

Proceedings of the Africa Command Health Symposium



Health as a Bridge to Peace and Stability

January 8-9, 2009

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Africa Command Health Symposium:
Health as a Bridge to Peace and Stability
January 8-9, 2009
Proceedings

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The opinions expressed herein do not necessarily reflect the positions of the United States Government, Africa Command, or any other organizations.

Africa Command Health Symposium: Health as a Bridge to Peace and Stability

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**Africa Command Health Symposium: Health as a Bridge to Peace and Stability
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Event Summary

Introduction/Background

The newly established United States Africa Command (AFRICOM) intends to incorporate health as a bridge towards security. AFRICOM was declared a fully unified command on October 1, 2008. It was designed to be a “different kind of command” focusing on war prevention rather than war-fighting (AFRICOM, 2008a). Over half the personnel who will ultimately be assigned to AFRICOM will be civilians, including representatives from non-military U.S. government agencies. Africa Command’s mission is to work in concert with other U.S. government agencies and international partners. It will conduct sustained security engagement through military-to-military programs to promote a stable and secure African environment in support of U.S. foreign policy (AFRICOM, 2008b). The intention of this new command is to increase security on the African continent through an integrated and coordinated approach. There is a reflexive relationship between public health, civil security, and economics. Improvements in one of these areas generally help the status of the others.

The medical and health issues representative to Africa Command is the Command Surgeon, who has many mission objectives. His goal is to enhance coordination and create more sustainable medical programs through military-to-military engagement efforts. There are many potential positive benefits for civilian public health infrastructure and capacity building that may ensue from these engagements. To help facilitate these objectives, the U.S. Assistant Secretary of Defense for Health Affairs sponsored the Africa Command Health Symposium convened at the National Academy of Sciences from January 8-9, 2009.

Symposium Goals

The goals of the Africa Command Health Symposium were to: 1) Introduce the U.S. Africa Command Surgeon; 2) Explore the successful public-private partnership model in Africa; 3) Explore the potential role of health research in developing host nation capabilities; and 4) Develop a communication and coordination mechanism to share best practices among service providers regarding health care capabilities and programs. The intent of the conference was to bring together senior government and non-government agency leaders and allow them the opportunity share successful development models with Africa Command. The aim is to build stronger and more effective partnerships for current and future joint development projects in Africa. These goals were accomplished by bringing together experts from academia, U.S. Government, private sector, and the African Union to address challenges across the healthcare spectrum.

Public Health and Military Significance

Health as a Bridge for Peace was formally accepted by the 51st World Health Assembly in May 1998. It has been defined as the integration of peace-building concerns, concepts, principles, strategies and practices into health relief and health sector development (WHO, 2009). Deficiencies in transnational governance may create a global public health crisis. Health is no longer just a humanitarian issue, but rather a major economic and security issue (Kickbusch, 2002). In 2005 a Department of Defense directive defined “stability operations” as a “core U.S. military mission” with a “priority comparable to combat operations.” This required the DoD to expand from its traditional war-fighting mission to one that includes preventing or mitigating collapse of failing nations (DoD, 2005; Reaves, Schor, & Burkle, 2008).

With globalization, every communicable disease is now potentially only an airplane trip away from any of us. It is imperative that surveillance programs be as robust as possible. Collaboration between U.S. Africa Command and local African military forces provides an opportunity both to expand U.S. knowledge of emerging diseases and improve the local African health systems. Military-to-military and military-to-civilian partnerships support ministers of health in obtaining laboratory, epidemiological, and logistical resources (Chretien et al., 2007). Direct health-related strategic threats to the United States include infectious diseases such as pandemic influenza. However, chronic diseases, maternal and child mortality, sanitation, malnutrition, and access to basic health care also affect U.S. national interests due to their impacts on key countries' economies, governments, and militaries (NIC, 2008)

Symposium Summary

The Africa Command Health Symposium: Health as a Bridge to Peace and Stability was conducted January 8-9, 2009 at the National Academy of Sciences in Washington, DC. The symposium was sponsored by the Office of the Assistant Secretary of Defense for Health Affairs. This conference was convened for the recently established Office of the Command Surgeon, U.S. Africa Command. Over 200 people from around the world registered for the conference, and it was well attended. There was representation from senior international experts, U.S. Government agencies, non-governmental agencies, U.S. military, World Bank, and the African Union. The symposium provided an opportunity for stakeholders to network and learn about other participants' perspectives and projects.

The Assistant Secretary of Defense for Health Affairs, Dr. S. Ward Casscells, encouraged the symposium's speakers and attendees to contribute their experiences and ideas for improving Africa's health challenges. He also noted how even basic initiatives such as vaccination and

nutrition programs can make huge impacts by giving people hope. He stated, "People begin to (think) they are going to be around when things get better. (They) begin to think longer term and invest in themselves, because their health will carry them through."

The Command Surgeon of Africa Command, COL Schuyler Geller, presented the history, mission, organization, objectives, and approach of Africa Command. He discussed his strategy for medical engagement with African nations through military-to-military collaboration. The success of past collaborations and the potential for future partnerships in the areas of infectious disease surveillance, military training of trainers, and various other medical initiatives was emphasized. Active input regarding other agencies' lessons learned and suggestions for future approaches was encouraged.

United States Agency for International Development (USAID) presented a panel discussion on a wide range of topics. Past and current global development projects were reviewed with an emphasis on Africa. The "Three Ds" of development, diplomacy and defense were described as laying the groundwork for the U.S. National Security Strategy. A common theme to all the USAID presenters' comments was the need for improved communication between the various governmental and non-governmental agencies. It was noted that there are often multiple languages being spoken. Since no one agency can complete a mission alone, partnerships are essential for there to be successful development projects.

The potential for significant disruptions in economies, travel, and stability of nations secondary to infectious disease threats such as pandemic influenza was examined. Pandemic influenza highlights many challenges that will require collaboration between multiple agencies of different countries. It was noted that Africa would be disproportionately adversely affected by a pandemic. A pandemic in Africa would lead to more than just the initial increases in influenza-

related morbidity and mortality; it would have significant impacts on all other health programs. A disruption in distribution of drugs, food, and medical supplies will also affect such diseases as malaria and HIV/AIDS. Other DoD medical initiatives to combat infectious diseases were highlighted throughout the conference, such as the Defense HIV/AIDS Prevention Program (DHAPP) which is assisting host nation militaries with voluntary HIV testing and treatment. Many research commands including Walter Reed Army Institute of Research, U.S. Army Medical Research Institute of Infectious Diseases, and the Naval Medical Research Units have supported disease surveillance, prevention, and treatment of malaria, Rift Valley fever, and Monkey Pox. Medical research can also be used as a tool to facilitate stability operations.

USAID related how governments lose legitimacy when they are unable or unwilling to provide basic security and essential services for their citizens. The governments then become vulnerable and unstable. This fragility is really due to poor governance, endemic corruption, and a weak civil society. Agencies such as USAID cannot focus on development until the triggers of fragility and causes of conflict in the country are evaluated and addressed. The recent interactions between USAID and Combined Joint Task Force, Horn of Africa (CJTF-HOA) in Djibouti were described and lessons learned by both civilians and military should be of use for future joint missions. Recommendations regarding interactions between military, government agencies, and non-governmental organizations were given by representatives of the State Department. Capacity building was emphasized by focusing on helping groups, not individuals. The ultimate goal for programs should be a sustainable hand-off to local populations. The separation of roles between military and non-military entities is important, and non-governmental organizations need to be viewed by the local populations as being independent as much as possible.

