Saving Lives: The Civil–Military Response to the 2014 Ebola outbreak in West Africa
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Saving Lives: The civil-military response to the 2014 Ebola outbreak in West Africa / Adam Kamradt-Scott, Sophie Harman, Clare Wenham and Frank Smith III.

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-- Ebola virus disease
-- Civil-military cooperation
-- Health security
-- West Africa (Liberia, Sierra Leone)
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Executive Summary

The 2014 Ebola outbreak in Guinea, Liberia and Sierra Leone proved to be an exceptional outbreak that blurred the lines between health and humanitarian crises. In so doing, it highlighted numerous problems with regard to the coordination of humanitarian disasters that have public health implications of international consequence. The manner in which the international response to this crisis unfolded has in turn prompted a number of high-level intergovernmental reviews of the key actors, institutions and systems that we - as a global community - currently rely upon. At the time of writing, some of these reviews are yet to hand down their findings. This study, which was funded by the University of Sydney, provides a number of independent insights into the civil-military response and overall coordination of the Ebola outbreak in Liberia and Sierra Leone. It also offers recommendations to inform future research and response efforts.

The domestic health systems of Liberia and Sierra Leone were ill-equipped to address the size and scale of the Ebola outbreak. Overwhelmed, rapid international assistance was needed to halt the spread of the virus and save lives. The international civilian response to this crisis was, however, widely perceived as slow and inadequate. While key institutions such as the World Health Organization (WHO) have been heavily criticized, the role of non-government organizations (NGOs) was also mixed. A small number of non-state actors and international NGOs (INGOs) such as Medicines Sans Frontiers (MSF) reacted swiftly to the outbreak, but the majority of other organizations found themselves unprepared for a crisis of this nature, withdrawing personnel and closing down operations. This raises serious concerns about the overall capacity of the existing humanitarian system and agencies to respond to health-related crises.

Due to the inadequate civilian response, the 2014 Ebola outbreak also witnessed the deployment of thousands of military personnel to help contain the outbreak. The majority of respondents interviewed for this study were positive about the role of foreign military assistance (FMA), which was seen as a necessary last resort. In addition, Sierra Leoneans were generally positive about the role of domestic armed forces, which played a larger role in the Ebola response than their Liberian counterparts. However, several significant criticisms and concerns emerged as well. Foreign armed forces were perceived as risk averse and slow in constructing Ebola Treatment Units (ETUs). Criticism of domestic armed forces included the threat - and in some instances use of - violence and intimidation.

Strong leadership from the President and the health sector in Liberia was recognised as key to the country’s effective response, whereas weak leadership and patronage within the health sector was seen to hurt the response in Sierra Leone. Limited trust in government undermined public health, inhibiting behaviour change and social awareness campaigns (particularly in Sierra Leone). These findings highlight that changes are warranted in how governments, international organisations, NGOs, civil society and even militaries approach health-related humanitarian crises in the future.
Key Recommendations

1. Expand the terms of reference for the United Nations High-Level Panel on Global Response to Health Crises to include civil-military cooperation as part of the broader review of the international crisis response system.

2. Immediately and substantially increase international investment - informed by empirical evidence and frameworks such as the International Health Regulations (2005) - to address existing capacity gaps in disaster management and outbreak response.

3. Cite the 2014 Ebola outbreak to advocate for greater government resources to address the capacity gaps in national health systems. This includes leveraging support from international actors to secure the requisite technical and financial support to build local capacity.

4. Adverse health events must be recognised as equivalent to other disasters for their potential to cause or exacerbate humanitarian crises. Health actors must not preclude multisectoral collaboration with humanitarian, and if necessary, military actors even if an event is framed as a health crisis. Likewise, if an event is described as a humanitarian crisis the health aspects must not be lost.

5. Develop additional evidence-informed criteria to facilitate multi-level risk assessments that clearly delineate and guide civil-military responses to health-related humanitarian crises. This will help limit the risks of harmful and unintended consequences.

6. The United Nations Secretary-General commissions an independent research program to systematically investigate the roles and functions that military-based actors can perform - in collaboration with civilian authorities - during health-related humanitarian crises.

7. Enhance existing training programs for military and civilian actors to boost preparedness, build awareness, and ensure reciprocal understanding of appropriate roles, principles and practices for responding to health-related humanitarian crises. These programs must be developed in close collaboration with leading non-government and humanitarian agencies, militaries, academic institutions, and the United Nations.

8. The United Nations Secretary-General mandates that all humanitarian operations must have an independent evaluation team appointed at the commencement of the response, irrespective of whether the operation is coordinated by OCHA or another entity. The evaluation team should report directly to the Secretary-General.
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Methodology

The purpose of this study was to examine the civil-military response to the 2014 Ebola outbreak in Liberia and Sierra Leone. The research was funded by the Marie Bashir Institute for Infectious Diseases and Biosecurity and the Centre for International Security Studies based at the University of Sydney, and conducted by a small multidisciplinary team drawn from the University of Sydney, Queen Mary University of London, and the London School of Hygiene and Tropical Medicine. The study received full ethics approval from the University of Sydney and the London School of Hygiene and Tropical Medicine. Fieldwork was conducted in Liberia, Sierra Leone, and Ghana in February to April 2015. Additional research was conducted in the United Kingdom and Switzerland between February and May 2015, and the United States in August and September 2015.

Primary data was collected through interviews, structured around a common set of research questions (Appendix A). A combination of qualitative research methods were used to evaluate the crucial tasks, relationships, duties and responsibilities of the civilian and military actors engaged in containing the spread of Ebola in West Africa. These included literature reviews, semi-structured interviews, and non-participant observation. Participants were identified through stakeholder mapping, self-nomination, and snowball sampling. Formal written or verbal consent was obtained from all participants. Given the sensitivity of some issues, all quotations have been anonymized to protect identities.
Literature Review

Most scholarship that examines civil-military relations falls into two broad categories. The first category is principally concerned with domestic civil-military relations. Within this literature, the issues under investigation revolve around topics such as civilian oversight and control of the military, the risk of conflict between parties leading to unintended outcomes (i.e. military coups), and the importance of democratic governance and accountability.\(^1\) Accordingly, the focus is on the balance of power and bargaining between three groups of actors - the general population, civilian government, and military - with various theories emphasising different individual, institutional, or sociological factors to explain whether the armed forces are behaving as intended.\(^2\)

A second category of literature on civil-military relations emerged in the wake of the Cold War. This literature emphasizes the importance of particular norms such as the ‘responsibility to protect’, gender ‘mainstreaming’, etc. Here the principal concern is changing military practices and roles in international stability and reconstruction operations.\(^3\) Within this growing literature, the role of military personnel in health-related activities (and corresponding concepts such as ‘health as bridge for peace’) has remained especially controversial. A raft of unintended consequences supposedly arise from what is perceived as a ‘blurring’ of lines between civilian and military actors.\(^4\) These consequences range from compromising traditional humanitarian principles and the sustainability (and concomitant consequences) of any interventions, to the kidnapping or even murder of humanitarian workers. Inside the military, opinions also remain divided over the appropriateness of military-operations-other-than-war (MOOTWs), with some voices arguing that such activities are not ‘core business’ and should be discarded (especially in light of fiscal tightening).\(^5\) As a result, prior to the 2014 Ebola outbreak, there was no clear consensus on the effectiveness or appropriateness of civil-military cooperation in health-related humanitarian crises.
Research Findings

International Civilian Actors

‘International civilian actors’ refers to all intergovernmental, governmental, and non-governmental organizations that are not indigenous to Liberia and Sierra Leone. This notably includes all UN agencies, but excludes military-based actors such as the United Nations Mission in Liberia (UNMIL).

