

Tools and Strategies for Child Health and Survival in
Humanitarian Emergencies:

Current Practices and Needs

A Component of the WHO IMNCI Strategic Review

Dr Simran Chaudhri, MBBS MPH

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Executive Summary

The current climate of protracted conflicts, increasing natural disasters, and rapidly spreading epidemics has augmented the need for effective and efficient humanitarian programming across all domains. Children are increasingly being affected by emergencies; 1 in 6 children worldwide live in an area of armed conflict^{1,2} and 30 million children were displaced due to conflict this year³. Their vulnerability is exacerbated by increasing health risks in emergencies, with common diseases like acute respiratory infections, diarrhea, malaria, measles, neonatal causes, and malnutrition contributing to high levels of child mortality in emergencies.⁴⁻⁶

This report performed an analysis of published articles and expert interviews to assess which tools and strategies are currently being used to address child health in humanitarian emergencies. Program delivery and data collection tools were collated and explored, identifying current use in the field, their presence in the literature, and areas for development.

Neonatal health care delivery in emergencies was found to be a neglected topic, often competing with and taking a backseat to more acute priorities at the onset of an emergency. This invisibility is further exacerbated by the lack of trained specialists able to provide neonatal care, and poor quantification of the issue due to underreporting and weak registration systems.⁷ Prior to this year, newborns did not have a single guideline outlining their care in the field; however, UNICEF and Save the Children have recently released the 'Manual for the health care of children in humanitarian emergencies'⁸, which is currently awaiting finalization and dissemination.

In contrast to neonatal health, child health care delivery in emergencies benefits from a variety of resources including the WHO 'Manual for the health care of children in humanitarian emergencies'⁹ and the UNICEF 'Emergency Field Handbook: Guide for UNICEF Staff'¹⁰ among several others. Instead of additional guidelines, current child health protocols need to be adapted so that regular child health programs, such as Integrated Community Case Management (ICCM), can remain active in emergencies. Prioritization of adapted ministry of health protocols by all humanitarian actors would allow for the continuation of standardized services through an emergency, allow CHWs to provide care in areas not reached by NGOs, and ensure an equitable and cohesive response by all organizations.

The lack of specialized data collections tools was issue for both groups; a systematic review of data collection tools in emergencies identified zero tools used in published studies of child or newborn health.¹¹ There is a clear need for guidance on a minimum standard of child and newborn health data that should be routinely collected across all emergencies. Despite limited resources and competing priorities, routine data collection and primary research in emergencies is necessary to ensure the needs of beneficiaries are being met and continuous improvement of the humanitarian response.

1 - Introduction

The need for effective and efficient child health and survival programming in emergencies has never been more pressing. The current climate of increasing natural disasters, protracted conflicts, and rapidly spreading epidemics resulted in 87.6 million people in need of humanitarian assistance this year.³ The increasing displacement levels due to chronic conflicts like Iraq, South Sudan, Syria, and Yemen are unprecedented; of the 60 million people who had to flee their home due to conflict and violence this year, half of them were children.³ One in 6 children worldwide lives in an area of armed conflict.^{1, 2} In Yemen alone, child deaths and injuries were averaging 153 per day by mid-October 2015 (more than 5600 total deaths), up five fold from the previous year. Ongoing violence and recurrent natural disasters in Afghanistan have resulted in an estimated 1.2 million acutely malnourished children, and some 2.5 million severely malnourished children are being particularly affected by the high rates of malaria and recurrent measles and cholera outbreaks in the Democratic Republic of Congo.³

A humanitarian crisis is an event or a series of events that pose a threat to the health, safety, wellbeing, or security of a large civilian population, usually over a wide area.⁴ These emergencies are often due to natural disasters, conflicts, epidemics, or food insecurity, and require a response from the international humanitarian community to alleviate the devastating consequences. The health cluster is lead by the World Health Organization (WHO) who works with several non-governmental organizations (NGOs) to provide health care delivery in emergencies. Multiple protocols and methods exist in these complex settings; the WHO, other United Nations (UN) organizations, NGOs, and governments often have their own tools guiding child health programming and monitoring in the field.

