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# Disease Control Priorities for Reproductive, Maternal, Newborn and Child Health in Low- and Middle-Income Countries

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*economic evaluation for health*

Volume 2:

# Reproductive, Maternal, Newborn & Child Health

DISEASE CONTROL PRIORITIES • THIRD EDITION

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## Reproductive, Maternal, Newborn, and Child Health



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## Reproductive Health Package

- 17 interventions primarily at community level
- Provision of contraceptive services for 90% of unmet need
- Reduce annual births by 28 million
- Prevent 1.5 million deaths\* from avoided pregnancies

\*Including maternal, neonatal and child deaths and stillbirths



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# Maternal and Newborn Health Package

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- 35 interventions primarily at Primary Health Center level
- Prevent 2.6 million deaths\*
- Top 6 interventions
  - Labor and delivery management
  - Care of preterm babies
  - Syphilis detection and treatment
  - Treatment of newborn sepsis and pneumonia
  - Promotion of breastfeeding
  - Neonatal resuscitation

\*Including maternal, neonatal and child deaths and stillbirths

## Child Health Package

- 13 interventions (many compound e.g. vaccines, micronutrients) primarily at community level
- Prevent 1.4 million deaths\*
- Top 6 interventions
  - Treatment of malaria
  - Handwashing with soap
  - Antibiotics for pneumonia
  - Pneumococcal vaccine
  - Oral rehydration for diarrhea
  - Treatment of severe malnutrition

\*Including maternal, neonatal and child deaths and stillbirths



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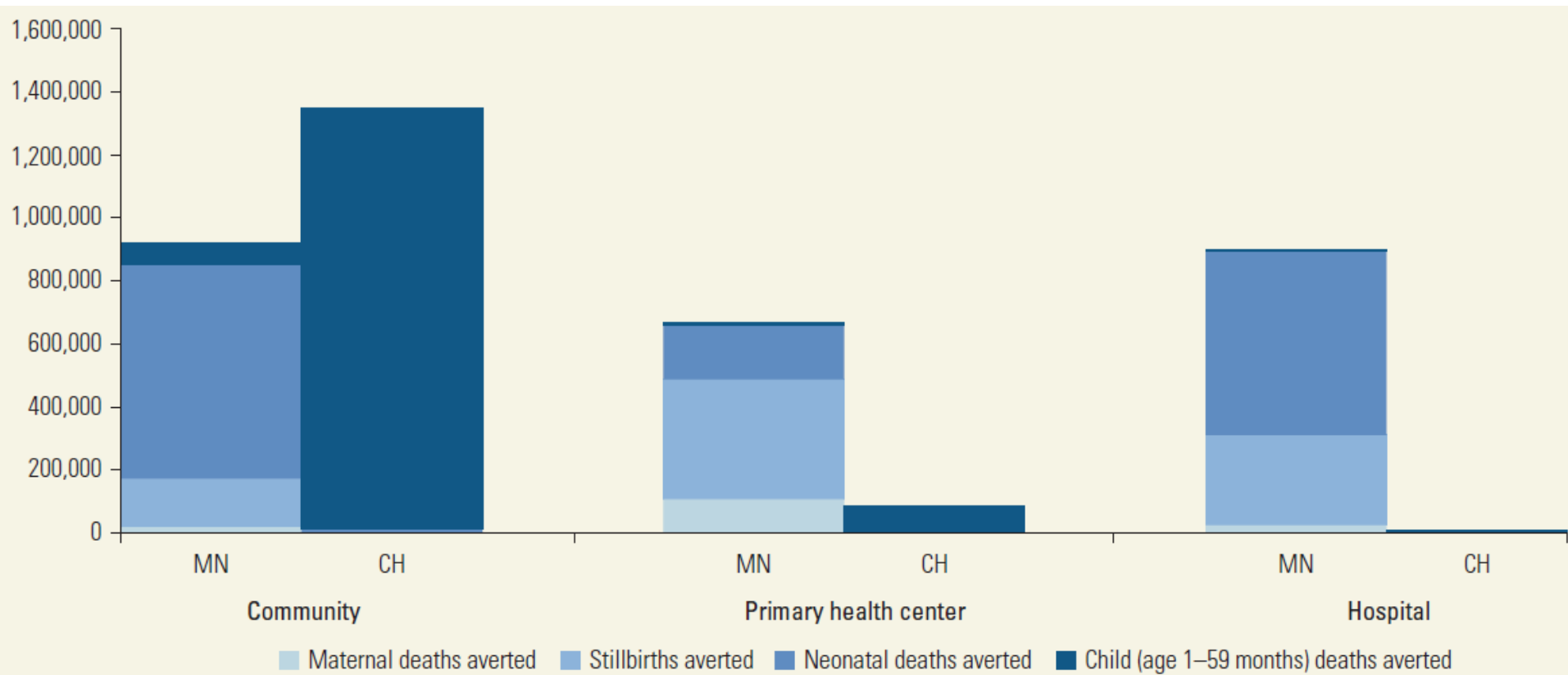
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# RMNCH Volume Overall Key Messages