The initial response by the international civilian community to the 2014 Ebola outbreak in West Africa is widely perceived to have been slow and inadequate. Individual organisations have been singled out for blame, particularly the WHO. However, it must also be acknowledged that the current systems and processes that guide most international actors are not sufficiently developed or resourced to enable the rapid mobilisation of personnel and equipment in emergency contexts.6

Moreover, as several respondents noted, 2014 was a particularly challenging year. Concurrent with the Ebola outbreak in West Africa were multiple category 3 (‘L3’) humanitarian emergencies in other locations, including Syria, the Central African Republic, South Sudan, and Iraq, as well as health crises of MERS-CoV, polio and avian influenza H7N9.7 As a result, both non-government and intergovernmental organizations were stretched beyond their capacity and found it difficult to re-deploy personnel to Ebola-affected countries. This experience has several implications for emergency humanitarian response and co-ordination.

a) Emergency response capacity

The international civilian actor that most participants identified as responding in a timely and enduring manner to the 2014 Ebola outbreak was MSF. Local chapters of the Red Cross (supported by the American Red Cross), the Africa Governance Initiative (AGI), and Kings Sierra Leone Partnership were also identified by a number of participants. The Red Cross focused on education and awareness raising, providing psychosocial support and safe burial practices.8 MSF had a small presence in Liberia and Sierra Leone working on malaria, but with the outbreak of Ebola, the organization re-prioritized its personnel to focus on containment and treatment. MSF also played a key advocacy role in alerting the international community to the uncontrolled nature of the crisis while arguing for more resources and personnel. In this context, the decision by MSF on 2 September 2014 to call for military intervention was identified by a number of participants as crucial to the overall response. Some suggested that
MSF helped provide a measure of legitimacy to the subsequent deployment of military forces, given the organization’s well-documented opposition to military involvement in health-related activities.

Having said this, MSF was also criticised for being unduly demanding and difficult. Some interviewees suggested, for example, that MSF held ‘unnecessarily high standards’, which were perceived to contribute to delays in the overall response. MSF was reported to be unjustifiably critical of other NGOs’ capacity to care for and treat Ebola patients, suggesting only they had the ability to operate ETUs. In addition, MSF was reportedly slow to respond in Sierra Leone. This may in part be explained, however, by the INGO being overwhelmed and lacking sufficient staff, which corresponds with findings in their publicly available report.

By contrast, the WHO was often identified by respondents as having ‘failed’ the international community and the people of West Africa by not reacting swiftly enough to the crisis. This perception was widespread, which suggests that the organization’s reputation has been seriously damaged as a result of its alleged failure. This failure was often cited as a reason why a stronger UN response was needed, although, as described below, views were mixed on the benefit of the United Nations Mission for Ebola Emergency Response (UNMEER) as well. While participants acknowledged that several independent reviews of the UN response (including WHO) are currently underway, they nevertheless argued that the WHO’s emergency response capacity warrants special attention.

For example, the WHO was seen to be overly protective of its reputation, failing to call for international action earlier for fear of antagonizing the governments of Guinea, Liberia and Sierra Leone. This view was particularly prevalent amongst a number of INGO and local respondents. Email correspondence from senior WHO officials subsequently published by Associated Press appears to confirm that these perceptions were accurate. Senior WHO officials interviewed for this study stressed that the organization responded appropriately to news of the initial outbreak in March 2014 by sending Global Outbreak Alert and Response Network (GOARN) teams. Still, they acknowledged that the organization’s response to the second wave of infections in late May 2014 was inadequate, and, as a result, significant structural reform of the WHO is reportedly underway.

A small number of respondents also raised concerns about the consistency and experience of deployed WHO staff. These concerns extended from staff installed at the district level to the country leadership. One participant, for instance, characterized their experience with WHO personnel at the district level as, “they’re only good for writing reports. And because they can write reports faster than us, they present it as their work. They take our data and present it as theirs. But we’re the ones out there fighting Ebola and putting our lives on the line”. Likewise, at least two participants observed that the WHO country representative for Sierra Leone was replaced three times between May 2014 and May 2015, allegedly over their ability and inexperience to manage the crisis. Other interviewees sought to counter such perceptions noting that only one country representative was replaced due to inexperience, that subsequent appointments were only intended to be temporary, and that the quality of staff was overall quite high. Either way, this suggests that the WHO may not have been sufficiently attuned to how the quality and rotation of personnel - whether due to competence or other factors - would be perceived by the local population and/or partner organizations.

It is important to note, however, that the WHO was not the only organization to encounter human resource challenges. The WHO response to the 2014 Ebola outbreak is the largest emergency operation in the organization’s almost 70-year history. As such, it is perhaps understandable that the experience of personnel deployed to assist in containing Ebola
varied, especially when taking into account the urgent need to recruit new staff and deploy them to the affected areas. Nor was the rapid rotation of personnel limited to the WHO. Organizations like the US Centres for Disease Control and Prevention (CDC) and US Public Health Service (USPHS) also sent some personnel on four- and eight-week rotations. These practices were reported to have disrupted interagency coordination as well as relationships with local health partners.\textsuperscript{18}

With the exception of MSF, the Red Cross, the King’s Sierra Leone Partnership, and particular individuals working in the non-governmental sector, most non-government and civil society actors were unprepared or unwilling to respond to this outbreak. A number of respondents observed that their organizations lacked appropriately trained personnel to deal with a crisis precipitated by an infectious agent. Further, they lacked sufficient capacity to train personnel in infection control or manage the demands for personal protective equipment. Instead, in several reported instances, local branches or missions were directed by their headquarters to cease operations and immediately withdraw their personnel to non-affected areas, even exiting the countries in which they were working entirely. In other instances, government-based development agencies (e.g. UK Department For International Development (DFID)) reportedly resorted to applying political and financial pressure on certain INGOs to ‘step up to the plate’, to ‘do their job’ and provide assistance.\textsuperscript{19}