The Integrated Management of Neonatal and Childhood Illness (IMNCI) is an integrated strategy that focuses on the management of the whole child via targeting of the most common neonatal and childhood illnesses. It is commonly delivered at a frontline health facility or through an Integrated Community Case Management (ICCM) program where community health workers (CHWs) apply the principles of IMNCI to deliver care to local children. While this approach has been proven to be highly effective in the development setting,¹²⁻¹⁴ there is little evidence demonstrating its capacity in emergencies. Despite children suffering from many of the same diseases in crises as in non-emergency settings^{4, 5}, protocols specifically created for emergencies are often favored in a humanitarian response.

This report aims to depict a comprehensive picture of the tools and strategies currently being used to support child health and survival program delivery and data collection in emergencies; identify gaps; and recommend areas for development. This report is based on a literature search and qualitative data gathered via expert interviews. Databases were searched for review articles pertaining to child health care delivery in emergencies and child health monitoring and program evaluation in emergencies; references of review articles were screened for additional primary sources. Child health in emergency experts were identified via snowball sampling and interviewed via telephone, with discussions focusing on their experiences delivering care in the field and their opinions regarding current needs. Experts from the WHO, UNICEF, and Save The Children were included in this report.

2 - The Impact of Humanitarian Crises on Child Health

The highest mortality rates in refugee populations are in children under 5 years of age.^{5, 15} The major causes of deaths in children under 5 in emergencies are the same as those in countries with high levels of child mortality: acute respiratory infections, diarrhea, malaria, measles, neonatal causes, and malnutrition.⁴⁻⁶ While this has been known for some time, it was recently corroborated in a 2011 study of 90 refugee camps throughout 16 countries where United Nations High Commissioner for Refugees (UNHCR) Health Information System data was collected from a 3-year period. This comprehensive data source identified malaria and pneumonia as the 2 most common causes of child mortality overall, with confirmed cases of malaria and pneumonia each accounting for 20% of child deaths. Together, suspected and confirmed cases of malaria accounted for 23% of child morbidity, while pneumonia accounted for 17%. Neonatal deaths comprised 11% of child deaths, acute malnutrition 10%, and diarrheal disease 7%.¹⁶ Specific examples of the effect of emergencies on child health include the effect of chronic conflict on rates of stunting in the Gaza Strip, which rose from 8.2% to 13.2% from 1996 to 2006¹⁷; and an Ethiopian famine where measles alone or in combination with wasting accounted for 22% of deaths in children under 5 years of age and 17% of deaths in children aged 5-14.¹⁸

Communicable diseases account for the majority of morbidity in emergencies, with increased risk attributed to crowding and inadequate shelter in camps, poor access to clean water and sanitation, and diminished vector control efforts. Morbidity and mortality from communicable diseases are further exacerbated by increased rates of malnutrition due to food insecurity.^{4, 16} Additional communicable diseases of concern in crises include poliomyelitis, meningitis, and tuberculosis, whose control programs are often disrupted in these settings, leading to increased transmission.⁵ Human Immunodeficiency Virus (HIV) infection is also a threat in conflict where increased poverty and vulnerability can lead to recruitment of children into the sex industry and transmission by combatants through rape.⁵

Child health concerns beyond communicable diseases include trauma and psychological issues. Pediatric trauma is common in natural disasters and both during and after conflicts, with landmine injuries being the most frequently documented;^{5, 19} over 90% of landmine victims are civilians and 1 in 4 of these victims are children.¹ Mental health concerns for children involved in emergencies, especially those who have experienced conflict, can range from anxiety and depression to post traumatic stress disorder (PTSD).^{1, 5} A study of over 1500 children and adolescents 1 year following the Rwandan genocide found that 62% of total participants and 100% of the most heavily exposed participants continued to experience symptoms of PTSD.²⁰ Children exposed to military violence also develop aggressive and antisocial behavior that has the potential to perpetuate this violence.²¹

