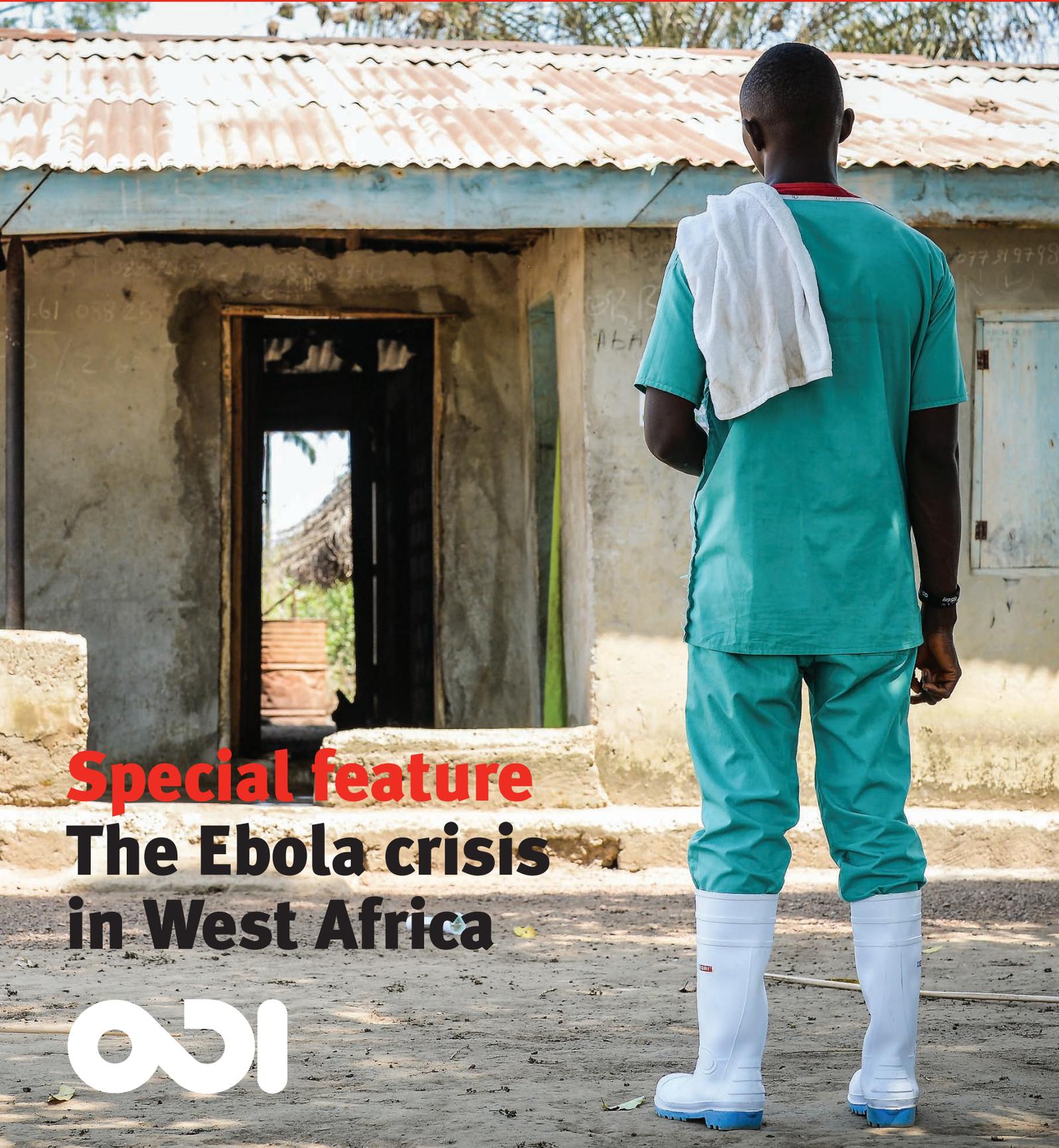


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A person wearing green scrubs and white rubber boots stands with their back to the camera, looking towards a building with a corrugated metal roof. A white cloth is draped over their shoulder. The building has a doorway and some graffiti on the wall.

Special feature
**The Ebola crisis
in West Africa**



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About HPN

The Humanitarian Practice Network at the Overseas Development Institute is an independent forum where field workers, managers and policymakers in the humanitarian sector share information, analysis and experience. The views and opinions expressed in HPN's publications do not necessarily state or reflect those of the Humanitarian Policy Group or the Overseas Development Institute.

Cover photo: A member of a decontamination team at Makamie in Port Loko District, Sierra Leone
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Editorial photo: Volunteers in Freetown, Sierra Leone, put on personal protective equipment
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Editorial



This edition of *Humanitarian Exchange* focuses on the humanitarian crisis created in West Africa by the Ebola outbreak, the largest and most complex since the virus was discovered in 1976. More than 11,000 people are believed to have died and over 26,300 cases have been reported. While Liberia was declared Ebola-free on 9 May 2015, Sierra Leone and Guinea are still struggling to contain the disease and assess the social and economic impact of the crisis.

In her lead article, Florika Fink-Hooijer analyses the weaknesses and inefficiencies in global humanitarian health governance revealed by the Ebola crisis. Aspects of humanitarian-military engagement are discussed by André Heller Pérache in the context of Médecins Sans Frontières (MSF)'s unprecedented call for biohazard containment teams, and Josiah Kaplan and Evan Easton-Calabria highlight how humanitarians are using innovations in military medicine to combat Ebola. Clea Kahn argues that characterising the outbreak as a public health crisis resulted in a failure to adequately consider the dignity and humanity of affected people. Chukwu-Emeka Chikezie sheds light on the role of the Sierra Leonean diaspora in the response. Catherine Meredith and her co-authors report on Oxfam's bottom-up approach to the response, and Craig Dean and Kelly Hawrylyshyn look at the role of children's and youth groups. Liz Hughes and Nick McWilliam explore how GIS mapping has been used in planning and targeting interventions. Jean-Martin Bauer and his co-authors report on the innovative use of mobile technology for monitoring food security. Articles by Lisa Reilly and Raquel Vazquez Llorente and Clara Hawkshaw highlight risk management and training approaches to the crisis, while Lisa Guppy reflects on the benefits and challenges of carrying out research in such a context. The edition ends with an article by Nadia Berger and Grace Tang on the importance of translation in the response.

As always, we welcome any comments or feedback, which can be sent to hpn@odi.org.uk or to The Coordinator, 203 Blackfriars Road, London SE1 8NJ.

Civil protection and humanitarian aid in the Ebola response: lessons for the humanitarian system from the EU experience

Florika Fink-Hooijer

The Ebola crisis both revealed major weaknesses and inefficiencies in global humanitarian health governance, and prompted the development of new and more efficient ways of responding to the crisis through improving how we manage humanitarian and civil protection resources together. This article is an initial attempt to draw out some lessons for the health sector. Much wider analysis will be needed to appreciate the full impact the crisis has had on other sectors and policies and to draw conclusions on the appropriateness of the current architecture of humanitarian response and preventive action.

How did Ebola in West Africa get out of control?

The Ebola outbreak in West Africa should and could have been contained before it got out of control. Under the World Health Organisation (WHO), the Global Health Cluster is meant to provide leadership and coordination among all the main humanitarian health agencies, either as members or observers (in the case of MSF and the ICRC). At global level WHO has a Foreign Medical Team and surge capacity. There are humanitarian Global Clusters for other sectors relevant to the Ebola response, such as logistics and water, sanitation and hygiene (WASH), and OCHA is resourced for humanitarian coordination and leadership. For months none of these resources was applied, leaving MSF largely alone on the ground and pursuing a solo global advocacy campaign to increase treatment capacity.

Three main observations can be made. First, leadership and coordination, both within international health governance and international humanitarian governance, has been a concern throughout. Management of the crisis by the WHO was weak, and country-based humanitarian governance mechanisms remained low-key and did not promptly request global support. Addressing these weaknesses must be the starting-point for reviewing the global system response. Second, improved oversight of the government response is essential, for example to ensure the necessary transparency of information to enable an appropriate response and the earlier engagement of Global Health Cluster resources. Equally, the failure of humanitarian governance reflects the disconnect between the development side of the UN and its humanitarian elements, raising serious questions about whether the Resident Coordinator should be responsible for humanitarian coordination. Third, in terms of visibility and funding the Ebola outbreak has had to compete with a range of major high-profile crises, but even with limited existing resources the capacity was there to contain the outbreak and to avoid the massive loss of life, suffering and long-term costs that have resulted. Given the likely

increase in the frequency and scale of such outbreaks and other health emergencies, additional resources are required for the health sector, but their effectiveness will be in doubt without improved governance.

WHO needs to ensure that staff in key posts are adequately equipped for their roles, including full awareness of resources for emergencies, like the health cluster. Provision is available for this in major health emergencies under the WHO Health in Emergencies Framework 'step aside' clause, which can be applied to remove country representatives who are not equipped to provide the appropriate leadership in a humanitarian crisis.

The Health Cluster should have been triggered much earlier, and certainly by the end of May, when it was clear that needs were expanding far beyond the capacity of the response. Indeed, in Guinea a health cluster had been activated four years previously, so it was simply a question of reactivating a dormant cluster and bringing in the expertise and capacity of the Global Health Cluster and its related resources. Triggering the Health Cluster could have ensured sustained presence of higher-quality leadership and a clearer division of labour. Equally, a larger, more rapid and better-coordinated deployment of Foreign Medical Teams would have helped address the main problem of lack of operational capacity on the ground. The early triggering of the Health Cluster would also have avoided the later problem of extra layers of coordination among the wide range of more peripheral actors and activities. Lastly, a timely reaction would also have facilitated attention and support to maintaining the health systems in Ebola-affected countries in order to deal with other deadly health challenges such as malaria.

There is a clear need for improved humanitarian health sector capacity through greater participation of health agencies, notably MSF, in the Global Health Cluster. MSF staff have been vital (and largely alone for much of the outbreak) in treating Ebola; however, as also seen in the Central African Republic MSF does not have the capacity to cover all treatment and other health-related needs. The operational capacity of humanitarian health agencies needs to be increased, and MSF needs to deepen its cooperation with the Global Health Cluster to address this.

Overall funding to the humanitarian health sector has been decreasing while needs across the sector are growing, which means that funding has to be targeted where it will have the greatest impact on the most urgent needs. This requires improved effectiveness in global health and humanitarian governance. The potential use

of the capacity of non-traditional responders should also be evaluated. For donors to focus their global capacity-building funding to make the system more effective, humanitarian health agencies have to provide a common position on where the priority needs are. For example, priority sub-sectors where needs appear to exceed capacity are epidemic outbreak and secondary health care. The Global Health Cluster should be the forum to establish this common position.

Scaling up the Ebola response and synergies between civil protection and humanitarian assistance

While the integration of civil protection and humanitarian aid was well under way within the European Union (EU), the Ebola crisis greatly expanded it. This was done largely through the Ebola Task Force, housed in the European Commission's Emergency Response Coordination Centre (ERCC). Because of its scale and nature, the crisis also triggered the use of diplomatic, development, research, military and civil protection instruments. As it touched on so many sectors and involved so many response actors, the entire process needed a more coordinated European approach. With daily meetings, the Ebola Task Force ensured information-sharing and better understanding of all aspects of the response, integrating the work of actors not used to operating together.

Broadly speaking, the humanitarian response addressed the frontline issues: deployment of humanitarian experts to liaise with partners and local authorities; funding for surveillance, diagnosis and treatment, and for maintaining regular health services; and medical training and supplies, including Personal Protective Equipment. The European civil protection contribution has ensured that this frontline work can take place by providing health and humanitarian personnel and equipment, and by ensuring a safe and guaranteed medical evacuation system. Both elements have been crucial to the response. Key components of the civil protection role in the response have been the transport of staff and materials for teams and emergency treatment units; the provision of medical teams; a laboratory; emergency treatment units, training facilities and trainers; and the deployment of experts.

While the Commission's humanitarian aid budget is financing teams through United Nations, Red Cross and non-governmental organisation partners, a significant contribution has been made by a number of individual EU members, channelled through the EU Civil Protection Mechanism (EU CPM). In September 2014 the lack of a medical evacuation capacity for Ebola cases was identified as a major bottleneck in the deployment of



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European Commissioner Christos Stylianides visits Ebola-affected countries

European health and humanitarian workers to affected countries. By the end of October, the ERCC, working in close collaboration with the Health Security Committee, chaired by the European Commission, and with WHO, had established a medical evacuation system for all international humanitarian staff, providing round-the-clock evacuations to specialised EU hospitals.

Some lessons to learn, some mistakes to avoid

Global humanitarian health governance urgently requires improvement, especially for disease outbreaks. This was recognised at WHO's Executive Board meeting in January, which adopted a resolution that included key measures for reform, including becoming fit for purpose in its humanitarian role; the more timely declaration of appropriate response levels to humanitarian emergencies; and a more extensive global public health workforce.

The Ebola crisis has led to the creation of additional global resources through the improved integration of civil protection and humanitarian aid. These now need to be better institutionalised within global humanitarian health governance. This is already under way, for example with EU Foreign Medical Teams for global deployment. The primary failing of the Ebola response was not lack of resources, but rather persistent weaknesses in utilising existing resources. In consequence, massive additional resources were needed, depleting resources for other humanitarian crises. One useful outcome has been an improvement in the synergies between civil protection and humanitarian assistance on an EU level.

Apart from the dramatic short- and long-term consequences of the Ebola epidemic for the countries most concerned and the West African region as a whole, the development of this crisis raises concerns regarding the concrete implementation of a range of concepts much

discussed in the humanitarian community, including Early Warning-Early Action, global reach and the functioning of the humanitarian architecture post the Transformative Agenda. The process leading up to the World Humanitarian Summit in 2016 should be used to learn lessons from an emergency which, although far less complex than other humanitarian crises, was not contained in time. The answer is not just

more resources, but first and foremost better governance of the resources that are available – including better synergies between humanitarian aid and civil protection.

Florika Fink-Hooijer is Director for Strategy, Policy and International Cooperation at the Directorate General for Humanitarian Aid and Civil Protection (DG ECHO).

‘To put out this fire, we must run into the burning building’: a review of MSF’s call for biological containment teams in West Africa

André Heller Pérache

On 2 September 2014, Dr Joanne Liu, International President of Médecins Sans Frontières (MSF), made an urgent appeal to United Nations member states to deploy biohazard containment teams to support the response to the Ebola epidemic in West Africa.¹ For MSF, this call was unprecedented since the biohazard response capacities of powerful states are typically a military capability developed in response to biological or chemical warfare, rather than epidemic control. Despite the strong consensus within MSF that led to this call, it was not without operational and reputational risks.

August 2014: an epidemic out of control

The Ebola outbreak in West Africa was on a scale never seen before. What began as an outbreak in a remote, rural region of Guinea in December 2013 had, by the summer of 2014, snowballed into a global security concern. In the Liberian capital Monrovia the disease was spreading rampantly, violent social unrest was increasing, contact tracing was impossible, healthcare workers were contaminated and dying in shocking numbers, surveillance was spotty and no spaces remained in overflowing case management centres. MSF’s resources were pushed beyond their limits; rather than proactively working on all pillars of the epidemic, as in past interventions, including contact tracing, safe burial and social mobilisation, field teams in Monrovia were only able to maintain a basic level of case management, and we feared that this terrifying situation could become a reality for an increasing number of densely populated urban centres.