Ebola was an unfamiliar threat that created fear in both the health and humanitarian sector. A number of respondents acknowledged that some humanitarian personnel were unwilling to deploy to an area where this infectious disease was spreading. According to one participant, ‘we had people lining up to get shot at in Syria, but we couldn’t get anyone to come to West Africa’.\textsuperscript{20} This reticence was especially acute given the level of publicity surrounding the morbidity and mortality associated with this virus, and the frenetic actions taken by some Western governments reported in international media.\textsuperscript{21} As one respondent remarked, ‘I don’t blame people for not wanting to come. This was Ebola, which is the world’s worst disease in terms of fatality rates’.\textsuperscript{22}

Military personnel expressed mixed views about the activities and actions of humanitarian agencies. Several military personnel singled out MSF as having performed its duties well in both Liberia and Sierra Leone. However, opinions were divided over the effectiveness and utility of other international humanitarian actors. For example, one officer remarked that he ‘would have preferred if the NGOs did more to support us’ by ‘getting behind the mission’, but they instead appeared to be preoccupied with ‘their reputation’.\textsuperscript{23} Another interviewee remarked that the exodus of INGOs ceased only after it was announced that armed forces were deploying to West Africa - an observation that was confirmed by several representatives from humanitarian organizations themselves.

\section*{b) Coordination}

The UN Secretary General officially launched UNMEER on 19 September 2014. This followed the passage of United Nations General Assembly resolution 69/1 and UN Security Council resolution 2177(2014) that declared the Ebola outbreak an ‘international threat to peace and security’.\textsuperscript{24} The main function of UNMEER was coordination of the UN response to Ebola. It also acted as an emblem of high-level UN concern and commitment; by January 2015, UNMEER had raised over USD$5.1 billion in donations.\textsuperscript{25} The symbolic status of UNMEER and the politics of the UN will arguably see this mission framed as a success, regardless of what it did or did not do. Nevertheless, the majority of participants outlined serious concerns with how this entity functioned.
The first major critique of UNMEER was that it was peripheral to the Ebola response. It arrived too late, left too soon, and did not locate its official headquarters in an affected country but instead was based in Accra, Ghana. The decision to be based in Accra was explained by one senior UN official in the following way:

In many respects it was a classic military-style approach. You establish a forward operating base that you can retreat safely to if, or when, things go awry. And keep in mind that decision was taken in September when things were looking pretty dire. Even if [the United Nations Office for Humanitarian Affairs (OCHA)] had been in charge it probably would have made the same decision, although it probably wouldn’t have been Accra that was chosen as the location.26

In practice, however, respondents suggested this reflected a lack of confidence in the safety of the three affected countries. It also added to the impression that there were no UNMEER staff on the ground. As one respondent observed, ‘we have been told that [UNMEER staff] are here, but people hardly ever see them and we don’t really know what they do’.27 Similarly, according to another respondent, ‘if UNMEER had gone away, no one would have noticed.’28 It was also observed that some UN staff were reluctant to deploy, since the mission was intended to be short-lived and it was unclear who would comprise the senior management team.29

UNMEER took approximately 6-8 weeks to deploy sufficient personnel to West Africa. While this was relatively fast for the UN, other actors had already assumed a number of specific responsibilities and set up their own mechanisms of coordination before UNMEER arrived. In February 2015, it was then announced that the mission would cease operations by mid-2015. Although UNMEER was meant to be short-lived, this announcement nevertheless took a number of agencies, staff, and partner organizations by surprise, and it led to confusion as to who would takeover coordination as the outbreak continued in Sierra Leone, Liberia and Guinea.

A second major critique was that UNMEER did not use standard processes for humanitarian management and it had little expertise or experience in coordination. UNMEER viewed the outbreak as a public health emergency rather than an unfolding humanitarian disaster. This perspective had several implications for coordination and leadership. The designation of UNMEER as a public health mission and its associated 30-60-90-day strategy for containing the outbreak focused the organization too narrowly on health targets. This strategy informed the ‘4 Pillars’ framework that countries were encouraged to adopt,30 and it facilitated a vertical or silo-style approach to addressing the crisis that was at odds with the commonly understood OCHA-led cluster framework. As one respondent observed, this disjunction created considerable confusion amongst partners:

We had some cluster arms stood up, others were partially stood up, but others were not stood up at all. What this meant... was that as organizations arrived to assist with the outbreak they had to work out where they could fit in and what activities they could do that weren’t already being done by other groups. It was all a bit of a mess.31

By dismissing the cluster framework in favour of the 4 Pillars approach, some participants believed UNMEER ignored a number of the wider social and economic consequences arising from the outbreak. These included the impact on food security and emergency shelter, as well as non-food items and protection (especially for survivors). In terms of technical assistance and coordination, most participants observed that UNMEER brought little to ‘no added value’, with one respondent characterizing the organization as ‘only good for writing cheques’.32
While the creation of UNMEER was purported to assist with coordinating various UN agencies, the organization failed to provide regional leadership or coordination. Rather, the government of each affected territory was encouraged to take carriage of their own national response. Respondents noted that as a result, lessons learned were not shared and easily avoidable mistakes were repeated. While UNMEER may not have been explicitly commissioned to provide region-wide leadership (instead focusing on coordinating UN agencies), it was perceived to have not performed as desired.

Much of the criticism levelled against UNMEER was that it was not OCHA and did not do what OCHA has done during previous humanitarian missions. The fact that UNMEER diverged from standard humanitarian response practices created confusion amongst a number of partner agencies. At least two participants identified that the creation of UNMEER under the UN’s Department of Peacekeeping Operations (DPKO) framework inhibited the organisation’s autonomy to distribute funds and render assistance. Additionally, valuable opportunities to identify ‘lessons learned’ have been lost, given that the Secretary-General failed to appoint an evaluation team to review the UN’s first-ever public health mission and no formal evaluation of UNMEER has been undertaken to date.

Domestic Civilian Actors

‘Domestic civilian actors’ in Sierra Leone and Liberia refer to both the government sector – the Ministry of Health and Sanitation (Sierra Leone)/Ministry of Health and Social Welfare (Liberia) - and the non-governmental sector, primarily national civil society organisations, community groups and social media.

a) Emergency response capacity

A key factor in the spread of Ebola virus was the poor state of national healthcare systems throughout Liberia and Sierra Leone. These systems were characterized by inadequate infrastructure, a lack of resources, poor surveillance capacity, and insufficient numbers of trained health workers even before the outbreak. There was no domestic surge capacity to deal with a sudden onset health emergency, and, as news of high infection rates amongst health workers spread, what limited operational capacity there was collapsed entirely.

