The Bihar, India Experience

A CARE India - PRONTO International partnership
Mobile Nurse Mentoring Programme - part of the Bihar Technical Support Programme

Supported by the Bill & Melinda Gates Foundation
Bihar, India

BIHAR
- South of Nepal
- 8.07% of India’s population
- 1.4% of the Global population

Bihar- Place of Buddha’s Enlightenment
Demographics

MATERNAL MORTALITY RATE

<table>
<thead>
<tr>
<th>Year</th>
<th>India</th>
<th>Bihar</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRS 2007-09</td>
<td>212</td>
<td>261</td>
</tr>
<tr>
<td>SRS 2010-12</td>
<td>178</td>
<td>219</td>
</tr>
<tr>
<td>SRS 2011-13</td>
<td>167</td>
<td>208</td>
</tr>
</tbody>
</table>

NEONATAL MORTALITY RATE

<table>
<thead>
<tr>
<th>Year</th>
<th>India</th>
<th>Bihar</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRS 2011</td>
<td>33</td>
<td>31</td>
</tr>
<tr>
<td>SRS 2012</td>
<td>29</td>
<td>28</td>
</tr>
<tr>
<td>SRS 2013</td>
<td>29</td>
<td>28</td>
</tr>
</tbody>
</table>

Population Share

Maternal Death: Share of Bihar

- Bihar: 8%
- Rest of States: 92%

Infant Deaths: Share of Bihar

- Bihar: 10%
- Rest of India: 90%

Neonatal Deaths: Share of Bihar

- Bihar: 12%
- Rest of the States: 88%

SRS 2007-2009
SRS 2010-2012
SRS 2011-2013
INDIA
BIHAR
What does QI consist of in Bihar? An Overview

**Bucket A – Facility preparedness**
Gap assessment and debottlenecking of HR, Infrastructure, Supplies, Equipment, Finance and fund utilization etc.

[Expected number of facilities to be covered = 533 block PHCs, 70 RHs, 44 SDHs and 35 DHs]

**Bucket B – Basic clinical care**
(Addressing elements that do not need clinically qualified mentors)
Looks at aspects such as Infection prevention (Handwash, DDK/ Sterile tray, gloves etc.), use of uterotonics for AMTSL, Post-partum checkup, breastfeeding, VLBW identification and care, etc

[Expected number of facilities to be covered = 533 block PHCs, 70 RHs, 44 SDHs and 35 DHs]

**Bucket C – Detailed clinical mentoring**
(Prevention as well as Identification, Stabilization, Referral and Management of maternal and neo-natal complications, as well as Family Planning Procedures)

- **BEmONC mentoring** [Expected number of facilities to be covered = 72 + 320 BEmONC facilities]
- **CEmONC mentoring** [Expected number of facilities to be covered = 56 CEmONC facilities]

B/D/SQAC is a sustainability mechanism for QI – to takeover understanding of QI processes and ensure continuity of the same
Training Mechanism

**Mentors**

- One M.Sc. Nurse Master Mentor per 2 teams
- Two B.Sc Nurse Mentors/ 4 facilities per District

**Types of training sessions**

- Technology enabled classroom training
- On-site training and mentoring in labour rooms/ NBCCs/ OTs
- Mini Skill lab
- Simulations
- Team Building Exercises
- Value
- Adult Learning Principles
January 2015

| **100** Graduate and post-graduate nurse mentors for Block PHCs | **38** Districts |
| **14** Mentors for District Hospitals |

**AMANAT** – translated as “something precious given in trust/ security/ deposit”  
(Acronym translated as Maternal and Neonatal Emergency Preparedness)

*Programme now running in...*

| **160** Block PHCs | **376** Facilities |
| **06** District Hospitals |

*by March 2017*

These facilities handle close to 1.1 million births a year.
Program Coverage
Changes

Difficult to segregate the separate impact of Simulation vs the rest of the training or preparedness.

• To reduce maternal and neonatal deaths handling perinatal complications in mother and neonate are best practised as simulations:
  o Repeated drills exposes possible errors and institutionalises memory of protocols
  o Team work institutionalized
  o Lesser referrals as better confidence; also mean much lower expenses for patients

• General preparedness of facility also improves in terms of infrastructure, supplies etc.
Measurement Framework

*Focusing on Changes in Reproductive, Maternal and Neonatal Health*
Examples of FIS data: Observed vs Unobserved/ partially observed data of identification and recording of maternal complications

