

## Maternal, newborn and child health

framework

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Maternal, newborn and child health framework 1232600 01/2013 E



# Maternal, newborn and child health framework

**Strategy 2020** voices the collective determination of the IFRC to move forward in tackling the major challenges that confront humanity in the next decade. Informed by the needs and vulnerabilities of the diverse communities with whom we work, as well as the basic rights and freedoms to which all are entitled, this strategy seeks to benefit all who look to Red Cross Red Crescent to help to build a more humane, dignified and peaceful world.

Over the next ten years, the collective focus of the IFRC will be on achieving the following strategic aims:

- 1. Save lives, protect livelihoods and strengthen recovery from disasters and crises
- 2. Enable healthy and safe living
- 3. Promote social inclusion and a culture of non-violence and peace

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### 1. Purpose

This framework provides guidance and direction to National Societies, their programme managers and all other parties involved in the planning, design and implementation of programmes and interventions in maternal/reproductive, newborn and child health (MNCH, also referred to as RMNCH).

The International Federation of the Red Cross and Red Crescent Societies (IFRC) is committed to the health and well-being of women and children and to the achievement of the Millennium Development Goals (MDG) 3, 4 and 5¹. In addition, the IFRC is committed to shaping the post-MDG MNCH landscape.

The MNCH framework (the framework) builds on the understanding that progress towards these goals requires reducing inequities in health and gender, and addressing their social determinants and human rights.

The MNCH continuum of care is the operational context for health programming to ensure that there is continuity of care for women and children. To improve the overall health of women and children, continuity of care is necessary throughout the lifecycle as well as between places of caregiving. The framework promotes a developmental approach to relief whereby emergency response is used as a platform for sustainable scale-up of the essential MNCH interventions addressing longer-term vulnerabilities and risks. Realizing the intrinsic link between health and nutrition in the context of the global burden of maternal and child undernutrition, this framework considers essential nutrition interventions an integral part of activities across the MNCH continuum of care.

This framework presents strategic objectives, cross-cutting principles and a structured approach to guide the efforts of the National Societies in MNCH and to ensure that they:

- adhere to the Movement's principles and values and build on its strengths and strategic advantages
- are aligned with Strategy 2020 and with objectives of the Global Strategy for Women's and Children's Health
- are consistent with the WHOs concept of MNCH, the current evidence-base and best practices in community-based health programming
- can be integrated with the national MNCH plans of individual countries.

The development of the framework took place between September 2010 and February 2012 and draws on discussions and conclusions of the MNCH working group, consultations with zones and National Societies, and the resolution 6<sup>2</sup> of the 31<sup>st</sup> International Conference of the Red Cross and Red Crescent.

<sup>1</sup> MDG 3 promote gender equality and empower women; MDG 4 reduce child mortality; and MDG 5 improve maternal health.

<sup>2</sup> Resolution 6: Health inequities: reducing burden on women and children.

The framework is a "living" document that will be updated periodically. It is developed with the understanding that both the unique geo-cultural and political context of each country operation, as well as the evidence-base related to the effectiveness of MNCH interventions are constantly evolving and hence require a certain degree of responsiveness. Above all, this framework provides guidance – it is not meant to be a set of prescriptive rules.



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## <u><sup>2.</sup></u> Backgrounc

## 2.1 MNCH today: challenges and opportunities

Women's and children's health has been at the forefront of the IFRC's efforts worldwide. This commitment is consistent with the Movement's fundamental principles and its mission to build capacities of people and communities to find sustainable solutions for their most pressing needs and vulnerabilities.

Resilience and livelihood security of hazard-prone communities where National Societies work are, to a great extent, determined by the health of the most vulnerable groups: mothers, newborns and children.

More than 1,000 women die each day – 358,000 a year – during pregnancy and child birth mainly due to poor access to effective interventions: skilled care during childbirth is available only to 60 per cent of women; and even fewer – less than 40 per cent – receive a postnatal visit (WHO, 2010). Meanwhile, the number of unintended pregnancies is 76 million a year, and unsafe abortions reach 22 million accounting for 13 per cent of all maternal deaths. In most developing countries, access to family planning remains very limited despite its potential to avert deaths: satisfying the unmet need for contraceptives would reduce unintended pregnancies by two-thirds, which, in turn, would save more than 1.5 million maternal and newborn lives and prevent 505,000 children from losing their mothers (UNFPA, 2010).

Among children younger than five years, the estimated annual number of deaths is 7.6 million, including three million within the first month of life; another 2.6 million babies are born dead. Pneumonia, diarrhoea and malaria are responsible for 43 per cent of the under-five deaths. Although each of these causes can be effectively treated, communities lack the resources required. For example, antibiotics for pneumonia are available to just over 25 per cent of affected children, and diarrhoea treatment only to 42 per cent (UN Interagency Group for Child Mortality Estimation, 2011).

The greatest challenge facing global efforts to improve MNCH is undernutrition. Stunting, wasting and micronutrient deficiencies, are responsible for about 35 per cent of the disease burden in children younger than five and 11 per cent of the total global disease burden. This translates into 3.5 million maternal and child deaths for which the underlying cause is undernutrition (Black et al, 2008).

Over the last decade, progress has clearly been made towards achieving both MDGs 4 and 5. However, the achievements are very uneven across regions and countries. Both the under-five and maternal mortality is increasingly

### Maternal, newborn and child health framework

concentrated. About half of the world's child deaths in 2009 occurred in only five countries (Danszen You et al, 2010); and most (65 per cent) of all maternal deaths - in 11 countries (WHO, 2010).

Even in countries where national coverage rates are high, they do not always indicate progress in reaching the most vulnerable women and children. The disparities are stark especially in Sub-Saharan Africa and South Asia where the gaps between rich and poor are the widest. Similarly, national burdens of disease and under-nutrition are concentrated in the most deprived populations. Children from the poorest households are twice as likely to be stunted and underweight, and to die before the age of five compared to their wealthiest peers. Women in the lowest quintile are two to three times less likely to have access to maternity services.

Furthermore, the poorest and least educated families account for the highest number of teenage pregnancies.

The adverse effect of socio-economic factors on maternal and child health is compounded by gender inequalities. In many countries and societies, women and girls' access to health and nutrition as well as education and income is influenced by social and behavioural norms, codes of conduct and laws that view them as socially inferior and objects to subjugation.

Concerted global efforts are now being made to address growing inequities in MNCH. This implies minimizing those variations in health across gender, occupation and race/ethnicity that are related to social determinants of health including income, education, access to health care, power relationship, community structures. A strategy that addresses inequities in health by focusing on the most excluded, vulnerable and hard to reach has been recognized as the most practical and cost-effective way to avert maternal and child deaths and to reduce the burden of disease (UNICEF, 2010). Approaches to an equitybased strategy include expanding maternity services at the primary level and upgrading selected facilities that deliver maternal and newborn care at the referral level; eliminating user charges and introducing cash transfers to the poorest to cover transportation costs; strengthening outreach services, and mobilizing community-based promoters of health and nutrition; and where appropriate, introducing task shifting which involves use of community health workers (CHW) and trained volunteers to deliver basic health services outside health facilities, in the community and at people's homes.

The IFRC has a unique advantage among relief and development organizations in the implementation of an equity-based approach to MNCH programming. First, it has access to communities that are the most isolated and exposed to disaster risks. Second, the auxiliary role to public authorities, including Ministries of Health (MOH) allows playing an active role in linking those communities to the health system. Third, National Societies have the ability to reach the most impoverished, marginalized and excluded populations through their networks of volunteers. Last, but not least, many interventions proven effective in improving maternal, neonatal and child health are feasible for implementation at the community level by trained volunteers such as those affiliated with the Red Cross Red Crescent Societies. The IFRC is well placed to bring these interventions to those in need and/or to provide a community-based platform for service delivery through improved care-seeking and better linkage of families and communities with the health system.

