

Helpdesk Report: Prioritising health activities in humanitarian crises

Date: 13 February 2014

Query: Identify available literature/information on prioritisation of health activities in humanitarian crises.

Content

1. Overview
2. Practical guides/handbooks
3. Further resources on prioritisation
4. Identified priorities for country cases
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1. Overview

The Sphere Humanitarian Charter states that: All people should have access to health services that are prioritised to address the main causes of excess mortality and morbidity. There are a number of handbooks to aid prioritisation in crisis situations highlighted in section 2 of this report:

- The Johns Hopkins and Red Cross Red Crescent (2008) public health guide outlines essential tasks for prioritising health services and shows a simple technique for ranking health problems in emergencies.
- The Humanitarian Practice Network (HPN) (2007) guide proposes questions for identifying health problems for prioritisation and a framework for answering these.
- The UNICEF Emergency Field Handbook (2005) gives a priority action checklist.
- The WHO Health and Nutrition Tracking Service (HNHS) (2009) highlights priority indicators for assessing the nutritional and general health situation in complex emergencies.
- Medecins Sans Frontieres (1997) list intervention priorities for refugee health for the emergency and post-emergency phase of a situation.

Further resources, section 3, include papers on distributive justice and resource allocation, a paper examining how evidence is used to assess needs in Southern Sudan, an opinion paper and two systematic reviews.

Section 4 provides some priorities outlined for different countries. A WHO (2013) compendium lists priorities for 19 countries based on response plans. Some common priorities emerge, such as: warning and response systems for disease outbreaks; and coordination of partners and interventions. However, the difficulty in finding commonalities is because needs vary so greatly and this emphasises the importance of establishing priorities specific to each different context. Also included in this section are the principal health issues

identified in a WHO (2014) risk assessment for Southern Sudan; and a UN (2013) humanitarian assistance response plan for Syria which gives criteria for prioritising needs.

The case studies in Section 5 offer some experience which may help to prioritise health intervention in future crises. The papers document injury and disease after earthquakes and tsunami. Another paper provides assessment results from newly arrived refugees in Thailand.

Data collection and measurement are key to determining priorities in humanitarian crises. Section 6 includes guidelines, comments and advice for data collection and evaluations.

2. Practical guides/handbooks

The Johns Hopkins and Red Cross Red Crescent Public health guide in emergencies

Johns Hopkins Bloomberg School of Public Health and the International Federation of Red Cross and Red Crescent Societies. 2008.

http://www.jhsph.edu/research/centers-and-institutes/center-for-refugee-and-disaster-response/publications_tools/publications/_CRDR_ICRC_Public_Health_Guide_Book/Forward.pdf

Essential tasks for prioritising health services are outlined in Chapter 2, Health Systems:

- Conduct an initial assessment. Using a public health approach, health priorities in the affected population are set by connecting water and sanitation, vector control, shelter, and nutrition needs together with health care system capacity, basic health care needs, reproductive health epidemics, etc.
- Identify the major causes of morbidity and mortality.
- Use evidence-based interventions to address major causes of morbidity and mortality. These include: provision of sufficient water, chlorination and protection of drinking water, adequate access to sanitation, measles immunisation, food aid and security, shelter, and basic clinical services.
- Develop a health information system that will help identify evolving health needs and guide changes needed over time in interventions.

Chapter 3 on emergency health services has some guidance on prioritisation. With limited resources, emergency health services planning must be based on the best available information. As will be discussed further in the epidemiology chapter of this book, needs assessment can gather information that is critical for prioritising health care needs.

In small size local disasters that involve mass casualty incidents, a rapid assessment of the scene must be part of the initial steps for any mass casualty management. This will be discussed later in the chapter. The mass casualty incident may be the result of a bus accident or a small natural disaster. The rapid assessment covered in the epidemiology chapter will provide management with a broad picture of the emergency's issues rather than just the health issues.

Emergency health care must focus on the most urgent health problems. These may vary depending on the nature and magnitude of the disaster on and whether there is a long-term population displacement. Any interventions recommended after the assessment must prevent excess mortality and morbidity as well as anticipate future health problems from the evolving emergency situation.

A simple technique shown in figure 1 can rank problems and identify priority health interventions within the selected health services.

Figure 1: Ranking Health Problems

		Frequency of disease diagnosis	
		High	Low
Risk of excess mortality or morbidity	High	Malaria Diarrhoea	TB Epilepsy
	Low	Intestinal worms URTI	Ringworm Arthritis

It would be impossible and ineffective to address all issues all at the same time. Health interventions prioritisation is vital to the success of the disaster response campaign. Some diseases occur very frequently and are associated with a high risk of death such as malaria and diarrhoea in children under five years. These must be addressed before other diseases that have as high a frequency but a lower risk of serious illness or death such as intestinal worms. Cases that are not emergent may be addressed after the life-threatening diseases have been put under control.

Chapter 6 in this guide: 'Epidemiology and Surveillance' describes how to conduct a rapid assessment; and how to calculate rates, ratios and proportions of public health importance.

Public health in crisis-affected populations. A practical guide for decision-makers.

Checchi, F. Et al. 2007. HPN

<http://www.odihpn.org/documents/networkpaper061.pdf>

For deciding which health problems to prioritise, this guide proposes a framework for answering the questions on the following when first hearing about a new or ongoing crisis:

- Demographic and epidemiological setting. Is any health crisis going to be driven mainly by infectious or non-infectious diseases?
- Crisis conditions present.
- Presence of proximate risk.
- In this setting and these crisis conditions: how will these risk factors generally affect the infection rate, the proportion of those developing the disease and the proportion dying of that disease, of the various classes of infectious and non-infectious diseases?

The above provides at least a frame of reference for short-listing likely health problems to consider. For example, the 2006 Israel–Hezbollah war in Lebanon took place in a setting with residual infectious disease threats, especially among children, but mainly chronic disease problems, including mental illness due to trauma. Displacement into neighbouring communities or very small camps was the main crisis condition, though non-displaced communities in the south experienced short-lived entrapment conditions. The main proximate risk factors in the immediate term appeared to be lack of and/or delay in treatment, and warfare itself (especially bombing), but a food crisis was possible within weeks in the trapped communities of the south if relief was not allowed through.

The next step is to identify and rank existing health problems as well as imminent threats, so as to select and prioritise interventions. As soon as relief arrives, prospective surveillance becomes a critical tool to identify emergent health problems, and to adjust the relative weight of different interventions to address any observed gap.

