



CIVIL-MILITARY MEDICINE: On Dangerous Ground

Edited by Anne L. Clunan

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International
Medical Corps



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About the Center for Stabilization and Reconstruction Studies

The Naval Postgraduate School created the Center for Stabilization and Reconstruction Studies (CSRS) in September 2004. The new Center is dedicated to building more effective responses to failing states or ungoverned spaces. The Center provides short- and long-term graduate education, creates knowledge through research, and conducts educational outreach in the broad functional areas of stability and reconstruction.

The best learning in this field occurs when the curriculum is multi-disciplinary and interactive among a diverse student mix. Rising to the challenge, CSRS programs incorporate students from the complete range of actors involved in these activities, including US and foreign military officers, US and foreign government civilians, and civilians from both international organizations and non-governmental organizations.

About the Co-Sponsors

The success of this workshop was due to the co-sponsorship of the Center for Humanitarian Cooperation, the International Medical Corps and the International Rescue Committee, and close coordination between California State University, Monterey Bay, the Center for Stabilization and Reconstruction Studies at the Naval Postgraduate School and the Monterey Institute of International Studies. It was endorsed and generously hosted by the United States Institute of Peace.

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Civil-Military Medicine: On Dangerous Ground

**Edited by
Anne L. Clunan
Naval Postgraduate School, Monterey, CA**

March 2006

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Civil-Military Medicine: On Dangerous Ground

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EXECUTIVE SUMMARY

The interaction between armed forces and civilian organizations providing medical and health aid in insecure environments is increasing. Recent examples include a US-led anti-insurgent Joint Task Force providing disaster relief after mudslides in the Philippines, the international response to the Asian tsunami and operations in Iraq and Afghanistan. Practitioners and scholars alike have noted that the rising incidence of civil-military medical assistance increases the need for better operational coordination and cooperation among the actors in the medical and health sector of humanitarian assistance.

From January 29 to February 2, 2006, representatives from the U.S. government, United Nations, and international nongovernmental organizations (NGOs) participated in an educational game at the Center for Stabilization and Reconstruction Studies (CSRS) at the Naval Postgraduate School in Monterey, California. The game focused on the operational challenges associated with providing medical and health assistance as part of disaster relief and development assistance in regions of conflict or instability. Three scenarios were used, and participants took the role of representing their respective medical communities: Military, civilian government, international organization, and international nongovernmental organization. The first scenario focused on disaster relief in a post-conflict setting, the second posed a situation of a natural disaster occurring during ongoing combat operations, while the third concerned an epidemic of avian influenza among a mixed population of civilians and insurgent forces.

Participants developed the following findings and recommendations:

- Different missions considerably constrain medical and health cooperation between armed forces, UN agencies, and NGOs in combat and post-conflict environments.
- Preferred modes of coordination and information sharing emphasize the United Nations via OCHA and/or the World Health Organization (WHO), and secondarily civilian national agencies such as USAID OFDA as central nodes in the network of humanitarian medical and health assistance.
- NGOs vary widely in their willingness to coordinate with armed forces under any circumstances. Furthermore, when international military forces are in a belligerent or coercive role the NGO-military relationship is more complicated.

- Operational coordination is often dependent on relationships built on the ground, and is often hindered by policy coordination at higher levels. Participants recommended that policy coordination should be driven to a much greater degree by operational needs rather than the reverse.
- Mechanisms for operational coordination and information sharing are not institutionalized or planned in advance, and actors often re-learn the same lessons on the ground in each emergency. Existing standards and protocols appear to be little used.
- The lack of coordination and information sharing is particularly acute among and between NGOs and the other communities.
- While planning is underway at the strategic level for intra-governmental and international coordination in the event of an avian influenza epidemic or pandemic, such planning has yet to impact the operational level. Most actors are unaware of what policies and resources are available in the various communities. NGOs, as a community and group, are largely unprepared for such an event and need to be incorporated into both governmental and UN planning.

CIVIL-MILITARY MEDICINE: ON DANGEROUS GROUND

Humanitarian medical and health assistance has traditionally been an arena in which foreign and host governments, international organizations (IOs), and international non-governmental organizations (NGOs) coordinated in response to disasters and disease. Increasingly, they have been joined by foreign military forces. In the aftermath of the Asian tsunami and the Indo-Pakistani earthquake, military and civilian forces responded to provide immediate medical and health assistance. Practitioners and scholars alike have noted that the rising incidence of civil-military medical and health assistance increases the need for better operational coordination and cooperation among the actors in this sector of humanitarian assistance (HA).¹

In light of this growing need, the Center for Stabilization and Reconstruction Studies (CSRS) at the Naval Postgraduate School in Monterey, California, organized an educational game to focus on the challenges of providing medical and health services in environments subject to major natural disasters and conflict. The purpose of the game was to allow the various medical communities (non-governmental and international organizations, governmental agencies, and armed forces) engaged in delivering health services in emergency situations to deepen their mutual understanding of operational planning and implementation. Participants from United Nations agencies, the non-governmental humanitarian medical community, U.S. civilian government agencies and the U.S. Department of Defense medical corps engaged in a four-day educational game designed to expand their knowledge of and experience with each other's organizations and missions. The participants brought a wide array of knowledge of procedures and protocols as well as field experience in post-conflict situations to the simulations.

The game was specifically geared to focus on operational coordination and response to an unfolding humanitarian medical disaster under various environmental conditions and security levels. Participants moved through the game and learned in concrete detail how each organization's mission enabled and conditioned medical and health responses on the ground. They focused on the major challenges humanitarian medical communities face in real-life situations as they unfold, from the immediate crisis through its second- and third-order effects. Participants discussed each others' organizational priorities, lines of authority, and existing mechanisms for cooperation and procedures for responding to a complex medical/health emergency.

Participants stressed that the simulation underscored the need for better coordination and planning in advance of humanitarian medical and health emergencies. There was general agreement that operational networks should be constructed to facilitate information sharing and communication among medical communities before, during and after complex emergencies occur. They came

away with a better understanding of each others' priorities in different types of medical/health emergencies, as well as of who could and should take the lead in responding to events.

An important outcome of the game was the sharing of information about each community's mode of operation as well as its operational capabilities. Participants discussed the main avenues for intra- and inter-organizational communication, the levels at which operational decisions are taken, as well as how organizations are likely to respond in a specific situation.

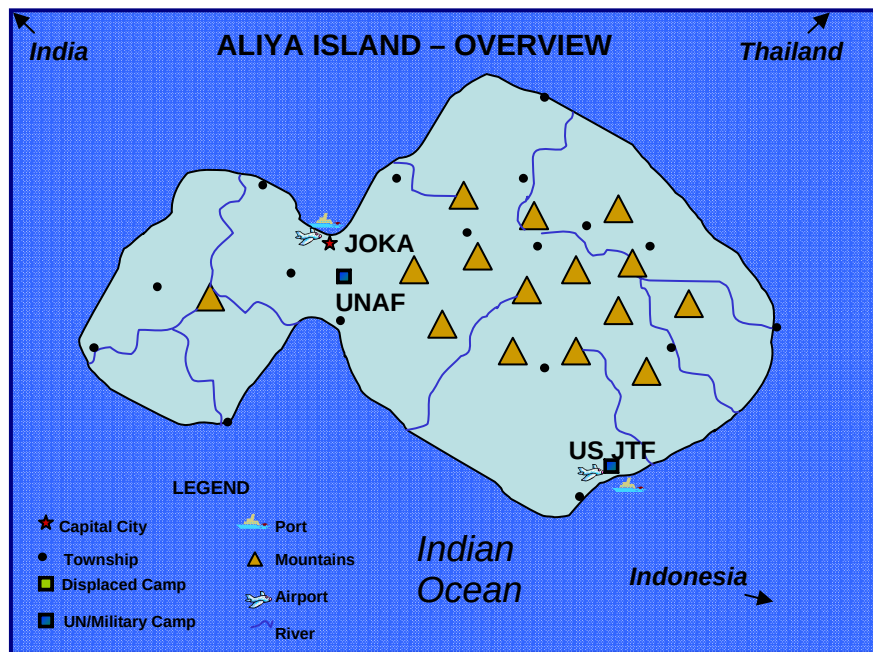
The scenarios successfully revealed which organizations were likely to have a particular stake in different types of complex medical and health emergencies. Participants also learned how quickly and with what resources each others' organizations could and would respond to a given crisis. They discussed how medical and health priorities would shift vis-à-vis other priorities as a crisis unfolded over time, and how their relationship with the host nation would evolve.

During the game play, participants explored areas of potential synergy among their medical communities. They engaged in discussions of how to integrate medical and health assessments and responses, public health information campaigns, as well as allocate and request resources. In addition, they focused on joint utilization of resources such as laboratory facilities and diagnostic equipment, as well as documents and assessment forms.

One of the most fruitful products of the game was the participants' recommendations for their parent organizations. These focused on how to build and improve information-sharing mechanisms, such as common assessments. Participants emphasized that a common depository of lessons learned and evaluation documents should be created. In their view, too many after-action reviews were compartmentalized within organizations or governments, and were not available for all the medical communities to evaluate and institutionalize the many lessons learned in the wake of crises. They emphasized that all of the medical/health communities should participate in after-action reviews to ensure that integration and coordination spans all the relevant actors.

This report highlights the strengths and weaknesses of each community in responding to humanitarian medical crises, as well as the key lessons learned during the course of the game. The report follows the chronology of the game. Each day, a representative of one of the participating medical/health communities introduced their community's perspective on the issues raised in complex health emergencies. The three papers by Drs. Lawry, Tarantino and Selanikio cover these presentations. These are followed in turn by a brief overview of the game scenario that followed each presentation, and then a synopsis of the key points arising out of participants' discussions of the simulations.

The overall setting of the simulation exercise was the fictional island of Aliya, located in the Indian Ocean. Aliya is host to a United Nations peacekeeping force, brokering a truce between the government and demobilized former militias. A militant faction refuses to disarm, and has struck up ties with other separatist movements throughout Southeast Asia. At the request of the Aliyan government, the U.S. military has established a joint counter-terrorism and counter-insurgency operation with the Aliyan military. Participants in the game played the role of medical director within their respective organizations.



Over the three days of game play this background scenario was complicated by a series of natural disasters that led to varying levels of insecurity as the insurgency took advantage of the crisis situation. The first crisis scenario was similar to the Asian tsunami of December 2004. The second involved a disaster similar to the Indo-Pakistani earthquake of 2005. The third introduced an outbreak of avian influenza and subsequent human-to-human endemic influenza. Participants moved through several phases of each crisis, beginning with its immediate aftermath, and their response several weeks and then several months after the event. At each point in time, participants worked through which unique and common problems their organizations would face, what their organizational and medical/health priorities would be, as well as how and whether they would cooperate with each other.

PART I. HUMANITARIAN MEDICAL AND HEALTH ASSISTANCE IN DISASTER RELIEF

The first section of the game focuses on how medical personnel from NGOs, international organizations, civilian government agencies, and the military might intersect and interact in the event of a massive catastrophe, similar to the Asian tsunami of December 2004. The medical and health problems arising from such natural disasters range from immediate treatment to longer-term problems such as restoring clinical infrastructure, clean running water and sanitation. The humanitarian NGO community plays a central role in provision of all such disaster relief. Dr. Lynn Lawry provides a general introduction to the humanitarian assistance community. As one participant noted, the humanitarian assistance community encompasses a wide variety of organizations which can be roughly divided -- according to their views of coordination with the military -- into "fundamentalists," "pragmatists," and "collaborators." Dr. Lawry's chapter therefore does not represent the full range of views in the humanitarian assistance community, nor does it necessarily represent the views of CSRS. The first day's scenario and a summary of the participants' discussion and key findings follow her chapter.

Non-Governmental Humanitarian Aid Perspectives During Health Emergencies

Lynn Lawry MD, MSPH, MSc*

HUMANITARIAN AID PRIORITIES

International non-governmental organizations (INGOs, or simply, NGOs) are an essential part of humanitarian relief, bringing years of experience in public health and preventive medicine programming to a crisis zone. In humanitarian emergencies, ninety percent of deaths occur from disease rather than armed conflict, making INGOs a crucial part of any relief effort.² Moreover, in a disaster INGOs use changing mortality and morbidity rates to monitor and provide effective public health programming. Indeed, more than 90% of aid coordinated by the United Nations (UN) is provided by INGOs.³

Although INGOs worldwide number in the thousands and vary widely in their performance, professionalism, sense of responsibility and attention to standards in accordance with the Humanitarian Code of Conduct⁴, about 95% of the relief work is provided by only thirty-five to forty major American and European organizations,⁵ and on the whole, these INGOs follow codified, well-tested international standards of care.⁶

INGOs are defined by their voluntary, independent, and not-for-profit status and have unique charters and missions. They are the major component of the aid system that directly represents the recipients in the field, and they vary in size, mandate, and capability. Some specialize in broader relief, such as water and sanitation, food, health, and shelter. Others focus on targeting specific vulnerable groups with appropriate skill sets for, say, therapeutic feeding centers or reproductive health. Advocacy INGOs (otherwise known as human rights organizations) promote and monitor human rights protections and support efforts to uncover and record abuses. Many other humanitarian aid organizations, however, also promote and monitor human rights and report on these “silently.”

Although groups have different mandates and specialties, they all follow key principles that guide humanitarian aid, and most of them subscribe to the Code of Conduct for the International Red Cross and Red Crescent Movement and INGOs in Disaster Relief.⁷

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<u>Humanity</u>	Human suffering must be addressed wherever it is found, with particular attention to the most vulnerable in the population, such as children, women and the elderly. The dignity and rights of all victims must be respected and protected.
<u>Neutrality</u>	Humanitarian assistance must be provided without engaging in hostilities or taking sides in controversies of a political, religious or ideological nature.
<u>Impartiality</u>	Humanitarian assistance must be provided without discriminating as to ethnic origin, gender, nationality, political opinions, race or religion. Relief of the suffering must be guided solely by needs and priority must be given to the most urgent cases of distress.

Since the attempted genocides in Rwanda (1994) and Bosnia (1992-94), it should be noted however, that many organizations have removed “neutrality” statements from their charters, as it is impossible to be seen as neutral in any complex disaster. By virtue of placing an office or clinic in a specific location, the organization will be viewed as being on one side of the “line,” even if the choice of location was driven by security concerns or the need to have access to affected individuals. Humanitarian aid in more recent years has also become more complicated, as aid groups struggle with the perception of locals that the groups are a tool of foreign policy. This became especially apparent during the Kosovo (1998), Afghanistan (2001-present) and Iraq (2003-present) wars. Governments often use “hearts and minds” activities to further foreign policy agendas, but these programs do not meet the INGOs’ criteria of neutrality and impartiality.

Humanitarian aid agencies vary in their program capacity and may carry out any or all of several functions: Emergency assistance, long-term development, peace building and sustainability programming. Key policy and operations are designed to: 1) preserve life and minimize suffering by providing warning of natural events that often result in disaster (e.g., hurricanes); 2) preserve life and minimize suffering by responding to human-generated disasters; 3) foster self-sufficiency among disaster-prone nations by helping them achieve some measure of preparedness; 4) alleviate suffering by providing rapid, adequate response to aid requests; and 5) enhance recovery through rehabilitation programs. While most INGOs subscribe to the elimination of extreme poverty, many work as development agencies in specific theaters, including post-conflict environments.

Assistance activities can be divided into three categories based on the degree of contact with the affected population. Direct assistance is face-to-face distribution of goods and services. Examples include support of medical clinic services, supplies, and personnel. These services can be and usually are long-term. Indirect assistance is at least one step removed from the population and involves such activities as transporting goods or relief personnel, support for ministries of health, and technical assistance such as assessments of hospitals, clinics or even population needs and gaps. The third category, infrastructure support, involves providing general services, such as road repair, hospital repair, airspace management and power generation, which facilitate relief but are not necessarily visible to or solely for the benefit of the affected population.

Lines of authority

Each humanitarian aid organization is an entity unto itself. Although funding sources may be similar (these include the UN; U.S. Agency for International Development (USAID); USAID's Office of Foreign Disaster Relief; U.S. Department of State Bureau of Population, Refugees and Migration; the European Union; and private foundations among many others), each organization is independent and answers only to those it aids, its board of directors and its donors. There are distinct differences in terms of organizational structure, culture and capacity between the various INGOs, but all are often highly effective.

The United Nations

In post-conflict environments, humanitarian aid organizations usually look to the United Nations for coordination and guidance, although the UN does not have any authority over any one NGO. The UN in recent years has created sub-divisions within its own organization to aid in relief efforts. The UN Joint Logistics Center (UNJLC)⁸, which comprises all divisions of the UN and the UN Office for the Coordination of Humanitarian Affairs (OCHA) in both Iraq and Afghanistan, has played a central role in the humanitarian aid community's relief efforts in those countries, and sometimes has served as a liaison to the military for INGOs unwilling to speak directly to them.

Each humanitarian aid organization is an entity unto itself. Although funding sources may be similar, each organization is independent and answers only to those they aid, to their Boards of Directors, and to their donors.

Like INGOs, UN agencies have long in-country time horizons: They are in place before disasters, are there as events unfold, and will be there afterwards. INGOs, however, frequently are able to work in conflict areas where the UN cannot because of more stringent security rules that govern UN staff and programs. Non-governmental, non-profit public or voluntary organizations may be admitted into a mutually beneficial working relationship with the United Nations by attaining consultative status with the Economic and Social Council.⁹ There are more than 2,700 INGOs currently that have such status and that may qualify to contribute to the work programs and goals of the United Nations by serving as technical experts, advisers and consultants to governments and the Secretariat.

Local Communities

In any disaster, INGOs make it a priority to obtain community buy-in. Effective relief and development activities are implemented through community-based programs with participatory project planning approaches. Due to the impartial status of INGOs, high-level local government, military, rebel and community leader meetings occur on a regular basis. It is not uncommon that INGOs have to speak to and negotiate with rebel/regime leaders to get access and aid to IDP (internally displaced person) or refugee populations. In general, groups will immediately establish relationships with the ministry of health (MoH), and take guidance from its officials on how to develop responses. For instance, in some countries, reproductive health programs must be modified in order to gain access to IDPs. Some countries allow the “morning-after pill” to be used by victims of sexual violence; others do not. Nuances are critical when considering which procedures are allowed and which MoH medications are accepted.



Although such preliminaries can be time-consuming, INGOs make a considerable effort to meet village elders, “camp sheiks” or regime leaders to gain access to the communities of interest and be more effective in their work. It is not uncommon to spend a day (or more) having tea, and introducing the NGO and its staff to community leaders. For many INGOs, hiring local staff and building local capacity is a priority in emergency and long-

IMC's Lynn Lawry with community leaders in Darfur, Sudan (Photo: IMC)

term program development. Staff members who come from the community are familiar with its leaders, customs, language, traditions, and terrain -- all indispensable in establishing and maintaining effective programs.

POST-CONFLICT REQUIREMENTS

Humanitarian organizations are usually present before, during and well after any military involvement in a crisis. A key element for humanitarian agencies and organizations when they decide to assist affected communities is to establish and maintain a conducive operating environment (sometimes referred to as “humanitarian space”). Maintaining a clear distinction between humanitarian actors and the military is essential to create an operating environment in which humanitarian organizations can be effective and stay safe over time.

Maintaining a clear distinction between humanitarian actors and the military is essential in creating an operating environment in which humanitarian organizations can continue to be effective and safe.

Humanitarian space facilitates the perception of adherence to neutrality and impartiality. The military’s sensitivity to issues pertaining to humanitarian space is critical for securing good working relationships with INGOs. Sustained access to the affected population is ensured when the receipt of aid is not conditional upon allegiance to or support of parties in a conflict. Access to humanitarian aid must be accepted by all sides as a right, independent of military and political action.

Security

Humanitarian aid organizations are responsible for their own security, both personal and organizational, and cannot work effectively in a dangerous environment. Many INGOs take the issue very seriously and have an investment in developing security management tools and protocols. Because they typically will remain in theater after the UN has evacuated, the welfare of their staff is paramount. In many countries where there is war or insurgency today, aid programs are run from an outside office that communicates with local partners or staff inside the conflict area. Many INGOs will stay in areas where the UN may not be working; if it appears, however, that the risk of working outweighs the benefit of staying, INGOs will evacuate expatriate staff and stop programs that may put local staff at risk. Security assessments are made on a daily basis.

The provision of security by the military for civilian humanitarian organizations is often a contentious issue. Problems of security classification frequently occur when INGOs and the military seek to share reporting. [This needs a sentence or two of elaboration. What is meant by “problems of security classification”, and why do clashes occur over reporting?]

Organizations develop their own security protocols that range from armed guards outside offices and houses, to an absolute policy against having any type of arms on organizational property, including cars. In recent years, as INGOs have become targets of violence themselves, there has been a noticeable increase not only in better security for in-country offices, but also in the hiring of security consultants and organization staff who have had prior military experience.



An IMC security convoy in Darfur, Sudan (Photo: IMC)

In both Afghanistan and Iraq, there were instances where civilian humanitarian aid had to be delivered with the assistance of military security or in coordination with military convoys. In early April 2003, International Medical Corps (IMC) had to be attached to a Marine division for security in order to get needed supplies to hospitals in the An Nasyriah area of Iraq, as well as make adequate assessments of other clinics and hospitals. In fact, the area was so insecure at the time that IMC staff camped at a Marine prison site, Camp Whitehorse, during these assessments, using IMC supplies but relying on the military encampment for security at night. Despite their efforts, however, looting of hospitals and the complete lack of security during and after combat in Iraq hindered supply and

stability in the hospitals and wasted precious resources. Chronically, INGOs found they did not have the money needed to supply hospitals and clinics. The disagreement over whether the United States was an “occupying force” and therefore needed to uphold the Geneva Conventions, left a void in security for hospitals and clinics that had a significant effect on the ability of local health services to respond to casualties.

Communications

Humanitarian aid organizations use all available modes of communication -- cell phones, satellite, internet, and peer-to-peer technology -- and in most cases are up and running with communications when they cross the border. In some instances, security prohibits use of cell phones or other communication modalities, leaving face-to-face communication as a necessary means to achieve goals. This is frequently the case when organizations need to discuss human rights violations. In dealing with the military, it may be more beneficial to work via

International Non-Governmental Organizations vary from group to group as to whether communication with the military, in any form, is desirable. Technology cannot substitute for personal interaction; you must get people together and build trust across organizational boundaries.

a peer-to-peer network (or web-based information sharing); there are times when face-to-face communication promotes trust that could not be achieved otherwise. INGOs vary from group to group as to whether they consider communication with the military, in any form, to be desirable. Technology cannot substitute for personal interaction; people must get together and build trust between organizations. Open networks can be protected, and protected communications can bridge organizational boundaries as well as the civil-military divide. Peer-to-peer networks between the military and INGOs are being used now in Afghanistan, Indonesia, Iraq and many other countries. To this day, much of the existing civil-military cooperation and coordination is based on personal trust and face-to-face interactions in neutral locations, and is occurring at the ground level.

Coordination

Coordination is important in all stages of the aid process. Many INGOs believe that communication and coordination should start at the pre-conflict stage, an important discussion that is too in-depth for this paper.

