Roadmap to Accelerate Progress for Every Newborn in Humanitarian Settings 2020 – 2025

Save the Children

World Health Organization

UNHCR
The UN Refugee Agency

unicef

DRAFT FOR CONSULTATION

Roadmap to Accelerate Progress for Every Newborn in Humanitarian Settings 2020 – 2025

Table of Contents

Foreword

Reaching SDG goals for neonatal mortality and stillbirths by 2030 requires prioritizing lifesaving newborn interventions during humanitarian crises.

Countries facing conflict have the highest rates of neonatal mortality and stillbirths.[1] The perinatal period represents a critically important time of vulnerability and risk for mothers and their newborns.[2] Newborn health cannot be considered in isolation, and must be addressed in the context of maternal health, and any interventions aimed at improving newborn health should be framed in the context of maternal and newborn health. However, it is widely recognised that during humanitarian crises, efforts for maternal and child health often overlook newborn care, including nurturing care. Progress has been made in financing and delivering reproductive, maternal, and child health interventions during crisis, but significant gaps remain in the financing of essential newborn interventions.[3] Therefore, improving newborn survival during humanitarian crises will require a greater focus on newborns as part of the continuum of care.

Women and children suffer disproportionately in a natural disaster r and they are **14** times more likely to die than men.[4] Every day in fragile and humanitarian settings, an estimated **500** women and girls die from complications due to pregnancy and childbirth.[5] More than **80%** of the high-mortality countries have suffered either a recent conflict, recurring natural disasters, or both.[6] Goals within the Global Strategy for Women, Children, and Adolescents' Health 2016-2030, to reduce newborn mortality to as low as 12 per 1000 live births in every country by 2030 require urgent action in fragile and humanitarian settings. Among the 49 countries that experienced an acute or protracted humanitarian crisis in the past five years,

75% of the countries fall short of the Sustainable Development Goal (SDG) target for neonatal mortality.[7] **Pakistan, Central African Republic, South Sudan, Afghanistan, and Somalia** are the top five countries with the highest rates of neonatal mortality; alarmingly at 39 deaths per 1000 live births or higher.[8]

The majority of maternal and newborn deaths and stillbirths are preventable, even in the most challenging situations.

Far too many newborns in fragile and humanitarian settings have limited or no access to cost-effective, lifesaving interventions, and the equity gap with other countries will continue to grow while the rest of the world moves forward with reductions in neonatal and child mortality. Humanitarian contexts produced by armed conflicts, famine, natural disasters, and epidemics may be temporary and short-lived, but they are increasingly protracted, with the average crisis lasting longer than 9 years.[9] These crises are contributing to a growing population of displaced people. Humanitarian contexts are diverse, with varying baseline mortality, economic development, health system capacity, population dynamics, and local burden of disease. Populations affected by crises may also be from various groups such as refugees, internally displaced persons, migrants, or local populations. They may live in remote rural areas or camps, but increasingly they are integrated in urban areas. The distinction between a humanitarian and development setting is often unclear, and efforts to improve maternal and newborn health must bridge both situations and be coordinated. The supporting systems and host populations often lack the will or capacity to meet the basic needs of persons displaced in their surrounding communities. The challenges in conflict settings for mothers and newborns are additionally compounded by insecurity and the natural focus of services on trauma and population safety. This *Roadmap to Accelerate Progress for Every Newborn in Humanitarian Settings* seeks to address newborn heath across these diverse contexts, with recommendations that can be applied generally, but can also be relevant to some specific contexts more than others.

During the preparedness, emergency, and recovery phase of a humanitarian response, priorities for newborn health need to be clearly articulated in coordination and advocacy platforms. Better integration of development initiatives that bolster emergency response efforts in preparedness and resilience-building can mitigate the long-term impact of crisis on the health of women and children. Global initiatives such as *Every Women Every Child and Every Newborn Action Plan* have brought together multi-stakeholder partners to prioritize key actions to help countries reduce newborn mortality by 2030. Taking into account these initiatives addressing newborn health and survival, this roadmap calls for action to accelerate the health of women and their newborns across all contexts and phases of emergency response, using a health systems approach. Stakeholders need to be engaged from across humanitarian and development sectors to ensure newborns survive and thrive even in the most difficult circumstances. This includes having a common vision, approach, and commitment to expand the reach and quality of service delivery for maternal and newborn health in populations affected by acute and protracted conflicts and natural disasters.

This roadmap was developed with input from more than 80 individuals, led by a Steering Committee with a strong stake in improving maternal and newborn health in humanitarian contexts including non-governmental, UN, academic, and donor agencies. A multi-sectoral experts meeting was held in February 2019 to validate the critical needs, challenges, and opportunities highlighted in this roadmap for newborn health in humanitarian settings. Recommendations from the global meeting and materials from development of this roadmap can be found at **www.healthynewbornnetwork.org/issue/emergencies/.**

The audience for whom this roadmap includes stakeholders from both the development and humanitarian community, both from maternal and newborn health communities and diverse sectors of the humanitarian response. This document sets out a vision for how improvements could be made for mothers and newborns in humanitarian settings. An advocacy paper accompanies this document, and will be followed by a work plan detailing a specific plan of action.

Vision

A world in which no newborn should face a greater risk of preventable death or disease because of where they live or who they are.

Goals

Prevent excess newborn deaths in humanitarian crises, and work towards global targets for reduction of neonatal mortality, stillbirth, and maternal mortality rates

Ensure mothers and newborns thrive by preventing maternal and child morbidity and promoting early childhood development

During the emergency phase of humanitarian crisis:

Count every neonatal death and stillbirth

Prevent excess stillbirths and neonatal and maternal deaths by reducing mortality to below thresholds defined by context specific pre-crisis or national rates

During the recovery phase of humanitarian crisis:

Align efforts with global targets for the SDGs

Work towards global targets for the SDGs by 2030 to reduce the neonatal mortality rate to 12 per 1,000 live births or less, stillbirth rate to 12 per 1,000 total births or less, and maternal mortality ratio to 70 per 100,000 live births or less

Objectives

SURVIVE

End preventable deaths

THRIVE

Ensure health and wellbeing

TRANSFORM

Expand enabling environments

SURVIVE

End preventable deaths

- **Prioritise strengthening** the maternal-newborn dyad in humanitarian crises
- **Ensure delivery** of cost-effective, life-saving essential newborn care from the onset of an emergency
- **Expand universal access** to dignified and quality antenatal, intrapartum, and postnatal interventions along the care continuum
- **Deliver appropriate care** for small and sick newborns
- **Register every birth** and count every newborn death and stillbirth

THRIVE

Ensure health and wellbeing

- **Strengthen linkages** across the continuum of care with key humanitarian sectors
- **Generate support and coordination** across the humanitarian-development nexus

TRANSFORM

Expand enabling environments

- **Empower communities and governments** through partnerships that promote innovative and sustainable maternal and newborn health services
- **Explore innovative approaches** and improve scientific evidence that informs service delivery at the facility and community levels in various settings
- **Increase the visibility of newborns** in humanitarian settings using existing accountability frameworks

Guiding Principles

- Evidence-Informed
- Newborn deaths and stillbirths are preventable
- Mothers & newborns are rights holders
- Respectful maternal & newborn care
- Family-Centered Care
- Newborns do better with their caregivers
- Newborns & stillbirths in humanitarian settings count
- Accountability
- Context-specific innovations
- High quality care that meets the needs of communities
- Empowering women & girls improves newborn survival
- Gender Equality
- Health system strengthening
- Preparedness and resilience improve sustainability

What can we do to reduce newborns deaths and stillbirths in fragile and humanitarian settings?

Key Actions for Newborn Health in Fragile and Humanitarian Settings

1 Prioritise strengthening the maternal-newborn dyad in humanitarian crises

Humanitarian settings are often characterised by disrupted access to services, and international and national assistance may be delayed, insufficient, or unable to reach mothers who are the most underserved. The mother is the best chance of the newborn' s survival, and protecting the maternal-newborn dyad is crucial for essential lifesaving interventions such as early and exclusive breastfeeding and skin-to-skin care to succeed, as well as for creating an environment of nurturing care for early childhood development. However, the importance of this relationship is often underestimated or overlooked, and lifesaving interventions are often de-prioritised during humanitarian response, despite their cost-effectiveness. Interventions risk being counterproductive if the mother-newborn dyad is weakened because ongoing care can become compromised, even if initial interventions appeared effective.

Keep newborns with their mothers and caregivers, the most reliable source of warmth, feeding, and protection in crises

Keeping newborns with their mothers and caregivers is an evidence-based, cost-effective intervention that can be feasible in any setting. Maternal and newborn care services should be designed to minimize separation of mother and baby from birth, during the postnatal period, and, in cases of neonatal complications, during referral. This necessitates a focus on the maternal-newborn dyad at every level, including leadership and governance, clinical care, referral pathways, and monitoring and evaluation. Services should be designed such that the needs of mothers and newborns can be addressed together, by linking newborn care with interventions that address the needs of mothers. In the case where keeping a newborn with their mother is impossible, efforts should be made to quickly establish a sustainable caregiver for the newborn.