This guide goes on to describe epidemiological risk assessment for the onset of a new crisis using the example of the WHO Communicable Diseases Working Group on Emergencies (CD-WGE). The group meets urgently to systematically review available data (including outbreak notifications, relevant Ministry of Health data from affected countries, published

literature, reports and surveys) in order to better define the risk of infectious diseases and generate risk profiles for the crisis.

After the onset of a crisis epidemiological surveillance is needed. The main purpose of surveillance is to detect epidemics with minimum delay. The implementation of surveillance systems requires expert coordination. Systems consist of the following components:

- A surveillance network
- A list of diseases
- Standardised case definitions for each disease in the list
- A mode of reporting
- A set frequency of reporting and analysis
- A reporting mechanism
- Alert and epidemic thresholds

The main outputs of surveillance systems are trends in incidence over time, and ad hoc investigations of alerts and confirmed outbreaks. Mortality excepted, it is almost never necessary for surveillance to capture all events; rather, what matters is being able to monitor trends over time.

Emergency Field Handbook. A Guide for UNICEF Staff.

UNICEF. 2005.

http://www.unicef.org/lac/emergency_handbook.pdf

The Health and Nutrition chapter of the Emergency Field Handbook is a guide on how to implement the health and nutrition components of the Core Commitments for Children in Emergencies.

The priority action checklist is as follows:

- Do a rapid assessment of needs and of the status of existing health and nutrition facilities and capacities, including cold chain, human resources and equipment.
- Assess in-country capacity for staffing, logistics, supplies and coordination of emergency health and nutrition programme response.
- Establish or reactivate the inter-agency coordinating committee or task group.
- Consult with the ministry of health, the World Health Organization (WHO) and partner agencies and organisations to decide whether to implement rapid measles and vitamin A campaigns.
- Prevent excess inflow of powdered milk and breastmilk substitute donations and prevent their use as a general supply.
- Ensure availability and use of standard protocols for management of health and nutrition emergencies, particularly with reference to conducting nutrition surveys, managing severe acute undernutrition and treating infectious diseases.
- Verify existing stocks of essential drugs, measles vaccines, syringes, cold-chain equipment, oral rehydration salts, fortified nutritional products and micronutrient supplements and order if necessary.
- Support micronutrient supplementation (vitamin A, iron folate and zinc).
- Based on rapid assessment, provide blankets, tarpaulins, jerrycans, water-purification tablets and cooking sets.
- Establish safe havens for pregnant and lactating women in every camp or supply site to ensure they receive special rations and to support breastfeeding and relactation.
- Support therapeutic and supplementary feeding programmes.
- Establish or reactivate essential health-care services focusing on correct case management of childhood illnesses (malaria, diarrhoea and pneumonia), emergency obstetric care services and routine immunization services (particularly tetanus toxoid).

- Provide health and nutrition education.
- Include communication, child protection, education, and water and sanitation sectors in planning.
- Coordinate and establish a nutritional surveillance system with partner agencies.

Health and Nutrition Tracking Service (HNTS) Consultancy Report & Background Documents. Priority indicators in complex emergencies.

WHO HNTS. 2009.

<http://www.unicef.org/nutritioncluster/files/hnts.pdf>

Data and indicator policies for the ten largest humanitarian NGOs plus other selected organisations were obtained by interviews, publications, and web postings. The actual measurement activities of 11 NGO programmes in 5 countries were obtained and compared to the headquarter policies. Because the Sphere Standards were the primary indicator source cited, a Medline review was conducted to explore the published evidence basis for each specific indicator. These findings were assessed with past recommendations to select two key types of indicators and make recommendations for advancing the field of humanitarian relief.

Results:

- 1) There is widespread variation between the indicators that agencies propose collecting. Only measures of mortality and malnutrition appear to be very common, with maternal mortality and water availability prioritised by a majority of agencies.
- 2) In the field, most operational INGOs do not collect all the indicators their headquarters suggest.
- 3) The Sphere Standards provide the most widely used health monitoring indicators in the field of humanitarian assistance. Of the 346 indicators in the 2004 Sphere Handbook, we believe that 224 (65%) are not quantifiable, 48 (14%) are quantifiable but cannot be supported by a search of the published literature, and for only 55 (13%) was any data identified to support that a given indicator was related to human health.
- 4) Scholars have generally argued for short lists of quantifiable indicators that actually are health outcomes (e.g. mortality rates) or that are very strong links to health outcomes (e.g. measles immunization coverage).

The priority indicators to assess the nutritional situation are:

- 1) Prevalence of global acute malnutrition (GAM)
- 2) Prevalence of severe acute malnutrition (SAM)
- 3) Number of admissions in therapeutic and selective feeding centres
- 4) Proportion/number of U5 GAM cases detected
- 5) Proportion/number of U5 SAM cases detected

Priority indicators to assess the general health situation are:

- 1) Crude, Under 5, infant, proportional, cause specific, and maternal mortality rates
- 2) Incidence rates for most common diseases
- 3) Case fatality rate for most common diseases
- 4) Cases/incidence of sexual violence

Main contextual indicators used to interpret health situation (secondary information):

- 1) Health facility utilisation rate
- 2) Measles vaccination coverage
- 3) Proportion of people with < 15L of water/day

Refugee Health: An Approach to Emergency Situations

Medecins Sans Frontieres. 1997. Pan Macmillan.

http://refbooks.msf.org/msf_docs/en/refugee_health/rh.pdf

Information gathered over the last few decades has made it possible to analyse the health problems of refugee and displaced populations. As a result, the most effective strategies for controlling the mortality rate have now been properly defined, and procedures standardised. The intervention priorities in the emergency phase cover 10 sectors of activity that can be listed as follows:

- 1) Initial assessment
- 2) Measles immunization
- 3) Water and sanitation
- 4) Food and nutrition
- 5) Shelter and site planning
- 6) Health care in the emergency phase
- 7) Control of communicable diseases and epidemics
- 8) Public health surveillance
- 9) Human resources and training
- 10) Coordination

Ideally, these interventions should be carried out simultaneously, which becomes feasible when different teams of relief workers are involved. When several operational partners are present in the field, it is essential to rapidly assign responsibility for different programmes, as good coordination among partners is essential for their speedy implementation. It is also essential that each sector of activity is monitored, as every operating health agency needs to have a clear picture of the work being carried out in each of the different sectors. In the emergency phase, although the emphasis is classically put on the quantity and availability of services, sufficient attention must be given to their quality as well. It is the responsibility of agencies to monitor not only the NUMBER of services available or the population that they cover, but also HOW these services are delivered. Supervision of staff plays a key role in this regard.

This book goes on to describe each priority in more detail.

The post-emergency phase begins when the excess mortality of the emergency phase is controlled and the basic needs (water, food, shelter, etc.) have all been addressed through the implementation of the 10 top priorities.