The work of civilian charitable organizations such as the AMAR Foundation was presented and demonstrated how grass-root interventions can make significant improvements in local populations' health status. The AMAR Foundation has particularly focused on the health issues of women and children.

Evolving technologies such as cell phones and telemedicine hold huge promises for advancing health delivery in Africa. Projects currently being developed by the Telemedicine and Advanced Technology Research Center were presented. Their goal is to develop affordable, useable, sustainable, and appropriate health care technologies. Cell phones are already widely available in Africa and provide a mechanism to remind people to take daily medications, notify populations about disease outbreaks, and enable communication between local providers and higher echelon medical centers. Expanding medical training through the use of simulators, developing portable laboratory diagnostic tests, and creating more easily serviceable medical equipment are current priorities.

The need for more medical professionals on the African continent was reiterated by many speakers. Many of the military-to-military programs being pursued by Africa Command focus on training the medical trainer. The Executive Chairman of the African Union Africa Diaspora Health Initiative, Dr. Akukwe, spoke about facilitating a mechanism enabling health experts of the African Diaspora to transfer information, skills and expertise to their counterparts on the African Continent.

China is engaged in many development programs throughout Africa. Dr. Lawry described China's history on the African continent and outlined their guiding principles. Healthcare is viewed as a commodity that is used to obtain others that China needs, such as lumber, iron ore, and oil. China is not encumbered by the regulatory restrictions and good

governance policies that affect most Western development agencies. This allows them to complete projects quicker and with less strings attached. There are also foreign physicians and health care workers from both China and Cuba working within certain African nations.

The psychological challenges that members of both the military and civilian NGOs face during and after deployments to unstable environments was presented. Strategies for identifying stress reactions in the field and monitoring for post traumatic stress disorder were outlined. Team leaders may be able to minimize adverse outcomes by proactively preparing their personnel before deployment and screening periodically for psychological distress upon return.

Africa Command Health Symposium: Health as a Bridge to Peace and Stability

DAY 1 AGENDA; January 8, 2009

0830-0850	Welcome	Dr. Warner (Butch) Anderson	Director, International Health (OSD/HA)
0850-0910	Symposium Introduction	Hon. S. Ward Casscells	Assistant Secretary of Defense for Health Affairs
0910-0940	Command Brief	COL (Dr.) Schuyler Geller	Command Surgeon, Africa Command
0940-1000	COFFEE BREAK		
1000-1230	<p>USAID: Improving Stability through Health Sector Development—Challenges and Opportunities:</p> <p>Addressing Drivers of Conflict Through Community-based Programs</p> <p>Building Capacity of Host Country Services By Strengthening National Supply Chain Systems</p> <p>Pandemics—A Looming Threat</p>	<p>Dr. Kent Hill</p> <p>Mr. Franklin Moore</p> <p>Panelist: Dr. Ron Waldman, Ms. Elizabeth Kibour, Ritu Singh, and Dr. Alan Bournbusch</p>	<p>Assistant Administrator for Global Health, U.S. Agency for International Development</p> <p>Deputy Assistant Administrator for Africa, U.S. Agency for International Development</p> <p>Global Health Bureau, U.S. Agency for International Development</p>
1230-1330	WORKING LUNCH		
1330-1400	Barefoot Health Professionals	Baroness Nicholson of Winterbourne	AMAR International Charitable Foundation
1400-1420	BREAK		
1420-1520	Cell Phones and Medicine	COL (Dr.) Ron Poropatich	Deputy Director, Telemedicine and Advanced Technology Research Center
1520-1605	Medical Research as a Tool to Facilitate Stability Operations	COL (Dr.) Gray Heppner	Deputy Commander, Walter Reed Army Institute of Research
1605-1650	Emerging Technologies That Can Transform Health in Africa	COL (Dr.) Karl Friedl	Director, Telemedicine and Advanced Technology Research Center

Africa Command Health Symposium: Health as a Bridge to Peace and Stability

DAY 2 AGENDA; January 9, 2009

0830-0840	Welcome	Dr. Warner (Butch) Anderson	Director, International Health (OSD/HA)
0840-0900	Symposium Introduction	Ms. Ellen Embrey	Deputy Assistant Secretary of Defense for Force Health Protection and Readiness
0900-0920	COFFEE BREAK		
0920-1000	The African Union and its Vision for Africa's Health	Dr. Chinua Akukwe	Executive Chairman of the African Union Africa Diaspora Health Initiative
1000-1040	Africa's Burden of Health: Implications for Human Security	Dr. Shahul Ebrahim	United States Health Attaché to the African Union
1040-1100	World Bank Perspective	Mr. Ok Pannenburg	Senior Technical Advisor, The World Bank
1100-1115	BREAK		
1115-1145	China in Africa	Dr. Lynn Lawry	Senior Health Stability/Humanitarian Assistance Specialist, Department of Defense
1145-1215	Department of State Initiatives in Africa	Mr. Bryan Schaaf	Health Officer, Bureau of Population, Refugees, and Migration, Department of State
1215-1320	Mental Health and Humanitarian Crises	CAPT (Dr.) Edward Simmer	Senior Executive Director for Psychological Health, Center of Excellence for Psychological Health & Traumatic Brain Injury
1320-1330	Summary and Close	COL (Dr.) Schuyler Geller	Command Surgeon, Africa Command

**Africa Command Health Symposium: Health as a Bridge to Peace and Stability
Summary of Remarks**

Day 1, January 8, 2009

Dr. Warner (Butch) Anderson, Director, International Health (OSD/HA)

It is good to see so many kindly faces in the audience. Thank you all for coming out. I'm an anthropologist, as well as a physician, and I wanted to talk a little about the cultural gaps that exist in the interagency. Many of you are aware of this, but I'd like to put it right out on the table. The DoD is often accused of being the 800 pound gorilla in the room, and we probably merit that description. That's not necessarily a bad thing if you need an 800 pound gorilla backing you up. But, the other 800 pound gorilla is the fact that we don't all speak the same language. I think it was Winston Churchill who said, "We are a people divided by a common language." I plea that we do not devolve into political correctness. For the purposes of discourse, getting to know each other, and giving COL Geller advice, I'd like to get past some of those things. I'd like to give a few examples. You are going to hear a lot about partners. Partner means different things to different people. If you are an attorney, partner means that you are both liable legally. When NGOs hear us use the term, they sometimes think we mean armor-up and put a round in the chamber because you are going out with us. When COL Geller uses the term partner, I think he means let's sit down at the table and talk.

I hope there are also going to be some emotionally laden words as well. The term genocide is an example. Issues in Africa can rarely be discussed honestly without somebody bringing up the issue of genocide. But please recall, genocide means different things to different people. It has a legal definition, it has an advocacy definition, and it has other various shades of

distinction. So let's try to define our terms and make sure that if we are disagreeing, we are disagreeing about the concepts, and not just the words.

What we are finding is a great deal of synergy. I see the net effects of the interagency as being greater than the sum of the individual components. We have interagency people who are more than partners. They are an integral member of our team, and we couldn't operate without them. USAID, State Department, and CDC have been very helpful to our department. All these people bring different approaches, attitudes, and cultures. And when these things come together, that's where the true power of America is. It's in the power of people to cooperate, talk, and team-up. That's what we are going to hear about today. In my understanding, the DoD at no point is trying to push any issues. We are truly here to help you.