### 2.2 MNCH programming by IFRC

The IFRC has supported and promoted maternal and child health (MCH) and, more recently, MNCH for more than 20 years through its network of National Societies and strategic alliances. A significant portion of the IFRCs MNCH programming has evolved in response to the medium- and long-term needs of disaster-affected communities. Most of it is supported bilaterally by Partner National Societies from Europe and North America. Programmes range from comprehensive MNCH efforts on both the demand and supply sides of primary health care to community-based activities that are focused mainly on the promotion of improved health practices and care-seeking behaviour.

The proportion of National Societies with comprehensive MNCH programming varies among the zones. South Asia is an example of a zone where National Societies have been active players in MNCH, mainly by filling gaps in the delivery of essential services and by advancing national health agendas. For example, the Afghanistan Red Crescent Society supports a network of clinics as part of the Government's Basic Package of Health Service. Similarly, the Pakistan Red Crescent Society has been running mobile health units in addition to programmes for the re-orientation of traditional birth attendants (TBAs), safe motherhood, and immunization. The Bangladesh Red Crescent Society has supported rural MCH centers and several maternity hospitals for the urban population since 1970s. The Indian Red Cross Society has made a significant contribution to implementation of the National Family Welfare Programme.

In the Americas, ten National Societies in partnership with the Pan American Health Organization (PAHO) have assisted their respective MOHs in the implementation of integrated management of childhood illness.

As the MNCH portfolio of the IFRC grows, a consensus emerged for a need to develop clear guidance on the strategies, priorities and standards for the delivery of programmes and projects. Committed to global efforts to achieve MDG 4 and 5, and the goals of the Global Strategy for Women's and Children's Health, the IFRC seeks to develop a more uniform and coherent approach to MNCH across the emergency/crisis, response and recovery continuum, from relief through to rehabilitation and development.

### 2.3 MNCH and continuum of care

MNCH encompasses all interventions, delivered over a continuum of care, which are aimed at improving the health of mothers, newborn babies, and children.

First proposed in the World Health Report 2005, the "continuum of care" principle has since evolved to be a more encompassing concept. The consensus is now that the **continuum of care for RMNCH** includes the seamless and integrated service delivery for women and children throughout the lifecycle – from pre-pregnancy to delivery, the immediate postnatal period and childhood – and across all places of care, including families and communities, outpatient services, clinics and other health facilities (see Figure 1, 2 and 3).

ADOLESCENCE AND BEFORE PREGNANCY PREGNANCY PREGNANCY PREGNANCY POSTNATAL (NEWBORN) INFANCY CHILDHOOD

POSTNATAL (NEWBORN) INFANCY CHILDHOOD

HEALTH FACILITIES

Figure 1: MNCH continuum of care

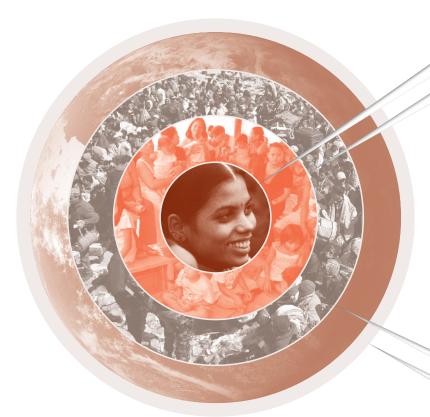
PMNCH (2011). Adapted from WHO (2005) - Make every mother and child count

The life-cycle dimension of the continuum of care (see Figure 2) starts before pregnancy to encompass the reproductive and sexual health of women. It extends through pregnancy and birth to the baby's childhood and the mother's health. All these stages are interdependent as reproductive health has impact on pregnancy, and the health of the newborn child is dependent on the health of pregnant women. The link between maternal and newborn health is particularly strong. This interdependency explains why it is imperative that the interventions throughout the life cycle are closely linked and mutually supportive. MNCH is also closely linked to a right to a safe and satisfying sex life, to information on sexual and reproductive choices, to reproductive health services and to the freedom to decide when and how often to have children.





### Figure 2: MNCH across life-cycle



### Resilient individual

A healthy person, enabled to make healthy choices and living in a supportive and healthy environment

### Resilient community

Communities that are informed and empowered, able to prepare for and deal with health challenges within a fair and caring health environment and benefit fully from the formal health system

#### Resilient nation

A country whose efficient national health system is based on fair health policies and strategies granting equitable access to basic health to all its citizens

### Resilient globe

A world that addresses global health problems in an equitable way within a supportive health environment

Adopted from PMNCH, 2009

The place-of-care dimension (Figure 3) recognizes the importance of the health system as a whole and of each of its levels. Health education at the family and community level helps prevent disease; quality primary care reduces the need for hospitalization, and functioning referral systems allow timely treatment for acute conditions.

Figure 3: MNCH across places of care-giving (home-to-hospital continuum)



Source: PMNCH. 2011

With respect to the place-of-care dimension of the continuum, MNCH interventions can be delivered:

- at a household and in a community community level/home services;
- through outreach from first-level facilities (includes immunization, antenatal, postnatal care delivered from/at village health posts) first level/outreach services;
- at district hospital or referral hospitals **referral level services** (includes diagnostics, treatment, care, counseling and rehabilitation).

The continuum-of-care approach encourages the delivery of mutually supportive interventions across both its dimensions and efficient use of scarce human and financial resources. It helps to avert deaths by ensuring that **appropriate care is available to every women and every child whenever it is needed; and that it is effectively linked to other levels of care.** As stated by WHO: "Interventions and strategies for improving MNCH and survival are closely related and must be provided through a continuum of care approach. When linked together and included as integrated programs, these interventions can lower costs, promote greater efficiencies and reduce duplication of resources."

In underserved and isolated areas, this usually requires shifting the first pointof-entry into the health care system from the health facility to the home/community so that essential and affordable services can be delivered directly.

The impact of MNCH programmes depends on 1) high coverage of essential interventions throughout the continuum; 2) their quality, and 3) functional linkages between interventions and the health system.

Despite some progress in coverage and quality of the MNCH interventions over the last 10 years, there are still significant gaps.

## 2.4 Gaps in the MNCH continuum across the pregnancy-to-childhood and home-to-hospital dimensions

In 75 countries with the highest prevalence of maternal and child death (Countdown countries), the most common gaps in national coverage for essential interventions and selected approaches across the pregnancy-to-childhood continuum are as follows:

- Pre-pregnancy: low prevalence of contraceptive use which demonstrates unmet need for family planning.
- During pregnancy: low coverage of preventive treatment for malaria in pregnant women and of prevention of mother-to-child transmission (PMTCT) of HIV both indicative of low coverage of skilled antenatal care.
- At childbirth and during a postnatal period: poor access to skilled attendance, emergency obstetric and neonatal care; low prevalence of early initiation of breastfeeding.
- During infancy: low average rates of exclusive breastfeeding.
- During childhood: low use of insecticide treated nets (ITN) by children; poor access to treatment for pneumonia, malaria and diarrhoea.

Gaps in the home-to-hospital continuum include:

- Health workforce shortages combined with limited task shifting: only 28 per cent of the Countdown countries have a minimum health worker/per 10,000 people ratio required to deliver essential health services.
- Poor quality of care attributed to health worker shortages, poor infrastructure and inadequate supply of commodities and medical equipment.
- Low demand for care due to high out-of-pocket costs, provider attitude; low awareness, inadequate knowledge, local beliefs and misconceptions around health issues and health care services.
- Ineffective referral systems and weak links between facility-based staff and community-based workers.