Disease patterns are roughly the same as those in any non-refugee population. Diarrhoeal diseases, acute respiratory infections and malaria are the major killers and the most frequently encountered health problems. Others, such as reproductive health problems, AIDS, tuberculosis, mental problems, etc, may also account for a significant proportion of morbidity and mortality. In addition, epidemics of communicable diseases continue to occur: cholera, hepatitis, measles, meningitis, etc. Unfortunately, surveillance tends to be less intensive in this phase, so that the beginning of an outbreak could be overlooked.

The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response

<http://www.spherehandbook.org/>

The Sphere Handbook is one of the most widely known and internationally recognized sets of common principles and universal minimum standards for the delivery of quality humanitarian response. Because it is not owned by any one organisation, the Sphere Handbook enjoys broad acceptance by the humanitarian sector as a whole.

The Sphere Handbook puts the right of disaster-affected populations to life with dignity, and to protection and assistance at the centre of humanitarian action. It promotes the active participation of affected populations as well as of local and national authorities, and is used to negotiate humanitarian space and resources with authorities in disaster-preparedness work. The minimum standards cover four primary life-saving areas of humanitarian aid: water supply, sanitation and hygiene promotion; food security and nutrition; shelter, settlement and non-food items; and health action.

Communicable diseases following natural disasters. Risk assessment and priority interventions.

WHO. 2006.

http://www.who.int/diseasecontrol_emergencies/guidelines/CD_Disasters_26_06.pdf

The Communicable Diseases Working Group on Emergencies (CD-WGE) at WHO/HQ has developed this document to describe the communicable disease risks in populations affected by natural disasters. It is hoped that this document, by detailing the priority measures that are necessary to reduce the impact of communicable diseases following natural disasters, will help to protect the health of disaster-affected populations.

3. Further resources on prioritisation

Prioritising health care in complex emergencies

Waldman, R.J. 2001. *The Lancet*, 357(9266): 1427 - 1429

[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(00\)04568-2/fulltext?_eventId=login](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(00)04568-2/fulltext?_eventId=login)

The public health approach to managing complex emergencies is one of triage. Over the years, there have been many, too many, opportunities to develop a consistent approach to the organisation and delivery of health services in complex emergencies. In the first days and weeks, interventions should limit mortality. The basics—food, water, sanitation, and shelter—usually need to be provided, after which (or preferably at the same time, if resources are available) specific health programmes are quickly put into place. Measles, diarrhoea, pneumonia, malaria, malnutrition, and a limited number of other diseases with epidemic potential, such as cholera and meningitis, have recurrently been prominent causes of morbidity and mortality. The most recent of the few textbooks devoted to health care for refugees identifies the “ten top priorities” for intervention in the emergency phase and clearly distinguishes them from activities that should wait until after mortality has fallen to “acceptable” levels.

Implementing these early priorities has always been problematic. For example, whereas epidemiological data have usually directed emergency health interventions toward children and women, many societies have cultural norms that would preferentially protect other groups—the elderly, for example. Also, delivering adequate food to civilians, knowing that a large share might be diverted to support armed forces and potentially prolong conflict, has been a devilish conundrum for the relief community. At times, tensions have arisen between humanitarian groups, who need cooperation from local authorities, and human rights groups, who challenge the same authorities over alleged, and usually real, violations of human rights and international humanitarian law. Issues like these have been debated in the humanitarian literature. Underlying them, however, has been the presumption that what needs to be done is clear.

There are indications that the few lessons identified from past experiences have not been adequately learned and are not being consistently applied. Mass measles vaccination as early as possible in an emergency has become a priority for relief organisations since measles was shown to be responsible for half the deaths that occurred during a series of

African emergencies 20 years ago. At a recent WHO meeting, reports indicated that efforts to control the recent Ebola virus outbreak in Uganda were hampered by the occurrence of a measles epidemic in refugee camps in which international non-governmental organisations were providing a variety of other needed services. The Médecins Sans Frontières textbook lists measles vaccination as the second most urgent priority in emergency health interventions. However, the world's current emphasis for vaccination is the eradication of poliomyelitis and there has been increasing pressure to carry out polio vaccination campaigns during complex emergencies.

Fortunately, women's reproductive health issues have received increased attention in recent emergencies. The appalling situation of women during times of societal upheaval had frequently been neglected in programmes addressing refugee health needs. Effective advocacy has gone a long way towards correcting this wrong, and a minimum initial service package for reproductive health has been widely adopted.

Ethical Considerations for Vaccination Programmes in Acute Humanitarian Emergencies

Moodley, K. 2013. Bulletin of the World Health Organization, 91: 290-297.

http://www.who.int/immunization/sage/meetings/2012/april/3_SAGE_Ethics_Briefing_Document_15March_2012.pdf

Distributive justice requires the fair allocation of limited resources. This applies to basic items such as shelter, food and potable water, as well as vaccines that are in limited supply. One arguably equitable way of distributing a limited supply of vaccine would be a lottery, but this does not take into account groups who are most vulnerable to illness or those who contribute most to transmission. Decision-making and priority setting in acute crises differs from routine situations or protracted crises. The "best possible" way to distribute resources is often not perfect, as humanitarians can only do the "best they can" in the context of imperfect information, exceptional and unique circumstances.

This challenge of allocating resources fairly and legitimately is exacerbated in humanitarian crises due to the enormous disjunction between constrained resources and accentuated need. Where resources, particularly human resources, are limited, decision-makers often explicitly or implicitly consider cost-effectiveness when determining the relative focus on various interventions to achieve maximum benefits. Vaccination is widely recognised as highly cost-effective. Additional considerations include the extent and urgency of the need met by vaccination, and the feasibility of quickly providing vaccination compared with other interventions in the specific emergency situation. There should be explicit consideration of targeting distribution to high risk or high transmission groups. Vaccination is often highly relevant in emergency settings, as it can mitigate serious infectious disease risks. It is also possible to vaccinate large numbers of people in a timely fashion.

Allocation decisions are relevant to all countries regardless of socioeconomic status or past experience of humanitarian emergencies. There is a shared global vulnerability to humanitarian emergencies, although this is more pronounced in poor countries and regions because poverty hampers resilience. As described below, allocation decisions require striking a balance between promotion of utility (maximising the good to the community, smooth economic and societal functioning) and the achievement of equality and fairness. This is essential to promote public trust in vaccination programmes during crises. Egalitarian considerations require that allocation decisions should not be discriminatory and everyone should have a fair chance of receiving vaccination.