At this point, I'd like to introduce Dr. Ward Casscells who is the Assistant Secretary of Defense for Health Affairs. The thing that is important to me about Dr. Casscells is the way he handles issues, like those at Walter Reed. Frankly, the DoD has not been accused of transparency in the past. I was sitting at a staff meeting and Dr. Casscells said, "throw open the windows and let the light shine in." He inherited Walter Reed after the story broke and he invited the press to embed reporters at the hospital. I don't believe they did it, but that was their choice not to do that. He welcomes this type of openness, and for that, I have a great deal of respect for him. He believes that the truth will set you free. It is my great honor to introduce Dr. Ward Casscells, Assistant Secretary of Defense for Health Affairs.

Hon. S. Ward Casscells, Assistant Secretary of Defense for Health Affairs
-Symposium Introduction

I'm just thrilled at the attendance here today. The interest in this conference was so high that we narrowed it to people who were in positions to do something about it, not just people who had an interest in it. I'm thrilled to have people here who have been or can be of great assistance to this effort of supporting COL Geller. He can then support USAID and the rest of the interagencies. It's terrific to have all the Combatant Surgeons here since elements from Africa Command came over from Pacific Command, Central Command, and European Command. It is critical for us to incorporate their lessons learned.

This is a great opportunity for us to work with USAID. In the past this has been a challenge, and the more we meet like this, the better. We learn to speak State and they learn to speak military. We have some translators here who have worked in both worlds and that is very helpful, particularly our NGO partners. It's important to have NGO leaders who can advise us. The Secretary, Dr. Gates, has made it clear that the Defense Department has to develop some expertise in soft power. He does not say that we should be the State Department. He believes the State Department needs more funds, not just more military personnel detailed to them. It is unsettling that we have more military band members than we have career foreign service officers, and Dr. Gates has transferred funds in an effort to fix this.

I've spoken with members of the Presidential transition team and I think they support Dr. Gates' concept of soft power and the DoD walking more humbly while listening to NGO, inter-agency, and international partners. I have not spoken to the President Elect directly, but people who speak for him say this will be a priority. I cannot imagine that the Africa Command would not be a priority.

So what can we hope to accomplish here today? You will hear from Baroness Nicholson about the AMAR Foundation and how people with great persistence and courage can train women to be barefoot doctors. They have managed to succeed in places where the government has been against them or where there is no government. To actually train trainers and build capacity in these situations is almost impossible, but they have succeeded. We in the Defense Department are trying to learn about this. You will hear from COL Poropatich about initiatives to use cell phones for public health and education. You'll hear about some of our Navy activities. ADM Mullen, the Chairman of the Joint Chiefs, has stated that the hospital ships are the most powerful ships in our Navy. He says this because when the big white ship pulled into Banda Aceh after the 2004 tsunami, the opinion of the United States in the world's largest Muslim country just skyrocketed.

Let me address some of the critics of soft power. I served in Iraq and I know you can't put health care at the front of the train. You have to have water, power, sewage, and first and foremost, security. The hospitals must be safe and functional. But even when you don't have these sorts of things, the little things still matter. Providing vaccinations or nutrition education sends a message to the local people that their lives are worth your attention. It gives them hope. When you educate people, they start to think long term. I know from experience that they start to think that they will be around when things get better. This has a subtle, but profound, effect on the economy. They start to invest in themselves and projects around them because they have more hope.

I think most of us understand the effects of soft power, but we shouldn't be timid in saying it. Health care often comes after food, shelter, transportation, security, water, power, and education. But, it should be right up front and part of the initial planning phase. I've been to

many conferences and meetings where health is not given priority, and we need to change this. The DoD has a lot to learn, but we have a lot to offer. We are globally distributed and offer much for disease surveillance, lift capability, disaster response, and education.

Africa is an enormous continent and COL Geller has a small budget. We have to support him, and I hope after this conference, he knows who he can call upon for reach-back and consultation. We need your ideas for how we can do low cost public health in Africa. We also need better surveys of African health measures, as the WHO data is often incomplete. Please speak freely today and tell us how we can help COL Geller help you to help Africa to help itself.

COL (Dr.) Schuyler Geller - Command Brief - Command Surgeon, Africa Command

On October 1, 2009 Africa Command became a fully operational Unified Command and GEN Ward took on full responsibility. My job is to support GEN Ward and the theater strategic interests. I'm looking forward to learning from you how I might do that better.

Much time was spent formulating the command mission statement and it went through many iterations. It is, "United States Africa Command, in concert with other U.S. government agencies and international partners, conducts sustained security engagement through military-to-military programs, military-sponsored activity, and other military operations as directed to promote a stable and secure African environment in support of U.S. foreign policy."

We do not make policy at U.S. Africa Command; we support it. GEN Ward is very concerned that efforts are persistent and sustained. It's about building a capacity to prevent conflict. Our approach is to build partner security capacity, promote strategic relationships, conduct civil-military activities to foster stability, provide crisis response, support USG efforts to encourage dialogue and development, and to enable the work of Africans. The hierarchy of

strategy and plans takes into account both DoD and non-DoD documents, with much input from USAID. Our reason for being is determined. Health will be a part of the means that Africa Command uses to reach its goals.

Our resources and processes must be appropriately robust and defined to support those lines of effort. U.S. Africa Command was set up from its inception as an interagency command and its end-state will contain equal military and civilian billets. Africa Command has participation from many U.S. Government agencies with embedded leadership from State, Homeland Security, USAID, Commerce, and Treasury. The command structure of Africa Command is not based on the standard J-codes found within a usual Unified Command. The Foreign Policy Advisor, the Deputy to the Commander on Civ-Mil Activities, and Director of Outreach are all from the State Department. The Senior Development Advisor, Director of Programs, and OFDA Representative are from USAID.

The Command Surgeon is a member of the Special Staff and reports directly to GEN Ward. I'm dual-hatted and also oversee the medical personnel within the Directorate of Operations & Logistics (J-4). The medical structure is still evolving and we are open to changes. Within the Medical Division there is an international health specialist branch, medical plans and operations branch, and force health protection branch. Many of the staff within the Medical Division are civilians.

How is GEN Ward supported? There are very few standing forces in support of Africa Command. We have inherited many team members from the now consolidated previous Combatant Command elements. There are currently many standing partnerships between U.S. States and African countries, and we would like to see more in the future. Partnerships that

prevent conflict will enable the work of Africa, and that is our approach. Our ultimate partners are the Africans themselves.

The theater strategic objectives are: al Qaeda network is defeated in Africa Command AOR; U.S. and designated African states maintain assured access throughout the AOR; American population is protected from deadly contagions emanating from Africa; identified African partners cooperate in the creation of an environment inhospitable to the unsanctioned possession and proliferation of Weapons of Mass Destruction; military support to USG efforts has improved security sector governance/has increased stability; continental peacekeeping operations are effectively meeting mission requirements; and peace-keeping operations capacity exists to respond to emerging crises.

The medical theater strategic strategy seeks effects-based planning for medical events, has a regional approach (5 regions in AOR), is based on Africa Command strategic objectives, is linked to measures of effectiveness, requires medical planning must be done in partnership, adds value while doing no harm, enhances coordination and creates more sustainable medical programs with our mil-mil engagement, and is fully mindful of the many positive externalities on the civilian public health infrastructure and capacity that might ensue.

We have many medical tools in our theater strategic campaign (TSC) to include combined training, combined exercises, military contacts, humanitarian assistance, and security assistance. Other engagements include medical outreach-education (GEIS/CDHAM, DIMO, NDU, ACSS, Mil-Med Conferences), exchanges planned outside of Africa Command, HIV/AIDS (DHAPP/PEPFAR), AI/PI, HMA, IO, and exercise related construction. There were 150 TSC programs last year.