As the outbreak expanded in mid-2014, the governments of Liberia and Sierra Leone enacted emergency plans and established focal points to oversee their national response. However, both countries were overwhelmed and ultimately dependent on assistance from, among others, INGOs such as International Medical Corps, MSF, and AGI; development partners such as DFID and the United States Agency for International Development (USAID); local NGOs and civil society organizations; and ultimately, foreign and domestic military forces.
b) Coordination

When the outbreak spread to Liberia, the Ministry of Health and Social Welfare (MOHSW) established a national task force and expert committee to oversee the response. In July 2014, this structure was supplemented by a purpose-built incident management system (IMS), which was developed with assistance from the US CDC. The IMS, chaired by Assistant Minister for Health, the Hon. Tolbert Nyenswah, then served as the principal coordination mechanism for the national response, with daily meetings between its technical committee and partner organisations.

This coordination framework was remarked upon by a number of respondents as particularly effective, since the MOHSW was widely perceived as leading and directing the national response effort. Its leadership notably included the coordination (often via intermediary actors)
of FMA, as well as INGOs and domestic NGOs. In the case of the US military, for instance, it was repeatedly stressed that military personnel were deployed in support of USAID, which was supporting the MOHSW. As a result, USAID would receive requests from the MOHSW via IMS meetings, and USAID would in turn direct US military activities using a mission tasking matrix. This approach ensured that external armed forces were kept at arms-length in Liberia and avoided the perception they were receiving orders from a foreign government. However, one notable exception to this approach to coordination appears to have been the Chinese military. Chinese armed forces were responsible for running an ETU, but their representatives reportedly attended IMS meetings infrequently and did not actively participate.

The national response to Ebola followed a similar trajectory in Sierra Leone but with several key differences. On 30 July 2014, Sierra Leone’s President, Dr Ernest Bai Koroma, established a presidential taskforce to oversee the national response and ordered the formation of the Emergency Operations Centre (EOC), which was to be coordinated by the Ministry of Health and Sanitation (MOHS). On 29 August 2014, however, President Koroma dismissed the then-health minister and appointed the WHO country representative and Chief Medical Officer to co-chair the EOC. Less than three weeks later, the President disbanded the EOC and appointed the Minister for Defence, Major (Rtd) Alfred Palo Conteh, as head of a newly formed National Ebola Response Centre (NERC). Following Major Conteh’s appointment, the Republic of Sierra Leone Armed Forces (RSLAF) assumed a much more prominent role in coordinating the national response. The RSLAF was supported by the British armed forces. A number of interviewees observed that the appointment of Major Conteh effectively side-lined the MOHS from further involvement in coordination.

One reported weakness in national responses across both countries was a pervasive lack of trust in government institutions. Mistrust extended to the highest levels of government in Liberia and Sierra Leone, and it was often remarked that the only trustworthy part of government was the military. In general, mistrust impeded the Ebola response and coordination efforts in a number of important ways. Several communities in Sierra Leone and Liberia initially refused to believe that the Ebola outbreak was real, judging it to be part of a government conspiracy to secure new funding from Western donors. As the epidemic progressed, suspicion turned to the international community. Conspiracy theories soon emerged; for example, that Ebola had been intentionally introduced to depopulate West Africa for its mineral resources, with some suggesting the national governments were in league with this plan. As a result of these beliefs spreading, Liberia and Sierra Leone reportedly experienced isolated incidents of violence against government health workers and/or INGO representatives.
Finally, an important but contentious domestic issue was the emergence of a formal and informal ‘Ebola economy.’ The formal element refers to the economy organised around hazard pay for healthcare workers and burial teams. Hazard pay was a critical tool to motivate workers into risky and traumatic roles. However, such payments have distorted the pay scales and expectations of local healthcare workers, as well as those that were not employed in health-related activities before taking on these hazard roles (i.e. teachers). The informal aspect of the Ebola economy manifested in the overall cost increases for basic necessities and services. While international actors generally accepted this as the ‘cost of doing business’, the impact of over-pricing on local populations prompted the leaders of both Sierra Leone and Liberia to issue official statements, warning that perpetrators of price gouging would be prosecuted.39

Foreign Militaries

‘Foreign militaries’ pertains to the involvement of all external military forces engaged in the Ebola response. This excludes the military forces of Liberia and Sierra Leone.

a) Emergency response capacity

It is important to note that plans to deploy armed forces to West Africa were already well underway when MSF International President Joanna Liu called for military intervention at the UN Security Council in September 2014. The US National Security Council was reviewing plans for intervention by July 2014, and US military personnel were reportedly based in Monrovia throughout August to consult with senior MOHSH officials on the nature of American military assistance.40 These consultations were coupled with assessment by the US combatant command for Africa (AFRICOM) ultimately informed President Barack Obama’s announcement on 16 September 2014 that the US military (under Operation United Assistance) would be part of a wider US-led effort to contain the outbreak and reduce its social and economic impacts.41 Similar planning efforts were also undertaken by UK forces to assist authorities in Sierra Leone and facilitate the launch of Operation Gritrock in October 2014.42

As witnessed in a number of previous humanitarian crises, military forces frequently command significant and, in many respects, unparalleled logistical capacity compared to their civilian counterparts. The 2014 Ebola outbreak was no different. A summary of the various contributions by armed forces is provided in Appendix B. Perhaps most significant, the deployment of 2,900 US military personnel (predominantly in Liberia), and some 750 UK military personnel in Sierra Leone, signified firm commitments to support the affected countries and halt the spread of Ebola.43 The arrival of thousands of US service members in Liberia
UK and US military forces were primarily focused on constructing ETUs and training local health workers. The US military did not provide direct patient care; this mission was reserved for the USPHS, with the CDC providing training, epidemiology, and laboratory support.\(^46\) In contrast, virtually all of the smaller military contingents deployed to Liberia and Sierra Leone provided some form of clinical care. The African Union, for instance, deployed approximately 720 civilian and military health workers from Nigeria, Ethiopia, the Democratic Republic of Congo, and Kenya to assist affected countries as part of Operation African Union Support to Ebola Outbreak (ASEOWA).\(^47\) The Canadian military contribution, which was directed to support UK efforts in Sierra Leone, comprised of 36 military health workers in total.\(^48\) Likewise, a large proportion of the German military assisting the German Red Cross in Liberia worked in the Severe Infection Temporary Treatment Unit (SITTU) treating non-EVD illnesses.\(^49\) Although no confirmation could be obtained from the Chinese authorities, a number of interviewees stated they believed the staff operating the Chinese-run ETUs in Monrovia and Freetown were also military.

Most study participants regarded the involvement of armed forces in this context positively – even those who admitted that they were highly sceptical or otherwise averse to military engagement in health-related activities. The use of military aircraft was especially seen as critical to the response. Witnessing American helicopters and fixed-wing aircraft fly overhead fed public perceptions that the US military had arrived in force to render assistance. However, deployment of other military assets received mixed reviews, including the UK’s Royal Fleet Auxiliary (RFA) Argus. This ship was deployed to Sierra Leone, but a number of respondents claimed that it was unnecessary and costly. Others were ambivalent, and at least one respondent suggested that the ship provided reassurance during a difficult time.

