Emergency Obsteric Care

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Pregnancy represents a journey into the unknown from which all too many women never return. Methods to make motherhood safe are wellknown & resources are obtainable. The necessary services are neither sophisticated or very expensive. Reducing maternal mortality is one of the most cost effective strategies available in the area of public health. Yet one woman dies every minute, 16,000 women die every day, the equivalent of at least 5,85,000 women a year. Maternal mortality rates in developing countries are frequently underestimated by 50%. All but 1% of the maternal deaths every year occur in developing countries (WHO 1996) with 90% occuring in Asia & Subsaharan Africa; of all the health statistics monitored by WHO, maternal mortality is the one with the largest discrepancy between developed & developing countries.

The factors leading to maternal deaths are complex & lie along the continuum of a woman's life, from her health & nutrition during infancy & childhood to her education & development during adolescence & prevailing marriage & fertility patterns of the community. Promoting the nutrition & education of women, improving their social status, & raising the age at marriage would have an impact on maternal mortality. These are, however essentially long term solutions. The immediate solution to the problem of unsafe childbirth lie primarily in the provision of high quality maternal health services including referal of high risk pregnancies & access to care for obstetric emergencies. Most life threatening complications require skilled medical interventions such as caesarean delivery, blood transfusion, drug therapy etc. 75% of maternal deaths are direct obstetric deaths due to obstetric complications such as haemorrhage, unsafe abortion, hypertensive disorders, sepsis & obstructed labour.

All pregnant women are at risk of obstetric complications. Most life threatening complications occur during labour & delivery, and these can not be predicted. Prenatal screening does not identify all of the women who will develop complications. Every pregnant woman needs access to facilities with capabilities to provide emergency obstetric care (EOC). Neither effective prenatal care nor identifying risk will help women if EOC is not available, not utilised. To date, the focus of safe maternal services other than emergency obstetric care. The goal of reducing maternal mortality can be achieved if prompt adequate care is not available for obstetric complications. The challenge now is to shift focus on EOC in addition to ongoing maternal health care services. EOC includes specific interventions to manage emergency obstetric complications, Obstetric complications can be fatal within hours & access to EOC can determine if a woman lives or dies.

Estimated average interval from onset to death.

Condition	Interval
P.P.H.	2 Hrs.
A.P.H.	12 Hrs.
Rupture Uterus	1 day
Eclampsia	2 days
Obstructed Labour	3 days
Sepsis	6 days

EOC need not be all or nothing proposition. (i.e. either a hospital capable of performing surgery or nothing) Based on specific settings & availability of resources, there are interventions that can be effectively carried out at various levels of the health system starting from community level facilities.

1. Obstetric First Aid.
2. Basic EOC.
3. Comprehensive EOC.

1. Functions to define Obstetric First Aid.

Parental Oxytocics, Parental Antibiotics, & Parental

Anticonvulsants can be given at home.

2. Functions to define E.O.C. inclues in addition, to I.

- Manual removal of Placenta
- Forceps / Vacuum Extraction
- I.V. Fluid administration. These can be done at Community Health Centres.

3. Comprehensive E.O.C. includes in addition to above facilities for surgery anaesthesia & blood Transfusion. The first referral unit (F.R.U.)forms the vital link between rural community and the centralised district hospital. Obstetric haemorrhage can kill in hours and the location of the FRU should be such that any woman can reach it within two hours of an emergency even from the remotest village.

Maternal mortality can be reduced only by treating the complicated cases earlier and nearer home.

FRU is the facility to which a woman prenatally identified as high risk is referred to or to which a woman is sent when complications previously unforseen arise during labour or delivery. The facility may be at a lower level of the health center, or may be a subdistrict / district hospital. Staff here are trained to perform Essential Obstetric Functions, (WHO 1986). These are :-

1. **Surgical Functions:**
   C.S., Laparotomy for Rupture Uterus & Tubal Pregnancy, Dilatation & Evacuation, Amniotomy, Oxytocin infusion for augmentation of labour, repair of vaginal or cervical tears.
2. Anaesthetic Functions: General / Regional
3. Medical Functions: Treatment of shock, Sepsis, Hypertension, Eclampsia, Anaemia (Total dose influsion)
4. Blood Transfusion
5. Manual or Assessment Functions: Manual removal of placenta, Vacuum Extraction / Forceps, Partography.
6. Family Planning : Tubectomy, Vasectomy, IUD Insertions, Norplant Insertions etc.
7. Management of complicated pregnancies / Labour refered from other levels.
8. Neonatal Care: resuscitation, Thermal control & Feeding.

Near the first referral centers, maternity waiting homes (MWHs) should be established where high risk women from distant villages can stay in the last months of pregnancy instead of being brought in late in labour

Progress indicators & their minimum acceptable levels.

Indicator	Minimum Acceptable level
a. Number of EOC facilities	For every 20,000 annual births a comprehensive facility + 4 Basic EOC facilities.
b. Geographic distribution	Minimum level of EOC services is met throughout the country.
c. Proportion of all At least 15% of all births in population	takes place in either basic or in comprehensive EOC facilities.
d. Complicated cases percentage of	Complicated cases in basic & comprehensive EOC, all births facilities are equal to at least 15% of all births in the population.
e. C. S. as percentage	Not <5% & >15% of all births.
f. Case fatality rates	Fatality rates among women with specific obstetric complications in EOC facilities <1%.

Barriers to timely & appropriate E.O.C.

The "3 Delays Model" identified the points at which delay to E.O.C. can occur.

1. Delay in deciding to seek care.
2. Delay in reaching F.R.U.
3. Delay in actually receiving care after arriving at the facility.

Lessons learned & suggestions for improving E.O.C.:-

1. Community Education & Involvement.
   a. Education of community to make early decision to seek care.
   b. Community involvement:
   Training community motivators.
   Forming community blood donor associations.
   Establishing community loan funds.
   Establishing community supported transport.

2. Strengthening the Referral System :-
   a. Training Traditional Birth Attendants.
   b. Emergency Transport.
   c. Expanding midwifery services
   d. Maternity waiting homes.
   e. Upgrading Health Centres.

3. Improving Quality of E.O.C.:-
   a. Training in Life Saving Skills.
   b. Improving Interpersonal & counselling skills.
   c. Delegation of responsibilities & role for Non physician health care providers.
   d. Ensuring availability of drugs & supplies.
   e. Improving management.

Forming and enhancing community women's groups & strengthening community education will foster greater responsibility for self care & early decision to seek care. The information includes danger signs of pregnancy & labour & where to go when a complication occurs.

A strong referral system starts from the community level up: beginning with trained traditional birth attendants (to identify risk factors for early referral) at the community level; availability of emergency transportation (utilising police/defence/fire brigade service vehicles if required): midwives posted at health post level, maternity waiting homes near FRU sites, to health centers / hospitals upgraded to provide E.O.C. In matab posts, they were supported by a strong referral system that included a maternity clinic capable of providing basic EOC, which in turn was supported by a district hospital and a transport system capable of referring the patient in time. MMR declined from 440 to 140 deaths per 100,000 births.