Utilitarian considerations require that allocation decisions achieve maximal benefits in terms of aggregate wellbeing, i.e. achieving "the greatest good for the greatest number". It is perhaps unclear whether utility considerations require maximally reducing the burden of

disease, for example in terms of Disability Adjusted Life Years (DALYs) versus saving the most lives. These two goals might sometimes conflict with one another. In any case, utility can conflict with equality or fairness because it may sometimes be possible to achieve the greatest health gains, in terms of lives saved or DALYs averted, by allocating vaccines to urban rather than rural areas, with greater impact and cost-effectiveness of implementation due to population density in urban areas.

If rural populations are systematically excluded, however, this would be considered inequitable. Occasionally physical security risk to health workers in areas of conflict will determine which groups are able to be vaccinated. The goal of maximising utility may conflict with the egalitarian idea that justice requires efforts to maximally improve the situation of those who are worst-off. Improving the situation of worst-off groups implies that these populations receive priority allocation of limited supplies even if less health utility is achieved overall.

From a pluralistic perspective, we should aim to strike a balance between utilitarian and egalitarian considerations rather than according absolute priority to either. Fortunately when it comes to vaccination, it is often the most socioeconomically marginalised groups that will gain the greatest utility from vaccination, with limited conflict between utilitarian and egalitarian aims.

Questions concerning the fair distribution of limited vaccine supplies came into sharp focus in the context of pandemic influenza preparations. Particular categories prioritised in this situation for special consideration were those people at greatest risk of infection such as school children and health care workers, those most likely to suffer severe consequences from the disease if infected, including individuals with chronic illness or immunosuppression and those most likely to spread infection including children; and emergency service providers.

During humanitarian emergencies characterised by displacement of affected populations, communities neighbouring those that have been displaced by the emergency, also merit consideration. In most circumstances, host communities should have access to services provided to refugees in camps, and refugees should have access to government services available to host communities.

Refugee or displaced populations should not be regarded as separate from the host community and assistance programmes, including vaccination, should be planned to support the area as a whole. The guiding principle should be equitable access to vaccination for equal risk. Other considerations for an inclusive approach include efficiency of providing programmes to two communities with the available resources; and the benefit of fair and equitable approaches to minimise hostility and jealousies between host and displaced communities.

On a utilitarian and equity basis children often deserve prioritisation as they are more vulnerable to vaccine-preventable illnesses and saving a younger person's life will usually result in a larger reduction in disease burden, as more years of healthy life are lost when a young person dies. Furthermore, parents and caregivers will often prioritise the needs of children over themselves. Some communities place a greater importance on the roles of the elderly or pregnant women, however, and may thus prioritise access to healthcare, and vaccines in particular, differently.

From a utilitarian perspective preventing illness in frontline health workers, who are in the business of saving lives, will have indirect health benefits for the community, particularly where there are limited numbers of health workers. The principle of reciprocity suggests that it is fair to prioritise vaccination to health care workers exposed to increased infection risks due to their professional commitment to care for society. In addition, as health care workers have contact with particularly vulnerable individuals they have a duty to accept vaccination so

that they do not place patients at risk of infection.

Southern Sudan, Funding According to Need

Poole, L. & Primrose, J. 2010. Global Humanitarian Assistance.

<http://www.globalhumanitarianassistance.org/wp-content/uploads/2010/10/Funding-according-to-needs-Sudan-Oct-2010.pdf>

This paper examines the ways in which evidence demonstrating the scale and severity of humanitarian needs in Southern Sudan is generated and used by the three largest sources of humanitarian funds – the US, the EC and the Common Humanitarian Fund (CHF) – to prioritise funding to meet humanitarian needs. The paper also looks at some of the other considerations and influences that donors weigh in their decision-making processes and where some of the major obstacles to funding in accordance with needs lie.

The ability of donors to fund according to assessed needs is constrained by the limited availability of objective and comparable evidence about humanitarian needs. This inevitably has consequences for the decisions that are ultimately made about how resources are directed, but this is only part of the story. In the absence of comprehensive objective evidence, human intelligence, judgement and experience play a critical role in decision-making, and this should not be under-valued. However, without robust and comparable evidence, competing for an equitable share of the available global humanitarian funds is problematic.

Better evidence of the scale and severity of humanitarian needs and greater transparency in information exchange about them is crucial to promote more equitable funding decisions. To achieve this requires greater commitment and investment across the humanitarian community as well as a shared technical and conceptual language with which to measure and talk about humanitarian needs. Significant progress has been made in Southern Sudan in the past five years in needs assessment and routine monitoring and surveillance, and a number of initiatives are underway within global clusters and under the IASC to refine shared methodologies for measuring needs.

Donors, however, have a role to play in aligning incentives for delivery agencies to adopt shared methodologies that will enable greater comparability of evidence, investing in needs assessments and in encouraging greater transparency in evidence sharing amongst recipient agencies.

Allocating Resources in Humanitarian Medicine

Hurst, S.A. 2009. Public Health Ethics, 2(1):89-99

<http://phe.oxfordjournals.org/content/2/1/89.abstract>

Fair resource allocation in humanitarian medicine is gaining in importance and complexity, but remains insufficiently explored. It raises specific issues regarding non-ideal fairness, global solidarity, legitimacy in non-governmental institutions and conflicts of interest. All would benefit from further exploration. We propose that some headway could be made by adapting existing frameworks of procedural fairness for use in humanitarian organisations. Despite the difficulties in applying it to humanitarian medicine, it is possible to partly adapt Daniels and Sabin's 'Accountability for reasonableness' to this context. This would require: (1) inclusion of internally explicit decisions and rationales; (2) publicity to donors, local staff, community leaders and governments, as well as frank answers to any beneficiary—or potential beneficiary—who asked for clarification of decisions and their rationale; (3) a consistent reasoning strategy to weigh conflicting views of equity in specific situations; (4) advocacy within the organisation as a mechanism for revision and appeals; and (5) internal regulation according to publicly accessible mechanisms. Organisations could generate a common

corpus of allocation decisions from which to draw in future similar cases. Importantly, the complexity of these challenges should encourage, rather than hinder, broader discussion on ethical aspects of resource allocation in humanitarian medicine.

An evidence review of research on health interventions in humanitarian crises

Blanchet, K. et al. 2013. LSHTM.

http://www.elrha.org/uploads/Evidence%20Review%20R2HC%20Full%20Report%20FINAL_2.pdf

This evidence review does not specifically discuss research on prioritisation. Cost studies, which could help establish what interventions to prioritise, are identified as a research gap. Expert interviews find consensus that non-communicable diseases were not seen as a priority for intervention. Identification and inclusion of essential drugs for NCDs into emergency kits and the subsequent evaluation of the basic package of care for humanitarian crises is recommended as a high priority for future research.