<table>
<thead>
<tr>
<th>Condition</th>
<th>Observed</th>
<th>Partially Observed/Unobserved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fetal Distress</td>
<td>1.02%</td>
<td>0.27%</td>
</tr>
<tr>
<td>Breech</td>
<td>0.97%</td>
<td>0.27%</td>
</tr>
<tr>
<td>Obstructed Labor</td>
<td>0.91%</td>
<td>0.24%</td>
</tr>
<tr>
<td>Prolonged labor</td>
<td>1.57%</td>
<td>0.74%</td>
</tr>
<tr>
<td>Sepsis</td>
<td>1.68%</td>
<td>0.37%</td>
</tr>
<tr>
<td>PROM</td>
<td>1.48%</td>
<td>0.71%</td>
</tr>
<tr>
<td>Pre-term labor</td>
<td>1.48%</td>
<td>0.25%</td>
</tr>
<tr>
<td>Pre Eclampsia</td>
<td>1.48%</td>
<td>0.14%</td>
</tr>
<tr>
<td>Severe Preeclampsia</td>
<td>1.48%</td>
<td>0.07%</td>
</tr>
<tr>
<td>Eclampsia</td>
<td>0.27%</td>
<td>0.04%</td>
</tr>
<tr>
<td>3rd degree/Cervical tear</td>
<td>1.34%</td>
<td>0.30%</td>
</tr>
<tr>
<td>PPH</td>
<td>3.50%</td>
<td>1.77%</td>
</tr>
<tr>
<td>APH</td>
<td>2.11%</td>
<td>0.62%</td>
</tr>
<tr>
<td>Anaemia</td>
<td>0.40%</td>
<td>0.71%</td>
</tr>
</tbody>
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Difference between observed and unobserved/ partially observed data indicates need for improvement in identification and recording of maternal complications.

N (observed)= 3514 deliveries
N (partially/unobserved)= 11161 deliveries
Examples of FIS data: Accurate identification and recording of newborn asphyxia cases

Pushing for accurate identification and recording of newborn asphyxia cases by nurse mentors at PHCs has led to more accurate identification and subsequently, more no. of asphyxia cases are being revived.

Note: Observed data is collected by the nurse mentors when they are present in the institution; Unobserved data is recorded from facility records in absence of mentors.
Observed vs Unobserved/Partially Observed/Recorded data

**Birth Asphyxia**
- **Observed**: 8.84%
- **Unobserved/Partially unobserved**: 3.12%

**Still Birth Rate**
- **Observed**: 12%
- **Unobserved/Partially unobserved**: 14%

**Type of still birth**
- **Still Birth- fresh**: 44.10%
- **Still Birth - macerated**: 51.60%

**Immediate Neonatal death**
- **Observed**: 0.30%
- **Unobserved/Partially unobserved**: 0.20%

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*N (observed) = 2776 deliveries (2742 live birth, 34 still birth)*
*N (partially/unobserved) = 9060 deliveries (8936 live births, 128 still births)*
Remarks

• Dynamic, allowing for changes in level of difficulty

• In hot afternoons, sense of active participation and ‘drama’ makes life interesting!

• In poor governance areas, higher than 70% attendance of mentees over 7 months speaks about the interest generated— and don’t we know that if the interest is big, the principle must also be great!!
Go to the people.
Live with them.
Learn from them.
Love them.
Start with what they know.
Build with what they have.
But with the best leaders,
When the work is done,
The task accomplished,
The people will say
‘We have done this ourselves’
Lao-tse in 7th century B.C.

THANKS
## MNM Pilot Results

*After Last round (post- 2013-14) with minimal inputs of simulation*

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Before Mentoring %</th>
<th>6 months after Mentoring %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxytocin for AMTSL</td>
<td>8.6</td>
<td>75.0</td>
</tr>
<tr>
<td>Fundal pressure applied</td>
<td>32.0</td>
<td>03.6</td>
</tr>
<tr>
<td>STSC initiated</td>
<td>30.9</td>
<td>62.5</td>
</tr>
<tr>
<td>BF initiated in LR</td>
<td>49.1</td>
<td>71.5</td>
</tr>
<tr>
<td>Handwashing correct (All six steps)</td>
<td>14.0</td>
<td>36.8</td>
</tr>
<tr>
<td>Sterile instruments used</td>
<td>13.0</td>
<td>43.5</td>
</tr>
<tr>
<td>Attendant wore gloves</td>
<td>76.0</td>
<td>90.4</td>
</tr>
</tbody>
</table>
CARE & PRONTO Partnership

CARE Field Team prepares facility for training

CARE State Team

CARE Capacity Building Team & PRONTO Team

Assist Govt. officials to identify gaps, create budgets, help in construction/procurement, change duty rosters for effective once a month training, and to ensure infrastructure, drugs, supplies and nurse mentees for the mentoring process.

Receives the orders for government health officials to allow full cooperation with the programme.

Jointly designs the curriculum for the TOT of nurse mentors, conducts basic theory, practical skill-station training and then the practicum of handling deliveries in good hospitals; joint monitoring of field and of web based data.