Challenges and Opportunities in Low-Resource Settings: Guideline Development, Adaptation, Implementation and Performance Measurement

Measures to Reduce MMR in Kerala

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State Mission Director, NRHM, Kerala
Disclosure of Interests (last 3 years)

Dr M Beena

I certify that, to the best of my knowledge, no aspect of my current personal or professional situation might reasonably be expected to affect significantly my views on the subject on which I am presenting, other than the following*:

Employee of Government of Kerala. Presently working as State Mission Director, National Rural Health Mission, Kerala.
National Rural Health Mission Kerala

- National Rural Health Mission seeks to provide accessible, affordable and quality health care to the rural population, especially the vulnerable sections.
- In Kerala NRHM is supporting the Health Services Department to improve service delivery.
### Kerala Basic Features

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>Kerala</th>
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<tbody>
<tr>
<td>Population</td>
<td>33 Million</td>
</tr>
<tr>
<td>IMR (000)</td>
<td>12</td>
</tr>
<tr>
<td>MMR (100,000)</td>
<td>81 (SRS)</td>
</tr>
<tr>
<td>Institutional Delivery</td>
<td>99.4</td>
</tr>
<tr>
<td>Total Fertility Rate</td>
<td>1.7</td>
</tr>
<tr>
<td>Crude Birth Rate</td>
<td>14.7</td>
</tr>
<tr>
<td>Death Rate (000)</td>
<td>6.8</td>
</tr>
<tr>
<td>Sex Ratio Female : Male</td>
<td>1.084</td>
</tr>
<tr>
<td>Per capita income</td>
<td>$ 1513</td>
</tr>
<tr>
<td>Life Expectancy at Birth</td>
<td>75</td>
</tr>
<tr>
<td>HDI</td>
<td>0.790</td>
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</tbody>
</table>

- Small but highly populous state of India
- Highly literate population, esp. women
- Historically good health care system
- Social equity and Land reforms
- Early political activism
- Missionary activities
- Women empowerment
- Public Distribution System
- Indigenous Systems of Medicine
- Excellent Healthcare Delivery Network
Maternal Mortality in Kerala

- The MMR in Kerala is high when compared with other health indices.
- New strategy is needed to reduce the MMR.

<table>
<thead>
<tr>
<th>Year</th>
<th>India</th>
<th>Kerala</th>
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<tbody>
<tr>
<td>2001-03</td>
<td>301</td>
<td>110</td>
</tr>
<tr>
<td>2004-06</td>
<td>254</td>
<td>95</td>
</tr>
<tr>
<td>2007-09</td>
<td>212</td>
<td>81</td>
</tr>
</tbody>
</table>

Source: Registrar General of India, Ministry of Home Affairs (SRS Estimates)

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</tr>
</thead>
<tbody>
<tr>
<td>MMR</td>
<td>81</td>
<td>70</td>
<td>60</td>
<td>50</td>
<td>45</td>
<td>40</td>
</tr>
</tbody>
</table>
Maternal Death Audit

• Confidential Maternal Death Audit started in 1990’s
• Format and methodology revised in 2010
• District level monitoring committee formed.
• All maternal death in Govt and Private sector are audited
• Kerala Federation of Obstetrics and Gynecologist published study report on maternal Death
Maternal Mortality in Kerala

Causes of Maternal Death

- Based on the Confidential review of Maternal Audit Report, the major causes of death are:
  - Hemorrhage
  - Hypertensive disorders
  - Sepsis
  - Heart diseases complicating pregnancy
  - Amniotic fluid embolism
Measures to reduce Maternal Mortality in Kerala is a joint project

- Government of Kerala
- National Rural Health Mission
- Health Services Department
- NICE international UK
- Kerala Federation of Obstetrics and Gynaecology

- Aim of the project is to reduce the Maternal Mortality.
- Development of Quality Standards and pilot implementation in 8 hospitals.
- The pilot hospitals include different categories of health care institutions.
Measures to Reduce Maternal Death in Kerala