The goal of coordination and communication is to avoid duplication of efforts or establishment of parallel programs. In the medical realm, the creation of parallel health systems within a country has to be avoided. INGOs do not set up field hospitals or otherwise subvert the local health care system; rather, INGOs will, when possible, help to renovate existing clinics or hospitals. Parallel programs cause confusion for the people they intend to help and set up unrealistic goals for the community and its leaders. It is far more desirable to work together using the strengths of all groups and existing infrastructure to accomplish a goal.

The UN Secretariat may instruct one UN agency to act as the lead agency or to direct the overall response for a particular sector. Usually this is OCHA. Since its creation, OCHA has taken on the role of coordinator of humanitarian response, policy development and humanitarian advocacy. OCHA typically becomes involved in the initial response only when and if a crisis reaches such proportions that it requires a multi-sectoral international effort broken down into clusters such as health, food, protection, etc.¹⁰ OCHA usually will establish a humanitarian operations center (HOC) to facilitate and support coordination among humanitarian organizations. The HOC provides a common facility where organizations and agencies can work together on mutual issues, pooling the experience and expertise of the respective humanitarian groups for immediate and effective responses.

Since its establishment, the United Nations Office of the Coordinator for Humanitarian Affairs has taken on the role of coordination of humanitarian response, policy development and humanitarian advocacy.

The OCHA representative may authorize the establishment of a Humanitarian Information Center (HIC), an interagency center for UN agencies, INGOs, and donor entities that serves as a hub for integration, information and data. The HIC provides coordination tools, reference sites for maps, de-mining maps and sectoral meeting schedules, and delineates tasks and locations for personnel, among other services.

Some INGOs have particular knowledge and skills in one or more of the essential “sectors” and will only undertake projects based on requirements within that sector. Typical sector groupings are: Food; water and sanitation; shelter; public health and medical; human rights/protection; education; agriculture; gender issues; de-mining. One NGO, for instance, may take responsibility to see that adequate housing is available across the entire operational area (Kosovo and Iraq are good examples, in which the country was subdivided into regions where

one NGO would take the lead on all efforts in a particular sector), requiring INGOs to coordinate with each other and with the military.

There have been other successful information/coordination centers in Afghanistan, Kuwait, and Indonesia. An HOC, also called a civil-military operations center, run by the U.S. military, was indispensable in Kuwait during the 2003 Iraq war.¹¹ Although coordination met with resistance from INGOs in the early stages of the war, ultimately more than eighty INGOs, the UN and the military met within this center and worked together. Having a neutral and media-free space for close interaction and discussion allowed civil and military actors to consult without having to fight the issues of ownership and control. At the HOC-Kuwait, humanitarian information was collected and shared by all groups. It is interesting to note that the vast preponderance of cooperation and collaboration occurred informally over coffee after daily briefings. Lessons learned from this positive experience have been invaluable in easing the often contentious civil-military relationship. Themes that recurred in each civil-military interaction over the years are notable, and include simply agreeing on common definitions of important terms, and to avoid acronyms and irritant phrases.¹² For example, INGOs agreed to avoid using the term “belligerent,” and the military agreed not to call INGOs “force multipliers.”

INGOs understand that the military, in accordance with the Geneva Conventions, should provide treatment to combatants but not necessarily to civilians, and that military hospitals are established to treat combat-wounded soldiers and combatants rather than for civilians to receive treatment.

The military and INGOs nevertheless should not assume that each understands the other, as cultural differences can be subtle, yet profound. Within medical ethics, there are distinct and characteristic “lines in the sand” that can determine how the military or an NGO may respond on the ground. INGOs understand that the military, in accordance with the Geneva Conventions, should provide treatment to combatants but not necessarily to civilians, and that military hospitals are established to treat combat-wounded soldiers and combatants rather than for civilians to receive treatment. Kosovo, Afghanistan and Iraq saw military hospitals flooded by civilians seeking care. At the same time, INGOs are flooded with members of local host communities (some whom may be “combatants,” such as Hutu militia in Rwanda) requesting care in refugee and IDP camps. Under such circumstances, INGOs have decided that care must be given to all. Efforts have been made not only to assist in refugee camps, but also in local communities that may be hosting millions of refugees.

It therefore falls on INGOs to: 1) Educate the community and the military that

parallel health systems undermine local capacity (as discussed above); 2) assist local leaders to identify needs of area hospitals and clinics so that populations can be served; and 3) ask for and use military specialized surgical teams only in the most dire circumstances, when a need cannot be met at the civilian level. An example of the latter occurred during the Kosovo campaign, when a French field hospital in Albania was asked to care for a Kosovar child with acute appendicitis. The child was operated on in the field hospital and sent back to the refugee camp two days later to be cared for by family and NGO medical personnel.

Information Needs

Daily briefs in any venue (UN, military, NGO) need to include all major stakeholders and should cover all that are relevant among the following topics: Food; logistics and transportation; social services; domestic needs; health and nutrition; water and sanitation; education; shelter; income generation; environmental protection; mine and unexploded ordinance data; agency operational support; public information; budgets; and safety and protection. All agencies in this setting should have a chance to share concerns or brief others on situations they have encountered.

Shared assessments among military and NGO groups have been difficult. These attempts have only emphasized the problem of communication and shared information between groups.

An interesting and complex topic is the need for good epidemiologic information. Many groups “collect data,” although very few have evidence-based methods for understanding needs, deaths, epidemics and gaps at a population-based level. IMC is one of a handful of INGOs that uses epidemiologic, population-based data collection. In many cases the U.S. Centers for Disease Control and Prevention, because it is a government organization, cannot access areas in need. It then becomes the responsibility of INGOs (many of whom do not have the technical expertise) to collect data and report on many different levels of need. It is nearly impossible, for example, for any NGO to have Polymerase Chain Reaction labs established in the field to identify specific strains of infections.

Military and NGO groups have found it difficult to share assessments. In Iraq, the U.S. military's Civil Affairs assessments of forward cities were impossible to declassify, despite numerous attempts by HOC personnel. In addition, the form that was created by UN and U.S. governmental agencies for such assessments was described as a “nightmare.” There have been several attempts to simplify this form and make it accessible on peer-to-peer networks so that any organization (civilian or military) can access it and use the data as necessary. These attempts have only emphasized the problem of communication and information sharing between groups.

Media

The media play an important role in disseminating information, including information about NGO relief efforts. But the media have unique requirements for fulfilling their role that often don't benefit INGOs on the ground. The HOC-Kuwait had a “no media” policy. Reporters were not allowed on the compound and all interviews were conducted off-site, a valuable decision that allowed the military and INGOs to interact closely in an environment free from political visibility and without risk to neutrality or of mandate violation. The trust thus established allowed the HOC to coordinate with INGOs that routinely keep their distance from the military. This promoted the rapid sharing of vital, non-classified information and helped get non-military aid to areas of critical need.

INGOs must balance the risk publicity can pose to their coordination efforts and to their beneficiaries against the simultaneous need to raise visibility and receive public recognition.

INGOs, however, must balance the benefits noted above with the simultaneous need to raise visibility and receive public recognition for their efforts. While this may not appear congruent with being an organization providing relief in a humanitarian crisis, it reflects the reality that governments, as well as private donors and foundations, fund INGOs. Organizations must show results to their constituencies, or their funding streams will suffer.

In other cases, the media can inadvertently put INGOs or their beneficiaries at risk. Although heightened public awareness can foster changes in policy or help INGOs to raise more money to further serve human needs, it can also hurt their programs. This was especially true for American INGOs in Iraq. In the case of IMC, media reports related to IMC operations in Iraq have been kept at a bare minimum in order to ensure the safety of staff and programs. Without IMC's programs, more than six million beneficiaries would not have access to aid. IMC

also experienced situations in which political conditions and cultural sensitivities made it unwise to release data collected through evidence-based research, or even information about a program.

In a similar vein, there have been situations in which IMC has initiated studies that could not be completed; changed the research design to account for risks and political events; and even withheld scientific work from publication to protect staff, data collectors and participants. Although it is ideal to have one's work published in peer-reviewed journals, and thereby accepted as credible scientific work, it is transparently more important to protect participants and in-country collaborators. Sometimes quiet diplomacy accomplishes as much as media releases, and with less risk to staff, than the so-called "name and shame" approach common to many human rights investigations. All of these factors must be considered when deciding how to use information.

Supplies and Logistics

Humanitarian aid workers cannot subvert country policies and laws and remain effective. In general, they must adhere to visa, health, identification, and documentation requirements. In some cases, this is done from the country of origin, such as the United States; in others, it may be that visas are obtained "on the tarmac," as was the case in Afghanistan during the Taliban years and during the early stages of the 2001-02 war there, before the interim government was established. Multi-entry business visas are essential, as are other transit visas to countries where INGO workers may need to travel for safety reasons. In some countries (such as Iraq), border passes and checkpoint passes are needed. In Sudan, travel documents are needed simply to travel from Khartoum to Darfur, and again upon return.

This can take days to expedite and the "fees" associated with such paperwork can be high.

Humanitarian aid agencies usually must register with the country where they are providing assistance, which can take days or even weeks, depending on the country. In addition, they must register with the UN and bordering countries. Housing, food, transportation, support staff and translators are all



Air transport in Afghanistan (Photo: IMC)

arranged once office space is found and secured. In some cases, programs have been run from tents until office space and/or security could be assured. Travel throughout the country, if possible, is done by road, sometimes using old tourist maps as opposed to GPS.

Humanitarian assistance groups can use air transport for supplies or personnel. Specific INGOs work in this area. AirServ is the most popular for humanitarian aid workers.¹³ Its flights are cheaper than UN flights, and it is easier to arrange seats. Only in extreme circumstances does AirServ ground flights, and its planes fly into some of the most remote areas. On occasion, humanitarian aid supplies and personnel have flown on military planes, but usually it is only when no other options exist. In other cases, it is possible for INGOs to have enough clout with the host community to arrange transport on helicopters, trucks or even trains (as happened in Albania) for supplies, personnel or even medical evacuation. Some INGOs relied on military transport for supplies and personnel from Kuwait into and out of Iraq, especially at times when the cross-border roads became “non-permissive.” In Afghanistan, flights into Dubai could be coordinated with Baghram Airbase during the war, when normal means of transportation (commercial flights in and out of Pakistan and UN flights) were unavailable. The Northern Alliance also ferried NGO personnel into areas that were inaccessible by road or other means, especially during the winter months.

Humanitarian aid agencies are generally “logistics poor.” Transport, warehousing, procurement and communications, which are military strengths, are not, for the most part, strengths for INGOs. Waybills for cargo, as well as import taxes, export taxes, airport fees, etc., require patience and time. It is not uncommon for vehicles or other expensive equipment (communications and medical) to be held up in customs.

The movement of personnel, materiel, and frequently, food continues to present serious difficulties for many agencies, especially in conflict areas. Delays or lack of knowledge of custom clearance procedures and uncertainties related to stockpile availability compounds these issues for INGOs.

Military Assistance

Humanitarian assistance providers look to the military as a last resort and prefer that any use of military assets retain its civilian nature and character. While INGOs understand that military assets are under military control, the operation as a whole must remain under the overall authority and control of civilian humanitarian authorities. Military support for humanitarian work should not involve direct assistance, in order to maintain a clear distinction between the normal functions and roles of civilian and military stakeholders.

It is important for the NGO community to avoid making distinctions between “good guys” and “bad guys;” aid workers must remain impartial, since neutrality is always at risk. It is certainly more difficult to coordinate with those who are party to the conflict (for example, the U.S. military in Iraq 2003), but that is not to say that bridges cannot be built. For some INGOs, the overriding principle is getting to those in need at all costs. If this means talking to or even negotiating with rebels such as Kabila in Zaire, rebels in Sierra Leone, or the Taliban in Afghanistan, some (but not many) INGOs will find a way to do this in order to get access to those in need.

CONCLUSION

This conclusion summarizes the strengths and weaknesses of humanitarian aid organizations, and the challenges they face and create in carrying out their work.

Humanitarian Aid Strengths

Long-time horizons	INGOs have access usually before a disaster, stay during the disaster/conflict, and remain long after.
Inexpensive	INGOs have the capability to transport goods across countries and continents at a cheaper rate. The UN and INGOs can lease C-130s and helicopters better than the military in the long-term (in the short-term of hours or days, this may not be the case)
Core sectoral expertise	INGOs have years of experience in public health and preventive medicine programming which is important given that 90% of deaths occur due to disease as opposed to conflict. ¹⁴
Development	INGOs have years of experience in not just emergency response but in the area of long-term development and reconstruction. Lessons learned for more than 40 years have helped to determine what works in conflict and non-conflict areas.
Partnerships	INGOs work with local partners and have community buy-in. There is little suspicion of INGOs regarding US agenda. INGOs work with the communities to decide what the priorities of the community are and how to best empower the local community to eventually “take-over” the projects started by INGOs.

Humanitarian Aid Organization Weaknesses

Multiple competing missions	There likely will be numerous INGOs involved in any one disaster. While grouped under one heading, all organizations vary widely in terms of size, orientation, funding sources, etc. Working together is difficult. Each NGO is primarily concerned with fulfilling its own purpose and gaining visibility and recognition for its efforts.
Disinclination to coordinate	Coordination among INGOs poses a challenge. INGOs may have an organization-centric bias and are reluctant to accept assessments from other organizations as a basis for committing assets.
Informal	INGOs also tend to rely on ad hoc procedures and networks, including personal networks, as opposed to formalized procedures and relationships - although as stated previously there are written standards and guidelines that INGOs follow, especially in health related projects.
Opportunism with guile	INGOs may knowingly or unknowingly exaggerate conditions or inflate requirements in order to gain priority for distribution of materials.
Insufficient technical expertise	INGOs as a whole lack the technical capacity to have evidence-based assessments. Numbers that are quoted by INGOs tend to be "best guess" methods, which in many cases leads to either under-recognition of a problem or exaggeration of a problem.
Inadequate scientific facilities	INGOs do not have a network of laboratories or collective lab capabilities for assessing epidemics.
Staffing	Organizations are largely relying on full-time or part-time professional staff, and approximately 24% of staff is volunteers. In addition, it is difficult to find people willing to travel, regardless of geographic location and nature of emergency, even for periods of 4-6 weeks. ¹⁵
Communications	Reaching coastline and small islands in real time (if

there are not on-going program aid programs already) is difficult during disasters/conflict.

Delayed Response

Most of the emergency teams are able to deploy within 72 hours, but primarily for assessment missions. Only a few agencies are able to react within 24 hours, despite the fact that most agencies have a 24-hour on-call system.¹⁶

Logistics

The movement of personnel, material, and frequently food continues to present serious difficulties for many agencies. Security in a particular area is the most cumbersome roadblock for INGOs. Delays or lack of knowledge of custom clearance procedures and uncertainties related to stockpile availability compounds these issues.

Scenario 1: Responding to a Earthquake and Tsunami

The first scenario takes place against the backdrop of ongoing peacekeeping and counter-terrorism and counter-insurgency operations, and post-conflict reconstruction of the society and economy. Under such conditions, humanitarian organizations are providing aid in most sectors (water and sanitation, health, agriculture, economic development) but are limited in their access to the highland populations, where remnants of the militant rebels still operate. The United Nations peacekeeping forces continue to monitor the peace agreement between demobilized and disarmed former militias and Aliyan government forces. Government and U.S. forces are conducting counter-insurgency operations in a significant portion of the island to counter the activities of the remaining rebels, and other agencies and organization have only restricted access to these areas. During the course of the simulation, participants were presented with a series of four parts as the crisis unfolded over time. The participants were broken into three groups to work through the parts of the scenario.

Scenario 1, Part 1: The Immediate Aftermath

The first part of the scenario takes place two days after two massive earthquakes in the Indian Ocean unleashed a tsunami on the island. Participants, acting as medical directors for their respective organizations and agencies on the ground, were asked to focus on information gathering, inter-agency coordination, information dissemination to local staff and parent organizations, as well as the main avenues for intra-agency and inter-agency communication.

Participants were uniform in stating that their priority in the immediate aftermath of such a catastrophe would be the health and wellbeing of their own personnel. Only after communications and assessments of their own staff had been undertaken and their medical needs met, would the medical communities focus on assessing the broader damage to the local population and infrastructure. For the NGO community, identifying the number of dead and injured among its local and expatriate staff, contacting local staff throughout the country and getting information on their availability for work was the first priority. As one participant noted, “if my staff are tracking down missing relatives and helping their families, they won’t show up to work.” NGOs also would need to evaluate the possibilities for evacuation of expatriate staff. For the military, the first concern would be the health and safety of their own forces, both in the capital city and at the main Joint Task Force base in the south. Their assessments would focus on potential further risks to troops, and what additional medical care and supplies are needed to respond to new disasters befalling their forces. For the embassy medical officer,

the first task would likewise be to establish the status of embassy expatriate and local personnel.

Each community would begin with such an “inward” assessment and then focus on assessing the overall impact of the tsunami, as well as what resources and personnel are available to provide medical aid and disaster relief. The bulk of initial communication and information sharing would occur in person, consuming significant time and resources for many of the participants. For the military, the second priority would be an assessment of the impact of the catastrophe on their mission. They would be seeking information on the scale of the disaster, as well as direction from their superiors about whether the Joint Task Force (JTF) would have its missions curtailed or reduced and switched to a new mission of humanitarian assistance and disaster relief (HA/DR). Some suggested that a new JFT would be established nearer the capital with an HA/DR mission.

For the embassy medical officer, the first point of contact would be the local Ministry of Health to find out what it knew about conditions throughout the country, and what resources existed for search and rescue. All this would be supplied to the ambassador so that he could coordinate the potential medical activities of the agencies, such as USAID’s Office of Foreign Disaster Assistance. The medical officer would also seek to facilitate the public health and medical activities of a Disaster Assistance Response Team (DART).

The UN would also undertake an assessment of its staff, but would then work to measure the amount of “human damage” done - which populations were affected and to what degree - as well as the amount of physical damage: The extent of flooding, and of damage and destruction to houses and infrastructure. World Health Organization staff would seek information from NGOs about where they are providing services and where gaps in provision exist. The UN humanitarian coordinator would be the focal point for coordination within the UN system, and between the UN and NGOs. This person would set up meetings and mobilize UN Disaster and Coordination (DAC) and Search and Rescue (SAR) teams.



Japanese DART team in Banda Aceh after the Asian Tsunami (Photo: REUTERS/Kim Kyung- Hoon, courtesy of Alertnet)

The NGO, IO and foreign government participants agreed that getting information on the number of dead and injured throughout the country would be the second priority, and that efforts would be made immediately to set up coordination and communication centers. There was disagreement over whether the foreign military forces should be directly represented at such a coordination and communication center. Some participants said they would want to meet with any organization, including the military. The military would have

information on security risks to NGO personnel as well as the capability for assessing infrastructural damage. They would visit the Ministry of Health daily to report on their findings, even if the Ministry had no information itself. Some participants rejected the idea of communicating and coordinating directly with military forces, particularly foreign military forces. This would occur only as a last resort, and such communication should be channeled through the embassy and ministries. Their first point of contact would be the United Nations. Participants suggested that the local UN Office of Humanitarian Affairs (OCHA) or the US Embassy - if functional - should act as the coordinating mechanism for disaster response. All participants acknowledged that this coordinating mechanism would be officially led by the local government's Ministry of Health; since it was likely that "the government had collapsed at this point," however, most recognized that the primary coordination would fall to the UN or an acceptable embassy.

While all participants agreed that an integrated assessment center that included the local Ministry of Health, the local Red Cross or Red Crescent Society, the UN agencies, NGOs and the embassies (representing the foreign military forces) should ideally be established, some of them questioned whether this would actually be the primary means of communicating and coordinating. For some NGOs, a key factor was identifying which coordinating meetings were the most important to attend, as too much staff time would be wasted shuttling from meeting to meeting. NGOs would seek to identify who in embassies could be a source for communication, who had the most information, and with whom they would be able to communicate. They would seek to find the "center of gravity" for coordination and communication, and would not waste time on other meetings of lesser value.



**Sumatran village after the Asian Tsunami
(Photo: U.S. Navy/Philip A. McDaniel)**

For NGOs, much of the key information needed at this stage of the response involved their ability to bring in and distribute resources. For them, key questions included whether the local government would allow needed staff and supplies to be brought into the country, and whether they would have access to airfields, roads, storage facilities, housing and shelter for their workers. The other information required by NGOs included finding out where the internally displaced persons (IDPs) and other populations at risk were, what their health status was and whether they had shelter. The NGO medical director would also be concerned with identifying sources of funding locally as well as internationally, and establishing communication means both in-country and with headquarters.

The military noted that their ability to move beyond force protection measures would depend on guidance from their government as well as the conditions that are attached to funds that are made available for response. If authorized to provide humanitarian assistance, the civil affairs officer would be responsible for contacting the host nation and the U.S. embassy to determine needs and potential contributions.

Participants noted that one of the key lessons from the Asian tsunami was the need for medical directors to restrain their own humanitarian impulses. The temptation of operational staff is immediately to begin providing direct relief - loading trucks with medical supplies - instead of focusing on assessing needs and capabilities, and coordinating locally and communicating with headquarters. One group of participants enthusiastically supported the idea of setting up a local radio station to broadcast situation reports and updates among the humanitarian communities. The military participants in this group suggested that they would have the capacity to set up such a station.

Participants agreed that ideally the following actions should be taken. A communication and coordination infrastructure or network would be established, with the UN OCHA or an embassy as the coordinator. Some participants noted that whichever agency provided a daily situation report to all communities would become the *de facto* coordinator. All agreed that on the need for standardized and regular information updates. Some recommended that a medical officer should run lower-level operational coordination, to ensure someone with technical skills is in charge of health and medical matters. The primary tasks after internal assessments would be to find out who has information, what relief efforts are being undertaken and to shift resources within the country to meet needs. Essential information includes determining who is under dire threat and whether there are immediate rescue needs; what the status of food, water and sanitation, and shelter are; what infrastructure exists to provide healthcare; and where people are moving to. Ideally, assessments would be coordinated, with different NGOs and teams dividing their labor in a complementary fashion, taking on particular portions of the affected areas as well as particular functional tasks (health, water and sanitation, rescue operations). The coordinating center would

provide information to USAID OFDA and other potential donors to aid in filling identified needs.

Others noted that all agencies and organizations should have contingency plans for all relevant potential disasters such as an earthquake, and would have coordinated their response in advance, but that this planning function often has not occurred in reality.

Despite agreement on the need for coordination, one break-out group made clear that most agency representatives wanted their own agency to take the lead. UN representatives were adamant on a UN lead. Other representatives noted that regardless of orders, military commanders balk at the UN taking the lead. Despite legal requirements, this break-out group agreed that decision makers on the ground tend to think of themselves as decisive, and while this often subverts plans, it also can lead to much beneficial (if *ad hoc*) cooperation.

Scenario 1, Part 2: Initial Reports of Cholera

The second part of the first day's scenario is set three weeks after the earthquakes and tsunami have hit the island country of Aliya. Government estimates are 94,000 killed and 476,700 displaced. Currently living in overcrowded camps with little access to basic services, the tsunami victims are increasingly vulnerable to disease. A spokesperson for one of the large aid organizations has reported that a doctor diagnosed four cases of cholera in one of the displaced camps. The director of the only functioning hospital near the devastated area denies any suspected outbreak. It is known that people in the camps are dying but the reports conflict as to what the cause of death is. Given the proximity of the camps to each other and free movement between the camps, the possibility that a cholera epidemic could erupt in a matter of days is extremely high.