Local capacities were not strong enough to face the crisis without substantial international support. Sierra Leone had just one doctor for every 50,000 people; Liberia had one for every 100,000. To make matters worse, healthcare workers were being infected (and dying) at alarming rates, further diminishing capacity and increasing stigmatisation and fear. Despite the World Health Organisation (WHO)’s (late) announcement of a ‘public health emergency of international concern’ and the elaboration of a regional response plan, a meaningful response was not forthcoming, and the epidemic left most aid agencies and donors

paralysed. In-house expertise to deal with an epidemic such as Ebola had not been developed in most agencies, and the slim margin of error and severe consequences of any mistakes, whether in running a case management centre or in doing any form of outreach work, meant that engaging in a meaningful response was well outside the acceptable risk norms within the sector. Most INGOs draw almost entirely from local capacities to do the hands-on work, but in this case more hands were needed alongside them, inside the high-risk zones, rather than facilitating or managing from a (safe) distance. Some other international agencies in addition to MSF had deployed, but the scale of the overall response was far short of the needs. Decision-making had to be quick and clear, operational models had to be direct and involved rather than simply empowering local actors to work, and the ensemble could not be weakened by unclear chains of responsibility or inflexibility in grant funding.

While the INGO- and donor-led Ebola response was scaling up, MSF estimated (more or less accurately) that the process would take around three months, during which time the epidemic might well have continued to expand. The world was in uncharted territory from an epidemiological perspective and, despite attempts at modelling, no one was able to project how catastrophic the situation might be in three months’ time. Essentially, MSF’s call for UN member states to deploy biological hazard containment teams was a last resort, in the hope of bringing about rapid and concrete action at the field level while aid actors and local authorities scaled up their response.²

The risks of calling for foreign military assistance

Militaries operate with independent logistical capacity and have field-deployable medical resources. They also have a strong command and control style of management and a culture of discipline, both of which are a tremendous advantage in maintaining rigorous standards of infection control. However, despite internal consensus on making the appeal for biohazard teams to help with patient

¹ The quote in the title of this article is taken from Dr Liu’s 2 September briefing to UN member states. See <http://www.msf.org.uk>.

² From an interview with Brice de la Vigne, Director of MSF’s Ebola Taskforce, Brussels, 3 February 2015.

treatment, many within MSF feared that the deployment of foreign troops would militarise the response. MSF is opposed to a security-dominated approach to outbreak response that favours the imposition of safeguards such as lockdowns and the use of force to compel compliance. Rhetoric the world over employed a conflict/military lexicon to describe the outbreak: ‘fighting’ the outbreak, ‘hunting’ the virus, healthcare workers on the ‘frontlines’ and so on. In Monrovia, a muscular, military-led quarantine backfired catastrophically, leading to violence, increased suffering due to lack of access to food, services and livelihoods and loss of trust in government-backed efforts to combat the epidemic; ultimately it may have amplified transmission rather than reduced it.³ If tactics such as quarantines were encouraged, defended by foreign troops, what rules would govern their use of force when imposing them? No framework exists within International Humanitarian Law, as there is no conflict under way in the most affected countries, although the use of force is specifically rejected in the Oslo Accords, which offer a framework for the use of military assets in disaster relief. In addition, we feared that our appeal would be misconstrued or taken as a call for armed intervention amid fears about the deteriorating security environment and state collapse. Regardless of how military assets would be engaged, how would they be perceived by locals? Negative perceptions proved harmful to the aid effort during the earlier stages of the response, and led to the murder of outreach workers in Guinea in September.⁴

Reputational risks for MSF were easily identified. Factors that could influence external perceptions of MSF ranged from how information about our appeal was used or understood to the consequences of what actually happened on the ground when or if military assets were deployed. In many conflict zones around the world, including in West Africa, international aid agencies are considered by some armed groups to be instruments or proxies of hostile states, and thus not neutral or impartial. Regional examples include northern Mali and Nigeria, both of which experienced outbreaks of Ebola. Our call for the deployment of military assets ran the risk of confirming false suspicions that MSF is part of a Western security agenda. This could have created even more barriers to access in conflict-affected areas. Beyond this, if military assets were deployed and had a negative and damaging effect, for whatever reason, MSF

³ ‘As Ebola Grips Liberia’s Capital, a Quarantine Sows Social Chaos’, *The New York Times*, 28 August 2014, <http://www.nytimes.com>.

⁴ ‘Ebola Outbreak: Guinea Health Team Killed’, BBC News Africa, 19 September 2014, <http://www.bbc.co.uk/news/world-africa-29256443>.



© UN Photo/Martine Perret

Burial team volunteers disinfect themselves in Conakry, Guinea

could be blamed for having called for them in the first place.

MSF always endeavours to keep a safe distance from the trend in the aid industry whereby security, state-building and stabilisation agendas are conflated with humanitarian relief efforts. Even in the event of a natural disaster, MSF can choose to maintain a strict distance from military-assisted relief efforts due to existing conflict in the area, drawing exclusively from its own internally developed technical and logistical capacity. Unlike the earthquake in Kashmir in 2005, where MSF benefited from the use of military transport to participate in a well-received aid effort, MSF refused to work directly with the military in the response to the floods in Pakistan in 2010 due to ongoing conflict between the government and Taliban forces in the region. If the military is seen to be successful in managing Ebola cases in West Africa, this may fuel popular support for their engagement in supporting humanitarian relief in situations of armed conflict, which may put both aid workers and aid recipients in the firing line of opposing forces.

What did these militaries do?

Following MSF’s call in early September, both the US and UK governments announced that they would support the epidemic intervention using military assets. Much to MSF’s disappointment – and the frustration of many military medics – their role was not as a care provider to the general population, but rather to provide support, coordination and logistics for INGOs and local authorities. Even the facilities that were built, supported and operated by the military for the treatment of local and foreign healthcare workers (which we had also asked for and which were greatly appreciated) were provided to help ensure that others could treat patients within the general population, rather than offering care themselves. In Liberia risk aversion, either within or imposed upon the

US military, led to inflexible and restrictive biosecurity protocols. For example, US helicopters would not assist in transporting laboratory samples, and would not transport healthy personnel back from areas where they had worked in treatment centres, meaning that the US military was actually more risk averse than the commercial airlines still operating in the region. Likewise, military vehicles were never used in a significant way for patient referral. In the end, even though formally under the auspices of USAID and the UK's Department for International Development (DFID), decisions, including on the use of personnel and assets, seemed to have been previously established at higher political levels, whether within the military or by politicians.

Informal discussions with military personnel at various levels suggest that our understanding of their biohazard containment capabilities was at least somewhat accurate, but ultimately it was unlikely that we would see the full extent of such resources given that any capacities developed for this kind of warfare would be highly classified. Perhaps fear of the political cost of something going wrong – for instance a soldier getting sick and dying, or deploying a specialised response force that might draw scrutiny – limited the use of resources and exposure to risk despite eagerness on the part of many soldiers to do much more. In the end, supporting activities remained the only option, and could equally have been performed by existing international aid agencies.

The real added value and unmet gap

While MSF's appeal for the deployment of biohazard teams was not met, the deployment of military actors was not without value or meaning. Essentially their engagement marked the symbolic beginning of the

deployment of a substantial international response, and seemed to help people understand that an intervention was under way. Providing treatment facilities with a European or US standard of care for healthcare workers also reassured international agencies, allowing them to offer stronger assurances about fulfilling their duty of care standards when deploying international personnel and local workers and authorities. In the case of Liberia, where a more serious security force was deployed (with stabilisation in mind), soldiers were not rejected, and people on the ground seemed reassured that help had arrived.

By late February 2015, positive trends had emerged in the region's struggle with the epidemic, as transmission rates and new cases decreased. MSF's fears about the possible negative consequences of the military presence did not seem to have materialised operationally, yet neither did MSF get what it asked for in making its appeal to use military resources to curb transmission in the earlier phase. As institutions, aid agencies and governments reconsider global health security and epidemic response, we must hold existing institutions to account and affirm that responses to epidemics can mobilise quickly and effectively, particularly in periods of crisis. When the story of the management of this epidemic is written, we need to view foreign military engagement critically and accurately, rather than simply assuming that their added value was a game changer in a material sense on the ground.

André Heller Pérache is Head of Programmes at MSF UK. This article draws heavily on discussions and collaboration with Brice de la Vigne (MSF Operational Director) and Seco Gerard (advocacy manager for Ebola).

Military medical innovation and the Ebola response: a unique space for humanitarian civil–military engagement

Josiah Kaplan and Evan Easton-Calabria

Military contributions have featured prominently in the international response to the Ebola epidemic in West Africa. Médecins Sans Frontières (MSF)'s public call for civil–military collaboration – a first for the organisation – has been echoed across the wider global public health community, and a variety of agencies have stated the need for military logistics, communications, planning and coordination capacities. In response, several countries have sent military deployments to West Africa. The US has committed 2,900 troops and military equipment to Liberia in order to assist in the construction of treatment centres and provide medical expertise. On 8 October 2014 the UK pledged 750 military personnel to Sierra Leone to establish treatment centres and an Ebola 'training academy' for medical practitioners.

Critically, these military forces are working alongside both international humanitarian and national medical staff. The

US military, for instance, committed to training 500 local Liberian healthcare workers each week in Ebola prevention, containment and treatment. The Kerry Town Treatment Centre, an 80-bed facility built by the British military in Sierra Leone, was handed over to Save the Children but houses an additional clinic managed by the UK Military of Defence to treat local and international healthcare workers.

The scale and immediacy of such direct coordination between military and humanitarian actors represents an extraordinary – and, to some, extremely controversial – evolution in civil–military coordination (CIMIC) during emergency humanitarian operations, and has sparked important discussions around the implications of military collaboration within the medical humanitarian space.¹

¹ K. B. Sandvik, 'Ebola: A Humanitarian Crisis or a Crisis of Humanitarian Governance?', HPN blogpost, <http://www.odihpn.org>.



© Staff Sgt. Christopher Hubenthal/US Air Force

A combat medic helps a student don personal protective equipment during training

Although direct operational coordination between humanitarian and military actors is on prominent display in the West African response, a particularly interesting aspect of CIMIC has gone largely unnoticed: namely that humanitarians are actively drawing from key innovations in military medicine to combat the spread of the disease. The Ebola emergency response offers interesting examples of how military-derived scientific knowledge and product innovations related to infectious disease control can be adapted to medical humanitarian practice. This diffusion of military scientific knowledge and products highlights a distinct and under-explored area of active humanitarian-military engagement, and one that may hold potential for further exchanges of innovations valuable for medical humanitarianism.

Military medical innovations

The history of warfare is intrinsically tied to military medicine's struggles against disease and trauma, and militaries around the world have historically devoted significant resources to infectious disease control and biomedical R&D as aspects of force protection. The massive size and scale of military investment in the development of new medical innovations, and the large supporting biomedical R&D infrastructures of several major militaries, have in turn provided generations of medical knowledge, products and processes with applications far beyond the military sector. These include many scientific breakthroughs with direct applicability to medical humanitarian operations.

US military drug research alone has made major contributions to the discovery and development of vaccines

for a range of communicable diseases, including equine encephalitis, meningococcal meningitis, adenovirus respiratory disease, Rift Valley fever and anthrax, as well as leading experimental vaccine candidates for malaria and HIV/AIDS.² In parasitology, key US military contributions include foundational epidemiological research into, among others, schistosomiasis, trypanosomiasis and gastrointestinal parasites.³ US military researchers have also been responsible for establishing the efficacy of the anti-malarial drugs Malarone, primaquine and weekly tafenoquine, and the development of DEET and permethrin.⁴

US military medicine in the Ebola response

Much of the current knowledge of Ebola comes directly from the US military, which prioritised research into the virus as a result of bioterrorism and bio-warfare security concerns long before the current outbreak. One major output of US military biodefence R&D into Ebola is the drug ZMapp, which at present is the leading global candidate for a potential Ebola treatment. ZMapp is a direct result of efforts by the US Army Medical Research Institute of

2 A. Artenstein, 'History of US Military Contributions to the Study of Vaccines against Infectious Disease', *Military Medicine*, 170 4(3), 2005.

3 N. Crum et al., 'History of US Military Contributions to the Study of Parasitic Diseases', *Military Medicine*, 170 4(17), 2005.

4 L. Kitchen et al., 'The Role of the United States Military in the Development of Vector Control Products, Including Insect Repellents, Insecticides, and Bed Nets', *Journal of Vector Ecology*, 34(1), 2009; J. Peake et al., 'The Defense Department's Enduring Contributions to Global Health', Center for Strategic and International Studies, <http://csis.org>.

Infectious Disease (USAMRIID) and the US Defense Threat Reduction Agency, in partnership with the Public Health Agency of Canada, which together have supported two pharmaceutical companies, Mapp Biopharmaceutical and Defryus, Inc, in the development of the drug for years.

ZMapp remains the front-runner candidate for further Ebola treatment, although a trial in Switzerland was recently put on hold. The drug was successful in treating several Ebola patients, and a clinical trial may soon commence in West Africa. Several other potential Ebola treatments – including TKM-Ebola, AVI-7537 and the GSK/NIAD Ebola vaccine – are also outputs of USAMRIID-supported development by the pharmaceutical industry. Indeed, at the time of writing efforts to develop vaccines and experimental treatments for Ebola currently rely more on US government funding and innovation than they do on the private pharmaceutical sector.

Several new products currently in use as part of the Ebola response also offer examples of medical technologies with military roots. One is the FilmArray BioThreat Panel, a rapid-test Ebola screening kit currently used by US military medical staff on deployment in West Africa and in US hospitals. The kit was initially developed through a Defense Department-sponsored competition to elicit next-generation diagnostic systems for infectious disease. The winners, BioFire Diagnostics, received a \$240 million contract from the Defense Department to support the kit's development.⁵ Likewise, product testing of a new antiseptic skin product, Provodine, was provided over the last four years at USAMRIID and is now being deployed by the US Army and provided to healthcare workers and emergency responders at risk of contracting Ebola in Liberia.⁶

Another area of medical technology led by US military research are mobile health platforms, also called mhealth, which utilise networked technologies to track and report health emergencies. These have proven particularly valuable in the fight against Ebola. Often in the form of smartphone applications, mobile health platforms collect, share and manage data for research and remote patient management. The Nigerian government has credited mobile health technology with helping to contain an Ebola outbreak in Nigeria, with Minister of Communication Technology Omobola Johnson noting that mobile phone systems 'helped in reducing reporting time of infections [related to Ebola] by seventy-five percent'.⁷

Mobile health platforms, in turn, belong to a broader category of telemedicine technologies which are a result of advances in military R&D. For example, the US Army Telemedicine and Advanced Technology Research Center

(TATRC) developed the Global MedAid Engagement Toolkit for health data collection and training. It is currently undergoing field testing in West Africa as part of the US Ebola response. The toolkit integrates mobile learning, foreign language machine translation and mobile data collection into a service available on mobile phones. It is intended to support troops deployed in humanitarian disasters, and could potentially be adapted for humanitarian use.

Opportunities for military–humanitarian innovation exchange

These examples demonstrate a distinct form of interaction between military and humanitarian actors that is rarely discussed within the traditional CIMIC debate – the exchange of innovative dual-use products and processes developed by militaries and employed for humanitarian practice. How militaries manage the R&D cycles that lead to innovations, and how these strategies differ from traditional humanitarian approaches to R&D and industry, are themselves important areas of comparative study that hold learning opportunities for improving humanitarian practice.

This point is especially pertinent to recent efforts to improve the humanitarian sector's capacity to find innovative solutions to current and emerging challenges in the delivery of aid. While the value of engagement between humanitarians and non-traditional players in the humanitarian space, such as private sector actors, is becoming better recognised in the 'humanitarian innovation' debate, the military has not been seriously considered for study or engagement, critical or otherwise. Military medical innovations and their relevance in humanitarian work are evidence of the value of examining this engagement further. The Ebola response demonstrates an unprecedented recognition of the military's potential in medical humanitarianism; as Julie Fischer, an expert on infectious diseases at George Washington University, says: 'What we've already seen is a sea change in the receptiveness of many international health workers to military engagement'.

West Africans quickly adopted a cautious new way to greet each other in the midst of the current outbreak – the elbow-to-elbow 'Ebola handshake'. It is an apt metaphor for any attempt to explore learning engagement between military and humanitarian actors around the theme of innovation. Like any other aspect of CIMIC, established core humanitarian principles must be preserved. Nonetheless, examples of military-derived scientific knowledge and infectious disease control innovation within the medical humanitarian Ebola response demonstrate that exploring innovation in the military world holds real potential for advancing humanitarian innovation and expanding the range of tools that humanitarians can utilise during crises. Understanding how the military and humanitarians already exchange knowledge is an important first step towards this goal.