# Impact of Scaling Up Maternal and Newborn Health and Child Health Packages in 2015 (Current Birth Rates)

- Maternal and newborn and child health packages could avert 149,000 maternal deaths, 849,000 stillbirths, 1,498,000 neonatal deaths and 1,515,000 child deaths; total 4,011,000 deaths
- Reduction of about half of global maternal, newborn and child deaths and one-third of stillbirths

# Community and Primary Health Center Platforms Could Avert 77% of these Deaths





# Cost of Scaling Up the Three Packages of RMNCH

- **Annual incremental cost** of US \$6.2 billion in low-income countries, US \$12.4 billion in lower-middle-income countries and US \$7.9 billion in upper-middle-income countries; **total \$26.5 billion**
  - The Reproductive Health Package (contraceptive services only) is the least costly package requiring US \$1.2 billion per year
  - The Child Health Package requires an additional US \$19.4 billion per year and the Maternal and Newborn Health Package US \$5.9 billion per year
- **Average annual per capita cost** would be US \$6.7, US \$4.70 and US \$3.9 in low-, lower-middle and upper-middle-income countries; **average \$4.5**

## RMNCH Key Messages

- Progress could be accelerated by scaling up integrated packages of essential RMNCH interventions across the continuum of care
- These interventions are highly cost-effective and result in benefit-cost ratios of 7-11 by 2035
- Individual interventions that have the highest impact on deaths are provision of contraception, management of labor and delivery, care of preterm births, treatment of severe infectious diseases, and management of severe acute malnutrition

## Delivery of Interventions

- Weaknesses in RMNCH delivery platforms, including limited access to care, poor quality of services and shortages of health workers, are major barriers
- Innovative service delivery approaches are needed and are being employed, such as task-shifting, household visitation, community-based services, financial incentives for households and health workers and accreditation
- Achievement of SDG RMNCH targets will require focus on essential interventions, additional funding and improved service platforms, especially community and PHC.



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# THANK YOU

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# Extra Slides

# Essential Interventions for Reproductive Health Package

**Table 1.1** Essential Interventions for Reproductive Health

	Delivery platform <sup>a</sup>		
	Community workers or health post	Primary health center	First-level and referral hospitals
Information and education	1. Sexuality education		
	2. Nutritional education and food supplementation		
	3. Promotion of care-seeking for antenatal care and delivery		
	4. Prevention of sexual and reproductive tract infections	1. Detection and treatment of sexual and reproductive tract infections	
	5. Prevention of female genital mutilation (may be for daughters of women of reproductive age)	2. Management of complications following female genital mutilation	
	6. Prevention of gender-based violence	3. Post-gender-based violence care (prevention of sexually transmitted infection and HIV, emergency contraception, support and counseling)	
	7. Information about cervical cancer and screening	5. Screening and treatment of precancerous lesions, referral of cancers	1. Management of cervical cancer
Service delivery	8. Folic acid supplementation <sup>b</sup>		
	9. Immunization (human papillomavirus, hepatitis B)		
	10. Contraception: Provision of condoms and hormonal contraceptives <sup>b</sup>	6. Tubal ligation, vasectomy, and insertion and removal of long-lasting contraceptives <sup>b</sup>	2. Management of complicated contraceptive procedures