## 2.5 Undernutrition in the context of the MNCH continuum of care

A single major factor affecting health and survival across the entire continuum of care is undernutrition.

Good maternal health and nutrition are important contributors to child survival. Undernourished women give birth to smaller infants than those nourished adequately. Low-birth infants, in turn, are at a higher risk of death due to infections and asphyxia. Further, undernutrition increases the likelihood that children will be stunted when they reach adulthood. As adults, those children tend to have lower educational attainment and hence lower economic status. On the other hand, maternal survival is also affected by the women's nutritional status. Specifically, maternal short stature and iron deficiency are associated with a higher risk of death of the mother at delivery and account for at least 20 per cent of maternal deaths. Addressing the issues of undernutrition through high coverage of proved interventions greatly increases the impact of all other services across the continuum and accelerates the achievement of goals for both maternal and child survival.

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## MNCH in the Red Cross Red Crescent context

### 3.1 Goal and objectives

The goal of the IFRC efforts in MNCH is to contribute to the improved health and reduced mortality among mothers, newborns and children in the most vulnerable communities. The efforts towards this goal will be delivered through three strategic objectives:

Strategic objective 1: Support National Societies in the delivery of effective and appropriate, context-driven community-based interventions across the RMNCH continuum of care and from relief to recovery and development.

Strategic objective 2: Promote accountability for resources and results.

Strategic objective 3: Advocate for the equity-based approach in global efforts to the achievement of MDG4 and 5.

To achieve these strategic objectives, the IFRC will work to:

- enhance the spectrum, quality, effectiveness and impact of the Movement's efforts in maternal, newborn and child health
- build monitoring, evaluation and reporting capacity among National Societies
- increase the Movement's role in global health partnerships and with respective national health authorities
- consolidate the Movement's portfolio in MNCH in both the emergency and non-emergency context
- improve the ability to leverage resources and build on existing platforms, thereby achieving greater efficiencies and improving outcomes of the IFRCs efforts in MNCH.

## 3.2 Cross-cutting principles and approaches

The strategic approach of the IFRC to MNCH is underpinned by eight guiding principles that are informed by the *Strategy 2020* and 31<sup>st</sup> International Conference of the Red Cross and Red Crescent.



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## Strategy and planning

### 4.1 Comprehensive assessment

The developmental approach to health promoted by the IFRC and reinforced in Strategy 2020, requires that decisions to launch programmes are made strategically based on a comprehensive assessment consisting of the following five key elements as shown in Table 1 below (see Annex 2 for more detailed explanation):

Table 1: Key elements of comprehensive assessment

K	ey elements	Essential content
1	Overall status of RMNCH in the country/province/district	See Annex 1 for a list of the indicators to analyse their definitions and sources of information
2	Review of coverage of essential interventions along the continuum of care	Identifying critical gaps in the continuum of care, analyse barriers to access and use of essential interventions  Review potential interventions to address those gaps and analyse their suitability for the delivery by Red Cross Red Crescent volunteers
		Identify interventions for which a partnership with National Societies creates an added value and allows reaching balance between the supply and demand of the essential interventions
3	Situational analysis	Analyse critical contextual factors (social-economic, cultural etc.)  Assess government's policy, commitment to RMNCH and existing national/regional health plans  Conduct rapid assessment of existing services and referral mechanisms  Identify vulnerable populations and groups  Analyse key stakeholder institutions and groups with particular attention to MOH

K	Cey elements	Essential content
4	Assessment of National Society capacity to deliver RMNCH programmes	Conduct SWOT analysis (strengths, weaknesses, opportunities, threats) with particular attention on:  - how RMNCH is reflected in the National Societies' overall strategy and infrastructure;  - level of success in previous/concurrent MNCH programmes;  - National Society volunteers' capacity to carry out MNCH programmes;  - effectiveness and resourcing of the National Societies' volunteer management system;  - National Societies' relationships with MOH, donors and partners;  - whether environment (political/economic, cultural, historical) is conducive to project implementation and National Societies' own development;  - risks to National Society related to project implementation;  - expected impact on National Societies' longer-term goals.
5	Estimate of funds required for 24 to 36 months of operation	Assess the feasibility for programming with a 24 to 36 month timeframe (considered necessary in order to demonstrate measurable outcomes)

## 4.2 Selecting target communities and populations

The selection of communities and the women, newborns and children groups can be determined taking into consideration one or more of the factors below, which are not mutually exclusive:

- **Geographic factors:** remoteness combined with poor roads, geographic obstacles, and proneness to natural hazards often referred to as "geographic targeting"
- **Socio-economic factors** (social determinants of health): poverty (i.e. targeting the rural or urban poor poverty targeting), unemployment, high illiteracy rate, ethnicity, etc.
- **Vulnerability factors:** targeting the most vulnerable households (vulnerability targeting) identified based on household-level data collected through a community census
- **Health problem factors:** targeting selected communities, populations or groups with interventions that are designed to address specific health problems that disproportionately affect the poor i.e. malnutrition, tuberculosis, malaria.

### 5. Design and interventions

## 5.1 Levels of the delivery of interventions across a home-to-hospital continuum

The principal focus of National Societies' in the RMNCH activities is on interventions that can be delivered at the **community/home level and the first / outreach** or **primary level**. The main delivery channel is a network of Red Cross Red Crescent volunteers who are trained to promote healthy behaviours, mobilize demand for appropriate services at other levels and, where needed and appropriate, to deliver simple preventive and treatment interventions.

To be able to succeed, programmes operating at these levels must be **context-specific** and linked with the formal healthcare system, and they must have back-up support from facility-based services.

Programme managers should ensure that selected interventions:

- are evidence-based and can be effectively delivered by Red Cross Red Crescent volunteers with appropriate training in coordination with primary health care (see section 5)
- are consistent with national/regional health priorities as described in national health plans and programme-specific strategies
- address the identified gaps in the coverage of key interventions across the continuum and/or improve the quality of their delivery
- have gender and equity issues incorporated in their design and implementation
- promote the adoption of healthy behaviours, self-care, and skilled care seeking; and where possible and appropriate, provide prevention and treatment
- empower communities to demand and access quality, skilled care through the mobilization of community resources
- allow to balance demand and supply by ensuring that supply of services is in place to match the increase in demand
- encourage male involvement and responsibilities in maternal, newborn and child health
- improve linkages between communities and their health facilities and strengthen referral systems
- use creative and innovative approaches that would contribute to better health outcomes for most vulnerable women, newborn and children.

## **5.2 Appropriate mix of interventions**

Once findings of the situational analysis have been reviewed and summarized, appropriate interventions can be selected from the list below of the essential evidence-based interventions that can be delivered by CHW including trained volunteers at the community and primary/first levels (and by professional health workers, if available, at all three levels).

