Maternal Mortality

WHERE ARE WE?

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ESI-PGIMSR, BASAIDARAPUR
Smita Patil
The death of a woman and mother is a tragic loss to the family, community and nation as a whole.
When a mother dies, children lose their primary caregiver, communities are denied her paid and unpaid labour, and countries forego her contributions to economic and social development.
GLOBAL SCENARIO

- 289,000 mothers die preventable deaths every year.
- 800 women die daily.
- One woman dies every two minutes.
- Developing countries account for 99% (284,000) of the global maternal deaths.
The sub-Saharan Africa region accounted for 62% (179,000), Southern Asia 24% (69,000).

At the country level, one third of all global maternal deaths are in India at 17% (50,000) and Nigeria at 14% (40,000).
MATERNAL HEALTH

Healthcare status of a woman during pregnancy, childbirth, and the postpartum period and is assessed through measurements of mortality and morbidity
MATERNAL DEATH

The death of a woman while she is pregnant
Or
within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.
MMR

- Maternal mortality ratio (MMR) Number of maternal deaths during a given time period per 100,000 live births during the same time period.
- MMR developing countries 230/100,000
- MMR developed countries 16/100,000
PRESENT SCENARIO

- Globally, the total number of maternal deaths decreased by from 523,000 in 1990 to 289,000 in 2013.
- Global MMR declined from 400 maternal deaths per 100,000 live births in 1990 to 210 in 2013.
- Between 1990 and 2012, maternal mortality worldwide dropped by almost 50%.
Commitment to Reducing Maternal Deaths (MDG)

GOAL

Reduce current MMR by 75% by 2015

INDIA 109/100,000
What is India’s MMR?
WHERE ARE WE

- 1938 - 20 per 1000 live births
- 1959 - 10 per 1000 live births
- 1997 - 407 per 100000 live births
- 2003 - 301 per 100000 live births
- 2006 - 254 per 100000 live births
- 2009 - 212 per 100000 live births
- 2012-178 per 100000 live births
Maternal Mortality Ratio of India has declined from 212 in 2007-2009 to 178 in 2010-2012. The decline has been most significant in EAG States & Assam from 308 to 257. Among the Southern States, the decline has been from 127 to 105 and in the Other States from 149 to 127.
## MMR INDIA

<table>
<thead>
<tr>
<th>S. No.</th>
<th>India &amp; Major states</th>
<th>2004-06</th>
<th>2007-09</th>
<th>2010-12</th>
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<td>16</td>
<td>Other</td>
<td>-</td>
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## Maternal Mortality Ratio, INDIA SRS,2010-12

<table>
<thead>
<tr>
<th>INDIA TOTAL</th>
<th>Achieved MDG target</th>
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<tbody>
<tr>
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<td>178/lakh live birth</td>
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<tr>
<td></td>
<td>109/lakh live birth</td>
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<tr>
<td>Kerala</td>
<td>66</td>
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<tr>
<td>Tamil Nadu</td>
<td>90</td>
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<tr>
<td>Maharashtra</td>
<td>87</td>
</tr>
</tbody>
</table>

### Close proximity to MDG targets

| Andhra Pradesh          | 110                 |
| Gujarat                 | 122                 |
| West Bengal             | 117                 |
| Haryana                 | 146                 |
| Uttar pradesh           | 292                 |
Proportion of Maternal Deaths by State - Total Maternal deaths in India- 56,700

73% of maternal mortality occurs in 5 large states.
MMR...we need to accelerate pace of decline
What Do Women Die Of?

They Die of Obstetric Complications that Need Not Be Fatal
Most Obstetric Complications

Can Neither be Predicted Nor Prevented...

But if Women Receive Effective Treatment in Time,

...Almost All Can Be Saved
How Do We Know Which Women Will Experience Complications?

WE DON’T
...But we do know that of any population of pregnant women at least 15% will experience an obstetric complication.

...This is as true of pregnant women in the US and Europe as of women in Africa, Asia and Latin America.

Nobody Knows Why This Happens. It is a Fact of Life.
OBSTETRIC COMPLICATIONS

- Hemorrhage 25%
- Unsafe Abortion 13%
- Eclampsia 12%
- Obstructed Labor 8%
- Infection 15%
- Other 8%

Account for about 3/4 of Maternal Deaths
INDIRECT OBSTETRIC COMPLICATIONS

- Are Due to Pre-existing Conditions,
- Including Malaria, Anemia and Hepatitis
- And Increasingly HIV/AIDS

Account for about 1/4 of Maternal Deaths
One in five maternal deaths are directly due to anaemia.

In India, anaemia is directly or indirectly responsible for 40 percent of maternal deaths and contributes to about 80 per cent of the maternal deaths due to anaemia in South Asia.

There is 8 to 10-fold increase in MMR when the Hb falls below 5 g/dl.
Contributing Factors to Maternal Deaths

- Early marriage
- Adolescent pregnancy
- Poverty
- Malnutrition
- Harmful traditional practices
- Illiteracy/Ignorance
- HIV among pregnant women
Contributing Factors to Maternal Deaths

- Ineffective health services
- Inadequate obstetric care
- Inadequate essential supplies
- Poor maternal mortality audit
Women are not dying because of diseases we cannot treat...

They are dying because societies have yet to make the decision that their lives are worth saving

Mahamoud F. Fathalla
MMR can be reduced in India

- Tamil Nadu (90)
- Kerala (66)
- Maharashtra (87) have already met the MDG 2015 goal
India (Tamil Nadu)

- Invested in access to emergency obstetric care which contributed to reducing MMR to 90
- Focus areas were 24/7 availability, transportation, Infrastructure upgradation and training
- Resource constraints were overcome by contracting private doctors.
Three key requirements for safe motherhood

- Every pregnancy a wanted pregnancy
  - Contraception and population stabilization services
  - Safe and comprehensive abortion care
- Skilled care during childbirth
- Transport to appropriate services
How Much Time Do We Have?

