

Decision-making in humanitarian crises: politics, and not only evidence, is the problem

La presa di decisioni nelle crisi umanitarie: il problema è la politica, non solo l'evidenza

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ABSTRACT

Accurate, relevant and timely public health information is paramount in a humanitarian crisis: it can help to identify needs and priorities, guide decisions on interventions and resource allocation, monitor trends, evaluate the effectiveness of the response, support advocacy for human rights, and extract lessons that could be relevant in similar contexts. The present review shows, however, that the public health information available in humanitarian crises is, in general, inadequate and that its application is secondary to reasoning and incentives of a political nature, thus contributing to the recurrent failings of humanitarian action. This article reviews the causes of this state of affairs – cultural, political/institutional/methodological and ethical – that hinder the production, dissemination, and use of information for determining which interventions should be implemented or modified. Traditional epidemiological skills and methods are poorly suited to humanitarian contexts. The approaches and tools that have been introduced in crisis contexts require validation and improvement. There is a need for more field “barefoot epidemiologists” who are able to collaborate with anthropologists, demographers, and sociologists to better understand the priorities to be addressed in a crisis. Evidence, however, is not enough *per se*: it is political will that is the key factor in the use, or not, of information in decision-making concerning humanitarian resources and interventions.

Keywords: information management, humanitarian crises, field epidemiology, qualitative approaches, mortality

RIASSUNTO

Un'informazione di sanità pubblica accurata, pertinente e tempestiva è essenziale nelle crisi umanitarie: può aiutare a definire necessità e priorità, guidare le decisioni sugli interventi e l'allocazione delle risorse, monitorare le tendenze, valutare l'efficacia della risposta, difendere i diritti umani ed estrarre lezioni che si possano applicare in contesti simili. Questa rassegna mostra, però, come, nonostante la crescente richiesta di dati per giustificare gli investimenti in assisten-

za umanitaria, l'informazione di sanità pubblica disponibile nelle crisi umanitarie sia, in generale, carente e secondaria a logiche e incentivi di carattere politico, contribuendo così ai ripetuti fallimenti che affliggono l'azione in questi contesti.

L'articolo passa in rassegna le cause culturali, politico/contestuali, metodologiche ed etiche che ostacolano la produzione, la circolazione e l'uso di informazioni per decidere quali interventi sanitari mettere in atto o modificare. Le competenze e i metodi epidemiologici classici sono poco adatti in un contesto umanitario e gli approcci e strumenti che sono stati introdotti richiedono di essere validati e raffinati. C'è bisogno di un maggior numero di “epidemiologi scalzi”, con esperienza sul campo e che sappiano lavorare con demografi, antropologi e sociologi per capire meglio le necessità prioritarie alle quali dare risposta in una crisi. L'evidenza di per sé, però, non è sufficiente: a essere determinante nell'uso o meno dell'informazione per le decisioni sulle risorse e gli interventi umanitari è la volontà politica.

Parole chiave: gestione dell'informazione, crisi umanitarie, epidemiologia sul campo, approcci qualitativi, mortalità

KEYPOINTS

- This review shows how public health information in emergencies is generally inadequate and its use is secondary to political incentives.
- The lack of accurate and timely information in a crisis can have catastrophic consequences on the health and well-being of affected populations and can result in the waste of precious resources.
- Traditional epidemiological expertise and methods are poorly suited to humanitarian contexts.
- Fundamental questions in humanitarian crises can be reduced to a definition of “good enough” evidence for guiding action in a given context.
- New, multidisciplinary approaches are needed to guide donors, governments of affected Countries and humanitarian practitioners.
- Political will, more than evidence, is the key factor in decision-making concerning humanitarian resources and interventions.

ABOUT THE AUTHORS

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If public health information in humanitarian crises is ill, are there realistic and effective remedies?

INTRODUCTION

Humanitarian action in the public health domain is defined here as the set of interventions aimed at mitigating the consequences of crises – due to conflicts, famines or natural disasters – on morbidity and mortality. The effectiveness of this action depends on various factors. The most important among them include knowledge of the context, understanding of priority needs, and the correct and timely identification and implementation, on an adequate scale, of the most appropriate interventions. The importance of information and evidence in making decisions in a crisis context is obvious, but, as this article attempts to demonstrate, it is not sufficient.¹ Dijkzeul et al.² note that evidence in humanitarian crises must have two fundamental characteristics:

- it must be methodologically valid;
- it must be relevant to decision-makers.