Protect, promote, and support early and exclusive breastfeeding in humanitarian settings

Inadequate or undermined breastfeeding is particularly dangerous in humanitarian settings because access to safe water and sanitation is often compromised. The protection, promotion, and support of early initiation and exclusive breastfeeding is a lifesaving intervention that should be given adequate priority during humanitarian response for both healthy and high risk newborns.[10–16] A key priority in emergencies must be to create an enabling environment for early and exclusive breastfeeding both in facilities and in the community. This includes the availability of supplies for breastmilk expression, storage, and alternative feeding methods; training of health workers; advocacy; media communication; and psychosocial and peer-to-peer support. Breast Milk Substitute (BMS) provision should be limited to medical needs17, or reserved as a last resort action after efforts to provide expressed breast-milk, donor milk, protect early breastfeeding or restart lactation were made but were unsuccessful. BMS provision should also be linked to context-specific, coordinated package of care, and skilled support to ensure adequate water and

sanitation hygiene.[18] In humanitarian settings there is a need to strengthen and build upon existing initiatives for monitoring the WHO code such as Netcode,[19] and for breastfeeding promotion such as the baby friendly hospital initiative.[20]

2 Ensure delivery of cost-effective, life-saving essential newborn care from the onset of an emergency

Substantial evidence exists for the most effective interventions aimed at reducing neonatal mortality across the continuum of care, with interventions during the intrapartum and early postnatal period having the greatest impact.[21] The *Newborn Health in Humanitarian Settings Field Guide*, summarised existing evidence-based guidelines from WHO.[22] This operational guide highlights the most critical health services for every newborn. Yet, current efforts to integrate these essential newborn care interventions into routine health services have failed to lead to wide uptake.

> ***"Ensuring health providers are competent in essential newborn care including basic neonatal resuscitation is particularly critical because referral may not be feasible."***
>
> *Newborn Health in Humanitarian Settings Field Guide*

ACTIONS Strengthen and scale up essential newborn care, focusing on cost efficient and high impact interventions

Ensure that essential newborn care interventions are prioritized in national policies and guidelines, health assessments, donor proposals, humanitarian response plans, and supply lists for facility and community-based programs. Ensure that every provider of newborn care can deliver lifesaving and time-sensitive interventions immediately after birth. These interventions, as described in the *Newborn Health in Humanitarian Settings Field Guide*, include thermal care, infection prevention, neonatal resuscitation, early initiation and support for breastfeeding, monitoring danger signs, postnatal checks, delayed cord clamping, and vitamin K and tetracycline administration.

Essential Newbon Care for all Newborns

Newborn Health in Humanitarian Settings Field Guide

- **Thermal care:** Drying, warming, skin-to-skin contact, delayed bathing
- **Infection prevention:** Clean birth practices, hand washing, clean cord/skin/eye care. Chlorhexidine cord care is recommended for newborns born at home and in settings where the neonatal mortality rate is above 30 per 1000 live births (Box 3.8)
- **Initiation of breathing:** Thorough drying, clearing the airway only if needed, stimulation through rubbing the back, basic neonatal resuscitation using a self-inflating bag and mask for babies who do not spontaneously breathe
- **Feeding support:** Skin-to-skin contact, support for immediate and exclusive breastfeeding, not discarding colostrum (or first milk)
- **Monitoring:** Frequent assessment for danger signs of serious infections and other conditions that require extra care outside the household or health post
- **Postnatal care checks:** All women and babies should receive three postnatal checks during the first month: on Day 1 (the first 24 hours, which are the most critical), Day 3 and between Days 7-14. Every effort should be made to reach those babies born at home as soon as possible after birth
- Delayed cord clamping, vitamin K and tetracycline eye ointment within the first 24 hours, and vaccinations within the first week should be provided as part of essential care for all newborns.

Technologies that can bridge the gap between guidelines and clinical workflow (e.g. training, mentorship, and regular practice) should be explored while collecting data on barriers to guideline adherence. Ensuring that essential newborn care interventions are prioritized in national policies and guidelines, health assessments, donor proposals, humanitarian response plans, and supply lists for facility and community-based programs is essential.

Strengthen the availability of data to monitor and evaluate equitable coverage of essential newborn care interventions

Collect, analyse, disseminate, and use data from program assessments, as recommended by the Global Health Cluster, to monitor and evaluate gaps in service delivery. This should include where and who is primarily affected, and what barriers prevent access to essential newborn care. Introduce standardized indicators on coverage of newborn-specific interventions across the health sector that can be captured with different data collection platforms and tools. Report data into an overarching humanitarian coordination platform, such as the health cluster or reproductive health working group, where all actors can access data for public health action. Strengthen national data systems, in collaboration with *Countdown to 2030*, to ensure robust and usable data on coverage of essential newborn care are collected and reported to monitor trends, assess quality of delivered interventions, and evaluate impact and accountability of all concerned and relevant stakeholders.

3 Expand universal access to dignified and quality antenatal, intrapartum, and postnatal interventions along the care continuum

The focus in fragile and humanitarian settings should be on providing equitable quality care that is relevant to the setting, promotes maximum benefits, and is potentially sustainable. Feasible and cost-effective evidence-based interventions for antenatal, intrapartum, and postnatal care should be prioritized during a humanitarian response. To prevent stillbirths, health partners need to prioritize timely access to comprehensive emergency obstetric and newborn care at the onset of an emergency. Health system bottlenecks, which are exacerbated in humanitarian contexts, should be considered in the design and implementation of these interventions.

Provide access to basic and comprehensive emergency obstetric and newborn care around the time of birth to save the greatest number of lives

The provision of basic and comprehensive emergency obstetric and newborn care is an immediate priority in all emergencies. Care must be made universal and accessible to all, prioritising populations who would otherwise lack access. Contextual factors in fragile and humanitarian settings, such as insecurity, heavily influence the ability of mothers and newborns to access labour, delivery, and emergency care. Mothers must be empowered with information on their individual level of risk during pregnancy, and contingency plans for accessing care should be discussed with women and relevant caregivers. Contingency plans should consider contextual factors and unpredictable disruptions to care. This can include remote support innovations and community-based care, and methods such as maternity waiting homes to improve access to care. In contexts where women have limited agency in decision-making, sensitisation should be explored.

Establish a referral system that is flexible and resilient to health system shocks

Develop systems of reliable transportation and communication to facilitate appropriate referral of mothers and newborns when danger signs are detected pre-, during, and post-pregnancy. Educate communities and health workers to identify danger signs and raise awareness about referral mechanisms. Create emergency care protocols for stabilization prior to referral, and for management during transfer, including transferring the mother and baby together if postpartum preferably in skin-to-skin contact to prevent hypothermia. Transport systems should strengthen existing structures and modes of transport, and include community participation and leadership where possible.

Procure and preposition lifesaving maternal and newborn commodities

The *Newborn Health in Humanitarian Settings Field Guide* and the *Inter-agency Field Guide for Reproductive Health* provide a list of essential medicines and commodities to support safe delivery and newborn survival in the immediate postnatal period during emergencies. These supplies can be procured through UNICEF and UNFPA, and should be integrated into national essential medicines list and implementing organizations' supply lists. Commodities should be contextualized to align with national policies as appropriate, and chosen with consideration of the local context.

Establish a minimum service package for facility and community-based maternal and newborn care in fragile and humanitarian settings

Focus on prevention and treatment of major causes of newborn mortality, including asphyxia, infection, and prematurity. A package of newborn interventions along the continuum of care are found in the *Newborn Health in Humanitarian Settings Field Guide* for community-based (non-camp and camp) settings, primary health care facilities, and hospitals. This starts with quality antenatal care that provides counselling, screening, supplementation, and prevention of communicable, vertically transmitted and non-communicable diseases, as well as prompt treatment of complications, and ends with adequate postnatal follow up for newborn health promotion and linkage to treatment and other services. A minimum service package should be integrated into national preparedness and response plans, donor funding opportunities, and standards of care delivered by healthcare organizations.

Ensure access to care for displaced, refugee, and migrant women and newborns wherever and whoever they are

Uphold the right to health for all, ensuring no woman or child is left behind regardless of status and without discrimination. Health coverage must be universal and not limited by the requirement to prove identity, residency, or immigration status, and without the fear of financial hardship. Identify where women and newborns can safely access services using situational assessments, and ensure security procedures do not prevent access to care. Develop innovative strategies to provide lifesaving interventions in rural, urban, and camp-based settings. Strengthen the link between referrals from the host community and different points of care, while investing in the quality of care at referral facilities located in host communities

Ensure respectful maternal and newborn care in humanitarian response

Promote a culture of respectful maternal and newborn care as a common agenda,[23] aimed at saving lives and relieving suffering and distress for both the mother and the newborn. Respectful care includes supporting the woman's choices during labour and delivery, keeping the mother and her child together when possible, and avoiding unnecessary pain or harm including providing palliative care where appropriate. Raise awareness in maternal and newborn programs about the importance of respectful care using trainings, guidelines, and protocols. Create mechanisms for monitoring disrespect and abuse by giving service users opportunities to provide feedback. Promote inclusion and employment of female health workers where they are scarce, and locally based health workers where possible. Ensure that all women are permitted a birth companion when accessing health services. Engage in dialogue with communities early in the humanitarian response to explore context-specific factors that improve the acceptability of services.

Monitor quality across the care continuum and prioritise key areas such as intrapartum care to prevent harm

Outcomes of childbirth are particularly vulnerable to poor quality care, which can easily cause harm. Reporting on humanitarian interventions often focuses on quantity rather than quality, and there is little published data to assess service provision during humanitarian crisis. The risk of poor quality of care in fragile and humanitarian settings is high, due to numerous challenges including recruitment of an adequately resourced, trained, and supervised health workforce. Some interventions can pose a greater risk for harm if inappropriately implemented, and these should receive greater supervision[24] (e.g. controlled oxytocin[25], instrumental and surgical interventions).