The Africa Command Surgeon's priorities include developing a DoD medical strategy for the continent, regional situational awareness and developing medical common operating picture, CJTF-HOA integration of medical MAPE's-2009, component medical integration-RMTR, developing partnerships into effective programs, and developing measures of effectiveness that are outcomes driven.

We need to show measurable outcomes like the 40% weight gain in herds vaccinated by JTF-HOA compared to herds that were not vaccinated. Other key medical measures of effectiveness include Partner Nation (PN) militaries having medical capabilities to support all necessary force health protection issues, deployable medical capabilities to support PKOs and regional security organizations, medical capabilities to assist with HN and regional disaster response efforts, comprehensive HIV education/testing/treatment programs, and effective AI/PI (EID) contingency plans in place.

How is Africa Command going to accomplish Theater Strategic Objective 3: The American population is protected from deadly contagions emanating from Africa? It will measure percentage of military trained in Force Health Protection measures, percentage of military medically-ready for deployment as defined by African Union, verify incidence rate of HIV/AIDS in military continues to decline, and verify State's military has a specified epidemic response mission.

Subjective indicators include: military has developed and routinely-exercised epidemic response plans which are assessed to be effective to contain the spread of pandemic influenza and other high-risk contagions, military has medical/veterinary surveillance and reporting capability sufficient to identify pandemic influenza (PI) or other high-risk contagions, military has access to an accredited diagnostic reference laboratory, military has adequate medical

logistical capability for epidemic response to pandemic influenza or other high-risk contagions, and no increase in regional instability due to emerging disease threat.

Perceptual indicators include: African state's military is confident in their respective epidemic response capability, African state public is confident in their respective state military's epidemic response capability, and adjacent state governments and/or populations are confident in respective state's ability to identify and contain the spread of pandemic influenza or other high-risk contagions.

I am looking forward to learning from our many distinguished colleagues here how Africa Command's health strategy can be further refined and enhanced to more fully and effectively support the many ongoing efforts on the continent and island nations of Africa to prevent conflict and enable the work of Africans; building that bridge to peace and security.

USAID Panel Session

Dr. Kent Hill – Assistant Administrator for Global Health, USAID

(Prepared remarks below may differ from actual presentation at conference)

As Assistant Administrator of the Bureau for Global Health with the U.S. Agency for International Development, it is my privilege to make introductory remarks at this symposium under the theme “Health as a Bridge to Peace and Stability.”

First of all, I would like to welcome Colonel Geller, AFRICOM’s first Surgeon General, in his new role to ensure health gets incorporated in AFRICOM’s responsibilities on the continent. I would also like to thank the Dr. Casscells, Deputy Secretary of Defense and others at the Department of Defense and the Africa Command involved in hosting this important event to further explore how development and defense or “Civ-Mil” cooperation is vital to achieving peace and stability on the continent.

At USAID we clearly see the importance of the existing partnership with the U.S. military and Africa Command in supporting our respective work. No one Agency alone can accomplish the tasks that lay before us in Africa or around the world. We are committed to work with you in support of development and humanitarian assistance objectives worldwide. Also, we look forward to continuing to support our successful partnership to promote security and health in Africa in the future.

The increased importance of cooperation between USAID and the military is illustrated by the creation at USAID of the Office of Military Affairs, headed by Tom Baltazar. Also, we now have senior USAID development advisors in all the combatant commands.

Today, international development has been elevated alongside diplomacy and defense. Now called the "Three Ds," the combined priorities of development, diplomacy and defense lay the groundwork behind the US National Security Strategy.

The Strategy mandates that helping the world's poor is a strategic priority as well as a moral imperative. In short, success will never be achieved or ensured by focusing on defense or diplomacy alone; development is an indispensable requirement. And furthermore, success won't be achieved by any single agency alone; there must be unity of effort.

A key question we must answer when discussing this new strategic partnership is how development and defense agencies can increase cooperation and work together to implement a whole of government of approach. Each of our agencies brings inherent strengths and expertise to the table, so the better we understand how each agency does business, the better suited we will be to capitalize on these strengths. In most cases, where there are not security concerns, the default position is to utilize the experience and expertise of USAID. USAID wants to be available, however, to help AFRICOM when there are security situations which make advisable DOD involvement.

For example, development planners at USAID need to understand better how the DOD does business, plans and implements stability operations and how this relates to the development context. Planners at DOD need to understand more clearly and articulate more forcefully how our health assistance promotes peace and stability. The more we understand critical components of our respective work, the better we will be prepared to cooperate and enhance success in our respective missions. After all, not only do we share the same vision of creating a healthy, peaceful, and stable world, but also we are increasingly working in the same places in countries

around the world. Further, our successful work together in natural disasters, humanitarian emergencies, and crisis situations bodes well for further cooperation.

Now let me turn to USAID's work in the developing world, especially as it relates to strengthening local capacity.

The resources of the United States are focused on transformational initiatives that are owned over time by the developing nations themselves. We respond to immediate crises and build capacity for future challenges simultaneously, ensuring that our efforts are sustainable.

USAID's global approach to health focuses on the development and delivery of low-cost, high-impact interventions that can reach children and adults in poor countries to prevent or treat leading killers like tuberculosis, pneumonia, diarrhea, malaria, malnutrition, and other diseases.

Today's foreign assistance workers also labor to build human capacity in addition to physical infrastructure. The experience of the past four decades suggests that these development workers have done amazingly well. Efforts in public health have resulted in eradication of diseases like smallpox, a marked decline in infant and child mortality, a narrowing the of the gap between desired and actual family size, and an increase in life expectancy in many countries that almost matches the rates of developed countries. This is particularly true in Asia and Latin America.

As part of its efforts to promote healthy behavior, USAID has a long-standing commitment to strengthening systems and building local capacity. For example, in addition to buying medicines for both the public and the private sector, we are providing funds to strengthen drug management, supervision, community outreach, and other critical systems needed to deliver effective treatment. We recognize that investment in commodities needs to be accompanied by training the people to manage, deliver, and support the distribution of health services.

Where it makes sense, we try to piggyback on common service delivery platforms such as EPI (Expanded Program on Immunization) and antenatal care, thereby assisting countries to scale up prevention and control capacity.

In improving in-country supply chains, we need to continue strengthening management information systems, streamlining distribution systems, identifying financial resources for procurement and supply chain operation, and enhancing forecasting and procurement planning. Furthermore, we need to strengthen local institutions so they can manage these functions themselves.

I also want to highlight other global accomplishments in the health arena. With other partners, U.S. development assistance has:

- Treated with lifesaving oral rehydration therapy (ORT) almost a billion episodes of child diarrhea each year, reducing child deaths from diarrheal disease by more than 50 percent.
- Provided a set of basic immunizations each year to more than 100 million children, and tens of millions more receive supplemental immunizations against polio, measles, and other killer diseases.
- The Global Polio Eradication Initiative has saved an estimated five million children from death or paralysis.
- Malnutrition among children under age five has been reduced from one in three to one in four, a 25 percent reduction.
- Almost 60 percent of women have appropriately trained attendants when they give birth.
- Maternal mortality has been reduced by 20-50% within approximately a decade in eleven USAID-assisted countries.

USAID is also a global leader in health research. USAID's research role is to assess local health conditions, develop and adapt appropriate health products and interventions, and support their field testing and introduction, including strengthening local health systems. For example, 3.7 million newborns die annually, failing to complete even the first month of life. According to new USAID-supported research, more than one-third of these babies can be saved with low-cost home-based health interventions, despite continuing poverty, instability, weak health systems and conflict.