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5 P. Tucker, 'The Military's Ebola Screening Machine Just Got Approved for US Hospitals', *Defense One*, 16 October 2014, <http://www.defenseone.com>.

6 Microdermis, 'US Army Adopts and Deploys Provodine From Microdermis to Fight Ebola', Press release, Microdermis Corporation, 2 December 2014, <http://www.microdermis.com>.

7 E. McCann, 'WHO Credits mHealth App with Helping Nigeria Get Rid of Ebola', *mHealthNews*, 24 October 2014, <http://www.mhealthnews.com>.

Ebola and humanitarian protection

Clea Kahn

Over the decades, the international community has confronted a wide variety of humanitarian emergencies. We have slowly but surely built up a body of knowledge to improve the delivery of lifesaving assistance in some of the most challenging environments. Best practice has been documented, sector-by-sector, in the form of papers, guidelines and checklists. This body of information includes the recognition that every humanitarian emergency, regardless of its cause, creates new vulnerabilities and puts those already vulnerable – often women, children, older people and people with disabilities – at heightened risk: children orphaned or separated from their families – tick; disruption or breakdown of traditional, social or political systems that regulate behaviour – tick; lack of or discriminatory access to critical services – tick; elevated risk of gender-based violence, including sexual assault, sexual exploitation and abuse and transactional sex – tick, tick and tick. All of these indicators were present in the countries affected by Ebola in West Africa, but the boxes remained empty because the checklists were never even taken out. In the series of reviews, studies and evaluations that will certainly be conducted organisationally and systemically following this crisis, it is vital that we ask ourselves why.

Protection in the context of Ebola

All humanitarian crises – Ebola included – emerge or unfold in the context of complex societies. In doing so, they may exacerbate existing vulnerabilities and expose new ones. Ensuring that protection for the most vulnerable – particularly women and girls – is part of assessment and response in humanitarian contexts is a UK priority. What follows are the findings of a very rapid and informal assessment of protection concerns conducted as part of the UK response to Ebola in Sierra Leone in October 2014.

First, unaccompanied and separated children were not systematically identified. In some cases children were taken in by family or community members, but fear and stigma meant that these community coping mechanisms played less of a role than they might have done in a different type of emergency. The government and concerned organisations were involved in family tracing and reunification, but capacity did not meet the level of need. Moreover, there was very little follow-up on the well-being of children once they had been placed with carers.

Second, restrictions on movement, including health checkpoints and quarantine, created opportunities for abuse of power and/or (sexual) exploitation and abuse. Vulnerability to such abuses was potentially exacerbated by inconsistent levels of assistance to families placed under quarantine. Specific protections were not consistently provided to female- or child-headed households.

Third, transportation, isolation and treatment services for people infected or suspected of being infected by Ebola were not adapted to accommodate the most vulnerable: there was a lack of dedicated caregivers for children, there were few

facilities accepting pregnant women and no facilities were adapted to cater for people with disabilities or older people. Pressure on all of these services also meant that even basic measures to preserve the safety and dignity of patients were often not possible, such as separating men from women and children from adults. Observational interim care centres (OICCs) designed to care for unaccompanied children during the 21-day quarantine period took a long time to establish, and the lack of alternatives meant that on some occasions healthy children were admitted to Ebola treatment centres with their mothers. Rumours were rife of sexual activity, including sexual violence, in treatment centres, particularly in areas where survivors were convalescing.

Fourth, school closures and enforced proximity of family members increased the likelihood of abuse in the household, and the breakdown of existing programmes and services meant reduced avenues for reporting, referral and response to these issues, as well as other forms of gender-based violence.

The challenge of detecting and responding to protection issues was made more difficult because systems were not put in place early or were not integrated throughout the entire response. Even basic measures, such as disaggregation of data by sex and age, were not routinely taken, or the information was not shared in such a way that it could effectively inform the response.

As the cluster approach was not activated, humanitarian coordination was not rolled out in the usual configuration. Coordination was led by the Sierra Leonean government through the National Ebola Response Centre, which did include a child protection and psychosocial pillar. At the time of the assessment, however, it was largely ‘siloes’ and protection issues were not adequately or systematically integrated into other pillars of the response. For example, excellent things were done by organisations working with people with disabilities to ensure that Ebola messaging reached vulnerable groups, but their engagement did not extend to other pillars, so transport, treatment and quarantine often failed to take special needs into consideration.

Operational coordination mechanisms took some time to roll out, but eventually District Emergency Response Centres (DERCs) connected the alert system with ambulance services, treatment referral, quarantine and burial teams for a more fluid response. Again, however, protection was not incorporated from the outset, and as a result the system had to be retrofitted to incorporate a separate desk to handle protection concerns. Once this was in place, it allowed for detection and referral of cases and, importantly, provided the first real capacity to quantify the scale of protection needs.

There have been few opportunities for Sierra Leoneans to lodge complaints or express concerns about the Ebola response. Many of the measures that were taken were top-down, and while social mobilisation efforts aimed to



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A girl in Paynesville, Liberia

help the population understand the need for quarantine and isolation, feedback could not be systematically relayed to inform the response or address problems as they arose. It remains to be seen whether reports will emerge of widespread sexual exploitation and abuse as a result of restrictions on movement. What is certain is that, if this has been taking place, there has been no way to report it and no course of immediate redress for victims.

The evolution of the Ebola response

In attempting to understand the role of humanitarian protection in the response to the Ebola outbreak, it is important to look at how the response evolved. The 2014 outbreak occurred in ideal conditions to foster its spread. Previously unknown in West Africa, governments and communities were not expecting it, nor did they have the knowledge or systems to cope with it or curb its spread. In all of the affected countries, struggling health systems were further weakened by the toll that the disease took on their staff. It was clear that the critical issue was to stop the transmission of the disease, but there were several barriers. International specialist health agencies such as the World Health Organisation (WHO) and the Centers for Disease Control (CDC) possessed a good technical understanding of how to tackle the disease, but lacked experience in mobilising an effective humanitarian response. By contrast, humanitarian agencies, with the exception of Médecins Sans Frontières (MSF), lacked the medical and public health experience to confront the disease directly. Moreover, the humanitarian system overall was severely overtaxed, coping with several concurrent acute (Level 3) emergencies. Into the breach stepped a wide range of new mechanisms and actors: national and foreign militaries; foreign medical teams and private health actors; and the first-ever UN emergency health mission, the

UN Mission for Ebola Emergency Response (UNMEER). As these new actors scaled up, some traditional humanitarian organisations stepped in, first tentatively, and then with increasing confidence.

To their great credit, many humanitarian organisations took on roles in the Ebola response that they would never have anticipated, including high-risk tasks such as providing treatment, safe burials and contact tracing. With so many organisations working in such an unfamiliar area it is perhaps unsurprising that opportunities to mainstream protection were missed. Meanwhile, a substantial amount of the response was being implemented by organisations with limited experience in humanitarian contexts, and for whom protection would not necessarily be a key issue. Indeed, it seems likely that one of the main factors that led to the weakness of protection in the Ebola response was that it was launched and led with a public health approach, by actors whose professional grounding does not include protection as understood by humanitarians.

Whilst public health and humanitarian assistance often meet in situations of emergency, their aims are subtly different. Humanitarian action focuses on saving lives, alleviating suffering and restoring dignity; it addresses the consequences of the emergency, but generally does not attempt to address the cause. Public health responses, on the other hand, are targeted at preventing or arresting the cause itself, generally addressing directly only those consequences with a bearing on health.

The primary aim of most actors in the response was to reduce transmission of Ebola to zero. The objectives identified by UNMEER provide a good summary of how this played out in terms of priorities: to stop the outbreak; treat the infected;

ensure essential services; preserve stability; and prevent further outbreaks.¹ It is a solid approach that has certainly helped push towards the aim of zero cases, but there is a crucial gap: it fails to put the dignity and humanity of the affected community at the centre of the response; fails to look at the social and cultural context of the crisis; and fails to look at the humanitarian consequences of the outbreak.

This is not to suggest that public health and humanitarian approaches are mutually exclusive. Indeed, the more the two are blended, the more likely we are to attain the goal of zero cases. Unless we apply the learning that the humanitarian community has painstakingly built up about how to make people safer, however, success will remain elusive.

Challenges and opportunities

The challenge of Ebola has resulted in a unique response, both from affected countries and the international community. This has resulted in some very creative and innovative thinking. It has also highlighted where more is needed. One key issue that arose in the Ebola response is the importance of early funding for protection activities. UK funding to UNICEF in July 2014 allowed for the development of a child protection strategy and the basis for important activities like family tracing and reunification. As the situation evolved, there was a greater understanding of the particular vulnerabilities created by the crisis, necessitating new approaches and types of programming. One example is observational interim care centres (OICCs), developed to provide shelter and care to children exposed to Ebola until the 21-day quarantine period had elapsed and homes could be found for them with their families or communities. In another example, to facilitate the identification and referral of people at risk protection desks were integrated into District Ebola Response Centres.

¹ UN Mission for Emergency Ebola Response: <https://ebolaresponse.un.org/un-mission-ebola-emergency-response-unmeer>.

The response is still evolving and there are still opportunities to integrate lessons learnt and remedy deficiencies. Indeed, it is only in recent months that we have seen discussion of sexual violence during the epidemic² or attempts to quantify the scale of child protection concerns.³ In the coming months and years there will be a tremendous need for healing and recovery in Ebola-affected communities. Communities will need to mourn those they have lost, but also come to terms with the toll that stigma and rejection has taken on relationships. Mechanisms should be put in place to facilitate reconciliation and reintegration, provide safe spaces to disclose abuses or violations and ensure effective support to survivors of both Ebola and violations.

In December 2013, the Inter-Agency Standing Committee Principals made a ground-breaking statement recognising that protection 'must be central to our preparedness efforts, as part of immediate and life-saving activities, and throughout the duration of humanitarian response and beyond'.⁴ Just as we cannot wait for a conflict to end or every aftershock of an earthquake to cease before we start protection activities, we must think about wider vulnerabilities and potential rights violations immediately. Just as we have struggled to integrate or mainstream protection into situations of conflict or natural disaster, we must now ensure it is at the core of large-scale public health responses.

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² 'Sex Crimes Up amid Ebola Outbreak in Sierra Leone', IRIN, 4 February 2015, <http://www.irinnews.org>; 'Report: Ebola Is Leaving Women and Girls Vulnerable to Sexual Violence', *publichealthwatch*, 12 January 2015, <https://publichealthwatch.wordpress.com>.

³ UNICEF, 'More than 16,000 Children Lost Parents or Caregivers to Ebola – Many Are Taken into the Communities', 6 February 2015, <http://www.unicef.org>.

⁴ 'The Centrality of Protection in Humanitarian Action, Statement by the Principals, Inter-Agency Standing Committee, 17 December 2013', <http://www.humanitarianinfo.org>.

The Ebola crisis and the Sierra Leone diaspora

Chukwu-Emeka Chikezie

The Ebola epidemic in West Africa exacted an especially heavy toll on Guinea, Liberia and Sierra Leone. According to the World Health Organisation (WHO), the death toll across these three countries had exceeded 10,000 by early March 2015, a year and three months after the first index case in December 2013. There is near-consensus that individual governments and the international community were slow to realise the significance of the outbreak and mobilise a response; indeed, Médecins Sans Frontières (MSF) was criticised in April 2014 for crying wolf when it warned about the seriousness of the looming crisis. Much has been said about all these failings, and hopefully lessons can be learned.

One aspect of the crisis that perhaps deserves more serious attention is the role that diasporas from the

affected countries played in the response. Over the last 20 years or so awareness of how diasporas involve themselves in the development of their countries and regions of origin has grown. Today, such involvement in development or humanitarianism is taken for granted. The Ebola crisis is no exception. Focusing on Sierra Leone, this article examines the roles diasporas have played in the crisis, to what end, and whether they have been able to maximise the impact of their efforts.

What do we mean by African diasporas?

African diasporas are a diverse group. Typically, they are people who can trace their ties back to some country or part of Africa either in the recent historical memory of their own family (because they or their parents or grandparents



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Mohamed Koker, an emergency doctor in London, was born in Sierra Leone and went back to the country to help fight Ebola

or more cultures, and may thus be able to help countries of origin engage meaningfully with the rest of the world, or assist host country nationals to navigate their way in the origin country environment. Finally, we might also think of diasporas as deploying social capital through trust networks, relationships and kinship links. Typically, these resources operate in composite form, with two or more combining to give meaning to diasporas' intentions.

Diasporas organise themselves along a variety of lines. Hometown associations are an important feature of diaspora life. For instance, during the early days of the Ebola crisis in Sierra Leone, diaspora descendants from Kailahun, a district in the east of country that shares a border with both Guinea and Liberia, were among the first not only to raise concerns but also to send material support back home. Diasporas also organise along professional lines. One

were born there), or further back in their ancestry. What distinguishes a particular location's diaspora is a shared sense of connection to and identification with that place of origin (which might be a region, a country or the whole African continent) and often, though not necessarily, a desire to see that place develop. We use the term diasporas in the plural to emphasise the diversity of people who identify themselves as, say, part of the Sierra Leonean diaspora. 'The diaspora' sometimes connotes a degree of homogeneity that is more imagined than real.

How diasporas engage

We can think of diasporas as deploying a range of resources in the service of development or humanitarian relief. One resource is financial capital, often in the form of remittances, but also in investment capital or even the capital that diasporas spend to purchase goods and services from their countries of origin. Intellectual capital includes the brainpower that diasporas are able to deploy, leveraging their skills and know-how for development. While we used to hear a great deal about brain drain, these days we are just as likely to hear about brain gain or brain circulation as diaspora brains return temporarily, permanently or virtually (for instance through electronic networks) to strengthen knowledge production in their countries of origin.

Diasporas can also deploy political capital in the form of advocacy for or against their countries of origin, for instance by lobbying their host country or tackling policymakers in their countries of origin. Cultural capital also comes into play: through the mix of home and host country experiences, diasporas often bridge two

example of this is Sierra Leone Action (SLA), formed by Sierra Leonean physicians and other professionals living mostly in North America.¹ In some cases, long-established diaspora organisations find renewed vigour as a result of a crisis such as Ebola. The National Organization of Sierra Leoneans in North America (NOSLINA), formed in May 1998, was re-energised by the Ebola crisis. In London, the Sierra Leone UK Diaspora Ebola Taskforce (SLUKDERT) was formed in September 2014 after two 'town hall' meetings for Sierra Leoneans called by the High Commissioner to the UK. Diasporas also operate through almost invisible informal networks and as individuals. Indeed, when it comes to diaspora effort, informal networks and individuals may do the bulk of the heavy lifting despite the attention that formally constituted and more visible groups garner.

Diaspora innovation

SLA was formed in August 2014 with a vision to tackle Sierra Leone's Ebola epidemic through the introduction of convalescent serum therapy (CST).² The organisation secured the necessary approvals for CST use in Sierra Leone, and the US company Fresenius Kabi donated nine Fenwal Autopheresis-C instruments (these devices extract Ebola survivors' plasma and return other blood components to the donor, so donors are not left as denuded

1 http://www.saloneaction.com/#!about_us/csgz.

2 CST involves the transfusion of plasma from Ebola survivors to help current patients increase antibodies that can boost immune systems to fight the infection. Although used during the first Ebola outbreak in 1976 and subsequently, including in the latest one, its efficacy is as yet unproven, though many of the US medical professionals infected by Ebola received CST treatment, and all were cured.

of nutrients as with methods that do not return other blood components).³ SLA secured other essential equipment from other donors. On the ground in Sierra Leone, through partners, SLA identified and pre-screened Ebola survivors willing to donate plasma for CST. The organisation also raised funds to pay for training, additional equipment and clearing fees to get goods through customs in Sierra Leone.