Table 2: Essential evidence-based MNCH interventions suitable for delivery at the community/home and first levels

Intervention	Referral level	First level	Community
Adolescents & Pre-Pregnancy			
Family planning	1	1	1
Prevent and manage Sexually Transmitted illnesses including Mother-to-Child Transmission of HIV and syphilis	✓	✓	✓
Folic acid fortification and/or supplementation for preventing Neural Tube Defects	1	/	1
Pregnancy			
Management of unintended pregnancy  • Availability and provision of safe abortion care when indicated  • Provision of post abortion care  Appropriate antenatal care package  • Screening of maternal illnesses  • Screening for hypertensive disorders of pregnancy  • Screening for anaemia  • Iron and folic acid to prevent maternal anaemia  • Tetanus immunization  • Counselling on family planning, birth and emergency preparedness  • Prevention and management of HIV, including with antiretrovirals  • Prevent and manage malaria with insecticide treated nets and antimalarial medicine  • Smoking cessation	<i>y y</i>	- / /	-
Reduce malpresentation at term with External Cephalic Version	1	-	-
Prevention of pre-sclampsia  Calcium to prevent hypertension  Low dose aspirin to prevent hypertension	√ √	√ -	<u>-</u>
Magnesium sulphate for eclampsia	1	1	-
Induction of labour to manage prelabour rupture of membranes at term	1	-	-
Antibiotics for preterm prelabour rupture of membranes	1	1	-
Corticosteroids to prevent respiratory distress syndrome in newborns	1	-	-

Intervention	Referral level	evel	unity
	Referr	First level	Community
Childbirth			
Induction of labour for prolonged pregnancy	✓	-	-
Prophylactic uterotonics to prevent postpartum haemorrhage	✓	✓	1
Active management of third stage of labour to prevent postpartum haemorrhage	✓	1	-
Management of postpartum haemorrhage (e.g. uterotonics, uterine message)	✓	1	1
Caesarean section for maternal/foetal indication	1	-	-
Prophylatic antibiotics for caesarean section	✓	-	-
Postnatal (mother)			
Family planning	1	1	1
Prevent and treat maternal anaemia	✓	1	_
Detect and manage postpartum sepsis	1	1	-
Screen and initiate or continue antiretroviral therapy for HIV	✓	✓	_
Postnatal (newborn)			
Immediate thermal care	1	1	1
Initiation of exclusive breastfeeding (within first hour)	✓	1	1
Hygienic cord and skin care	1	1	1
Neonatal resuscitation with bag and mask (professional health worker)	✓	1	-
Case management of neonatal sepsis, meningitis and pneumonia	1	1	-
Kangaroo mother care for preterm and for less than 2000g babies	✓	1	-
Management of newborns with jaundice	1	1	-
Surfactant to prevent respiratory distress syndrome in preterm babies	1	-	-
Continuous positive airway pressure (CPAP) to manage babies with respiratory distress syndrome	✓	-	-
Extra support for feeding small and preterm babies	1	1	-
Presumptive antibiotic therapy for newborns at risk of bacterial infections	1	-	-

Intervention	Referral level	First level	Community
Infancy and childhood			
Exclusive breastfeeding for 6 months	1	1	1
Continued breastfeeding and complementary feeding from 6 months	1	1	1
Prevention and case management of childhood malaria	1	1	1
Vitamin A supplementation from 6 months of age	1	1	1
Comprehensive care of children infected with or exposed to HIV	1	1	-
Routine immunization and H. influenza, meningococcal, pneumococcal and rotavirus vaccines	1	1	1
Management of severe acute malnutrition	1	1	-
Case management of childhood pneumonia	1	1	1
Case management of diarrhoea	✓	1	1
Cross-cutting community strategies			
Home visits for women and children across the continuum of care	-	-	✓

Source: Essential Interventions, commodities and guidelines for Reproductive, Maternal, Newborn and Child Health.

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## Programme implementation

The following are some key strategies and approaches that constitute best practices and are recognized as essential to the success of MNCH programmes and sustainability of their outcomes. Programme managers should consider these when developing programme implementation plans.

Table 3: Considerations for programme implementation

Strategy/approach	Implementation
Early engagement and close collaboration with key stakeholders, partners, and, in particular, MOH – mandatory for all programmes	Achieve through early consultation and joint planning at all levels, reinforced further by joint monitoring and evaluation  Invest in building trust and credibility with MOH  Create mechanisms and channels for dialogue among communities, service providers, local governments and MOH
An equity-based strategy built into the programme design and implementation	Analyse equity issues in the target area  Identify vulnerable and disadvantaged groups on which to focus  Define equity objectives and determine equity strategies and activities while considering the cost of reaching the identified target groups
Comprehensive log frame analysis to inform programme design, implementation, monitoring and evaluation	Develop objectives and expected outcomes  Determine the cause-effect relationship between inputs, outputs and outcomes  Design, implement and monitor and evaluate programmes/projects  For further details refer to the <i>Project/programme Guidance Manual</i>

Strategy/approach	Implementation
A strategy to achieve/	Identify existing barriers on the supply side
maintain the balance between improved care seeking against the	Estimate expected increase in demand for health care in relation to the services and commodities
availability of health care services	Where needed and appropriate, harmonize programme activities with those of organizations that work on the supply side
	Explore all venues for increased linkages with MOH-supported services and functioning referral systems
	Ensure that volunteers have back-up support from the community- and facility-based health care providers
A behaviour change	Conduct formative research to explore barriers to behavioural change
communication strategy	Identify local enabling factors and potential points of resistance – particularly important where targeted communities include groups with different ethnic and cultural backgrounds from that of the main population
	Incorporate relevant contextual factors in the programme design
	Create a tailored communication strategy
	For further details refer to Behaviour change communication (BBC) for community-based volunteers, Volunteer toolkit.
Community participation and mobilization to	Effectively use participatory approaches with involvement of community leaders including spiritual and religious leaders
ensure ownership, sustainability and viable	Engage the most deprived and marginalized groups
solutions grounded in indigenous knowledge	Ensure community contribution to the interventions is linked with the health system
of local conditions and constraints	For further details refer to Community tools – Simple materials with illustrations and suggested questions and responses that facilitate volunteers' activities in households and the community
Women-centred approach, consideration	Examine gender roles/relationships in the targeted communities and address identified problems
for gender aspects, mother-to-child strategy	Facilitate appropriate participation of men and women
5,	Ensure broad participation of women from the outset of programmes to allow incorporating women's perspective and building on their abilities and interests
	Establish women groups, mother clubs, girls peer networks etc. – proven effective in the promotion of antenatal care, skilled delivery, newborn care, breastfeeding
	For further details refer to: Gender Training manual Inter-Agency Standing Committee's Gender Handbook in Humanitarian Action

## 7. MNCH in emergency

As part of the effort to strengthen the delivery of its MNCH programmes and projects, the IFRC seeks to develop greater capacity and effectiveness of National Societies' in activities aimed to improve survival of mothers, newborns and children in emergencies. The IFRCs approach to MNCH in emergency is based on the recognition of the link between relief and development and a critical role of preparedness for rapid and effective response. Longer-term efforts to improve access to health for most vulnerable and hard-to-reach women and children have to be at the centre of disaster preparedness and serve as a platform to build on when a disaster hits. Volunteers need to be trained and equipped with resources necessary to support the delivery of services on a routine basis as well as in all phases of an emergency. Close linkage with communities and health system, and effective coordination with all parties involved in disaster risk management are essential to ensure an immediate and effective local response to maternal and child health needs after a disaster.