U.S. global health leadership

The United States is at the forefront of efforts to improve global health. In 2008, the U.S. Government is spending over \$7 billion on improving global health. USAID is responsible for about \$5 billion of that amount. Routinely administrative funding requests, whether from Democrats or Republicans, are increased by Congress.

Since 2003, the U.S. Congress has committed approximately \$20 billion to fight HIV/AIDS, tuberculosis, malaria, and other neglected tropical diseases. The U.S. has massively increased its funding for the fight against these diseases since 2000. The U.S. is the leading donor to the Global Fund to fight HIV/AIDS, Tuberculosis and Malaria. The U.S. Government has provided about 25 percent of the Global Fund's \$11 billion in total contributions. Overall, the U.S. is the largest bilateral contributor to global health.

From 2000-2007, the Bush Administration dramatically increased U.S. Official Development Assistance. The increase of 118% over eight years is a faster rate than at any time since the period immediately following World War II. In 2007 U.S. ODA was \$21.8 billion, a decline of \$1.8 billion relative to the 2006 level; \$1.6 billion of this change is accounted for by a decline in debt relief activities after major new actions in 2006 and a decline in ODA to Iraq.

Iraq and Afghanistan were the largest recipients of bilateral aid in 2007, with \$3.7 billion going to Iraq and \$1.6 billion going to Afghanistan. This assistance provided for programs in humanitarian relief, economic development, counter-narcotics, good governance, health, clearance of landmines, and other reconstruction assistance. In addition, \$4.8 billion went to the world's least developed countries, and a further \$1.6 billion to other low-income countries, not including U.S. regional and global programs. In advance of the 2005 G-8 Summit, President Bush announced that the United States would double its assistance to sub-Saharan Africa from 2004 to 2010. From a 2004 base of \$4.3 billion, with planned increases in disbursements, the U.S. is on track to meet that pledge.

The challenges of global health are immense. Each year, 2.1 million die of HIV/AIDS; 1.7 million of tuberculosis, many of these related to HIV/TB co-infection; almost a million die from malaria; 415,000 from neglected tropical diseases, with another 52 million disability adjusted life years (DALY) -- or lost years of healthy life annually; 1.6 million children, mainly children, die of diarrhea. Consider neonatal mortality rates or deaths in the first 28 days of life in developed and developing countries. Thirty-four newborns die for every 1,000 births in developing countries compared to three deaths for every 1,000 births in industrialized countries; and children under five die at a rate of 87 per 1,000 births in developing countries, while only 5 die per 1,000 births in industrialized countries.

The U.S. has increased global coverage of basic health interventions. Great progress has been made in early and exclusive breast feeding, immunization, Vitamin A supplementation and oral rehydration therapy to reduce the frequency of severe childhood infections, and the use of insecticide-treated bed nets to prevent malaria.

Infant and child mortality rates are decreasing dramatically, with global child deaths reaching a record low of 9.2 million deaths in 2007, falling from 13 million in 1990, according to a United Nations Children's Fund (UNICEF) report released last year. It is the lowest level since record keeping began in 1960. Most of these 9.2 million could be saved by simply scaling up known interventions.

A number of USAID-assisted countries – including some of the world's poorest and most fragile, such as Afghanistan, Cambodia, Ethiopia, Haiti, Madagascar, Nepal, and Tanzania – have shown that the survival of children can be improved by 20 to 30 percent or more in just 5 to 7 years. Likewise, countries with USAID support have made significant reductions in maternal mortality, as well. Over the course of a decade, declines of 17 to 48 percent have been documented in 11 countries.

Our health successes are complemented by additional investments that address the poverty and hardship still facing children and their families in many countries, including micro-credit programs providing access to money that wisely used can lift families out of poverty; girls' education programs to improve the health and prosperity of coming generations; water and sanitation programs that prevent disease; emergency relief and food assistance that save children affected by conflict and disaster.

Partnerships

The future of United States efforts for global development increasingly involves investment and partnerships. The U.S. is the leading country in private financial flows to the developing world, with net capital flows exceeding \$99 billion in 2007¹. Residents of the United States also lead the world in their personal generosity, sending over \$48 billion² in personal

¹ Fact Sheet: Department of State, Bureau of Economic, Energy and Business Affairs, September 16, 2008

² Fact Sheet: Department of State, Bureau of Economic, Energy and Business Affairs, September 16, 2008

remittances and giving an estimated \$12 billion in private charitable contributions in 2007. This funding is not included in total Official Development Assistance figures.

Consider this trend line: forty years ago, after World War II, only 30 percent of U.S. capital flows to the developing world were private funds; 70 percent came in the form of U.S. official development assistance. In this decade, we have more than doubled development assistance, and the U.S. is still the largest bilateral donor in the world. But American private capital flows to the developing world have tripled, and now private sector outflows represent over 80 percent of capital funding to developing countries.

This dramatic increase in private capital represents a profound and promising change in the way international development is financed and conducted – one that looks to the private sector as an even more productive partner in development.

Government is, and will remain, a catalyst and partner in alliances for development. Since 2001, our Global Development Alliance business model, partnering with corporations, has created more than 680 public-private alliances made up of more than 1,700 partners, and has leveraged more than \$9 billion dollars in combined public/private sector resources. This leveraging has averaged \$2.7 private sector dollars for every one dollar of taxpayer money.

The provision of safe water is an excellent example of the value of these partnerships. Providing clean water to the more than one billion people in the developing world without current access at present requires resources that go far beyond traditional donor aid. However, the consequences of inadequate drinking water are catastrophic.

About 1.6 million children under age five died last year from diarrheal diseases caused by unsafe water, sanitation, and hygiene in developing countries. Millions more were put at significant risk of exposure to water-borne infections, such as cholera, typhoid fever, and

dysentery. Contaminated drinking water is also an important threat to people living with HIV/AIDS.

Household water treatment and safe storage activities, such as those pursued jointly by USAID and Procter & Gamble, reduce waterborne disease, empower families and communities, and improve household productivity. These measures complement community and municipal water supply infrastructure programs by providing immediate access to safe water while infrastructure improvements are implemented.

Partnership is also the cornerstone of the new Presidential initiative on neglected tropical diseases. This initiative will build on the very successful program begun with the support of Congress last year. In addition to delivering over 35 million treatments benefiting over 14 million people, USG funding is leveraging hundreds of millions of dollars worth of drugs through generous donations of drugs from several pharmaceutical companies.

Last year PMI leveraged private sector resources to provide 8 million insecticide-treated mosquito nets in four countries, bringing the bed net ownership rate above 50 percent for the first time. Partnerships in maternal and child health have extended treatment for pneumonia, the leading killer of children.

Community and faith-based organizations play an important role in this broad partnership effort to scale up prevention and treatment. USAID draws upon the strength of private voluntary groups through our Child Survival and Health Grants Program. Since 1985, USAID has funded 420 organizations in 62 countries through this grants program. These projects have reached more than 218 million women of reproductive age and children under age 5 with proven, high-impact health interventions. They have built the capacity of communities and local organizations and improved health systems and policies to ensure sustainability. In 2007, CSHGP supported 71

projects implemented in 40 countries by 39 PVOs in collaboration with ministries of health and faith-based and community groups reaching an estimated 13.2 million beneficiaries.

Conclusion

No expenditure by the Congress has the capacity to generate as much good will to the U.S. as does foreign assistance. Consider that 65 percent of Indonesians had more favorable views of the U.S. because of the American response to the tsunami. It had been much lower prior to the tsunami. In 2006, even more than a year after American help, Indonesian public opinion, the world's largest Muslim country, was very positive.