Moreover, in the initial, acute phase of a crisis, timeliness is critical: responders have to «make hard decisions under pressure and with minimal information».³

In this article, we make the case that public health information in crises is, in general, inadequate and its application is often secondary to political reasoning and incentives, thus contributing to the repeated failures that have affected humanitarian action.⁴ Remedies are, however, possible and are included in the recommendations.

PUBLIC HEALTH INFORMATION IN CRISIS CONTEXTS

First of all, it is important to distinguish two categories of information:

1. evidence relating to the potential effectiveness of health interventions in humanitarian settings (for example, clinical management of acute malnutrition, immunisation strat-

egies, psychosocial activities to promote mental health); **2.** contextual information, that is the information on the health status of the population, the priority health needs and risks, the availability of services, and the delivery of humanitarian action.

EVIDENCE ON INTERVENTIONS

The evidence base for public health interventions in crises remains thin, as demonstrated by a recent systematic review that highlights important gaps in the quantity and quality of available studies.⁵ The review shows, for example, that knowledge on non-communicable disease interventions in crises is very limited: only eight studies could be identified, none of which included cancers. These gaps re-emerge in a review of the evidence used in the Sphere project:⁶ only 13% of dozens of standards for the health sector were based on strong formal evidence, while the rest were merely supported by practical experience.⁷

CONTEXTUAL INFORMATION

In a 1948 article on the conditions of refugees and displaced persons following the partition of India and Pakistan, Taylor candidly recognized that his writing was «based entirely on impressions».^{8,9} Half a century later, despite substantial advances in technologies, knowledge and practices in the humanitarian field,¹⁰ an editorial of *Disasters* magazine highlighted that: «[...] reliable base-line statistics are seldom available [...] parties of the conflict tend to manipulate the information [...] relief agencies, in the rush for funding, may promulgate statistics that owe more to guesswork and imagination than to research. News media tend to repeat and simplify these interpretations [...]».¹¹ The British Department for International Development (DFID), one of the most influential government agencies of cooperation, in 2014 recognized that humanitarian decisions are often based on low quality information.¹²

QUALITY OF DATA

A series of reviews on the quality of nutrition and mortality surveys in emergencies, critical for assessing the health status of the affected population, highlighted important problems in standardization of methods as well as errors in the design and implementation of the studies.^{13,14} The most recent and complete analysis concluded that only 35% (No. 368) of the nutrition surveys and 3% (No. 158) of mortality studies carried out in crisis situations met minimum quality criteria.¹⁵

The late epidemiologist Hans Rosling,¹⁶ providing technical assistance to the Ministry of Health of Liberia at the peak of the Ebola epidemic, had to admit: «We are absolutely sure that we cannot be sure about the data».¹⁷

QUANTITY AND ACCESSIBILITY OF DATA

There seems to be a consensus on the inadequate quality of information in humanitarian crises. Conversely, the opinions on the quantity and accessibility of information diverge. In the early stages of a crisis, a lack of even minimal data that are readily available and of sufficient coverage, is common. For example, during the first six months of the crisis, essential information, such as the prevalence of acute malnutrition, the immunisation coverage for measles (a major cause of mortality in many crises) and even the geographic locations and programmatic areas of intervention of humanitarian actors (the so-called matrix “Who is doing What and Where” – essential for effective coordination) were available only in 43%, 15%, and 15%, respectively, of important armed conflicts between 2010 and 2015.¹⁸ The lack of information was even more pronounced in natural disasters, despite the fact that this type of crisis generally attracts more funding and occurs in populations more easily accessible than in conflict-related situations.

In many crises, however, the main problem is not the lack of data, but rather their accessibility.¹⁹ Health authorities and humanitarian agencies expend substantial time and resources to produce a wide range of potentially useful information, including situation analyses, needs assessments, project proposals, routine activity data, surveillance data, and internal reports. However, the majority of this information is often not standardized, not compiled into integrated documents or interoperable databases nor sufficiently disseminated and, therefore, remains inaccessible and unused by the UN and other coordination mechanisms and the health authorities of the crisis-affected Countries.