Participants were asked to focus on how their organizations would respond to this initial report of a cholera outbreak and what sources of information about the health situation they would trust. They were asked how they would put together a rapid verification and response team, and who could and should lead such an effort.

When asked about their immediate response, most of the NGOs agreed that they would immediately begin ramping up a cholera response effort before the initial reports of cholera had been confirmed. At a minimum they would begin public education campaigns on how to prevent the spread of the disease. They would determine whether WHO cholera kits were already in the country, and if not, would notify WHO and the local Ministry of Health of the reports and request

them. They would then recommend training staff on such things as the logistics of setting up cholera tents properly, and how to protect against contracting the disease through personal hygiene, safe water and food selection and preparation.

The NGO and military participants discussed the possibility of coordinating public education campaigns to combat the cholera outbreak. While they have significant numbers of local employees fluent in the various local languages and dialects, one NGO participant asserted that in the field most NGOs lack the capacity to print brochures or other educational materials on a large scale. Military participants stated that they have significant printing capabilities, and participants from both communities agreed that this is an important area in which there is a great potential for collaboration.

All participants agreed on the need to assess the situation and take preventive measures for their own personnel and the broader population. The UN would also operate on the assumption that the cholera was the cause of the symptoms, though it would work with the Ministry of Health to verify the reports. The UN representatives emphasized that the Ministries of Foreign Affairs and/or Civil Defense also would be involved, to deal with issues of quarantine. The embassy medical officers stressed that the situation immediately raises political as well as health issues. The health issues are the easiest to manage, as fairly standardized protocols for dealing with a suspected outbreak of cholera exist. The embassy would ask WHO would work with the local Ministry of Health to confirm the diagnosis. The military would immediately focus on force protection and education to prevent contraction and spread of the disease. The military asked why local staff and logistics are not prepared in advance of such predictable events. The same sequence of events seems to happen in each disaster, yet plans are not in place in advance. A NGO representative replied that many American NGOs are constrained by their lack of funding for advance preparation. Funds only arrive when a disaster strikes, not before.

When asked about which sources of information they would rely on, the participants diverged. Most agreed that “nobody really trust anybody else in a disaster.... Everyone feels that they must do their own assessments, or do not want to wait for the assessments of others.” Some favored relying on the NGO field testers - if they are a credible NGO - while others said that local doctors are more reliable in their diagnoses than expatriate doctors. Most agreed that they would want a confirmation of the initial diagnosis. Some felt it would be sufficient to rely on the Ministry of Health’s laboratories, if it has the capability to conduct tests according to internationally accepted standards, while others wanted an international (either WHO or U.S. military) lab to verify as well. Most would undertake their own assessments of the outbreak.

Most agreed that the formation of rapid verification and response teams should be led by the Ministry of Health; furthermore, they should be joint international teams, to conduct assessments and collect samples, and implement the appropriate protocols. The question of the involvement of foreign military forces elicited significant discussion. Some participants from NGOs and UN agencies insisted that such teams would be non-military to prevent locals and staff from being associated with parties to the ongoing conflict. Only in the event of an insecure environment would a military escort be welcomed by the UN. The U.S. military might put together its own response team, as these tend to be custom-fashioned. It would include U.S. public health officials in addition to military medical doctors. A consensus seemed to be that the use of U.S. military forces would depend on the presence of host nation military forces or rebel units. There was considerable disagreement as to whether U.S. military medical corps personnel could travel in relief missions without armed escorts and armed vehicles.

When discussing the question of which agency could and should lead such an operation, the respondents agreed that a joint assessment team would prevent “assessment fatigue” on the part of the local Ministry of Health. The question of which agency should lead the team produced different perspectives. Some military participants noted that in some situations, the military would have to take the lead. Most participants agreed that the Ministry of Health would lead the work, with close support from WHO. One group argued against an MOH lead, however, because according to the scenario, the Ministry of Health was headed by someone from the area where the insurgency was fiercest; in this case, WHO would be a more neutral entity with greater credibility and access to the affected population.

Scenario 1, Part 3: Cholera Epidemic and Internally Displaced Persons

Part 3 takes place six weeks after the tsunami. Humanitarian workers are calling for increased security in IDP Camp C due to fighting in the area. In addition, a cholera epidemic has been declared in the camp. It is felt that the epidemic can be contained if people remain in C Camp, where they have access to medical treatment; however, growing insecurity from incidents between the separatist movement and government troops is convincing people to leave the camp and surrounding area, thereby spreading the disease. UN peacekeepers are getting pressure from the local population and international aid workers to assist in keeping the people in the camps, and to provide general security in the area. The displaced are leaving C Camp out of fear that the separatists will attack the camp. They are also fleeing harassment by the government troops sent to guard

the camp. The Aliyan troops have limited logistical support and are thus being aggressive toward the very population they were sent to protect.

Humanitarian doctors have confirmed 54 cases of cholera in C Camp, with the number significantly increasing as each day passes. Other cases are now being reported in A and B Camps, most likely spread by those fleeing the growing insecurity in the C Camp area. 15 deaths have been recorded. There are an estimated 35,000 people being sheltered in the A and B Camps. Towns surrounding the camp are home to over 100,000 people. Isolated reports in other parts of the country indicate deaths resembling cholera, and samples have been sent to the capitol for confirmation. Given the scarcity of medical personnel and supplies in rural areas, people have begun moving into the urban centers. This may be the beginning of a mass migration into urban centers. The Ministry of Health has very little in the way of surplus staff, medications or lab facilities to help control the epidemic, and no resources to prevent the migration. The cholera epidemic is spreading rapidly and can no longer be considered under control.

Participants were asked to identify their primary and secondary priorities for responding to the cholera outbreak, and to consider any time constraints on these activities. They were asked to specify the level at which operational health decisions in their organization are made, and the amount of time delay they expected after an incident until that level is reached. Another topic of discussion was whether participants felt the need to establish their own laboratory. If participants planned on using others agencies' and organizations' labs, they were asked to identify which ones they would feel comfortable using, and who would and would not have access to them. Participants were asked how they defined the concept "control the environment," and with whom and how coordination should be organized and led. They were also asked to play the role of advocate on the JTF staff, and to consider how to convince the JTF commander to authorize the use of military resources for direct assistance.

With regard to organizations' priorities, all participants agreed that an immediate public information campaign was a very high priority, despite the reality that such campaigns often did not receive enough attention or begin quickly enough. However, they diverged on whether the security situation or the medical emergency was the primary issue at stake. For the UN and military, the security situation took precedence as it related to preventing the spread of the outbreak. For the embassy medical officers and NGOs, controlling the outbreak in the camps was the first priority.

The UN representatives in general believed that the security situation took precedence, and that preventing the camps' inhabitants from being attacked or harassed was the key to preventing the spread of disease. The UN Special Representative to the Secretary General would press the host government to

improve security at the camp and train its staff not to harass the IDPs. If this failed, the UN would seek to work with local police chiefs to improve the situation. The secondary priority would be to get UNHCR UNICEF or NGO personnel into the camps to handle the cholera. The UN participants emphasized that the UN would seek to increase the services provided in the camps, such as immunization and medical services. The UN agencies would seek to minimize their presence in the camps, and would not allow UN peacekeepers inside the camps. They would prefer to rely on NGOs to manage the disease and water and sanitation issues.

The military, embassy and UN participants all agreed that security - and who would provide it - was a priority. The question of quarantining the camps was raised. One UN official noted that if people in the camps decide to move, only the host government can order a quarantine. UN and other agencies cannot hold the people in the camps against their will. The military representatives all agreed that their first priority would be to report the intelligence to headquarters, and to protect the health of their troops. The military would also seek to coordinate security measures with host government forces in the area. Some military officials suggested that the military might be able to provide assistance with water and sanitation in the camps. The secondary priority would be to develop a plan to support the work of NGOs and the host nation to manage the outbreak and improve security, while awaiting authorization from headquarters. Some military officials rejected the notion that NGOs would remain in the camps or even on the island, because of security threats. NGO participants maintained that they would stay even if the military is fighting with insurgents because their mission continues despite -- and because of -- lack of security.

The NGOs said their first priorities would be to treat current cholera cases, which entails bringing in adequate supplies and personnel. The secondary priority would be to improve water and sanitation in the camps, in order to prevent future cases. The third priority would be preventive measures to protect their staff both from disease and from possible attacks. In short, preventing the migration of the disease would not be their main concern. Both the UN and NGOs agreed that they would try to improve conditions in the camps to manage the outbreak, but also to provide incentives for the IDPs not to leave the camp. The participants playing the role of US embassy medical officers noted that their first priority would be to provide sanitary water services and care for acute patients, and to assess and report to their superiors why their efforts to prevent the cholera outbreak had failed. The secondary priority was to stay alert to the possibility of other disease outbreaks within the same population.

All participants agreed that decisions would be made at the local operational level. In circumstances such as this particular scenario, sufficient funding would be immediately available to implement decisions locally, without the need to go to headquarters. This was true across the board, from NGOs to the military.

With regard to laboratory facilities, participants agreed that the best choice was to help rebuild the capacity of Ministry of Health laboratories to allow them to produce credible results. In the interim, using international labs or the U.S. military's facilities, or sending in rapid assessment teams from WHO, the US Department of Health and Human Services and DoD to perform remote analysis, would be sufficient. The military representatives said that they would use their own lab facilities to test their own forces. There was disagreement over whether such international capacity should be left behind when the crisis was over, with some participants from NGOs and the military feeling that international lab facilities should not be left behind, particularly if there was not local technical capacity to run them.

When asked why such quick agreement on the need to repair host government clinical infrastructure was so difficult to achieve during real-life emergencies, participants noted that the different communities had different organization cultures, with different responsibilities to their donors. This led to two divides, first at the headquarters level, where the problem was viewed differently than on the ground. Second, this then translated into different agendas in the field, which colored how actors on the ground viewed each other. One US government participant said that "there's not much disagreement on technical issues and goals, but when it comes to making those things happen, we have problems." For the military, coordination with NGOs was often viewed with frustration, as it slowed down the military's response time and interfered with efficiency. A UN official argued that "coordination very rarely, if ever, happens on the ground. How to effect it is to provide accurate and timely information, put it on the table, and share it."

The question of what it means to "control the environment" led to a variety of responses. For NGOs and some UN agencies, it meant dealing with the cholera outbreak: Setting up a cholera ward at the camps; using resources to prevent the spread of the disease; and developing public information campaigns. For other UN agencies, it was much broader, meaning to "control the overall political and operating environment as well as the epidemic." The military officers noted that it had different meanings "even within and among different branches of the military. To me [a medical corps officer], it means controlling cholera. To my boss, it's purely a tactical question, controlling movement of personnel."

There was significant disagreement over which organizations to coordinate efforts with and which organization could lead. Some UN officials and all military officials said that the local Ministry of Defense would be an important partner, given the security situation. Other UN and U.S. government participants argued that the primary partners were the host Ministry of Health and its medical and health infrastructure. They maintained that training should be concentrated on local MOH and other staff. NGOs argued that, while the MOH had to endorse response efforts, it was likely that in circumstances such as this it would be

incapable of leading the response. One NGO participant argued for ceding the lead to a large NGO such as Medecins Sans Frontieres. This provoked debate about whether NGOs would accept a role as leader of a team-effort, rather than operating unilaterally and according to their own agendas. The military representatives said they would focus on the host nation as a partner. They would request it to issue a quarantine, to empower the local military to enforce it and assist in training the local military in how to do so. The military expressed doubt that local military commanders would cede control of the response to other agencies if there was combat going on.

With regard to advising the JTF commander on providing direct assistance, there was significant disagreement between the UN and military representatives. UN rules prohibit military forces from providing direct assistance in combat situations, while such assistance is allowed in peacetime. One US military participant noted that when the U.S. military is engaged in a bilateral, rather than UN mission, it will ignore UN mandates. On a bilateral mission, if there is an emergency, direct assistance can be allowed. Whether the commander will provide it depends on whether it violates Title X, whether it diverges from his or her own plans, or if he or she lacks sufficient intelligence for authorization from DoD. The commander must consider the primary mission and prior orders, what funds are available (and what restrictions are attached to them), and the effect giving aid will have on the unit's ability to respond to other crises as well as on the security situation. Convincing the JTF commander to undertake direct assistance would require convincing the commander of the need and the unique assets the JTF can bring to bear, as well as how it fits in with the commander's intent. Military participants noted that historically, direct assistance is a last resort.

Scenario 1, Part 4: Cholera Controlled

Part four of the first scenario takes place ten weeks after the cholera epidemic officially began. The worst is now over. A cholera task force, chaired by WHO, was set up to coordinate and set the priorities for the response. WHO and other aid organizations brought in cholera kits and the Aliyan military helped distribute re-hydration salts, pit latrine kits, and some vaccines. Aid agencies have also begun a nationwide training program for health workers and health assistants. There are still cholera cases existing but new incidences have dropped rapidly. No deaths have taken place in over a week throughout the reporting system; however, there are still requirements for maintenance and surveillance to continue. The United Nations peacekeeping forces are withdrawing and will attempt to have all personnel out of the country within ninety days.

Relief agencies and local government officials, who have been relying on the military transport and other support, are appealing to have the peacekeeping mission extended but it does not appear likely that the Security Council will agree. Therefore, the UN Security Council has not authorized any direct humanitarian assistance to the local population. The separatists have been fairly calm during the epidemic but people fear that they are simply waiting for the peacekeepers to leave and then will start renewed attacks. Some aid agencies are planning on leaving as soon as the peacekeepers leave to avoid the security risk to their staff; most, however, are planning to stay.

The Ministry of Health has called a meeting of all medical officers and lead personnel to review the exit strategy of UN peacekeepers and coordinate filling the resulting critical vacancies. The Minister is very well-educated and professional; however, government resources are extremely limited and she has constantly to fight governmental corruption to pay hospital staff; purchase, distribute, and stockpile medicines; and deal with the common health service issues of a poor, developing country. The JTF command has not changed its position on providing direct assistance.

Participants were asked to review who should be in charge of coordination of the health services in Aliya, and whether there was any need for coordination to take place between particular international organizations without Aliyan government attendance or knowledge. They were asked to consider what resources their organization would leave behind or hand over, and if they had any major concerns and/or restrictions with re-allocating these resources. Finally, participants were asked, in light of the day's discussions, what recommended changes their parent organization should make for future coordination in a disaster and/or conflict setting.

Participants were unanimous that the host Ministry of Health should be in charge at this point in the emergency, with some technical assistance from WHO. They also generally agreed that interagency meetings would occur without the presence of host government representatives, but that these would have to be informal, so as not to offend the host government. These meetings would likely take place among NGOs and among UN agencies, as well as between the foreign military forces and NGOs. There was disagreement as to whether to leave behind medical equipment and medicines. NGOs noted that they often left these behind. Both would need to be technologically appropriate, and be left with properly trained organizations/technicians. The military officers noted that it was not their norm to leave equipment behind, but it might be done if the host government requested it. NGOs indicated that certain equipment and medicines wouldn't be left if to do so might violate the humanitarian precept to "do no harm." X-ray equipment was an example. Other NGOs noted that it was unlikely that equipment and supplies would be left with corrupt government agencies, but

instead would be turned over to local NGOs. Another concern was that leaving certain medicines, particularly narcotics, in the hands of local staff would put them at risk of corruption or attack.

Participants all agreed that more coordination needed to happen in advance of disasters and above the operational level. Some NGO representatives suggested that bringing together high-level NGO personnel and military commanders was necessary to generate real change at the operation level. Some US government representatives maintained that operational-level interaction was good, and that the main problem lay with the US State Department's failure to involve NGOs in high-level coordination. Some military officials agreed that NGO representatives should be invited into operational planning. Other recommendations concerned the coordination of after-action reports (AAR)/lessons-learned among all groups that worked together during a crisis. Ideally, after-action data will have been collected during the crisis for this purpose. Participants stressed that such reviews should not only incorporate lessons-learned, but also assess whether changes can actually be made. Currently no mechanisms exist to coordinate and produce joint AARs.

Scenario 1: Key Findings

The key findings from the day were brought out in the closing plenary session. It was clear that NGOs were constrained by their limited resources and staff. Establishing a center of gravity for communications and information came to the front as a priority. Yet, unlike UN agencies, the strength of NGOs lies in their willingness to work in insecure conditions, and to respond to the first reports of an outbreak of conflict, catastrophe or disease. The greatest challenge noted by US governmental officials was the fact that, unlike US government agencies, NGOs are not coordinated via the US ambassador. Furthermore, policy decisions in Washington, DC hampered the flow of information and thus reduced operational coordination. The second challenge was the embassy's reliance on host nation health officials for information and operational capabilities, as well as on both national and international political conditions which might make coordination even more difficult. For the military medical corps, the greatest challenge was the rapidly changing nature of their mission. Their resources were designed for taking care of healthy young soldiers and battle injuries, rather than disaster relief and humanitarian medical relief. Their greatest constraint was their original counter-insurgency mission, which dictated what assistance could be provided; they insisted that they would only act in support of the host nation rather than assume the lead in providing disaster assistance. UN participants noted that there were too many incompatible assessment forms among the various agencies, and that assessments should be standardized to facilitate coordination among all players.

Part II. Humanitarian Medical and Health Assistance in Conflict and Post-Conflict Zones

The second day of the simulation exercise had the participants respond to a massive earthquake in an area under insurgency and counter-insurgency combat, which can be entered only with government permission that is not forthcoming. Conflict and post-conflict operations complicate the delivery of medical and health assistance in the wake of natural disasters. The role of the military in such situations is divided between their primary combat mission and humanitarian assistance. Dr. David Tarantino, Jr., a medical doctor in the Office of the Assistant Secretary of Defense for Health Affairs, provides an overview of the U.S. Department of Defense's role in medical and health assistance. His presentation describes the policies and activities of the U.S. Defense Department, and should not be taken as representative of how other countries use their armed forces for humanitarian health and medical assistance. The second day's scenario, with a summary of the participants' discussion and key findings, follow his chapter.

Role of U.S. Department of Defense Health Sector in Natural Disaster and Conflict Settings

**David Tarantino, Jr., MD,
Commander, U.S. Navy Medical Corps***

INTRODUCTION

In recent years, the United States Department of Defense (DoD) has played an increasingly prominent role in health sector mitigation in natural disaster and conflict settings. Public health services were a significant part of the overall DoD response to the Asian tsunami (December 2004), Hurricane Katrina (September 2005), and the Pakistan earthquake (October 2005). In Afghanistan and Iraq, DoD is playing a key role in ongoing health sector stabilization and reconstruction work. DoD has been engaged in these kinds of missions throughout its history, but the magnitude of recent events has led to an increased emphasis on civil-military medicine. This is clearly illustrated by the newly-signed Department of Defense Directive regarding Stability Operations (DODD 3000.05), which directs DoD to “ensure DoD medical personnel and capabilities are prepared to meet military and civilian health requirements in stability operations.”¹⁷

Civil-Military Medicine –

A discipline within operational medicine comprising public health or medical issues that involve a civil-military interface (foreign or domestic), including military medical support to (domestic) civil authorities, medical security cooperation activities, and medical civil-military operations.

Players:

- **DoD: OSD Health Affairs, OSD Stability Operations, Joint Staff, Services (SGs), Civil Affairs community, AFMIC, USUHS, Combatant Commands, operational units, schools, centers**
- **Interagency: State Dept. Office of Stabilization and Reconstruction Operations, USAID, Office of Foreign Disaster Assistance, Health and Human Services, Homeland Security/FEMA**

* Director for Civil-Military Medical Affairs, Office of the Assistant Secretary of Defense for Health Affairs, U.S. Department of Defense.

- **International: Allied/Coalition militaries, United Nations (WHO, UNOCHA), ICRC, host nation officials (Ministry of Health), various NGOs**

The mission of the DoD military health system has traditionally been focused internally on delivering medical care to our active duty, retired, and dependent beneficiaries, and providing force health protection and medical support to our personnel deployed in harm's way. The increasing emphasis on civil-military medicine and medical aspects of stability operations establishes an additional core mission that is externally focused.

With regard to DoD's health sector role in natural disasters and conflict settings, force health protection and deployed medical support still constitute the primary responsibility of the military health system. Natural disasters and conflict settings pose myriad unique challenges for force health protection which must be addressed early in the planning process. This paper will focus on the other - external - civil-military medicine roles that DoD might be expected to play in natural disaster and conflict settings.

DoD CIVIL-MILITARY MEDICINE ROLES

Before exploring the various health sector roles DoD might engage in, it is instructive to highlight the importance of engaging in the health sector at all. The quality of health has been repeatedly linked to the (in)stability and (in)security of nations or regions. Inadequate health care can be a cause or consequence of instability or conflict, so any effort to prevent or address instability or conflict must consider the health sector.¹⁸ While DoD does not and should not have lead responsibility for health sector issues, when appropriate, it can contribute resources and expertise in support of a coordinated US government (USG) effort to bolster host nation and international health sector efforts.

With the goal of enhancing preparedness for natural disasters and preventing instability or conflict, DoD conducts a broad array of medical security cooperation activities. These include disaster preparedness projects focused on first responder training and post-traumatic stress prevention and treatment; humanitarian assistance such as health clinic construction or donation of excess medical property; disease surveillance and mitigation efforts; and HIV/AIDS prevention programs in cooperation with foreign militaries.

Civil-Military Medicine –

Domestic:

- ✓ **Homeland Defense/Military Support to Civil Authorities/Chemical, Biological, Radiological, Nuclear Emergencies**

Foreign:

- ✓ **Humanitarian Assistance (HA) projects (first responder training)**
- ✓ **Humanitarian and Civic Assistance projects**
- ✓ **Disease surveillance projects (Caribbean Epidemiology Center)**
- ✓ **HIV/AIDS prevention efforts in militaries/peacekeepers**
- ✓ **Disaster preparedness projects (warehouses/medical stockpiles)**
- ✓ **Disaster Assessment and Response activities (Hurricane Mitch)**
- ✓ **Medical stability operations (Afghanistan)**
- ✓ **Medical/health sector reconstruction operations (Iraq)**

These activities are designed to prepare host nations to respond to the medical and public health aspects of natural disasters, and to promote stability and prevent conflict by supporting and improving health care. They are also designed to better prepare DoD to respond in the event of a disaster or conflict through real-world training, and the establishment of vital access and contacts.

Another civil-military medicine role for DoD is disaster relief; particularly the public health aspects of disaster relief. In the past year alone, DoD has made significant contributions to the public health components of relief assistance following the Asian tsunami, Hurricane Katrina, and the Pakistan earthquake. With its extensive global medical assets, DoD is often uniquely positioned to play a critical role in immediate life-saving relief efforts as well as follow-on public health care. This is not to suggest, however, that DoD has, or should have, lead responsibility for disaster relief.

DoD International Disaster Relief

- **USAID Office of Foreign Disaster Assistance (OFDA), not DoD, has lead for USG response to foreign disasters.**
- **OFDA may request DoD assistance in certain cases:**
 - ✓ **Scope of disaster overwhelms Host Nation and USG**
 - ✓ **In the U.S. national interest**
 - ✓ **Host Nation desires and will accept DoD assistance**
 - ✓ **Verified requirements for DoD unique assets/capabilities**
 - ✓ **DoD mission clearly defined/exit conditions clear**
 - ✓ **Force protection must be addressed**

Lead responsibility lies with the host nation and international and non-governmental organizations, such as the United Nations Office for the Coordination of Humanitarian Assistance, the World Health Organization, and UNICEF. If USG assistance is requested, lead responsibility lies with the State Department and its embassy, and the US Agency for International Development's (USAID) Office of Foreign Disaster Assistance (OFDA).