Since 9/11 there is a bi-partisan consensus that international development is both the “right” thing to do (humanitarian, long-term development) and the “smart” thing to do (national security; public diplomacy; use of “soft power”).

Our diplomacy of deeds will establish lasting links for our country, as more people come to know that the American people care deeply about the well-being of people in other lands.”

U.S. support for Global Health has always been and will likely remain of key interest as long as we deliver health foreign assistance with clear, measurable objectives which can and do produce results. We ask that our programs to have clear targets for improvement in health outcomes, and link achievement of these targets with strengthening key elements of the health system and building countries' own capacities.

No matter what the future looks like, we will need hands-on, high-visibility methods for engaging the world-- to help prevent disease, to mitigate global health risks and to strengthen perceptions of the U.S. abroad. And finally, we will all need to work together to ensure that all of the collective investments of the USG have the highest chances of being successful in improving health around the world.

Mr. Franklin Moore – Deputy Assistant Administrator for Africa, USAID

(Prepared remarks below may differ from actual presentation at conference)

Honorable Ward, Colonel Schuyler, Ambassadors Amina Ali and John Simon, members of the diplomatic corps, members of the military services, and colleagues from the foreign assistance community: I am grateful to represent the United States Agency for International Development (USAID) Bureau for Africa on this occasion.

On behalf of our Administrator, Henrietta Fore, I want to thank you for organizing this conference to introduce the recently established U.S. Africa Command, Office of the Command Surgeon and to explore ways to build strong and more effective partnerships for Health in Africa. USAID has been deeply involved in the establishment of AFRICOM. Since November 2006, USAID staff has worked side-by-side with the Implementation Planning Team, the Transition Team, and then AFRICOM staff to establish the command. To strengthen coordination with AFRICOM and ensure that DoD activities in Africa support U.S. foreign policy priorities, USAID has five of its brightest, very talented officers assigned to AFRICOM bringing with them a wealth of field experience:

- The Senior Development Advisor, Carl Rahmaan;
- The Director of Programs, Ray Kirkland;
- The Director of Humanitarian Assistance, Diana Putman;
- Humanitarian Advisor, Angela Sherbenou; and
- Christine Byrne from the Office of the Inspector General.

To ensure synchronization at all levels, we have also provided a series of technical advisors, funded by the Department of Defense, to the Headquarters of the Combined Joint Task

Force-Horn of Africa in Djibouti on a rotational basis. Our latest addition to the Task Force is Ms. Ritu Singh.

We look forward to continuing this successful partnership to promote the security and health of our nation, our allies, and our friends throughout the world, and especially in Africa.

As one of the three pillars of US National Security, USAID also has a long and successful history of working in tandem with the Departments of State and Defense to advance peace and security in Africa. USAID is proud to play the lead role as an agency long experienced and skilled in delivering humanitarian assistance, promoting democracy and good governance, investing in the well-being of Africa's people, and spurring economic growth on the continent.

All three agencies can take pride in our collective track record and accomplishments in delivering humanitarian assistance, advancing peace and security, promoting the rule of law and good governance, investing in the well-being of Africa's people in times of crisis and in times of peace, and spurring economic growth on the continent.

The Department of Defense, through AFRICOM, focuses on supporting military professionalization and military capacity building to enhance the ability of our African partner nations to manage their own security, thereby enhancing their development prospects. In fact, we welcome AFRICOM's innovative and integrated command structure.

The State Department will ensure that our Ambassadors coordinate AFRICOM's activities. Such coordination will make certain that foreign policy priorities are met, complementarity between all USG programs and activities is maintained, and overall effectiveness is maximized.

Just as Secretary Gates sees development as crucial to the success of the overall mission of the Defense Department, USAID and State, in turn, recognize how fundamental security is to the

success of our respective missions. The link between security and development is clear throughout sub-Saharan Africa. With improved security, Liberia and Rwanda, for example, are beginning to experience sound economic growth, better living conditions, and improved governance following years of devastating armed conflict.

Our people are working side by side. Let me give you two examples of how this evolving partnership can work. In a time of national disaster, AFRICOM will be relied upon to provide logistical support. Working with African governments and our NGO partners, in towns and villages, we identify the needs of vulnerable populations for humanitarian assistance. We call upon our military to provide lift capacity and support to reach the people. We in USAID are the hub, coordinating with our NGOs, the host country government and the military. This proved to be an effective model during the floods in Kenya in 2007 and Mozambique in 2000. As another example, we are all concerned and preparing for responses that would be needed in the event of a pandemic of avian influenza. AFRICOM and the U.S military's Pacific Command (PACOM) will focus on linking military-to-military initiatives, recognizing the important role that national militaries are likely to play.

We strongly support AFRICOM's mission focus on military-to-military security cooperation; an area of engagement the State Department and USAID believe will maximize the Command's added value to the U.S. Government's combined efforts in Africa.

In post conflict environments, we widely recognize Security Sector Reform, as a "natural" area for greater coordination and collaboration. The question we all face is, "How do we best address the linkages among security, governance, development, and conflict in more comprehensive and sustainable ways?" In order to be effective, in addition to building professional security forces, Security Sector Reform programs must support the establishment of

relevant legal frameworks; build civilian management, leadership, oversight, planning, and budgeting capacities; enhance coordination and cooperation among security-related and civil institutions; and manage the legacies of past conflict or insecurity. Integrating these different activities into a comprehensive package ultimately will prove more successful and sustainable.

Clearly, without security, sustainable development cannot take place. U.S. Africa Command's assistance in helping to reestablish security in Liberia is well known. Post-conflict stability in Liberia has enabled USAID to develop, in close collaboration with the Ministry of Health and Social Welfare (MOHSW), a long term sustainable health program that will provide an essential basic package of health services to the Liberian population. USAID provided technical assistance to the Ministry of Health and Social Welfare in the development of their health policy and plan, supported the recent Demographic and Health Survey, and the development of National Health Accounts.

At the same time, we recognize that social, political and economic development can help mitigate a country's going into or returning to conflict. In the case of Burundi, for example, USAID made significant progress over the past year toward renewing bilateral relations with the Government of Burundi following the country's emergence from 13 years of civil war. In December 2007, the USG and Government of Burundi signed an agreement that provides the framework for USAID's bilateral assistance program to spur economic development and political stability and health care.

We appreciate AFRICOM's focus on providing value-added from DoD to the African continent. We are pleased to have the Command play a supporting role to our development

efforts as needed, including humanitarian relief efforts. By focusing on security challenges and supporting State- and USAID-led diplomatic and development initiatives, AFRICOM is providing critical value-added to USG policy in Africa.

Last, let me touch upon our respective relationships with NGOs. As Administrator Fore stated at the October 1 AFRICOM event, “we encourage our NGO partners to continue to work with us in responding to humanitarian crises, promoting disaster risk reduction and building local capacity. There is a role for many USG organizations in delivering timely, appropriate and life-saving assistance, with USAID leading the coordination of the military’s unique assets, for example, and ensuring that we, above all, address the needs of our beneficiaries. We look forward to this evolving relationship, the central point of which must be clear---that security, stability and peace are essential for the quality of human life...and essential for development. We know well that the conditions for economic growth and poverty reduction are a secure, stable, and appropriately governed environment. We welcome the continued dialogue to ensure that solutions for short term objectives are consistent with our shared long term goals.”

Again, let me extend my best wishes to you today, Honorable Casscells and Colonel Geller. We thank you for the AFRICOM leadership in reaching out to USAID in the past and in the future as you continue to develop the Command; and reiterate our commitment to continue and strengthen our relationship in the service of our country, our allies and our friends in Africa.