3 - Current Tools and Strategies in Humanitarian Child Health

A health response to an acute emergency involves a variety of actors working towards a shared goal: minimize casualties and mitigate suffering. All members of the response, be it multilateral organizations, international or local NGOs, government agents, or community first-responders operate using manuals and protocols developed during the pre-emergency phase. The development of standards for use across all types of emergencies is confounded by the varying types of emergencies requiring flexibility to adapt to their distinct health risks; children's different baseline health at the onset of an emergency, with regional differences persisting into the post emergency phase; and the differing health needs of refugee children in a camp setting versus those who are internally displaced.⁵

Despite these challenges, a variety of guidelines exist for both health care delivery and monitoring. These guidelines are often published by the WHO or another UN agency and disseminated to member states for adoption and adaptation to their local context; adapted ministry of health guidelines should be prioritized in emergencies as they promote standardization across all incoming organizations and can be used to lobby for funding of a specific package of interventions. These WHO, UN, and ministry tools are supplemented by NGOs, who often have their own organizational protocols to guide them in the field. There is little evidence to suggest that any of these guidelines are based on IMNCI strategy. However, the Sphere Handbook, or 'The Humanitarian Charter and Minimum Standards in Humanitarian Response', specifically references the adaptation of the Integrated Management of Childhood Illness (IMCI), advising that, in countries where it has been developed, IMCI should be preferentially incorporated into standardized emergency protocols.²²

A 2010 study of child health guidelines in crises settings completed a thorough search of guideline websites, international organization websites, and Google. They found only 6^{9, 10, 23-26} guidelines outlining methods for child and perinatal health care delivery in crises settings; of these 6, none were explicitly based on systematic literature searches or clearly linked to research evidence (only 3 provided references but they were not directly linked to guideline recommendations).²⁷ These findings attest to the need for rigorous evidenced-based strategies to guide child and neonatal health care in emergencies; a closer looking into each of these distinct target populations is explored below. All tools cited are summarized in Appendix 1.

3.1 - Tools and Strategies for Neonatal Care in Emergencies

3.1.1 - Neonatal health care delivery

Neonatal care remains a significant gap in health programming during emergencies. This can be attributed to a number of factors including, lack of consensus around programmatic priorities for newborns and the inaccurate estimation of newborn health needs.²⁸ Further, it is often overshadowed by the multitude of acute medical issues that demand priority at the onset of an emergency. Despite the limited attention and difficult enumeration due to poor registration systems and underreporting⁷, the neonatal burden of disease remains high; a study of Afghan refugees in Pakistan from 1999-2000 found that neonatal causes were the single largest cause of death, accounting for 19% of all deaths.²⁹ The effect of chronic conflict on neonatal mortality is

further demonstrated the increasing rates in the Middle East; the percentage increase from 1990 to 2006 has been 22.7% in the occupied Palestinian territory, 22.4% in the West Bank, and 22.8% in the Gaza Strip.¹⁷

This is exacerbated by the trained-personnel shortage in neonatal care.¹⁷ The majority of doctors providing healthcare in emergencies are surgeons or generalists; while this is beneficial for the management of the most prevalent complaints, it is at the expense of specialized neonatal care, which physicians trained in the treatment of adults are often uncomfortable providing. A 2012 survey of 56 respondents from 27 organizations working in humanitarian emergencies found that 91.8% of respondents desired staff training on the management of neonatal complications, while only 36.7% of respondents reported staff training in newborn care had occurred in the 12 months prior to the survey. 66.7% of the same respondents reported having maternal health guidelines, however these addressed the mother during pregnancy and childbirth with few specifically addressing newborn care.²⁸ A 2013 literature review of maternal and newborn health in conflict found that there were “no systematic models of MNH delivery, especially tailored for conflicts” available.³⁰

Neonatal care in emergencies suffers from a ‘know-do’ gap; despite evidence on the effectiveness of newborn health interventions³¹, frontline healthcare providers lack the knowledge, resources, and tools to provide them. Filling this gap requires clear evidenced-based guidelines that provide non-specialists with the confidence to deliver these services in the field.

In an attempt to address this, UNICEF and Save the Children have come together to create the ‘Newborn Health in Humanitarian Settings Field Guide’.⁸ This guide aims to provide health staff with guidance and tools to deliver newborn health services, reducing neonatal morbidity and mortality within humanitarian emergencies. This guide covers technical, programming, and strategic considerations, as well as includes an additional list of resources and indicators and measurements for monitoring and evaluation; it is currently in its interim version and is awaiting finalization and dissemination.