Intrapartum monitoring of fetal well-being is particularly challenging in humanitarian settings and requires close supervision. Quality intrapartum monitoring is required to detect fetal distress and direct interventions to prevent intrapartum stillbirths and asphyxia when appropriate to intervene for fetal indications. However, it is particularly important that inappropriate intervention is avoided, especially if it may place the mother at greater risk in future pregnancies, especially if access to family planning and obstetric care is unpredictable. Organisations must therefore audit their interventions to ensure they are based on appropriate indications, and adapt recommendations for interventions based on context specific risks of interventions and realistic quality of monitoring. Quality should be promoted using standards26 and adequate training that is adapted to educational levels in the contexts, in addition to using supportive supervision, peer support, mentoring, and feedback. Key areas such as neonatal resuscitation should include mandatory pre-service training with ongoing refresher trainings. Innovative tools for remote supervision and training such as telemedicine, m-health, and e-health tools should be explored and evaluated in humanitarian contexts. Agencies should monitor and share data on quality of care to promote support for quality improvement initiatives.

Ensure universal access to prevention and treatment of malaria, tetanus, syphilis, and mother-to-child transmission of HIV

Humanitarian settings are integral and crucial to the Global Strategies on HIV[27], Malaria[28], and Syphilis[29], as well as the Maternal-Neonatal Tetanus Elimination strategy[30]. To prevent the adverse outcomes from malaria in pregnancy, agencies should ensure coverage of long-lasting insecticide-treated nets (LLINs) and intermittent preventive treatment in pregnancy (IPTp). For tetanus, the focus must be on prevention via maternal vaccination, clean delivery, and strengthening routine EPI vaccines. Reporting neonatal tetanus cases, as part of routine disease surveillance during humanitarian response, provides a useful indicator for monitoring access to clean delivery and antenatal vaccination coverage. Surveillance should also be strengthened for congenital syphilis, with linkage to prevention and treatment approaches during pregnancy. The Global Strategy on HIV[27] aims for no infant to be born with HIV, and this applies to humanitarian contexts as much as any other. Prevention in fragile and humanitarian settings should encompass availability of voluntary counselling and testing, post-exposure prophylaxis in the case of sexual violence, supply of antiretroviral treatment, universal testing during antenatal care and/or labour and delivery, testing and prophylaxis for newborns, and counselling on infant feeding in HIV contexts according to globally accepted recommendations. HIV should be incorporated into emergency preparedness plans to ensure mechanisms are in place for uninterrupted supplies to prevent mother-to-child transmission.

4 Deliver appropriate care for small and sick newborns

Ensuring care for small and sick newborns can significantly improve survival. Standards of care and evidence-based interventions need to be adapted to fit within the health system of fragile and humanitarian settings. Additionally, keeping the mother and newborn together improves the chance for successfully implementing lifesaving interventions such as kangaroo mother care and breastfeeding. The most reliable source of warmth and feeding for newborns is their mother or caregivers.

Ensure appropriate and adequately trained staff to provide care for small and sick newborns

Guaranteeing that all staff are trained in essential newborn care is the first priority. When escalating care, staff with specialist training in neonatal care are required, with high quality nursing care as the priority. Basic standards and acceptable health worker to patient ratios must be carefully considered and established when making decisions based on the complexity of care.

Prioritise access to treatment for the main causes of neonatal mortality including sepsis, asphyxia, and prematurity

Ensure antibiotic treatment is available to treat newborns with possible severe bacterial infection. Where possible, this should be provided in facilities. When referral is not possible,[31] the option of providing antibiotic treatment in the community according to WHO guidelines should be explored in humanitarian settings. Ensure staff are trained on neonatal resuscitation to address asphyxia, and implement kangaroo mother care (KMC), feeding support, and controlled oxygen for premature babies.

Provide appropriate facility-based care for small and sick newborns

Facility-based care for small and sick newborns is highly variable in humanitarian settings. This is highlighted by a lack of context-specific guidance on which core interventions are appropriate in different contexts. Efforts should be made to avoid missing opportunities to provide less intensive but higher impact interventions. In settings with low health system capacity, the priority should be essential newborn care with a focus on cost-effective and potentially sustainable technologies that can be supported by sufficient and trained health workers. There is a need to develop standards for newborn care, outlining which interventions to prioritise depending on the context, baseline mortality, and facility delivery rates. Ongoing work on signal functions for small and sick newborns should be adapted for humanitarian settings.

Develop standards for managing complex conditions when access to definitive care is impossible

Definitive care might be unavailable for many newborn conditions such as congenital abnormalities. Develop clear standards that are relevant and acceptable to the context for respectful care, counselling of parents, relief of suffering and palliative care, and prevention during future pregnancies where possible (e.g. folic acid for neural tube defects).

Minimise harm to newborns in facilities by prioritising infection prevention and control

Fragile and humanitarian settings are particularly challenging environments to ensure adequate quality of care, and in these circumstances neonatal interventions can easily cause harm[24], such as uncontrolled oxygen in preterm newborns leading to retinopathy of prematurity and blindness[32], and poor infection prevention and control practices leading to avoidable infections and associated morbidity and mortality, and the development of antimicrobial resistance. Hospital-acquired infections (HAI) are common in low resource settings[33] and outbreaks of multi-resistant infections associated with high mortality rates have been detected in neonatal facilities in humanitarian settings when microbiology has been available.[34] Healthcare organizations should develop mechanisms for monitoring minimum IPC standards, as well as surveillance tools for HAI that are user-friendly and adapted to settings when microbiological facilities are unavailable. Organisations should develop and implement guidelines for IPC and WASH standards that include an explicit focus on maternal and newborn care, including integration with essential newborn care practices. IPC guidelines should be readily available for all equipment used during neonatal care. New technologies should be carefully considered and introduced on the condition that they are accompanied by adequate IPC guidelines, and training and practice can be maintained and monitored.

Strengthen antimicrobial stewardship during humanitarian responses

Access to appropriate antibiotics for neonatal sepsis is the primary concern in humanitarian settings. However, inappropriate antibiotic therapy in fragile and humanitarian settings is also a growing concern, especially when poor IPC and WASH facilitate greater spread of antibiotic resistance[34–38,39]. Antibiotic stewardship requires greater consideration, particularly in protracted crises and settings where regulatory frameworks are weak or compromised, or when drug donations are inappropriate and unmonitored.[40,41] Fragile and humanitarian settings should be included in the WHO Global Action Plan on Antimicrobial Resistance[42], and WHO guidelines on drug donations should be reinforced, with antibiotic donations carefully adapted to known microbiological epidemiology and the risk of introducing resistance.

Ensure early availability of guidance on pregnant women and newborns in infectious disease epidemics

Pregnant or lactating women and newborns present unique challenges in infectious disease epidemics. Guidance and awareness among health workers about the prevention of infection and clinical management among this population should be integrated into preparedness and response planning. Guidance and training about provision of care for pregnant women and newborns should be regarded as a priority at the onset of epidemics.

5 Register every birth and count every newborn death and stillbirth

Newborn deaths are often under-reported in humanitarian responses, and their importance is often diminished when aggregated within the under-five emergency mortality threshold. Many mortality surveys and publications neglect to mention newborn deaths. Interventions also tend to focus on the post-neonatal under-five period. Additionally, newborn deaths can be confused with stillbirths.

> ***"It is very unlikely that newborns are prioritized in humanitarian settings because responders focus on food, water, and primary health care. What caught our attention is our weekly mortality and surveillance data, and we realized the number of deaths had gone up!"***
>
> *- South Sudan*

ACTIONS Recognise and guarantee the rights of newborns including birth registration and legal status

Newborns born in humanitarian contexts, depending on the territory, may face barriers to legal status and citizenship, often based on discrimination against race, ethnicity, religion, language, or minority status. This can lead to barriers when accessing care.

Newborns should be recognised as rights holders including the right to be registered and to health, according to the United Nations Convention on the Rights of the Child (UNCRC) and the International Covenant on Economic Social and Cultural Rights (ICESCR).

ACTIONS Strengthen surveillance and surveys reporting newborn deaths and stillbirths, and report the neonatal proportion of under-five deaths at every level of decision-making

Mortality statistics are often limited by under-reporting and misclassification of neonatal deaths and stillbirths.[43,44] Count all births, newborn deaths, and stillbirths where possible, improve training and quality assurance to encourage better reporting, and to better distinguish between stillbirths and neonatal deaths. Ensure that the neonatal are disaggregated in surveys and surveillance. Innovative methods of surveillance and surveys should also be explored to improve data quality.

ACTIONS Implement maternal and perinatal death surveillance and response (MPDSR) where possible

Maternal and perinatal death review, as well as verbal autopsy, is a powerful tool to improve public health prevention and response at referral level facilities when used appropriately. MPDSR requires capacity and training, adaptation to different legal and cultural environments, national guidelines, and multi-stakeholder engagement inclusive of communities.[45]

Adopt and rollout tools that support actors to conduct mortality audits and reviews of stillbirths and maternal and neonatal deaths where possible, as part of quality care improvement efforts. Conduct implementation research to monitor context-specific barriers and facilitators and outcomes for MPDSR.

6 Strengthen linkages across the continuum of care with key humanitarian sectors

Gains in newborn health rely heavily on investments in other sectors, particularly family planning, nutrition, immunization, mental health, and water, sanitation, and hygiene (WASH). The maternal and newborn community must take a multi-sectoral approach and engage other actors as core partners to achieve improvements in newborn health, and other sectors should explore how their services could be better adapted to the needs of mothers and newborns.