The following are activities (see Table 4) for National Societies to consider as part of their disaster preparedness and response plans with a focus on the maternal, newborn and child health needs

### **Table 4: Preparedness, response and recovery activities for National Societies to consider**

### **PREPAREDNESS**

Addressing underlying causes of vulnerability and risk factors through the equity-focused approach to implementation of evidence-based essential interventions across the RMNCH continuum (see table 2) and in coordination with other key sectors such as water and sanitation, food agriculture, shelter and education

Where community case management is in place, consider using it as a platform to build on for MNCH in emergency, response and recovery

Contribute to the collection of data on pre-emergency coverage of critical RMNCH interventions

Engage with the Health Cluster/Inter-Agency Coordination mechanism to delineate the National Societies' role and responsibility with respect to RMNCH in emergency response and recovery; train and equip volunteers accordingly

### **RESPONSE**

Contribute to rapid assessment of health sector through Health Cluster/Inter-Agency Coordination mechanism

Assist in re-establishing the delivery of essential care services to women, newborn and children with a main focus on: treatment of malaria, pneumonia and diarrhoea; maternal health services; immunization; nutrition (breastfeeding and essential infant and young child feeding), HIV prevention and treatment; services for victims of sexual violence and child abuse

Contribute to the re-establishment of disrupted referral systems by facilitating transport and communication between communities, health centres and hospitals

Support community-based triage and referral of women and children to functioning health facilities and where deployed, a basic health care emergency unit

If access to a health facility is not possible, assist in prevention of excess maternal and newborn morbidity and mortality by providing clean delivery kits to visibly pregnant women and birth attendants

Disseminate key health education messages to affected communities with a focus on health services available, danger signs recognition and home management of the most common life-threatening conditions

#### **RECOVERY**

Continue support to the delivery of essential interventions and emergency health services

Consider using emergency response as a platform for strengthening and scale-up of pre-existing health services

Assist in integrating prevention and preparedness into community recovery and longer-term PMNCH programmes

Source: Adapted from Joint Statement. Scaling-up the community-based health workforce for emergencies and Inter-agency Field Manual on Reproductive Health in Emergencies.

The minimum initial service package (MISP), (a Sphere Humanitarian Charter and Minimum Standards in Disaster Response for humanitarian assistance providers) is a set of priority activities responding to reproductive health needs of populations at the onset of an emergency. The MISP is designed to: prevent and respond to sexual violence; prevent excess maternal and newborn mortality and morbidity; reduce HIV transmission; and plan for comprehensive reproductive health services.

#### Minimum Initial Service Package (MISP) for Reproductive Health **OBJECTIVE 1** Ensure health cluster/sector identifies agency to **LEAD** implementation of MISP • RH Officer in place • Meetings to discuss RH implementation held • RH Officer reports back to health cluster/sector • RH kits and supplies available & used RH Kit **OBJECTIVE 5 OBJECTIVE 2** Plan for COMPREHENSIVE RH Prevent SEXUAL VIOLENCE & services, integrated into primary assist survivors health care • Protection system in place especially • Background data collected for women & girls • Sites identified for future delivery of Medical services & psychosocial comprehensive RH support available for survivors Community aware of services • Staff capacity assessed and trainings planned • RH equipment and supplies ordered RH Kit RH Kit RH Kit GOAL Decrease mortality, morbidity & disability in crisis-affected populations (refugees/ IDPs or populations hosting them) **OBJECTIVE 4 OBJECTIVE 3** Prevent excess MATERNAL & Reduce transmission of HIV **NEWBORN** morbidity & mortality Safe and rational blood transfusion in • Emergency obstetric and newborn Standard precautions practiced care available • 24/7 referral system established Free condoms available • Clean delivery kits provided to birth attendants and visibly pregnant Standard precautions RH Kit women through kits 1-2 • Community aware of services RH Kit RH Kit RH Kit RH Kit RH Kit RH Kit 12

Source: Inter-Agency Field Manual on Reproductive Health in Humanitarian Settings

### 8. Measuring success

In order to be able to monitor the progress and demonstrate the impact of programmes, it is essential to apply a results-based management approach at all phases of a programme cycle – from analysis to design, implementation and evaluation (refer to Project/Programme Planning Guidance Manual).

To set-up an effective monitoring and evaluation system requires:

- adequate resource allocation into all components of monitoring and evaluation including base-line, end-line surveys, and if need be, mid-term evaluation
- standardized reporting forms
- development of a plan for the continuous review and update of the monitoring and evaluation methodology throughout the life of programme/project
- selecting programme indicators that:
  - are specific, measurable, achievable, relevant and time-bound (SMART criteria)
  - allow to measure results at all levels including inputs, outputs, outcomes and impact (i.e. to measure not only increase in beneficiary's knowledge but also practice and where possible, change in health outcomes).

Programmes that aim to increase coverage across the continuum of care, should measure their progress and outcomes using a set of eight coverage indicators recommended by the Commission on Information and Accountability (COIA) for Women's and Children's Health. Together with a set of three health status indicators, the eight coverage indicators, disaggregated by sex and other equity considerations, are to be used for the purpose of monitoring progress towards the goals of the Global Strategy for Women's and Children's Health.

Each of these indicators represents a part of the continuum of care and each one is connected with other dimensions of health and health systems. For example, a measure of contraception is used as a tracer for reproductive health. Antenatal care coverage measures access to the health system and its ability to identify maternal risks and improve health outcomes for the mother and newborn. Case management of childhood pneumonia is used as an indicator of access to treatment. (See Annex 1 for a list of the indicators and their definitions.)

## 9. Innovation and expansion

There is a broad consensus now that to remove barriers to equitable service delivery and achieve the health MDGs requires innovation and close collaboration between the public and private sector. Introducing innovative approaches to the efficient delivery of health services is one of the key areas for urgent action within the Global Strategy for Women's and Children's Health. Information and communication technologies and mobile health, in particular, are recognized as having a huge potential for bridging the gap between health providers and those in need of services, and in supporting health information systems and health infrastructure. There are many projects that have experimented with using modern technologies and used other innovative approaches to support MNCH. Below are some examples of innovation in MNCH for consideration by National Societies.

## 9.1 Innovative use of mobile health and related information and communication technologies

### Subscription-based health messaging

- Enhancing the health literacy and care-seeking among mothers: provision of relevant health information to pregnant women and new mothers using personalized text and/or voice messages that encourage them to visit local facilities for antenatal care and to immunize their children (refer to Mobile Technology for Community Health, Ghana)
- Support to disease prevention and patient self-management by disseminating information on prevention and care via short text messages of 40 characters or less to the enrolled cell phone users (refer to mDhil project, India)
- Connecting remote populations with health providers: communication of patients with their health care providers via mobile phones to save travel time and to improve the efficiency of service delivery (refer to MOTECH Dev)

### Health surveillance

- Improving data-gathering capacity for vital statistics: gathering data on infant mortality in a large household survey by using personal digital assistants to enter data at the point of collection Tanzania (Shirima et al., 2007).
- Identifying high-risk pregnancies: community health workers use mobile phones to send information about pregnant women to referral facilities (Grameen Intel, Bangladesh).

## 9.2 Innovative strategies for improving equitable access to diagnosis and treatment

- Integrated Community Case Management (ICMM): to reach the most excluded and vulnerable children under-five with diagnosis and treatment of malaria, diarrhoea and pneumonia. The strategy is approved by the WHO as an evidence-based and cost-effective way to achieve the equitable delivery of those essential interventions in areas where there is no access to health facilities. ICMM can also be used as a platform for scale-up of MNCH services during emergency and as a vehicle for some other key interventions such as the delivery of vitamin A supplements and injectable antibiotics (for neonatal sepsis), and screening for severe malnutrition.
- Creating incentives to use health services for women in the lowest quintile: introducing vouchers that can be used in place of cash to obtain services in health facilities contracted by the implementing organization or MOH.
- Removing financial barriers to health services: private providers redeem vouchers used by women to pay for anternatal and maternal services (expenses paid by the government and/or donors)
- Task shifting: delegation of tasks to less specialized health workers as a viable solution for improving coverage of essential services by making more efficient use of the human resources already available. One of the examples of task shifting is the use of CHWs to deliver basic health care interventions in the communities where health facilities do not exist or lack professional health providers. The approach proved to be effective where CHWs have been provided with proper training, supervision and incentives.