3.1.2 Neonatal health data collection

Data collection and monitoring in crises often plays a secondary role to life saving interventions. Limited funds and human resources, combined with the need to prioritize emergency care, results in data that is sparsely collected and not comprehensive. In the same 2012 survey of humanitarian workers, 72.9% of respondents reported using health information systems (HIS) to routinely collect information on maternal and newborn care, and 47.9% of sites reported routinely collecting the same data in emergencies via population-based household surveys independent of HIS.²⁸ A systematic review of data collections tools for maternal and child health in humanitarian emergencies found 5 studies that explicitly measured newborn health; birth outcomes and birth defects were the two types of data collected and none of the studies described the use of specific tools. Further, only 2 maternal and newborn health tools identified, the ‘MISP assessment toolkit’³² and the World Vision ‘Guide to maternal, newborn and child health and nutrition in emergencies’³³, were suitable in the acute phase of the emergency, however neither had field application reported.¹¹ Additional neonatal health data collection tools cited by this review include the Sphere Handbook²², MSF’s ‘Refugee health: an

approach to emergency situations'³⁴, and the UNHCR 'Twine' data collection tools³⁵; all of which have neonatal questions but were not specifically designed to assess newborn health. While the availability of these tools shows promise, more effort is required to ensure they provide a comprehensive overview of neonatal health issues and are routinely put into practice.

3.2 - Tools and Strategies for Child Health Care in Emergencies

3.2.1 - Child health care delivery

Unlike newborn health in crises, several strategies and guidelines exist to support the delivery of child health in emergencies. A key resource is the UNICEF 'Emergency Field Handbook: Guide for UNICEF Staff'¹⁰; it is structured around UNICEF's Core Commitments for Children in Emergencies³⁶ and outlines the provision of services for mothers and children essential for immediate survival. It is an instructional tool that guides staff through all aspects of an emergency, beginning with what actions need to be taken in the first 72 hours, through to general program monitoring and evaluation guidance. The WHO 'Manual for the health care of children in humanitarian emergencies' is a reference manual for the assessment and management of children in emergencies.⁹ It focuses on the provision of care during the acute and chronic phases of an emergency and can also be used as a training manual. UNHCR has released the 'Global Strategy For Public Health: Public Health – HIV and Reproductive Health – Food Security and Nutrition – Water, Sanitation, and Hygiene (WASH)' which provides a comprehensive strategy for public health response in emergencies and highlights the need to establish linkages to national IMCI approaches.³⁷

Several guidelines specifically focus on nutrition in crises. The Infant Feeding in Emergencies (IFE) Core group released 'Infant and Young Child feeding in Emergencies' in 2007, a practical (rather than technical) guide focusing on infants and young children under 2 years of age; it is currently undergoing revision in 2016.²³ Additionally, Valid International and Concern Worldwide published 'Community-based Therapeutic Care (CTC) A Field Manual' in 2009, providing guidance for the treatment of acute malnutrition in communities.²⁴

The recent Ebola epidemic prompted the creation of the 'Clinical management of patients with viral hemorrhagic fever: A pocket guide for front-line health workers', which focuses on case management and infection control and draws from several WHO normative guidelines including IMCI.³⁸ Additional tools incorporated into this pocket guide include 'Nutritional care of children and adults with Ebola virus disease in treatment centres'³⁹ and 'Infant feeding in the context of Ebola'.⁴⁰

This list is a merely a snapshot of some prominent resources that have surfaced through the analysis of published papers and interview data; it is by no means exhaustive and does not begin to consider the protocols published by various NGOs or ministries of health. While there are likely dozens of other guidelines in use, surveys of international relief organizations demonstrated that WHO, UNICEF, and ministry of health guidelines designed for use in stable situations are most commonly used.⁵ As well as attesting to the importance of the tools listed here, this finding also points to the significant issue of misapplication of guidelines. While child health issues in emergencies are similar to those in stable situations, guidelines for use in stable

settings are inadequate to respond to the complex needs of crises. Country specific ministry of health guidelines are advantageous in that they allow for the continuation of regular service provision and ensure standardized disease management, however these guidelines need to be adapted to account for health system consequences of emergencies, such as disrupted referral pathways and supply chains.