DoD Response to the Asian Tsunami –

Combined Support Force (CSF) - 536 Surgeon's Mission:

“To minimize the effects of wounds, injuries, diseases as well as environmental and occupational hazards brought on by the tsunami-affected areas of Sri Lanka, Indonesia and Thailand.

To facilitate in collaboration with the host nation and other nation(s), USAID/OFDA, the ability of the UN and NGO's to conduct relief efforts after CSF-536 is deactivated.”

DoD assistance is generally sought if the resources or capabilities of these organizations are overwhelmed. Since disaster relief is usually relatively non-controversial, and usually takes place in permissive, non-conflict environments, DoD involvement is generally well accepted, provided that the mission is clearly defined and appropriately circumscribed. Host nations and non-governmental organizations may resist DoD assistance that is perceived to duplicate or overshadow their capabilities or efforts.

The final, most complex and most controversial civil-military medical role for DoD is health sector support in conflict settings, such as in stability or reconstruction operations. Such health sector support can range from the provision of basic care to civilians in the midst of combat operations, to stabilization and establishment of host nation basic health services until other organizations or a new government can take the lead, to wholesale reestablishment and reconstruction of a national health system as an occupying power.

<u>Medical Security Cooperation –</u> Combatant Command-directed, health-related activities, aligned with Theater Security Cooperation Strategies and in cooperation with foreign partners, that promote security and stability and deter aggression by supporting the health sector, thereby: ✓ building relationships that promote specified US interests; ✓ building allied and friendly capabilities for self-defense and coalition operations; and ✓ providing US forces with peacetime and contingency access.	<u>DoD Health Sector Support in Afghanistan</u> ▪ Commander's Emergency Response Program ✓ 144 health/medical projects funded ▪ Overseas Humanitarian, Disaster, and Civic Aid (OHDACA) ✓ 45 health/medical projects approved ✓ Including OSD/Sec. Health and Human Services priority Rabia Balkhi project ✓ Estimated cost: \$8.1M ✓ 1/3 of all OHDACA expenditures = health/medical ▪ Capacity-building support to Afghan Ministry of Public Health ▪ Support to Afghan National Army – Medical ✓ Approx. \$50 M in aid, assistance, support
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Building Afghan Medical Capacity (Photo: OASD, DoD)

Again, DoD generally would not be expected to take the lead in these areas, but in a conflict setting, where other organizations may not be able to fulfill their traditional roles, and when vital USG interests are at stake, DoD may be asked to play a major part in health sector stabilization and reconstruction efforts - as is the case in Afghanistan and Iraq.

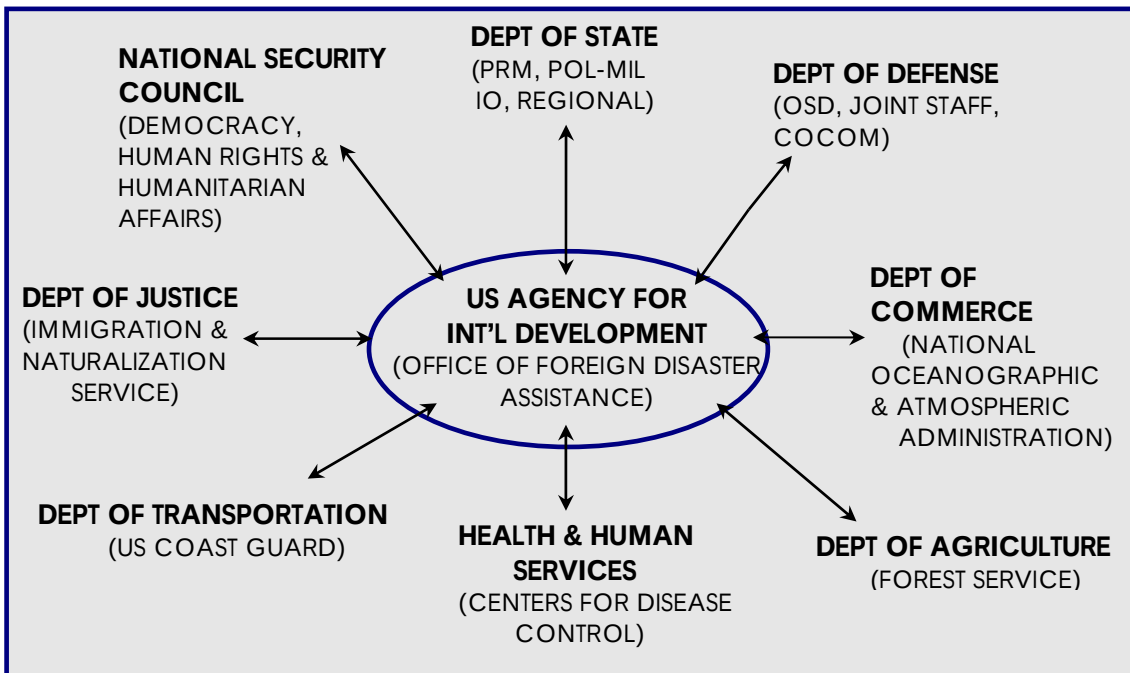
DoD ORGANIZATION AND APPROACH

One of DoD's strengths is a clearly defined organizational and command and control structure. This generally applies to the organization of and approach to health sector operations in disaster and conflict settings. Policy making and strategic guidance regarding DoD health sector efforts are coordinated at the Washington level, among the Office of the Assistant Secretary of Defense for Health Affairs, the Stability Operations office and the Joint Staff Surgeon. This includes outreach and coordination with other USG agencies (Department of State, USAID/OFDA, Department of Health and Human Services), and with appropriate international (WHO, UNICEF, UNOCHA) and non-governmental organizations.

The functional center of gravity for DoD is the Regional Combatant Command (i.e., Central Command, Pacific Command, Southern Command, European

Command). The Regional Combatant Commander is responsible for organizing, planning, and conducting contingency operations within his area of

Figure 1. The Place of DoD in U.S. Interagency Disaster Relief Coordination



responsibility. Each Combatant Commander has a Command Surgeon who advises on and coordinates the health and medical aspects of any operations.

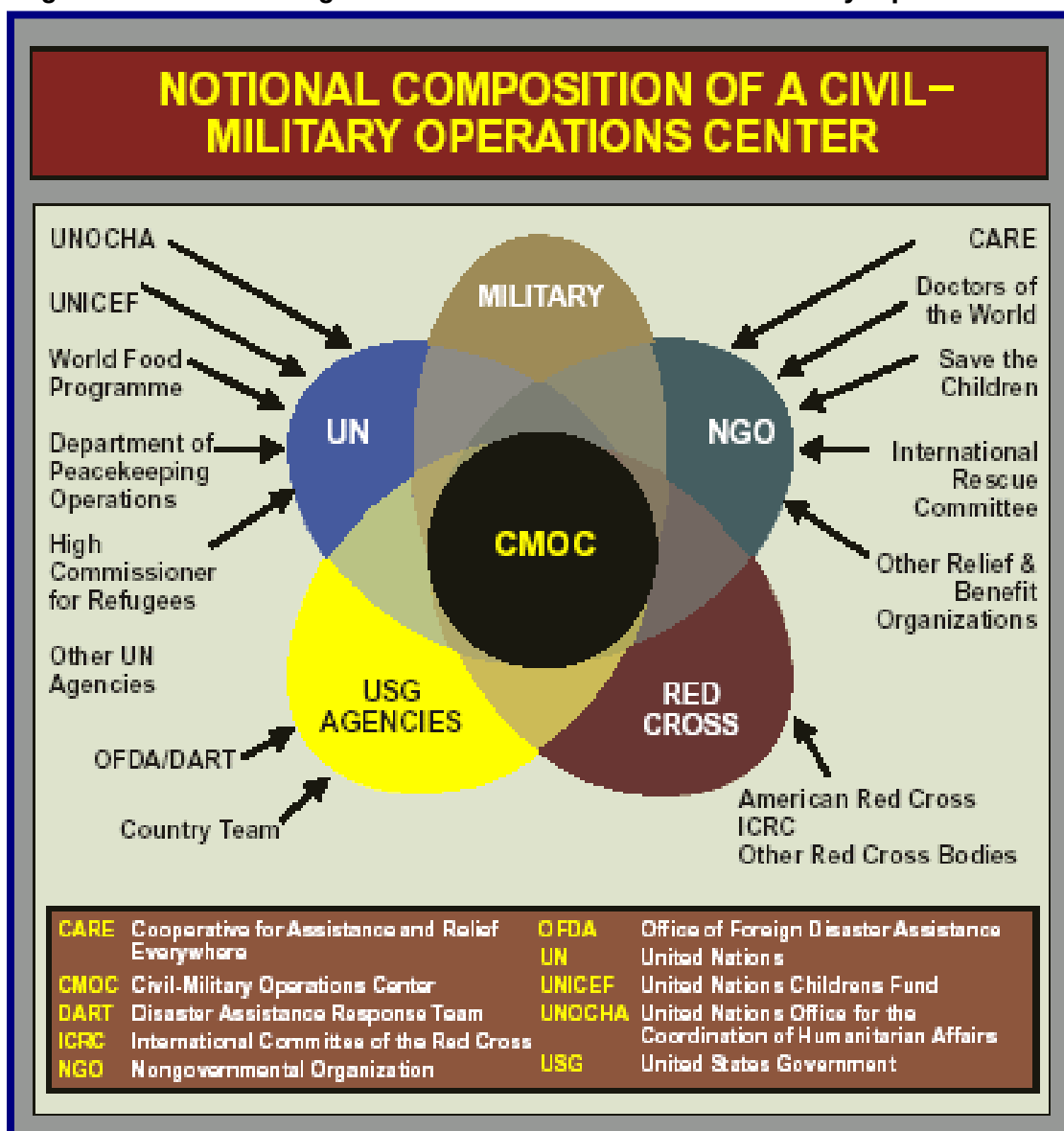
Contingency operations are generally conducted under the tactical command and control of a Joint Task Force (Commander) established by and reporting to the Regional Combatant Commander. Joint Task Forces (JTF) are flexible constructs that vary in size and make-up based on the mission. For example, Coalition Joint Task Force - 76 (CJTF-76) in Afghanistan is a long-standing combat-oriented task force established to coordinate and conduct combat and counterterrorist activities. CJTF-76 also conducts civil-military and health/medical activities that are complementary to its core mission. Combined Support Force - 536, a unique variant of the JTF, was established to coordinate and conduct initial Asian tsunami relief efforts. At its peak, it included over 15,000 DoD personnel, but it was deactivated after less than two months, as host nations and other civilian and international organizations became capable of dealing with the situation.

Like the Combatant Commands, every Joint Task Force has a JTF Surgeon (and staff) to handle health and medical activities. On the health side, at the tactical or implementing level, are division, brigade and unit surgeons and medics and deployed health facilities. JTFs typically also have a civil-military operations (CMO) section with a broad range of responsibilities in that sector; the tactical implementers are Civil Affairs forces. Because health sector issues and activities can intersect with Surgeon and CMO responsibilities, careful coordination between these groups is critical. As with the JTF itself, the surgeon and CMO sections are flexible constructs that are adaptable to the specific mission. Continuing with the above examples, in Afghanistan, the CJTF-76 surgeon and medical force focus largely - though not exclusively - on force health protection, while after the 2004 tsunami, the CSF-536 surgeon and medical force played a leading role in the initial public health response.

The functional or operational center of gravity for DoD is the Regional Combatant Command. Each Combatant Commander has a Command Surgeon who advises on and coordinates the health and medical aspects of any operations.

In the face of a natural disaster or conflict with significant public health consequences, DoD's general approach is to provide assistance as requested, in support of the lead USG agencies and the larger USG effort, which in turn supports other international and host nation activities. Within DoD, every attempt is made to establish lines of communication and coordination with relevant stakeholders from the policy and strategic (Washington) level to the operational (Combatant Command) level to the tactical (Joint Task Force) level. DoD also works hard to coordinate its missions with relevant stakeholders across the USG (State, USAID, HHS), as well as with international and non-governmental actors, and most importantly with host nation officials. At the Joint Task Force level, DoD will often establish a Civil-Military Operations Center (see Figure 2), as a neutral venue for the exchange of civil-military information including health sector issues, between all stakeholders and participants.

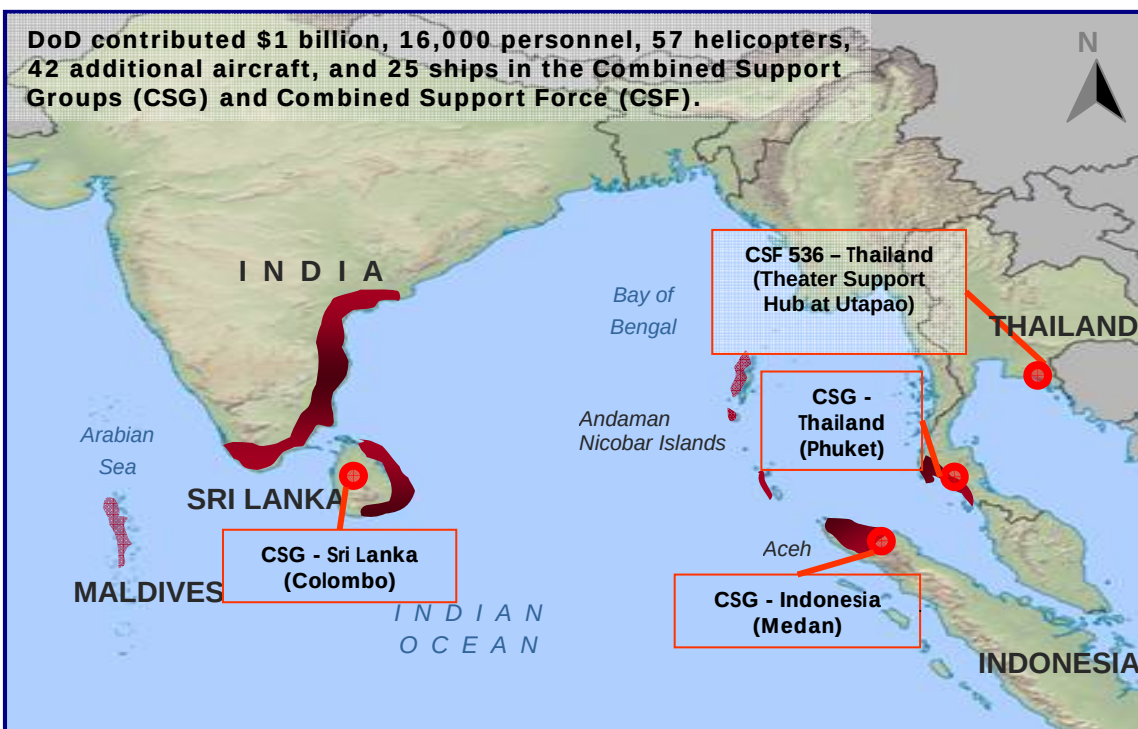
Figure 2. Coordinating across Communities in Civil-Military Operations



DoD STRENGTHS IN HEALTH SECTOR EFFORTS

DoD brings significant strengths to health sector support in natural disaster or conflict settings. Foremost is a global and expeditionary force structure. DoD has resources and assets around the globe that are designed for expeditionary deployment and can be drawn upon, when appropriate, in times of crisis. DoD also excels at establishing command, control, communication and coordination mechanisms and structures in the chaotic environments typical of natural disasters and conflicts. DoD has tremendous transportation capabilities - air, sea, ground - which can be brought to bear in a crisis, as well as significant supply and logistics capabilities. Specifically regarding health, DoD has a large pool of mobile, highly skilled public health and civil affairs experts, and can rapidly deploy an array of scalable medical care facilities, transport critical medical supplies, conduct detailed health sector assessments, and provide state-of-the-art disease surveillance capabilities. Figure 3 illustrates some of these strengths, in the case of DoD's response to the Asian tsunami. Finally, DoD is organized, trained and equipped to operate in the harshest and most dangerous environments, including direct combat operations. Many of these strengths were displayed during the immediate aftermath of the liberation of Iraq, when DoD medical personnel and Civil Affairs experts worked with USG, international, and Iraqi counterparts to prevent the public health crisis that many experts had predicted.

Figure 3. U.S. Department of Defense Assistance in the Asian Tsunami



DoD WEAKNESSES IN HEALTH SECTOR EFFORTS

Along with DoD's many strengths in the health sector arena are several significant weaknesses. Foremost is the fact that humanitarian assistance and health sector support has not typically been DoD's "day job." Other host nation, international and USG organizations typically predate DoD health sector involvement in a given situation, and will remain active long after DoD's role ends. These organizations tend to have greater local knowledge and expertise, and have more specific training and experience in health sector assistance during natural disasters or conflicts. Furthermore, DoD's experience and approach tends to



Medical Outreach Program (Photo: OASD, DoD)

be contingency-based and time-limited - that is, short-term relief or crisis response -- while these other organizations usually take a longer-term development and reconstruction approach. For example, DoD was well-suited to provide significant early relief assistance in the aftermath of the Asian tsunami, while ongoing, long-term health sector stabilization and reconstruction efforts in Iraq and Afghanistan have proven more challenging.

DoD is also limited by insufficient education and training opportunities for its health care professionals in the health aspects of natural disasters and conflict settings. A final challenge is the seemingly unavoidable resentment and resistance to DoD involvement in “humanitarian” activities such as health sector assistance by certain non-governmental organizations. This resistance tends to be most prominent in politically or emotionally charged “conflict” settings. This was indeed the case in Iraq, where DoD (representing the USG) found itself simultaneously criticized for not meeting its obligations as an occupying power (for example, to ensure basic needs of the civilian populace), and for involving itself in such humanitarian efforts.

CONCLUSIONS

DoD clearly has a significant health sector role in natural disaster and conflict settings. This has been demonstrated by recent DoD contributions to the health sector component of relief efforts for the Asian tsunami, Hurricane Katrina, and the Pakistan earthquake, as well as through ongoing health sector stabilization and reconstruction operations in Afghanistan and Iraq. The scope and extent of DoD’s health sector role will vary depending on such factors as the scope of the disaster or conflict; USG national security interests; and the capability of other USG agencies, international organizations, and host nations to address health needs. In general, DoD’s health sector role should be in support of a larger USG effort, which is in turn supportive of larger international and host nation activities. DoD’s strengths are global presence, command and control, logistics, transportation and the ability to operate in any environment. These strengths are generally optimally utilized during the early relief phase of a disaster or conflict, while other organizations are mobilizing their longer-term response. Circumstances, however, may also dictate DoD involvement in more complex, longer-term health sector stabilization and reconstruction efforts.

Scenario 2: A Devastating Earthquake as Winter Approaches

The scenario for the second day of the game is again set against the overall background of a UN peacekeeping mission - the UN Aliyan Force (UNAF) - and a US-Aliyan bilateral Joint Task Force (JTF) to counter the remaining insurgents and terrorism. This second scenario takes place without regard to the previous day's work. In this new scenario, the main urban centers of Aliya are relatively peaceful. UNAF is training the local police force to contain and prevent crime. Anti-terrorism measures are concentrated in the mountainous part of the island targeting the separatist leader who has been identified as the mastermind behind the recent worldwide bombing campaign that has killed hundreds of innocent people. Humanitarian workers have not been given permission by the Aliyan government to provide aid in this district due to the secretive nature of the JTF activities. Within the country in general, infrastructure is being rehabilitated; local airports are open and operating, while markets in all districts have shown increased produce and livestock. Although the government has established a professional civil service office in each district, funding shortages and communication breakdowns render most offices incapable of providing the necessary basic services they are set up to perform.

The National Health System is inadequate. While many of the indigenous doctors have trained in Europe or the United States, they practice mainly around the capital. All other health services are performed at clinics run by community health workers trained in basic medical practices. Participants were divided into three groups to work through the four parts of the scenario.

Scenario 2, Part 1: The Immediate Aftermath

The first part of the day's scenario takes place in early fall, two days after an earthquake of 7.6 on the Richter scale struck the northeast part of Aliya. A series of aftershocks (magnitude between 5.4 and 5.9) followed and a number of villages were destroyed. The capital and other cities were affected and many people are feared to be trapped under the rubble. In the northeast, the death toll is expected to be in the thousands. The Aliyan military, UNAF, and the JTF have been trying to perform assessments as well as search and rescue missions, but have been hindered by armed separatist resistance. Although Aliya lies in the Indian Ocean, the high mountainous areas are subject to extreme cold and sleet during the winter months.

The humanitarian community is extremely concerned about the approaching winter and how the population will survive. Their detailed knowledge of the highlanders is limited due to previous travel restrictions. They do know that the

population centers are remote, widespread, and poor. In the urban areas, where buildings were made of concrete, material from the rubble is mostly unusable. Many homes in the rural areas were built in river basins or on unstable mountainsides. While the destruction was more severe than in the cities, the stones, wood and corrugated iron of these fallen buildings can be retrieved and reused.

Participants played the role of the senior medical officer for their organization and have been in the country for six months. Prior to the earthquake, military medical officers have been spending most of their time dealing with force protection issues between JTF and Aliyan troops. Government medical officers have been trying to work with the State Department on medical advisories for US tourism. HA personnel have been working to support the health clinics. With the emergency at hand, participants were tasked with assessing the damage to the Aliyan health system and establish the relief requirements, if any, for assisting the people affected by the earthquake. Participants were asked to establish their priorities for making assessments and who would participate in them. Participants considered how they would reach all parts of the country in a timely manner to gather information, how they would target their health activities, and which indirect health issues might affect the health system in ways relevant to their organizations.

All participants agreed that they would first undertake an assessment of their own personnel and damage to their own infrastructure. NGOs, UN and US embassy officials immediately focused on the question of gaining access to the disaster zones, particularly in the conflict areas, in order to assess the damage. The UN and embassy officials suggested means to bring about a humanitarian ceasefire. US officials emphasized that their efforts would be conditioned by their public support for the host government's counter-insurgency effort. They and military players said they would immediately seek higher-level guidance to expand the scope of the mission and guidelines for access and support to other organizations. They, the JTF and the UN agencies would need permission from the host government, however, to begin to act. The embassy and UN players stressed that the host nation's formal disaster declaration is the first step to begin the entire process of meetings, assessments and response. NGOs are not constrained in this manner - they would begin information gathering, appeals for donations and planning even without a disaster declaration.

Information was again the first priority. Most participants agreed that at this stage in the catastrophe, only the JTF would have the capacity to provide information on the impact of the earthquakes, especially in the conflict zones. They also mainly agreed that the MOH would be the preferred primary conduit for information, and that NGOs in particular would avoid direct contact with the JTF. Some NGO players said they would focus on rapid response, and would first

seek whatever information they could locally, then go out to collect it themselves. They would share this information with OFDA, but not directly with the US military. They would seek to share as little information as possible so as not to jeopardize the security and safety of their staff. This surprised many of the military players.