## 9.3 Innovative community strategies

- Maternal death audits: systematic review by the community of each death related to pregnancy or delivery. The household where a woman died is visited by a delegation of local leaders and administrators to assess the cause. Each case of such death in a health facility is reported back to the community. The approach helps to increase awareness of maternal death and create accountability between communities, providers and local authorities.
- Mothers-to-mothers education and women's groups: demonstrated to be of the most effective applications of peer-to-peer education. Mothers are trained to advise other mothers and pregnant women on healthy living and care-seeking.

#### References

## References

Baqui AH, Arifeen SE et al. Improving newborn survival and changing household essential newborn care practices in rural Bangladesh: the Projahnmo experience. *The Lancet*, 371: 417-40. 2008.

Bhutta ZA, Memon ZA et al. Implementing community-based perinatal care: Results from a pilot study in rural Pakistan. WHO Bulletin, 86 (6). June 2008.

Black R, Allen LH et al. (2008). Maternal and child undernutrition: Global and regional exposures and health consequences. *The Lancet*, 371: 43-60. 2008.

Danzhen You, Gareth J et al. Levels and trends in child mortality, 1990-2009. The Lancet, 376:931-933. 2010.

Falle TY, Mullany LC et al. Potential role of traditional birth attendants in neonatal healthcare in rural southern Nepal. *Journal of Health*, Population and Nutrition, February 27(1): 53-61. 2009.

Global Health Workforce Alliance, UNHCR, UNICEF, WHO and IFRC. Joint Statement: Scaling-up the community-based health workforce for emergencies. October 2011. <a href="http://www.who.int/workforcealliance/knowledge/publications/alliance/joint-statement\_chwemergency\_en.pdf">http://www.who.int/workforcealliance/knowledge/publications/alliance/joint-statement\_chwemergency\_en.pdf</a>

Grameen Foundation and MOTECH. Mobile Technology for Community Health in Ghana. Second edition. September 2012.

 $\frac{http://www.grameen foundation.org/sites/default/files/MOTECH-Lessons-Learned-Sept-2012.pdf}{}$ 

Inter-Agency Standing Committee's. Women, Girls, Boys and Men. Different Needs Equal Opportunities. Gender Handbook in Humanitarian Action. 2006 <a href="http://www.humanitarianinfo.org/iasc/documents/subsidi/tf">http://www.humanitarianinfo.org/iasc/documents/subsidi/tf</a> gender/IASC%20 Gender%20Handbook%20(Feb%202007).pdf

Inter-agency Working Group (IAWG) on Reproductive Health in Crises. Interagency field manual on reproductive health in humanitarian settings. 2010. <a href="http://www.who.int/reproductivehealth/publications/emergencies/field\_manual/en/index.html">http://www.who.int/reproductivehealth/publications/emergencies/field\_manual/en/index.html</a>

IFRC. Gender Training manual. Geneva. 2004 https://fednet.ifrc.org/PageFiles/83934/Copy%20of%20Gender%20Perspectives\_ IFRC2003\_20cases%20training.pdf

#### Maternal, newborn and child health framework

IFRC. Behaviour change communication (BBC) for community-based volunteers, Volunteer toolkit. Geneva. 2009.

http://www.ifrc.org/PageFiles/53437/119200-vol4-BCC-trainers\_LR.pdf? epslanguage=en

IFRC. Strategy 2020. Geneva. 2010.

http://www.ifrc.org/en/who-we-are/vision-and-mission/strategy-2020/

IFRC. Project/programme Guidance Manual. Geneva. 2010. <a href="http://www.ifrc.org/MandE">http://www.ifrc.org/MandE</a>

IFRC. Community tools – Simple materials with illustrations and suggested questions and responses that facilitate volunteers' activities in households and the community. Geneva. <a href="https://fednet.ifrc.org/en/resources/health-and-care/community-based-health/cbhfa-manuals/">https://fednet.ifrc.org/en/resources/health-and-care/community-based-health/cbhfa-manuals/</a>

IFRC and The Partnership for Maternal, Newborn & Child Health. Eliminating health inequities. Geneva. 2011.

http://www.ifrc.org/PageFiles/91638/1208600-Health%20inequities%20advo-cacy%20report-EN-LR%20FINAL.pdf

Jokhio AH, Winter HR, Cheng KK. An intervention involving traditional birth attendants and perinatal and maternal mortality in Pakistan. *New England Journal of Medicine*, 352:2091-2099. 2005.

Alma-Ata: Rebirth and Revision 6, Interventions to address maternal, newborn, and child survival: what difference can integrated primary health care strategies make? *The Lancet. Vol 372.* September 2008.

The Partnership for Maternal, Newborn & Child Health and University of Aberdeen. Enable the Continuum of Care. Knowledge Summary 2. 2010. http://portal.pmnch.org/downloads/high/Knowledge for Action KS2 highres.pdf

Shirima, K., Mukasa, O., Schellenberg, J. A., et al. The use of personal digital assistants for data entry at the point of collection in a large household survey in southern Tanzania. Emerging themes in epidemiology, 4. 2007.

Sibley LM, Sipe TA. What can a meta-analysis tell us about traditional birth attendant training and pregnancy outcomes? *Midwifery*, 20: 51-60. 2004.

Sibley LM, Sipe TA et al. Traditional birth attendant training for improving health behaviors and pregnancy outcomes. *Cochrane Database of Systematic Reviews* 2007, Issue 3. 2007.

UN. Global Strategy for Women's and Children's Health. New York. 2010. http://www.everywomaneverychild.org/images/content/files/global\_strategy/full/20100914\_gswch\_en.pdf

UNFPA and Guttamcher Institute. Adding it up: the Benefits of Investing in Sexual and Reproductive Health Care. 2010.

http://www.unfpa.org/upload/lib\_pub\_file/240\_filename\_addingitup.pdf

UNICEF. Progress for Children. Achieving the MDGs with Equity. 2010.

UN Interagency Group for Child Mortality. Levels and Trends in Child Mortality: Report 2011. 2011.

#### References

WHO. The World Health Report 2005 – make every mother and child count. Geneva. 2005. <a href="http://www.who.int/whr/2005/en/index.html">http://www.who.int/whr/2005/en/index.html</a>

WHO, World Bank, UNICEF, UNFPA. Trends in Maternal Mortality: 1990 to 2008. Geneva. 2010.

http://whqlibdoc.who.int/publications/\*\*2010\*\*/9789241500265\_eng.pdf

WHO, The Aga Khan University, The Partnership for Maternal, Newborn & Child Health. Essential Interventions, commodities and guidelines for Reproductive, Maternal, Newborn and Child Health. 2011

WHO. Rio Political Declaration on Social Determinants of Health. World Conference on Social Determinants. Rio de Janeiro, Brazil. 2011.

http://www.who.int/sdhconference/declaration/Rio\_political\_declaration.pdf

WHO. Monitoring maternal, newborn and child health: understanding key progress indicators. 2011.

http://www.who.int/healthmetrics/news/monitoring\_maternal\_newborn\_child\_health.pdf

### Web sites

Countdown to 2015 Maternal, Newborn & Child Survival. <a href="http://www.countdown2015mnch.org/">http://www.countdown2015mnch.org/</a>

The 31st International Conference of the Red Cross and Red Crescent <a href="http://www.rcrcconference.org/en/introduction.html">http://www.rcrcconference.org/en/introduction.html</a>

Grameen Foundation

http://www.grameenfoundation.org/motech/devinfo

India-based mDhil counts 250K paying subscribers <a href="http://mobihealthnews.com/8994/india-based-mdhil-counts-250k-paying-subscribers/">http://mobihealthnews.com/8994/india-based-mdhil-counts-250k-paying-subscribers/</a>