3.2.2 - Child health care delivery in inaccessible conflict settings

Ensuring fidelity to strategies and guidelines becomes difficult in situations where insecurity or governing powers restrict the presence of humanitarian actors and the flow of resources; inaccessible conflict settings warrant novel approaches that work in the context of further limitations in supplies and reductions in healthcare providers. While some agencies have general remote management protocols^{41, 42}, the delivery of child health in these settings is largely trial and error. The few published examples depict the use of tele-consultations and tele-mentoring to support Somali clinicians when expatriate pediatricians were forced to evacuate due to security risks⁴³, and the Back Pack Health Worker Team crossing from Burma into Thailand to receive training from international NGOs, enabling the provision of general, maternal, and child health care to internally displaced persons when Burma was ruled by military junta.⁴⁴

UNICEF is currently working on a literature review of humanitarian programming and monitoring in inaccessible conflict settings that will go on to support the Global Health Cluster in defining formal strategies to guide future remotely managed humanitarian interventions.

3.2.3 - Child health data collection

Child health studies suffer from the same paucity of tools as those of neonates. In the systematic review of data collection tools in emergencies, 42 studies were identified pertaining to child health; none of the 42 studies described specific data collection tools used.¹¹ This review identified 4 tools that can be used in the collection of child health data in emergencies: the UNHCR 'Twine' tools³⁵, MSF's 'Refugee Health: An approach to emergency situations'³⁴, the Sphere Handbook²², and the World Vision 'Guide to maternal, newborn and child health and nutrition in emergencies'.³³ Of these, only the World Vision guide is suitable for use in the acute phase of an emergency, and none of the tools had any reported field application. Additionally, none of the tools were specifically designed to collect child health data, but included some child health questions.¹¹

The opportunity to collect child health data in emergencies, and use this data to improve programming, is clearly being missed. Data collection tools specific to child health are required in order to standardize assessments across emergencies, allowing for both comparison between emergencies and evidence-based responses. Advocating for the importance of data collection and educating humanitarian actors on the available tools are necessary to fill this gap and make data collection in crisis the routine standard.

4 - Community Case Management (CCM) in Emergencies

Community health workers have been suggested as a mechanism to deliver services in emergency situations where formal or facility-based services are not available.^{17, 30} One such example was that of a food crisis in Malawi where the most vulnerable children were not reached by health services; a previously established cadre of CHWs rolled out a community-based management of acute malnutrition (CMAM) program in 10 days and achieved much higher coverage than health facilities, despite only 2 nurses training them in the management of malnutrition.⁴⁵ CHWs are also capable first-responders, as demonstrated following Cyclone Nargis in Myanmar; CHWs trained in disaster preparedness were able to complete assessments and provide basic care before any NGOs were able to access the areas.⁴⁶

An example of ICCM implementation in an inaccessible conflict affected region is the 2012-2014 Save the Children program in the Karkaar Region of Puntland, Somalia. This was the first ICCM program aimed at a purely pastoralist population which served a small settled population and a larger transient group with no fixed abode. Insecurity within the region and the high risk of kidnapping for foreign health professionals necessitated remote management from neighboring Kenya. Despite significant issues with the supply chain, reduced effectiveness secondary to remote control, and a target population with a historic unfamiliarity with modern medicine, a household survey of 256 respondents demonstrated that approximately half of the settled population and a third of the pastoralists had used modern ICCM care after just 15 months of the program. A major lesson learned was the need for context specific guidelines; the training manual used was a verbatim translation of a South Sudanese curriculum, resulting in time and resources wasted on training health care providers in malaria management in a region with no malaria transmission, at the expense of more locally relevant issues.⁴⁷

4.1 - Current Research on CCM in Emergencies

The CCM in Emergencies Working Group has several case studies underway that examine the role community health workers have played in recent emergencies; preliminary data from South Sudan and Liberia was obtained via interview.