Dr. Ron Waldman – Global Health Bureau, USAID

Pandemics are an area of work where there can be no skepticism about the need for cooperation between the military and civilian agencies. If we are not working together, the world may suffer tremendous consequences from our failures to implement effective programs.

My focus is on pandemic response, not pandemic prevention. Many other agencies are working on prevention issues. While avian influenza has only claimed the lives of 300-400 people, the potential for a pandemic to occur is great and it would be associated with significant mortality. If we extrapolate the 1918-20 pandemic experience to today's population, we would see dramatic declines in life expectancy similar to what has happened in southern Africa with HIV/AIDS. Many analyses have shown that mortality during pandemics is inversely related to per capita income. Therefore, Africa would be disproportionately adversely affected by a pandemic.

We are currently in WHO phase 3 of avian influenza with controversial or limited human-to-human transmission. However, we can pass through phases 4 and 5 with development of direct human-to-human transmission very quickly. A mutation that allows direct human transmission only has to occur once, and when this happens, it will spread rapidly around the world regardless of efforts to contain the disease. Containment will be very difficult because there is no way to produce a vaccine against a yet to be identified pandemic strain. The day the pandemic strikes is the day development of a vaccine can begin, and this will take considerable time with our current technology. Anti-virals are not useful because they are not particularly effective and have to be administered within the first 48 hours of symptoms.

We are focused on how to mitigate the consequences of a pandemic once it occurs. The number of cases of avian influenza has decreased recently, but it still remains a clear and present danger given how fast it can mutate. The role of the military will be important in controlling population migration. The greatest risk for spreading this disease comes not from birds, but from airplanes.

USAID views pandemic influenza not just in terms of basic virology terms, but also for the potential for civil unrest, much like Kenya after the elections. USAID is additionally focused

on other potential causes of mortality such as food insecurity, lack of access to medical care for previous conditions, and nutritional deficiencies.

USAID works with certain assumptions to include: country capacity will be exceeded, vaccines and anti-virals will not be available in adequate quantity, substantial mortality will be due to illnesses other than influenza, time required for action will be limited, funding will be available for response, and limiting impact will be dependent on community-level actions.

We can limit the direct impact of pandemic influenza by caring for those ill with influenza with possibly vaccines/antivirals and community mitigation (non-pharmaceutical) interventions. Community mitigation includes isolation of ill people, voluntary quarantine of household members, social distancing of children (close schools), and social distancing of adults (stagger working hours, close places of employment, places of worship, places of amusement). We can also reduce the indirect impact by treating potentially fatal diseases when health services are disrupted (bacterial pneumonia, malaria, diarrhea, AIDS, tuberculosis, diabetes, hypertension, and mental disorders), ensuring food security, and accelerating resumption of livelihoods. Many people have now shown that the majority of deaths during the influenza pandemic resulted from secondary bacterial pneumonia. Perhaps we should be considering stock-piling antibiotics for this scenario.

The goal is to have a standardized response plan sitting on the shelves of every government and education of all the necessary personnel required to respond to a pandemic. Coordination is difficult and requires many agencies to work together such as the United Nations, IFRC, CORE Group, Interaction, and US Government agencies HHS/CDC. The Department of Defense will be especially important. It is unclear if U.S. military assets will be available internationally when a pandemic crisis is affecting homeland security.

As a foreign minister of the Netherlands said, “The only thing more difficult than planning for a pandemic would be explaining why you did not do it.”

Ms. Elizabeth Kibour – Africa Region Specialist, Global Health Bureau, USAID

Ms. Kibour was previously the health team leader at USAID’s mission in Guinea-Conakry where she addressed drivers of fragility and tried to mitigate the potential for conflict. Guinea is categorized as a fragile state where the legitimacy of the government is in question. The government is unable or unwilling to provide basic security and essential services to its citizens. Although Guinea’s level of instability did not cause civil war like its neighbors, it did have a significant impact on the development of the country. This led to the Mission really looking at the causes of fragility. We could not focus on development until we evaluated the triggers of fragility and causes of conflict in the country.

Guinea’s fragility is really due to poor governance, endemic corruption, and a weak civil society. Any intervention must address these factors of fragility. For Guinea, the Mission designed a single strategy instead of a sector based one. We really looked at advancing good governance. By designing a multi-sectoral program we aimed to achieve two results. From the supply side, we wanted to improve the effectiveness, transparency, and accountability of the government. From the demand side, we wanted to build the capacity of civil society organizations so that they empowered to provide quality services at the community level.

The Mission targeted key government institutions, such as the Ministries of Health and Finance. From the supply side, this has meant looking at how effectively the government operates. What are the government checks and balances for various programs? What is the

capacity of civil society to provide quality services to the community? The Mission continued to provide its traditional health activities, which is the service delivery. But, the way it went about it was different than the past. It really looked at the governance issues, corruption issues, and capacity to provide services in the health sector.

The Mission simultaneously continued to support political, social, and economic reform activities. The Mission took a holistic approach through partnerships with the different U.S. Government agencies, especially the Departments of State and Defense.

Ms. Ritu Singh, Office of Population and Reproductive Health, USAID

Ms. Singh has most recently worked with the Combined Joint Task Force, Horn of Africa (CJTF-HOA) in Djibouti. CJTF-HOA recently transitioned to AFRICOM and works in three major lanes of effort. It builds relationships, works with African military to build security capacity, and civil-military operations like building schools and clinics. For the last few years I've worked on designing programs for post-conflict countries like Liberia and South Sudan.

DoD and USAID have been moving towards an intersection of ideas on provision of health services as a means to increasing stability in a country. One of us does development for a living and the other one is being directed to help stabilize nations with all means available. In order to have a whole of government approach, we have been asked to coordinate. We have new policies that say we are going to coordinate, but one can't coordinate if one doesn't really know what the other organization is all about.

I volunteered for this detail because I wanted to have a firsthand understanding of what DoD is doing, and in particular, what CJTF-HOA is doing in east Africa. I wanted to understand

what coordination might look like on the ground and I wanted to understand what the military understood about development. As a development professional and as a worker-bee, I wanted to put aside my personal ambivalence about the intersection of these two roads. I wanted to figure out instead how we can make it work. Undoubtedly, I had pretty lofty goals for the 59 days I was in Djibouti. I barely scratched the surface of my curiosity. And of course, there are no clear cut answers or pathways.

Coordination is hard within agencies, much less amongst two organizations with different modes of operation and different end goals. I did learn a lot about the military and its culture. I have a huge amount of respect for our men and women in the military. What they do day in and out, I struggled with for 2 months. While it hasn't always been a focus, CJTF-HOA is now taking coordination with USAID pretty seriously. The Ambassador, as Chief of Mission, guides and directs coordination between HOA, USAID, and the Department of State. How this gets played out within each country and at the operational level is still a matter of discussion and work.

USAID missions on the ground have some legitimate concerns which need to be openly discussed and solved if genuine interaction and real progress is to be made. Right now all the USAID missions in the region interact with CJTF-HOA individually. While this may ultimately be necessary, as all countries have varying needs, USAID needs a consistent voice in the Horn of Africa. This can be achieved by standardizing guidance to coordinate with the military and periodic communication between the missions so that the best practices in working with the military can be shared. Similarly, CJTF-HOA needs to develop a document that clearly states the parameters which can be shared with all its mission partners. The parameters document

would cover topics like the military planning process, the funding processes, the geographic focus, and CJTF-HOA capabilities.