Thirty-two studies on health service delivery met the inclusion criteria but only four papers measured health outcomes and these were of a low quality. The following highlights the research needs identified:

- There is a strong need to improve the quantity and quality of the evidence base on health service interventions, particularly longitudinal studies of longer-term health service interventions and related health outcomes.
- More research is required on different service delivery models of health care.
- More research is required on the content, delivery and health outcomes of different service delivery packages of care.
- Longitudinal study designs are needed to help capture this information.
- There was a lack of consensus over the guidelines to be used, or even evaluated, for health service delivery. Further studies looking specifically at this issue would enable practical suggestions for service delivery in crisis situations.

The references for the health assessment methods review results (p124) may offer some useful case studies for prioritisation.

A Systematic Review of Public Health Emergency Operations Centres (EOC)

WHO. 2013.

http://apps.who.int/iris/bitstream/10665/99043/1/WHO_HSE_GCR_2014.1_eng.pdf

A public health emergency operations centre (EOC) is a central location for coordinating operational information and resources for strategic management of public health emergencies and events. EOCs provide communication and information tools and services and a management system during a response to an emergency or event. They also provide other essential functions to support decision-making and implementation, coordination, and collaboration.

This review examines peer-reviewed and grey literature to document current status, best practices and standards, impediments and gaps in building, maintaining, and using EOCs for effective response to public health risks and emergencies.

4. Identified priorities for country cases

2013 WHO Humanitarian Response

WHO. 2013.

http://www.who.int/hac/cap_2013_Feb.pdf?ua=1

This compendium provides an overview of health priorities and WHO projects in the 19 consolidated appeals and response plans that have been developed to meet humanitarian needs in protracted emergencies.

Priorities for Afghanistan:

- To ensure timely access to emergency health care services with a focus on maternal and child health for communities affected by humanitarian emergencies (natural and manmade).
- To strengthen the disease early warning mechanism and respond promptly to outbreaks that surpass the local response capacity across the country.
- To address the health needs of especially vulnerable groups requiring humanitarian aid (internally displaced persons (IDPs), refugees/returnees, persons in informal settlements and host communities).

Priorities for Burkina Faso:

- To strengthen early warning and response systems for disease outbreaks and decrease the prevalence of vaccine-preventable diseases.
- To decrease the risk and prevalence of diseases within the Malian refugee and host community populations.
- To reduce morbidity and mortality related to the food crisis.
- To provide access to reproductive health/sexual and gender-based violence (SGBV)/HIV services in the regions that are most affected by drought and food insecurity.

Priorities for the Central African Republic:

- To improve access to emergency health services, including access to emergency basic and secondary health care for both the vulnerable and host populations of crisis-affected health districts and decrease the rate of vaccine preventable diseases. This includes strengthening/implementing Integrated Management of Childhood Illness (IMCI) and the Minimum Initial Service Package for reproductive health (MISP).
- To strengthen the capacity of local community and health districts authorities to prevent, prepare for and respond to disaster and health crises.

Priorities for Chad:

- To increase general access to and use of primary health services with an emphasis on providing immunization along with HIV/AIDS, sexual and gender-based violence and reproductive health services.
- To rapidly detect and prevent disease outbreaks, as well as to ensure rapid medical care to populations affected by epidemics and/or malnutrition.
- To strengthen the capacity of the health system and communities to recover after epidemics and natural disasters.

Priorities for Democratic Republic of Congo:

- Increase access to a minimum package of health services including required life-saving interventions such as basic health care, surgical services and emergency obstetric care to reduce maternal and child mortality.
- Promote access to water and sanitation in areas at high risk for the spread of epidemics.
- Strengthen technical and institutional capacities in the surveillance and response to diseases with epidemic potential.
- Strengthen coordination of health partners to improve contingency plans and adapt responses to emerging situations.

- Strengthen capacities of communities, women and men, girls and boys, to reduce the risk of communicable diseases and to mitigate the impact of recurrent epidemics.

Priorities for Djibouti

- Reducing mortality and morbidity related to malnutrition and epidemics by at least 50% in the target Djiboutian population, particularly among children. Assisting migrants and their host communities in accessing health services.
- Strengthen the disease early warning system and surveillance capacities, particularly for diseases such as diarrhoea, measles, tuberculosis and HIV/AIDS and step up prevention and response.
- Strengthen synergies between the health sector, social networks and communities.
- Develop the capacity of health authorities to strengthen health aspects in policies relating to disaster risk management and response.

Priorities for Haiti:

- To prevent the spread of cholera and other infectious diseases.
- To provide swift and adequate medical care to victims of the cholera outbreak by supporting health authorities in their efforts to strengthen medical response capacities at the decentralised level.
- To reinforce the national public health emergency preparedness and response capacities.

Priorities for Kenya:

- To ensure that critical life-saving services, resources and supplies are available and accessible to vulnerable population groups, particularly women and children, at key strategic locations in arid and semi-arid regions.
- To promote health and nutrition awareness among communities and increase the utilisation of essential health and nutrition services.
- To support county level health sector governance structures in their commitment to disaster risk reduction and disaster preparedness.

Priorities for Mali:

- Improve access to quality basic health services and referral services, including reproductive health care and HIV/AIDS treatment, for crisis-affected target populations.
- Strengthen early warning and surveillance systems, ensure adequate preparedness and response to diseases with epidemic potential and other disasters.
- Contribute to the rehabilitation of health facilities.
- Strengthen coordination of emergency health interventions within the framework of the sectoral responsibility approach in 2013.

Priorities for Mauritania:

- Strengthen the capacity of health facilities/therapeutic feeding centres to treat medical complications of severe acute malnutrition.
- Strengthen preparedness to, detection of and response to epidemics.
- Strengthen essential health care services, particularly in the area of reproductive and child health.

Priorities for Niger:

- Improve access to and quality of primary and referral health care, particularly for reproductive health and HIV/AIDS services, for populations affected by health emergencies.
- Prevent, prepare for and respond appropriately to diseases with epidemic potential and other disasters and health emergencies.

- Reinforce the capacity of the health system and communities to withstand the impact of humanitarian crises.

Priorities for the Occupied Palestinian Territories:

- Ensure access of the vulnerable populations in the West Bank and Gaza to essential health and nutrition services.
- Facilitate access of the vulnerable populations in the West Bank and Gaza to remedies and recovery through the provision of services, monitoring, reporting and advocacy.
- Build emergency preparedness of the vulnerable communities in the West Bank and Gaza to mitigate the impact of the current and potential new emergencies.