The largest criticisms of the US and UK military contributions focused on the parameters of their respective missions. According to MSF, it anticipated that calling for military assistance would result in governments sending large numbers of personnel capable of providing ‘hands on’ clinical care, as well as personnel skilled in biohazard containment.\(^50\) But, in both Liberia and Sierra Leone, respondents found that their expectation differed from what foreign militaries actually delivered. Many also criticised the time it took for military forces to arrive, observing the bulk of personnel did not arrive until late October or early November 2014. However, according to one US government official, the decision to intervene may have been late, but
once this decision was made, the response rate was ‘pretty good’ when compared to the lead time prior to military interventions in Iraq and Afghanistan.\textsuperscript{51}

In both Liberia and Sierra Leone respondents also expressed frustration at the pace that ETU facilities were built by militaries, which took approximately 3 months to construct. This contrasted with INGO-built facilities that took an average of two to five weeks to complete. As one interviewee stated, ‘If we were ever to see this again, I have to say that it would be more appropriate for the military to erect tents in the first instance. We needed beds fast, not high spec buildings. They could have been built later’.\textsuperscript{52} High-level specifications, building codes and safety standards were regularly cited as causing delay. In this regard, these delays were not necessarily the fault of militaries per se, but rather the prescriptive standards set by their respective governments.

Several interviewees were also critical of the military’s perceived avoidance of risk, which manifested in a number of ways. It was observed, for instance, that most military personnel were confined to barracks once in country, which reportedly negated some of the goodwill that locals had initially felt towards foreign forces.\textsuperscript{53} One senior military officer attempted to counter such perceptions by noting that the deployment of any large force requires a sizeable contingent of support staff, the majority of whom have no frontline role.\textsuperscript{54} Another government official suggested that the US military was predisposed to come in heavy for force protection, and, in hindsight, some support personnel could probably have left Liberia sooner.\textsuperscript{55}

Further concerns flagged by interviewees related to divergent perspectives on care and treatment. This ranged from the refusal of the US military to airlift Ebola patients or specimens and an alleged ‘no touch care’ policy by the UK military to perceived differences in treatment protocols between the Sierra Leone military-run Hastings ETU and the British military-run Kerry Town Military Medical Unit (MMU). Public perceptions of Kerry Town were greatly affected when it was reported that Sierra Leone’s Dr Martin Salia had been turned away from the MMU and subsequently died of Ebola after being evacuated to the US (see below). Several respondents remarked how this contrasted with their expectations about what the military would do, although some also acknowledged that this perhaps reflected a level of naivety and unfamiliarity with the military on their part. UK and US military officials noted that such actions were consistent with force protection protocols and their mission parameters.

Having said this, there appears to be considerable confusion regarding certain events. For example, it was widely reported by interviewees in Freetown that the UK military promoted a ‘no touch care’ policy, and yet no documented evidence of this policy has been located. UK military health professionals that were deployed to Freetown have also denied the existence of such a policy, and some interviewees characterized the care provided by the UK military in
Sierra Leone as the highest quality medical care of all responders. Similarly, while the UK military attracted criticism for turning away Dr Sali, it has been reported that a local security firm was responsible for denying the doctor entry to the compound; once the UK military had been made aware of the doctor’s condition, they immediately made a bed available for him. All of this suggests that countering misinformation is critical to minimizing misunderstandings that can adversely affect health and humanitarian support.

b) Coordination

The arrival of FMA had a number of direct and indirect impacts on coordination efforts, and arguably became one of the most significant contributions to the overall response effort. In terms of the indirect impacts, a number of observers noted that the US military’s arrival in Liberia encouraged a more ‘professional’ response by INGOs and domestic military personnel. A similar dynamic was observed in Sierra Leone. Several respondents attributed this to the strong historical ties that exist between the US and Liberia, and the UK and Sierra Leone, including established military-military relationships involving officer training and personnel exchange programs.

In terms of direct effects, the arrival of FMA helped promote the adoption of more structured command and control arrangements. In Sierra Leone, although ostensibly deployed to assist DFID coordinate the response, the UK military played a very prominent role in assuming command of the national response between October and December 2014. The British military reportedly began to ‘step back’ from coordinating the NERC meetings by late December 2014, encouraging RSLAF personnel to assume a more prominent leadership role. This contrasted with the Liberian experience, where the MOHSW was visibly in charge of the national response, even as it adopted a militaristic approach to coordinating its IMS meetings.

On a practical, day-to-day level, most respondents found the military open, engaging, and keen to learn. However, in Sierra Leone, the coordination meetings in the NERC and Commander Unit Briefings (CUB) were seen by some respondents as particularly militarized and masculine spaces. In both settings there was little provision made for questions, discussion or opportunities to challenge the direction outlined by military leaders. This, combined with the fact the majority of speakers were men, was seen to reduce available space for people to admit failure in specific areas, or those with expertise outside the military to speak up about issues that they did not agree with. An additional limitation of the military was the creation of new committees within the NERC system that replicated existing domestic structures, particularly at the local level. Specifically, District Ebola Response Centres (DERCs) replicated much of the work of the District Medical Offices and for some could have been assimilated within existing arrangements. Others argued a separate entity was necessary to upscale the response.
The approach in each country highlights policy differences between US and UK on civil-military cooperation. In Liberia, the US military was resolute that it remain separate from the AFL, working instead in direct support of USAID (albeit very prominently, given the disproportionate resources at the military’s disposal). Perhaps as a consequence, one participant argued that no single entity appeared to be in charge and interagency coordination was limited, illustrating the need to improve America’s ‘whole of government’ response. In contrast, the approach taken by the British military inside Sierra Leone was to integrate and embed personnel within RSLAF and, at least in the initial months following their arrival, assume coordination of the national response in all but name. The UK military was observed to engage closely with DFID and other UK-based actors to also ensure effective coordination, but as one DFID contractor observed, “in the first few months the military were very much in charge”. Despite these differences, a common assertion was that Ebola would not have been contained without FMA.