NGOs and the UN agencies agreed that they would know that the JTF had previous assessments and satellite reconnaissance of the conflict zones, and would seek to gain this information. The UN agencies would rely on the JTF rather than UNAF forces for logistical support if JTF allowed it, but would prefer that assessment teams include other organizations than the military alone. NGOs would be more comfortable with the information being channeled through the MOH, the UN or OFDA. Embassy officials would seek an assessment from the JTF, and would pass the information to the MOH. Military and embassy players stressed that satellite imagery would be classified and would not be shared, but that there would be a willingness to share unclassified data, and to declassify wherever possible. Most players were surprised to learn that OFDA in Washington, DC played a central role in approving the release of information to NGOs and other agencies during the 2005 tsunami response.

Some NGOs pointed out they would not trust damage assessments from the military, but would seek military information on security in order to conduct their own assessments. Other NGOs said their first concern would be to see to the basic needs (food, shelter and water supply) of the affected populations, and therefore they would need information on the demographics of the affected areas. They would tap MOH officials from these regions to do an initial assessment. All players agreed that they would also plan to work from host government reports, and extrapolate the impact of the earthquakes from these various sources of information. The military players suggested that after the initial assessment of their own forces, they would likely use Special Forces to evaluate the situation in the affected area for themselves, to determine whether there was the need for a combat response in the area, how it could be secured, and how the local community could be assisted. They would recommend establishing a Civil-Military Operations Center (CMOC) immediately.

UN agencies would convene a UN DAC team to get a picture of the most pressing needs and to determine the status of the community health centers outside of the capital. They would also run a joint briefing of the NGOs to assess which were equipped to meet different needs.



UNDAC Team (Photo: UN OCHA)

This led to a productive discussion of how NGOs and UN agencies could learn to ask the military the right questions in terms of what information they needed. For example, NGOs don't necessarily need satellite images of a disaster zone (which may be classified), but rather specific information that the images will provide, such as the movement of refugee populations or damage to infrastructure. It was suggested that a standardized assessment form could be given by USAID to the JTF to get the initial information on structures and shelter. As a common standardized assessment form does not currently exist, one should be developed that can be used in training and education before a disaster response is needed.

All generally agreed that their primary need at this stage was to learn the status of infrastructure (water, sanitation, shelter, medical clinics, and public health facilities), the number of people living in the disaster zones, population movements of those affected, as well as types of terrain and transportation requirements to bring in aid.

There was much debate about whether NGOs would gain access to the conflict zone and whether the US JTF forces would allow this to happen. NGOs insisted that most of them would seek access regardless of the conflict. Some of the NGO players said they would negotiate armed escorts from rebel forces in the conflict zones if need be. If expatriates were denied access then local staff teams would go into these areas, and it was thought likely insurgents would allow them in. One NGO participant told the group that in the past he has secured "safe passage" from insurgent forces, thus gaining access for his team to address the health needs of civilian populations living in conflict zones. While acknowledging that this is controversial, the participant suggested that he would do the same in the face of a potential cholera outbreak in Aliya.

Other NGOs would seek JTF assistance for transportation to the disaster zones to conduct assessments. Embassy officials said that they would request an OFDA Disaster Assistance Response Team (DART), and that they would be willing to facilitate security escorts from the JTF for NGOs that were comfortable with such escorts, provide information to those that were not comfortable with armed escorts, and arrange checkpoints into and out of the conflict zones as a

means of tracking where NGOs and other aid agencies were operating. A major concern for the embassy and military players was the prospect of having to rescue trapped NGO workers from the conflict zone or have them caught in the cross-fire. Military players stressed that they would seek to control and restrict NGO access. There was some disagreement among the military players as to whether they would welcome humanitarian assistance to the insurgents. Some suggested that equal distribution to all parties would be seen as critical to the JTF's "hearts and minds" campaign. Others were much less sanguine about providing access to insurgents.

Scenario 2, Part 2: One Week in, with Isolated Reports of Flu

The second part of the scenario occurs one week after the earthquake hit. The Aliyan government estimates that nearly 40,000 people have been killed and 60,000 injured. Approximately 1 million people have been left without shelter and the severe winter weather is due to begin in less than a month. The international community and individuals have been very quick to respond and have been very generous; however, the difficult terrains, remote locations, destruction of infrastructure and weather conditions are obstructing the relief effort. The Special Representative of the Secretary-General, the lead for UNAF and UN operations in Aliya, has visited several sites in Aliya and has stressed the need for emergency shelter and rescue operations. She has also called for a coordination committee to be set up by the UN to coordinate the relief efforts. The Aliyan government has been giving customs exemptions, arranging visas, and providing emergency flight clearances to aid the effort, although some members of the government have voiced concerns that some nations and agencies are using the disaster to facilitate illegal entry into the country. The JTF, along with the Aliyan military, remain more cautious about coordinating outside the secure urban centers and appear to be dragging their feet in supporting humanitarian activities.

Initial health assessments indicate many people continue to struggle without clean water, shelter, food or basic medicines. Many families are being forced to share water and shelter with their livestock. Hundreds of people stream into the main health centers for urgent medical attention to crushed limbs and horribly infected wounds. Diarrhea and acute respiratory infections are increasing and there is fear that a flu epidemic will hit the area. An assessment team has just returned from the highlands with pharyngeal swab specimens collected from ill persons, from which the Aliyan Institute for Disease Control isolated four influenza A viruses (two of which were sub-typed as A(H3N2) viruses). They estimate that 95% of the deaths from influenza have not been investigated due to

several factors - remote location, recent earthquake, malnutrition, lack of testing facilities. The team recommends the following: expand influenza surveillance; educate the public and health care providers about influenza; improve access to health care in rural areas; and, ensure that adequate supplies of antibiotics are available at health centers to treat the bacterial complications of influenza.

The weather has turned cold in the highlands (below freezing every night; highs during the day just below 40° F.) and satellite weather forecasts predict this trend will continue. Participants were asked whether they would attend a WHO coordinating meeting or prefer to coordinate with other agencies; which reports have credibility; whether the assessment team's report affects their organizations; whether they would follow the team's recommendations; and what their organization's priorities would be at this stage of the emergency.

The debate indicated that there were significant divergences among the communities about whose reports would be considered reliable and about information sharing. UN agencies and NGOs indicated that information coming from the JTF would not necessarily be considered neutral, and much of their trust would depend on the person communicating with them from the military side. Again, there was agreement among NGOs and UN agencies that the military should be represented by embassy officials at coordinating meetings. Some NGOs would refuse to participate if military personnel were present. Some NGOs suggested that "only WHO or ICRC would have full reporting credibility." Embassy players suggested such mistrust was misplaced, as spreading incorrect assessments would run counter to their interests in stabilizing the situation and opening up access to the affected populations. Embassy and military players suggested that there would be good coordination and trust among themselves on the ground, though this would not necessarily be true at higher levels.

Most participants from all communities agreed that the reports of influenza would not be a priority for their organizations, given the magnitude of the medical and public health needs arising from the earthquake. Limited resources would not be diverted to treating flu. As one NGO participant stated, "without solid evidence on casualties, there is no practical epidemic." Some NGO players suggested they would be concerned with getting a credible assessment of the threat posed by flu. Most participants suggested that their organizations' priorities would remain focused on the broader humanitarian disaster, while military players noted that counter-terrorism and counter-insurgency operations remained their primary mission, and they would be in a support role at best in the humanitarian effort. UN and NGO players said their priority would be to set up camps outside of the conflict zone in order to provide treatment if access to the affected area could not be arranged. To assess the flu threat, they would interview IDPs. They also recognized that part of the response would be driven by the media. Many (perhaps most) aid organizations would flock to where the media were reporting

from, whether that was in the conflict zone or not; others would seek to draw media attention to locations where they were able to operate. The media would be critical to raising funds for the response effort. Players also recognized that the parties to the conflict would also use the media to reflect a humanitarian image for themselves, and would consider concentrating resources where the media were.

Scenario 2, Part 3: Influenza Epidemic and Increasing Violence

In the third part of the scenario, the flu epidemic in Aliya has reached a critical stage. Over 4,500 deaths have been attributed to the flu despite the humanitarian efforts to control the outbreak. Countless (suspected) infected people roam the rural areas. The violence in the highlands has increased steadily, as the population firmly believes that the flu was brought by the JTF and Aliyan military soldiers during their 'assessment' missions. International humanitarian workers have been targeted as being on the side of the government and cannot operate without armed security. Trapped in the middle of the violence and disease are tens of thousands of rural peasants who have ever decreasing access to any kind of medical help.

The separatists are attempting to use the humanitarian disaster to their political advantage. They offer a cease-fire if they are given the drugs to combat the flu, so that they can distribute them. One NGO agrees to these terms, but discovers some of the relief supplies for sale in the local market only two days after delivery to the separatists. The separatists appear to be fully willing to let their people die without the drugs and medical supplies. They have agreed to let humanitarian workers provide limited assistance, but only if accompanied by one of their representatives. The Aliyan government insists that the separatists be treated by all as a rebel force and do not let JTF negotiators agree to any compromise. The JTF commander has restricted his forces from any direct involvement in implementing health services to the local population beyond the "hearts and minds" campaign already running. All groups are adhering to the Aliyan government's policy of not dealing with the rebels but military, embassy and NGO medical officers are concerned about the potential loss of life that can result from this political stand, as this problem has expanded beyond their direct sphere of influence.

More deaths from influenza, along with an ice storm predicted to arrive in two days, are reported on the local news. The international media are focusing on the fact that people are dying, and accuse the JTF and humanitarian communities of not addressing the suffering. Participants were asked to determine what the most urgent issues for their organizations would be in this situation and what their recommendations would be regarding relations with the media, the local populations' perceptions, and donors.

Participants diverged in their organizational priorities. For most NGOs, the urgent issue was to provide general medical care as well as food, water and shelter to the affected populations, regardless of the conflict. As in the first part of this scenario, they would seek access to the rebel-held areas despite the government's position. They would negotiate with the separatists and the government for "humanitarian space" in which to provide aid. As a fall-back, they would set up camps as close as possible to the rebel-held areas. The NGO players noted that some NGOs would accept "guarded space" with armed guards, but others would not. However, some NGO players said that they would withdraw their staff to the capital until negotiations produced a more peaceful situation, and that they would seek to prevent the diversion of medical supplies to the black market. Other NGOs dismissed this as part of doing business, and that they remained convinced that the rebels could be negotiated with, and that NGOs would work in the conflict zone until their own personnel came under threat of attack.

For the UN, embassy and military players, the most urgent issue was the lack of agreement between the government and the separatists. These players indicated that they would pressure the host government to compromise, as the health situation would only get worse. The embassy officials indicated that they would try to find ways to channel medicines and funds to NGOs, as these organizations would continue to go into the conflict zones. The military and UN players generally agreed that this would be their strategy as well. The military players noted that the "hearts and minds" campaign already underway allowed the JTF commander considerable leeway in providing direct humanitarian assistance, as well as facilitating access for NGOs to the region. However, the military also pointed out that their primary mission would dictate how they would behave. Undermining the host government or its military was unacceptable, as was contributing in any way to terrorist activities. They noted that the size of this particular JTF would not enable it to affect health issues to much extent in the nation, so for the JTF the primary health issue would be force health protection, and then working to contain the spread of the disease.

This led the conversation to the effect of winter on operations, and the pros and cons of air-drops. Winter conditions would limit the capabilities of the military in terms of low altitude air-support, and all players' access to the mountainous regions. The possibility that the mountain population would move to lower altitudes was raised. NGOs cautioned against airdrops, especially for medical needs, as medical and health assistance could not be delivered without the presence of trained personnel. Military players suggested that they could team up with NGOs to coordinate where supplies would be left.

The players agreed that all of them, as well as the host government and the separatists, would try to use the media to their advantage. They noted that radio

distribution was a key means of communicating with far-flung populations, and that they would broadcast health education and prevention information as well as work to dispel rumors. One participant suggested a media strategy that would prompt journalists to ask awkward questions of the government regarding access, as a means of indirect pressure.

Players also all anticipated negative coverage. All the organizations stated they would train and instruct their staff on how to handle the media. UN agencies would need to maintain an image of neutrality and independence, while some NGOs would focus on their mandate of “bearing witness” and speaking out about the suffering of the population and the government’s intransigence. All NGOs would use the media as a means of raising funds, as would UN agencies. The embassy and military officials would ask for assistance from WHO and other UN agencies to participate in a media campaign to refute the popular perception that JTF forces were responsible for spreading the flu. They would seek to work with ministry officials from the insurgent region to organize supply drops on their behalf.

Scenario 2, Part 4: Transition to Post-Conflict Reconstruction

The final part of the scenario takes place in late spring as the situation shifts from emergency humanitarian response toward reconstruction and development. The influenza epidemic has run its course and Aliya is recovering from the earthquake as best it can. Reconstruction has provided work for many people and the rebuilding of their own country has brought them together. The separatists do not have the support that they once had and many Aliyans feel their behavior during the earthquake crisis is inexcusable. In an effort to appease the international donors who gave to the earthquake disaster, the Aliyan government has offered a general amnesty to separatists who immediately cease all violence. UNAF has completed its training of the police force, which is now being deployed throughout the population centers of the country. UNAF’s mission was not renewed and its personnel are preparing to leave the country. The last mission of the JTF is focused on the remote rural areas where some hard-line separatists remain in hiding. It will be handing over its mission to the Aliyan military in six weeks.

The humanitarian situation remains precarious as poverty, corruption, and human rights abuses continue, albeit on a smaller scale than before. The humanitarian community has almost completely rolled over its international staff from emergency/disaster personnel to rehabilitation/development personnel. Donors are requesting longer term project proposals for the health situation in the country and are not accepting any more disaster-related proposals.

Participants were asked to focus on how their priorities would change in this phase of the operation, and what effects this would have on the need for coordination and preferred partner organizations. They were tasked to recommend changes to their parent organizations for future coordination, and to describe how they would prioritize the operations of other organizations' health programs.

All participants agreed that the critical partner at this stage would be the Ministry of Health. As one NGO participant said, "now that we are getting into a state of peace, the minister of health takes over, our reign has ended." NGOs noted that funding would increasingly determine their presence in the country. Many NGOs would be wrapping up their operations and leaving the country. Health issues would only be "an add-on activity to some larger recovery project." General health care would be low on NGO agendas because it is not a highly visible project. They stressed that this environment would be extremely competitive in terms of searching for donors to sustain a multi-year health-related program. They noted that as the NGOs leave, the local economy will be negatively affected, as unemployment will rise. This will increase security concerns for NGO staff traveling in the country. As humanitarian response NGOs leave, development NGOs will arrive to fill in some of the gaps.

All other players emphasized that this would be a transition phase from emergency response to long-term health care needs. UN players said that there would be an opening for a greater UN lead in this situation. The UN disaster agencies would give way to UN development agencies, such as UNDP. They would be working to support the health ministry, particularly in the areas formerly under the control of rebel forces. Projects would include designing health centers, and building up local capacity and resources. Similarly, embassy players said they would transition from emergency response to routine medical and health assistance. They would continue to coordinate with the JTF to equip the host government to take over and sustain national activities. Their focus would be on strengthening local government capacity – in particular ensuring that the MOH was back to where it had been before the emergency – as well as strategizing on what projects should be developed and funded.

The JTF would also determine which aspects of its mission were complete and which required ongoing efforts. Personnel would develop criteria and processes for completing the transition: Whom to hand programs over to; training and sustainability projects; what supplies and equipment could be left behind; and timing. They would also be concerned with a media campaign to prevent the impression that they were leaving too quickly. The embassy players noted that the US government's default position was that nothing should be left behind; only in exceptional case would supplies and equipment be left. Most NGO players agreed, noting that they needed to consider the appropriateness of supplies that had been brought in. Only items that augmented the indigenous system should

be left, as it was important not to create a new unsustainable health system. They also noted that whoever received these supplies would in effect have been given a form of political power.

One of the key learning points came when participants realized that by this time, the JTF would have long since developed capacities (such as trained local employees) that would have been useful to the NGO community. It was also clear, however, that participants remained completely unaware of what each community had or needed. They agreed that actors should attempt to develop greater information sharing on such capacities and critical shortfalls in the transition phase.

The need for broad, intra-community coordination would have significantly diminished at this point. As one UN player noted, “the nature of coordination changes completely” at this stage of the operation, as operations take on a more routine character. The main coordinating partner for all communities would be the Ministry of Health. Other coordination would occur, but primarily within the NGO community, among the UN agencies, and between the embassy and JTF. The embassy would also coordinate with those NGOs to which it was making grants.

When asked to make recommendations, the players generally agreed that there was a long-standing problem with planning and coordinating the end-of-mission transitions. UN players recognized that UN agencies were not very good at ending programs, as local organizations and ministries were often hesitant to take over technical programs. Other UN players noted that preparing to end an operation required advance agreement among UN agencies and other organizations on the definition of the criteria for ending a mission or “end state,” who would assume certain mission aspects, and phasing of withdrawal. The key for success in this regard would be to build relationships with other organizations and agencies early, and to start working toward the end-of-mission transition earlier.

NGOs agreed that they tended not to focus on outcomes and measures of positive impact and effectiveness, but rather on minimum standards, and that this was an area for improvement. The definition of when goals had been met was effectively set by donors, which in turn determined when programs ended. Very few NGOs had the financial resources to develop their own metrics and exit criteria; only self-funded or large agencies such as Medecins Sans Frontieres or Oxfam were capable of doing so. As occurred the previous day, the participants agreed that bringing all the parties to the operation together for after-action reviews and analyses would be useful. US government players suggested that AARs be incorporated into the final stages of all humanitarian operations. Again, the problem that there was no one agency responsible for coordinating an AAR was raised. Too many separate and overlapping AARs are developed, without being shared among the entire community. Others noted that such reviews could

produce information overload, and even the U.S. military's AAR system was unable to process all the information in a timely manner.

The participants agreed that a significant challenge was the lack of a system for institutionalizing the lessons and information gained in each disaster that could then be accessed by all communities. Ideally such a system would result in training exercises for all communities on how to prepare for future events. A fundamental constraint on the ability of NGOs to contribute to AARs and participate in exercises, however, is lack of funding for training and travel for such purposes. An additional problem for all communities was that those who might go through such training would not necessarily end up running operations on the ground.

Scenario 2: Key Findings

The scenario deliberately set the stage for a conflict between humanitarian and military medical priorities. The groups' discussions throughout the day and during the closing plenary session reflected this tension. Again, the issues of gaining access to information and access to affected populations were critical points of contention.

These needs were primary to the NGO and UN communities, whereas the military and the embassy players were in the position to provide information as well as facilitate access. There was general agreement that a standard set of information requirements could be developed and given to those agencies, particularly the military, in advance. Such advance knowledge would allow information to be shared as soon as a crisis occurred. Participants agreed that the primary information needed at this stage included: The status of infrastructure such as water, sanitation, shelter, medical clinics, and public health facilities; the number of people living in the disaster zones' population movements of those affected; and terrain and transportation requirements to bring in aid.

The embassy's and military's political and security missions, however, constrained their ability to share information with other agencies. In the early stages of the conflict, the military would not be willing to allow NGO access to the conflict zones. However, given the magnitude of the disaster, both communities suggested that they would pressure the government to allow humanitarian organizations access to the devastated areas. They also said that they would pursue a joint strategy, using the distribution of direct and indirect aid, to promote their own government's interest in generating popular goodwill towards the United States and the host government.

All parties said that the media significantly influenced where and when assistance was delivered. They agreed that all communities, as well as the parties to the conflict, would seek to manipulate the media to their own organizational advantage.

Part III. Humanitarian Medical and Health Assistance in the Event of Avian Influenza

The third day of the simulation exercise presented the participants with a rapidly unfolding scenario based on the appearance of influenza in birds and its mutation to a human-to-human virus, in a country recently recovered from internal conflict. Such a scenario remains hypothetical at this time, yet it highlights how the various medical and health communities may need to cooperate in such a complex environment. The role of national governments in the response to avian influenza is of central importance in such scenarios. Dr. Joel Selanikio, former Senior Health Advisor within the Office of the Secretary of Health and Human Services (HHS), provides an overview of the U.S. government's role in medical and health assistance. A description of the third day's scenario and a synopsis of the participants' discussion and key findings follow his chapter.

The Role of the US Government Non-Military Health and Medical Community in Complex International Emergencies and Disasters

Joel Selanikio, MD*

ROLES AND CAPABILITIES IN A WORLD OF RISK

Since the end of the Cold War, it has been a matter of contention as to whether violent conflicts are increasing worldwide, with one recent major report contending that violent conflict has been on the wane.¹⁹ Whether there has been a general increase or decrease, there have certainly been *enough* wars to cause untold death and hardship. In the Congo alone it is likely that more than one million excess deaths occurred because of the conflict there, most of them due to the collapse of health and nutrition infrastructure, rather than violence.²⁰

There is also debate as to whether natural disasters are increasing, due to global climate change or some other factor. Certainly, however, the very recent examples of Hurricane Katrina in the United States and the Indian Ocean tsunami have been a rough reminder of the ability of nature to wreak havoc.

Consider now the combination of war and natural disaster: The difficulty of providing care and resources to survivors of natural disasters is often greatly complicated by the difficulty of staying alive in a zone of conflict - both for "victims" and for responders. The term "complex humanitarian emergency" is often applied to these situations, as shorthand for "humanitarian emergency where you might get shot."

And a further risk can be found in the emergence of new disease threats such as HIV and SARS, born from the expansion of human populations into previously unsettled areas, contact with previously isolated animal species, increasing

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international travel, agribusiness practices which may exacerbate natural illness among animals, and other factors.

Funding

The US government (USG) has, of course, a wide variety of non-military resources available for responding to humanitarian emergencies. It is important to keep in mind that the vast majority of those resources are not *directly* related to provision of clinical medical care, or even public health practice: The biggest impact that the USG has on health care in disasters is through funding.

An example can be found in the USG participation in the response to the October 8th, 2005, earthquake in India and Pakistan. So far the USG has contributed, through the US Agency for International Development, more than \$60 million dollars for humanitarian assistance in the areas affected. And although the Indian and Pakistani governments, and NGOs, are providing the vast majority of health care in the affected regions,²² the list of other organizations (“implementing partners”) receiving funding from the USG covers most of the major players in the response, as is evident in the sidebar (covering only Pakistan, with medical and public health providers highlighted).²³

Partial USG Spending on Pakistan Earthquake Relief ²¹ (health-related in blue, non-health in black)		
Organization	Role	USG Funding
ACTED	Relief supplies, shelter, water and sanitation, cash-for-work	2,351,232
Action Against Hunger	Shelter, relief supplies	2,180,000
American Red Cross	Emergency shelter, supplies	1,998,276
American Refugee Committee	Livelihoods	2,776,144
CRS	Livelihoods, water and sanitation, shelter	4,960,730
GOAL	Shelter, livelihoods, cash-for work, water and sanitation	3,750,000
ICRC	Emergency relief supplies, shelter	5,000,000
IMC	Water and sanitation	1,900,000
IOM	Supplies and transport	3,000,000
IRC	Shelter, supplies, child protection	2,483,041
Mercy Corps	Shelter, water and sanitation	2,420,348
Save the Children USA	Shelter, supplies, livelihoods	6,588,728
UNICEF	Water and sanitation	2,000,000
WHO	Health	2,000,000
WFP	Logistics, food	8,917,459
		\$52,325,958
As a point of reference, the USG is spending about \$200 million per day on military operations in Iraq, not including reconstruction.		

