

Concepts of Maternal and Child Mortality & Prevention

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What is maternal mortality?

- **Maternal death** : death of a woman from pregnancy-related complications occurring at anytime throughout pregnancy, labour, and childbirth or in the postpartum period (up to the 42nd day after the end of pregnancy, regardless of duration of pregnancy).
- **When do maternal deaths occur?**
 - 11% - 17% occur during childbirth, 50% - 71% in the postpartum period.
 - Late maternal death
- **Where do they occur?**
 - 99% in developing countries.
- **Measures of maternal mortality**
 - Maternal mortality ratio : No. maternal deaths / No. live births
 - Maternal mortality rate : No. maternal deaths / Women aged 15-49 years

Child's deaths

Neonates.....Infants.....Child.....U5M.....rates

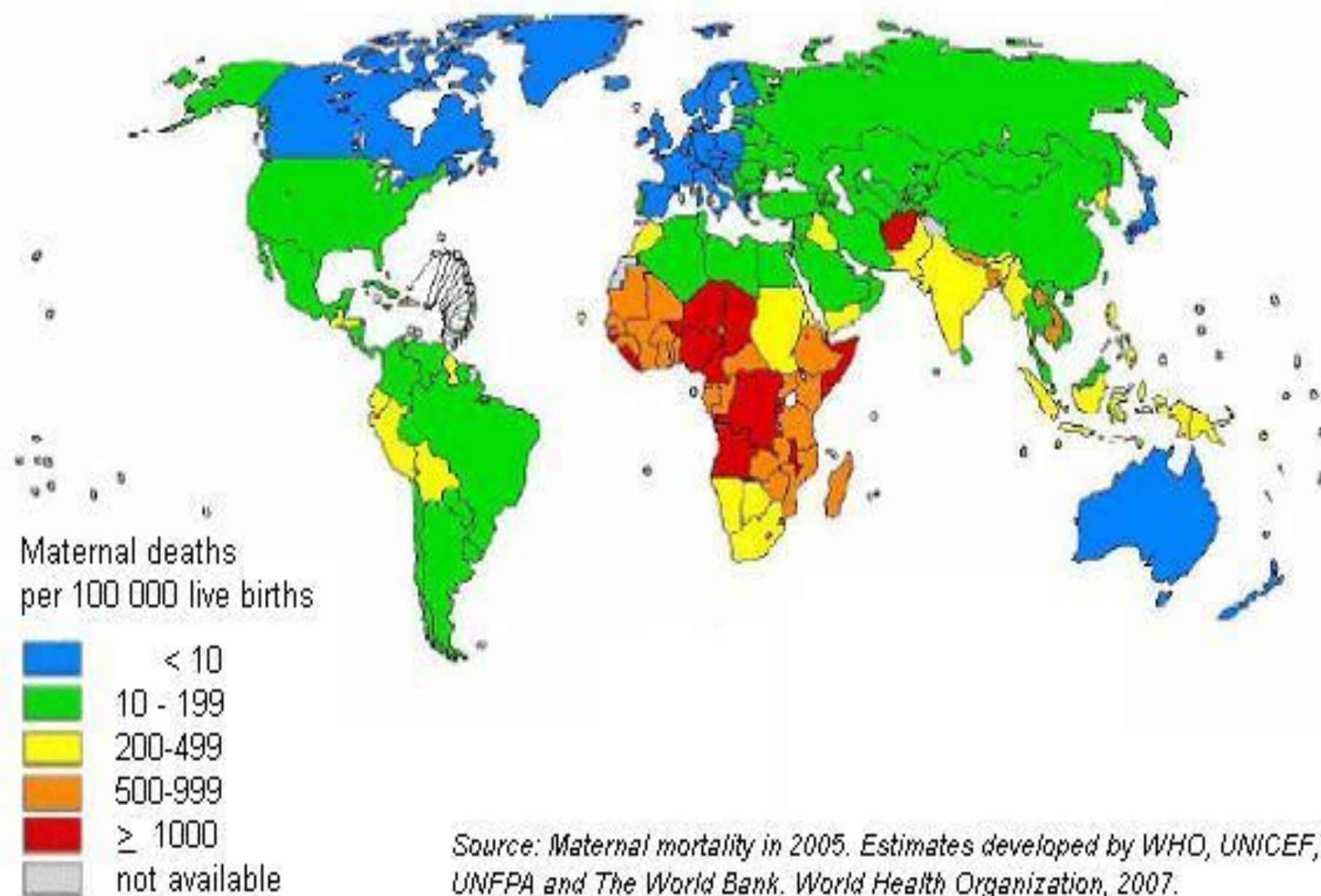
IMR

- Neonatal MR: Birth defect, pregnancy complications, LBW, birth asphyxia
- Post NMR(up to a year)
- U5MR

