MATERNAL HEALTH INTERVENTIONS
FOR REDUCING NEONATAL MORTALITY

Workshop on building capacity in supporting countries
to include newborn health in child survival strategies

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WHO - MPS
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Background

• About 50% of neonatal deaths occur in the first day of life, in addition to 3.3 million stillbirths
• Most of these deaths are related to maternal health and survival
• Strengthening maternal services will improve neonatal health and survival
Outline

• Clinical interventions likely to improve neonatal health and survival
• Packages likely to accelerate progress
• Health system and policy interventions
MPS list of interventions

- **Essential**: interventions that are absolutely necessary to satisfy the priority health care needs of women and newborn infants in all countries.
- **Situational**: interventions that are required specifically for women and newborns who live in settings with certain disease patterns.
- **Routine**: interventions for all women and newborn infants to be provided preferably at primary health care level at appropriate times.
- **Additional**: interventions for women and newborn infants with complications and problems that can be managed at primary health care level.
- **Specialized / referral**: interventions for severe obstetric, newborn and medical complications, and surgical family planning in the hospital.
- **Advanced**: interventions that are introduced at the primary health care level once quality essential interventions provided to all women and newborn infants. They may be available at the tertiary level of care.
Pre-conception interventions

- Nutrition, folic acid, iron, iodine
- Immunization against tetanus and rubella
- Life style (STIs/HIV prevention, smoke, alcohol, violence)
- Well-spaced and wanted pregnancies
Antenatal care

• Essential
  – Tetanus immunization
  – Syphilis testing and treatment
  – Birth and emergency preparedness
  – Early detection and treatment of maternal and fetal complications
  – Information and counselling on self care at home, nutrition, safe sex, healthy lifestyle and breastfeeding
  – Support for women with special needs e.g. adolescents, women living with violence

• Situational (routine, additional and referral)
  – Prevention of malaria (IPT and ITN) and treatment of uncomplicated and complicated malaria
  – Voluntary HIV counselling and testing; PMTCT by ART, infant feeding counselling, mode of delivery advice; treatment of opportunistic infections

• Advanced
  – Screening and treatment for asymptomatic bacteriuria and infection with streptococcus B (GBS)
  – Screening for rhesus isoimmunization
  – Selective use of ultrasound for diagnosing/confirming complications
  – Folic acid supplementation
Antenatal care is a success story: uptake and demand are on the increase.
Childbirth

- **Routine**
  - Monitoring progress of labour, maternal and fetal well-being with partograph, provide supportive care and pain relief
  - Early detection and management of delivery and fetal complications
  - Promotion of exclusive breastfeeding

- **Additional - bEmOC**
  - Treatment of mild to moderate complications (e.g. prolonged labour, including vacuum extraction; episiotomy, repair of genital tears, manual removal of placenta)
  - Pre-referral management of severe complications (e.g. obstructed labour, fetal distress, preterm labour, breech presentation, severe peri- and postpartum haemorrhage)

- **Specialized - cEmOC**
  - Treatment of severe complications in childbirth and in the immediate postpartum period (obstructed labour, malpresentation, eclampsia, severe infection, bleeding-including caesarean section, blood transfusion and hysterectomy)
  - Induction and augmentation of labour
Skilled attendants save newborn lives
Making Pregnancy Safer Department

Skilled attendants and wealth

Source: Kunst and Houweling, 2001
An Example of advanced intervention
Use of Antenatal Corticosteroids in preterm pregnancies in Latin America

Increasing the use of antenatal corticosteroids in preterm pregnancies from 32% to 65%, will:

perinatal mortality rate from 102 per 1,000 to 88 per 1,000 live births

avoid 16,000 deaths in LAC per year
Postnatal care

• Routine
  – Assessment of maternal and neonatal wellbeing
  – Detection of complications (e.g. infections, bleeding, anaemia, postpartum depression)
  – Iron & folate supplementation
  – Information and counselling on nutrition, safe sex, family planning and provision of some contraceptive methods
  – Advice on danger signs, emergency preparedness and follow-up
  – Protection, promotion and support of exclusive breastfeeding

• Additional
  – Management of mild complications (e.g. infections, bleeding, anaemia, postpartum depression)
  – Pre-referral treatment of severe complications

• Specialized
  – Management of severe complications (e.g. infections, bleeding, anaemia, postpartum depression)
IFC interventions

• Education activities to increase IFC awareness on MNH needs
• Establish mechanisms to assure community engagement in responding to MNH needs, including transport and finance for emergency situations, and to improving the quality of MNH care
• Support for special groups (HIV positive women, adolescents)
• Support from the family during childbirth and immediate postpartum
• Maternity protection in the workplace
Neonatal mortality is lower when mothers benefit from antenatal and childbirth care