DIRECT RESPONSE

In addition to providing funding to other organizations to mount a response, the government does have a variety of non-military assets that it can bring to bear in the health sphere.

Organizational: OFDA/DART

The US agency for International Development's (USAID) Office of Foreign Disaster Assistance (OFDA) has developed a structure for leading the US government response to international disasters: The Disaster Assistance Response Team (DART). The DART acts in concert with the most senior local US diplomatic representatives, combining the on-the-ground expertise of the latter with its own knowledge of response techniques and capabilities; serves as the coordinating group for USG non-military activities; and as the focal point for USG civil-military coordination.



DART Team Leader Bill Berger with ICRC at U.S. Disaster Assistance Center, Chaklala Airbase, Rawalpindi, Pakistan (Photo: USAID)

A DART team will often have a medical disaster specialist on the roster, who can play a role in assessing current public health and medical status at the disaster site. This is particularly useful early on, when others with that expertise, such as the World Health Organization (WHO), or the Centers for Disease Control (CDC), may not yet have arrived.²⁴

The DART team can provide an essential framework for any other USG teams that arrive, including CDC experts. The DART team provides a context in which those teams can be most productive - not to mention assisting in arranging transport and communications.

The USAID Field Operations Guide²⁵ lists some other potential activities of the DART:

- Providing technical assistance to the U.S. ambassador in formulating and executing an appropriate USG response to the disaster;
- Developing and, on approval, implementing OFDA's response strategy;
- Continuing to assess and report on the disaster situation and recommend follow-up actions, including suggested funding levels;
- Coordinating the movement and consignment of relief commodities;
- Analyzing existing capacity of the infrastructure and relief agencies to ensure an appropriate, efficient response;
- Reviewing and recommending approval for (or approving, when delegated the authority) relief program proposals;
- Assisting in the coordination of the USG's relief efforts with the affected country, other donors and relief agencies and, when present, other USG entities, including the US military; and
- Monitoring and evaluating OFDA-funded relief activities.

OFDA's FY2005 budget was \$232.8 million, not counting additional USAID funding administered by OFDA.

Clinical Medical

Within the federal government, the provision of clinical medical - as opposed to public health and epidemiological - capabilities for foreign disaster response is a role that has traditionally been filled by the various components of the US military, although several International Medical and Surgical Response Teams (IMSuRTs) are maintained in affiliation with the National Disaster Medical System (NDMS), formerly a part of the Department of Health and Human Services (HHS) but now a component of the Department of Homeland Security (DHS) under the Federal Emergency Management Agency (FEMA). The IMSuRTs are similar to the well-known Disaster Medical Assistance Teams (DMATs) but have the capacity to

provide surgical services, and are specifically international in mission (and name).

The Resource Specification for the IMSuRT teams²⁶ notes that there is currently only one IMSuRT that is at “level 1” readiness, which entails being able to:

- begin deployment to OCONUS (“outside the continental US”) location within 3 hours of notification; and
- staff two operating room suites that provide emergency surgery, treatment, and stabilization.

The specification further notes that “IMSuRT does not usually function in an austere environment without additional support,” which could limit the usefulness of the team in certain post-conflict or post-disaster settings.

There has been only one overseas deployment of an IMSuRT, to Iran for the December 26th, 2003 magnitude 6.6 earthquake in Bam. That deployment consisted of 57 people who operated a mobile surgical clinic for less than two weeks.²⁷



IMSuRT ICU Nurse Jenifer Albert monitors a patient in the intensive care unit after the Bam earthquake (Photo: Marty Bahamonde/FEMA)

One of the reasons for the sparse deployments and clinical medical resources available in the non-military community is the perceived lack of funding for deployments. When DMATs deploy domestically, they are covered by in-place funding programs, including Stafford Act funding for disasters. When there is the potential for overseas deployment, however, Stafford Act and other domestic funding programs do not apply and it is usually left to DOD, with existing logistics

and transport at the ready, to provide medical teams if they are felt to be necessary.

There have also been the expected disconnects and difficulties associated with the transition of the NDMS system into DHS, and these may take a long time to sort out: One highly placed senior manager within DHS recently told me that “the wheels have fallen off NDMS and I’m not sure when they’re getting put back on.”²⁸

Public Health

For public health and epidemiology within disaster settings, the USG non-military assets actually eclipse their military equivalents in some cases. Many of these assets are contained within the CDC, but several other federal organizations play a prominent role, particularly in laboratory response.

Non-Laboratory Assets: Epidemiologic Expertise

CDC plays a lead role in providing epidemiological expertise for response to terrorism, natural disasters, technological or complex disasters, and emerging disease outbreaks (e.g., West Nile virus or avian influenza). It would be hard to find a complex emergency or displaced-persons scenario where CDC field epidemiologists have not played a role in providing consultation on nutrition, public health, water & sanitation, and worker health.



**CDC worker in Angola taking samples for Marburg Virus
(Photo: Center for Biologic Counterterrorism and Emerging Diseases)**

One of the most useful roles these experts can play is in advising the authorities on the ground in how to investigate and monitor a variety of measures crucial to evaluating and following the health of the affected population (see sidebar, next

page). Epidemiological concepts such as rates, case definitions, and surveillance are some of the most important tools in establishing adequate “situational awareness” on the ground. Roles for CDC or other government epidemiologists include:

- Identification or confirmation of critical problems - often there is an important role in simply confirming whether a health risk (such as an outbreak of disease) actually exists or not (“is it real?”).
- Investigation of causes and risk factors - what are the predominant causes of death and illness, or their accompanying risk factors, that can be used to plan interventions? Similarly, evaluation of risk factors can be used to determine the cause of an outbreak.
- Monitoring of health trends - which provides an essential tool for program planning as well as something of a general report card for those responsible for the well-being of the affected individuals.
- Evaluation of impact of health programs - putting a program in place to combat a health problem is a good first step, but scrutinizing at regular intervals whether that program is *working* is a critical but often neglected second step.

Principal Epidemiological Indices in Caring for Large Populations in Complex Emergencies and Disasters

- Population size

Used in planning for essential services: Food, water and sanitation (“wat/san”), shelter, medical services. Also essential in providing a denominator for calculations of rates (see below).

- Birth rates

Essential in planning for clinical services as well as supplemental nutrition programs and long-term population care.

- Mortality rates

Crude mortality rate (CMR)

Used as a general indicator of a population's health, measured in deaths per 10,000 persons per day. A rate of less than 1 death/10,000/day is considered as indicative of generally effective relief efforts in complex emergencies.

Under-five mortality rate (U5MR)

General indicator of children's health, measured in deaths per 10,000 children per day. A rate of less than 2 deaths/10,000/day is considered an indication of generally effective relief in complex emergencies.

- Morbidity rates

Cause-Specific Mortality Rates

Death rate due to specific disease, e.g., 167 deaths from trauma/1000/month

Case Fatality Rates (CFR)

Proportion of individuals with specific disease that die, e.g., CFR for cholera = 25%

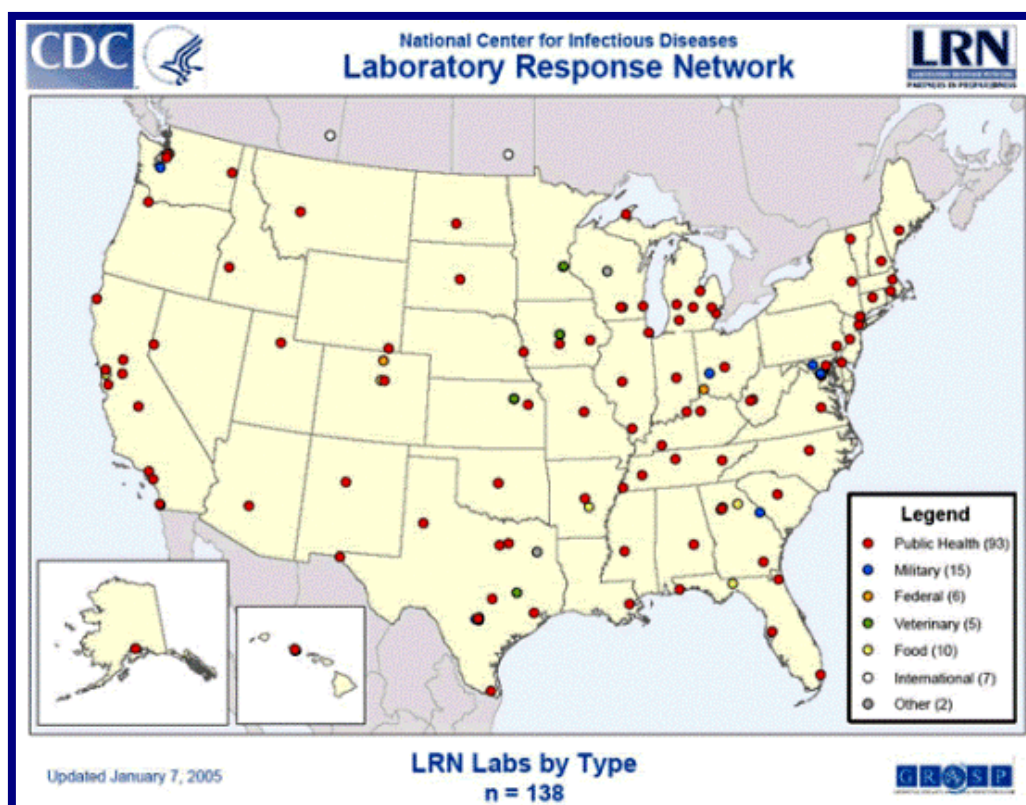
Age- and Sex-Specific Mortality Rates

Useful for monitoring vulnerable populations, including the very young and the very old.

Laboratory Assets

While there are many sources of epidemiological expertise that have participated and will continue to play a role in complex emergencies, disaster response, and outbreak investigation, there are many fewer organizations that are able to maintain world-class laboratories, and put them at the disposal of field responders. When the issue concerns laboratory investigation of human disease, CDC is predominant, and has led in the development of the Laboratory Response Network (LRN). The mission of the LRN is to:

maintain an integrated national and international network of laboratories that are fully equipped to respond quickly to acts of chemical or biological terrorism, emerging infectious diseases, and other public health threats and emergencies.²⁹



In order to accomplish this mission, the LRN coordinates the training of and communications among federal (including CDC, FDA, USDA), as well as participating military, state, and local labs in the United States, in addition to labs in Canada, the United Kingdom and Australia. It would be difficult to overestimate the importance of the LRN, organized in advance to respond rapidly to significant and unusual health events including the emerging disease threats of SARS, West

LRN's Role in SARS –

During the initial stages of SARS it was CDC's labs that sequenced the genome of the causative coronavirus, and that in conjunction with the LRN were able to develop techniques and materials that employ PCR (polymerase chain reaction) technology for rapid testing. Those techniques were widely disseminated, and form the basis for current SARS surveillance.

Nile virus, and avian influenza. CDC's labs, in particular, are of key importance in the response to international outbreaks or situations of concern, since most of the LRN is focused on the domestic United States. The veterinary labs at USDA also play a critical role, particularly when animal samples are to be tested or the safety of the food supply is in question.

CHALLENGES OF COMPLEX EMERGENCIES AND DISASTERS

As indicated in the previous sections, there is a great deal of health expertise within the US government. Still, there are great challenges in deploying that expertise to good use in a complex emergency or natural disaster, challenges that affect the ability of those with that expertise to do their jobs effectively and to make it home in one piece. These challenges include:

- Minimizing the risk of violence
- Personnel preparedness
- Organization and logistics

Minimizing the Risk of Violence

Iraq is the current best example of a hostile environment for aid workers (whether one chooses to classify it as "post-conflict" or "right in the middle of conflict"), but there are many others: Colombia, Afghanistan, Sudan, Sri Lanka, etc. In these and other locations, there is the risk of random violence, violent crime, and political violence, in which the perpetrators associate the relief workers - correctly or incorrectly - with their political enemies, or judge that they will benefit from violence against responders. Given the current widespread dissatisfaction with American foreign policy, it is not unreasonable to think that representatives of the USG are at even higher risk than their colleagues in the UN organizations or NGOs.

There is no way to completely eliminate the threat of violence in this inherently unstable situation, short of staying home. Most - but certainly not all - humanitarian organizations provide security training to their personnel, and this is true of USG organizations as well. Sadly, this training is typically thought of as an administrative chore, one more checkbox to be checked in order to get to the work at hand. This means that security procedures in the field are often forgotten or ignored except after a violent event has taken place, and the longer the interval between violent events, the more difficult it becomes to maintain an careful security stance.

While it is tempting in these cases to invoke “personal responsibility” for one’s own safety and security, incomplete or un-enforced security training and procedures greatly affect an organization’s ability to complete its mission, and it is the organization’s responsibility to properly train and equip its personnel.

Violence can, of course, be directed at the population the responder is trying to serve, and make it nearly impossible to function. Those currently providing medical and public health care in Iraq, Afghanistan and elsewhere need to re-evaluate daily whether through their actions they may be increasing the risk to local populations. Examples of actions that increase such risks include raising the visibility of vulnerable groups or appearing to favor certain groups over others.

Personnel Preparedness

Each year many relief personnel put themselves needlessly at risk while responding to disasters by failing to undertake the appropriate preparations. As with violent events, often the risks of diseases -- such as malaria -- are ignored until after one finds oneself alone with shaking chills in the middle of nowhere. And as with anti-violence measures, the ultimate responsibility lies with the organization, not with the individual, to ensure that only well-equipped, well-trained responders are able to participate.

Organization & Logistics

The chaotic response to the anthrax attacks of late 2001,³⁰ as well as the widely-criticized response to Hurricane Katrina, poses a difficult question for international humanitarian response: If coordination was so poor even within a single, very wealthy country, with a single federal structure, with well-drawn lines of authority, what chance is there for a well-coordinated response in a complex emergency or disaster elsewhere?

Poor coordination was certainly seen in the aftermath to the Indian Ocean tsunami of December 26th, 2004, although the coordination there between military

and non-military (see box below) was much better for USG personnel (e.g., OFDA).

One obstacle standing in the way of better cooperation in disasters and complex emergencies is the lack of a viable coordinating authority. It is often unclear as to who is in charge in a disaster setting, and responders may also resist a designated coordinating authority for a variety of reasons, including:

- A belief that the coordinating authority is invalid or incompetent - in the aftermath of the tsunami, a USG epidemiologist, in explaining why he had no intention of attending the WHO-run health committee (and subcommittee) meetings, told me “They [WHO] can hold meetings, and meanwhile we *do* things.”
- Competition for the public eye and donations - an NGO local coordinator in Sri Lanka: “[W]e do not get rewarded for quietly working in concert with the other NGOs, we get rewarded by getting ourselves on CNN.” This competition is not pronounced, in my experience, although most of us are at some point susceptible to the lure of seeing ourselves on television.

Coordination Problems: Aceh after the tsunami

In Aceh – the region hardest hit by the tsunami – a multitude of UN agencies, NGOs, and non-military USG personnel found themselves competing for operational space and resources. Separated from most of the devastated areas by impassable (or newly nonexistent) roads and without air transport, they had no information about the problems facing the victims and were unable to get to them.³¹

The International Federation of Red Cross and Red Crescent Societies (IFRC) described the situation among relief agencies, local authorities, and tsunami victims in Aceh as an “information black hole” noting that,

Initially, aid organizations had to base their relief distributions on informed guesses – overwhelmed by logistics, they lacked the time to undertake detailed assessments or consultations with affected people.³²

In my observation, most personnel in Banda

were not overwhelmed by “logistics” (the health staff were not, for example, occupied by trying to find office space in Banda Aceh), they were rendered ineffective by lack of helicopters. It wasn't that they didn't have *time* to do assessments; it was that they couldn't reach the bulk of the population that needed assessing. During the same period the US military was routinely flying missions (mostly dropping supplies, but also providing medical evacuations) up and down the coast.

The problem here was not that the non-military personnel in Banda Aceh did not have helicopters of their own; every group cannot maintain the ability to move those kind of transport resources around the planet. And there were not enough helicopters based in Indonesia, or even nearby Singapore, to fill the need.

The real problem was that there seemed to be no standard link between military and non-military personnel that would immediately allow them to begin matching up resources efficiently.

These attitudes can be reflective of reality, or misperceptions, but it is difficult to work around them when there is no group with the power to enforce cooperation (and the USG personnel are far from supervisors in Atlanta or Washington).

ANATOMY OF A RESPONSE

There is a great deal of flexibility (i.e., a lack of standardization) in federal responses to disasters or emergencies overseas. In nearly a decade at CDC, the only hard and fast rule that I was ever told was that we could not enter a country on official business until an official request from that government (usually the Ministry of Health) had been received. In recent years, the Office of the Secretary of Health and Human Services (the parent department of CDC) has exerted greater control and authority over CDC activities in general, and this extends to travel and to emergency response. One aspect of this has been to institute or enforce protocols for, for example, contacting embassy personnel on arrival in country.

In the event of a suspected overseas outbreak, the following might be a reasonable chronology:

Awareness / Notification	Before responding, CDC would need to hear about any outbreak, and this might happen through a number of routes, because of the web of personal connections connecting CDC personnel to their counterparts in other countries. A physician or public health official in the affected area might contact a colleague at CDC directly, who might or might not be in the correct division of CDC. Alternatively, they might contact their local WHO representative first. There is great variability in the timeliness of such contacts and notifications: In Haiti in 1994-5, a fatal outbreak of kidney disease of unknown cause killed more than 100 children over a period of more than 6 months before CDC was notified.³³ Often, as with SARS, political considerations weigh heavily in the notification process. In 2003, as the SARS epidemic was spreading through China, China intervened to prevent Taiwan from communicating with WHO about the epidemic. Taiwan then contacted CDC through informal channels to share information, thus allowing the USG to pressure China to provide information and, eventually, access.³⁴

Invitation	As indicated above, CDC requires official invitation before launching or participating in any type of overseas investigation. This process can take hours, days or more.
Response initiation	CDC's response to any request for assistance will vary depending on the perceived severity of the problem, the weigh-in of the Secretary's office, the personnel available, transport resources, and other factors. As with the other stages of this process, the time frame for response initiation is highly variable.
Arrival	As noted above, there is considerable variation in response protocol, but generally a CDC responder will receive a briefing from US embassy staff in-country, which will include a security briefing. The responder will, of course, make rapid contact with local public health officials and local WHO staff. In the context of a disaster or other humanitarian emergency, it is likely that the CDCer will contact OFDA personnel (e.g, the DART team leader) as well.
Response activity	The activity varies, depending on the scenario. Some possibilities: - o <i>Unconfirmed outbreak in resource-poor country</i> – the fewer the resources commanded by local health authorities, the greater the CDC involvement is likely to be. In a potential outbreak setting in a resource-poor environment, CDC may play a very active role in taking steps to confirm or disprove the outbreak: ▪ initial data collection; ▪ development of a case definition; ▪ case-control³⁵ or other investigation; ▪ sample collection; ▪ interviews of those affected or their family members; ▪ dispatch of samples to the closest appropriate laboratory; ▪ recommendation of control measures.

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| | <ul style="list-style-type: none"> o <i>Epidemiological consultation in refugee or IDP (internally-displaced person)³⁶ setting</i> – again, the activity will depend on the expertise already available. Many NGOs, for example, are expert in the care of mass populations, but may want to consult with CDC on a specific issue, such as the design of a surveillance system, or the interpretation of clinical data, or the implementation of other public health activities. o <i>Technical support in resource-rich location</i> – in this setting, CDC might be called on to provide a particular technical service not available elsewhere, such as provision of specialized lab testing. Even where epidemiologists are well-supplied, however, CDC can be called in to provide general consultation in order to arbitrate between two groups, or simply because local public health organizations are short-staffed. |
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CONCLUSION

The resources of the US government are enormous, and can play a powerful role in the international medical and public health response to natural disasters, humanitarian crises, and complex emergencies. Whether they do play a role can depend upon politics, coverage of the crisis in the media and subsequent public consciousness, national strategic interests, and many other factors, and the role itself can encompass funding, direct provision of medical care, coordination of response assets, and technical assistance from the many world-class experts within the government.

In the past, international responses have at times been marked by a lack of coordination between military and non-military resources, between national and international assets, and between the various response groups. This lack of coordination can be the result of chaotic circumstances on the ground, a clash of organizational culture, or a competition for funding and attention. As we go forward, an increasing amount of attention will be paid to the interaction of these organizations, their roles, and how they fulfill those roles, and this may provide for greater efficiencies in collaboration, but only if the varied factors determining - or discouraging - cooperation are openly addressed.

Scenario 3: Bird Flu amidst Post-Conflict Reconstruction

The third day's scenario begins with the recent history of a United Nations peacekeeping mission (UNAF) and a U.S.-Aliyan bilateral counter-insurgency and counter-terrorism operation. The scenario begins as if the preceding two days' scenarios had not taken place.

JTF forces have been departing Aliya for two weeks. The only forces that remain are a medical team, two civil affairs members, and one anti-terrorism combat unit. Aliya now has a relatively stable government after last year's constitutional reform and last month's general elections. Millions of dollars in reconstruction funds have brought work to Aliya and, therefore, money to the local population. Several Asian airlines are now stopping in the capital of Joka as more tourists arrive to explore the beauty of the island, and the service industry increases its percentage of GDP. Approximately two million people travel in and out of Joka each year. The entire country is open to humanitarian operations and most districts are being covered by international groups working alongside Aliyan Ministry and civil service workers. The markets are full of locally grown produce and livestock, intermingled with various imported items.

Scenario 3, Part 1: Initial Reports of Influenza in Poultry

A medical research team working in the west has noted an influenza virus subtype present in some of the farm poultry they tested. There has been no abnormal illness among poultry workers in the areas the team was working. Since no new influenza virus subtypes have been detected in humans, no further action is taken or recommended. Agriculture NGOs, working in other parts of the island, however, have reported an unknown infection that seems to be contagious among livestock, particularly poultry.

Participants, playing the role of medical director for their organization in Aliya, were asked whether this situation was relevant to their organization, and if so, what their proposed course of action would be, and if there were any health or indirect issues that this scenario raised for their organization.

All players took the news of the reports of influenza in poultry very seriously. The military participants were unanimous that the situation was relevant to their organization for force health protection reasons as well as protecting the United States. They were sending troops home and would want to know if these individuals were carrying any diseases. They noted that post-deployment medical screening is now a routine procedure, and based on its results, they would inform their command as well as their local health care personnel on what to look for when doing the screening. They would seek information on the troops that had already returned to the United States, as well as screen those still in-country. Their medical teams would inform the host government regarding the results. Some military participants wanted to go further and seek to verify the information. They wanted to ensure that a trusted authority (CDC, WHO or, if necessary, the military itself) conducted proper testing and investigations. Some might also increase preventive medical measures, such as hand washing. Some military players noted that the situation raised concerns about their food supply, as they were eating local produce.

