Preventive measures to address pregnancy risks

Increasingly, more and more women are attending antenatal care, four or more times during their pregnancy. The numbers of assisted births and institutional deliveries are on the increase. The wave of institutional births in most LMICs has caught on from WHO and other international expert recommendations. In India a study in rural tribal area of Gujarat, of almost 30,000 live births from 2003-2011, there were significant reductions in adjusted incidence rate of maternal deaths due to direct causes, during intra-partum and post-partum periods, and those which occurred at home. However, reductions in incidence of maternal deaths due to indirect causes, at hospital and during antepartum period were not statistically significant. Most maternal deaths are now occurring at hospitals and due to indirect causes. It would be essential to now prioritise management of indirect causes of maternal mortality during pregnancy at community and hospitals for further reduction in maternal deaths to achieve SDGs.[1]

The main indirect causes include anaemia, hypertensive states of pregnancy, cardiac disease, HIV/ AIDS, and cerebrovascular disease. Genital tract sepsis and early pregnancy deaths are other reasons. Adopting multipronged approach through reducing delays in access to Emergency Obstetric Care, contraceptive use, encouraging early and regular ANC and shared ANC with the medical team is essential to tackle the situation.

So where should one start in an effort to further reduce Maternal Mortality? Shouldn't we start at the birth of a girl child! There are many stages of development and neglect of women from childhood and in the extended family, which adversely affect women and increase the risk of maternal mortality related to pregnancy.

1. **Equal treatment of a girl child:** This goes back to our cultural attitudes towards the treatment of a girl child. In many cultures attention to general care of the child, nutrition, education and spending money is centered on boys rather than the girls. Moreover, girls are considered a burden and boys keep wealth in the family (See under old items > Sex Ratio in India March 17, 2019). Girls experience effects of poor nutrition through anaemia, stunting, delayed puberty and poor body reserves to fight any infections. When sick, requiring secondary care is much more delayed for girls than for the boys. Teen marriage of girls is another factor affecting first pregnancy. All these factors play a role in poor growth and development of the girls to become a women and experience a healthy pregnancy.
2. **Contraception and family Planning:** In many cultures and religious groups, the access to contraception and family planning advice is restricted or not allowed at all. Termination, even after rape, of unwanted or accidental pregnancy is a taboo. For too young girls, teen pregnancy exposes young girls to the complications of pregnancy. Multiple pregnancies and too frequent pregnancies also expose women to higher risks of pregnancy. Every women deserves full information on the use of contraceptives. With judicious use of contraception these risks can be minimised, reducing pregnancy related maternal mortality significantly.
3. **Antenatal Care (ANC):** In spite of increase in ANC and institutionalised deliveries, maternal mortality and still birth, neonatal and infant mortality rates have not declined sufficiently to reach MDG targets. Improvements in ANC at primary health centres

and by Village Health Workers (VHWs) need to be strengthened to address indirect causes of maternal mortality. Specific areas of attention are checks for anaemia, hypertension, proteinuria, diabetes, sexually transmitted infections including HIV and Syphilis and any other medical condition during pregnancy. The need for assessing advancing pregnancy by medical examination and foetal assessment during ANC are the key to identify any risks to pregnancy.

4. **Essential Obstetric Care (EOC):** The most important aspect of prevention is to reduce substantially the "Three Delays"**[2]**; *Delay in decision to seek care, Delay in reaching care, Delay in receiving adequate health care.* The first delay, the Mother, Family and the Community, all need to be educated on the concept of a normal pregnancy, but an association of small risk of complications, about which the family and community must be prepared ahead of time. Advice to attend regular ANC helps to identify any risk factors. The Second delay is in reaching health facility in time. It is important from the point of being prepared to get to the health facility as soon as possible, if required. Family and community should be advised for this preparation. Provision of motorbike ambulances for mountainous terrain to improve access to health centres has shown to be effective. If the distance to health facility is too great, pregnant women should be moved to waiting houses next to health centre to stay in before their due date so when they go into labour, assistance is on site. The third Delay is at the Health Facility. Appropriate training of midwives nurses and doctors is essential. Facility preparedness at all times with suitable equipment and referral systems in place. A successful model of having a protocol in the labour room for most common complications of pregnancy for health workers to follow has been shown to be effective. (see Maternal and Child Health > Maternal Health > Maternal Mortality - a case study).
5. **Universal Health Coverage:** Comprehensive follow-up of the primary health centre catchment population (Age-Sex Register) has been discussed earlier (Old Items > Information Boosting Primary Health Care. March 30, 2019). It is essential so that no one slips through the net in health care provision. Starting with growth monitoring to reduce stunting in children, especially in girl child, family planning advice to all women in reproductive age and provision of contraception to reduce unwanted pregnancy. VHWs should be responsible for following each pregnant women right through the pregnancy through ANC, supervised delivery at the onset of labour in an appropriate place and post natal care.

More than quarter of all maternal deaths are due to indirect causes. Measures discussed here can greatly improve the outcome of pregnancy in reducing the Maternal Mortality Ratio further.

References:

[1] Pankaj Shah et al. Changing epidemiology of maternal mortality in rural India: time to reset strategies for MDG-5. Tropical Medicine and International Health. Vol 19 No 5 pp568–575. 2014.

[2] https://www.maternityworldwide.org/what-we-do/three-delays-model/