On paper this looked like an innovative, ground-breaking project with significant prospects. The nine machines are in Freetown, the capital, and the regulatory approvals have been granted. Yet the machines remain unused, no donor plasma has been extracted and no Ebola patient has benefited from CST. Why? It seems clear that SLA was able to mobilise significant intellectual capital, drawing as it did on a membership with notable medical expertise. SLA was also able to mobilise some of the financial capital needed to see the project through, and there is every reason to believe it could have secured more. To the extent that it was able to persuade Fresenius Kabi to donate nine machines suggests that its members had built up significant social capital in their host locations.

The supply side, then, looked reasonably strong. But what about the demand side? It is no secret that Sierra Leone's Ministry of Health and Sanitation was operating on the Ebola frontline and its officials were busy, even overwhelmed, and may have lacked the space to engage constructively with SLA around this innovative project. Although SLA worked with partners and representatives on the ground, it did not have the substantive operational presence that would have enabled it to get its views across during meetings in Freetown. More importantly, it lacked the social and political capital to effect change and push its proposals through. A deeper presence on the ground would have enabled SLA to understand the local context and the underlying factors, including perverse incentives and self-interest, driving decision-making.

The environment for diaspora initiatives like SLA's is anything but enabling. The government of Sierra Leone established an Office for Diaspora Affairs (ODA) inside the Presidency in 2007 to facilitate diaspora engagement in the country's development. Sadly, the ODA seems to be moribund, or certainly ineffective. Sierra Leone lacks a diaspora policy, though the Ministry of Political and Public Affairs has declared its intention to develop one. If implemented well (it would almost certainly entail an overhaul of the ODA), such a policy could make the difference.

With the epidemic on the wane, though stubbornly still present in Sierra Leone (and Guinea), the moment for CST to have a major impact on this particular outbreak may

³ SLA initially used advocacy to argue for use of CST in battling the epidemic, and a blog article and petition called on the US Food and Drug Administration to expedite trials into drugs and vaccines.

have passed. However, the wider significance of the SLA initiative should not be lost. First, a positive spill-over from CST would have been to help Sierra Leone strengthen its overall blood transfusion system, which offers wide medical and public health benefits. This was one of the reasons why the World Health Organisation (WHO) supported CST. But beyond Ebola and CST, SLA represents an important resource for Sierra Leone as the country sets about rebuilding its battered healthcare system, robbed by the disease of some of its most experienced medical professionals. While CST may have been SLA's first offering, there is much more that this group, and others like it, could offer the country. If no crisis should go to waste, then Ebola should be an opportunity to reengage Sierra Leone's diasporas in strengthening the healthcare system.

Conclusion

When it comes to helping countries ravaged by the world's worst-ever Ebola epidemic get to zero cases and resuscitate their battered healthcare systems, economies and societies, their diasporas represent a vital resource. There is work to do on the supply and demand sides and the enabling environment. Diasporas, countries of origin, host countries (particularly where these are developed countries) and the broader international system all have their work cut out.

While slow to realise the significance of the Ebola epidemic, the international community did eventually mobilise a significant effort in Guinea, Liberia and Sierra Leone. Yet a surprising omission in the strategies that international organisations and supporting countries have deployed is a proactive approach to helping affected countries tap their diasporas, even though in each case diasporas have agitated to do as much as they could. Certainly, diasporas have found ways to work with various elements of the international community and make their own contributions to the Ebola fight. But there has been no comprehensive approach by any of the major actors to think through creatively how they might mobilise diaspora resources as an integral approach to their intervention strategies. Perhaps this is because large-scale humanitarian efforts generally tend to stifle or snuff out local initiative and capacity, especially in the early parts of interventions when there is a heavy international presence, often accompanied by distrust of local institutions (the limitations of which may have been part of the systemic failures that led to the crisis or its spread). It may also just be that the international system isn't yet set up to seriously consider the potential contribution diasporas can make to humanitarian efforts and development.

As Ebola-ravaged countries turn their attention to early recovery and development, now is the time for diasporas, origin and host countries and international actors to revisit their strategies and find new ways of working.

Chukwu-Emeka Chikezie is the Director of Up!-Africa Ltd.

A bottom-up approach to the Ebola response

Catherine Meredith

Because we see our people, our brothers, speaking our language, we can believe what they say

Female focus group respondent,
John Thorpe Community

The Ebola crisis in West Africa was the defining humanitarian crisis of 2014 for Oxfam, and arguably for the humanitarian community at large. As the number of Ebola cases escalated, Oxfam – as a WASH agency in what was initially considered a medical emergency – struggled to find a constructive role. More needed to be done on prevention, so Oxfam decided to focus on Ebola prevention activities with community health volunteers in Liberia and Sierra Leone. In both countries, Oxfam had been working with communities through its WASH programming. In the Ebola response this was complemented by partnerships with medical agencies in the construction of WASH facilities for treatment and community care centres.

The importance of social mobilisation

Social mobilisation, building the capacity of affected communities to prevent and manage Ebola, is critical to increasing trust and confidence in outbreak control mechanisms, and consequently to breaking the chain of transmission.¹ Community involvement in the planning

and setting up of Ebola management centres is key to early referral. This is a two-way process: actors involved in the response need to listen to communities and respond to their needs, and adapt their interventions and services accordingly. In Liberia and Sierra Leone Oxfam has built on existing WASH programmes and participatory approaches to promote prevention, early referral and safe burials, in consultation with community influencers such as religious leaders, traditional healers, women's leaders and youth groups, actively engaging all community members in the development of their own response plans.

Community health committees in Sierra Leone

In Sierra Leone Oxfam is helping communities to form Community Health Committees, 821 of which are operating in the four districts where the agency is present. Working with Oxfam, the District Health Management Team and District Ebola Response Coordination, committees have identified barriers to effective prevention, case management and safe burials, and have drawn up action plans to overcome them. Barriers range from practical needs, such as fuel for ambulances and water access for quarantined households, to high-risk behaviours based on the belief that bathing in salt water can cure Ebola, or the practice of washing and touching dead bodies in preparation for burial.



Oxfam Community Health Workers in Freetown, Sierra Leone

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¹ According to the UN Mission for Ebola Emergency Response (UNMEER): 'areas exhibiting most success in reducing and eliminating the incidence of Ebola have been those where the local community

has become educated and actively engaged'. UNMEER, *Making a Difference: The Global Ebola Response: Outlook 2015*, <http://ebolaresponse.un.org>.

Case study: the John Thorpe Community

The John Thorpe Community in the Western Area in Sierra Leone was badly affected by Ebola. Women from John Thorpe told Oxfam that, at the peak of the outbreak, ‘responders’ took people away and passed on messages about Ebola, but did not ‘build’ anything with them. They received no information once someone had been taken, and were simply left waiting. Living in fear, many of these women and their families suspected witchcraft had caused Ebola as they ‘had no other explanation’.

We lost 141 people, 141 brothers, sisters, children and parents. Everyone has lost someone ... They left and never came back, without information on what happened.

Female Community Health Committee member who lost three children to Ebola, John Thorpe, Sierra Leone

Oxfam began working in John Thorpe in November with the formation of 20 community health committees. The committees fed into the plans for a community care centre in John Thorpe, to be constructed by Oxfam and run by the International Rescue Committee (IRC), and spent over a month persuading the community to accept the construction of the centre. This was done through discussions, meetings and drama performances that took villagers through their Ebola story and helped them to understand the benefits of having a community care centre. The centre was built such that community members could visit and see their family members from a safe distance, and community members were invited to attend an opening ceremony.

In January, with the community care centre open, Oxfam helped committees and their communities to begin referring people to the centre. Communications training was provided for the committees to increase their confidence in communicating effectively with their neighbours, developing positive ‘kangosa’ or gossip (informal chats where ways of supporting the sick were discussed). One committee member told Oxfam: ‘You cannot visit just once, we are there, every day, so they will change [their high-risk behaviour] slowly, because I am always there’. IRC medical staff provided further training on Ebola case identification, and committee members began identifying people who might be ill and referring them to the community care centre. At the time of writing, 40 people had been referred to the centre and, although many of them had malaria and none tested positive for Ebola, their willingness to go to the centre was a major step forward in terms of community confidence in making referrals. Women from focus groups in John Thorpe told Oxfam that the centre had made them feel safer. They spoke of people surviving and leaving the centre: ‘It was the first time we saw people discharged, they were coming home ... The health centre encourages us to go with any symptom and that is how we stay safe’.

Active case finding in Liberia

In Liberia, the Ebola outbreak has been concentrated in the urban areas around Monrovia. Oxfam was the first agency to adopt the active case finding approach often used for

cholera outbreaks as part of its Ebola response. This has taken place in three phases, as cases have declined: initial blanket household-level visits across target communities; hotspot targeting and the verification of ‘voids’ to check whether these were truly Ebola-free; and finally individual case investigation.

The first phase began in November when Oxfam staff and volunteers visited households in New Kru Town, Clara Town and West Point in a large-scale, intensive and targeted approach, reaching 350,000 people a week with repeat visits. This led to the discovery of several hotspots which the local coordinating body, the Ebola Task Force, was unaware of. In the second phase field officers used a GPS app to record the coordinates of referrals, which were plotted on google maps and colour-coded, with referrals in green, negative cases in yellow and positive cases in red. Areas with no referrals triggered extra supervision to understand whether the Oxfam teams were being accepted by the community. Hotspots triggered increased supervision to refer and isolate cases and contain Ebola in the immediate area. In December 2014, Oxfam referred 27% of national confirmed Ebola cases, including 45% of cases in Monrovia and 90% in the three townships areas, New Kru Town, Clara Town and West Point. At the time of writing, 94 people had been referred to Ebola Treatment Units by ambulance, with 23 positive cases confirmed and a further 11 unconfirmed by the Ministry of Health.

Active case finding only worked because of the trust which community health volunteers and Oxfam staff had built up with communities. Case finding was combined with prevention and awareness-raising about Ebola and efforts to encourage people to seek treatment for any health problems, re-establishing trust in the health system where previously there had been fear that everyone would be treated as an Ebola patient. Consequently people began self-referring for a range of health issues.

Oxfam worked with families to ensure effective referral of potential Ebola cases. This meant talking through what would happen to them, explaining why it was important to seek early treatment and presenting options about where to go and how to get there. For example, some sick individuals were more willing to go for referral if the ambulance arrived quietly without the sirens on. One Ebola survivor from Doe explained that he was scared of going for Ebola testing, but ‘the Oxfam team encouraged [his] family’. An Oxfam volunteer called for an ambulance and the team followed up the case, so that when his wife and brother became ill they too were referred in the early stages of illness. All three survived.

Strengthening the referral pathway through the Ebola Task Force and on to Ebola Treatment Units was a critical factor in securing early referrals. Oxfam teams made follow-up calls to treatment centres on behalf of families to find out about their relatives and to ensure that ambulances arrived. Oxfam liaised between the service providers and the communities, talking to communities about the kind of treatment they could expect to receive and feeding back community concerns to improve the referral process.

Successes and challenges

In both Sierra Leone and Liberia Oxfam has drawn on its experience of working with communities in emergencies, seeking and responding to their feedback and adapting the programme in line with it. However, there have been significant challenges in terms of coordinating social mobilisation activities in a context where multiple agencies are active in the same communities, each with their own way of working. In Sierra Leone, for example, the Social Mobilisation Pillar (SMP) is the largest of the programme implementing platforms, with more than 40 international and national members. The SMP, an umbrella structure led by the Ministry of Health and co-chaired by UNICEF, provides a forum for agencies working with communities to contribute at national and district meetings. Oxfam is an active member of the SMP, both in Freetown and in the districts where it operates, and supports the SMP's activities. For example, in hard-to-reach locations of Koingadugu Oxfam facilitates the SMP's field activities because it is the only organisation that covers the entire district through community health committees.

Some of the areas where Oxfam worked were geographically remote, so setting up operations was logistically difficult. In terms of staff capacity, Oxfam has also needed to be flexible in order to maintain relationships with communities in areas where the outbreak was established, while being mobile enough so that teams could be deployed quickly to hot spots in new areas as the virus spread.

Active case finding added an important proactive element to social mobilisation by identifying cases and connecting communities with service providers. This was particularly important where contact tracing methods were insufficient, for example with groups such as taxi drivers and drug users, who may be unable or unwilling to disclose all contacts. In Sierra Leone, actively involving community members in the development of their own prevention and protection approaches has built trust within and among

communities and increased people's willingness to refer themselves and seek treatment.

Active listening groups are being set up to enable Oxfam to respond to the suggestions and concerns of communities and to explore the contribution communities believe health committees have made to reducing Ebola transmission. More in-depth research is being carried out on community attitudes towards seeking treatment in case of illness.

Going forward

Ebola is not over, and Oxfam is continuing its emergency response, while transitioning into longer-term programming. This includes rehabilitating and improving WASH facilities in schools in Sierra Leone and Liberia and working with children, parents and teachers to help them stay alert to the threat of Ebola as they begin to recover and return to normal as the outbreak subsides. Oxfam's recent report *Ebola Is Still Here* shares feedback gathered from communities about their needs and hopes for the future. One theme that has emerged is that people want to see community health committee activities continue. Improved hygiene practices and water and sanitation facilities, along with active community organisation to prevent disease, should help make communities in Liberia and Sierra Leone more resilient against future healthcare threats, whether from Ebola or other diseases. Preventive behaviours, surveillance and referral pathways need further strengthening to effectively function independently.

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Engaging young people in the Ebola response

Craig Dean and Kelly Hawrylyshyn

As part of its Ebola response work in Sierra Leone and Liberia, Plan International is helping children and youth groups actively engage in prevention and response efforts, whilst also benefiting from peer support.¹ Activities are building on Plan's prior longer-term development work on child and youth engagement and youth-led media activities, including activities supported by Plan's Youth Advisory Panels and its Global Voice for Change project.² To date Plan has connected

¹ Children and young people are a key vulnerable group for the Ebola epidemic, as well as the largest cohorts in both countries: 42% of Sierra Leone's population and 43% of Liberia's are under 14.

² Plan's Youth Advisory Panels allow the young people Plan works with to participate in its decision-making processes at community, country and international level. See <http://plan-international.org>. Global Voice for Change is a pilot project connecting youth groups using technology they already have access to, across multiple languages and led by young people.

18 young people (nine female, nine male) between 14 and 24 years of age from Sierra Leone, Liberia and Norway. The young people are part of child and youth groups in their communities and members of broader children and youth networks in both countries. For example, 19-year-old Henry from Liberia is managing a team of 20 young people providing psychosocial support and food and non-food items in Monrovia.³ He is also a member of Liberia's National Youth Advisory Board, which coordinates advocacy work at a national and local level on child protection, and a member of the Liberian Student Union.

One key new approach to supporting dialogue and exchanges between these young people is through the use

³ 'The Young People Helping Ebola-Affected Families', <http://plan-international.org>.



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Campaigners provide information on Ebola in Sierra Leone

of conference calls with the members of the Global Voice for Change youth-steering panel and through a WhatsApp network group. The young people are supported by Plan and partners' youth engagement staff on coordination, follow-up on agreed actions and psychosocial support. Communications staff help them to develop blogs distributed on Facebook and Twitter, and a closed Facebook group has been established. The young people are given credit for internet and telephone calls on mobile phones, and in some cases mobile phones have been provided to enable young people to connect while quarantined in their homes, communities or districts.

Key activities

Activities young people have been engaged in as part of the Ebola response include:

Social mobilisation

Plan's Ebola response programme has helped young people to participate in training provided by the Sierra Leone Association of Journalists on effectively communicating messaging on Ebola risk and prevention. In Port Loko Plan supports *Kids ARISE*, a youth group producing radio programmes on issues facing young people. During the Ebola response *Kids ARISE* has produced daily and weekly radio phone-in programmes for young people and community members to raise issues and receive information. *Kids ARISE* also used drama and distributed information, education and communication (IEC) materials in villages and towns at the start of the response. In Liberia, young people were involved in radio and television Ebola sensitisation campaigns, complemented

by youth-led outreach work.⁴ Young people have provided affected communities with messages of support and encouragement, health guidance, daily updates on caseloads and information on feedback mechanisms.