Status of Nigeria

- High MMR
 - High IMR
 - **Among the highest in the world**
 - **Unacceptable**
 - **Situation getting better**
- More needs to be done and Urgently**

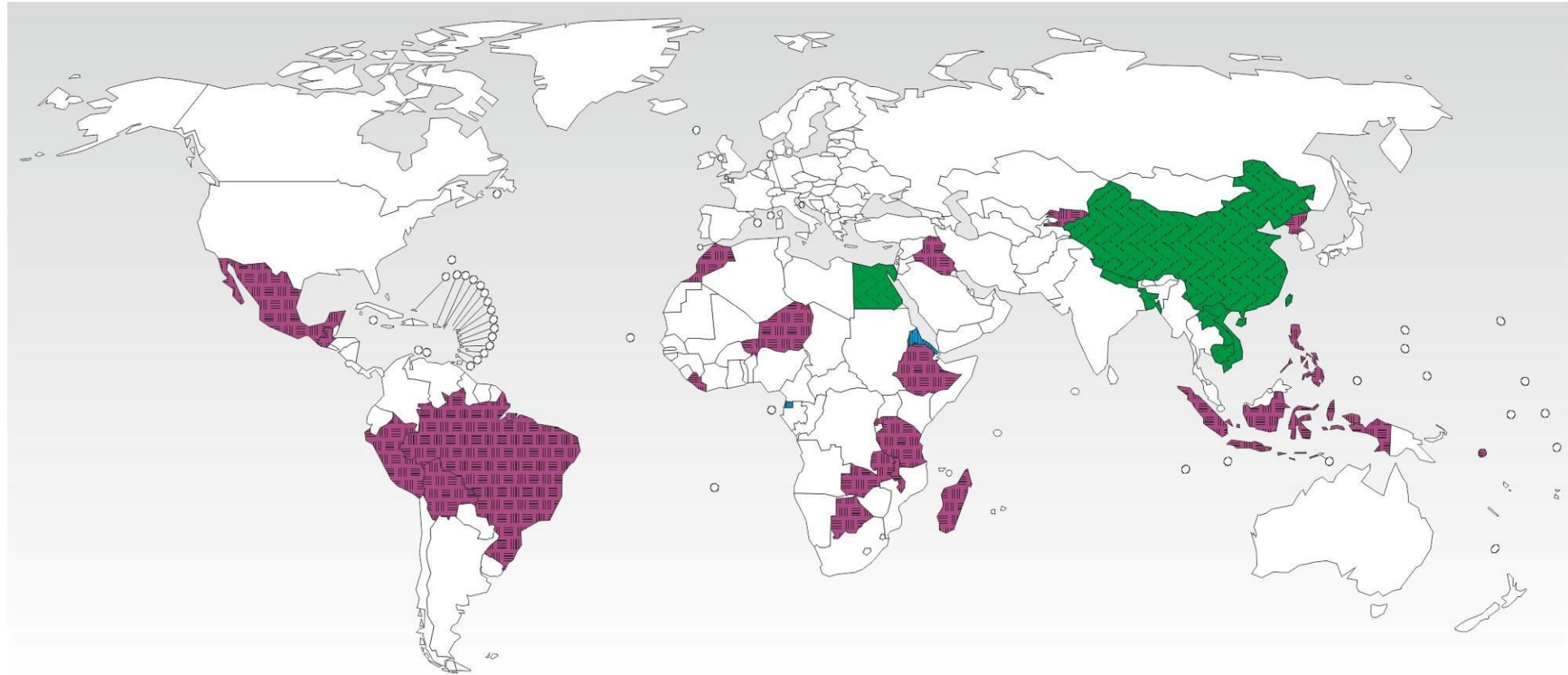
Maternal mortality ratio, by country, 2005



3 PHASES OF DELAY

- 1st phase: Decision: to uptake services
- 2nd phase: Transportation issues
- 3rd: Health systems issue

But, few countries on track



'On track' for MDG 4 only, not for MDG 5a (21)