# Essential Interventions for Maternal & Newborn Health Package

	<i>Delivery platform<sup>a</sup></i>		
	<i>Community worker or health post</i>	<i>Primary health center</i>	<i>First-level and referral hospitals</i>
<i>Pregnancy</i>	<ol style="list-style-type: none"> <li>1. Preparation for safe birth and newborn care; emergency planning</li> <li>2. Micronutrient supplementation<sup>b</sup></li> <li>3. Nutrition education<sup>b</sup></li> <li>4. IPTp<sup>b</sup></li> <li>5. Food supplementation<sup>b</sup></li> <li>6. Education on family planning</li> <li>7. Promotion of HIV testing</li> </ol>	<ol style="list-style-type: none"> <li>1. Management of unwanted pregnancy<sup>b</sup></li> <li>2. Screening and treatment for HIV and syphilis<sup>b</sup></li> <li>3. Management of miscarriage or incomplete abortion and postabortion care<sup>b</sup></li> <li>4. Antibiotics for pPRoM<sup>b</sup></li> <li>5. Management of chronic medical conditions (hypertension, diabetes mellitus, and others)</li> <li>6. Tetanus toxoid<sup>b</sup></li> <li>7. Screening for complications of pregnancy<sup>b</sup></li> <li>8. Initiate antenatal steroids (as long as clinical criteria and standards are met)<sup>b</sup></li> <li>9. Initiate magnesium sulfate (loading dose)<sup>b</sup></li> <li>10. Detection of sepsis<sup>b</sup></li> </ol>	<ol style="list-style-type: none"> <li>1. Antenatal steroids<sup>b</sup></li> <li>2. Magnesium sulfate<sup>b</sup></li> <li>3. Treatment of sepsis<sup>b</sup></li> </ol>

# Essential Interventions for Maternal & Newborn Health (cont.)



- 4. Induction of labor postterm<sup>b</sup>
- 5. Ectopic pregnancy case management<sup>b</sup>
- 6. Detection and management of fetal growth restriction<sup>b</sup>

<i>Delivery (woman)</i>	8. Management of labor and delivery in low-risk women by skilled attendant <sup>b</sup>	11. Management of labor and delivery in low-risk women (BEmNOC) including initial treatment of obstetric and delivery complications prior to transfer <sup>b</sup>	7. Management of labor and delivery in high-risk women, including operative delivery (CEmNOC) <sup>b</sup>
<i>Postpartum (woman)</i>	9. Promotion of breastfeeding <sup>b</sup>		
<i>Postnatal (newborn)</i>	10. Thermal care for preterm newborns <sup>b</sup>	12. Kangaroo mother care <sup>b</sup>	8. Full supportive care for preterm newborns <sup>b</sup>
	11. Neonatal resuscitation <sup>b</sup>		
	12. Oral antibiotics for pneumonia <sup>b</sup>	13. Injectable and oral antibiotics for sepsis, pneumonia, and meningitis <sup>b</sup>	9. Treatment of newborn complications, meningitis, and other very serious infections <sup>b</sup>
		14. Jaundice management <sup>b</sup>	





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# Essential Interventions for Child Health

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Delivery Platform		
Community/health post	Primary Health Center	First-level and Referral Hospitals
1. Promote breastfeeding and complementary feeding		
2. Provide vitamin A, zinc and food supplementation		
3. Immunizations		
4. Cotrimoxazole for HIV positive children	1. ART for HIV positive children	
5. Education on safe disposal of children's stools and hand washing		
6. Distribute and promote use of ITNs or IRS		
7. Detect and refer severe acute malnutrition	2. Treat severe acute malnutrition	1. Treat severe acute malnutrition associated with serious infection
8. Detect and treat serious infections without danger signs (iCCM); refer if danger signs	3. Detect and treat serious infections with danger signs (IMCI)	2. Detect and treat serious infections with danger signs with full supportive care

Red=urgent care, blue=continuing care, black=routine care