Domestic Militaries

‘Domestic militaries’ refers exclusively to the Armed Forces of Liberia (AFL), and the Republic of Sierra Leone Armed Forces (RSLAF).

a) Emergency response capacity

The use of domestic militaries for responding to disasters or civil emergencies is a common practice throughout West Africa. Domestic militaries are, in many circumstances, the only available option for governments to respond to crises. In Sierra Leone, for example, RSLAF had previously worked alongside public health officials during the 2012 cholera outbreak, which suggests that these forces already had an established reputation for assisting in health-related crises. That being said, domestic militaries were not immediately called upon to assist with national Ebola response efforts. They were only engaged in Liberia and Sierra Leone in mid-2014.

b) Coordination

By August 2014 the scale of the outbreak was so dire that military forces in both Liberia and Sierra Leone were deployed to assist in the response. In Sierra Leone, RSLAF assumed a prominent role in coordinating the national response following the appointment of the defence minister as director of the NERC. RSLAF was perceived to fill a void created by the overwhelmed and poorly functioning MOHS, as well as the relatively inactive and ill-equipped Office for National Security. This contrasted notably with the experience of Liberia, where the MOHSW assumed command of the national response and the military was relegated to a support function, particularly following the West Point incident (see below). Senior military officers would often attend IMS meetings and provide regular updates, but the MOHSW took the lead in directing efforts and coordinating the various international and domestic actors. Given these differences, it should perhaps come as no surprise that the general consensus amongst Sierra Leonean respondents was that the situation would have been much worse if the domestic military had not stepped in, whereas in Liberia it was FMA (specifically the US) that was seen as the decisive factor for the response proving successful.

Both the AFL and RSLAF undertook a variety of activities. In Liberia, the AFL Engineering Company worked alongside US military engineers to build four ETUs, and they assisted with
extending a remote airstrip to help deploy more logistical equipment. Similar activities were undertaken in Sierra Leone where RSLAF staffed checkpoints, enforced quarantine, and assisted with the removal and safe burial of Ebola victims. In these activities, the majority of respondents drew clear distinctions between their respective military and police forces, indicating that military personnel were generally seen as more honest and trustworthy. Several interviewees in each country stated how proud they were of their military, noting that they had undergone significant reform as part of post-conflict reconstruction efforts at the end of the civil wars in both states.

This pride notwithstanding, several respondents in both Sierra Leone and Liberia also noted that they followed instructions from their domestic military out of fear for personal safety and the safety of their loved ones. It was not uncommon for respondents to recall memories of the civil war and past atrocities committed by both armed forces and ‘sobels’ (soldier-rebels) when discussing the military role in the Ebola response. Some respondents failed to understand why military personnel carried guns and were dressed in combat fatigues when they were ‘fighting’ a disease. Stories were also recounted of people fleeing their homes after the military imposed quarantine, while a small number of respondents reported isolated incidents of alleged low-level violence to enforce lockdown periods and ensure the safe closure of ETUs. For some respondents in Sierra Leone, this low-level but state-sanctioned violence was perceived as the norm and a necessary form of heavy-handedness. However, it raises difficult questions about how violence or the threat of force can be sanctioned in response to health emergencies.

The most prominent example that respondents identified as a cause for concern was the West Point ‘incident’. On 19 August 2014, Liberia’s President ordered the quarantine and isolation of Monrovia’s West Point community. This followed an earlier disturbance when an Ebola isolation centre was ransacked (freeing patients, as well as removing infected bedding and other materials). Overnight, and at the direction of the President, the AFL moved in to establish roadblocks with the result that residents of the community awoke the next day to find that they were unable to leave the area. Tensions escalated, leading to protests. While attempting to quell a local riot, a 15-year old boy was shot in the leg and bleed to death due to concerns that he may have been infected. An inquiry was launched, but this event was noted to have profound implications in undermining the reputation of the AFL throughout Liberia. Respondents in Sierra Leone also cited the West Point incident as evidence of the risk of violence from security services.

The West Point incident, combined with the shooting of two civilians by the Sierra Leone Police in Kono district in October 2014, exemplify the worst fears about security forces being involved in health-related activities. In the wake of West Point, Liberia’s President admitted
that the deployment of the AFL and police had been an error that 'created more tension in the society'. These incidents also had wider impacts on policy; inside Liberia, it contributed to the reduced visibility of the AFL in the subsequent national response to Ebola. In Sierra Leone, the shooting of the two civilians in Kono district allegedly exacerbated mistrust in the national police, but did not appear to affect the level of confidence in RSLAF. Further, by contrast to Liberia, use of security services - including the police - in containing Ebola across Sierra Leone continued. In both countries, political leaders now suggest that there is a need to train their domestic security services to be better prepared in the future to deliver humanitarian assistance, including in peacekeeping operations.

**Key Themes & Recommendations**

**A system-wide review of the humanitarian response systems is required**

The 2014 Ebola outbreak in West Africa revealed that the existing international humanitarian response system is not currently fit-for-purpose or sufficiently flexible to respond to health-related humanitarian crises such as widespread disease outbreaks. The event exposed a substantial incongruity between previous responses to humanitarian crises led by OCHA, and the response to the 2014 Ebola outbreak initially led by the WHO and later UNMEER. Humanitarian agencies and actors are not sufficiently equipped to deal with health issues, and health organisations appear unfamiliar with broader humanitarian cooperation frameworks. Accordingly, the United Nations Secretary-General’s decision to convene a High-Level Panel on the Global Response to Health Crises to interrogate this disjunction is both appropriate and timely.

Importantly, however, the 2014 Ebola outbreak also revealed that in the absence of robust health systems at the domestic level and timely civilian-led humanitarian intervention at the international level, civil-military cooperation can prove decisive in responding to health-related humanitarian crises. While FMA should be called upon sparingly and only as a last resort, military personnel often bring essential skills and capabilities that can be successfully leveraged to augment civilian efforts. In this respect, the Ebola outbreak demonstrated that FMA and domestic military forces can be used productively when civilian-led humanitarian efforts are inadequate. There are also acknowledged dangers in deploying militaries that must be taken into consideration. Therefore, unmitigated opposition towards military involvement in health-related emergencies warrants re-evaluation, and a systematic review of the international humanitarian response system that includes civil-military cooperation is merited.

It is also imperative that governments immediately act to address capacity gaps by investing in health systems, preparedness, coordination and response. The poor state of health infrastructure within the countries most severely affected by Ebola was well known prior to 2014. In repeated evaluations and assessments, it had been identified that Guinea, Sierra Leone and Liberia lacked health systems capable of responding to acute public health emergencies (irrespective of their potential for international spread). This fact highlights yet again the need for strengthening national health systems, and the necessity for significant investment in building the disease surveillance and response capacities identified in frameworks such as the revised International Health Regulations (2005). This will require investment from international and bilateral donors and a considered assessment of the functionality, personnel, pay, and structures of domestic health systems in these countries.
International humanitarian assistance will forever remain a poor substitute without such investment.

The 2014 Ebola outbreak also acutely demonstrated that, internationally, few organizations were prepared for responding to an emergency of this nature. This reveals yet another set of core weaknesses within existing arrangements. The number of suitably qualified personnel capable of responding at short notice is far too small. More training in health disaster management and preparedness is urgently needed, as are systems that will enable the rapid deployment of personnel in crises. This need is particularly acute given the frequency with which disease-related events are occurring. In this respect, the 2014 Ebola outbreak presents a timely opportunity to refocus attention on addressing overall capacity for responding to acute public health crises at both the national and international level.