Assessments and distributions

Young people have also supported logistics for non-food item (NFI) distributions, contributing labour for packaging and transportation and facilitating the distribution of hand-washing NFIs to reduce further contamination. Youth in Freetown are manning checkpoints, carrying out temperature checks and monitoring hand washing, house-to-house searches for sick people and medicine distributions. Their contribution has helped speed up humanitarian efforts coordinated by local leaders, while at the same time allowing them to personally benefit from active engagement in response efforts, rather than as passive recipients of external distributions led by INGOs. This in turn has given them the opportunity to contribute to better targeting and more effective logistics arrangements. In Liberia, young people consulted children who had been orphaned by Ebola and street children to find out what support they needed.

Psychosocial support

The engagement and relationships established at community level and through national and regional networks allow young people to support each other through sharing experiences of the impact of the Ebola epidemic on their

⁴ 'Encounters During Ebola Awareness Campaign', <http://plan-international.org>.

lives, monitoring progress in tackling Ebola and sharing messages of support. Regular conference calls have allowed the young people to develop trust and created a space to share personal experiences, fears and priorities regarding the progression of the epidemic and its impact. The peer-to-peer approach has proved particularly valuable given stringent quarantine regulations, which have limited face-to-face interaction and created a sense of loneliness, isolation and fear.⁵

Feedback mechanisms

Together with GroundTruth,⁶ Plan is supporting the setting up of accountability mechanisms at local, district and national levels. The young people are members of reference groups set up at the chiefdom level to provide feedback on the Ebola response, allowing them to raise issues they have identified and discussed as a group. In Moyamba radio phone-in programmes and feedback mechanisms have allowed them to raise issues such as increased teen pregnancy and early marriage with the local chief, resulting in local by-laws banning early and forced marriage.

Voice

The blogs and videos young people have developed were featured in the local news and are being disseminated globally. For example, a blog on forced marriage⁷ reached over 780,000 people through UN Women and The Girl Effect social media, among others. The 'Real Stories of Ebola' video⁸ was used as part of an inter-agency petition to leaders attending the G20 summit in Australia to press for a greater and swifter donor commitment to the Ebola response.

Challenges

One of the key challenges in facilitating this virtual engagement amongst youth in different locations has been connectivity. Weak telephone links between Sierra Leone, Liberia and Norway led to many hours of wasted time, with participants, especially in rural areas, dropping out of calls or not being heard clearly. At local level, the young people often experience difficulties with charging their mobile phones due to limited access to electricity or power cuts. The general quality of the phones available locally has also caused problems, and the project has provided mobile phones and credit (airtime and data allowances) to young reporters in Sierra Leone and Liberia.

Internet connectivity was not suitable for Skype teleconferences or sufficient to allow the young people to view the 'Real Stories of Ebola' video on mobile devices. Editing video content from Sierra Leone and Liberia was also a challenge given bandwidth constraints. Radio programmes and the existing partnership between the youth groups and radio stations have been the best method of disseminating and collating the views of young people at the community level.

5 'Feeling Afraid in Ebola Lockdown', <http://plan-international.org>.

6 See <http://www.groundtruthsolutions.org/sierra-leone.html>.

7 'Forced Marriage on the Rise in Time of Ebola', <http://plan-international.org>.

8 See <http://www.youtube.com/watch?v=tPoQVyejQ-Q>.

Many of the concerns raised by young people are hard to address within the constraints of the Ebola response, particularly regarding loss of relatives and friends and overall constraints on living a 'normal' life. Integrating young people into feedback mechanisms allowed for greater awareness of the human challenges they faced, while peer-to-peer support has provided some form of healing, albeit clearly not addressing all the damage Ebola has caused.

Young people involved in the response often faced aggression and abuse from community members, including in the suggestion boxes of the feedback mechanism. This included being accused of bringing Ebola into their community and 'eating' Ebola money. At the start of the response there were instances where young people carrying out social mobilisation activities were chased away by community members and had stones thrown at them. To address this, they decided to work as a group of three or four, and conduct house-to-house campaigns accompanied by local and religious leaders. There were also difficulties in ensuring appropriate protective clothing (masks, gloves) so that the young people felt protected, while not scaring community members. Other challenges in engaging young people relate to local stipends. These may affect the return of young people to formal education as they have been an invaluable source of income for youth and their families. Efforts are required to ensure employment opportunities in the recovery phase.

Lessons learnt

Youth networks and relevant communications and media structures need to be in place before an emergency (at national, district and local levels), and Plan was able to capitalise on its prior work with youth-led media and communication to rapidly set up youth networks and radio outreach in both countries. Plan, as a member of the Communicating with Disaster-Affected Communities (CDAC) network,⁹ benefited from CDAC's support in developing the initial concept and to ensure that lessons from previous emergencies were taken into consideration.

Investment is required to ensure that young people have access to multiple forms of communication to connect with each other from local to international level. Although many young people in both countries own mobile phones, funding made available through a DFID project allowed for the purchase of internet credit and phones. The original Global Voice for Change project aimed to connect young people using the technologies they already had access to, rather than distributing hardware. However, this was reconsidered given the exceptional Ebola situation and the quarantines put in place.

Dedicated human resources are required, with expertise in facilitating youth engagement, communications and child protection in order to effectively support youth engagement in humanitarian response. In both countries we identified local partners (such as Defence for Children International in Liberia and the Youth and

9 The CDAC Network aims to ensure that disaster-affected communities are better able to access life-saving information and give voice to their needs. See www.cdacnetwork.org.

Children Advocacy Network in Sierra Leone) and youth-led organisations (such as the National Youth Advisory Board in Liberia and *Kids Wave* in Sierra Leone), and built on existing youth engagement work. Securing an enabling environment for emergency-affected youth, particularly in a context of misinformation and lack of trust in information sources, is a key priority in building trust among young people. Furthermore, awareness of and expertise in child protection in emergencies as part of a coordinated response will help in developing appropriate operating strategies and mitigating any potential harm or violations that could exacerbate young people's vulnerability.

Like most disaster situations, the Ebola crisis has aggravated pre-existing gender inequalities in both Liberia and Sierra Leone. Through a blog, one of the young people shared her concerns regarding the risk of early marriage and teen pregnancy. The young people have also expressed significant concerns regarding the return of students, particularly girls, to school, given that they have now engaged in business or economic activity to help meet their families' needs. These risks need to be addressed through a holistic emergency response and long-term recovery plan.

Establishing links between the young people in the affected countries and those watching the crisis unfold via the global media allowed for greater understanding of the complexity of the emergency. Young people are aware that Ebola is more than a health crisis, and has direct implications for their day-to-day lives, well-being and future prospects. Youth engagement in the response has allowed for better understanding particularly regarding the impact of school closures, quarantines and cultural and behavioural changes. This in turn has helped young people better address these challenges, in terms of generating peer-to-peer psychosocial support and opportunities to contribute to building the resilience of their communities.

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We would like to thank the young people engaged in the Young Reporters/Global Voice for Change project, and acknowledge the support from Plan and partner staff in Sierra Leone and Liberia.

The Ebola emergency: perspectives on information management and mapping responses

Liz Hughes and Nick McWilliam, with input from Anne Frankland

As for many organisations, the Ebola outbreak was a new experience for MapAction, which had never previously responded to a large-scale health emergency. The gravity of the outbreak and evident applicability of geospatial analysis to inform the humanitarian response led the organisation to mobilise a large proportion of its resources in support. Over a period of four months, MapAction deployed 11 volunteer Geospatial Information professionals and three paid personnel to Liberia, Sierra Leone, Ghana and Mali. In addition, remote support was provided prior to, during and since those field deployments to a variety of agencies, including the UN Office for the Coordination of Humanitarian Affairs (OCHA), the UN Disaster Assessment and Coordination System (UNDAC) and the UN Mission for Ebola Emergency Response (UNMEER), as well as the governments of each country, other UN agencies, NGOs, clusters and remote technical communities. As a member of the Digital Humanitarian Network, MapAction was involved in liaising with a wide network of online data providers, and remains the channel for UK Department for International Development (DFID) funding of an Ebola Coordinator for the Network.

Initially, MapAction offered remote support to the regional OCHA office in Dakar, Senegal, assisting with mapping core services remotely (treatment centres, laboratories, safe burial locations and social mobilisation). Once in-country MapAction established the administrative mapping framework for the government-led Ebola Response Command Centres in Liberia and Sierra Leone, set out an

Box 1: Geospatial Information Systems

GIS maps out geographical data, identifying patterns, gaps and hotspots, while further analytical tools help to 'answer questions' by looking at correlations, trends, scenarios and forecasts. GIS is widely used in public, private and charitable sectors to help plan and solve business dilemmas. In the humanitarian domain, GIS professionals typically have a broad range of expertise, covering coordination, information management, cartography and spatial analysis.

information management structure for Mali in preparation for a possible outbreak there and worked with UNMEER's information section in Ghana to develop a data management system for use across the region.

The Ebola emergency was characterised by its inherently geographic nature – location was critical. Locating people with the virus was essential for treatment and contact tracing. Identifying clusters of transmissions helped operational prioritisation locally, while knowledge of broader patterns and trends helped to shape strategic responses at a national level. Applying geographical analysis to the problem therefore seemed an obvious course of action.

GIS analyses data and turns this analysis into visual maps – or 'pictures' – that tell the story of what's happened.



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A team meeting of staff coordinating an Ebola treatment centre in Nzérékoré, Guinea

understanding their needs and evaluating the relevance and use of emerging data. Fourth, in an escalating and ongoing emergency, handing over information management systems that could be readily maintained was essential.

The role of data in information services is one of the key lessons MapAction took away from this emergency. This lesson was not new. We have dealt with large volumes of data before: in Haiti, an overwhelming amount of data was generated by social media and mobile technology, and in the Philippines MapAction produced over 2,000 unique maps in a six-week period. In the Ebola response, however, we realised the importance of being selective about which data was significant. The complexity of the situation, with different information providers in different locations, meant that it

Such story-telling should aim to deliver useful analysis about the allocation of resources, the scale of response and locations of greatest unmet need. Ultimately it is only useful if it results in aid delivered to the right people at the right time in the right way. Our teams, as first responders, are used to the rapidly changing story that evolves during an emergency, but the Ebola outbreak presented a much more dynamic picture as the number of patients grew, geographical patterns shifted and urban contexts became more significant, requiring detailed analysis on a daily basis.

was difficult to finalise which data should be used as the master data set, and it was unclear who had the authority to decide this. This governance question is key in complex emergencies; although guidelines exist in relation to some data sets,¹ there was a lack of clarity about this in relation to the health treatment unit dataset. In this sense, Ebola was more of a data-driven emergency than MapAction had experienced previously, but one where judgement needed to be exercised in terms of which data was useful.

This highly dynamic environment placed new demands on the data and information management community. It raised questions about the provenance and accuracy of the data being shared, and whether data could be collected and transferred in a timely way. The close link between accurate information and effective response made us realise that assumptions and approximations that would be acceptable in other contexts could not be made here. Bed availability at a particular treatment centre, for example, not only changes from day to day, but is a very specific number that is only useful if precise and accurate. This meant that constant, meticulous effort was needed to maintain datasets and their corresponding map products, while emphasising the importance of recording the source and date of every detail. The fact that this was an emergency experienced at a village/neighbourhood, chiefdom, district, country, regional and international level further complicated information flows and the telling of the story. In short, in information terms, significant effort and resources were required.

In Sierra Leone MapAction initially found map and data information that was contradictory, without clearly defined products or validation. This served as a useful reminder that it is always important, when collecting data, even in a data-driven environment, to ask what the data is for. The most critical questions facing decision-makers included how to stop the spread of the infection and how and where to care for those already infected. This led MapAction to adopt a deliberate strategy of focusing information management on a few key datasets: case data and Ebola care facilities. These datasets were quite simple to identify but demanding to maintain because of the rapidly changing situation. Any delay in collecting data or inconsistencies in the way data was collected meant checking and cleaning data took more time, delaying a rapid turnaround of analysis each day. Thus, MapAction deliberately chose key datasets, such as case data and Ebola care facilities, that both had a defined purpose and could realistically be maintained by the organisation's volunteers.

Lessons

Four core lessons emerged for MapAction during the emergency. First, data is a critical element of robust information management services. Second, data is only useful if it informs decisions relevant to the emergency. Third, being on the ground alongside service users is essential in

MapAction's proximity to information providers and service users enabled a contribution to the response that would not have been possible remotely. For example, it became

¹ IASC Guidelines Common Operational Datasets (CODs) in Disaster Preparedness and Response As Requested by the 77th IASC Working Group Meeting IASC Endorsed November 1 2010.

apparent in Liberia that there were particular sensitivities related to identifying settlements below a certain size. This was an invisible but important issue highlighting the imperative of understanding the context in which information management is delivered. In Sierra Leone, MapAction focused on Ministry of Health statistics, which provide more authoritative and complete data than other datasets. Much of this was not visible prior to arrival in the country, but provided essential context to map production, and for relationship-building and coordination.

It was a priority to identify a focal point within the first two weeks to hand over the mapping function to. However, recognising that this had been a particularly demanding emergency for producing meaningful and useful products led the field teams to strip back the function to essential map products and data management processes to deliver these maps, and the necessary skills in emergency mapping. In the case of Sierra Leone, the datasets and maps established by MapAction during its mission are now maintained and published by UNMEER.

Conclusion

MapAction was not the only GIS provider in this emergency: many others with whom we work closely, as well as new colleagues, were active in-country and remotely. MapAction benefited from the work of organisations including the Humanitarian Open Street Map team and the British Red Cross. In Liberia MapAction and the Liberian Institute of

Statistics and GIS convened a GIS coordination group for all providers. This proved a useful starting-point for sharing GIS information further in-country. MapAction also supported the coordination of online volunteer communities, through the establishment of a Skype Ebola group and by channelling funding from DFID to the Digital Humanitarian Network to hire a coordinator for the Ebola group. The growth and scope of this group of volunteer networks illustrate the value that participants have gained from it and the value of the Digital Humanitarian Network in providing support more widely to the humanitarian response.

Although data sharing was not always straightforward, there is no doubt that there was a desire to do it as well if not better than in previous emergencies as the value of GIS was well recognised and the tools were available. However, it is also clear that governments need to maintain and make available accurate demographic, reference and health data with clear sign-off procedures on new data emerging, to give clear visibility of the problem, and the basic framework within which to respond. The place of ‘command and control’ – albeit gently applied and received – was as relevant in this emergency as in any other. This of course is not a new lesson, but one that is amplified when all the goalposts of a ‘standard’ humanitarian emergency have moved.

Liz Hughes is Chief Executive of MapAction. **Nick McWilliam** and **Anne Frankland** are GIS professionals and volunteer members of MapAction.

Not a Rolls-Royce but it gets you there: remote mobile food security monitoring during the Ebola crisis

Jean-Martin Bauer, Anne-Claire Mouillez and Arif Husain

The Ebola crisis marked a coming of age for the use of mobile technologies in the humanitarian sector, with food security assessments leading the way. Movement restrictions and quarantines, in addition to fear of contracting the disease, made implementation of traditional face-to-face food security assessments in Ebola-affected communities extremely difficult. The rapid spread of Ebola and concerns as to how the outbreak could negatively influence market access and food availability also created a need for regular updates on food security.

To overcome these challenges, the World Food Programme (WFP) deployed a fully automated, mobile-phone based remote food security monitoring system in Liberia, Sierra Leone and Guinea. The design of the system incorporated lessons from a pilot in the Democratic Republic of Congo (DRC).¹ Since September 2014, WFP has been implementing monthly rounds of remote data collection through text messages (SMS) and interactive voice response (IVR – pre-recorded audio messages) through GeoPoll.² Phone

surveys are sent to between 500 and 1,100 randomly selected respondents in each country. In line with best practice, these surveys comprise short, simple questions that require straightforward responses, namely food prices and information on how households are coping with food shortages. In December, an open-ended question was added to the SMS surveys to allow respondents to share their perceptions of food security in their communities.