ACTIONS Integrate a nurturing care framework into humanitarian responses to improve early childhood development

Children born in humanitarian crises are at high risk of adverse developmental outcomes, with potential negative intergenerational consequences[46]. Interventions should be considered through the lens of the '*nurturing care framework*', which refers to conditions created by policies, programmes and services to promote child development, and is as relevant to the humanitarian sector as any other. Nurturing care enables communities and caregivers to promote the health and nutrition of their children, and involves creating opportunities for early learning through early stimulation and responsive and supportive interactions[47]. Programs should take a holistic approach by empowering caregivers with the needed resources and skills to provide developmentally supportive care and newborn services could be linked to early childhood development programs.[47]

ACTIONS Increase regular training about newborn care among managers and health providers in fragile and humanitarian settings

Trainings on maternal and newborn health should include sessions relevant for program managers and supportive staff to understand the key lifesaving newborn interventions that should be included in program proposals.

Program managers should also lead the development of action plans that highlight key gaps and activities for maternal and newborn health.

Reach all newborns by integrating care in community health programs, with emphasis on contexts with low institutional delivery rates

Humanitarian contexts can pose significant challenges to ensuring continuous access to facility-based care. Community-based services can be an essential mechanism to achieve meaningful coverage of interventions. Community health programs can be resilient to disruptions resulting from insecurity,[48] and can stimulate demand for facility-based care[49]. Newborn care can be integrated into existing community-based platforms in humanitarian emergencies such as integrated community case management (iCCM) programs. This requires engagement with national programs and thoughtful investment in community health worker training, supplies, and supportive supervision.

SPOTLIGHT: Rohingya Crisis

Targeted violence against the Rohingya community in Myanmar has resulted in distrust of public health services. Community health workers have strengthened trust to facilitate uptake of services through community engagement and support. Newborns face challenges in receiving postnatal care since women are also encouraged to stay indoors for 40 days after birth. Reaching women with critical information in this context depends on effective community-based programming.

Link maternal and newborn programs with reproductive health services to avoid missed opportunities for accessing family planning services

Integration of family planning during antenatal and postnatal care will improve newborn outcomes by encouraging early initiation and exclusive breastfeeding and improving spacing between pregnancies. Reproductive, maternal, newborn, and child health organisations should build partnerships and share data to maximise opportunities. Partnership with Family Planning 2020 can expand collaboration with non-humanitarian and country level actors to promote integration of services.

Partner with the nutrition sector to improve maternal, infant, and young child nutrition in emergencies (MIYCN-E) so newborns can have a healthy start

In humanitarian and fragile settings, food security can be a challenge. Improving maternal and newborn health begins with ensuring access to food and safe water and maternal nutritional counselling and support, in addition to iron and folic acid supplementation. These interventions should be packaged with newborn health interventions such as support for early initiation of breastfeeding and protection, promotion, and support of exclusive breastfeeding during the first six months of life, in addition to recognition, diagnosis, and treatment of maternal acute malnutrition prenatally and postnatally. Breastfeeding

SPOTLIGHT: Indonesia Earthquake[49]

During the earthquake in Yogyakara in Indonesia in 2006, BMS donations were ''uncontrolled and widespread''. In a study of 831 children aged 0-23 months, 75% of households had received donated infant formula, which was associated with greater than double the risk of diarrhea, demonstrating how inappropriate BMS donations in emergencies can undermine child health.

counselling and support for exclusive breastfeeding in the first days and weeks after birth are crucial to the mother and the newborn. Newborn care is also integral to infant and young child feeding programmes, as per the Operational Guidance on Infant and Young Child Feeding in Emergencies (OG-IFE).[18] Partnering with the nutrition sector is required for more effective monitoring of inappropriate donations of BMS, as well as inappropriate use of feeding equipment such as bottles and teats. Maternal, newborn, and child health interventions should be integrated in nutrition and community health funding proposals to ensure growth and development monitoring and the continuum of care between the newborn and infant period. Linkages with IYCF safe spaces like Mother Baby Areas and IYCF-E Corners should be in place to ensure that both the mother and the newborn receive ongoing support and nutritional care. Further research is required to address the evidence gap in re-lactation strategies and management of malnutrition under six months of age.[50]

Incorporate Expanded Programme on Immunization (EPI) with postnatal care activities

Programs providing maternal and newborn care often occur in parallel to EPI programs that create missed opportunities for vaccination of newborns and young infants. Health partners should coordinate EPI and postnatal care activities between maternity and immunization programs, particularly for vaccines given at birth in high incidence settings or in the newborn period including Hepatitis B, BCG, and Polio. Delivery of early vaccinations and other injections should be harmonised with the promotion of early and exclusive breastfeeding. Staff in EPI programs can be trained to promote essential newborn care and recognize and refer sick newborns.

Work with humanitarian operations support sectors to ensure facilities have spaces tailored for maternal and newborn care

The structure of temporary, semi-permanent, and permanent facilities should consider the needs of mothers and newborns. This includes adequate space for breastfeeding, breastmilk expression, KMC, and management of sick newborns. Every effort should be made to minimize overcrowding of maternity wards to reduce the risk of healthcare-associated infections among newborns. Communities should also be consulted on the design of culturally acceptable facilities and staffing.

Link with WASH partners to address risks for newborns

Newborns are particularly vulnerable to infections related to poor water and sanitation, particularly when breastfeeding is compromised, or when traditional practices include provision of water. Mothers and caregivers of newborns should be prioritised in WASH activities, and interventions should be specifically tailored to the needs of mothers and newborn in the community and facility. There is a need to develop and disseminate IPC and WASH-specific standards for maternity wards in humanitarian settings.

Link maternal and newborn programming with support for maternal mental health and psychosocial support (MHPSS)

Humanitarian crises are often associated with significant distress. Pregnant and lactating women should be prioritized for psychosocial services, not only for their own mental health, but also due to the potential influence of maternal mental health on newborn health including sustained exclusive breastfeeding. Maternal and newborn health programs should be linked to mental health support for a full range of scenarios including but not limited to psychiatric disorders, post-traumatic stress disorder, depression, sexual violence, and pregnancy or neonatal loss, including innovative approaches such as women's groups and peer-to-peer support.

Link maternal and newborn health programs with child protection services and pathways

Child protection challenges are complex and context specific, requiring agencies and stakeholders to share experiences, learning, guidance and information where appropriate. Addressing child protection requires greater communication and coordination between agencies to link health services with child protection pathways. Newborns should be included in the strategies that establish minimum standards for child protection in humanitarian response.[51]

Implement social protection interventions such as conditional cash transfers to address the needs of pregnant and postpartum women and newborns

Pregnant women, new mothers, and caregivers face multiple challenges and competing priorities in humanitarian settings. This has the potential to limit their capacity to provide care for their newborns, particularly small or sick newborns requiring prolonged care. Innovative approaches such as enhanced cash or in-kind transfers that are sensitive to the needs of mothers and newborns should be the focus of further research.

7 Generate support and coordination across the humanitarian-development nexus

Although mortality may decline after the 'emergency phase' of a humanitarian crisis, the need for maternal and newborn health services continues. In many settings, the distinction between 'humanitarian' and 'development' is crucial for humanitarian organisations so that they can maintain neutrality. However, in protracted crises the distinction between humanitarian response and development can become blurred. Linking the two approaches can lead to better outcomes. Linking the two approaches can improve outcomes and reduce risks based on the comparative advantage of a diverse range of actors.

Transition from the Minimum Initial Service Package for Reproductive Health in Crises (MISP) to comprehensive reproductive health services while rebuilding the national package of health services

There is often a delayed transition from the MISP to comprehensive reproductive health services. Coordination and planning across the humanitarian-development nexus should improve the transition to comprehensive reproductive health services.

Strengthen collaboration between humanitarian and development actors and coordination mechanisms, and national governments where possible

Humanitarian and development actors and national governments often function with parallel coordination mechanisms, and limited communication or integration. In protracted situations, greater collaboration in coordination platforms, joint assessments and gap analyses, and national health strategies across partners is crucial for maternal and newborn health.

Implement an Every Newborn Action Plan in countries with humanitarian and fragile settings

The Every Newborn Action Plan provides a framework with indicators and targets for newborn health that is increasingly adopted by countries affected by humanitarian crises. Countries should ensure that maternal and newborn care are included in national emergency preparedness plans, and national health plans include newborn interventions that will be implemented in case of a humanitarian crisis with a dedicated budget. Greater communication and coordination, including sharing of information and tools, between the development and humanitarian sectors can align humanitarian activities to address national and global targets for newborn health.

Ensure sustained funding for protracted emergencies

Explore innovative financing and engagement of donors who traditionally provide development assistance. Across the transition from a humanitarian to development phase, maternal and newborn health is particularly sensitive to weak health systems. Humanitarian and development funding should be integrated and sustained with longer funding cycles.

8 Empower communities and governments through partnerships that promote innovative and sustainable maternal and newborn health services

Communities play a significant role in the provision of newborn health services when access is limited to health facilities. Humanitarian actors can reinforce linkages between the different levels of care in partnership with the community. Strong leadership by national and local governments, particularly during emergency preparedness, also contributes to rapid improvements in maternal and newborn survival during crisis. This leadership is vital towards maintaining sustainable progress. Governments can develop policies and allocate resources to ensure newborns are not left behind during an emergency.