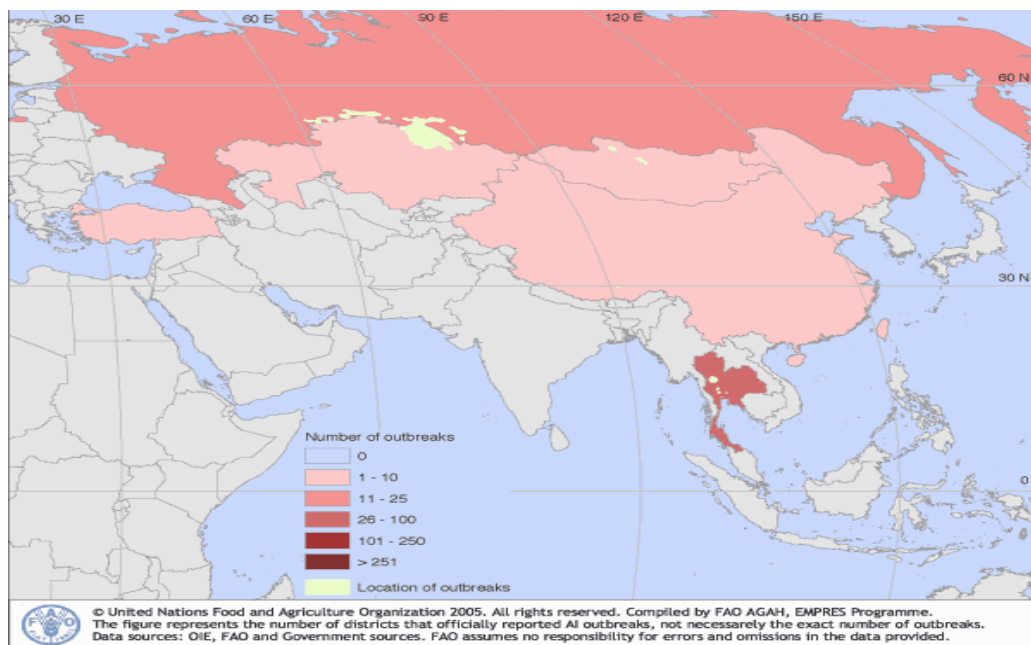
Several military and embassy players noted the need to control rumors. They commented that the news might severely impact the local economy and even the state of civil peace. The host government would be divided internally about how to manage the situation, with the Ministry of Tourism and Economy unwilling to jeopardize economic recovery by making a public announcement. Other indirect issues for the military concerned geographical and public affairs planning, including whether there was a need to evacuate US citizens and NGOs. They would need to begin to plan ahead for a crisis.

As with the military, most embassy players said that the situation would be of importance to them in light of the overall concern regarding avian influenza. They would report the information back to Washington and encourage the host government to report to the UN Food and Agriculture Organization (FAO) and WHO, and to permit the transport of specimens to a WHO laboratory. One embassy player noted that while the issue at present was an agricultural issue, because of heightened concerns about avian flu, health and agricultural ministries were working more closely together. This was even more the case at the international level, with much greater coordination between WHO and FAO.

One embassy player noted that the issue was immediately of regional or even global concern, because of the island's tourism industry and fears of a global outbreak. The embassy players would be prepared, if the situation warranted it, to take action to manage the situation through the MOH. They would seek information on the scale of the poultry industry in the country as well as have their medical research team look at local capabilities (such as laboratories). They would seek to get CDC -- though this would require host country permission-- or other qualified experts involved, and conduct an epidemiological study of poultry workers. However, given the concerns about regional spread of avian flu, the

embassy would be making decisions with regard to the safety of other countries beyond its normal interest in supporting the host government. Only one embassy player said that this level of response from the embassy was unlikely, even though it was ideal.

The priorities for the embassy players was to assess the funding available to deal with a potential avian influenza outbreak, what the equipment stockpile would be, how much personal protective equipment (PPE) was available, and what the protocols for distribution would be. One US government participant noted that the United States wanted to work with NGOs on this problem, to establish a formulary and help the USG understand what needed to be purchased for stockpiles. He felt that information about the contents of “single response kits” being developed by USAID for poultry cullers and first responders, as well as protocols, should be made available to the NGO community now. The embassy players would call for preprinted avian influenza materials (which USAID is currently developing in pictogram form) to be sent to the country. Indirect issues for the USG included the possibility that any DART team would have to be staffed by volunteers, predicated on informed consent to risks.



(Graphic courtesy of UN FAO Emergency Prevention System [EMPRES] for Transboundary Animal and Plant Pests and Diseases)

The NGO players also believed the information was relevant, but most said it would not effect their current operations. All said they would want to track the situation. Some said they would send out an information sheet to staff to avoid contact with poultry and to report cases of influenza-like illness, and would

include the news in their reports to headquarters. This would likely trigger alarms, and force headquarters to think about the potential need for evacuation as the situation evolved. Several NGO players suggested that there was a need to prepare for the worst-case scenario. Other NGO players said they would contact the embassy and WHO with the information, to find out what they should be doing. Their concern was that the infection might spread to other livestock or poultry, and in the longer-term, about the potential for a mass slaughter of the population's sources of protein. They would hope that a coordination meeting mechanism would be in place among the humanitarian agencies and embassies to share information. Indirect issues for NGOs include finding the money to stock supplies of PPE, as well as liability issues for expatriate staff, even though informed consent forms are signed. NGOs also face the difficulty of attracting international staff if people are dying of bird flu and other infectious diseases in the line of work.

For one NGO player, protection of his own staff's health was the first priority. The organization would take steps, in the case of flu or bird flu, to ensure that staff had appropriate PPE, and that there was a system in place to guarantee evacuation of patients to an intensive care unit (ICU) somewhere outside of the country. He emphasized that this protocol was not representative of the humanitarian NGO community, only his organization. For NGO staff involved in community livelihood programs, he would ensure they had PPE and were instructed to pull out at the first sign of bird flu. He noted that currently there were no guidelines, but that they were needed.

UN players cautioned the others not to expect very much from the UN OCHA, as it would be transitioning out of the country, and transferring duties to the UN development agencies. They did not see a role for UN disaster and humanitarian agencies at this point in the scenario, as there was no crisis. WHO and FAO staff on the ground, however, would be monitoring and reporting on the situation, and coordinating with leading embassies.

Scenario 3, Part 2: Unconfirmed Reports of Avian Influenza in Humans

Medical officers at the embassy are working closely with the Aliyan government and university staff. Military medical officers are concentrating their efforts on the return of soldiers to the United States. NGO and UN medical officers are looking to expand their services into the rural areas and train a local cadre of community health workers.

At a medical conference in the capital, participants hear reports of a new subtype of virus among rural agricultural workers, but no human-to-human spread. The

Ministry of Health states that there have been small clusters of human-to-human transmission of the same virus, but only in highly localized areas. A week later, participants receive a report that indicates much larger clusters of human-to-human spread, although still localized mostly in the foothills; there are, however, at least two suspected cases in the western and southern districts. The Aliyan government flatly denies any problems exist and has made it very clear that any organization reporting to the media or highlighting the virus in any public way will be asked to leave. Two doctors working with NGOs are not provided re-entry visas after leaving the country for vacation; they had previously described their concerns about the virus to a local paper.

Participants were asked how they would address the government's concerns and actions, whether they would involve other organizations in their activities, what would be the first and secondary priorities from a purely health perspective, and what the direct and indirect impacts would be on their organization.

The situation presented the NGOs with competing goals: Staying in the country to provide services on the one hand, which would require complying with the government's policies despite the need to protect their staff with often visible measures such as masks and other PPE or quarantining; and on the other hand, their broader responsibility to consider the larger impact and alert the world to the problem. Some said they would pull their expatriate staff from the field, and give their local staff the option to continue if they used PPE. Others agreed that they would require PPE for their staff at this point. Most NGOs said they would restrict their staff's interaction with the press, especially in informal situations. They would continue to work through the MOH, but also participate in separate information-sharing meeting with the embassies, OFDA and other NGOs. They would try to use their local staff to communicate with the local population on how to treat their poultry. They would also ask their headquarters to contact the CDC quietly. They would remain focused on their own missions for the time being, however, while listening very carefully to what was going on in the international community.

The embassy players said that at this point the embassy would be coordinating with other embassies and UN agencies to share information and develop and deliver a consistent message to the host government to open itself up to investigation. The embassy players would be pressing the host government to allow them to send samples to WHO labs to clarify the situation. They would also be talking quietly with NGOs to find out what they knew based upon clinic records from outlying communities, and whether they could access the affected communities to find out more information while conducting their own missions.

Embassy players would also be enacting preventive health and protective measures for embassy personnel, and would contact the military to ensure that they had all the information and were conducting pre- and post-deployment

screenings. They might begin testing embassy staff at this point. They would certainly undertake an internal public education campaign, as a first measure. They said that the host government should be the source of information and the public education campaign, but failing that, the information should come from WHO. They might try to convince the host government to treat the situation as normal influenza in order to launch a public health education campaign, but they would warn against unnecessary obfuscation, as this would generate rumors and panic.

In the view of the US government, UN and military participants, the fact that the host government was resisting transparency instantly made the situation a political, not just a health, matter. The embassy players would also ensure that the US military troops who had returned home were monitored for the disease. They would follow international health regulations and inform the WHO of the potential threat. The CDC might issue a travel advisory, and begin quiet discussions with international commercial air carriers regarding supplies and evacuation. One embassy player suggested that already by this stage, if the host government refused to cooperate, the UN Security Council might move toward issuing resolutions to take control. Despite US interests in seeing the host government stabilized after a long civil conflict, the overarching US interest would be in preventing a major outbreak and spread of avian flu. Regional organizations, such as ASEAN, would be exerting enormous pressure on the host government as well. US government officials also said that they would be seeking to get viral samples for research into a possible vaccine. The international community's priority is verification of the presence of the virus and observation of any modification of it that might have occurred.

The military players suggested that their response at this time would not change significantly from their earlier reaction to the initial reports. They would remain focused on their impending departure until ordered to change their mission. The main changes would be to increase force health protection measures such as an informal quarantine, have personnel eat rations rather than the local food, and begin planning for airlift and evacuation contingencies. Much of this planning would be ramping up outside the country. They would also pressure the Aliyan MOH to open up and allow investigations, and educate their Aliyan counterparts on how to respond. They noted that since their mission was ending, they could act more aggressively than they might otherwise.

UN players said that monitoring would continue, and the WHO, WFP, UNICEF and FAO would likely increase their activities in coordination with the local UN Regional Coordinator. They would suggest that the embassies consider a disaster declaration and recommend travel restrictions. They would hold contingency planning meetings to recommend interagency assessment as well as request antiviral medications from headquarters.

Scenario 3, Part 3: Confirmed Reports of Bird-to-Human Avian Influenza

A highly pathogenic avian influenza A (H5N1) is spreading in both poultry and humans. Eighteen people have been hospitalized and ten of them have died. It has been confirmed that the transmission is direct from birds to humans. No confirmed human-to-human cases have been discovered yet, but there are some cases that are suspect. In the eastern district, a wildlife expert, working with the Aliyan Ministry of Parks and Natural Resources, has found numerous dead migratory birds infected with H5N1. It is now confirmed that the virus exists in both wild fowl and poultry, and that infection cases are present in all districts. The government of Aliya is adamant about keeping these findings out of the international media. The successful tourism sector of the country, bringing in millions of dollars and thousands of jobs, would be devastated. Behind the scenes, the government asks for international help without drawing attention to the situation or publicly recognizing that a potential disaster exists. The Ministry of Agriculture is working with the Ministry of Health on a plan that would eradicate 70% of the poultry and 50% of the wild fowl.

Participants were asked to develop their recommended course of action in light of this information: What they would advise their headquarters regarding support of the government's eradication programs; how they would handle media enquiries; and whether the scenario posed issues outside their organization's competence that would impact the health services.

Military players said they would continue their force health protection and ensure that they had supplies of antiviral medications, such as Tamiflu. They would coordinate with the embassy and CDC to bring in survey and vaccination teams; they also would bring in military veterinarians to train the host government's military to perform direct interventions in animal and human populations, and to properly dispose of the birds. The funds for this would be fairly easily obtained; the main constraint would be getting equipment and teams overseas.

They noted that before acting, there would be a very large amount of strategic-level dialogue going on within the US government as well as with UN agencies, to determine the proper course of action. They would be preparing to support any missions to which they might be assigned, while continuing to pressure the host government to cooperate. They would also assist the other communities as long as they had the capability to do so, even if it was not their primary mission. Redeployment to the United States, however, remains their primary mission at this point. One military participant noted that the key coordination problem was that US government strategic planning has been proceeding on this issue for some months. Washington would seek to have WHO take the lead; the main

difficulty was that the NGO community was not included in the US planning process.



Veterinarian Medical Readiness Training Exercise
(Photo: U.S. Army photo by Kaye Richey)

The embassy players said they would work with the host government on how properly to conduct the poultry eradication program, and how to replace poultry not only as a food supply but also as an economic resource. They emphasized that the animals should be isolated and prevented from flying away, in order to contain and then eliminate the gene pool. Embassy officials emphasized that discussion would be occurring at the highest levels of the Aliyan government, and would include representatives from every government agency working in a task force to handle the situation. This would have to be chaired by the host country's president to make coordination effective. Guidance would be coming directly from the State Department to the US ambassador to the embassy medical team and USAID. The embassy officials would "make it very clear that there is no longer any option of delay. Action is required immediately." A public information campaign through the MOH would be essential.

The embassy officials would be searching for more data to determine what the case load and burden of the disease are, as well as to evaluate the suspect human-to-human cases. They would also be concerned with ensuring that those who had taken ill had access to health care. They would consider putting together a Regional Medical Team focused on the flu problem, and increasing funding for future planning. They would continue to try to develop a vaccine from the infected birds, as well as import medications to treat the sick. They suggested that a mandatory evacuation would only be ordered when human-to-human transmission had been confirmed. They also noted that if there was a localized

outbreak, the US government could provide 100,000 doses of Tamiflu antiviral medication, via the WHO.

NGOs agreed with the other participants that while all the communities had common interests in this situation, there would still need to be a significant amount of discussion among the players. A key challenge from their perspective was who to talk with other than the CDC via the US embassy. For them the critical issue was to catch up with and participate in the ongoing interagency coordination, and to learn about mutual resources. They noted that they would also want to know what the case load was, and what measures would be advisable (for example, would self-isolation work?) to prevent contamination. They stressed that the primary health centers in this country (outside of the capital) had a capacity of fewer than a dozen beds, so supporting patients in their homes would be necessary.

NGOs and some embassy players noted that it was important to consider that if a mass slaughter was undertaken, it might significantly affect much of the population's source of protein and/or livelihood. Culling would require NGOs to initiate food programs in order to stop popular unrest and resistance to the culling program. One NGO player noted that medical and health NGOs do not have the capacity to deal with avian flu. Other NGOs could address the long-term nutritional impact of the protein deficiency problem. Embassy and NGO players agreed that there should be a "cash for culling" program. One embassy player said that the IMF and World Bank would have to be involved in such compensation programs. A military participant pointed out that the World Food Program (WFP) or FAO had been proactively planning for this and may have a solution in place for the food crisis. Some NGOs said that if they had the personnel, they would participate in the eradication program. For the NGOs, protection of their staff remained important, and requests would go out to headquarters to provide PPE and antiviral medicines.

During discussion among one of the break-out groups, it became clear that the NGO community currently lacks an effective means for coordinating or sharing guidelines on how to respond to avian flu. One NGO participant suggested that InterAction, an NGO consortium, might serve as coordinating body, but as of yet it did not have a mandate to communicate with members and non-members. The UN participant noted that the UN communicates regularly with umbrella NGOs such as InterAction for policy coordination and information exchange. In this group all communities agreed that they had identified a key problem, in that there was no information system in place to disseminate and coordinate medical and policy guidelines.

There was some disagreement among the communities about what capabilities the United Nations could bring to bear in this situation. UN participants suggested that, given the scenario, the UN Regional Coordinator would want to work closely

with embassies and the World Bank and IMF to establish an interagency task force. The UN would also try to assess the international, especially regional, impacts of the disease. They would urge the host nation to establish a task force involving all aspects of the host government (from defense, health and agriculture to public safety). They would attempt to work out a common interagency media strategy as well as a unified public health education campaign, and then pressure the host government to adopt it. The UN participant cautioned the others that the WHO, UNICEF and FAO had limited funding for future planning and few early warning planners, so their capacity should not be overestimated. While there was a UN guideline in place for avian flu, it was not known or disseminated at the ground level. The UN participants also noted that NGOs were likely to be a more useful channel of information at this point than the UN. An embassy player noted that the participants had been operating on this flawed assumption that WHO was omnipotent in this situation; in fact, FAO would have the lead in responding to the outbreak among animals, while WHO would respond to the human outbreak. Another embassy player suggested, however, that WHO would have already brought in high-level officials, a large number of high-level consultants and doctors by this stage. Others suggested that ambassadors were going to be the key actors in this situation.



(Photo: AP)

The participants diverged in their views on how to handle the media in this situation. All agreed that it would be impossible to keep the situation out of the international press. NGOs would try to sidestep the issue in order to keep operating. All favored a common media approach, but emphasized the need to use the local media for public health education.

Scenario 3, Part 4: Avian Influenza Epidemic

At the Joka International Airport, two people collapsed in the terminal and died within 24 hours. It is reported by the central hospital that the death was caused by the H5N1 virus. The Port Authority has requested the Ministry of Health to provide monitors for the harbors, as fifteen cases of the virus have been confirmed resulting in three deaths. Ten tourists - three from Japan, two from the United States, two from the Philippines, one from Thailand, and two from India - who recently returned to their own countries from Aliya, have fallen ill and been

diagnosed with the H5N1 virus. Two of these tourists have died. Three other deaths attributed to the H5N1 virus were people who had never been to Aliya. One was a caregiver for one of the ill tourists and the other two may have had exposure to one of the other returning tourists. Locally, one in four of the rural population and 2 out of 5 in the urban centers are infected. The death toll is currently at 394 in Aliya. The international community is panicking and canceling all flights from Aliya. The US Ambassador has requested military support to help quarantine the entire Aliyan Island. No one is allowed to leave the island, including expatriate UN and NGO staffs. The international media are playing up the fears of a pandemic and there is a general state of panic. Other Asian countries are on alert for similar illnesses and/or deaths, but as yet none have reported any cases of the H5N1 virus.

Participants were asked how this situation would affect their organization, what advice their organization would provide to the host government and people, whether they would participate in the quarantine activities, what an ideal response to the scenario might look like, and what, if any, recommended changes they would make to their parent organization for future coordination in a disaster and/or conflict setting.

This scenario immediately posed in dramatic form a conflict between the humanitarian goal of treating and aiding the local population as the epidemic spread throughout the island country, and the broader humanitarian and security interests in preventing the global spread of the avian flu.

For the US military and government officials, as well as the UN participants, the first priority was to prevent the epidemic from becoming a pandemic. This immediately moved the question from one of health and medical response to one of political cooperation. All players agreed that the need for cooperation among the UN agencies, the neighboring countries, the United States and the host government would be urgent and high-level. UN participants suggested that in this situation, WHO would convene a regional meeting to take steps regarding monitoring travelers, screening incoming flights and the like. They noted that the UN Secretary General had created a special advisor for avian flu, who would be deeply involved at this stage. There was disagreement among the UN and US civilian players about whether the UN Security Council would be involved. UN players thought it unlikely, while US players noted that a scenario such as the one outlined above was “uncharted territory,” and “would be a case where the boundaries of the concept of security are expanded;” thus it was likely the UN Security Council would invoke its Chapter VII authority.

The military and US government players agreed that Washington would not unilaterally impose a naval quarantine around the island. This would be a coalition effort, most likely organized through a regional organization such as ASEAN or even the UN. Military players noted that while there had never

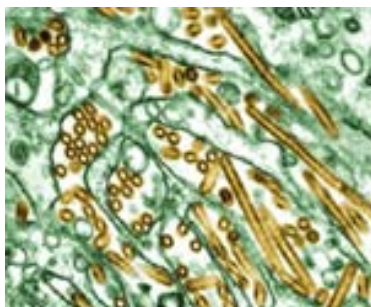
previously been a naval peacekeeping operation, it could easily be done. They suggested that it would be unlikely that the US military would be involved in it, both because there would only be approximately fifty members of the JTF left in the country at this point, and because neighboring countries would have a vested interest in isolating the country by patrolling their own borders and territorial seas. Their own navies would enforce a blockade to prevent refugees from fleeing the afflicted country by boat. This raised issues of international humanitarian law, and military players suggested the UN would need to determine when these forces could cross into the afflicted country's territorial waters to enforce the quarantine. The US civilian and military players all emphasized that the United States would not act on its own in such a situation.

At the operational level, US military players focused on the requirements for an evacuation of all US citizens, and for those US NGOs that refused to leave initially but might need to be brought out later. For the military, the issue was whether (and to what locations) US nationals would be evacuated for quarantine and isolation or treatment, given that the host government had said no one was to leave the country. There was considerable disagreement among the military players over whether US nationals would be evacuated, or whether medical equipment and hospitals would be brought in to treat them in place. Players noted that the most effective treatment required ICUs and ventilation equipment. They also expressed concern about the capacity for treatment of evacuees both regionally and in their home countries. The military participants noted that the US Air Force had a large amount of ventilators in the United States, and evacuees might be able to be treated there. But the military players also significantly disagreed over whether the US military would commit resources to this situation, given their current operational commitments in other areas.

US government participants at the operational level, focused on isolating their own staff, ensuring they had PPE, and planning for evacuation of non-essential embassy personnel and US citizens. They would also caution against refugees or US nationals being treated on US Navy ships (such as the USS Mercy), as this would only prompt the local population to flee to these ships. Military players noted that their ships had very little capacity to treat the sick. The embassy players would request that the US government increase the production of vaccines and medications, to be available in the event of a pandemic. They would also want to ensure that there was a buffer stock of vaccine and antiviral medication available to the host government, in order for it to continue functioning. Government participants further noted that this scenario presented a research opportunity to deploy candidate vaccines, an opportunity that should be seized.

NGOs divided on how they would respond. Some noted that they would be concerned with evacuating their expatriate staff and ensuring their treatment, and would at a minimum call them back from their field operations in order to isolate

them from the disease. Others disagreed and said they would continue to try to treat the sick, and bring in more supplies and volunteers to do so. They noted that most of their clinical staff were locals, and that if they pulled them from their posts, health care for much of the population would cease. It became clear that the medical and health NGO community needs to begin working with host countries' national contingency plans for avian flu immediately. It was agreed that NGOs were the humanitarian community at largest risk, both because of the lack of coordination and planning for this eventuality, and because of their direct contacts with the local population.



H5N1 Avian influenza viruses (gold) growing in animal cells (Photo: CDC/C. Goldsmith)

When asked what an ideal response would require, all participants agreed that there was a great need for coordinated planning in advance of such events. They also agreed that prevention of a pandemic was the ideal. In a perfect world, a pandemic vaccine system would already be in place, according to US and UN officials. Currently, this is impossible, as there is insufficient industrial capacity to produce the vaccine prototypes and the actual vaccine. There are, however, national epidemic systems in place that could distribute it once it became available. Each country should be prepared in advance to prevent and contain outbreaks, with public health education, risk

communication, sufficient stockpiles of antiviral and antibiotic medications, IV solutions, PPE and treatment facilities and clinical personnel, as these were the most cost-effective ways of preventing a pandemic. Military players noted that planning was proceeding at the strategic level, but had yet to reach the operational level. The international community and especially the NGO community were not sufficiently integrated into this planning cycle. Players also agreed that public education and information campaigns needed to be in place so that the population was aware and informed of how they needed to behave in the event of an outbreak of human-to-human avian influenza.