**Recommendation 1:** Expand the terms of reference for the United Nations High-Level Panel on Global Response to Health Crises to include civil-military cooperation as part of the broader review of the international crisis response system.

**Recommendation 2:** Immediately and substantially increase international investment - informed by empirical evidence and frameworks such as the International Health Regulations (2005) - to address existing capacity gaps in disaster management and outbreak response.

**Recommendation 3:** Cite the 2014 Ebola outbreak to advocate for greater government resources to address the capacity gaps in national health systems. This includes leveraging support from international actors to secure the requisite technical and financial support to build local capacity.

**Framing an event influences coordination**

How an event is framed or described can shape the type of response that is elicited. When an issue is labelled ‘a health event’, it traditionally triggers a response from actors involved in the health sector: health ministries, the WHO, the World Bank, a range of INGOs and academic health specialists. By contrast, when an event is identified as ‘a humanitarian disaster’ it provokes a very different response - one informed by established humanitarian systems, principles and practices led by OCHA and involving multiple humanitarian agencies such as the World Food Programme (WFP), INGOs, and, in some instances, domestic and foreign militaries.

The challenge with the 2014 Ebola outbreak in West Africa was that it was initially characterized as a health problem, as opposed to being framed as a humanitarian crisis from the outset. The health framing made sense at the time: Ebola is not uncommon and previous outbreaks have been contained by timely public health interventions. The scale and location of the 2014 outbreak in West Africa, however, combined with the inadequate health systems in the affected countries rapidly transformed this outbreak into a larger humanitarian crisis.
Unfortunately, the full extent and nature of the outbreak was not understood in sufficient time. Here, the governments of the affected countries must accept some of the blame for not calling for international assistance earlier. Even when later it was identified that international assistance was needed, decision-makers continued to view the crisis predominantly through a health lens. As such, the structures and processes for responding to humanitarian disasters that have been developed and refined since 2005 were not activated. Instead, a new ‘4 pillar’ framework focused on specific public health measures was implemented. This system was untried. It facilitated ‘vertical’ activities while discouraging cross-sectoral collaboration, created confusion, and often failed to consider the wider social and economic implications of the crisis. The 2014 Ebola outbreak thus revealed the importance of anticipating and appropriately framing an adverse event early on, as these ideas inform the subsequent response, including the organisations, leadership and co-ordination to used address the crisis.

**Recommendation 4:** Adverse health events must be recognised as equivalent to other disasters for their potential to cause or exacerbate humanitarian crises. Health actors must not preclude multisectoral collaboration with humanitarian, and if necessary, military actors even if an event is framed as a health crisis. Likewise, if an event is described as a humanitarian crisis the health aspects must not be lost.

**Civil-military cooperation in health-related humanitarian crises should remain context-specific**

There is danger in viewing the 2014 Ebola outbreak as a simple blueprint for future civil-military cooperation. This is principally because the countries most severely affected by this virus possessed a long history of post-conflict reconstruction and military-military cooperation in the wake of their respective civil wars. Such extensive cooperation and historical engagement may not be mirrored elsewhere. As a result, the huge amount of goodwill extended towards foreign military forces during the 2014 outbreak in West Africa may not be easily replicated in other contexts.

There is also a genuine need to consider the long-term implications of the Ebola response on civil-military cooperation in health. The call for military intervention in September 2014 and overt collaboration with foreign military personnel highlights longstanding and contentious questions about the neutrality and independence of humanitarian organizations. Perceived independence from both domestic and foreign militaries is often assumed to be a key pillar of humanitarian work. The call for military intervention and subsequent collaboration has further ‘blurred the lines’ between civilian, military and non-governmental work.
The experience of the 2014 Ebola outbreak thereby suggests that civil-military cooperation in health-related humanitarian crises needs to be considered on a case-by-case basis. Awareness of the political, economic and social history of each event is essential and should be carefully weighed prior to launching of any international response (military or otherwise). It is unlikely, for example, that a foreign military would be received positively as part of a health mission in countries where the same military had previously engaged in hostile actions against domestic armed forces and/or local populations.

When lives are at stake, the temptation of governments and the international community may be to utilize any available measures to prevent harm. Accordingly, further research is needed prior to the next health-related humanitarian crisis to assess past and present events independently and impartially, absent of the imperative for immediate action. Establishing what principles and parameters should guide civil-military cooperation in health-related humanitarian crises must be accomplished in a non-emergency context.

**Recommendation 5:** Develop additional evidence-informed criteria to facilitate multi-level risk assessments that clearly delineate and guide civil-military responses to health-related humanitarian crises. This will help limit the risks of harmful and unintended consequences.

Increase awareness of expectations, perceptions and understanding through research and training

There is a genuine need for greater awareness and understanding of the relationship between humanitarian and military actors. Despite decades of civil-military cooperation in other contexts, the Ebola outbreak demonstrated that there remains considerable confusion about how militaries operate amongst humanitarian actors and vice versa. Developing realistic expectations of the various roles and functions that military and civilian actors can perform, specifically in the health sector, and what they cannot or should not do is essential to inform any future emergency response efforts.

Consequently, there is a critical need for further research to be commissioned and overseen by independent organizations to identify when, why, and how military personnel are called upon to assist civilian efforts in health-related humanitarian crises. More work is required to identify when it is appropriate to engage military actors. This includes studying the impact of military participation in activities ranging from quarantine and isolation to clinical care, and whether in fact they should play a role in these types of activities at all. Moreover, as the Ebola crisis revealed, there is an urgent need for increased training of military and civilian personnel prior to performing their respective duties so that errors and adverse outcomes are minimized. This research and training should be conducted by independent entities, such as academic
institutions, in close collaboration with relevant INGOs (e.g. MSF, ICRC), military forces, and the United Nations (e.g. United Nations Institute for Training and Research (UNITAR)) to ensure that existing humanitarian and civil-military coordination (CM-Coord) principles, practices and procedures are accurately captured.

**Recommendation 6: The United Nations Secretary-General commissions an independent research program to systematically investigate the roles and functions that military-based actors can perform, in collaboration with civilian authorities, during health-related humanitarian crises.**

**Recommendation 7: Enhance existing training programs for military and civilian actors to boost preparedness, build awareness, and ensure greater reciprocal understanding of appropriate roles, principles and practices for responding to health-related humanitarian crises. These programs must be developed in close collaboration with leading non-government and humanitarian agencies, militaries, academic institutions, and the United Nations.**

**Evaluation is necessary to prevent errors**

It is understandable that, when an emergency situation arises, responders will want to focus energy and attention on resolving the crisis and pay little heed to peripheral considerations. Far too frequently, however, evaluation is erroneously considered peripheral to the mission. Without independent evaluators working alongside responders from the commencement of any operation, valuable lessons will be lost, thereby raising the prospect that avoidable errors will be repeated. This was observed to be a pervasive problem throughout the 2014 Ebola outbreak. Not only did new entities like UNMEER fail to appoint a team of experts to independently evaluate the United Nations’ first-ever public health mission so that lessons learned could be captured, but more experienced actors (including foreign militaries) appear to only have conducted internal reviews of their performance. Such practices are not consistent with good governance principles and should be avoided. Evaluation teams, consisting of independent and varied expertise, should be appointed at the commencement of any humanitarian operation. These teams should enjoy high-level political support and have unfettered access to acquire information and data pertinent to the operation. When a crisis is widespread, affecting multiple countries - such as the 2014 Ebola outbreak - such teams can serve as valuable conduits for sharing strategies around what has worked well and what has not, thereby saving time, finances and valuable resources, and ultimately lives.