ACTIONS Integrate newborn care in national policies and strategies

Promote the adoption of the key actions from the *Global Strategy for Women's, Children's and Adolescent's Health* in national strategies and policies in fragile and humanitarian settings. Governments should ensure that newborn care is addressed in national policies and integrated in national curricula for midwifery and nursing training institutions, health information systems, and essential medicines list.

ACTIONS Prepare the health system to reduce newborn deaths and stillbirths during an emergency

Strengthen resilience at national and sub-national levels by integrating priority maternal and newborn health interventions into preparedness and response plans using global guidance and evidence to inform policies. Response plans and guidelines, including the MISP, can be promoted through forums that bring together national, local, international humanitarian and development actors. Standard operating procedures should be in place for: 1) national plans on provision of maternal and newborn services, 2) availability of a skilled health workforce for newborn care including regular training and task sharing, 3) infrastructure for maternity wards, 4) essential medicines and commodities, 5) universal access to services at each level of care, 6) community-based newborn services, 7) health information system with a minimum set of newborn indicators, 8) safe referral and transportation system for mother-newborn dyads, 9) ethical considerations, and 10) counseling on relactation and alternative methods of feeding breast milk and counseling and adherence to the WHO International Code for BMS.

> ***"In case of a disaster, positioning ENC as a preparedness intervention is the main lesson we learned: have a national health policy in place, map service delivery capacity, define training capcities available local health workers, and an emergency information system in case records are destroyed."***
>
> *– Philippines*

Invest in community engagement through women's health groups and community health workers

Promote activities and retention of community health workers through ensuring sufficient numbers are trained, equipped, and adequately supervised. Support women's health groups that increase access to key maternal and newborn health information and promote uptake of antenatal care, facility deliveries, postnatal care, breastfeeding support, and family planning. Engage with other community networks (e.g. adolescents, religious leaders, and health committees) to promote maternal and newborn health and reinforce linkages with health facilities along the referral continuum. Although evidence does not support having traditional birth attendants (TBAs) conduct deliveries, engaging with TBAs in a manner that strengthens recognition and referral for danger signs is might be beneficial. Further research should be conducted in humanitarian settings to inform training and supervision of lay health workers.

Promote a family-centred approach so caregivers can be empowered to provide for their newborns

Family-centred care includes minimal separation of the mother and newborn and creating a supportive environment for families to care for their newborns both in facilities and the community. Create enabling environments for families to care for their newborns by adapting facility based care where possible, and with enhanced support in the community in the form of nutrition, in-kind support, WASH, and social protection.

Address ethical issues in maternal and newborn care with communities

Maternal and newborn care in fragile and humanitarian settings often presents difficult ethical decisions such as treatment of extremely low birth weight babies, congenital anomalies, palliative care, and caesarean sections for fetal indications in regions with potentially unsustainable access to comprehensive emergency obstetric care. Promote discussion with women, communities, and families about ethical issues to encourage joint ownership of ethical frameworks between communities and health actors. Consider establishing 'ethical committees' including local representatives, and integrating these within decision-making processes at the health cluster level.

Amplify the role of communities in the delivery of maternal and newborn health interventions, recognizing they are both the immediate and long-term responders in crisis settings.

Engage constructively with the private sector to encourage accountability and equity

The private sector is an important partner in humanitarian responses. Perverse incentives which lead to inappropriate interventions, such as high rates of caesarean sections, should be actively monitored and limited. Ensure accountability mechanisms for private sector providers in humanitarian responses for maternal and newborn care, where appropriate while avoiding conflict of interest as recommended by the independent accountability panel of *Every Woman Every Child*.

9 Explore innovative approaches and improve scientific evidence that informs service delivery at the facility and community level in various settings

Evidence from stable settings has identified effective newborn interventions that reduce mortality across the continuum of care. Limited information exists on the implementation of these interventions in humanitarian contexts. CHNRI methodology has been used to generate research questions on newborn survival in humanitarian settings.[40] Further implementation research is needed to understand the models of care best suited for contexts with limited health system capacity, and the outcomes of those models including cost implications. Innovation, with support from global partnerships, can also provide novel opportunities to reach populations with limited accessibility and build the capacity of local institutions.

ACTIONS Disseminate existing scientific evidence to global and national stakeholders to encourage uptake of newborn interventions

At the global level, findings from studies that highlight evidence-based interventions for newborns should be shared widely using the Healthy Newborn Network and other relevant platforms. Implementing partners and UN agencies should be responsible for the timely dissemination of findings to policymakers in fragile and humanitarian settings, to ensure rapid uptake and scale up of evidence-based interventions in a responsive and contextualized manner.

ACTIONS Invest in implementation research to inform the rollout of evidence-based interventions in diverse humanitarian contexts

Evidence-based interventions tested in resource-limited settings are potentially highly applicable to humanitarian settings. This includes community-based newborn care, chlorhexidine for cord care (if newborn mortality is greater than 30 deaths per 1,000 livebirths),[54–57] simplified antibiotic regimens at the community level when referral is not possible,[58,31] KMC,[59–61] and others. Implementation studies are needed to understand factors that influence the success or failure of evidence-based interventions when they are translated to humanitarian settings.

Evaluate the appropriateness of new technologies for newborn care adapted to low-resource settings

Several new technologies adapted to low-resource settings are relevant to certain humanitarian settings (e.g. bubble CPAP, low flow oxygen metres, upright resuscitators, color-coded thermometers, IV drip rate regulators, point of care testing, LED phototherapy, low cost incubators, and oxygen delivery mechanisms). Importantly, interventions which increase the complexity of care can have unintended consequences on competing priorities and quality of basic care such as essential newborn care or infection prevention and control,[62] and the evidence base for existing technologies may not always apply to low-cost adaptations. Therefore, introduction of new technology should carefully consider the context including existing human resources, IPC standards, and sustainability, as well as considering whether adapted technologies offer the expected benefits of evidence-based original versions. Procedures should be developed for evaluating locally adapted equipment to ensure it is achieving the desired effect and not causing unanticipated harm. Implementation research should assess outcomes, cost-effectiveness, and impact on competing priorities.

Explore training frameworks for task sharing newborn care during humanitarian crisis

Humanitarian situations are frequently associated with severe human resources shortages, meaning task shifting becomes inevitable. Legal frameworks often prevent task sharing, which may or may not always be appropriate. Emergency preparedness plans should consider capacity building to allow for the expansion of the roles of health workers to ensure adequate coverage of essential interventions during crisis. Partnerships with community-based midwives through training and task shifting strategies that include proper monitoring can increase access to care when facility-based services are disrupted.

Leverage advances in digitization to strengthen the capacity of health workers in low-resource settings

Digital solutions such as mHealth, eHealth, telemedicine, and telemonitoring are becoming available that have the potential to improve communication, training, quality of care, task shifting, and data collection. Digitization can also allow access to decision-making support and specialist advice. Digital technology should be assessed by its ability to increase quality, capacity and competency, and reduce cost.

10 Increase the visibility of newborns in humanitarian settings using existing accountability frameworks

Newborn health is often missed in the list of priorities during a humanitarian response, and is often regarded as a 'development sector' activity. Communication of maternal and neonatal mortality and stillbirth estimates, and gaps and priorities in newborn care is essential for galvanizing attention and awareness. Ultimately, this would lead to improved program funding as well as integration of newborn services in the field. Involving civil society organizations, including humanitarian actors, community members, and local government leaders, early on can help define needs and identify existing resources for newborn health. This participatory process can formalize contributions to the health system and promote supportive attitudes towards preventing newborn mortality and stillbirths.

> ***"First thing is having an evidence-based advocacy plan to influence national counterparts, and to use it to plan and monitor. We used this information very loudly and tactfully in every meeting."***
>
> *– Iraq*

ACTIONS Raise newborn health on the agenda of humanitarian response planning, prioritization and coordination

Review the extent to which humanitarian response planning is, and could be made more sensitive to newborn health priorities throughout the phases of an emergency. Improve coordination between agencies, and representation of newborn health at the health cluster level. Ensure that guidelines and standard operating procedures include maternal and newborn health, and monitoring and evaluation frameworks include newborn health indicators.

ACTIONS Communicate neonatal mortality rates and stillbirths, and define unacceptable 'alert' levels for every crisis depending on pre-crisis and national levels

Emergency thresholds exist for crude overall mortality rates and under-five mortality. There are no such specific definitions of emergency thresholds or unacceptable rates for neonatal mortality, stillbirths, and maternal deaths. Each humanitarian response should consider defining and communicating alert levels of neonatal mortality, stillbirths, and maternal deaths, depending on pre-crisis or national level estimates.

ACTIONS Ensure maternal and newborn indicators are central to decision-making across the humanitarian-development nexus

Maternal and neonatal mortality rates are useful indicators of health system strength, and can be used as important indicators of the degree of assistance required. These indicators should be considered alongside crude and under-five mortality rates, and should be factored into decision-making processes related to humanitarian assistance and ongoing health system support.

Encourage positive attitudes toward newborn survival

Substantial evidence has shown that most newborn deaths can be prevented with cost-effective, lifesaving interventions. There is often limited awareness of the preventability of newborn deaths and an overreliance on highly medicalised care, while essential newborn care is overlooked and undervalued. Health workers should be trained with the knowledge and skills to care for small and sick newborns including guidance on ethical decision-making. In the community, messaging campaigns about lifesaving newborn care can improve social perceptions and norms about newborn survival and inspire behaviour change.