- **May 2012**: Preliminary phase started
  - Meeting on Causes of Maternal Mortality
- **June 2012**: Workshop on Measures to Reduce Maternal Death
- **July 2012**: Preparatory meeting with members.
  - Visit of NICE team
  - Preliminary meeting with officials and Gynecologists
- **Aug 2012**: Workshop for the development of Quality Standards
  - Working Group on Measures to Reduce Maternal Death
  - Draft Quality Standards developed.
- **Sept 2012**: Quality Standard for maternal healthcare finalised
- **Jan 2013**: Quality Standards published
- **March 2013**: Training at Trivandrum & Ernakulam
- **April**: Implementation of pilot phase
- **Monthly review meetings**
Quality Standards

Working Group on Measures to Reduce Maternal Death in Kerala was formed

NICE team visiting W and C Hospital

Quality Standards on Maternal Health Care Developed
Sources used

Maternal Fetal Medicine Committee, KFOG

KFOG

WHO
WHO recommendations for the prevention and treatment of postpartum haemorrhage, 2012

NICE
Intrapartum care, Care of healthy women and their babies during childbirth, 2007

RCOG
Green-top guideline No 52, Prevention and management of postpartum haemorrhage, 2009
Quality Standards

10 chapters

Each chapter contains:

• Quality statement
• Definitions
• Quality Measure – Structure, Process and Outcomes measures.
• What the quality Statement means for each audience
• Data sources
• Source guidance
Quality Standards

1. Active Management of Third Stage of Labour
2. PPH Prevention – 4th Stage Management
3. Management of Post-Partum Haemorrhage with Blood and Blood Products
4. Obstetric Intensive Care
5. Placenta Praevia Accreta
6. Pre eclampsia
7. Anti-hypertensive Treatment
8. Severe Hypertension in pregnancy and in Immediate Postpartum Period
9. HELLP
10. Eclampsia
Quality Standards was released by UK Health Minister in presence of Honorable Chief Minister and Health Minister of Kerala.

- Dr Kalipso Chalkidou, Director, NICE International
- Rajeev Sadanandan, Principal Secretary Health
- Dr M Beena State Mission Director NRHM
Training

- Pilot phase are being implemented in 8 selected hospitals
- Training provided to all staff working in the Labor room and maternity ward
- Visited all hospitals to review the programme
Quality Standards Implementation

- Flow charts developed
- Quality Standards distributed to all Pilot Hospitals
- A new register for the labor room was designed and implemented
- Disposable delivery kits was introduced in all selected hospitals
- New equipments were purchased and distributed to all pilot hospitals
Flow charts for Quality standards developed.

Displayed in the labor room and antenatal care areas.
Monitoring of the Programme

**Inputs**
- Resources
  - Fund
  - Infrastructure
  - Equipments
  - HR
  - Technical expertise
  - Delivery Kit

**Activities**
- Programme
  - Implementation of Quality Standards
  - Active Management of Third Stage of Labour
  - PPH Prevention
  - Labor room and OT renovation

**Outputs**
- Products or services produced
  - No PPH cases
  - Number of blood transfusions
  - Cases treated in ICU
  - Number of cases with HELP
  - Labor room and OT renovation

**Outcomes**
- Results or Effects
  - Number of Complications
  - Number of cases Referral
  - Deaths due to complications

**Impact**
- Long term effects
  - Decreased MMR

**Monitoring of the Programme**
Initial reports showed that

- All Hospitals following the Quality Standards
- There is a decrease in the PPH
- Decreased referral to higher centres
- All patients were stabilised before the referral.
- There is decrease in the use of blood products
Conclusions

• Excellent partnership between key partners (clinicians, policy makers), mutual respect and consistent leadership have been crucial to the success of the work
• All pilot hospitals report good progress and satisfaction with the QS work
• General enthusiasm among staff
• All suggest the QS should be rolled out to the entire state of Kerala

Challenges

• Delays in supplying the model delivery sets due to shortage of good quality instruments
• Baseline data was not collected prior to pilot roll out makes it difficult to measure improvement
• Quality Standard need developing for other major causes of maternal deaths
Thank you