Bolivia, Botswana, Brazil, Ethiopia, Guatemala, Indonesia, Iraq, Korea DPR, Kyrgyz Republic, Liberia, Madagascar, Malawi, Mexico, Morocco, Niger, Peru, Philippines, Rwanda, Solomon Islands, Tanzania and Zambia



'On track' for MDG 5a only, not for MDG 4 (2)

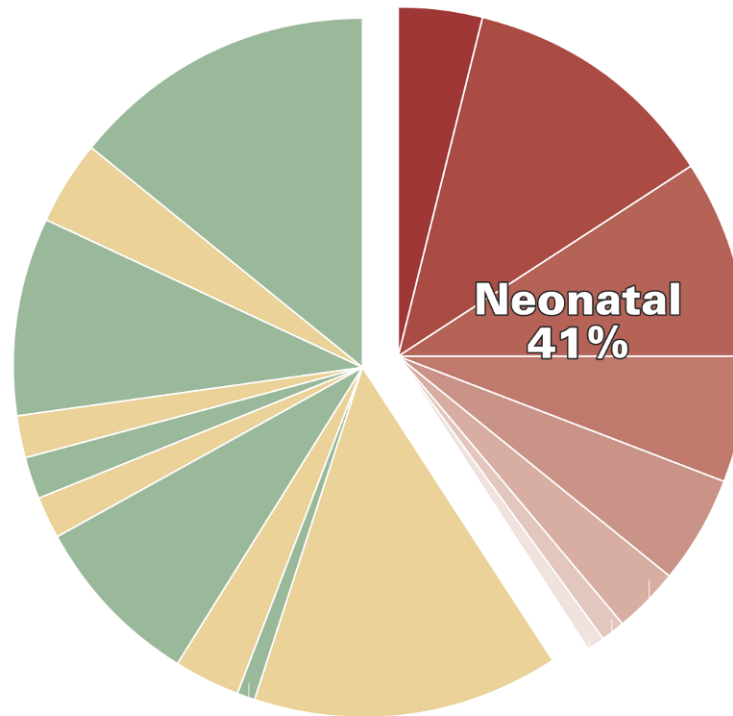
Eritrea and Equatorial Guinea



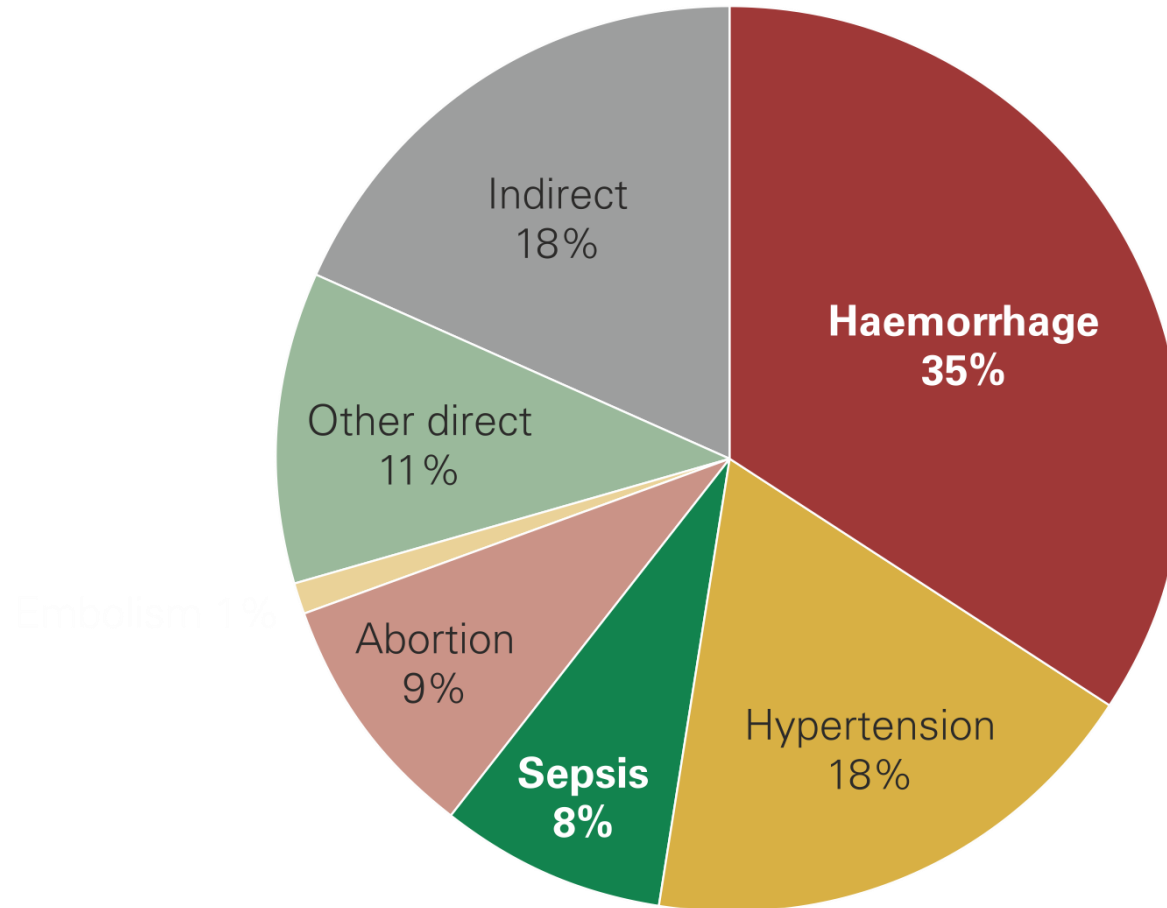
'On track' for both MDGs 4 and 5a (7)