**Recommendation 8: The United Nations Secretary-General mandates that all humanitarian operations must have an independent evaluation team appointed at the commencement of the response, irrespective of whether the operation is coordinated by OCHA or another entity. The evaluation team should report directly to the Secretary-General.**
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tr>
<td>AFL</td>
<td>Armed Forces of Liberia</td>
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<td>Commander Unit Briefing</td>
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<td>RSLAF</td>
<td>Republic of Sierra Leone Armed Forces</td>
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<td>SITTU</td>
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<td>SOPs</td>
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<td>United States Public Health Service</td>
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<td>World Health Organization</td>
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Appendix A

Research Questions

1. Can you please briefly outline your professional background/experience and the nature of any current duties that require close cooperation with civilian/military organizations in the current Ebola outbreak?

2. How would you characterize the current level of civil-military cooperation in responding to Ebola in this country / your organization / your unit? (e.g. well developed/formalized/minimal/non-existent)

3. In your current role, what type of activities would you identify as civil-military cooperation? (e.g. disease outbreak surveillance and response, construction of facilities, coordination of personnel, etc)

4. What are the key benefits, in your view, of civil-military cooperation in this current outbreak? Where have military (or civilian) assistance/personnel really made a difference? How and why?

5. In your view, are there any drawbacks to this type of cooperation? If so, what is the nature of these drawbacks? Where are the limits of civil-military cooperation in responding to complex health emergencies?

6. In your opinion, are there any risks/challenges associated with civil-military cooperation in this current outbreak? If so, how have these risks/challenges been addressed/managed?

7. How is trust being built between organisations? What steps/measures have been taken to improve the working relationship between your organisation and civilian/military personnel?

8. What is the nature and extent of any arrangements between the military/your organization and the country in which you are currently/formerly working? (e.g. formal MOU, informal networks, individual links, etc)

9. To what extent would you recommend that civil-military cooperation be replicated in future complex health emergencies?
### Appendix B

<table>
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<th>Country/Organization</th>
<th>USA</th>
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<th>Canada</th>
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- http://www.msf.org.uk/ebola
- http://www.reuters.com/article/2014/10/31/health-ebola-china-idUSL4N0SQ4XU20141031


9 Personnel correspondence with interviewee, 13 July 2015.

10 Ibid.


13 Based on interview conducted with WHO official on 27 May 2015, Geneva, Switzerland, and the WHO Director-General’s public statements on the Ebola response.

14 Interview with district health officer, 18 April 2015, Freetown, Sierra Leone.

15 Interview with NGO representative, 9 April 2015, Freetown, Sierra Leone; Interview with local health official, 18 April 2015.


18 Interview with local health official, 18 April 2015, Freetown, Sierra Leone; Phone interview with US Government official, 1 September 2015, Washington, D.C., United States.

19 Interview with military official, 9 April 2014, Freetown, Sierra Leone.

20 Interview with representative from an international non-government organization, 11 April 2015, Freetown, Sierra Leone.

21 Interview with health worker, 26 March 2015, Monrovia, Liberia.

22 Interview with non-government organization representative, 14 April 2015, Freetown, Sierra Leone; confirmed by interview with government contractor, 16 April 2015, Freetown Sierra Leone.

23 Interview with senior military official, 13 April 2015, Freetown, Sierra Leone.


26 Interview with UN official, 27 May 2015, Geneva, Switzerland.

27 Interview with NGO representative, 2 April 2015, Monrovia, Liberia.

28 Phone interview with government official, 23 September 2015, Washington, D.C., United States.

29 Interview with UN official, 3 April 2015, Monrovia, Liberia.

30 The four pillars are: i) case management; ii) case finding, lab and contact tracing; iii) safe and dignified burials; and iv) community engagement and social mobilization.

31 Interview with official, 30 March 2015, Monrovia, Liberia.

32 Interview with senior military official, 25 March 2015, Monrovia, Liberia.

33 Interview with two UN officials, 2 April 2015, Monrovia, Liberia.


36 Interview with NGO representative, 2 April 2014, Monrovia, Liberia.

37 At the same time as President Koroma dismissed the then-health minister, he also appointed Dr Abu Bakarr Fofanah as Minister for Health and Sanitation, and Ms Madina Rahman as Deputy Minister for Health and Sanitation - see Koroma EB (2014) Press release 29 August


40 Interview with senior government official, 2 April 2014, Monrovia, Liberia; interview with senior military official, 25 March 2015, Monrovia, Liberia; phone interview with senior government official, 1 September 2015, Washington D.C., United States.


43 Note: this is the total number of military personnel deployed across West Africa in the Ebola response as per the Lead Inspector General (2015) report. In Liberia and Senegal only the total number was 2,692 - see Lightsey R (2015) Fighting Ebola: An Interagency Collaboration Paradigm. (forthcoming publication).

44 Interview with Liberian civilian, 27 March 2015, Monrovia, Liberia.

45 Interview with UN official, 2 April 2015, Monrovia, Liberia.


49 The German Red Cross and military had originally intended to build an ETU, but due to delays encountered in the construction of the facility, by the time it was completed very few EVD cases were occurring. As such, the facility was converted to treat non-Ebola illness.

50 MSF report, pages 13-14; based on interview data collected 2 April 2014, Monrovia, Liberia, and 13 April 2014, Freetown, Sierra Leone.

51 Phone interview with US government official, 1 September 2015.

52 Interview with non-government organization representative, 13 April 2015, Freetown, Sierra Leone.

53 Interview with three local civilians, 26 March 2015, Monrovia, Liberia.

54 Telephone interview with senior US military officer, 6 May 2015, Sydney, Australia.


56 Based on comments made at a workshop on civil-military cooperation in health, 7 July 2015, Sandhurst Military College, United Kingdom.

57 Personnel correspondence with interviewee, 13 July 2015.


59 Phone interview with US government official, 1 September 2015.

60 Interview with official, 15 April 2015, Freetown, Sierra Leone.

61 Interview with official, 11 February 2015, Accra, Ghana.