Priorities for the Philippines (Mindanao):

- Provide support for affected populations, especially the vulnerable groups, to access essential preventive, promotive and curative health services (including mental health and psychosocial services, adult and adolescent reproductive health). Provide mobile health services to communities without existing health facilities. Continue to rehabilitate barangay health stations and preposition emergency medicines and supplies.
- Strengthen the emergency disease surveillance system and improve information management. Build local capacity through training, investigate outbreaks within 48 hours of detection and initiate response within 24 hours after confirmation. Furthermore, establish a database of pregnant and lactating women.
- Reinforce health education, promotion and advocacy through the organization of Community Health Teams, conducting health information sessions and the provision of health information material to households.

Priorities for the Republic of Southern Sudan:

- Maintain the existing safety net by providing basic health packages and emergency referral services, especially in areas of instability, underserved areas and among vulnerable groups.
- Strengthen emergency preparedness, including surgical interventions. The main focus will be placed on training and building skills for epidemic preparedness, surveillance of disease outbreaks, case management of epidemic-prone diseases, and key emergency surgical and obstetric interventions. Prepositioning of essential medicines, vaccines and equipment (including diarrhoea, trauma and reproductive health kits) will help in having adequate supplies available in an emergency.
- Respond to health-related emergencies, including controlling the spread of communicable diseases. The Health Cluster will support health partners to respond to emergencies and cover critical gaps to ensure complete service delivery, including primary healthcare, health education, surgical interventions and referral and reproductive healthcare in line with the Minimum Initial Service Package.

Priorities for Somalia:

- Prevent and control epidemic-prone and other communicable diseases through expansion of surveillance, disaster risk reduction, emergency preparedness and life-saving humanitarian health services for various Somali zones and target populations (e.g. internally displaced persons, returnees and vulnerable groups) in line with the national Health Strategic Frameworks.
- Increase access to high-impact emergency obstetric and routine reproductive, maternal and newborn and child health services as per national priority packages (e.g. Minimum Initial Service Package) to harness stability, resilience and facilitate progress towards health-related Millennium Development Goals.
- Facilitate early recovery and transition of health systems through enhanced coordination with humanitarian and development partners and the provision of

technical support and capacity-building of partners outlined in the humanitarian partnership principles.

Priorities for the Sudan:

- Increase utilization and strengthen the quality of primary and first referral health care services by improving equity in health service coverage and outcomes.
- Improve emergency preparedness, risk reduction, disease surveillance, and the prevention and control of epidemic-prone and communicable diseases.
- Build the capacity of the health workforce to achieve sufficient numbers of trained personnel with the right mix of skills to respond to the health needs of vulnerable populations.
- Mainstream cross-cutting themes such as gender, environment, early recovery and HIV/AIDS into all health programmes.

Priorities for Yemen:

- Ensure effective intra- and inter-cluster coordination, primarily between the Health, Nutrition and WASH Clusters. Focus on joint needs assessment, programming, monitoring and evaluation, in order to ensure a more effective and efficient response to the humanitarian health needs of crisis-affected and other vulnerable populations, especially women and children.
- Improve access to quality primary and secondary (hospital) health-care services, including basic health and emergency referral services for vulnerable populations, through a focused approach on health system strengthening.
- Strengthen local capacity in priority districts to detect, prepare for, respond to, mitigate and manage health risks with a focus on communicable diseases and seasonal emergencies.

REVISED Syria Humanitarian Assistance Response Plan

Syria Humanitarian Assistance Response Plan (SHARP). 2013. UN.

https://docs.unocha.org/sites/dms/CAP/Revision_2013_Syria_HARP.pdf

The revised SHARP recognises the enormous immediate life-saving needs such as increasing food insecurity, lack of means of adequate sanitation, increase in injuries compounded by disruption in treatment, targeting of hospitals as well as sexual and gender-based violence. However, there is also recognition of the fact that there is an expansion of humanitarian needs across all sectors—largely as a result of the disruption of basic services such as health, schooling, water and sanitation—which is greatly increasing vulnerability and affecting the resilience and coping mechanisms of affected populations. The disruption in basic services and reduction in resilience and coping mechanisms is seen as a major driver of the current situation.

It is also noted that needs are spread across all geographic locations throughout Syria. However, there are hotspots, difficult-to-reach areas, areas where key services have been disrupted, areas with the highest number of deaths/injuries, highest amount of physical infrastructure destroyed, and the highest the concentration of affected populations, which deserve special attention.

In view of the above, the following broad criteria guide the prioritization process in coordination among all relevant actors:

- There is no distinction in priority between immediate life-saving actions and categories of interventions focused on restoration of public services and dignity of affected populations. All are considered high-priority interventions. In the same line, projects supporting preparedness efforts around prepositioning of supplies and

- stocks to respond to sudden-onset crises given the fluid nature of this crisis are given a high priority as well.
- Geographic prioritisation is a key consideration for project selection. Each sector has developed specific indicators to define their areas of geographic priority based on evidence of identified need.
 - Vulnerability: while there is recognition of the limited data to effectively map and define vulnerability based on clear indicators, sectors have developed specific (proxy) indicators to define vulnerable categories of people in need of special attention and targeting, such as households/populations who have been displaced, households/populations who have lost their sources of income, women-headed households, child-headed households, and unaccompanied or separated children.
 - Thematic considerations. Sectors have also identified areas of thematic focus that could support prioritisation.
 - Access: projects promoting greater reach to affected populations in hard-to-reach areas have been given priority, in order to be able to expand the current scope of assistance.

Public health risk assessment and interventions. Conflict and humanitarian crisis in South Sudan

WHO. 2014.

http://reliefweb.int/sites/reliefweb.int/files/resources/south_sudan_public_health_risk_assessment%20%281%29.pdf

Principal health issues identified:

- Wounds and injuries as a direct result of violence.
- High burden of communicable diseases such as malaria, pneumonia, and diarrhoea (the top three causes of childhood death).
- Risk of disease outbreaks related to lack of safe water, poor sanitation and hygiene, overcrowding, and poor vaccination coverage.
- Malnutrition: especially in infants and young children, leading to increased and more severe disease.
- Reproductive health (especially complications of pregnancy, safe delivery and acute newborn care).
- Sexual and gender based violence and sexually transmitted diseases
- Mental health and psychosocial conditions
- Poor access to health services due to attacks on patients, health care workers, and health facilities, and severe shortages of health staff.
- Major disruption in medicines supply chain, including for treatment of trauma, obstetric care, infectious diseases such as malaria, tuberculosis, leprosy, and chronic conditions.
- Poor infection prevention and control in health care facilities.