In some cases, the information produced is redundant or, in the worst instances, contradictory. According to the Centre for Research on the Epidemiology of Disasters (CRED), about 30 mortality studies were conducted in Darfur (Sudan) between 2003 and 2005. In 2004, WHO²⁰ and the World Food Program (WFP)²¹ carried out two mortality surveys, a few months apart and in the same region, which produced divergent results: according to WHO, the mortality exceeded the emergency threshold and required a rapid scale-up of the humanitarian response, while for WFP the mortality rates were below the emergency threshold.

Beesley and colleagues²² describe how, during the first years of independence in South Sudan, the Ministry of Health received such a “deluge” of data, analyses, and plans from aid agencies that it saturated the limited absorption and decision-making capacity of its small number of officials: a typical example of information overload.



CAP-HAÏTIE, HAITI, 2013. ASSESSING NUTRITIONAL STATUS OF A CHILD. (CREDITS: S. COLOMBO)

CONSEQUENCES

In humanitarian crises, needs invariably exceed resources, even in “noisy” emergencies, which attract substantial aid. A sound situation analysis would prevent or reduce the waste of resources, by guiding the allocation of resources to priority needs; in crisis settings, however, data are invariably weak and incomplete, and dispersed among different people and institutions. The lack of accurate and timely information can have catastrophic consequences (seldom documented) for the populations affected by the crises. For example, the British DFID decided in 2001 to temporarily suspend food aid to Darfur (a region of Sudan in chronic crisis), based on the biased results of a rapid need assessment carried out by an NGO, despite the availability of methodologically valid data showing a serious malnutrition and food insecurity situation.²³ More recently, the failure to disseminate clear data on the trends of the Ebola outbreak in West Africa during the first half of 2014 was a significant determining factor for the serious delays in the Ebola response.²⁴ Currently, there are doubts about the true extent of the food crises resulting from conflicts in South Sudan and Yemen, where UN statements of actual or imminent famine have been contradicted by anthropometric data that, despite being inaccurate and geographically unrepresentative, present the situation as less severe than expected.²⁵ In Syria, health professionals complain about the lack of analysis for an objective prioritisation of chronic diseases, neglected by many actors in favour of war surgery, perceived as more important.²⁶ The consequences of the delays of the humanitarian response to the 2011 famine in Somalia, in terms of death toll, were also extremely grave (see box 2 p. 222).

THE CAUSES OF THE POOR STATUS OF PUBLIC HEALTH INFORMATION

Like all complex pathologies, the disease that affects information in humanitarian crises has multiple, complex and interdependent causes.

CULTURAL CAUSES

The attitude “we must act immediately” is part of the humanitarian culture. This may be justified at the beginning of an acute crisis, when a timely response that addresses basic needs (shelter, water, food, sanitation, health), based on the experience of other crises in similar contexts, helps to define humanitarian interventions and to save lives. However, in chronic and complex crises, this reaction may result in the acceptance of data collected or analysed using questionable methodologies or even of estimates from unreliable sources. Thus, humanitarian interventions may be designed and implemented based on unproven assumptions or without a proper situation analysis.^{27,28} Moreover, there is a common tendency of replicating intervention modalities used in previous crises without adaptation, a cultural phenomenon well described in the humanitarian sector.²⁹

Particularly in insecure contexts, humanitarian workers often live in “bunkerized” compounds, separated from the rest of the population.³⁰ Multiple factors may create obstacles to effective communication and a real understanding of needs, including strict security rules, language barriers, specialist competence prioritised over knowledge of the local context, as well as economic conditions, values, and cultural and social behaviours that are very distant from those of the affected population.³¹⁻³³ During the Ebola outbreak in West Africa, the initial failure to understand the local sociocultural norms – for example, practices surrounding burial of the dead – led to unwanted consequences, such as the refusal of communities to report cases of disease and death, which resulted in increased transmission of the disease.³⁴ These barriers have methodological implications for obtaining information: for example, questionnaires must be developed in such a way as to be understandable and acceptable to both local interviewers and interviewees; issues that are culturally sensitive may need to be avoided or investigated indirectly; in some cultures, it is inadmissible for a woman to be interviewed by a man and/or in the absence of her husband.