The Partnership for Maternal, Newborn <a href="http://www.who.int/pmnch/about/vision/en/index.html">http://www.who.int/pmnch/about/vision/en/index.html</a>

UN. Millennium Development Goals <a href="http://www.un.org/millenniumgoals/bkgd.shtml">http://www.un.org/millenniumgoals/bkgd.shtml</a>



## List of indicators for maternal, newborn and child health

Intervention	Indicator definition	Numerator	Denominator
Demand for family planning satisfied (met need for contraception)	Percentage of women of reproductive age (15-49 years or age), either married or in a union, who have their need for family planning satisfied. This indicator is determined by the current levels of contraceptive use and the unmet need for family planning.	The Contraceptive Prevalence Rate (CPR) is the percentage of women of reproductive age (15-49 years old) who are married or in a union and who are currently using, or whose sexual partner is currently using, at least one contraceptive method, regardless of the method used (modern or traditional).	Total demand for family planning is defined as the sum of the CPR (as defined above) and the unmet need for family planning. Unmet need for family planning is the proportion of women of reproductive age (15-49 years old) either married or in a consensual union, who are fecund and sexually active but who are not using any method of contraception (modern or traditional), and report not wanting any more children or wanting to delay the birth of their next child for at least two years. Included are:  1. all pregnant women (married or in a consensual union) whose pregnancies were unwanted or mistimed at the time of conception;  2. all postpartum amenorrhoeic women (married or in consensual union) who are not using family planning and whose last birth was unwanted or mistimed;  3. all fecund women (married or in consensual union) who are neither pregnant nor postpartum amenorrhoeic, and who either do not want any more children (want to limit family size), or who wish to postpone the birth of a child for at least two years or do not know when or if they want another child (want to space births), but are not using any contraceptive method.

Intervention	Indicator definition	Numerator	Denominator
Antenatal care, four or more visits	Percentage of women attended at least four times during pregnancy by any provider (skilled or unskilled) for reasons related to the pregnancy	Number of women attended at least four times during pregnancy by any provider (skilled or unskilled) for reasons related to the pregnancy in the <i>x</i> years prior to the survey	Total number of women who had a live birth in the same time period
1. Antiretrovirals for HIV-positive pregnant women to reduce the risk of mother-to-child transmission during pregnancy and delivery;  2. Antiretroviral therapy for (pregnant) women who are treatment eligible	1. Percentage of HIV-infected pregnant women provided with antiretroviral drugs to reduce the risk of mother-to-child transmission during pregnancy and delivery  2. Percentage of HIV-infected (pregnant) women who are treatment eligible provided with antiretroviral therapy	1. Number of HIV-infected pregnant women who received antiretroviral drugs during the past 12 months to reduce mother-to-child transmission of HIV.  The numerator can be disaggregated by four options. The first three are recommended by WHO for HIV-infected pregnant women for the prevention of mother-to-child transmission of HIV (PMTCT):  a) ARV therapy for HIV-infected pregnant women eligible for life-long treatment b) Maternal triple ARV prophylaxis. This includes the following azidothymidine/ also called zidovudine (AZT)-based regimens when all three drugs are started simultaneously:  • AZT + 3TC + LPV-r  • AZT + 3TC + ABC  • AZT + 3TC + EFV9 c) Maternal AZT. This includes women who receive only AZT starting at 14 weeks and those that receive other ARVs (such as 3TC and NVP10) at labour and delivery, or postpartum (as a "tail"). A regimen with AZT as the primary prophylactic agent regardless of the duration and receipt of other drugs should be included in this category.	<ol> <li>Estimated number of pregnant HIV-infected women within the past 12 months.</li> <li>Estimated number of HIV-infected pregnant women eligible for ART</li> </ol>

Intervention	Indicator definition	Numerator	Denominator
		d) Single-dose nevirapine only (SDNVP). Although this regimen is not recommended by WHO and national PMTCT programmes are being encouraged to move towards using more efficacious regimens, it should be recorded and reported when it is provided. Progress reports on PMTCT will now present two versions of the indicator, one with and one without SDNVP included in the estimate.  2. ARV therapy for HIV-infected pregnant women eligible for life-long treatment	
Skilled attendant at birth	Percentage of live births attended by skilled health personnel	The number of live births to women ages 15-49 in the <i>x</i> years prior to the survey attended during delivery by a skilled health personnel (doctor, nurse, midwife, or auxiliary midwife)	Total number of live births to women ages 15-49 in the x years prior to the survey
Postnatal care for mothers and babies within two days of birth	Percentage of mothers and babies who received postnatal care within two days of childbirth	<ol> <li>Number of women         who received postnatal         care within two days of         childbirth (regardless of         place of delivery)</li> <li>Number of babies who         received postnatal care         within two days of childbirth         (regardless of place of         birth)</li> </ol>	<ol> <li>Total number of women ages         15-49 years with a last live birth         in the <i>x</i> years prior to the survey         (regardless of place of delivery)     </li> <li>Total number of most recently         born babies in the <i>x</i> years prior to         the survey (regardless of place of         birth)</li> </ol>
Exclusive breastfeeding (up to six months)	Percentage of infants ages zero to five months who are exclusively breastfed	Number of infants zero to five months who are exclusively breastfed	Total number of infants zero to five months surveyed
Three doses of combined diphtheriatetanuspertussis (DTP3) vaccine immunization coverage	Percentage of infants who received three doses of diphtheria- tetanus- pertussis vaccine (DTP3)	Number of surviving infants (under 12 months of age) who received three doses of diphtheria-tetanus-pertussis vaccine (DTP3)	Number of surviving infants (under 12 months of age) in the reference year

Intervention	Indicator definition	Numerator	Denominator
Antibiotic treatment for childhood pneumonia	Percentage of children ages 0-59 months with suspected pneumonia receiving antibiotics	Number of children ages 0-59 months with suspected pneumonia in the two weeks prior to the survey receiving antibiotics	Total number of children ages 0-59 months with suspected pneumonia in the two weeks prior to the survey

Source: Adapted from Monitoring maternal, newborn and child health: understanding key progress indicators. WHO. pp. 21-39. 2011

# Evidence for impact and cost-effectiveness of selected MNCH interventions

Interventions	Strength of the evidence of effects on morbidity or mortality	Estimated cost-effectiveness (per DALY averted) USD	Role of CHW with limited training: principal responsibility (++) or additional task (+)
Interventions that ha	ve strong/moderate e	vidence of effect on I	morbidity/mortality
PROMOTIONAL INTERVENTION	ONS		
Promotion of reproductive health and family planning	Strong	48–1000	+
Promotion of appropriate care- seeking and antenatal care during pregnancy	Moderate	15–47	++
Promotion of skilled care for childbirth	Strong	48–1000	++
Exclusive breastfeeding advice and support	Strong	15–47	++
Counselling for adequate nutrition and iron folate supplement during pregnancy	Moderate	48–1000	+
Promotion of basic newborn care and care of the low birth weight infant	Moderate	48–1000	+

Interventions	Strength of the evidence of effects on morbidity or mortality	Estimated cost- effectiveness (per DALY averted) USD	Role of CHW with limited training: principal responsibility (++) or additional task (+)
PREVENTIVE INTERVENTION	IS		
Provision/availability of contraceptives for birth spacing and safe sex	Strong	15–47	+
Cord care and delivery kits	Strong	15–47	++
Iron folate or multiple micronutrient supplementation during pregnancy	Moderate	15–47	+
Low-dose aspirin in pregnancy for at-risk women	Strong	15–47	+
Vitamin A supplementation in children	Strong	15–47	+
Insecticide treated bed nets for the family	Strong	15–47	++
Promotion of WASH strategies and household practices, including large-scale sanitation projects	Moderate	>1000	++
TREATMENT INTERVENTIONS			
Improved diarrhoea management (zinc and ORT etc.)	Strong	48–1000	++
Community detection and management of pneumonia with short course of amoxicillin	Strong	48–1000	
Improved case management of malaria including ACTs	Strong	48–1000	+

Source: Adapted from Alma-Ata: Rebirth and Revision 6, Interventions to address maternal, newborn, and child survival: what difference can integrated primary health care strategies make? Pp. 978-980 Tables 4 to 6. The Lancet. Vol. 372. September 2008.