Partnership, Participation & Financing

To effectively implement the 2030 Agenda and realize the SDGs, the global community must continue to advocate, innovate, expand, coordinate, and push forward a progressive agenda aimed at ensuring high quality health care for the most vulnerable populations - every mother and newborn - in these especially challenging environments. New sources of funding and innovative financing mechanisms are needed to support the acute phase of an emergency, in addition to multi-year planning in protracted situations. The role of national governments should be visible to ensure sustainability by allocating sufficient financial resources for maternal and newborn care in the context of the humanitarian-development nexus. Decision makers need to commit to collective action to address newborn survival in fragile and humanitarian settings. A workstream within ENAP should be expanded to include humanitarian actors such as UNHCR, Save the Children, Inter-agency Working Group for Reproductive Health in Crises (IAWG), Global Health Cluster, and other relevant bodies who are empowered to oversee progress and hold partners accountable. This workstream should coordinate efforts related to: provision of guidance, resource mobilisation, monitoring progress, advocacy and awareness raising, liaison with key initiatives, and technical assistance.

Partnerships to Leverage Newborn Survival

Global policymakers

- Strengthen policy guidance on integrating newborn health services into national and regional emergency preparedness plans.
- Integrate newborn health indicators into cross-sectoral coordinated needs assessments and monitoring frameworks.
- Strengthen guidance to address the needs of pregnant women and newborns in surveillance, prevention, and response activities during infectious disease epidemics
- Engage private sector and professional societies to innovate and implement healthcare technology and training resources in humanitarian and fragile settings.

Implementing organizations

- Implement priority newborn health interventions at the onset of humanitarian emergencies consistent with global guidance.
- Build capacity of healthcare providers through training, mentoring, or similar performance improvement approaches to ensure they have competencies in all 7 signal functions of basic emergency obstetric, essential newborn care, and care for small and sick newborns underpinned by respectful maternity care.
- Preposition supplies to ensure life-saving commodities are available at onset of humanitarian emergencies.
- Challenge organizational norms to strengthen linkages between maternal and newborn health and other priority sectors, and between humanitarian and development actors
- Engage in respectful partnerships with communities to promote newborn health services and behaviors.
- Partner with academic institutions to build evidence of effective community-based approaches for newborn health in humanitarian settings.

Donors

- Encourage and fund partnerships that aim to support and enhance the maternal-newborn dyad and local capacities in the provision of services during emergencies.
- Require reporting on core newborn health indicators when funding health activities from the onset of an emergency
- Support research activities that build the evidence-base of effective newborn health interventions in fragile and humanitarian settings.
- Expand multi-year, flexible funding to support critical impact areas for newborn health across the humanitarian-development nexus, and contribute to rapid funding mechanisms for humanitarian emergencies.

Monitoring Progress

Global Milestones

Year	Global Benchmarks
2020	▪ Focal person or global secretariat is established to oversee and monitor implementation of strategy ▪ Existence of a convening mechanism for newborn health in humanitarian and fragile settings ▪ Roadmap endorsed by Global Health Cluster Strategic Advisory Group ▪ Work plan for newborn health in humanitarian drafted ▪ Key actions within the strategy are integrated into other priority sectors action plans ▪ Global targets to track newborn health are refined as needed to reflect humanitarian settings and endorsed by global leads
2021	▪ Newborn mortality is disaggregated when reporting child mortality in all humanitarian reporting ▪ Health funding appeals include core newborn indicators and interventions at the onset of emergency ▪ Joint needs assessments include newborn health ▪ Focal person for newborn health in humanitarian health agencies
2022	▪ Essential drug lists or supply kits include recommended newborn supplies from *Newborn Care Supply Kits for Humanitarian Settings* ▪ Newborn policies integrated into preparedness plans ▪ Implementing organizations developed policies and guidelines on perinatal death audits ▪ Training protocols for humanitarian health organizations at the community and facility level include newborn care ▪ Work plan for newborn health in humanitarian settings is costed with an identified funding mechanism for the next five years
2023	▪ Humanitarian health organizations adopted and trained community-based cadres on newborn care ▪ Every Newborn Action Plans developed in countries with a humanitarian or fragile setting ▪ At least 55 countries adopt minimum set of indicators for newborn health in humanitarian settings
2024	▪ Reduced neonatal mortality and stillbirth rate in 10 humanitarian settings ▪ 15 research studies conducted (or in progress) on priority questions for maternal, stillborn, or newborn care in humanitarian settings from 2020-2024 ▪ 75% of Humanitarian Response Plans (HRPs) specifically mention integration of newborn health interventions

Minimum Set of Indicators for Newborn Health in Humanitarian Settings

Indicators have been proposed based on the December 2018 WHO Technical Consultation for Monitoring and Evaluation in Humanitarian Settings and the Newborn Health in Humanitarian Settings Field Guide. The indicators will be field tested in 2019, with more specific indicators to be proposed in early 2020.

Indicator type (definition)	Indicator type (core/extended)	Settings (acute/protracted)	Type of reporting (facility/population-based)
Impact			
Neonatal mortality rate: # of deaths in the first 28 days of life / 1000 live births, disaggregated by early neonatal (<7 days after birth) and late neonatal (8-28 days after birth)	Core	Acute, protracted	Facility, population-based
Cause of death: # of early neonatal deaths, disaggregated by cause (preterm, intrapartum, infection, congenital, other)	Core	Acute, protracted	Facility
Stillbirth rate: # of fetuses and newborns born after 28 weeks gestation or ≥ 1000g with no sign of life / 1000 live births, disaggregated by fresh and macerated stillbirth	Core	Acute, protracted	Facility, population-based
Coverage/Outcome			
Newborn morbidities identified during postnatal care: # of newborns with any health condition attributed to or aggravated by pregnancy and childbirth identified during postnatal care	Extended	Protracted	Facility, population-based
Low birth weight prevalence: # of live born neonates with weight < 2500g at birth / # of live births	Core	Acute, protracted	Facility, population-based
Infants weighed at birth: # of newborns weighed prior to discharge / # of newborns in a given year	Extended	Protracted	Facility
Preterm birth prevalence: # of live births where newborn was preterm / # of live births, disaggregated by moderate to late preterm (32 to 37 weeks), very preterm (28 to 32 weeks), and extremely preterm (< 28 weeks)	Extended	Protracted	Facility
KMC at facilities: # of health facilities that provide KMC / # of facilities	Core	Protracted	Facility
KMC coverage: # of small or preterm newborns initiated on KMC / # of small or preterm newborns	Core	Acute, protracted	Facility
Neonatal resuscitation at facilities: # of health facilities with delivery services that are able to provide neonatal resuscitation / # of facilities with delivery services	Core	Protracted	Facility

YEAR ONE ACTION PLAN

During the February 2019 Global Meeting, experts came together and agreed on these key priorities for the next year. The action plan will continue to be updated annually until 2024.

Activities

Strategy launch at upcoming high-level events

TASKS

- Publish paper on process of Newborn Strategy
- Disseminate MNH advocacy paper and advocacy briefer on newborns
- Launch Declaration
- Develop infographics and social media strategy

Identification of entry points in sectors

TASKS

- Develop a 'cheat sheet' of entry points to use during messaging at inter-cluster meetings
- Promote inclusion of maternal and newborn in joint needs assessments and indicators