POLITICAL/CONTEXTUAL/LOGISTIC CAUSES

Humanitarian contexts, especially those related to armed conflicts, are unstable, unpredictable and uncontrollable.³⁵ Common difficulties of information management in resource-poor contexts tend to be amplified in crisis situations. Insecurity may not only prevent access to the population on which information is to be collected, but may also damage the health infrastructure that produces epidemiological data, including the breakdown of routine health information systems.³⁶ Furthermore, healthcare workers' efforts may be diverted from data collection to other priorities; registers may be lost; transmission of information may be hindered by communication and security problems; and key local health staff may emigrate (along with their precious institutional memory), while there may be an influx of *outsiders* that lack knowledge of local realities.

Other factors also constrain the collection of complete, accurate, and timely data. It is widely accepted that the “humanitarian space” is shrinking.³⁷ Some Western governments use, or abuse, humanitarian assistance in order to pursue strategic objectives in politically risky areas, such as Afghanistan, Iraq, and Syria. Non-governmental actors, including armed groups, can prevent access to humanitarian agencies, as has happened in Somalia with Al-Shabaab, in Afghanistan with the Taliban and in Iraq and Syria with Daesh.³⁸

The counter-terrorism legislations of donor governments



SOUTH DARFUR, SUDAN, 2006. SLIM GUERRILLA FIGHTERS. (CREDITS: S. COLOMBO)

can result in enormous bureaucratic barriers to humanitarian assistance in these areas.³⁹ In some situations, local authorities hinder or prevent humanitarian access, or even expel humanitarian organizations for documenting sexual violence and other human rights abuses, with very serious consequences for humanitarian assistance, as happened in Darfur in 2009 and in Pakistan in 2017.^{40,41} In addition, authoritarian regimes tend to control information, prevent its dissemination, and hamper independent research: Iraq before 2003⁴² and Syria before 2011 are cases in point.

Furthermore, crisis contexts are often volatile: mass population displacements can be rapid, overturning the humanitarian situation within days or weeks, and thus making data obsolete. In 1994, hundreds of thousands of Hutu refugees crossed the borders of Rwanda into Tanzania and the former Zaire (Now Democratic Republic of Congo) within a matter of days, catching the governments and humanitarian agencies unprepared. A similar situation occurred in September 2017, when Rohingya from Myanmar fled to Bangladesh.

The political geography of a crisis is often complex: violent or insecure areas frequently border on relatively quiet zones; in very large Countries, such as the Democratic Republic of the Congo or Sudan, data aggregated at national level conceal these differences. A further difficulty concerns urban areas and/or dispersed populations, where data collection is a much more complex and expensive exercise than in populations concentrated in refugee camps.

The governments that most significantly finance humanitarian aid and upon which UN agencies and most NGOs are dependent,⁴³ often adopt essentially ideological decisions, even when the evidence to support their choices is insufficient or contradictory. In so-called fragile Countries, where governments and institutions are weak, certain choices are imposed by donors without enough political dialogue with the national counterparts. The contracting out of health service provision to NGOs in Afghanistan after the defeat of the Taliban in 2001⁴⁴ and, more recently, the scaling up of performance-based financing in Haiti in the aftermath of the earthquake are just two examples.⁴⁵

The polarized nature of many crises favours “strategic disinformation”, including the political manipulation of survey results, as the box 1 illustrates.

This is not a new phenomenon: during the Vietnam war, political pressures within the US government encouraged the overestimation of enemy casualties and the undercounting of enemy forces.⁵³ The barriers to obtain information and the manipulation of data are not limited to mortality or war crimes: in Ethiopia, health agencies were forbidden to report cases of cholera, a disease perceived