## Estimated effects of selected MNCH interventions

Intervention	Estimated effect
Continuity of care between trained TBAs, midwives and doctors	Reduced likelihood of antenatal hospitalization (RR****[1]**** 0.79); and reduced risk of Apgar score < 7 at 1 min (RR 0.53)
Training of TBAs for basic newborn care and referral	Reduced number of stillbirths (RR 0.69), perinatal mortality (RR 0.70), and neonatal mortality (RR 0.71); increased number of maternal referrals (RR 1.50) with reduced rate of post-partum hemorrhage (0.61)
Insecticide-treated bednets	Reduction in all-cause child mortality (RR 0.82)
Education/promotion of exclusive breastfeeding	Assumed to improve breastfeeding practices up to 12 months of age, highest effect of exclusive BF under 1 month (OR****[²]**** 4.0) and 1 to 6 month – OR 3.5 (the effect of group counselling is bigger than individual but the range for the former is quite broad; quality of design and implementation critical
Complementary feeding support and education <u>without</u> food supplements or conditional cash transfers	In populations with sufficient food: if given between 6 and 18 months – increases height by 1.14 cm at 18 months
Complementary feeding support, including education, with food supplements or conditional cash transfers	In populations with insufficient food: if given between 6 and 36 months – increases height by 3.6 cm at 36 months
Hygiene interventions (hand washing, water quality treatment, sanitation)	Assumed to reduce incidence of diarrhoea by 30% in under-five and hence reduce the odds of stunting
Clean delivery practices	Reduction in all-cause neonatal mortality (55% to 99%)
Community mobilization through support groups	The overall effect on MNCH-related behaviours and newborn mortality seems positive; comparable trends also evident on reduction in perinatal mortality

<sup>1</sup> Relative Risk (RR): the number of times more likely (RR > 1) or less likely (RR < 1) an event is to happen in one group compared with another.

<sup>2</sup> Odds Ratio (OR): it is the odds of an event happening in the experimental group expressed as a proportion of the odds of an event happening in the control group. The closer the OR is to one, the smaller the difference in effect between the experimental intervention and the control intervention. If the OR is greater (or less) than one, then the effects of the intervention are more (or less) than those in the control group.

Intervention	Estimated effect
Supplementation with iron folate or iron	Assumed to reduce the risk of anemia, and hence to reduce risk of maternal death by 23%
Malaria prophylaxis and IPT for malaria in pregnancy and birth	IPT (intermittent preventive treatment) results in 46% reduction in risk of severe anemia
Zinc supplementation	Assumed to reduce both stunting and mortality directly from 6 months onwards, mortality risk by 9%, the odds of stunting by 15% in each group
Prevention and management of hypothermia	Reduction in all-cause neonatal mortality (18% to 42%)

Source: Bhutta et al., The Lancet, 2008

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### Evidence for care provided by TBAs

Study	Type/design	Findings/outcome
Sibley et al, 2004 <sup>1</sup>	Meta-analysis of 60 studies from 24 countries in 3 regions over nearly 3 decades	Small but significant effect on neonatal mortality due to birth asphyxia
	(1971–1999)	Small but significant effect on perinatal mortality due to ARI
		Inconclusive effect on maternal mortality
Jokhio et al, 2005 <sup>2</sup>	Six-month, cluster-randomized controlled study in rural district of Pakistan:	
	TBAs trained and issued delivery kits	
	lady health workers linked TBAs with established services, documented processes and outcomes obstetric teams provided outreach clinics for antenatal care	
	Perinatal death reduced by 30%	
Sibley et al, 2007 <sup>3</sup>	Cochrane review-sponsored meta-analysis of studies of analysing potential of TBA training to reduce peri-and neonatal mortality	Impact positive when training is combined with improved health services more studies needed to establish training
	mortality	effectiveness

<sup>1</sup> Sibley LM, Sipe TA. What can a meta-analysis tell us about traditional birth attendant training and pregnancy outcomes? Midwifery, 20: 51-60. 2004

<sup>2</sup> Jokhio AH, Winter HR, Cheng KK. An intervention involving traditional birth attendants and perinatal and maternal mortality in Pakistan. New England Journal of Medicine, 352:2091-2099. 2005.

<sup>3</sup> Sibley LM, Sipe TA et al. Traditional birth attendant training for improving health behaviors and pregnancy outcomes. Cochrane Database of Systematic Reviews 2007, Issue 3. 2007.

Study	Type/design	Findings/outcome
Bhutta et al, 2008 <sup>4</sup>	Lady health workers and Dais (TBAs) trained in home-based newborn care (basic resuscitation and immediate newborn care)  Dais encouraged to attend lady health workers-led community education sessions  Lady health workers and Dais together identify all pregnant women and expected dates of birth  Lady health workers make multiple visits to woman before/after birth  Community group counselling  Community mobilization: emergency transport fund for women and newborns	Reduced stillbirths from 65.9 to 43.2 per 1000 live births  Reduced neonatal mortality rates from 57.3 to 41.3 per 1000 live birth  Outcomes require confirmation in an adequately powered trial  * Increase in institutional deliveries from 18% to 30% with decrease in home birth from 79% to 65%  Higher frequency of key behaviours: early and exclusive breastfeeding, delayed bathing and cord care
Baqui et al, 2008 <sup>5</sup>	Thirty-month, cluster-randomized controlled trial in rural Bangladesh:  recruited/trained (six-weeks) CHWs to provide home-based neonatal care  Trained community health volunteers to promote newborn care  Established referral systems  Neonatal mortality rate reduced by 34%	
Falle et al, 2009 <sup>6</sup>	Interviews with 93 randomly selected TBAs in rural southern Nepal to ascertain knowledge, attitudes and practices	Good hand-washing among trained TBAs, but misconceptions persist about correct use of soap  Poor knowledge/practices of simple methods for keeping newborns warm  High prevalence of early bathing

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<sup>4</sup> Bhutta ZA, Memon ZA et al. Implementing community-based perinatal care: Results from a pilot study in rural Pakistan. WHO Bulletin, 86 (6). June 2008.

<sup>5</sup> Baqui AH, Arifeen SE et al. Improving newborn survival and changing household essential newborn care practices in rural Bangladesh: the Projahnmo experience. The Lancet, 371: 417-40. 2008.

<sup>6</sup> Falle TY, Mullany LC et al. Potential role of traditional birth attendants in neonatal healthcare in rural southern Nepal. Journal of Health, Population and Nutrition, February 27(1): 53-61. 2009

### The Fundamental Principles of the International Red Cross and Red Crescent Movement

**Humanity** The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all peoples.

**Impartiality** It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

**Neutrality** In order to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

**Independence** The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

**Voluntary service** It is a voluntary relief movement not prompted in any manner by desire for gain.

**Unity** There can be only one Red Cross or Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

**Universality** The International Red Cross and Red Crescent Movement, in which all societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.

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