

MERE INSTITUTIONAL DELIVERY IS NOT ENOUGH: QUALITY OBSTETRIC CARE IS IMPORTANT FOR FURTHER REDUCTIONS IN MATERNAL MORTALITY

A. Maternal Mortality is Still Unacceptably High in spite of Near-total Institutional Deliveries

Institutional delivery is a key maternal and newborn care strategy of the National Health Mission (NHM), for reducing maternal and neonatal mortality. According to latest Health Management Information System (HMIS) Institutional deliveries account for 98 percent of all births in the erstwhile combined state of Telangana (TS) and Andhra Pradesh (AP). According to the sample registration system (SRS) findings of 2012 which provides for an independent and unbiased estimates of medical attention at birth, about 88 percent of deliveries in TS&AP were institutional in nature. Despite high level of institutional delivery, the maternal mortality ratio (MMR) continues to be around 100 per 100,000 live births. The potential for further reduction of MMR simply by increased coverage of institutional deliveries is limited. Thus, improving the quality of Obstetric Care services for these deliveries has the potential to bring down the existing high MMR.

B. Causes of Maternal Mortality

Maternal deaths are usually classified as direct or indirect. Direct causes are obstetric complications of pregnancy, childbirth or abortion. These are mostly due to; severe bleeding, infections, hypertensive diseases of pregnancy, obstructed labour, or unsafe abortion. Indirect causes are diseases that are aggravated by pregnancy, eg. severe anaemia and malaria. Direct causes are responsible for 82 percent of all maternal deaths in India. About 60 percent of maternal deaths are due to four causes namely; (a) severe bleeding (25 percent), sepsis or infection (18 percent), complications of abortion (10 percent), and hypertensive disorders of pregnancy (7 percent). Provision of high quality emergency obstetric care (EmOC) can reduce the number of deaths due to these highly preventable causes.

C. Why Institutional Deliveries?

The realization that access to EmOC is most effective means of reducing maternal mortality has come about after a long process of trial and error with a

wide range of often intuitively appealing interventions. Home delivery by trained traditional birth attendants is hardly of any use for reduction of maternal mortality (Wilson et al, 2011; Sibley et al, 2012). Antenatal care (ANC) contributes immensely to newborn survival, but has limited role in reducing maternal mortality (Carroli et al, 2001, Oyerinde 2013). Auxiliary Nurse Midwives (ANMs) are required to identify 'at risk' pregnancies based on current state of knowledge. But main causes of maternal mortality are not detectable by ANC. Chance of obstetric complications is not very different for 'at risk' and other pregnant women (Campbell et al, 2006). Formal risk assessment in pregnancy have concluded that the risk approach may not be effective in preventing maternal death or in ensuring rational use of resources (Ronsmans et al, 2008). ANC appears to influence women's resort to institutional delivery (Dixit et al, 2013). Ultimately it is the ready access to skilled midwifery and professional obstetric care that contributes to reductions in maternal mortality (Brouwere et al, 2001, Khan et al, 2006). Ready access to skilled Obstetric Care is usually feasible in healthcare facilities, otherwise known as facility birthing and is referred to as institutional delivery.



D. Why Reliability of Service and Quality of Care is Important

Giving birth in a health facility does not necessarily equate with high-quality care or fewer maternal deaths. Quality EmOC in any health facility will be possible only if (a) physical facilities for obstetric care are fully operational, (b) skilled birth attendants are available, and (c) they follow evidence-based clinical practice guidelines. If any of these are deficient, institutional deliveries may not yield its full potential of reducing maternal mortality.

Even when a woman reaches a health facility, there are a number of obstacles to her receiving adequate and appropriate care.

The example of Dominican Republic of having high Institutional deliveries and high Maternal Mortality is a case in point. A study seeking to understand the paradox found that peripheral and Primary Care facilities were not prepared, equipped, stocked or adequately staffed to provide for quality EmOC. In some of these facilities nurses and doctors were not adequately trained in EmOC (Miller et al, 2003).

E. Signal Functions and Quality Indicators of EmOC

The UN expert agencies recommend a short list of nine clearly defined 'signal functions' to assess the level of care actually provided by health facilities (see box).

Signal functions to identify basic (1-7) and comprehensive (1-9) EmOC:

1. Administer parenteral antibiotics
2. Administer uterotonic drugs (eg. oxytocin)
3. Administer parenteral anticonvulsants (eg. Magnesium sulfate, Diazepam, Phenytoin Sodium and Phenobarbitone)
4. Manual removal of placenta
5. Removal of retained products (eg. dilatation & curettage, manual vacuum extraction)
6. Assisted vaginal delivery (eg. vacuum extraction, forceps delivery)
7. Basic neonatal resuscitation (eg. With bag and mask)
8. Perform surgery (eg. Caesarian section)
9. Transfuse blood

These are key medical interventions for direct obstetric complications that cause majority of maternal deaths. Health facilities are classified on the basis that these functions have been actually performed in the past three months (WHO et al, 2009). In addition, the Ministry of Health & Family Welfare (MOHFW) has stipulated a minimum of ten deliveries / month as an indicator of functioning EmOC.