Mobile technology allowed WFP to set up a basic food security monitoring system in a very short time, less than one month after the declaration of Ebola as a public health emergency. The system delivered information quickly, providing regular updates as the epidemic spread. Beginning in September 2014, WFP began publishing monthly food security reports and datasets detailing changes in households’ coping strategies (the coping strategies index (CSI)) and food prices.³ Given low cell phone coverage and ownership in the three countries, survey results have some urban, male and wealth biases. However, considering the urgent nature of the evolving epidemic and the lack of alternative sources of information, it was felt that data

¹ Jean-Martin Bauer et al., ‘A New Tool in the Toolbox: Using Mobile Text for Food Security Surveys in a Conflict Setting’, HPN blogpost, <http://www.odihpn.org>.

² See <http://research.geopoll.com>.

³ See http://vam.wfp.org/sites/mvam_monitoring.

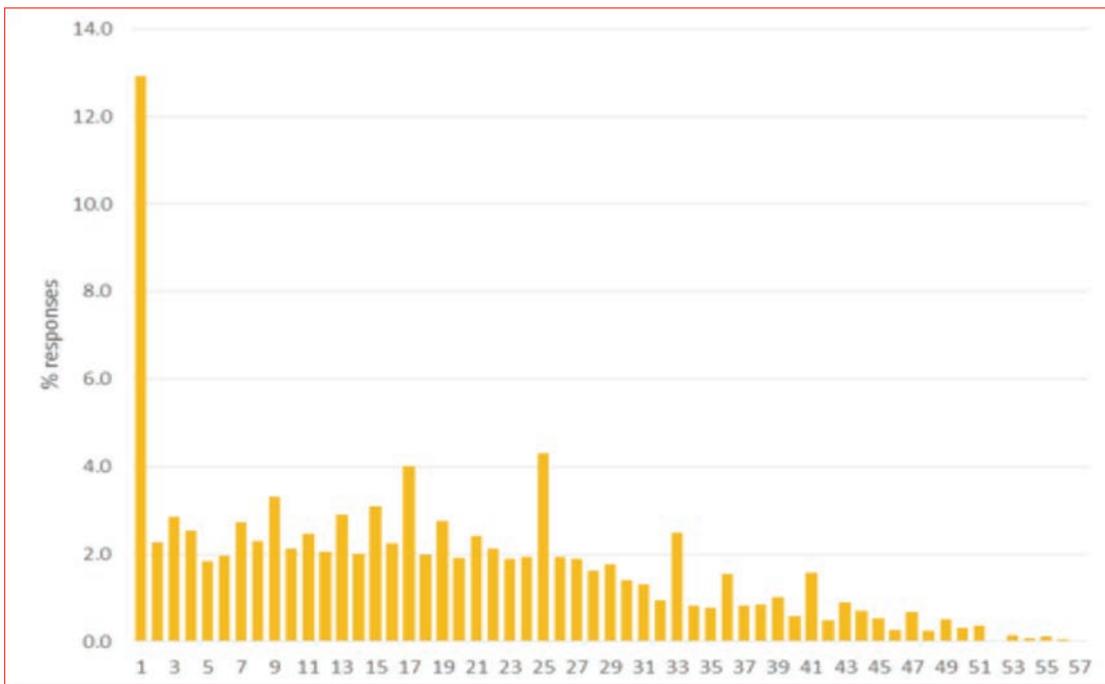
collection should proceed, and that biases would be accounted for during analysis and interpretation.

SMS and IVR as survey modes: strengths and limitations

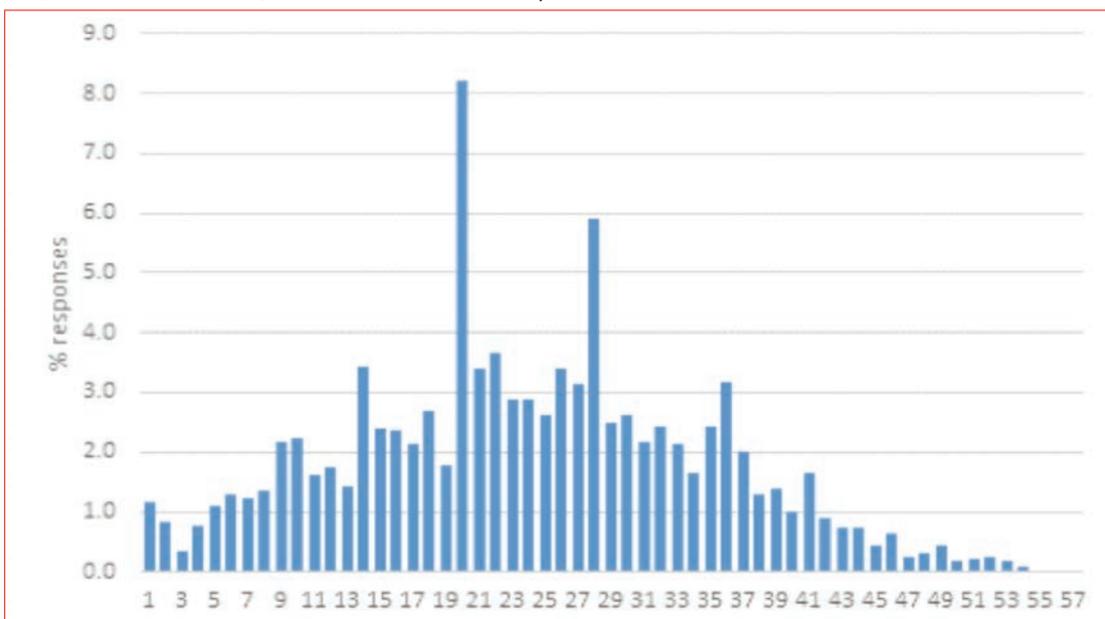
Our experience with two data collection modes – IVR and SMS – allowed us to assess their relative performance. People in the Ebola-affected countries either received a series of questions via SMS, to which they would respond by text message, or via IVR, to which they would reply by pressing keys on their phones. The surveys were free to reply to, and respondents received a small airtime credit as an incentive after completing the surveys.

SMS and IVR performed differently in terms of cost and data quality. It was much cheaper to collect data by SMS than by IVR. For the same number of questions, an IVR questionnaire cost \$35 to complete, compared to \$6 by SMS. The quality of data collected by SMS was also better than for IVR. Figure 1 compares the distribution of the CSI data for SMS and IVR. The profile of the CSI data collected by SMS is close to what face-to-face surveys produce: many responses at zero and a progressively diminishing number of responses for higher CSI values. By contrast, IVR surveys tended to produce a bell-curve distribution, indicating that IVR was producing data that differed from face-to-face surveys.

Figure 1: Data distribution, Coping Strategies Index
SMS, Sierra Leone and Liberia, September–December 2014



IVR, Liberia and Guinea, October–December 2014



Source: WFP data.



Phone mast and mobile shop at a road junction in Sierra Leone

© Martin Tod

There was also some indication that IVR surveys were producing higher CSI estimates than SMS. For instance, when we switched from IVR to SMS data collection in November we observed an average 8.1 point drop in the indicator across Liberia. However, in Lofa County, where we had used SMS in October and November, the drop was a much smaller 0.8 points. We were therefore cautious in interpreting IVR results, and moved to SMS whenever possible. A more structured study to evaluate how different survey mode affects results (e.g. SMS versus IVR) is being planned in Guinea. This will help us quantify the extent to which the survey modality affects the responses.

For food prices SMS surveys produced data with fewer outliers than IVR, presumably because the respondent could read and edit responses prior to sending them. Between 60% and 80% of responses collected by SMS required no cleaning, compared to much lower percentages of clean responses for IVR. Tweaks to the SMS questionnaire led to over 90% of responses being clean for Sierra Leone and Liberia in data collection rounds four and five.

Why did SMS achieve better results than IVR? On average, respondents took 18–19 minutes to complete a questionnaire by SMS, compared to six minutes for IVR. This might suggest that the ‘pace’ of an IVR questionnaire leads to greater data quality issues. This supports our theory that SMS is a user-friendly medium of exchange for collecting data remotely, as it allows people to reply at a time of their choosing, read questions at their own pace and review their reply before submitting their answer.

While SMS was cheaper and more reliable, there is scope to use IVR for data collection. In contexts similar to that of the Ebola-affected countries where SMS may not be possible due to technical reasons, IVR could be used as a last resort, or for simpler questions. It is also thought that IVR could have an important role to play in remote surveys in communities with very low literacy levels.

Due to the use of automated data collection modes, thus far we have not successfully administered more complex survey modules like the food consumption score (FCS) as the indicator has proven too cumbersome to be reliably collected through SMS. This meant that we were only able to track how households’ experiences of dealing with food insecurity changed, not changes in their actual food consumption.

Did the data describe reality?

The findings suggested that affected communities were facing a ‘slump’ food access crisis, characterised by low household incomes and reduced demand, rather than scarcity and spiralling food prices. Overall, low purchasing power, rather than food price hikes, constituted the main barrier to household food access: ‘It’s not the price of commodities that is high, but rather the wages are low’, read a text message received in December from a respondent in Sierra Leone. These findings suggest that the consequences of Ebola outbreaks had immediate, indirect and substantial impacts on wages and labour markets. These effects were also reported, in more detail, by other sources.⁴ The data generally showed that food

⁴ See for example World Bank, *The Socio-Economic Impacts of Ebola in Sierra Leone*, <http://www.worldbank.org>.

security indicators were poorer in rural locations compared to the capital cities, which were all experiencing Ebola outbreaks. The hypothesis was that greater market access in the capitals allowed city dwellers to cope better with livelihood change than their counterparts in other areas. Our data also suggested that households led by women were generally more food insecure than households led by men. We also noted that more deprived households used negative coping strategies much more often than their better-off counterparts.

Our data also suggested that the areas initially exposed to the Ebola outbreak (Forest Guinea, Lofa County in Liberia and Kailahun District in Sierra Leone) had the highest levels of negative coping, indicating a relationship between zones that experienced high levels of Ebola cases and food insecurity. We further observed that, as the epidemic spread to northern Sierra Leone and western Liberia in November, food-related distress in those newly affected areas also increased. Findings in December suggested that, in places where the epidemic had subsided, Ebola-induced food insecurity remained. It is possible that the Ebola outbreak may have prompted longer-term effects on household incomes and assets, a hypothesis that in-depth needs assessments must consider.

The system was also able to capture seasonal changes in indicators (with declines in coping and food prices observed during and immediately following harvest), matching the International Growth Centre's assessment of food price trends in Sierra Leone.⁵ However, we were unable to pick up the more granular, localised price anomalies reported by the IGC in Sierra Leone, or by Premise in Liberia.⁶

The system was able to tell a story and support discussions on operational response based on changing data trends. However, it was unable to zoom in on specific zones, making it difficult to observe nuances between areas. As such, collected data was of limited use when determining how to target assistance other than geographically.

Discussion: field-ready for other emergencies?

There was no alternative to remote mobile data collection in the Ebola-affected countries due to restrictions on staff movement that limited routine assessment activities. The

crisis provided an opportunity to set up a remote data collection system, which was put in place quickly and delivered data cost-efficiently. This experience shows that the tool could provide some added value in other settings where physical access to survey respondents is irregular or otherwise restricted – for instance in conflict. WFP's work with call centre-based phone surveys in central Somalia and eastern DRC points to the potential of such approaches.⁷

While the Ebola crisis shows the promise of automated food security monitoring systems, a word of caution is necessary. Remote mobile surveys are technically tricky and labour-intensive. Automating data collection through SMS or IVR is no shortcut: in order to achieve the desired outcome of quick, accurate and inexpensive food security monitoring and reporting, agencies must continue to invest in improving remote data collection techniques, data management and analysis.

Due to its streamlined nature, remote mobile data collection, on its own, is unlikely to satisfy the multiple (and growing) information needs of humanitarian managers. Mixed-mode systems, that exploit the strengths of both face-to-face and mobile data collection and allow for the triangulation of information, would be ideal. However, food security information systems tend to be weakest in the resource-poor environments where they are most needed.

Experience with the Ebola response suggests that humanitarian agencies will have even more access to high-frequency information on developing food crises, perhaps for a broader range of indicators. The challenge will be managing this large amount of information responsibly. Humanitarians will have to develop agile ways to access and exchange information on household food insecurity, ideally coupled with relevant market and health facilities data.

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⁵ International Growth Centre, *The Economic Implication of Ebola*, 2015, <http://www.theigc.org>.

⁶ See <https://data.premise.com/indicators/liberia>.

⁷ See <http://mvamblog.wordpress.com>.

Organisational risk management in high-risk programmes: the non-medical response to the Ebola outbreak

Lisa Reilly and Raquel Vazquez Llorente

In September 2014, five aid workers from a local NGO were disposing of dead bodies in Forécariah, western Guinea. The human remains, believed to be of Ebola victims, needed to be collected and buried following a special procedure to avoid spreading the disease, which had already killed 430 people in Guinea alone. Humanitarian agencies had taken over the family burial ritual in what had become a hazardous job, and not only for the risks of contracting Ebola when handling the bodies. As the team was working in the area, a hostile crowd attacked them. A week earlier, in Nzérékoré, 530 miles from Forécariah, a national staff member working for an international NGO was killed in a mob attack during an Ebola education visit. Until these attacks Guinea had not registered any serious incidents against aid workers for 14 years.¹

These unfortunate (and almost isolated) events in Guinea illustrate two key points about how the Ebola outbreak challenged aid agencies' traditional organisational risk management. The Ebola response was a high-risk *programme*, but not a high-risk *context*. Traditional checklists for high-risk environments did not fit here. First and foremost, non high-risk countries where agencies have been operating for years were now posing new and sudden safety and security challenges. Second, not only healthcare workers (understood as doctors, nurses and other medical personnel) but also community liaison staff and anyone perceived to be working in the Ebola response were facing increasing difficulties in gaining safe access to affected communities. Ebola was also raising safety and security issues for any aid organisation working in the affected areas, even if not working directly in the Ebola response.

This article looks at the organisational risk management capabilities of non-medical humanitarian agencies responding to the Ebola outbreak, and how they adapted their risk management policies in a high-risk programme in a low-risk context. It draws on interviews with four security and risk managers from non-medical aid agencies, and supporting information from the European Interagency Security Forum (EISF) working group for security managers and focal points.

The security situation in Guinea, Liberia and Sierra Leone

Figures from the *Aid Worker Security Report 2014* reveal a staggering rise (66% increase over the previous year) in attacks against humanitarian staff. In total, 460 aid workers were victims of targeted violence in 2013; 155 lost their

lives, 171 were seriously wounded and 134 kidnapped.² Three-quarters of all attacks in 2013 took place in just five countries: Afghanistan, Syria, South Sudan, Pakistan and Sudan. Most of the victims (87%) were national staffers providing aid within their own countries, and employed either by international or national organisations.

Compared to other regions and countries, the level of deliberate violence against aid workers in Guinea, Sierra Leone and Liberia, the countries most affected by the Ebola outbreak, has been low. The combined figures for the period 1997–2013 show 17 serious incidents (Pakistan alone accounts for the same number of serious incidents in a single year, 2013). Prior to the Ebola crisis the most recent serious incident registered in the region dated back to 2010, when a local employee of an international organisation was ambushed at night while travelling in a commercial vehicle. Between 1997 and 2013, ten aid workers were killed across Guinea, Sierra Leone and Liberia, eight of them national staff. Six aid workers were wounded, all nationals, and 13 kidnapped. Eleven of these victims were international staff, and six were abducted in the same incident in Liberia; they were released unharmed after two days in captivity.

Although incident statistics help in understanding the context where aid workers operate and the risks they face, these figures should be taken as a starting point for deeper analysis. Documenting violence against aid workers is a difficult exercise and a small number of incidents does not mean that a country is not dangerous. A high number of violent attacks may merely reflect a higher number of humanitarian personnel in the country, or a more robust reporting system. It is also worth noting that attacks against national aid workers are less reported and violence against international staff usually makes more headlines.