Immediate priorities identified:

- Protection of health care workers and health facilities
- Restoration of emergency and essential primary and secondary health services for trauma, infectious diseases, reproductive health (especially safe deliveries/ obstetric care and acute newborn care), care for victims of SGBV, and continuity of treatment of chronic conditions.
- Procurement, storage and distribution of life-saving and essential medicines and supplies
- Provision of safe drinking water, adequate sanitation and hygiene facilities.
- Strengthen the early warning surveillance and response system for outbreak-prone diseases.
- Vaccination against measles (and polio) with vitamin A supplementation.

- Referral and care of children with medical complications of severe acute malnutrition
- Vector control, especially the provision of Long Lasting Insecticidal nets (LLINs) against malaria
- Emergency mental health and psychosocial care
- Infection control in health care facilities including safe transfusion and medical waste management
- Risk communication to the public.

5. Case studies – reporting and response

Medical evacuation management and clinical characteristics of 3,255 inpatients after the 2010 Yushu earthquake in China

Kang, P. et al. 2012. The Journal of Trauma and Acute Care, 72(6):1626-33.

<http://www.ncbi.nlm.nih.gov/pubmed/22695432>

BACKGROUND: A catastrophic earthquake struck the Yushu prefecture of China's Qinghai province on April 14, 2010. Supported by the China National Ministry of Health, this study performed a detailed medical analysis of injuries and diseases, based on comprehensive medical data of hospitalised patients to share the experiences and lessons learned from emergency medical aid operations in high-altitude regions.

METHODS: To survey the management of medical relief, more than 10 interviews with rescuers were held and more than 100 documents were reviewed. Medical records of 3,255 patients from 57 hospitals were analysed retrospectively. Patient demographic data, complaints, diagnoses, prognoses, injury types, dispositions, and means of transportation were all reviewed.

RESULTS: A total of 3,255 patients were admitted to hospitals. Of these, 1,426 (43.8%) were middle-aged (31-50 years), 2,574 (79.07%) were transported by plane, and the first 3 days were the peak period for air transportation. The records of 2,622 patients with earthquake-related injuries were analysed, and 1,775 (68.32%) of them were admitted to hospital within the first 3 days. Bone fractures were diagnosed in 1,431 (55.08%) patients and crush syndrome was observed in 23 (0.89%). Illnesses accounted for 657 patients who were admitted to surveyed hospitals. Of these, 143 (20.63%) suffered from respiratory diseases and 259 (39.97%) from acute high-altitude sickness. Of the latter, 224 (86.49%) were rescuers. The overall mortality rate was 0.2% (7 of 3,255). Four patients died from earthquake-related injuries and three from other illnesses.

CONCLUSIONS: A devastating earthquake occurring in a remote, high-altitude region presented a variety of challenges for external medical aid. Air transportation for those with severe injuries and diseases played a crucial role in decreasing the mortality and morbidity. It is necessary for hospitals to initiate effective emergency measures while facing the peak admission flow within the initial 72-hour period. Characteristic factors such as high altitude, low-oxygen content, local construction features, and lifestyle may contribute to complex injuries and illnesses. More attention should be paid to medical aid training for rescuers, and effective measures should be developed to deal with destructive natural disasters occurring in special geographical environments.

Experience of a Korean disaster medical assistance team in Sri Lanka after the South Asia tsunami

Kwak, Y.H. et. al. 2006. 21(1):143-150.

<http://www.readcube.com/articles/10.3346/jkms.2006.21.1.143?locale=en>

On 26 December 2004, a huge tsunami struck the coasts of South Asian countries and it resulted in 29,729 deaths and 16,665 injuries in Sri Lanka. This study characterises the epidemiology, clinical data and time course of the medical problems seen by a Korean disaster medical assistance team (DMAT) during its deployment in Sri Lanka, from 2 to 8 January 2005. The team consisting of 20 surgical and medical personnel began to provide care 7 days after tsunami in the southern part of Sri Lanka, the Matara and Hambantota districts. During this period, a total of 2,807 patients visited our field clinics with 3,186 chief complaints. Using the triage and refer system, we performed 3,231 clinical examinations and made 3,259 diagnoses. The majority of victims had medical problems (82.4%) rather than injuries (17.6%), and most conditions (92.1%) were mild enough to be discharged after simple management. There were also substantial needs of surgical managements even in the second week following the tsunami. Our study also suggests that effective triage system, self-sufficient preparedness, and close collaboration with local authorities may be the critical points for the foreign DMAT activity.

The most common clinical diagnoses were:

- 1) Respiratory disorder – 32%
- 2) Injury – 17.6%
- 3) Musculoskeletal disorder – 11.6%
- 4) Skin and subcutaneous disorder – 10.9%
- 5) Digestive disorder – 5.2%
- 6) Eye and ear disorder – 4.2%
- 7) Circulatory disorder – 4.1%

Survey of Bam earthquake survivors' opinions on medical and health systems services

Nia, M. S., Nafissi, N. & Moharamzad, Y. 2008. *Prehospital Disaster Medicine*, 23(3):263–268.

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.176.1374&rep=rep1&type=pdf>

The report concludes: In addition to reinforcing the medical and health infrastructures of a society in accordance with geographical and architectural characteristics, effective air evacuation and relief missions carried out by experienced international relief teams can play an important role in the appropriate management of approximately 30,000 casualties after a catastrophic event, such as experience with the Bam Earthquake.

Medical support in the Tangshan earthquake: a review of the management of mass casualties and certain major injuries

Sheng, Z.Y. 1987. *Journal of Trauma*, 27(10):1130-5.

<http://www.ncbi.nlm.nih.gov/pubmed/3312621>

The Tangshan earthquake took a death toll of 242,769, with 164,851 injured in addition. This presentation describes the organisation of disaster relief work after the earthquake, the rescue of buried victims, the organisation of medical resources, and the sanitation work to forestall epidemics. It also presents the author's reflections on the management of three major injuries, namely, crush syndrome, fracture of pelvis, and traumatic paraplegia, by reviewing the available data pertaining to these injuries. The author concurs with the prevailing opinion that fasciotomy plays an important role in the successful management of crush injury. It not only prevented acute renal failure subsequent to intracompartmental increase of pressure, but also the occurrence of Volkmann's ischemic contracture as a late sequela. Herbs to induce catharsis and diuresis were used to alleviate intracompartmental pressure. For the management of pelvic fractures, two newly developed treatment techniques are described. On analysis of clinical data, it is the author's opinion that traumatic paraplegia should not be given the priority of early surgery in the circumstances of mass casualties. The

primary concern should be the stability and restoration of normal curvature of the spine, especially in cases of complete paraplegia. Decompression of the spinal cord through an anterolateral approach gave promising results in hyperflexion type of spinal fracture.