Examples of EmOC Quality Indicators:

Structure:

1. Availability of midwives & doctors, and
2. Their EmOC competency scores.

Process:

1. % Women receiving oxytocin in 3rd stage.
2. % Receiving prophylactic antibiotic before cesarean.

Outcome:

1. % Women delivered with intact perineum.
2. % \geq 37 wk births with Apgar <7 at 5 min.
3. Adverse outcome index: score based on deliveries with adverse events.

Signal functions reflect functionality but do not measure quality. Experts agree on the conceptual framework of structure, process and outcome measures as indicators of Quality Obstetric Care (QOC). The accompanying box illustrates the framework with a few indicators. There is no agreement yet, on a minimal set of universally applicable QOC indicators. Choice of QOC indicators will depend on current stage of development of services, process importance, data collection overheads, and frequency of outcome measures.

F. EmOC in Telangana (TS) and Andhra Pradesh (AP)

The situation in TS and AP is evidently paradoxical. High level of institutional deliveries in the two states should have resulted in much lower levels of maternal mortality. Most probably the under performance is contributed by deficient or poor quality of EmOC in health facilities. Recent studies between 2011-14 by the Regional Evaluation Teams show that problems of under staffing, deficient facilities and poor functioning continues, albeit somewhat reduced. For example; about 52 percent of the 24x7 PHCs in Telangana and 49 percent of the 24x7 PHCs in AP were understaffed. Only about 14 percent of the 24x7 PHCs in Telangana and 44 percent of the 24x7 PHCs in AP were performing the stipulated minimum ten deliveries per month.

G. Action Points to Improve Quality of Obstetric Care

1. Better Midwifery and More Midwives:

Experience shows that integrating midwives into maternity care services improves birth outcomes and reduces medical procedures (Das et al, 2014; Renfrew et al, 2014). Hence, (a) Increase both number and existing competence of midwives. (b) Consider the recommended guidelines of Indian Public Health Standards (IPHS) (GOI-DGHS, 2012) recruiting desirable strength of six midwives as the minimum for 24x7 PHCs. (c) Retain SBA-trained staff in EmOC facilities and periodically evaluate their competence. (d) Training programs must ensure essential competencies for midwifery practice (ICM, 2013).

2. Collaborative SBA Training Initiatives:

Adequate and effective training of midwives, nurses and medical officers is critical to achieve high quality EmOC. Unfortunately, evaluation or performance reports on SBA Training in TS and/or AP are not available. Anecdotal evidence suggests that the SBA training program is largely confined to District Hospitals. Special short training for EmOC and anaesthesia, mostly through overloaded medical colleges, has not worked well. Majority of obstetricians practice in the private sector. Evaluation of SBA training in Karnataka (IMaCS, 2012) suggests that it is feasible to involve many more institutions including well run CHCs / FRUs, and Private Hospitals to improve upon the existing competence levels of SBAs. Hence,

- a. Expand the network of SBA training centres by including; (i) Maternity Hospitals, (ii) FRUs/ CHCs with a good track record and specified volume of EmOC service, and (iii) Private Health Facilities (PHF) with a good track record and specified volume of EmOC services provided for.
- b. Emphasize and ensure that trainees actually practice various signal functions and gain sufficient hands on experience during EmOC training
- c. Dynamically revise the network of SBA training centres to ensure continuation of professionally committed, seriously engaged institutions and teams delivering adequate hands on experience to their trainees.

3. Ensuring that all EmOC centres and linkages are fully functional:

Poor quality of obstetric care is one reason why many women may bypass local EmOC centres (Kruk et al, 2014). Hence, it's better to invest on facilities, where quality of care can be ensured.

- a. Reorganize and consolidate EmOC facilities with appropriate obstetric volume, and geographic spread to improve access.
- b. Encourage telephone consultations between SBAs in 24x7 PHCs and CEmOC centres.
- c. All CEmOC centres may conduct monthly Referred Case Reviews to be attended by representative SBAs from 24x7 PHCs. Administrative in-charges and SBA team leaders at the CEmOC centre should lead these discussions.
- d. Appropriate financial delegation & control to ensure required operational autonomy for the various EmOC centres to sustain uninterrupted functional status.

4. Collaborative Quality Obstetric Care Initiatives:

Instituting collaborative birth outcome initiatives to accelerate improvements in quality of maternity services, adoption of evidence-based midwifery and obstetric practices can bring about positive birth outcomes and reduce unnecessary operative interventions such as cesarean sections.

5. Effective Monitoring and Evaluation:

- a. Ensure timely reporting and compilation of EmOC service activities and upload summary data in the departments web site regularly.
- b. Organize professional and administrative inspection of EmOC centres and establish a system for appropriate action on the observations and recommendations arising from these inspections. Prepare & publish half yearly / annual summary of observations and action taken on the inspection of EmOC centres.
- c. Activate maternal death review by professional teams, and publish summary results in the department web site regularly.
- d. Commission independent evaluation of access, availability and quality of EmOC services, at regular intervals.

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Acknowledgements: We appreciate helpful comments and suggestions received from Dr. Dinesh Agarwal, Technical Advisor, IPE Global, New Delhi; Prof. Rama Devi, Indian Institute of Health & Family Welfare, Hyderabad and Dr. Pradeep Reddy, Consultant - UNICEF, HFO.



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This document has been produced with the support of UNICEF, Hyderabad Field Office