For most organisations, Guinea, Liberia and Sierra Leone were considered family postings prior to the outbreak. The identified threats were mostly common criminality, road accidents, abuse of power, social unrest and infectious diseases like cholera. During the Ebola crisis, with the exception of the cases mentioned in Guinea the security situation has remained relatively stable and no serious incidents were registered. While some organisations experienced threats to their staff these never materialised, and on only one occasion – also in Guinea – were programmes temporarily suspended.

The Ebola crisis: an internal look at the non-medical response

The safety and security of staff is becoming a key concern for aid agencies, not least given the recent increase in deliberate attacks against humanitarians.

¹ The data and information on the incidents described in this article have been taken from the Aid Worker Security Database (AWSD), a project of Humanitarian Outcomes. AWSD is available online at www.aidworkersecurity.org and www.humanitarianoutcomes.org/awsd. Data is up to date as at the time of writing in mid-February 2015.

² Humanitarian Outcomes, *Aid Worker Security Report 2014*, p. 3.



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Community health volunteers in Sierra Leone

Most international organisations follow a similar pattern when they assess whether they should respond to a humanitarian crisis: senior management at headquarters makes the call for action, then security managers and advisors are consulted on how to implement programmes safely. Depending on the organisation's risk culture and appetite, and the operational context, headquarters security managers and advisers may be involved to a greater degree in the decision-making process. The Ebola outbreak was different: the Ebola response was a high-risk *programme*, but not a high-risk *context*. Traditional checklists for high-risk environments did not fit here.

All individuals interviewed for this article reported that their organisations had well-established programmes in Guinea, Liberia and Sierra Leone before the outbreak, although in one instance one of the organisations was scaling down operations prior to the crisis. When the outbreak started to show signs of following a different course than previous outbreaks in West Africa, and the situation started to be closely monitored by agencies on the ground, the question at headquarters level for non-medical organisations was whether to stay or leave. Emergency responses generally have a quick decision-making process that may leave out the security component. However, in the case of the Ebola response the reputational and individual risks for non-medical organisations were so alien that the decision to continue or adapt programmes was only taken after robust risk assessments at headquarters. How would the organisation handle the media and liaison with families if a staff member was infected? Would it be possible to get

medical treatment or evacuation in the event of a road accident or a medical emergency not related to Ebola?

In most cases these assessments involved consultations with senior managers in logistics, finance, human resources and security. In many organisations these consultations were delayed as many agencies initially turned to the human resources department as the division generally responsible for dealing with health and safety risks. Only when senior managers realised that the Ebola outbreak required a more holistic internal response did security managers come into play. Senior managers recognised that security managers do not only 'do security', but actually understand how to manage risks.

Once the decision was taken, mitigating measures for different risks, including physical security, medical and reputational, were considered together as part of an overall risk management approach, rather than trying to tackle them separately. Many non-medical organisations implemented new safety and security protocols and revised existing policies and contingency plans, notably insurance and medical evacuations for non-medical responders. How internal protocols were adapted differed according to the programmes, needs and resources of each organisation, for example using returning travellers to brief headquarters and outgoing staff and employing specific Ebola programme risk managers. Many organisations held consultations with medical agencies such as Médecins Sans Frontières, national Red Cross societies and national public health ministries.

An interagency Ebola working group for security managers and focal points was set up by EISF to share information on the issues faced in the early days of the outbreak and ways of dealing with them (e.g. details of European Union (EU) contact points in case of medical evacuation). Much of the discussion was around how to deal with the fear caused by perceptions around Ebola, such as contagion risks to other staff and family of people travelling in the affected region. Internally, working groups were also put in place at headquarters to engage different organisational divisions. Generally, both internally and externally the Ebola response was tightly coordinated.

Organisations that had the resources recruited additional dedicated field staff with responsibility for safety and security. However, some organisations did not find it easy to recruit qualified non-medical personnel willing to work in the response. As mentioned earlier, the security situation remained generally stable, and bearing in mind that Guinea, Liberia and Sierra Leone were not complex environments – as opposed to Nigeria, for instance – the biggest concerns were around safety and staff health. Job descriptions and person specifications for security managers shifted towards a stronger safety and health background. In the early days of the Ebola outbreak security managers had to address a variety of risks, from new risks to staff travelling to the region on day-to-day organisational business to the continuity of non-Ebola response projects and managing perceptions of staff being deployed to Ebola-affected regions – including returning offices wanting to isolate personnel coming back from deployment in the area.

Health is usually a diluted function that falls into different teams and positions. With public health systems collapsing in the region, some organisations had to allocate dedicated personnel responsible for staff health

in country, although in most cases organisations were also liaising with national systems in Europe to seek medical advice to prevent infection, and coordination and planning advice in case of infection. On the ground, health and safety training was put in place for all staff working in the response, including security personnel such as guards and watchmen. Other safety risks had to be assessed, including the risk of fire from inflammable equipment.

Looking forward: integrating risk management into programming

The Ebola outbreak challenged the organisational capabilities of both medical and non-medical humanitarian agencies in many different ways. From the operational capacity to deliver programmes that could help health workers stop the spread of the disease to the moral dilemma of responding to communities in need at high risk not only for the health and safety of staff, but also for the organisation's reputation in case of infection, the Ebola response required a different approach to dealing with the threats, one that took an organisational, proactive approach to identifying and managing a variety of risks, rather than compartmentalising programme, health and security risks and dealing with them separately.

Even if it proves difficult to replicate, integrating security risk management into future responses from the outset of programmes, and as early as the initial decision-making process, may now be a step closer. As the number of new cases falls in Guinea, Liberia and Sierra Leone, a positive outcome of this initially slow response may be a sweeping organisational change that integrates security risk management into all programming stages.

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Training on the frontline in the Ebola response

Clara Hawkshaw

The Ebola crisis has generated an unprecedented need for training during an emergency response. The rapid scaling up of the response during September–December 2014 saw the construction of six UK-funded treatment centres (ETCs) across Sierra Leone, in Kerry Town, Port Loko, Makeni, Moyamba and Freetown, bringing the number of UK-supported beds to over 700. In October 2014 Save the Children took over the running of the largest of these centres, in Kerry Town. The maintenance of each centre requires a large number of staff. Unlike previous disasters such as the Indian Ocean tsunami, which had huge influxes of international aid workers, the Ebola response has had a much smaller international presence on the ground, and the majority of staff have been recruited locally. In February 2015, Save the Children employed 600 national and 100 international staff to run the Kerry Town centre.

As non-medical international NGOs such as Save the Children have taken on responsibility for building and running treatment centres, staff training has had to adapt to incorporate technical and clinical training. It is imperative that training on humanitarian principles, how to operate in an Ebola context and how to wear Personal Protective Equipment (PPE) is successfully delivered to every staff member. As such, the goal of Save the Children's training strategy is to ensure that all national, regional and international staff working at the Kerry Town centre receive a comprehensive induction and specialist training that enables them to manage their own health and safety, maximise team cohesion and minimise reputational risk.

Staff diversity

Staff recruited for the treatment centre fall broadly into two categories: health and water, sanitation and health



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Local and international staff at the Makeni Ebola treatment centre, Sierra Leone

the agency invited other INGOs to its training centre in Brussels, as well as opening a training centre in-country in Bo.

Save the Children followed MSF's lead in designing its Ebola response. Treatment centre protocols were based on MSF protocols, although these have been modified since by new clinical experts to ensure that they are specific to the context of the centre. For example, if a piece of PPE kit changes or is modified the protocols need to be amended accordingly, and staff are continuously retrained on the updated equipment.

Ongoing capacity-building

The speed of the scale up was a huge challenge. Whilst construction was being completed at the treatment centre, local staff were trained by Save the Children in nearby school buildings and community centres. Since then, the

(WASH). The health team comprises doctors, nurses and community health officers seconded primarily from the UK National Health Service, the Sierra Leone Ministry of Health and the Cuban Medical Brigade, as well as Save the Children consultants. Laboratory technicians are seconded from Public Health England to analyse patients' blood samples at the onsite laboratory. The majority of health staff have not worked in an emergency context before.

The WASH team is the largest at the ETC and their tasks vary from site cleaners and PPE dressers to incinerator engineers and dead body hygienists, arguably one of the most dangerous tasks in this context. As the majority of WASH staff do not have any previous work experience of their role, the induction training is therefore longer and more comprehensive than the clinical induction, taking five days to cover the basics of the role and a familiarisation with hygiene protocols and PPE procedures. In comparison, the clinical induction takes three days to cover clinical protocols and the PPE procedure and focuses less on the day-to-day tasks. Transforming local labourers into infection control personnel is testament to the high level of training and capacity-building which can be achieved even during an emergency response.

Background of the training curriculum

As the majority of centre staff have not worked in an emergency before, induction training includes information on basic humanitarian principles and the values of Save the Children. PPE training for health staff ensures that they are protected from health risks. Historically, PPE training has been delivered by Médecins Sans Frontières (MSF), the only INGO treating Ebola cases in Sierra Leone before the scaling up of the response. In an unprecedented move

training has become much more sustainable by incorporating Training of Trainers programmes. PPE training is delivered by seven full-time trainers who joined the centre as hygienists but who previously worked as teachers. The team has the capacity to deliver training which goes beyond the initial humanitarian inductions and PPE training, and it has incorporated a strong capacity-building approach and a commitment to creating a strong and sustainable workforce for the centre. Training ranges from one-hour knowledge-sharing lectures to three-day leadership courses.

Knowledge sharing has largely been organised and run from within the health team. During the response there were fluctuations in patient numbers and the team has used the quiet times to deliver knowledge-sharing and capacity-building lectures. International clinicians have given lectures on various clinical topics at the request of national medical staff, and the training plans for each module have been assessed to ensure that the model is contextually relevant for the country, and will cover topics that will be useful after the Ebola response has scaled down.

Refresher training has been delivered throughout the response, ensuring that all staff are up to date on the protocols. To reach all staff refresher training is increasingly delivered through a training of trainers model whereby certain individuals within each team are trained to deliver the training to the rest. This ensures that the centre can promptly address issues raised by ongoing quality assurance monitoring.

The training of trainers model highlights the well of talent within the 600-strong national team. Leadership training has been introduced for senior WASH team members to

help them move into management roles. Although it is uncertain how the expertise of the WASH teams will be used after the outbreak, leadership training aims to create professional individuals and teams that can be deployed to deal with infection prevention and control (IPC) issues in the future.

Future plans and lessons learnt

The training delivered at the treatment centre shows what can be achieved in capacity-building programmes during a humanitarian response. The team has grown from two international trainers in November 2014 to three international and seven national trainers in February 2015, supported by two administrators. A key lesson here is that training needs to be properly planned for and resourced from the outset, ensuring that the training effort has sufficient planning and coordination capacity to assist in both identifying the need and delivering the required quality of outcome.

INGOs deliver training as a means to meet their wider capacity-building targets. However, there is limited analysis on the impact of this training, or the number of

external staff who receive it. INGOs spend their resources building the capacity of their own staff, rather than people in local communities or within national NGOs. However, with such high short-term local recruitment, the Ebola response has challenged the status quo and pushed NGOs to train local non-skilled workers who will not necessarily be employed by them in the long term.

In one sense it is difficult to use the Ebola context as a model for future crises, not least because the high level of local recruitment in the response was only made possible because of high unemployment in the country as a result of school closures and other special measures by the government. However, we should not ignore the success of this level of training and the sector should consider how greater numbers of local staff can be trained to respond to local emergencies in the future. Instead, we should scale up the capacity to deliver high-quality training at the beginning of a response and dedicate resources to realise the potential of all staff.

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Research in crises: examples from the Ebola outbreak

Lisa Guppy

Humanitarians are increasingly being asked to deliver more. Many agencies and donors now require them to report on the impact of their work, and to prove that the response they mounted was the best possible option and the most effective and efficient path to recovery – in other words, finding and using ‘what works’. There are two challenges with this: first, measuring impact and showing proof is often extremely difficult in emergency contexts; and second, current systems and mechanisms for generating information and knowledge are often not capable of meeting these additional expectations. It is possible that new or adapted systems, people and concepts will have to be taken up.

A key concept in measuring impact and proving what works is evidence. However, there are many different definitions of humanitarian evidence, and the ways in which different agencies are collecting and using it vary greatly. This article discusses one way of producing evidence – namely research – and discusses how research and evidence is being used in the context of the Ebola outbreak. It draws on experience from two research projects. The first, ‘The Ebola Response Anthropology Platform’, is being led by academics from the London School of Hygiene and Tropical Medicine, Njala University in Sierra Leone, the Institute of Development Studies at the University of Sussex and the University of Exeter in the UK.¹ The second, ‘Participatory Behavioural Change To Reinforce Infection Prevention and Control for Ebola Virus Disease in Sierra Leone’, is led by

the International Rescue Committee (IRC) in partnership with Charité – Universitätsmedizin in Germany, Durham University in the UK and Njala University. Both were funded by Research for Health in Humanitarian Crises (see www.elrha.org/r2hc/home).

How does research build evidence?

There are two fundamental characteristics of evidence: it must be methodologically sound, and it should establish causality.²

In this context, a methodology is the set of principles, processes and practices used to collect, analyse and synthesise evidence. The words ‘sound’ and ‘robust’ are often used to describe methods that are ethical; contextually appropriate; follow established standards; and are described in detail, so that all stakeholders can access and read the methodology and judge for themselves if it is sound or not.

Methodologies could be unsound or unethical if, for example, a researcher failed to get parents’ permission to interview children; if local or field research teams were not trained to understand what constitutes high-quality, valid data; if field team composition was not ethnically appropriate, gender-sensitive and competent in the most suitable languages; or if they did not talk to enough people, evaluate enough camps or inspect enough infrastructure to have a representative sample on which to base their analysis.

¹ See <http://www.ebola-anthropology.net>.

² D. Dijkzeul, D. Hilhorst and P. Walker, ‘Introduction: Evidence-based Action in Humanitarian Crises’, *Disasters*, 37(S1), 2013.



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Discussing Ebola in Greater Monrovia, Liberia

Establishing causality is a big problem in complex situations. In practical terms it means that, if an organisation decides to launch a particular health promotion campaign, then they should be able to prove that it was their campaign that led to measurable changes in behaviour; or that, by supplying certain amounts of water to a care centre, an agency should be able to objectively measure improved health profiles in vulnerable groups and link improvements directly back to their activities. There are two main problems with these scenarios. First, it is very difficult to measure changes and improvement in a particular group of people after each and every humanitarian action. Second, it is difficult to isolate the impact of a single programme and claim that it was the key action that led to observed and measured changes.

Research can help to measure impact and demonstrate ‘what works’. A good humanitarian researcher or academic, who is familiar with the context and region of the crisis and who has experience in a particular field, can make sure that evidence is robust and ethical and can answer specific questions with real proof. They can also analyse rationally how much impact a programme or action might have had, given all the other variables (conditions and actions) in play.

Research and humanitarians

Research is important because it is key to an evidence-based approach. Research in the Ebola outbreak produced evidence and advice that influenced humanitarian action in real time. Some examples of active research from the Ebola Response Anthropology Platform are highlighted in Box 1, page 32.

Researchers in emergencies need to pose clear questions and design a methodology that answers those questions with the minimum of resources. They ultimately require rigorous justification to proceed – it is important to be prudent with research, given competing priorities in a crisis. Perhaps the highest priority will be research that can quickly answer specific, critical questions in a way that could impact that response very quickly. Another high priority may be research that answers critical questions that come up repeatedly in different responses, so that humanitarian response is made more effective in the future.

Linking research to practical needs

Three key ingredients are necessary to link research with need: rapid response funding; knowledge of – and networks between – researchers who are already experts on the region and the context of the emergency; and immediate access to grassroots or ‘field’ researchers, who will often be local, within this network. If these three ingredients are lacking, research can still be important and can contribute to improving responses to future crises. However, it is unlikely to be able to contribute evidence to a current emergency.