4.1.1 - ICCM in Emergencies Case Study: South Sudan

The International Rescue Committee has been managing an ICCM program in South Sudan since prior to the 2013 conflict. In addition to insecurity, recurrent flooding continues to contribute to accessibility issues within the region. Initial data has demonstrated that CHWs continued to work during the conflict, moving with communities when villages fled, and providing care as resources allowed. Despite some breaks in service due to drug stock outs, supervisors managed to locate CHWs via word of mouth, provide them with supplies, and collect data. Utilization proved to be higher than normal due to mixing with other displaced populations. Additionally, CHWs were often acting as the only point of care in areas where health facilities were distant or destroyed, health workers had fled, and NGOs were not providing services.

Of note is that this program is composed of a large proportion of illiterate CHWs, demonstrating that, given the appropriate illustrative tools, literacy is not a prerequisite for effective emergency

response. Further, this case demonstrated the need for: pre-positioning of drugs to protect the supply chain, the elucidation of robust contact mechanisms to ensure displaced CHWs can be located and supported, and the adaptation of guidelines to incorporate emergency protocols into the CHWs mandate prior to crises.

4.1.2 - ICCM in Emergencies Case Study: Liberia

Liberia has a number of ongoing ICCM programs of various strength and quality, run by a variety of NGOs. The Ebola epidemic overlapped with some of these programs, seeming to hit areas where ICCM was weaker prior to the emergency. At the onset of Ebola, many NGOs ceased to support regular services, transferring all their resources to the Ebola response. Additionally, the international community instituted a “No touch” policy, prohibiting much of the standard services CHWs would normally provide (rapid tests, blood drawing, MUAC, etc.) and encouraging diagnosis based on signs and symptoms only; confusion about the policy and lack of clear guidelines resulted in the complete cessation of ICCM services in several areas. The combination of these circumstances resulted in a complete failure of regular service provision throughout Ebola affected areas.

However, while CHWs failed in providing regular care, they were credited for turning the tide on the Ebola epidemic. They proved to be essential providers of health care messaging as they were able to garner trust from the local people when outsiders were not. They were crucial in encouraging families to stop hiding sick relatives and performing secret burials, actions that were critical in controlling the outbreak.

In addition to the response capabilities of CHWs, this case demonstrates the importance of flexible funding, contingency planning and clear guidelines, and continued NGO support to facilitate the continuation of regular programming in the event of an emergency. As previously stated, the predominant health risks to children are the same in an emergency as a non-emergency situation, necessitating comprehensive management of common diseases despite the additional demands of an acute emergency.

4.1.3 – Lessons Learned

Community health workers are advantageous over facility-based services as they have the ability to travel with mobile populations and can continue to provide services in isolated locations where distance, insecurity, and checkpoints prevent access to health facilities. Additionally, they are also able to provide services where facilities have been damaged or destroyed due to conflict or natural disaster, and are often considered highly acceptable by the communities given their continued presence prior to the emergency. In order to utilize them to their full potential, clear emergency preparedness measures and adaptations need to be incorporated into their guidelines to enable the continuation of regular services throughout the crisis.

While the utilization of previously developed CCM programs in emergencies seems promising, the development of a CCM program during an acute crisis is likely to be more difficult. The lengthy recruitment, training, and supervision required at the onset of a program would be difficult to execute in insecure situations where communities and health care professionals are

evacuating and medical supplies are not easily required. Instead, preparedness for the emergency response should be integrated into regular programming with flexible funding allocated to enable scale up in crisis.

5 - Conclusion: Additional Needs for Child Health and Survival in Humanitarian Emergencies

This analysis has highlighted tools and strategies currently in use for the provision care and the collection of data for child health and survival in emergencies. The comparison of available resources to published literature and expert interviews has identified gaps in utilization and areas in need of additional support for both neonatal and child health in emergencies.

While neonatal health in emergencies has long suffered from invisibility and a lack of specific programming guidance, the UNICEF and Save the Children 'Newborn Health in Humanitarian Settings Field Guide' looks poised to fill this gap. In-situ testing and finalization of this guide remain priorities in order to begin to address this critical need.