BOX 1. THE POLITICS OF NUMBERS

Both the US and British governments criticized, on a flawed methodological basis, the mortality surveys carried out in Iraq after the 2003 war and which showed a considerable mortality excess among civilians.^{46,47} The US resistance to acknowledging the scale of the insurgency it was facing was at the root of the criticism. By the same token, the Ugandan government requested WHO in 2005 to conduct a mortality survey in the North of the Country, where an armed rebellion and an equally brutal counteroffensive by the government army were ongoing. Since the results showed an excess mortality and the inadequacy of the humanitarian response, the government rejected the survey and banned its publication.⁴⁸ WHO decided not to protest.^{49,50} The same politicisation of data occurred in Sudan: the government refused to endorse the findings of a survey carried out, with WHO support, in Darfur in 2004,⁵¹ when its president was under accusation for violation of human rights. In consequence, one of the authors of this review had to carry out another survey the following year, which had to offer guarantees of impartiality well in excess of the accepted standards for this type of study.⁵²

as a symptom of insufficient development and a potential obstacle to commercial relations. WHO itself delayed the international alarm on the Ebola epidemic for many months in 2014, claiming potential negative repercussions for the economies of the three Countries affected.²⁴ Sometimes economic reasons may be the sole motivation for governments or international agencies to inflate the number of people in need, with the hidden aim of obtaining more aid⁵⁴ (sometimes for personal purposes) or, conversely, to reduce their number in order to minimize or deny the crisis.

The fragmentation of aid, with multiple NGOs, UN agencies, and other organizations competing for funding,⁵⁵ exacerbates the difficulties in coordinating the collection, standardisation, and consolidation of data. Differing indicators, various data collection tools, diverse samples, different reference periods, and unequal quality in data collection can make the compilation and analysis of data as frustrating as trying to complete a puzzle using pieces from different boxes. This was the experience of one of the authors in South Iraq after the 2003 war: the impossibility of translating a huge amount of data from health unit assessments into a coherent framework for the identification of humanitarian priorities.⁵⁶

In Haiti, after the 2010 earthquake, various health need assessments were carried out, using eight different data collection tools, with the result that: «there was not an absence of data, but rather an abundance of it, collected in different formats, on different platforms, using different indicators and with varying degrees of comprehensiveness». ⁵⁷ Moreover, the capacity of health coordinators to produce a coherent need analysis, by synthesizing available data, ⁵⁸ is often insufficient, as experienced by the authors during training courses for this personnel.

Competition between agencies discourages information sharing. ^{59,60} Furthermore, a UN report acknowledged that «the delays [in information dissemination] can be attributed, in large part, to a lack of willingness by agencies to prioritize reporting on activities». ⁶¹

Information that is publically accessible is often limited to absolute numbers indicating the amount of services rendered to the affected population (for example number of children vaccinated, number of hospital admissions); however, as these data are disconnected from the denominator (population actually requiring such services), they little contribute to the analysis of the situation.

Finally, the resources allocated to health information are often insufficient. On the one hand, donor governments are demanding more and more data in order to justify humanitarian aid to tax payers; on the other hand, they are reluctant to finance the collection and analysis of data, giving priority to direct humanitarian assistance.

METHODOLOGICAL CAUSES

Traditional epidemiological methods (case-control, cohort, randomized controlled trials – RCT) that are routinely used to measure the effectiveness of health interventions in the field are rarely applicable in humanitarian settings, for a number of reasons. On the one hand, there are the limitations of context, time, logistics, and ethics, as discussed in this review; on the other hand, there is a general lack of secondary data necessary for selecting representative samples and defining appropriate control groups. A thorny problem is **the judgment of causal attribution** in the evaluation of the effectiveness of an intervention (or a package of interventions) in terms of improved health indicators. The presence of many organizations on the ground with similar programmes, the simultaneous implementation of interventions in other sectors, the volatility of the situation, and other contextual factors external to the intervention make a judgment of causality often impossible, especially when the chain of factors that links the intervention to the results is long and complex: ⁶² it is more prudent to reason in terms of contribution rather than attribution.