Bangladesh, Cambodia, China, Egypt, Lao PDR, Nepal and Vietnam

MDG 4: Causes of newborn and child mortality



MDG 5a: Causes of maternal deaths worldwide



Women's, children's and adolescents' health within the Sustainable Development Goals (SDGs)

SDG Goal 3. Ensure healthy lives and promote well-being for all at all ages

A subset of goal 3:

- Reduce the global maternal mortality ratio to less than 70 per 100,000 live births
- End preventable deaths of newborns and under-five children
- Ensure universal access to sexual and reproductive health care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes
- Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all



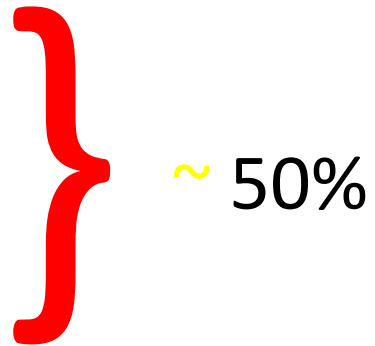
Other post-2015 goals and targets for women's, children's and adolescents' health

- Endorse global targets for 2030 **to reduce child mortality to 25** or fewer deaths per 1,000 live births, **newborn mortality to 12** or fewer deaths per 1,000 live births, and to reduce **maternal mortality in all countries to a global ratio of less than 70** per 100,000 live births and a minimum of **75 percent of demand for contraceptives** is met by modern methods
- Invest in **universal access to integrated sexual and reproductive health information, education, services and supplies**
- Recognize the right of marginalized and underserved groups, including **young people, to actively participate as partners in the design of policies and strategies that affect their lives** and health and note the recommendations in the PMNCH youth pre-forum outcome document
- Establish **shared goals with health-enhancing sectors**, such as education, nutrition, water and sanitation, rural electrification, roads, skills and employment
- Commit to **differentiated targets and indicators** to guarantee focus on key populations including adolescents, marginalized and underserved groups, and to take into account different levels of development in countries

These and other goals are set out in the PMNCH post-2015 position statement (endorsed by 250 organizations) and the 2014 Partners' Forum Communiqué

What are under-fives dying of?

(excluding neonatal causes of death)

- Pneumonia
 - Diarrhoea
 - Malaria
 - Measles
 - HIV/AIDS
- 
- ~ 50%

Malnutrition contributes to more than half of all under-five deaths

What are neonates dying of?

- **Preterm births**
- **Severe infection**
- **Asphyxia**
- **Congenital anomalies**
- **Tetanus**

} ~ 75%

Coverage of child survival interventions

- **ANTENATAL CARE**

- 94% of pregnant women attend ANC and at least 73% attend 4 visits or more (DHS)- (Missed opportunities)
- 84% of deliveries attended by a skilled health workers (nurses and doctors, DHS)

Skills and human resource shortages- pre-service, in-service, more financial resources

Coverage of child survival interventions

FEEDING:

- 40% of newborns are breastfed within a hour of birth
- 12% of children are exclusively breastfed at 0-3 months and 1.5% at 6 months
- Vitamin A: Coverage above 90% for children 6-12mnths
25% for children 13-60mnths

Solution:

- Expansion of BFHI
- Building capacity of CHW on Infant feeding

Coverage of child survival interventions

IMMUNISATION

- 94% of children <1 year are fully immunized against DPT, Hib and Polio (2005)
- 82% of children <1 year are immunized against measles