Child health in emergencies benefits from a number of existing tools and strategies that support service delivery. It is not the creation of new tools that should be the focus of improvement efforts, but the adaptation of existing tools used in stable settings. Adapting IMNCI strategies and ICCM programs to include contingency plans for times of crisis will allow regular provision of care throughout the emergency. Incorporating emergency programming into everyday child health guidelines will enable smoother transitions by front line health workers and first responders; a child health in emergencies strategy that accounts for consequences like disrupted supply chains and referral pathways will be better able to meet the needs of the population in times of crisis. Cooperation across the humanitarian and development sectors is required to bridge gaps and ensure the health response is better anticipated, planned and resourced.⁴⁸ Additionally, guidelines should be adapted to account for the different levels of training and the different types of workers providing care⁵; illustrative guidelines should be introduced in order to capitalize on the emergency response capabilities of illiterate CHWs.

The development of comprehensive newborn and child health data collection tools is necessary in order to accurately assess the magnitude of health issues in emergencies and enable appropriate tailoring of programs to address them. These tools should promote the collection of comparable data, and include simplified abbreviated versions to facilitate their use in the acute phase or where the security risk is rapidly changing. Additionally, qualitative tools are necessary to ensure the voices of beneficiaries are heard and accounted for in programming.⁷ Guidance on a minimum data set to be collected for newborn and child health in emergencies would fill a significant need. Following creation, all tools will require field testing to prove their utility across settings, taking into account the need to minimize the time required for training of data collectors and the data collection itself.⁷ Advocacy and education will also be necessary to promote their use in the field; it is only through routine data collection and primary research by humanitarian actors will crises be analyzed and knowledge gained to improve future humanitarian responses.

Appendix 1 – Summary of Tools Cited

TITLE	YEAR	DEVELOPER	FOCUS
Manual for the health care of children in humanitarian emergencies ⁹	2008	WHO	Child health care delivery
Infant and Young Child Feeding in Emergencies ²³	2007	IFE Core Group	Feeding of children under 2 years of age
Community-based Therapeutic Care (CTC) A Field Manual ²⁴	2006	Valid International (with Concern Worldwide)	Treatment of acute malnutrition in communities
Emergency Field Handbook A guide For UNICEF Staff ¹⁰	2005	UNICEF	Emergency program delivery Program monitoring and evaluation Data collection
Antenatal Guidelines for Primary Health Care in Crisis Conditions ²⁵	2005	ICRC	Antenatal and newborn health care delivery
Guiding principles for feeding infants and young children during emergencies ²⁶	2004	WHO	Infant and young child feeding Program monitoring and Evaluation Data collection
Newborn Health in Humanitarian Settings: Field Guide ⁸	2016	UNICEF Save the Children	Neonatal health care delivery Program monitoring & Evaluation
MISP Assessment tool kit ³²	2010	UNHCR	Reproductive and neonatal health care delivery Data collection
Guide to maternal, newborn and child health and nutrition in emergencies ³³	2012	World Vision	Maternal, newborn and child health care delivery Data collection
Refugee Health: An approach to emergency situations ³⁴	1997	MSF	Health care delivery Data collection
The Humanitarian Charter and Minimum Standards in Humanitarian Response (Sphere Handbook) ²²	2011	The Sphere Project	Emergency response delivery (all components) Data collection
Twine data collection tools ³⁵	2014	UNHCR	Data collection
Global Strategy For Public Health: Public Health – HIV and Reproductive Health – Food Security and Nutrition – Water, Sanitation, and Hygiene (WASH) ³⁷	2014	UNHCR	Health care delivery Program monitoring and evaluation Data collection
Clinical management of	2016	WHO	Health care delivery

patients with viral hemorrhagic fever: A pocket guide for front-line health workers ³⁸			Program monitoring and evaluation
Nutritional care of children and adults with Ebola virus disease in treatment centres ³⁹	2014	WHO	Nutrition delivery to Ebola patients
Infant feeding in the context of Ebola ⁴⁰	2014	UNICEF WHO IFE Core Group	Infant feeding in Ebola (acute illness)

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