Maternal and Perinatal Death Review (MPDR) in Thakurgaon, Narail, Jamalpur & Moulvibazar
From 2010 to till date

Implemented by LD ESD, DGHS in collaboration with DGFP within scope of Joint GoB-UN MNHI
An Analysis of Verbal Autopsies in 305 Maternal Deaths captured in 2011 by the GoB led MPDR System in 4 Districts of Bangladesh

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Background

- MPDR intervention was first initiated in Thakurgaon in 2010 by LD MNCAH, DGHS in collaboration with DGFP through Joint GoB-UN MNH Initiative under financial support of DFID, EC and CIDA

- Based on experience; MPDR was expanded in 4 MNHI districts in 2011 and continued to 2012

- CIPRB, a research based organization has been providing technical and implementation support under a UNICEF-CIPRB partnership
What is MPDR: Maternal and Perinatal Death Review

- It identifies maternal, neonatal deaths and still births at both community and facility
  - Maternal death (from pregnancy to 42 days of delivery)
  - Neonatal Death (from birth to 28 days of life)
  - Still births (from 7 month pregnancy to birth)
- Conduct Verbal autopsies to identify medical and social causes of deaths
MPDR Implementation framework

At Facility
By Staff Nurse

Fill up of Facility Death Review Form by Nurse

At Community by HA/FWA

Death Mapping by Managers to find area of high incidence death

Verbal Autopsy by HI/AHI/FPI to find medical/social causes

Analyse HR/logistic gaps using ASP Checklist by Doctors

3. Analyse Data, discuss and prepare action plan for implementation by Upazila MPDR Committee

Analyse Data, discuss and prepare action plan for implementation by District MPDR Committee
## Total deaths notified

<table>
<thead>
<tr>
<th>Districts</th>
<th>2011</th>
<th>2012 ~Nov (9 mo)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Matern</td>
<td>Neonat</td>
</tr>
<tr>
<td>Jamalpur</td>
<td>100</td>
<td>1321</td>
</tr>
<tr>
<td>Moulvibazar</td>
<td>110</td>
<td>865</td>
</tr>
<tr>
<td>Narail</td>
<td>36</td>
<td>314</td>
</tr>
<tr>
<td>Thakugaon</td>
<td>59</td>
<td>870</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>305</td>
<td>3370</td>
</tr>
</tbody>
</table>

Calculated MMR: 179/100,000 LB and NMR 23.7/1000 LB
Death Mapping: a simple tool to identify vulnerable geographic area helped the local Health and FP managers to implement focused interventions in partnership.
Kashipur: Ranishankoil Upazila

Community Clinic

10 bed Community Clinic

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
<th>Maternal</th>
<th>Neonatal</th>
<th>Still birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>4</td>
<td>21</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>0</td>
<td>08</td>
<td>05</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>1</td>
<td>06</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>
Analysis of Verbal Autopsies in 305 maternal deaths

Age of mothers
• 14% adolescents
• 51% very young

By Education of mother

Only one Illiterate
85% >primary complete
Maternal Deaths (n=305)

Delivered; n=250 (82%)

- Vaginal Delivery 75%
- Breech 0.8%
- C-section 23.2%
- Others 1.2%

Not delivered, n=55 (18%)

Birth Outcome (n=205)

- Live birth 75.3%
- Still birth 21.2%
- Abortion 3.5%
Maternal Deaths in relation to
1. Time of Pregnancy and delivery
2. Place of delivery

Place of Death:
- Home
- Facility
- Others
Causes of maternal death (n=252)

<table>
<thead>
<tr>
<th>Cause</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rupture uterus</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>8</td>
</tr>
<tr>
<td>CVA</td>
<td>2</td>
</tr>
</tbody>
</table>
- 59% of mothers delivered at home died
- 17% died on the Way
- 51% of the women died in hospitals
Death after CS by cause and day of death after delivery

<table>
<thead>
<tr>
<th>Time of Death</th>
<th>Number of mothers died</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 day</td>
<td>9</td>
</tr>
<tr>
<td>2-7 day</td>
<td>6</td>
</tr>
<tr>
<td>8-14 day</td>
<td>7</td>
</tr>
<tr>
<td>15 day above</td>
<td>2</td>
</tr>
</tbody>
</table>

- PPH
- Pre & Ecl
- Sepsis
- CS compl
- Other
Three delays in 252 maternal deaths

First Delay (hr)
- < 1 hr: 30.8
- 1 hr - 2 hrs: 10.7
- 2 hrs - 6 hrs: 34.0
- 6 hrs - 12 hrs: 13.8
- > 12 hours: 10.7

Second Delay (hr)
- < 1 hr: 20.3
- 1-2 hr: 41.3
- 2-6 hr: 31.2
- > 6 hr: 7.2

Third Delay (hr)
- < 1/2 hr: 54.0
- 1/2 - 1 hr: 24.1
- 1-2 hrs: 13.9
- 2-6 hrs: 5.1
- 6-12 hrs: 2.9

Decision making
- % of cases:
  - < 1 hr: 75%
  - 1 hr - 2 hrs: 31.2%
  - 2 hrs - 6 hrs: 40.0%
  - 6 hrs - 12 hrs: 20.3%
  - > 12 hours: 7.2%

Transport to Receiving Treatment
- % of cases:
  - < 1/hr: 62%
  - 1-2 hr: 31.2%
  - > 6 hr: 1/2 - 1 hr: 78%

Receiving Treatment
- % of cases:
  - < 1/2 hr: 31.2%
  - 1/2 - 1 hr: 41.3%
  - 1-2 hrs: 31.2%
  - 2-6 hrs: 20.3%
  - 6-12 hrs: 7.2%
  - > 12 hours: 7.2%
MPDR facilitated improvement in MNH services

- Review meetings at upazila/dist used MPDR data in preparing remedial actions
- Death dense- Vulnerable areas were identified for focused interventions
- Special Initiative in Tea Gardens to notify death taken in partnership
- Death mapping found dense deaths along the banks of “Monu River” in Moulvibazar
- Facility based MPDR improved quality of care in facilities: blood arrangement in community partnership
MPDR : a way towards actions that proved to save a mother with 17 bags of blood transfusion

Thank you
Opportunities and Way forward

- Mainstreaming with MIS mortality data
- Use data in designing and monitoring LLP
- Use data to improve quality of care & services
- Use of data for monitor progress
- Scale up MPDR nation wide under sector programme
An analysis of 1319 Neonatal deaths from 4 districts.

Chart 1: Place of Death

- Home: 50.9%
- Government Facility: 33.6%
- Private Facility: 7.8%
- Way: 4.9%
- Others: 2.7%

Chart 2: Place of Delivery

- Home: 61.2%
- GoB Hosp: 21.4%
- Private hosp: 15.3%
- Others: 2.1%

36.7% delivery at Govt. Hosp.
Neonatal Deaths by Causes

- Sepsis: 35%
- Asphyxia: 33%
- LBW/Prematurity: 18%
- Undetermined: 12%
- Birth trauma: 1%
- Congenital anomalies: 1%
Analysis of 24 hrs deaths

44.0% in 1st day

74% in 1st week

Delivered at home
Delivered at facility