Scenario 3: Key Findings

It became clear in the discussions of the avian influenza scenario that the broader interest in preventing a pandemic would quickly trump the humanitarian concern for the local population. Despite the inevitable widespread coverage of people dying in the afflicted country, national and international interests in containing the disease would mandate isolation and quarantine of the island

country and the turning away of refugees. Even before confirmation of a human-to-human epidemic had occurred, the issue quickly shifted out of the purely health sector to become political, owing to the host government's initial resistance to full disclosure according to the scenario.

It was also clear that the communities diverged widely in how much planning for such a contingency had or was taking place. What was clear was that the scale of cooperation needed in the event of this scenario was enormous. The NGO community was least prepared (although an initial planning meeting on avian flu was taking place at InterAction at the same time as the Winter Game), while US civilian and military officials indicated that strategic and operational planning was accelerating. As participants noted, the roles in this scenario were very unclear, reflecting the newness of the threat. As one military participant pointed out, "What would an operational response look like? We haven't gone down that road yet, so we still don't know. We need maximum interagency and international cooperation. The United States may be one part of the response, but a US Joint Task Force is not going to come in and solve this." There was general agreement that progress could be made if the communities could better define what their roles would be, and what could be expected of them in the event of an avian flu epidemic or pandemic. While everyone agreed on the absolute need for coordination, their lack of knowledge of each others' roles and capabilities in this situation made it very difficult for them to figure out how they would operationally respond in this crisis.

Significant differences of opinion emerged within and across the communities on how they would respond at the operational level. Much of this debate concerned questions of evacuation of expatriate citizens versus quarantine. However, there were also debates about whether treatment of the afflicted population was a priority, or whether the epidemic would instead be seen primarily as a vaccine research and public education opportunity for the global population. There was also agreement that the international community (FAO and WHO) would be heavily involved in ensuring proper culling and disposal of birds, as well as in establishing and funding poultry compensation programs (WFP, FAO, IMF, and World Bank). There was little common knowledge amongst participants about the resources available for such programs. One point of agreement was that all communities would want to find out what resources (PPE, ICUs, respirators) and medicines existed in the country and were available internationally.

The general agreement was that the communities are not being proactive enough jointly or even individually to plan and implement policy and procedures at the operational level, before full-blown human-to-human transmission of avian flu occurs. All communities agreed that the main inhibitors to such advance planning were lack of funding, time and personnel. USAID only has one future planner, UN OCHA has none. At the UN, there were many personnel devoted to collecting information, but few doing analysis and even fewer conducting planning. The US

military was best equipped in this regard. An additional complication for NGOs was the problem of not knowing what the appropriate future planning should be. Some, in the past, had sought such information from governments with regard to the potential use of weapons of mass destruction, but had gotten nowhere. Liability issues also diminished NGO interest in advance planning for such situations. Participants noted that such coordination and planning was made difficult, as NGOs had no overarching governing body. Each NGO makes its own contingency plans. Some participants urged the NGO community to begin to create an umbrella coordination structure to create and disseminate such policies and procedures. One noted that InterAction was just beginning to think along these lines but did not yet have the authority to undertake planning and dissemination of policies and procedures.

Another important outcome of the day's discussion was the lack of awareness within and across the communities about what policies, guidelines, capabilities and resources each community had or was developing. A tremendous amount of new information was shared among the participants about what planning was occurring at present. Participants were cautioned not to overestimate the capacities of WHO and FAO in such a crisis. Cooperation with donor and host governments would be essential. Both US civilian and military participants expressed a strong desire to include NGOs in the development of formularies and stockpiles, as well as distribution and response plans. It was clear that interagency cooperation between the US civilian and military agencies and the UN FAO, WHO, and WFP was much more developed than with NGOs. Participants also learned that countries were developing national contingency plans and that NGOs should immediately begin working with host nations on their development. Participants came away with a much greater knowledge of what resources were being developed and already exist, but equally that, if such a scenario were to happen today, coordination amongst the communities on the ground would be almost entirely *ad hoc*.

Improving Civil-Military Medicine in Conflict and Post-Conflict Environments

The growing interaction of civilian and military organizations providing medical and health assistance in complex emergencies suggests that much can be gained from better coordination and cooperation. Yet a number of factors, ranging from organizational missions, ideological opposition to working with armed forces, lack of funding and personnel for NGOs and IOs to carry out advanced planning or develop routine mechanisms for information sharing and coordination, hinder such cooperation in the health sector, and more generally. Participants in the CSRS 2006 Winter Game emphasized that operational coordination is often dependent on personal relations built during emergencies. They recognized that even though military organizations appear increasingly interested in incorporating humanitarian NGOs and IOs into their planning, such planning often proceeds without the contributions of these two crucial humanitarian communities.

Participants learned that their different missions placed considerable constraints on the possibilities for close cooperation. For the military and civilian government agencies, their mission of advancing their government's national interests limited their flexibility in responding to humanitarian crises. International organizations are constrained by the wishes of their member-states, and lack the capacity to proceed independently with humanitarian response and planning. Humanitarian NGOs, on the other hand, are driven by their mission of providing medical and health services to all human beings, regardless of national, ideological, ethnic, political or other loyalties. These different missions often collide in situations of conflict or post-conflict reconstruction. Despite these differences, participants sought to improve their coordination in light of their increasing interaction in complex emergencies.

Over the course of the four-day exercise, it became clear that information sharing lay at the heart of health and medical cooperation in humanitarian emergencies. Participants from the military learned that humanitarian nongovernmental organizations had a fairly uniform set of health and medical information requirements that the military could often meet if informed in advance. At the root level of building a common parlance among the communities, the military learned that most NGO requests for assistance were actually requests for information. Yet NGOs were not willing to make information-sharing a fully two-way street, as this would fundamentally jeopardize their core principle of impartiality and likely endanger their personnel in the field.

Despite this weak and ineffective quid pro quo system, participants from the military recognized that much information could and needed to be shared with

NGOs. They recommended that NGO and other communities learn which questions to ask in order to obtain information, and called on them to develop standardized health and medical information forms that would be used to build unclassified databases, which would be made available to the humanitarian response community in the event of a disaster. Participants generally agreed that the preferred nexus among the humanitarian health and medical communities was the United Nations OCHA, and secondarily civilian national agencies such as USAID OFDA.

Mechanisms for operational coordination and information sharing are not institutionalized or planned in advance, and actors often re-learn the same lessons on the ground in each emergency. Too often AARs are done in isolation by an agency or body and therefore reflect organizational bias rather than general lessons learned. Repeatedly, over the course of the exercise, the need for a standardized, and if possible integrated, mechanism for conducting after-action reviews that included all the operational players was emphasized. These after-action reviews should be collected and stored in open-access databases. In addition, these reviews needed to be analyzed, and their results pushed back out to the operational level through both simulation and training exercises, and policy and operations coordination meetings. Participants emphasized that too often the wrong people ended up at after-action reviews. It became clear that such reviews should occur at the operational level. Lessons learned should then not only be disseminated to operations officers, but up to headquarters and policy personnel to facilitate the development of plans and procedures for future operations. Such planning should also incorporate all actors in humanitarian crises. In particular, NGOs need to be incorporated as contributors to military and civilian agency planning rather than as observers, as is usually the case.

Such a system for developing institutional memory currently does not exist. Participants recommended that one be developed, but few had suggestions which agency should or could host such a system. Participants noted that operational coordination is often dependent on relationships built on the ground, and is often hindered by policy coordination at higher-levels. Until a more centralized system for sharing and disseminating policies, procedures and operational lessons-learned is developed, such *ad hoc* personal relationships are likely to remain the key nodes in the humanitarian health and medical network, and emergency response with remain under-institutionalized.

While participants recognized that operational coordination in complex emergencies was often ad hoc, and mistakes were often repeated in crisis after crisis, coordination does actually occur. Participants generally knew whom they would turn to on the ground and at headquarters in the event of a natural disaster or a complex humanitarian emergency. The game revealed that this is not the case with regard to avian influenza. While planning is underway at the strategic

level for intra-governmental and international coordination in the event of an avian influenza epidemic or pandemic, such planning has yet to impact the operational level. Only a few military and government participants had detailed knowledge of governmental and intergovernmental planning. They recognized that there was a broad lack of knowledge about resources, policies and procedures and a tremendous need for extensive coordination among all the communities present. Players, particularly NGOs, had contradictory and incomplete knowledge of who they should contact on the ground if an avian flu outbreak occurred. Most actors are unaware of what policies and resources are available in the various communities. NGOs are entirely unprepared for such an event. Both military and government officials called for greater incorporation of NGOs into governmental and UN strategic and operational planning for an avian flu epidemic and pandemic.

In general, the simulation exercise demonstrated that the lack of coordination and information sharing is particularly acute among NGOs, and between NGOs and the other communities. NGOs compete with each other for funding, which inhibits intra-community cooperation. Also, the very nature of NGOs as niche-fillers for areas where state authorities cannot or will not work inhibits coordination. The humanitarian NGO community is extremely diverse, and includes organizations that refuse on principle to have any contact with military and even some civilian agencies. This further complicates efforts to establish coordination and information networks that span all members of all humanitarian health and medical communities. Participants recommended that efforts to coordinate need to aim for as much cooperation among communities as possible, but to accept that the benchmark for successful coordination will focus on what is feasible and workable rather than on perfection.

Conclusion

The 2006 Winter Game successfully revealed the strengths and limitations of each health and medical community. The humanitarian NGO community's greatest strength is its commitment and flexibility in responding to humanitarian disasters. It is the least encumbered by politics and the most able to deliver health and medical relief to those in need. The ongoing need to raise funds and secure resources is the NGO community's most fundamental limitation. The need to raise funds dictates the presence, level and length of their medical and health responses to humanitarian emergencies. Competition for resources also significantly constrains nongovernmental organizations' willingness and ability to cooperate with each other.

The greatest strength of humanitarian intergovernmental organizations lies in their legitimacy as representatives of international norms and guidelines. They

are most capable of acting as operational coordination nodes for NGOs committed to impartiality, and national civilian and military agencies with national interests in complex emergencies. However, humanitarian relief IOs have few resources or personnel devoted to planning and are dependent on member-states for commitment of medical and health supplies, equipment and distribution mechanisms. They are also limited in their response by the requirement to respect national sovereignty. They must lead from behind the scenes.

National civilian governments' greatest assets are their willingness and ability to commit resources to humanitarian medical and health assistance - resources that range from grants to NGOs, to trained health and medical personnel, to military medical corps and airlift capabilities. National governments are also increasingly recognizing links between health and medical emergencies and national security. National civilian agencies and IOs have a dearth of health and medical planners as well as first responders. Governments also appear increasingly to rely on their militaries in humanitarian emergencies. National civilian agencies are necessarily constrained by their government's overarching national interests. This affects their willingness to fund particular operations and their ability to introduce their medical and health capabilities (civilian or military) without the consent of host governments. Pursuit of national interests also limits which organizations are willing to partner with national civilian agencies and vice-versa. This limits their suitability to serve as nodes in a cross-community information and coordination network.

Finally, militaries share all the limitations of national civilian agencies, with the additional factor that they are often a party to ongoing conflict or post-conflict operations. They are increasingly called on by their governments to deliver health and medical assistance as a part of improving their government's image in the host nation. This fundamentally alters their relationships with humanitarian NGOs and IOs, and severely limits their legitimacy as a lead actor in humanitarian medical and health responses. Moreover, military medical personnel are often trained and equipped for combat missions rather than humanitarian medical and health emergencies. They are reluctant to take central roles in disaster relief. Yet militaries are widely, if often reluctantly, recognized as having the best assets and logistical support to respond to humanitarian health and medical catastrophes. Their government's and the international community's growing recognition of humanitarian emergencies as threats to national and international peace and security have made military organizations permanent actors in the field of humanitarian health and medical assistance. As one participant noted, for the humanitarian community, time is the enemy in an emergency, and the biggest asset the military brings is the speed at which relief can be organized and delivered.

In the closing session of the 2006 Winter Game, participants noted the importance of such events to promote and further constructive dialogue on how

these communities can better cooperate in the future. Participants emphasized that the development of personal networks was the first step toward building more institutional forms of cooperation. Participants recognized that since each humanitarian emergency is somewhat different, it is difficult to recognize the lowest common denominator from which to plan. They agreed, however, that each disaster has enough similarities as it unfolds to make advance coordination not only possible but critical to success.

Participants concluded that establishing a depository for information requirements, policy guidelines and protocols, as well as a mechanism for disseminating lessons-learned from humanitarian health and medical operations, would mark a significant step forward. NGO participants noted the CSRS educational game marked the first time an NGO was asked to co-sponsor an event with the US military, and that this was a positive move. The NGO community is very interested in further such cooperation. Military participants agreed, noting that civil-military medicine is increasingly a reality and even a priority for the US military. They suggested establishing an informal or quasi-formal civil-military medicine contact group among the game participants to continue forward momentum. Participants concluded by recommending that the Center for Stabilization and Reconstruction Studies continue to facilitate the communities' identification of the key nodes in information and coordination networks, and focus on how operational lessons can and should influence change at the policy level to ensure operational success.

Notes

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³ Author communication with Frederick Burkle, MD.

⁴ Red Cross and Red Crescent Societies, Humanitarian Code of Conduct. <http://www.ifrc.org/publicat/conduct/code.asp>, accessed January 26, 2006.

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⁶ See United Nations Children's Fund, "Guidelines for Monitoring the Availability and Use of Obstetric Services," 1997, www.unicef.org, accessed June 8, 2002; SPHERE <http://www.humanitarianinfo.org/darfur/infocentre/sphere/index.asp>, accessed January 13, 2006; MISP http://www.rhrc.org/pdf/fs_misp.pdf, accessed September 19, 2005; U.S. Agency for International Development, Bureau for Humanitarian Response, Office of Foreign Disaster Assistance, "Field Operations Guide for Disaster Assessment and Response."

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¹⁰ World Health Organization, "Tracking Health Performance and Humanitarian Outcomes," <http://www.who.int/hac/events/summarynote.pdf>, accessed January 26, 2006.

¹¹ See the U.S. Army After Action Report. Copies available by contacting LTC James C Brown, at James.C.Brown@us.army.mil.

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¹⁵ OCHA. Humanitarian Response Review. <http://www.reliefweb.int/library/documents/2005/ocha-gen-02sep.pdf>, Accessed January 13, 2006.

¹⁶ Ibid.

¹⁷ *Department of Defense Directive 3000.05. Military Support for Stability, Security, Transition, and Reconstruction (SSTR) Operations*, U.S. Department of Defense, November 2005.

¹⁸ *Health and peace-building: securing the future*. The University of New South Wales Health and Conflict Project, December 2004.

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- ²² Personnel from the US Army's 212th Mobile Army Surgical Hospital have been operating a medical facility since shortly after the event.
- ²³ USAID Fact Sheet #32 South Asia - Earthquake Fact Sheet #32, Fiscal Year (FY) 2006, December 30, 2005, p. 4. Downloadable at http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/south_asia/eq_index.html
- ²⁴ Sometimes the medical disaster specialist *is* from CDC or some other government source of expertise.
- ²⁵ USAID Field Operations Guide, version 4.0, September 2005, downloadable at http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/resources/, accessed 1 January, 2006.
- ²⁶ US Department of Homeland Security/Federal Emergency Management Agency, "Resource: International Medical Surgical Response Team (IMSuRT)", http://www.fema.gov/preparedness/resources/health_med/imsurt.htm, accessed 1 January, 2006.
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- ²⁹ LRN website: <http://www.bt.cdc.gov/lrn/factsheet.asp>
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- ³⁴ Tkacik, John. "An American Response to Severe Acute Respiratory Syndrome",

Executive Memorandum #870 of the Heritage Foundation, downloadable at <http://www.heritage.org/Research/AsiaandthePacific/em870.cfm>

³⁵ “Case-control” is one type of “study” or investigation commonly used in investigations of outbreaks of unknown cause in order to identify risk factors for becoming ill (technically, a case-control investigation cannot *prove* that something [e.g., , exposure to poultry] has *caused* an outbreak, only that it is strongly associated with the disease).

³⁶ Technically the term “refugee” only applies to those who have crossed international boundaries. Those who have moved within a nation’s borders are referred to as “internally-displaced persons” or IDPs.

CONTRIBUTORS

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Anne Clunan is an Assistant Professor at the Naval Postgraduate School in Monterey, CA. She received her Ph.D. in Political Science from the University of California at Berkeley. Her research and teaching interests include international security, international cooperation, international humanitarian and criminal law, theories of institutional change, Russia and the FSU, and the international politics of science and technology. She is finishing a manuscript, *History, Reason and Identity: the Sources of Security Policy*. Her ongoing research and publications analyze how states respond to the rise of non-traditional security threats such as terrorist financing and bio- and health-security, and the causes and consequences of changes in the boundaries of national sovereignty.

Prior to her academic career, Clunan launched the Civic Education Project, Inc., an international non-governmental organization dedicated to promoting civil society in post-authoritarian countries through transformation of higher education. For this work she received the Velvet Revolution Award from the Czech and Slovak governments.

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Prior to his work for the HHS Secretary served as medical director of the Navy's Center of Excellence in Disaster Management and Humanitarian Assistance, specializing in public health issues in mass casualty, refugee, and developing-country settings, and pioneering the use of handheld computers for field data collection. To continue this work, he co-founded the DataDyne Group, a small consultancy bringing the best applicable information technologies to support public health in developing countries. Working with the World Bank and the UN Foundation, he is currently developing public-domain software to support development organizations and health ministries in data collection, analysis, and distribution.

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Prior to his Iraq deployment, he served as Humanitarian Affairs/Disaster Relief Advisor and Chief, International HIV/AIDS Policy in the Office of the Secretary of Defense (SO/LIC), with lead roles in strategy and planning for the humanitarian component of Operation Enduring Freedom - Afghanistan, and in the development of a global Department of Defense HIV/AIDS prevention program for foreign militaries. He also played a lead role in interagency civil-military planning and coordination for Operation Iraqi Freedom, serving on the interagency Humanitarian Planning Team for Iraq .

He received his Bachelor of Arts Degree in Human Biology from Stanford University, including studies in the Stanford Overseas Studies Program in Florence , Italy . His M.D. Degree is from Georgetown University School of Medicine, and he is board-certified in Family Practice medicine. CDR Tarantino's military career has been distinguished by multiple challenging overseas and operational assignments, including medical and humanitarian missions in Iraq , Alaska , Haiti , Guyana , Tanzania , Cambodia , Estonia , and several Pacific Rim nations. He served as medical director and team physician for a challenging deployment to Turkey in the aftermath of their massive 1999 earthquake, providing emergent medical/surgical care in an austere and chaotic setting. He also served as Flight Surgeon and medical department head for a Marine Corps F/A-18 fighter squadron, including a six-month deployment around the Pacific Rim.

His military decorations include the Navy-Marine Corps Medal for Heroism for actions at the Pentagon on 9/11, the Bronze Star for service in Iraq, and the Humanitarian Service Medal. He has also been recognized as a "Washingtonian of the Year" by *Washingtonian Magazine* and a "Hero Against Hate" by the Anti-Defamation League and has received the American Medical Association's Medal of Valor, the Association of Military Surgeons of the United States ' Young Physician Award, and Georgetown Medical School 's Founder's Award.

SUGGESTED READINGS AND RESOURCES

For a detailed listing of civil-military medicine references, refer to the extensive Civil-Military Bibliography under “Civil-Military,” at the Center for Disaster and Humanitarian Assistance Medicine (CDHAM) Online Disaster and Humanitarian Access Portal, <http://www.cdham.org>.

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ACRONYMS FOR INTERNATIONAL DISASTER RESPONSE AND PUBLIC HEALTH

Non-Governmental Organizations (NGOs)

AAH	Action Against Hunger
ACF	Action Contre la Faim (Action Against Hunger)
ACTED	Agency for Technical Cooperation and Development
ADRA	Adventist Development and Relief Agency
AmRC	American Red Cross
ARC	American Refugee Committee (also used for American Red Cross)
CHF	Community Habitat and Finance
CISP	Comitato Internazionale per lo Sviluppo dei Popoli (International Committee for the Development of Peoples)
COOPI	Cooperazione Internazionale (International Cooperation)
CRS	Catholic Relief Services
CWS	Church World Service
FHI	Food for the Hungry International
GAA	German Agro Action
GOAL	Although capitalized, GOAL is not an acronym
IMC	International Medical Corps
IRC	International Rescue Committee
LWR	Lutheran World Relief
Merlin	Medical Emergency Relief International
MSF	Médecins Sans Frontières (Doctors Without Borders)
NPA	Norwegian People's Aid
PADCO	Planning and Development Collaborative International
PCI	Project Concern International
UMCOR	United Methodist Committee on Relief

International Organizations (IOs) and United Nations (UN) Agencies

CIMIC	Civil-Military Cooperation (NATO)
FAO	Food and Agriculture Organization (UN)
HACC	Humanitarian Assistance Coordination Center
HICC	Humanitarian Information Coordination Center
HOC	Humanitarian Operations Center
ICRC	International Committee of the Red Cross
IFRC	International Federation of Red Cross and Red Crescent Societies
IOM	International Organization for Migration
OCHA	Office for the Coordination of Humanitarian Affairs (UN)
PAHO	Pan American Health Organization (WHO)
UNDAC	UN Disaster and Coordination
UNDP	UN Development Program
UNHCR	UN High Commissioner for Refugees
UNICEF	UN Children's Fund
UNSECOORD	Office of the UN Security Coordinator

WFP	World Food Program (UN)
WHO	World Health Organization (UN)

U.S. Government (USG)

AFMIC	Armed Forces Medical Intelligence Center
CDC	U.S. Centers for Disease Control and Prevention
CMOC	Civil-Military Operations Center
DART	Disaster Assistance Response Team
DCHA	Bureau for Democracy, Conflict, and Humanitarian Assistance
DHS	Department of Homeland Security
DMAT	Disaster Medical Assistance Team
DMORT	Disaster Mortuary Team
DOD	U.S. Department of Defense
EDRC	Emergency Disaster Response Coordinator
EUCOM	U.S. European Command
FEMA	Federal Emergency Management Agency
FEWS	NET Famine Early Warning Systems Network
FFP	Office of Food for Peace
IMSurT	International Med-Surg Response Team, part of NDMS
LRN	Laboratory Response Network
MDRO	Mission Disaster Relief Officer
NCEH	National Center for Environmental Health, part of CDC
NCID	National Center for Infectious Disease, part of CDC
NDMS	National Disaster Medical System, part of DHS/FEMA
OFDA	Office of U.S. Foreign Disaster Assistance
OHDACA	Overseas Humanitarian, Disaster, and Civic Aid
OSD	Office of the Secretary of Defense
OTI	Office of Transition Initiatives
PRM	Bureau of Population, Refugees, and Migration
PACOM	U.S. Pacific Command
SOUTHCOM	U.S. Southern Command
State	U.S. Department of State
USAID	U.S. Agency for International Development
USDA	U.S. Department of Agriculture
USG	U.S. Government
USGS	U.S. Geological Survey
USUHS	Uniformed Services University of the Health Sciences

Civil-Military Medicine: On Dangerous Ground



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