The **cluster randomized trials**, ⁶³ that aim at an unbiased assessment of the effectiveness of public health interventions at community level through a comparison with control communities that do not receive the intervention, have limited application in emergencies for operational, financial, and ethical reasons. ⁶⁴ At the methodological level, such experimental approaches are considered unsuitable to examine complex processes and phenomena involving multiple interacting and non-linear causal factors; their external validity is also limited, given the importance of contextual factors specific to each crisis. ⁶⁵ Recently, **alternative approaches** have been tested, such as those based on “stepped-wedge” study designs as well as (especially in the mental health field) the use of “waiting list” controls in situations where the intervention, as a result of operational limitations, is introduced sequentially. ^{66,67} The most common approach used in evaluation remains the before-after-intervention comparison, which must, however, take into account that many factors can confound the cause-effect attribution. ⁶⁸

The difficulties of cultural, political, methodological, and ethical nature in the evaluation of humanitarian interventions have promoted the development of “realist” approaches, in which the context where the intervention is applied, the methods for its implementation, and also the unexpected results become important aspects to be analysed. ^{69,70} This approach can help to understand why the same intervention can reach different degrees of effectiveness according to the context, and which implementation modalities have been modified so that the intervention achieves its potential effect in a humanitarian situation. Bradt argues that it is not so much the scientific evidence that is missing, but rather the understanding of the most effective ways of implementation in specific humanitarian settings. ⁷¹

Similarly, the tendency to combine quantitative and qualitative methods (mixed methods) for assessing the needs and the effectiveness of interventions has become common practice among humanitarian workers. ⁷² Some factors — cultural, political etc. — that affect the performance and use of health services or the exposure to risk factors cannot be analysed in a quantitative way, raising the dilemma of how to “measure the immeasurable”. ⁷³

There is a general lack of expertise in epidemiology and allied disciplines (demography, anthropology, sociology, economics) with methods adapted to the specific context of crises. ^{74,75} These methods are not part of the standard training curriculum in epidemiology. ⁷⁶ With the exception of Epicentre (a centre for research and training in field epidemiology affiliated to Médecins sans Frontières), EPIET (the European Program for Intervention Epidemi-



TABQA, SYRIA, 2017. LOOTED HEALTH CENTRE. (CREDITS: S. COLOMBO)

ology Training), CDC, and few other centres in European and US universities, training in this area is very limited in relation to the needs.

Humanitarian crises frequently affect Countries with fragile institutions. Routine secondary data, such as epidemiological surveillance, coverage of health interventions and death, and birth rates may be not-existent, or have been

destroyed, or are incomplete, obsolete and of low quality and coverage. The crisis further worsens data production and analysis. This implies, among other things, that it is difficult or even impossible to refer to pre-crisis levels of health indicators for comparisons with the values found during the crisis.

Estimating the size of the affected population, an essential step for planning humanitarian interventions is particularly difficult, unless in a refugee/IDP (Internally Displaced Persons) camp setting. Census data, with projections based on growth rates, are often the only source for obtaining population estimates, although disaggregated data do not always exist and these estimates do not take into account increased mortality and population movements. For example, it is estimated that more than half of the Syrian population has sought refuge abroad or is internally displaced as a result of the conflict.⁷⁷ Various **methods of rapid estimation**, requiring specific expertise, have been proposed; only some of them have been validated.⁷⁸ Immunisation coverage data combined with health activity data have long been used to estimate population numbers;⁷⁹ recently, the use of satellite-based imagery has been tested in various contexts,⁸⁰ as well as mobile phone network data that have been used to



SOUTH DARRUR, SUDAN, 2006. GEREIDA IDP CAMP (CREDITS: S. COLOMBO)

track the movement of communities affected by the earthquake in Haiti.⁸¹

The lack of household or individual listings, a common feature of emergency settings, precludes the use of simple random sampling in health surveys; cluster and purposive sampling (i.e., based on the selection of a non-representative sample and easy to implement) are the most commonly used approaches. The former method has, however, limitations in precision, due to the “design effect”;⁸² the latter method is particularly prone to biases. A classic example of the lack of precision of cluster sampling is the above-mentioned first mortality survey in Iraq after the 2003 war: the study estimated 98,000 excess deaths among civilians, with a 95% confidence interval of 8,000-196,000.⁴⁵

An additional constraint is insecurity that can prevent the access of humanitarian workers to certain areas: the communities living there will not be selected in the sample and the findings of the survey will have, therefore, a limited external validity.