Identification of investment priorities during pre-crisis and recovery phase

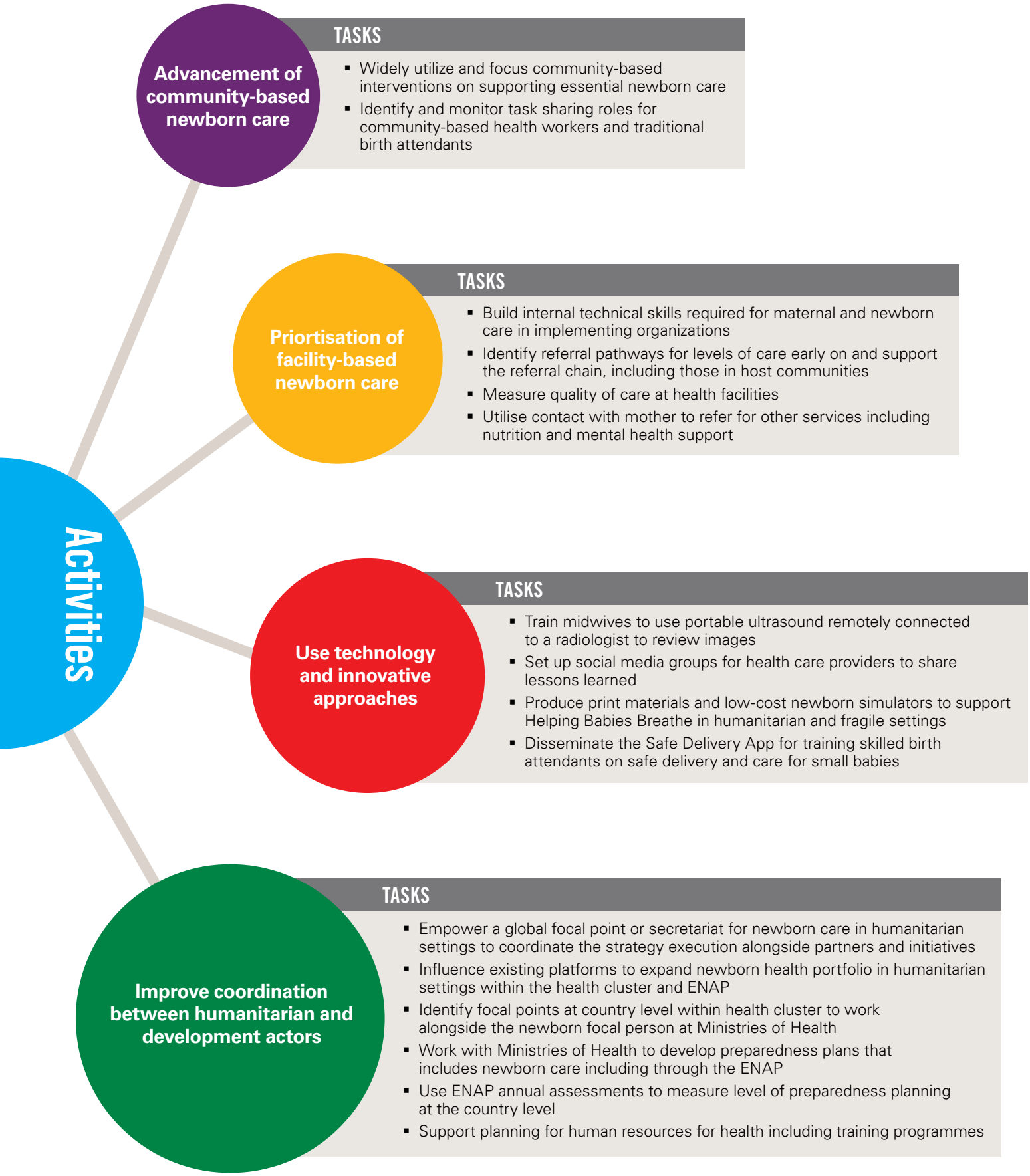
TASKS

- Improve messaging on investment priorities for pre-crisis and recovery MNH activities
- Integrate MNH priorities in contingency plans and national policies
- Explore alternate funding mechanisms

Improvement of mortality measurement and data collection and use

TASKS

- Disaggregate neonatal mortality in child mortality reports
- Count stillbirths in health information systems
- Harmonize indicators and data collection tools
- Measure broader program implementation


Activities
Advancement of community-based newborn care
TASKS
Widely utilize and focus community-based interventions on supporting essential newborn care
Identify and monitor task sharing roles for community-based health workers and traditional birth attendants
Priortisation of facility-based newborn care
TASKS
Build internal technical skills required for maternal and newborn care in implementing organizations
Identify referral pathways for levels of care early on and support the referral chain, including those in host communities
Measure quality of care at health facilities
Utilise contact with mother to refer for other services including nutrition and mental health support
Use technology and innovative approaches
TASKS
Train midwives to use portable ultrasound remotely connected to a radiologist to review images
Set up social media groups for health care providers to share lessons learned
Produce print materials and low-cost newborn simulators to support Helping Babies Breathe in humanitarian and fragile settings
Disseminate the Safe Delivery App for training skilled birth attendants on safe delivery and care for small babies
Improve coordination between humanitarian and development actors
TASKS
Empower a global focal point or secretariat for newborn care in humanitarian settings to coordinate the strategy execution alongside partners and initiatives
Influence existing platforms to expand newborn health portfolio in humanitarian settings within the health cluster and ENAP
Identify focal points at country level within health cluster to work alongside the newborn focal person at Ministries of Health
Work with Ministries of Health to develop preparedness plans that includes newborn care including through the ENAP
Use ENAP annual assessments to measure level of preparedness planning at the country level
Support planning for human resources for health including training programmes

References

1. Wise PH, Darmstadt GL. Confronting stillbirths and newborn deaths in areas of conflict and political instability: a neglected global imperative. *Paediatr Int Child Heal*. 2015;35(3):220-226. doi:10.1179/2046905515Y.0000000027
2. World Health Organization. Maternal and perinatal health.
3. Foster AM, Evans DP, Garcia M, et al. The 2018 Inter-agency field manual on reproductive health in humanitarian settings: revising the global standards. *Reprod Health Matters*. 2017;25(51):18-24. doi:10.1080/09688080.2017.1403277
4. Peterson K. *Reaching Out to Women When Disaster Strikes*. Soroptimist White Paper.; 2007.
5. UNFPA. *Humanitarian Action 2019 Overview.*; 2019.
6. UNICEF. *The State of the World's Children 2014 -Every Child Counts.*; 2014.
7. Inter-Agency Working Group on Reproductive Health in Crises (IAWG). *Timing Is Everything: Caring for Mothers and Newborns in Humanitarian Emergencies on the Day of Childbirth.*; 2019.
8. UNICEF and WHO. *Levels and Trends in Child Mortality: Report 2018.*; 2018.
9. United Nations Office for the Coordination of Humanitarian Affairs (OCHA). *Global Humanitarian Overview 2019.*; 2019.
10. Victora CG, Bahl R, Barros AJD, et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet*. 2016;387(10017):475-490. doi:10.1016/S0140-6736(15)01024-7
11. Rollins NC, Bhandari N, Hajeebhoy N, et al. Why invest, and what it will take to improve breastfeeding practices? *Lancet*. 2016;387(10017):491-504. doi:10.1016/S0140-6736(15)01044-2
12. Prudhon C, Benelli P, Maclaine A, Harrigan P, Frize J. Informing infant and young child feeding programming in humanitarian emergencies: An evidence map of reviews including low and middle income countries. *Matern Child Nutr*. 2018;14(1):e12457. doi:doi:10.1111/mcn.12457
13. Shaker-Berbari L, Ghattas H, Symon AG, Anderson AS. Infant and young child feeding in emergencies: Organisational policies and activities during the refugee crisis in Lebanon. *Matern Child Nutr*. 2018;14(3):e12576. doi:10.1111/mcn.12576
14. Debes AK, Kohli A, Walker N, Edmond K, Mullany LC. Time to initiation of breastfeeding and neonatal mortality and morbidity: a systematic review. *BMC Public Health*. 2013;13 Suppl 3(Suppl 3):S19-S19. doi:10.1186/1471-2458-13-S3-S19
15. Yotebieng M, Labbok M, Soeters HM, et al. Ten Steps to Successful Breastfeeding programme to promote early initiation and exclusive breastfeeding in DR Congo: a cluster-randomised controlled trial. *Lancet Glob Heal*. 2015;3(9):e546-e555. doi:10.1016/S2214-109X(15)00012-1
16. Ayoya MA, Golden K, Ngnie-Teta I, et al. Protecting and improving breastfeeding practices during a major emergency: lessons learnt from the baby tents in Haiti. *Bull World Health Organ*. 2013;91(8):612-617. doi:10.2471/BLT.12.113936
17. WHO. *Acceptable Medical Reasons for Use of Breast-Milk Substitutes.*; 2009. https://www.who.int/maternal_child_adolescent/documents/WHO_FCH_CAH_09.01/en/.
18. IFE. *Infant and Young Child Feeding in Emergencies: Operational Guidance for Emergency Relief Staff and Program Managers Version 3.0 October 2017.*; 2017. https://www.ennonline.net/attachments/2673/Ops-G_2017_WEB.pdf.
19. WHO. *Netcode*. https://www.who.int/nutrition/netcode/en/. Accessed May 12, 2019.
20. UNICEF. *Protecting, Promoting and Supporting Breastfeeding in Facilities Providing Maternity and Newborn Services: The Revised BABY-FRIENDLY HOSPITAL INITIATIVE: Implementation Guidance.*; 2018. https://apps.who.int/iris/bitstream/handle/10665/272943/9789241513807-eng.pdf?ua=1.
21. Bhutta ZA, Das JK, Bahl R, et al. Can available interventions end preventable deaths in mothers, newborn babies, and stillbirths, and at what cost? *Lancet*. 2014;384(9940):347-370. doi:10.1016/S0140-6736(14)60792-3
22. WHO. *WHO Recommendations on Newborn Health: Guidelines Approved by the WHO Guidelines Review Committee*. Geneva; 2017. https://apps.who.int/iris/bitstream/handle/10665/259269/WHO-MCA-17.07-eng.pdf.
23. Sacks E, Kinney M V. Respectful maternal and newborn care: building a common agenda. *Reprod Health*. 2015;12(1):46. doi:10.1186/s12978-015-0042-7
24. Every Preemie. *Every Preemie Scale: Do No Harm Technical Briefs.*; 2017. https://www.everypreemie.org/donoharmbriefs/.
25. Shah S, Van den Bergh R, Prinsloo JR, et al. Unregulated usage of labour-inducing medication in a region of Pakistan with poor drug regulatory control: characteristics and risk patterns. *Int Health*. 2016;8(2):89-95. doi:10.1093/inthealth/ihv051

26. WHO. *Standards for Improving Quality of Maternal and Newborn Care in Health Facilities.*; 2016. https://apps.who.int/iris/bitstream/handle/10665/249155/9789241511216-eng.pdf?sequence=1.

27. Organisation WH. *Global Health Sector Strategy on HIV 2016-2021: Towards Ending Aids.*; 2016. https://apps.who.int/iris/bitstream/handle/10665/246178/WHO-HIV-2016.05-eng.pdf?sequence=1.

28. WHO | Global Technical Strategy for Malaria 2016–2030. *WHO*. 2017.

29. WHO. *GLOBAL HEALTH SECTOR STRATEGY ON SEXUALLY TRANSMITTED INFECTIONS 2016–2021.*; 2016. https://apps.who.int/iris/bitstream/handle/10665/246296/WHO-RHR-16.09-eng.pdf?sequence=1.