Data source: Demographic and Health Surveys.
The Lancet Neonatal Survival series

- 16 interventions of proven efficacy on neonatal survival
- 3 delivery systems: family-community, outreach and facility-based
- Universal coverage of the 16 interventions could avert 41-72% of global neonatal deaths
<table>
<thead>
<tr>
<th>Clinical care</th>
<th>Outreach services</th>
<th>Family-community</th>
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<tbody>
<tr>
<td>Skilled obstetric and immediate newborn care including resuscitation</td>
<td>4-visit antenatal package including tetanus immunisation, detection &amp; management of syphilis, other infections, pre-eclampsia, etc</td>
<td>Folic acid #</td>
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<tr>
<td>Emergency obstetric care to manage complications such as obstructed labour and hemorrhage</td>
<td>Malaria intermittent presumptive therapy*</td>
<td>Counseling and preparation for newborn care and breastfeeding, emergency preparedness</td>
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<tr>
<td>Antibiotics for preterm rupture of membranes*</td>
<td>Detection and treatment of bacteriuria*</td>
<td>Clean home delivery</td>
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<tr>
<td>Corticosteroids for preterm labour*</td>
<td>Postnatal care to support healthy practices</td>
<td>Healthy home care including breastfeeding promotion, hygienic cord/skin care, thermal care, promoting demand for quality care</td>
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<tr>
<td>Emergency newborn care for illness, especially sepsis management and care of very low birth weight babies</td>
<td>Early detection and referral of complications</td>
<td>Extra care of low birth weight babies</td>
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<td>Case management for pneumonia</td>
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**Pre-pregnancy**

- Family-community

- Outreach services

- Clinical care

**Pregnancy**

- Family-community

- Outreach services

- Clinical care

**Birth**

- Family-community

- Outreach services

- Clinical care

**Neonatal period**

- Family-community

- Outreach services

- Clinical care

**Infancy**
Primary-level care including outreach

*Selected antenatal care interventions (ANC)*

**combination of 1-4**
1. Tetanus toxoid (TT)
2. Screening for pre-eclampsia
3. Screening & treatment of asymptomatic bacteruria
4. Screening & treatment of syphilis

*Skilled maternal and immediate newborn care (SMNC) combination of 5 -8*
5. Normal delivery by skilled attendant
6. Active management of the third stage of labour
7. Initial management of post-partum haemorrhage (PPH)
8. Neonatal resuscitation

Referral care level

9. Treatment of severe pre-eclampsia/eclampsia*
10. Antibiotics for pre-term prelabour rupture of membranes (pPROM)*
11. Antenatal steroids for pre-term births*
12. Management of obstructed labour, breech & fetal distress (OL)*
13. Management of severe post-partum haemorrhage (PPH)*
14. Management of maternal sepsis*

*Emergency neonatal care (ENC) combination of 15-18*
15. Management of very low birth weight babies (vLBW)*
16. Management of severe neonatal infections*
17. Management of severe neonatal asphyxia*
18. Management of neonatal jaundice*

Community-based interventions

*Community newborn care package combination of 19-20*
19. Support for breastfeeding mothers
20. Support for low birth weight babies
21. Community-based case management for neonatal pneumonia
Results for Afr-E region

Afr-E region (High child, very high adult mortality)
Results for Sear-D region (High child, high adult mortality)
Limitations

• Not all interventions included, e.g.
  – Family planning & safe abortion
  – Surfactant therapy for respiratory distress syndrome
• Does not measure impact on stillbirths & morbidity from neonatal complications
• Estimates of effectiveness often based on evidence from developed settings
Discussion

• Most cost-effective mix of interventions was similar in the two regions:
  – Community-based newborn care package most CE, followed by:
  – Antenatal care
  – Skilled attendance at birth (basic maternal and neonatal care)
  – Referral-level emergency neonatal and obstetric care

• Coverage of the very CE interventions (ANC, SMNC, community-care) remains low
  – Where resource availability is extremely limited & unlikely to increase, scale down less CE interventions & reallocate resources to these more CE options

• However, access to referral-level care will be necessary to achieve the MDGs — scaling up all interventions in this analysis to 95% coverage would halve neonatal and maternal deaths
Scaling-up will require legal and policy interventions

- To address the human resources crisis
- To achieve universal coverage
- To make it possible for mothers and babies to enjoy the right to survival, the right to health and the right to non-discrimination on the ground of poverty
Thank you

For more information visit MPS website

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