Retrospective household surveys, especially those estimating mortality, have high risk of biases, due to the fact that members of the family may not precisely remember the dates of dramatic events such as the death of a family member, or mistakenly refer to members of the extended family. The use of pre-tested questionnaires and local calendars with events known to all (for example religious holidays, first day of the agricultural harvest, date of an armed attack) serves to mitigate, but not completely eliminate, these risks. For this reason, the retrospective period to be studied is usually short, at most a few months, which, in return, requires sufficiently large samples (usually at least 500-1,000 households) to achieve the desired precision.

Another problem, common in populations where the impact of the crisis has been geographically concentrated, is the “**survivor**” bias (the exclusion from the sample of households of which all members have died or that have disintegrated following displacement), which results in the underestimation of mortality, attack rate of an outbreak or prevalence of acute malnutrition.⁸³ Variants of the traditional retrospective survey – the **main informant**⁸⁴ and the **neighbours** methods⁸⁵ – have been introduced with the aim of reducing the risk of bias and collecting sensitive information (such as for gender-based violence). The gold standard is **prospective epidemiological surveillance**, which uses various information sources (community health workers, traditional and/or religious leaders, grave diggers, etc.); this approach is preferable to retrospective surveys in stable populations (such as those of some refugee or IDP camps), especially because it generates data in real time and allows a quick response.



NORTH DARFUR, SUDAN, 2005. MORTALITY SURVEY (CREDITS: S. COLOMBO)

A frequent criticism is that the quantitative methods of needs assessments do not give sufficient voice to the populations affected by a crisis.⁸⁶ To address this concern, the **HESPER scale**⁸⁷ was developed, which provides a quick and validated qualitative method to describe the perceived needs of affected communities; the scale is commonly associated with quantitative approaches.

ETHICAL CAUSES

On the one hand, there is an «ethical imperative to collect good quality data» in humanitarian crises.⁸⁸ On the other hand, the production of information and evidence is an area undermined by complex ethical problems.⁸⁹

Data collection can consume resources that would be best used in urgent relief activities. Inquiries can raise expectations of assistance, which will not always materialize. Obtaining informed and voluntary consent can be difficult, especially when fieldwork needs to be completed within a tight timeframe and in precarious security conditions, or where participation in a study can be perceived by affected communities as a requirement to receive assistance. People included in a study can be traumatized by the consequences of the crisis and interviews may be intrusive, for example in mortality surveys. Interviewees can even be exposed to risks when politically sensitive information is solicited, for example on violence and abuse. Ensuring the security of the people included in a study and the confi-

dentiality of the data thus becomes an imperative, particularly in violent contexts.⁹⁰ Furthermore, «information flows outside; the last people to have access to it are the victims themselves».⁹¹

Finally, the lack of coordination, as discussed above, can result in a “survey fatigue” if several agencies request the same information from the same people, without providing any concrete assistance.⁹² In 2004, 107 communities in Darfur (Sudan) were surveyed; of these, 33 were subjected to two or more studies, and two communities to five or more.⁹² From a mainly research perspective, it is fundamental to ask oneself if the evidence available from non-humanitarian contexts or from similar crises is applicable to the specific crisis in question and, if not, what evidence is really needed to provide an effective and contextually adequate humanitarian response. For example, following the earthquake in Haiti, amputation rates varied substantially among surgical teams of different Countries.⁹³ These data stimulated the development of guidelines for surgery in humanitarian crises, including the recommendation to collect and publish epidemiological data.⁹⁴

SOME CONCLUSIONS AND A FEW SUGGESTIONS

Given the methodological challenges and other difficulties concerning information in humanitarian crises, the fundamental questions can be reduced to a definition of what constitutes “good enough” evidence to guide humanitarian action in a given context.⁹⁵ The experience and evidence accumulated over years of humanitarian assistance are often sufficient for deciding on priority interventions in the initial acute phases of a crisis.⁹⁶ In chronic and complex humanitarian settings, it may not be feasible to do more than showing, with rational arguments and plausible judgments, that certain interventions, when based on a sound situation analysis, logically lead to the desired health outcomes and a reduced risk exposure, although the causal chain cannot be demonstrated through strictly epidemiological criteria.⁹⁷

It is important to emphasize again that information, even when valid, relevant and timely, *per se* does not automatically translate into correct choices in due time. Other factors, such as those related to political expediency, availability of resources, internal organisational considerations, or simply the subjective conviction of key stakeholders, can influence decision-making or, on the contrary, determine inaction (see box 2). Furthermore, sometimes the information, although rigorous, is not communicated in an effective and/or timely manner to the decision-makers, especially where such decisions are taken far away from where the information is collected and by those who do not know the context well or do not understand the data limitations.