30. WHO. *Maternal and Neonatal Tetanus Elimination (MNTE)*. https://www.who.int/immunization/diseases/MNTE_initiative/en/index4.html; 2018.

31. WHO. *Managing Possible Serious Bacterial Infection in Young Infants When Referral Is Not Feasible*. http://apps.who.int/iris/bitstream/handle/10665/181426/9789241509268_eng.pdf?sequence=1; 2015.

32. WHO. *Oxygen Therapy for Children*. Geneva; 2016. https://apps.who.int/iris/bitstream/handle/10665/204584/9789241549554_eng.pdf?sequence=1.

33. Zaidi AK, Huskins WC, Thaver D, Bhutta ZA, Abbas Z, Goldmann DA. Hospital-acquired neonatal infections in developing countries. *Lancet*. 2005;365(9465):1175-1188. doi:10.1016/S0140-6736(05)71881-X

34. Lenglet A, Faniyan O, Hopman J. A Nosocomial Outbreak of Clinical Sepsis in a Neonatal Care Unit (NCU) in Port-Au-Prince Haiti, July 2014 - September 2015. *PLoS Curr*. 2018;10:ecurrents.outbreaks.58723332ec0de952adefd9a9b69059. doi:10.1371/currents.outbreaks.58723332ec0de952adefd9a9b6905932

35. Abbara A, Rawson TM, Karah N, et al. Antimicrobial resistance in the context of the Syrian conflict: Drivers before and after the onset of conflict and key recommendations. *Int J Infect Dis*. 2018;73:1-6. doi:10.1016/j.ijid.2018.05.008

36. Ronat J-B, Kakol J, Khoury MN, et al. Highly drug-resistant pathogens implicated in burn-associated bacteremia in an Iraqi burn care unit. *PLoS One*. 2014;9(8):e101017-e101017. doi:10.1371/journal.pone.0101017

37. Murphy RA, Chua AC. Prevention of common healthcare-associated infections in humanitarian hospitals. *Curr Opin Infect Dis*. 2016;29(4):381-387. doi:10.1097/qco.0000000000000285

38. Talley LE, Boyd E. Challenges to the programmatic implementation of ready to use infant formula in the post-earthquake response, Haiti, 2010: a program review. *PLoS One*. 2013;8(12):e84043. doi:10.1371/journal.pone.0084043

39. Woerther P-L, Angebault C, Jacquier H, et al. Massive Increase, Spread, and Exchange of Extended Spectrum β-Lactamase–Encoding Genes Among Intestinal Enterobacteriaceae in Hospitalized Children With Severe Acute Malnutrition in Niger. *Clin Infect Dis*. 2011;53(7):677-685. doi:10.1093/cid/cir522

40. Berckmans P, Dawans V, Schmets G, Vandenbergh D, Autier P. Inappropriate Drug-Donation Practices in Bosnia and Herzegovina, 1992 to 1996. *N Engl J Med*. 1997;337(25):1842-1845. doi:10.1056/nejm199712183372512

41. Cañigueral-Vila N, Chen JC, Frenkel-Rorden L, Laing R. Improvements for international medicine donations: a review of the World Health Organization Guidelines for Medicine Donations, 3rd edition. J Pharm policy Pract. 2015;8:28. doi:10.1186/s40545-015-0045-3

42. WHO. *Gobal Action Plan on Antimicrobial Resistance*. (Organisation WH, ed.). http://apps.who.int/iris/bitstream/handle/10665/193736/9789241509763_eng.pdf?sequence=1; 2015.

43. Checchi F, Warsame A, Treacy-Wong V, Polonsky J, van Ommeren M, Prudhon C. Public health information in crisis-affected populations: a review of methods and their use for advocacy and action. *Lancet*. 2017;390(10109):2297-2313. doi:10.1016/S0140-6736(17)30702-X

44. Checchi F, Roberts L. Documenting mortality in crises: what keeps us from doing better. *PLoS Med*. 2008;5(7):e146-e146. doi:10.1371/journal.pmed.0050146

45. Koblinsky M. Maternal Death Surveillance and Response: A Tall Order for Effectiveness in Resource-Poor Settings. *Glob Heal Sci Pract*. 2017;5(3):333-337. doi:10.9745/GHSP-D-17-00308

46. Devakumar D, Birch M, Osrin D, Sondorp E, Wells JC. The intergenerational effects of war on the health of children. *BMC Med*. 2014;12(1):57. doi:10.1186/1741-7015-12-57

47. WHO. *Nurturing Care for Early Childhood Development: A Framework for Helping Children Survive and Thrive to Transform Health and Human Potential.*; 2018. https://apps.who.int/iris/bitstream/handle/10665/272603/9789241514064-eng.pdf.

48. Kozuki N, Ericson K, Marron B, Lainez YB, Miller NP. The resilience of integrated community case management in acute emergency: a case study from Unity State, South Sudan. *J Glob Health*. 2018;8(2):20602. doi:10.7189/jogh.08.020602

49. Edmond KM, Yousufi K, Anwari Z, et al. Can community health worker home visiting improve care-seeking and maternal and newborn care practices in fragile states such as Afghanistan? A population-based intervention study. *BMC Med*. 2018;16(1):106. doi:10.1186/s12916-018-1092-9

50. Prudhon C, Maclaine A, Hall A, Benelli P, Harrigan P, Frize J. Research priorities for improving infant and young child feeding in humanitarian emergencies. *BMC Nutr*. 2016;2(1):27. doi:10.1186/s40795-016-0066-6

51. UNICEF. *Minimum Standards for Child Protection in Humanitarian Settings.*; 2012. https://www.unicef.org/iran/Minimum_standards_for_child_protection_in_humanitarian_action.pdf.

52. Checchi & Roberts, L. F. *Interpreting and Using Mortality Data in Humanitarian Emergencies: A Primer for Non-Epidemiologists.*; 2005.

53. Morof DF, Kerber K, Tomczyk B, et al. Neonatal survival in complex humanitarian emergencies: setting an evidence-based research agenda. *Confl Health*. 2014;8(1):8. doi:10.1186/1752-1505-8-8

54. Soofi S, Cousens S, Imdad A, Bhutto N, Ali N, Bhutta ZA. Topical application of chlorhexidine to neonatal umbilical cords for prevention of omphalitis and neonatal mortality in a rural district of Pakistan: A community-based, cluster-randomised trial. *Lancet*. 2012. doi:10.1016/S0140-6736(11)61877-1

55. Arifeen S El, Mullany LC, Shah R, et al. The effect of cord cleansing with chlorhexidine on neonatal mortality in rural Bangladesh: A community-based, cluster-randomised trial. *Lancet*. 2012. doi:10.1016/S0140-6736(11)61848-5

56. Sinha A, Sazawal S, Pradhan A, Ramji S, Opiyo N. Chlorhexidine skin or cord care for prevention of mortality and infections in neonates. *Cochrane Database Syst Rev. 2015*. doi:10.1002/14651858.CD007835.pub2

57. Sankar MJ, Chandrasekaran A, Ravindranath A, Agarwal R, Paul VK. Umbilical cord cleansing with chlorhexidine in neonates: A systematic review. *J Perinatol*. 2016. doi:10.1038/jp.2016.28

58. A. L, M. B, Y. C, C. E, S. Q, A. T. Simplified antibiotic regimens for treating neonates and young infants with severe infections in the Democratic Republic of Congo: A comparative efficacy trial. *Matern Heal Neonatol Perinatol*. 2018. doi:http://dx.doi.org/10.1186/s40748-018-0076-2

59. Lawn JE, Kinney M V., Belizan JM, et al. Born Too Soon: Accelerating actions for prevention and care of 15 million newborns born too soon. *Reprod Health*. 2013. doi:10.1186/1742-4755-10-S1-S6

60. Lawn JE, Davidge R, Paul VK, et al. *Preterm Baby Survival and Care Round the World Born Too Soon: Care for the Preterm Baby.*; 2013.

61. Lawn JE, Mwansa-Kambafwile J, Horta BL, Barros FC, Cousens S. 'Kangaroo mother care' to prevent neonatal deaths due to preterm birth complications. *Int J Epidemiol*. 2010.

62. Lissauer T, Duke T, Mellor K, Molyneux L. Nasal CPAP for neonatal respiratory support in low and middle-income countries. *Arch Dis Child Fetal Neonatal Ed*. 2017;102(3):F194-F196. doi:10.1136/archdischild-2016-311653

63. Hipgrave DB, Assefa F, Winoto A, Sukotjo S. Donated breast milk substitutes and incidence of diarrhoea among infants and young children after the May 2006 earthquake in Yogyakarta and Central Java. *Public Health Nutr*. 2011;15(2):307-315. doi:10.1017/S1368980010003423

Photo Credits:

Cover © Sylvia Nabanoba / Save the Children

Inside Cover © Robert McKechnie / Save the Children

Page 2 © UNICEF/NYHQ2007-2723/Noorani

Page 4 © Jonas Gratzer / Save the Children

Page 6 © David Wardell / Save the Children

Page 11 © Jonas Gratzer / Save the Children

Page 12 © Robert McKechnie / Save the Children Australia

Page 16 © Jordi Matas / Save the Children

Page 23 © Peter Caton / Save the Children

Page 26 © Christena Dowsett / Save the Children

Page 30 © Allan Gichigi / Save the Children

Page 33 © Allan Gichigi / Save the Children

Page 34 © UNICEF/NYHQ2005-1876/DeCesare

Published
May 2019

DRAFT FOR CONSULTATION