The first point can be difficult to address, as there are few rapid response funding mechanisms available. Both of the projects discussed here were funded through Research for Health in Humanitarian Crises (R2HC), which managed a special, fast-track Ebola Emergency Call in late 2014.

In line with the second point, Anthropology Platform managers very quickly brought together researchers who

Box 1: The Ebola Response Anthropology Platform

The Ebola Response Anthropology Platform allows anthropologists and social scientists to provide advice on the socio-cultural and political dimensions of the Ebola outbreak. The primary aim of the platform is to support locally appropriate interventions and more effective humanitarian response. The platform presents evidence through a range of knowledge products, including briefing notes and field notes. It also allows humanitarians to ask questions of anthropological researchers and receive a real-time reply.

One significant challenge was and is local resistance to outbreak management teams, which led to some communities building barricades and threatening, intimidating or even harming personnel. Early in the response, Platform researchers who were familiar with the region recognised that a lot of local anxiety about these teams was not based on ignorance but on historical and current facts. Communities had experienced heavy-handed approaches by outsiders in the past, and often had experience of not being informed or consulted in appropriate ways. The Anthropology Platform posted advice on, for example, how best to listen to complaints and take into account the customs and culture of those concerned.

Social and anthropological research has also fed into the development of community care centres in Sierra Leone. During establishment, there had to be negotiations on issues such as land tenure, and preferred locations and host communities. Advice developed through research into community needs proved vital to ensure the most locally effective set-up for each centre.

Field notes on the website advise on challenges and issues, such as how and why isolated outbreaks in Sierra Leone end when outside intervention or assistance is limited; how and why urban populations in Liberia seek health care; and the compassionate and ethical use of experimental medications and therapies in and after an emergency.

Field notes also address issues that some agencies, perhaps focused on health services, may not have planned well. For example, one field note on the flow of 'Ebola money' at community level recommends that reducing potential conflicts associated with cash distributions should be prioritised. The briefing note describes a 'patron-client' social and financial relationship that may be typical in affected countries, and provides clear advice on how these existing structures can be used so that payments for Ebola-related work are transparent and seen as fair, and most likely to support effective action.

were already experts in West Africa and public health there. The Anthropology Platform Steering Group comprises researchers mostly from the UK and Sierra Leone. This mix means that field, national and international experts are able to contribute as needed, depending on the questions that arise and the analysis that needs to be

done, in a responsive and flexible way. This group could be pulled together quickly because there was an existing partnership between the lead university in Sierra Leone (Njala University) and the UK.

The third ingredient – field research – is critical. It often takes years for a researcher to build up field experience and grassroots knowledge within a region, and in an emergency this can form the foundation for new, tailored research.

Obstacles and challenges

Many of the obstacles and challenges that confront humanitarian responders also affect researchers. In the same way that practitioners often struggle with coordination, a high-profile emergency like the Ebola outbreak can lead to a rush of researchers, with varying levels of experience, who may not be coordinated and may have agendas which compete with each other and with the humanitarian response. The IRC project leaders found that having the University of Sierra Leone as a partner provided good insight into potential overlaps or conflicts in and between research projects. It is also important that researchers are sensitive to humanitarian imperatives and priorities, and work in collaboration with humanitarian staff. IRC project staff in-country kept in close contact with the health cluster and the Ministry of Health, to maintain an overview of interventions being done in the outbreak.

Researchers can also do harm, and it is standard practice that many types of research require ethical clearance from the government and from a university in order to ensure that local and/or international standards are followed. However, getting ethical approval can be difficult. For its project the IRC sought ethical approval from the Ministry of Health and Sanitation in Sierra Leone, but the ministry was overstretched with the response and the IRC found it difficult to get priority attention. In this case, obtaining an additional rapid review from a review board at Durham University was key in ensuring ethical oversight quickly.

The timeframe of methodological planning is also a common obstacle. Methodologies must be detailed and robust, and researchers outside a crisis context will normally spend weeks or months designing and testing their methodologies. The Anthology Platform and the IRC addressed this in part by having established partnerships with experts who already understood the context, the countries and/or viral haemorrhagic fevers. Regional and topical experts are the researchers most likely to be able to create a robust research plan quickly.

Whose role is it?

The responsibility to do high-quality research in crises of all kinds is mutual – humanitarian and academic institutions together must make sure that research is accountable, relevant and useful. Amongst researchers, there is an ethical imperative to share their knowledge in a useful way. For humanitarian practitioners and donors, it is important to recognise how and why research in crises should and could be undertaken, and determine how best to fund it alongside active response. This means that

humanitarians and researchers must be willing to work together in partnership.

However, each member of the partnership must also have a clear role to play, and be able to deliver specific results. For example, in the Participatory Behavioural Change project, the IRC was already taking a lead on infection prevention and control in Sierra Leone through the nationwide Ebola Response Consortium. Therefore it was able to identify critical problems that could be addressed through research – in this case, improving health workers' capacity to adhere to standard precautions in order to prevent infection. Academic partners at Durham University contribute anthropological knowledge and expertise; epidemiology expertise comes from partners at Charité – Universitätsmedizin Berlin; Njala University contributes to the design aspects of the project and provides expertise in infection prevention and control for viral haemorrhagic fevers; and the Kenema District Health Team provides contextual expertise on the ground.

Summary

Gathering evidence through research on what works and what doesn't is both necessary and possible in the midst of a crisis like the Ebola outbreak. It is most effective when researchers and humanitarians work together in partnership. Humanitarian and academic roles can be brought together through better mutual understanding of the importance of evidence in humanitarian practice. Humanitarians can better request and support research, and researchers can better address critical humanitarian needs and support humanitarians, when there is agreement that research matters.

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Ebola: a crisis of language

Nadia Berger and Grace Tang

In the aftermath of the Ebola outbreak, the humanitarian community is taking a hard look at international response mechanisms, evaluating what went well and what can be improved. One of the main areas of criticism has been the initial slow response when the disease took hold in spring 2014. These concerns have prompted the World Health Organisation (WHO), among others, to pursue major reforms directed at strengthening disease-fighting capabilities. These changes should look carefully at communications with affected populations: the crisis was one of information – and especially information in the right language – as much as anything else. Information provided in languages people can understand can help save lives in a crisis. Unfortunately, language is usually not seen as a priority in emergency responses. As a result, misinformation, mistrust, fear and panic can spread quickly.

Languages matter

Language was one of the main difficulties faced by humanitarian workers responding to the Ebola crisis. Information and messages about Ebola are primarily available in English or French, but only a minority of people (approximately 20%) in the three most affected countries, Sierra Leone, Guinea and Liberia, speak either language. In Sierra Leone only 13% of women understand English. Most Sierra Leoneans, particularly in rural areas, speak Krio, Mende and Themne. Providing Ebola-related material in English or French leads to important knowledge gaps: in a survey published in late August, UNICEF found that, in Sierra Leone, 30% believed Ebola was transmitted via mosquitoes and another 30% thought it was an airborne disease. Four out of ten respondents believed that hot salt-water baths are an effective cure.

Words of Relief

Translation is not always integrated into communications by aid agencies. To help address this issue, Translators without Borders (TWB) took a project it was testing in Kenya – Words of Relief – to West Africa. Words of Relief is the first translation crisis relief network in the world. It is intended to improve communications with communities when aid organisations and affected people do not speak the same language. The 17-month project, which started in January 2014, is funded by the Humanitarian Innovation Fund (HIF) and Microsoft, and is currently being piloted in TWB's translator training centre in Nairobi. The project focuses on the translation and distribution of key crisis content in Swahili and Somali. One of its most successful pieces of work has been the translation of the CDAC Network Message Library, an online database of messages – including first aid tips and public service announcements – into multiple languages.¹ In November 2014 the Humanitarian Innovation Fund extended the project to cover Ebola-affected countries, complemented with a grant from the Indigo Trust.

Translating to save lives

Translators without Borders relies on an innovative approach to addressing language barriers: the creation of 'spider networks' of crisis translators. These are virtual teams of translators trained to respond rapidly to language needs. In Kenya a spider network of translators for 11 different Kenyan languages is able to respond to crises such as floods, droughts, cholera and conflict. The same approach was used in the response to the Ebola crisis, as a way to develop the translation capacity of an organisation and rapidly build a network of translators.

¹ See <http://www.cdacnetwork.org/tools-and-resources/message-library>.



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A member of a WHO contact tracing team talks to the head of a family in Conakry, Guinea

TWB used its network of supporters and advisors as well as social media to recruit about a dozen translators covering the Ebola-affected countries. They were based around the world, in the United States, Ghana, Sierra Leone, Mali, France, Switzerland, Germany and Kenya. They were recruited because they are native speakers and have strong links to the affected countries. Their languages skills were vetted and they underwent online training focusing on rapid translation. The training sessions addressed topics such as ‘What is translation’ and ‘How to translate’. They also included tips for translators and best practice for terminology problems and quality assurance.

TWB worked with about a dozen partners to collect and translate Ebola-related materials into West African languages for the most affected populations in Sierra Leone, Guinea and Liberia.² Between November 2014 and the end of the Ebola project in February 2015, more than 100 items – including posters, social mobilisation and SMS messages, videos, cartoons and maps – were translated into 30 languages. About 80,000 words were translated. One of the most effective outputs has been a series of simple informative posters from International SOS suggesting ways to prevent the spread of Ebola, describing symptoms of infection and emphasising the urgent need to seek medical attention.

Table 1: Example of key social mobilisation messages translated into Krio
 (Excerpt from: WHO/UNICEF Key Messages for Social Mobilisation Community Engagement in Intense Transmission Areas)

Safe Burial Practices: Information for those handling a person with Ebola who has died	Aw en wetin Fɔ du Fɔ Ber we Problem nɔ go de: Mɛsej fɔ yu we de dil wit pɔsin we Ebola kil
If somebody in your family dies with suspected Ebola, immediately call the toll free Ebola Hotline at XXXX for disinfection of the house and removal of the body.	If Pɔsin we na yu fambul day we den fil se get Ebola, Kɔl the Ebola nɔmba na 117 so dat den kin kam spre yu ose en pul di dede bɔdi de.
Pay your respects without touching, kissing, cleaning or wrapping the body before burial or cremation. The body can be prayed over to complete religious practices, but at a safe distance or one meter, without touching. Ebola is very infectious even after death.	Yu kin sho se yu respekt di day pɔsin bɔt nɔ fɔ toɔh am ɔ kis am ɔ nɔ klin ɔ rap di bɔdi bifo den ber am ɔ bɔn am. Den kin pre pan di bɔdi fɔ sho se di pɔsin na kristien ɔ muslim bɔt yu fɔ de far we lek wan mita so we yu nɔ go toɔh di bɔdi. Ebola na bad sik ivin we pɔsin dɔn day.

² Partners included the Centers for Disease Control, International SOS, WHO/UNICEF, IntraHealth, Chocolate Moose Media, the Global

Protection Cluster, the International Organisation for Migration, Scientific Animation without Borders and the CDAC Network.

Other documents include social mobilisation messages from WHO and UNICEF³ and a series of messages for children and caregivers provided by the Global Protection Cluster.⁴ These typical messages focused, for example, on the best behaviour to adopt when someone is sick, information for those who have had contact with a person with Ebola and advice on burials and where to get medical help.

TWB also contributed to the translation of the video *Ebola: A Poem for The Living*,⁵ produced by Chocolate Moose Media. The video is currently in 17 languages and has a potential audience of 400 million. As of December 2014, the video had had over 45,000 views, had been uploaded over 500,000 times and had more than 600,000 embeds. It was broadcast on TV in Liberia and was also passed via Bluetooth among mobile phone users in Guinea.

Another objective of the project was to make local language materials widely available to aid agencies. Partners consented to their content being shared with the wider humanitarian community. Once translated and reformatted, Translators without Borders disseminated the documents through humanitarian networks including the Ebola Communications Network, Humanitarian Response Info, ReliefWeb, the BOND Ebola working group and the CDAC Message Library.

Main challenges

Although many agree that communication with communities in the right language is critical, translation is not always considered a priority by governments and aid agencies. This challenge was reflected in the difficulty in getting content from aid organisations. While there was demonstrated interest, follow through, whereby organisations actually provide the content to be translated, has been weak. TWB believes that the lack of follow through is partly due to aid organisations being stretched too thin during the crisis, as well as a lack of incentive because projects are not measured on whether they use local languages. One way to address this issue would be to encourage aid agencies to adopt new methods of working. This can be as simple as being able to quickly reformat documents after they have been translated. TWB is also working on producing an advocacy video for NGOs and governments on the importance of local languages and translation in communications with communities.

A major concern during the project was illiteracy. According to UNESCO, adult literacy rates in the three most affected countries are below 48%. The majority of the material

³ Available at: <http://www.cdacnetwork.org/tools-and-resources/message-library/?&language=krio&filterA=threat&filterB=THR-Ebola&filterC=&filterD=&local=sierra-leone&format=html-cdac>

⁴ Available at: http://ebolacommunicationnetwork.org/latest-materials/#!/resource_types=271&topics=272.

⁵ See <http://vimeo.com/user33201638/videos/sort:alphabetical/format:thumbnail>.

translated was in written form (i.e. posters). Although in the right language and using graphics elements, posters and other written materials are not effective if people can't read them. Priority should be given to audio and video in local languages for the next Words of Relief deployment. Finding experienced translators for African languages has also been challenging. Professional translators in most West African languages do not exist, and the project had to focus on the more widely spoken languages. This meant that requests for languages like Susu, Kpelle, Bassa, Mano and Mandingo could not be met.

Non-professional translators recruited from the diaspora via the spider networks often lack experience in translating. TWB developed new tools to help address this issue and ensure that this lack of experience did not affect the quality of the translations. First, inexperienced translators needed to be trained in basic translation. TWB adapted the three-day on-site training from the Words of Relief pilot project in Kenya into basic online training that can be used for any languages and any crisis. Training was conducted on Skype with expert language trainers. Another online orientation training has also been developed to provide contextual information and key aspects of rapid response translation. These tools are available in multiple languages. To ensure quality, two people reviewed each translation. This also helped address another issue associated with the multiple dialects of a language. For example, Fula (also known as Fulani) and Pulaar from Guinea are very different from Pulaar from Senegal, which means that editors were also needed to ensure the correct dialect of a language was used.

Conclusion

It is clear that a greater focus on translation is needed to help control crises such as the Ebola outbreak. However, the difficulties in getting humanitarian organisations and governments to collaborate and provide content for translation confirm that more work remains to be done. Concrete changes are needed in the way we communicate with communities during crisis. While TWB continues to improve its tools for crisis translation, there is an opportunity for aid organisations to review their response mechanisms and consider ways in which translation can be integrated as a full component of their humanitarian response. As Claudia Evers, Médecins Sans Frontières (MSF)'s Ebola emergency coordinator in Guinea, said: 'In the first nine months, if people had been given proper messages, all this could have been prevented'.

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Humanitarian Practice Network

The Humanitarian Practice Network (HPN) is an independent forum where field workers, managers and policymakers in the humanitarian sector share information, analysis and experience.

HPN's aim is to improve the performance of humanitarian action by contributing to individual and institutional learning.

HPN's activities include:

- A series of specialist publications: *Humanitarian Exchange* magazine, Network Papers and Good Practice Reviews.
- A resource website at www.odihpn.org.
- Occasional seminars and workshops bringing together practitioners, policymakers and analysts.

HPN's members and audience comprise individuals and organisations engaged in humanitarian action. They are in 80 countries worldwide, working in northern and southern NGOs, the UN and other multilateral agencies, governments and donors, academic institutions and consultancies. HPN's publications are written by a similarly wide range of contributors.

HPN's institutional location is the Humanitarian Policy Group (HPG) at the Overseas Development Institute (ODI), an independent think tank on humanitarian and development policy. HPN's publications are researched and written by a wide range of individuals and organisations, and are published by HPN in order to encourage and facilitate knowledge-sharing within the sector. The views and opinions expressed in HPN's publications do not necessarily state or reflect those of the Humanitarian Policy Group or the Overseas Development Institute.

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