BOX 2. THE DELAYS OF THE HUMANITARIAN RESPONSE TO THE 2011 FAMINE IN SOMALIA

In Somalia, alarming levels of food insecurity were documented as early as of the beginning of 2010, but it was not until July 2011, when 11 million people had long been in extreme need for food, that the combination of the declaration of famine by the United Nations, a media campaign and strong pressures from the international community set the humanitarian machine in motion.⁹⁸ When aid reached a level proportional to the needs, at the end of 2011, mortality rates were already declining.⁹⁹ The consequences of this delay, also determined by the obstacles posed by the rebel group Al-Shabaab and by the counter-terrorism legislation of the US, were extremely serious: the excess deaths were estimated at 244,000-273,000, of which about half were of children under 5 years of age.¹⁰⁰

If public health information in humanitarian crises is ill, are there realistic and effective remedies?

It has been suggested that there is the need for increased financial resources for data collection and analysis. According to Checchi, USD 15-25 million per year, or about 1% of the total humanitarian health aid, would be enough to increase the number of information managers, support capacity building at country level, strengthen local information infrastructure, produce guidelines, create a central data repository, develop the necessary software, and equip the health coordination bodies for emergencies with the staff required for covering this important area.¹⁰¹ To achieve this, donors should be convinced that a limited investment – such as the one proposed – could quickly pay off, contributing to the improvement of the effectiveness and efficiency of the humanitarian response.

With more resources available, NGOs and UN agencies may require the few qualified centres to expand their training activities in epidemiological and information management methods for their staff, using the experience and the already available technical resources and on the basis of an agreed upon curriculum. With a greater pool of epidemiologists, it would be possible to ensure the field presence of professionals in key humanitarian operations, to strengthen local human resources and ensure that they can benefit from remote technical assistance. It would also be important to foster collaborations on the ground and technical exchanges between epidemiologists and specialists in other disciplines equally important in humanitarian crises – such as anthropologists, sociologists, demographers, psychologists, and economists – with joint training and regular technical meetings.

Funds could be used to promote applied research, in order to validate and refine existing epidemiological methods to estimate the number of people affected by a crisis and mortality levels, ensure an adequate surveillance of outbreaks, etc.

Recently, a group of agencies has produced a series of standards for public health information services in emergency settings.¹⁰¹ These standards should be supported by technical guidance to be used in training and to help field staff in their implementation.

Many of the evaluations carried out are internal to the agencies that have commissioned them; the findings, which are not always disseminated, are used more often to draw lessons than to assess the effectiveness of humanitarian programmes and assume responsibility for achievements and flaws.¹⁰² Therefore, it would be important to promote and finance more independent evaluations and ensure their wide dissemination.

More funds alone, however, will not be enough for redressing the weaknesses that affect public health information. The first step would be acknowledging that many of the problems related to public health information are not exclusive to the humanitarian enterprise, but are exacerbated by the conditions under which it operates. Many of the political and social obstacles encountered in humanitari-

an crises and affecting health are of a complex, long-standing, and “wicked” nature; «they are difficult or impossible to solve because of incomplete, contradictory, and changing requirements. These are often difficult to recognise».¹⁰³ New, multidisciplinary approaches, that include qualitative components, are needed to better understand these contexts and guide donors, governments of affected Countries and humanitarian practitioners. Field epidemiological methods, adapted to humanitarian crises, can contribute with the rigour of their quantitative techniques.

Finally, it is important to restate that the evidence is only part of the equation, and it is not enough in itself: the main incentive to use it, or not, in decisions on resources and interventions for addressing humanitarian problems is political will; humanitarian actors can exert little leverage with politicians.

Unfortunately, for many politicians, Rennie’s quote remains valid today: «When beliefs conflict with evidence, beliefs tend to win».¹⁰⁴

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