*It is estimated that, if untreated, death occurs on average in:

- 2 hours: PPH
- 12 hours: APH
- 2 days: Obstructed Labor
- 6 days: Infection

They gave me five units of blood but it was too late.
Three delay model

- These are the three points at which access to care is delayed or denied, and that lack of care leads to maternal death

- Time - critical factor
The First Delay

Delay in deciding to seek care at the household

- Lack of information and inadequate knowledge
- Cultural/traditional practices
- Lack of money

Male Involvement is Key

*Birth Preparedness*
Birth Preparedness
Janani Suraksha Yojana

A demand side intervention
For promoting Safe delivery
MONTHLY VILLAGE HEALTH NUTRITION DAY (VHND)
Mamata Diwas
The Second Delay

Inability to access health facilities:

- Out of reach health facilities
- Poor roads and communication network
- Poor community support mechanisms
Emergency Referral Services (Toll free no 108) introduced
Networking of various private and public vehicles and locally identified mobile phones forms the core infrastructure of the helpline, which has been made financially sustainable by linking it with JSY.
Emergency Transport Facility

Help Desk at SSG Hospital, Baroda

Jabugam CHC & CEmONC

Drivers of EmTF

24 x 7 ECR 94267 24500

Community - 7 lakhs tribal population

Outreach Staff

Other CHC/ Pvt./ Trust Hospitals
The Third Delay

Delay between arriving and receiving care at the health facility:

- Inadequate skilled attendants
- Poorly motivated staff
- Inadequate equipment
- System not geared to prioritize an emergency & respond promptly
Women Waiting at Health Facility
To Avert Death and Disability...

...We Need to Ensure that Women have Access To...

Emergency Obstetric Care (EmOC)
Strengthens the capacities of healthcare institutions to provide Basic and Comprehensive Emergency Obstetric Care (EmOC) to all women, and thus reduce the "third delay"
Basic and Comprehensive EmOC Facilities

EmOC Facilities Provide All Eight Services

- Antibiotics (intravenous or by injection)
- Oxytocic Drugs
- Anticonvulsants
- Manual Removal of Placenta
- Removal of Retained Products
- Assisted Vaginal Delivery
- Surgery (Cesarean Section)
- Blood Transfusion
Maternal Health Programs

1950-60 - MCH - PHC, ANMs
1966 - target oriented FP program started
1985 - 1990 UIP - (UNICEF)
1992-93 - CSSM (UNICEF & world bank) - FRU - EmOC
1997-2003 RCH isolated schemes to improve institutional delivery care. No focus on EmOC
2004- 2009 RCH II – improved access to skilled care and EmOC, shortage of trained manpower
Solutions Under NRHM
ASHA Training in village
Improved referral & transport system
UP GRADATION OF FACILITIES/
Maintenance of Facilities
Equipment availability

Baby warmers at PHC

RO, Solar water heater

X-Ray Unit in PHC
24x7 PHC
Making Emergency Obstetric Care available

Hiring private anaesthetists and obstetricians to carry out caesarian operations

Total caesarians done in secondary institutions in 2006-07 - 40878
Increased to 45966 (upto Jan 2010)

Training MBBS doctors in short term course in Life Saving Anaesthesia Skills and Emergency Obstetric Care.
So far 177 doctors trained
No of LSCS done by trained anesthetists - 12780
Community Involvement
Outsourcing

Objective: To develop conducive environment in all PHCs, making them clean and green, and mobilizing the community through involvement of Self Help Group members.
PUBLIC-PRIVATE PARTNERSHIP

Study of Emergency Response Service - EMRI model

EMRI:
Mahatma Gandhi National Rural Health Mission of India & Family Welfare Government of India
E-MAMTA

- Mother & Child Online tracking system

- A Gujarat initiative adopted by the Central Government for implementation across India
Maternal death audit

Theni District.
Name of Deceased: Amaravathy w/o Muthupillai 35 Yrs
Enquiry of officials MO, SHN, VHN, with Husband & Sister
Place: Dombucherry, Date: 05.04.2005.
Dombucherry PHC.
A new norm has been adopted for setting up a SHC based on ‘time to care’ with in 30 minutes by walk from a habitation for selected district of hilly and Desert areas.
What has not worked in the past

- High risk approach
- Target oriented approach
- Great emphasis only on antenatal care
What is slowing us down?

Resources

- Number of functional PHCs and FRUs is not adequate
- Blood is still a scarce resource
- Infrastructure and capacity building takes time
What is slowing us down?

Program issues

- No perfect central theme
- Diffusion of focus from EmOC and skilled birth attendant care
- Lack of integration
- Inadequate monitoring and evaluation

MMR...we need to accelerate pace of decline
"Maternal Health Ecosystem"

Solution is not purely medical

**KEY**

- create a maternal health ecosystem, interventions are not just available
- *high-quality, desirable, affordable* and *accessible* to those in need.
HOLISTIC APPROACH

- Provide quality healthcare
- Stimulate desire for care
- Ensure financial affordability
- Ensure physical accessibility
India need Introspection

- Medical education system – Are they people oriented?
- Paramedicals – Skills & inclusion in main stream?
India need Introspection

- Private health delivery system – Are they monitored?
- Public health system – Are they efficient & focused?
- Development models – Do they care for environment & common people?
VISION

ELIMINATING

PREVENTABLE MATERNAL DEATHS

BY

2035

(30/100,000)
You may be disappointed if you fail but you are doomed if you don’t try
Thank You