A high national immunisation coverage

Still have pockets of low coverage

Key Interventions, programmes and /or strategies

NEONATES AND INFANTS

Quality antenatal, intra-partum and immediate post-partum care

Basic Antenatal Care (BANC)

Basic Intra-partum Care (BIC)

Baby Friendly Hospital Initiative (BFHI)

Intervention Types

- Maternal, fetal, neonatal, child
- Periconceptual, antenatal, birth, immediate postnatal, child
- Preventive, curative
- Nutritional, vaccination, water/sanitation, treatment
- Risk factors: Cause-of-death specific
- Immediate, time-lagged
- External (family planning, AIDS), internal (all others)

Peri-conceptual Interventions

(Family planning)

Folic acid supplementation or fortification

Safe abortion services

Post abortion case management

Ectopic pregnancy case management

Pregnancy interventions

- Tetanus toxoid vaccination
- IPTp – malaria prevention in pregnancy
- Syphilis detection and treatment
- Calcium supplementation
- Multiple micronutrient supplementation
- Balanced energy supplementation
- Diabetes case management
- Maternal malaria case management
- MgSO₄ – management of pre-eclampsia
- Fetal growth restriction and management
- (PMTCT)

Childbirth Care Interventions

- Clean birth practices
- Immediate assessment and stimulation of the neonate
- Labor and delivery management
 - SBA at home or facility, BEmONC and CEmONC
- Neonatal resuscitation
 - At home or facility
- Antenatal corticosteroids for preterm labor
- Antibiotics for pPRoM
- MgSO₄ – for eclampsia
- AMTSL – active management of the third stage of labor
- Induction of labor for pregnancies 41+ weeks

Preventive Interventions

- Thermal care
- Clean postnatal practices
- Breastfeeding
 - Promotion
 - Behavior
- Complementary feeding
 - Education only
 - Education and supplementation
- Vitamin A for prevention
- Zinc for prevention
- Insecticide treated materials
- Improved water source
- Water connection in the home
- Improved sanitation
 - latrine, toilet
- Hand washing with soap
- Hygienic disposal of children's stools
- BCG vaccine
- Polio vaccine
- Pentavalent vaccine
 - DPT, Hib, HepB
- Pneumococcal vaccine
- Rotavirus vaccine
- Measles vaccine

Curative Interventions

- Maternal sepsis case management
- Kangaroo mother care
- Case management of serious neonatal illnesses
 - Oral antibiotics
 - Injectable antibiotics
 - Full supportive care: oxygen, IV fluids, IV antibiotics
- ORS for diarrhea
- Antibiotics for dysentery
- Zinc for treatment of diarrhea
- Oral antibiotics for management of pneumonia
- Vitamin A for measles treatment
- Therapeutic feeding
- Antimalarials
- (Cotrimoxazole for HIV+ children)
- (ART for children)

Progress has been variable

- **Neonatal mortality has fallen at a lower rate than post-neonatal or early child mortality**
- **Relatively greater progress has been made in some regions and countries**
 - e.g. neonatal mortality is now 58% lower in high income countries than in 1983, compared to 14% reduction in low/middle income countries
- **Large variations in mortality rates exist even within the same country**

