice of hand-washing was very inadequate, and very few facilities provided postpartum checkup of women after being shifted to the ward, while this is a very vulnerable period.



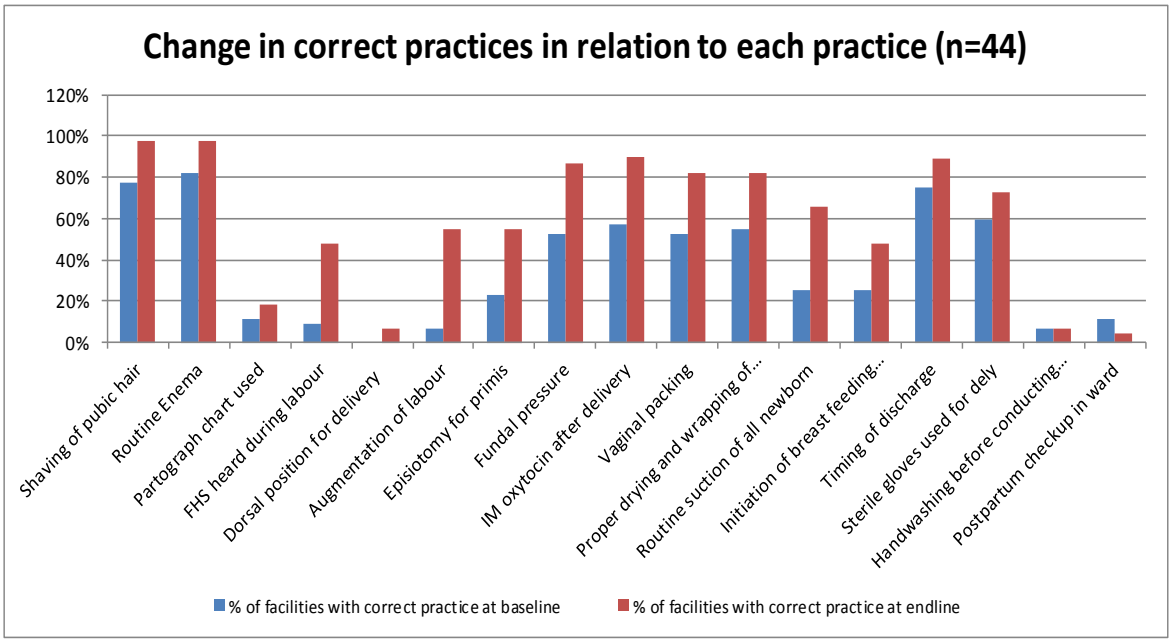
Several crucial inputs were not present in all facilities, e.g. BP instrument and stethoscope were ready in only 45% of labour rooms, while ambubag was ready only in two thirds of facilities. Interestingly, washbasin and running water were also present in nearly 80% facilities, however, labour room and labour table were clean only in 50% facilities.

Effect of Parijaat intervention on practices on improvement in childbirth practices

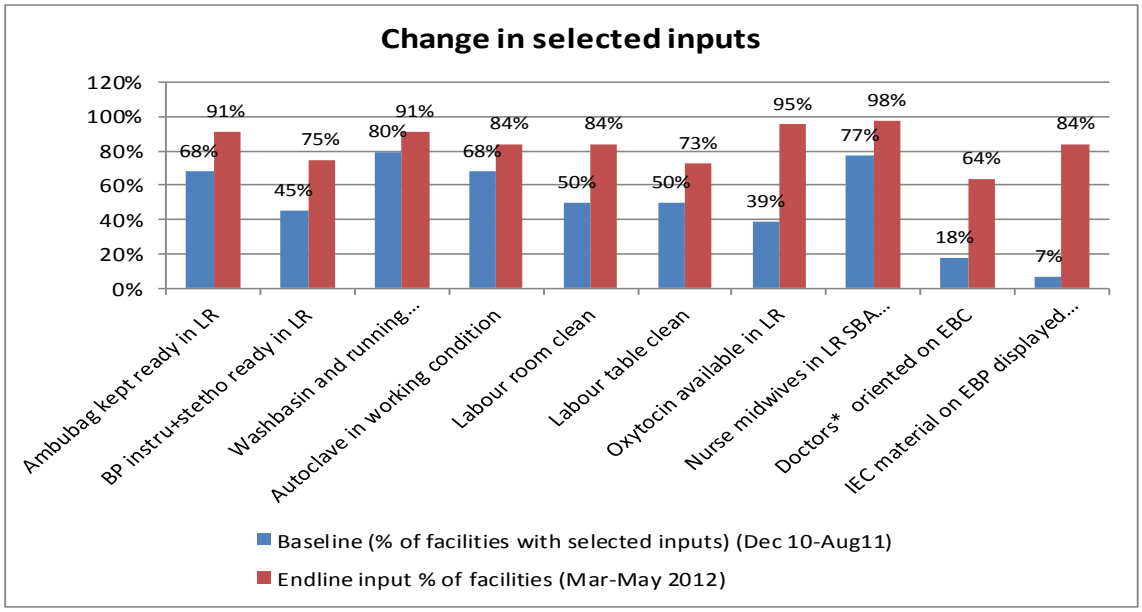
Similarly, the practices showed improvement to variable extent. Between the two visits, the use of correct practices improved in majority of facilities. Of note, episiotomies for primigravidas, augmentation of labor, abdominal pressure, and vaginal packing, (four incorrect and potentially dangerous practices often used in hospitals) all showed improvement across districts.



However, some practices did not show desired improvements – these were avoidance of dorsal position of delivery, use of partograph during labour and postpartum checkup in ward. Similarly, some seemingly simple but important procedures like hand-washing, use of sterile gloves and proper wrapping and drying of the newborn failed to show improvement between the two visits (figure 2).



Several inputs also showed improvements, such as higher proportion of staff being trained on evidence based practices, and the availability of BP instruments and stethoscope. Of note, keeping the labor room clean and the labor table in good condition significantly improved, however surprisingly the number of SBA trained individuals in the labor room did not significantly improve despite our training interventions.



IV. Conclusions and next steps:

The experience of Parijaat intervention shows that a combination of orientation of doctors, training of nurse midwives and quarterly cycles of AFTA (Assessment, Feedback, Training, and Action) are effective in bringing about improvements on quality of childbirth services. Some practices are more amenable to changes while some take longer to change.

In the next few months, the Parijaat intervention plans to focus on the following:

1. Greater participation of health department officials in the quality assurance exercise (quarterly AFTA cycles)
2. Strengthened monitoring of maternal and perinatal outcomes by facilities
3. Further development of in-facility short training capsules on priority topics using multi-media technologies
4. Preparation of a "tool-kit" to implement such an intervention in other districts or states

We also feel that there is a need for action at medical colleges to act as role models for quality of childbirth services. At the same time, mechanisms for ensuring maintenance of equipment & supply chain are needed.