Rapid assessment of health status and preventive-medicine needs of newly arrived Kampuchean refugees, Sa Kaeo, Thailand

Glass, R.I., et al. 1980. *Lancet*,1 (8173): 868-72.

[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(80\)91365-3/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(80)91365-3/abstract)

In the disaster relief programme for Kampuchean refugees in Thailand, epidemiological techniques were incorporated into the health-planning process during the first 2 weeks of the refugee influx. The findings influenced not only health care in the first refugee camp but also the delivery of medical services in subsequent camps. The mortality rate in the first week of refugee settlement was 9.1/10 000/day, and fell to 0.7/10 000/day by the fifth week. Children aged 4 and under had the highest risk of death. Fever/malaria was the main cause of morbidity and mortality. Simple epidemiological techniques, if initiated early in the relief effort, can influence medical decisions and lead to more effective use of health resources.

6. Data/measurement

Guidelines for Implementing Interagency Health and Nutrition Evaluations in Humanitarian Crises.

Interagency Health and Nutrition Evaluations in Humanitarian Crises (IHE) Initiative. 2007.

<http://www.unhcr.org/47692e3b4.pdf>

The purpose of IHEs is to improve the collective humanitarian response of agencies and other stakeholders in the health and nutrition sector. This is done by assessing collective strengths and weaknesses, gaps and overlaps, and plausible impacts on health and nutrition trends. This information feeds into and improves decision-making processes at the field level, enabling decision-makers to make more informed judgements, recommend priorities for change, and stimulate joint planning. IHEs are thus formative evaluations, which are defined as evaluations “intended to improve performance, most often conducted during the implementation phase of projects or programs”.

Measles is considered to be a priority prevention programme, and as one of the proxies for the overall provision of health services. Measles should mostly be considered an epidemic disease and notified. The Sphere standard of a vaccination coverage rate of 95% of children aged 6 months – 15 years should be obtained to ensure herd immunity threshold is reached. The percentage of children between 6 months and 15 years who are fully immunized against measles is calculated as: $\text{Number of children who finished antigen course} \times 100 / \text{Total number of children}$.

Health information systems in humanitarian emergencies

Thieren, M. 2005. *Bulletin of the World Health Organization*, 83:584-589.

<http://www.scielosp.org/pdf/bwho/v83n8/v83n8a11.pdf>

Health information systems (HIS) in emergencies face a double dilemma: the information necessary to understand and respond to humanitarian crises must be timely and detailed, whereas the circumstances of these crises makes it challenging to collect it. Building on the technical work of the Health Metrics Network on HIS and starting with a systemic definition of HIS in emergencies, this paper reviews the various data-collection platforms in these contexts, looking at their respective contributions to providing what humanitarian actors need to know to target their intervention to where the needs really are.

In spite of notable efforts to coordinate data collection and dissemination practices among humanitarian agencies, it is noted that coordination on the ground depends on the strengths and presence of a lead agency, often WHO, and on the commitment of humanitarian agencies to investing resources in data production. Poorly integrated HIS generate fragmented, incomplete and often contradictory statistics, a situation that leads to a misuse of numbers with negative consequences on humanitarian interventions. As a means to avoid confusion regarding humanitarian health statistics, this paper stresses the importance of submitting statistics to a rigorous and coordinated auditing process prior to their publication.

Rapid Health and Needs assessments after disasters: a systematic review

Korteweg, H.A. 2010. BMC Public Health, 10 (295).

<http://www.biomedcentral.com/1471-2458/10/295>

This report is not developing country focussed but might offer some useful experience.

Background: Public health care providers, stakeholders and policy makers request a rapid insight into health status and needs of the affected population after disasters. To our knowledge, there is no standardised rapid assessment tool for European countries. The aim of this article is to describe existing tools used internationally and analyse them for the development of a workable rapid assessment.

Methods: A review was conducted, including original studies concerning a rapid health and/or needs assessment. The studies used were published between 1980 and 2009. The electronic databases of Medline, Embase, SciSearch and Psychinfo were used.

Results: Thirty-three studies were included for this review. The majority of the studies was of US origin and in most cases related to natural disasters, especially concerning the weather. In 18 studies an assessment was conducted using a structured questionnaire, 11 studies used registries and 4 used both methods. Questionnaires were primarily used to assess the health needs, while data records were used to assess the health status of disaster victims.

Conclusions: Methods most commonly used were face to face interviews and data extracted from existing registries. Ideally, a rapid assessment tool is needed which does not add to the burden of disaster victims. In this perspective, the use of existing medical registries in combination with a brief questionnaire in the aftermath of disasters is the most promising. Since there is an increasing need for such a tool this approach needs further examination.

Disaster Metrics: A Proposed Quantitative Assessment Tool in Complex Humanitarian Emergencies – The Public Health Impact Severity Scale (PHISS)

Bayram, J.D., Kysia, R. & Kirsch, T.D. 2012. PLOS Currents Disasters. 2012 Aug 21. Edition 1. doi: 10.1371/4f7b4bab0d1a3.

<http://currents.plos.org//disasters/article/disaster-metrics-a-proposed-quantitative-assessment-tool-in-complex-humanitarian-emergencies-the-public-health-impact-severity-scale-phiss/pdf>

Background: Complex Humanitarian Emergencies (CHE) result in rapid degradation of population health and quickly overwhelm indigenous health resources. Numerous governmental, non-governmental, national and international organisations and agencies are involved in the assessment of post-CHE affected populations. To date, there is no entirely quantitative assessment tool conceptualised to measure the public health impact of CHE.

Methods: Essential public health parameters in CHE were identified based on the Sphere Project “Minimum Standards”, and scoring rubrics were proposed based on the prevailing evidence when applicable.

Results: 12 quantitative parameters were identified, representing the four categories of “Minimum Standards for Disaster Response” according to the Sphere Project; health, shelter, food and nutrition, in addition to water and sanitation. The cumulative tool constitutes a quantitative scale, referred to as the Public Health Impact Severity Scale (PHISS), and the score on this scale ranges from a minimum of 0 to a maximum of 100.

Conclusion: Quantitative measurement of the public health impact of CHE is germane to accurate assessment, in order to identify the scale and scope of the critical response required for the relief efforts of the affected populations. PHISS is a new conceptual metric tool, proposed to add an objective quantitative dimension to the post-CHE assessment arsenal. PHISS has not yet been validated, and studies are needed with prospective data collection to test its validity, feasibility and reliability.

7. Additional information

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