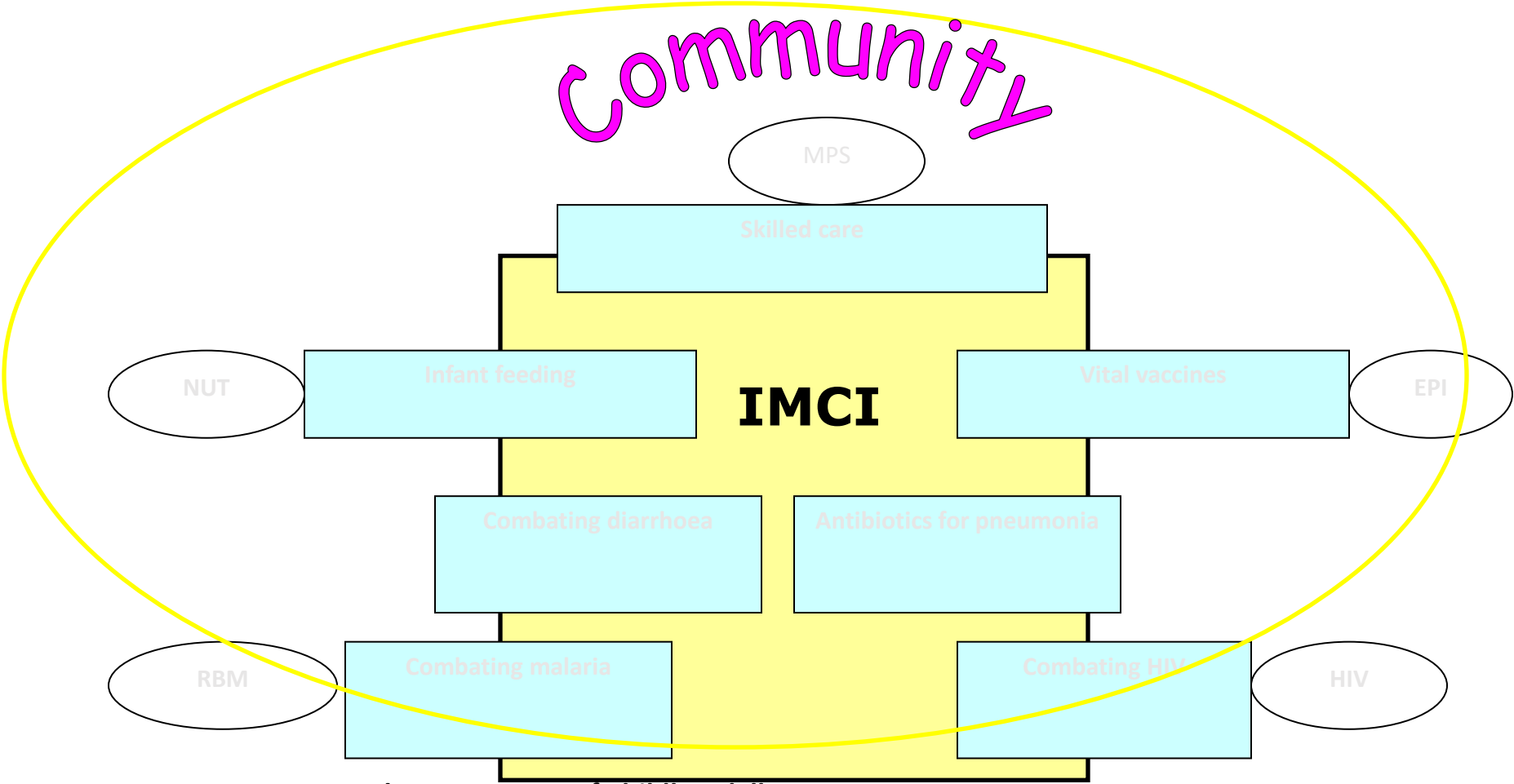
Solutions exist

- **Skilled care:** skilled care during pregnancy, childbirth and in the post-natal period
- **Infant feeding:** exclusive breastfeeding, complementary feeding and micronutrients
- **Vital vaccines:** measles and tetanus immunization and other conventional and new vaccines
- **Combating diarrhoea:** low osmolarity ORS and zinc in case management of diarrhoea, antibiotics for dysentery
- **Treating pneumonia and newborn sepsis:** prompt treatment with appropriate antibiotics

Where appropriate:

- Combating malaria
- Preventing and caring for HIV (mother and child)

Delivery strategies/tools exist



IMCI – Integrated Management of Childhood Illness

MPS – Making Pregnancy Safer

NUT - Nutrition

RBM – Roll Back Malaria

EPI – Expanded Programme on Immunization

SOLUTIONS EXIST

- **A mix of community and facility-based interventions**
- **A mix of integrated child health approaches**
- **Integrated management of neonatal and childhood illnesses is proven tool**

Goals of IMNCI

- **Standardized case management of sick newborns and children**
- **Focus on the most common causes of mortality**
- **Nutrition assessment and counselling for all sick infants and children**
- **Home care for newborns to**
 - **promote exclusive breastfeeding**
 - **prevent hypothermia**
 - **improve illness recognition & timely care seeking**

Essential components of IMNCI

- **Improve health and nutrition workers' skills**
- **Improve health systems**
- **Improve family and community practices**

Prevention/Reduction of maternal mortality

SAFEHAIRS

- Safe motherhood
- Adolescents RH
- Family planning
- Elimination of all forms of discrimination against women(gender)
- Harmful traditional practices
- Andropause and menopause
- Infertility management
- RH cancers-management and prevention
- STIs management and prevention