I have learned that the military at the ground level does not really know how USAID operates. Like any self respecting bureaucracy, we're pretty darn complicated and at times about as transparent as mud. So, this lack of clarity is understandable. But, there is a gap in knowledge. Before the military can coordinate with USAID or be a valued partner, they have to understand how we operate so we can better match their strengths with development needs. Perhaps the onus for insuring this understanding lies with USAID.

I have learned that until recently, CJTF-HOA did not use quantitative indicators to measure the results of its activities. Under its humanitarian assistance programs, HOA builds schools, wells, clinics, and conducts medical and veterinary civil action projects, also known as MEDCAPS and VETCAPS. While the overall effect of HOA activities in the region are assessed qualitatively, the success or failure of each project has not been measured or documented. I was lucky enough to be at CJTF-HOA when the J-5 effects team was starting the process of developing indicator check lists and I was able to participate in this process. We developed indicator check lists for each activity which would then evaluate the need for a particular activity, monitor it through its implementation, and evaluate the results upon its completion. We also started work on a database that would collect and aggregate project level results. The work is still in its initial stages and it needs to be vetted with stakeholders. Indicators also need to be pilot tested. Having these indicators will standardize implementation of projects, improve quality, and improve project oversight and management. Above all, it will allow CJTF-HOA a quantitative look at its projects and whether they contribute to their overall mission.

From a purely observational basis, I'd like to share with you that I think CJTF-HOA's mil-to-mil activities may have more significant and sustainable impact on the Horn of Africa. Mil-to-mil usually constitutes working with host national militaries in order to professionalize them and build their security capacity. Having a handful of civil affairs teams scattered throughout the Horn, each of them working on a few projects over a period of 6 months to a year, will likely not produce a sustainable impact on the development of an area, improve the health status of a population, or decrease the long term grievances of a population. An example was when a civil affairs team in northern Uganda partnered with the Ugandan Police and Defense Forces to implement community projects. The local Ugandans, unsure of their relationship the Ugandan Police, saw their own military working to help the community. If this model could be replicated, it could potentially work toward improving people's perception of the effectiveness of their own government.

In closing, we don't have control over whether these two roads will intersect, but we can control and manage how the intersection could happen.

Dr. Alan Bournbusch, Global Health Bureau, USAID

USAID is a leader in the provision of assistance for public health programs, such as oral rehydration therapy and childhood immunizations. Without exception, supply chains are critical to the success of all USAID global health programs. Our mantra is, "no product, no program." High quality public health services won't exist without an appropriate focus on products and their supply chains to ensure reliable supply. Prevention products such as bed-nets, drugs, and condoms must be present to be effective. We work to improve supply chains in the countries

where we provide assistance. Supply systems must themselves forecast, finance, procure, test, store, distribute, and account for products. Typically these are public sector supply chains operated by Ministries of Health or sometimes Agriculture.

Getting supplies to the poor is often the lesser of our challenges. More immense is the challenge of getting supplies to end users. There are national regulations that may be poorly enforced or designed. System designs that may not be technically sound, but for political reasons, are hard to change. Organizations with weak capacities, weak infrastructures, and staffing that is poorly trained, not professionally valued and hard to retain create challenges.

I would like to elaborate on some of these challenges, what we are doing to overcome them and end by offering some signs of progress. We work in the countries we assist by invitation and permission. We need to work with and not around local priorities, decisions, regulations and policies. One challenge we face is the role of government in public health and the provision of public health commodities in particular. Determining where the government is the implementer of public health programs and supply chains, as opposed to the steward over the provision of services by the private sector, is a challenge.

Financing for health programs is a constant challenge. Asia and Africa account for nearly 80% of the world's disease burden, but barely 20% of the world's health expenditures. Where will the resources come from for needed health products and the supply chains to deliver them? A big part of the answer is finding more money, but another significant part is making better use of money. Through better local procurement practices, better supply chain design, and technical innovations, USAID provides technical assistance to in-country agencies to enable them to make evidenced based decisions, allocate resources, and develop and manage cost effective reliable public health supply chains. We are developing tools to cost alternative

scenarios for how to manage supplies and help Ministries assess options to contract with third party providers for procurement and other logistical services.

The infrastructure in developing countries is a significant limitation. Modest investment and technical assistance can improve conditions. We are working to improve warehouse conditions, disposal of medical waste, clinics, and finding local solutions to transportation challenges. The number and scale of global health priorities has expanded dramatically in the past decade: HIV, AIDS, malaria, TB, maternal health and more. There has been a proliferation of vertical programs and vertical supply chains to support them.

We need to improve supply chain organization and design and find where functions can be integrated across programs. We are looking toward the private sector for new management tools, approaches, technologies, and reporting methods that can improve and increase the overall reliability, efficiency and cost effectiveness of supply chains that are challenged to manage growing numbers of products. We have opportunities in Africa to leverage the rapid expansion of information technology. Access to computers, cell phone coverage, and web access hold the potential to improve the capacity of information to be disseminated through the supply chain. Staffing is a significant challenge with too few people doing too much. People want to do the right thing, want to improve services, want to serve more people, but they work in an environment of scarcity. USAID therefore focuses much of its resources to build local capacities making improvements and providing technical expertise that work with people on the job. We support a variety of educational courses in supply chain management. We have established a global network of logisticians, the International Association of Public Health Logisticians, which has 288 members from 50 countries.

The so called “topping up” system in Zimbabwe was first adopted for contraceptives/condoms with USAID’s technical assistance. Based on its success, it has expanded to other commodities. Stock-out rates have significantly decreased. Beginning in 2003, the government of Zanzibar has decreased hospitalization rates of children with malaria 80% by improving its distribution system for malaria drugs and bed-nets. There is also evidence that better supply systems result in better quality of care. The better functioning a supply chain is, the better a country can keep multiple contraceptives in full supply, thus allowing clients a choice of family planning methods. USAID has also become involved in the distribution of personal protective kits for avian influenza to control growing number of outbreaks. Now we have an emergency response capability in partnership with other USG agencies international organizations, and in-country partners. There is no shortage of problems.

USAID developed a sequence of projects beginning about 30 years ago to improve the in-country management and distribution of health supplies. While our investments have yielded positive results along the way, much more is needed. The world is changing fast and we have to keep up. We still have much to learn from the private, and in particular, the commercial sector. Just as the military uses logistics contractors such as Agility for movement of goods, USAID also uses them for movement of condoms. The projects we have today are not like those of 30 years ago. They are orders of magnitude bigger, including dollars spent. I manage a project valued at \$2.75 billion. This is where we are when it comes to health logistics and commodities.

Baroness Nicholson of Winterbourne; AMAR International Charitable Foundation

AMAR in Arabic means “The Builder” and we call it rebuilding lives. The foundation emerged in the wake of genocide and ongoing human devastation by drawing on the age old root of one human helping another. It has been in existence for 17 years. It is the mission of AMAR to recover and to sustain professional services in medicine, public health, education, and basic needs provision within refugee and other communities living under stress of war zones, civil disorder, and disruption. Using health as a tool for peace and development has been a guiding principle of the Foundation since its inception in 1991.

AMAR seeks to achieve its mission statement through carrying out any or all of the following activities while working closely with the host government(s):

- Primary health care provision through fixed or mobile clinics
- Laboratory facilities
- Secondary health care and tertiary referrals
- Public health programmes
- Water treatment, including clean water supplies and waste water
- Garbage disposal
- Primary and secondary schooling, including books, timetables and exams
- Tertiary scholarships
- Finding, repairing or building and equipping suitable structures for the programmes (e.g. schools, clinics, sewage and clean water plants)
- Creating, training and resourcing appropriate local professional teams to carry out these tasks
- Developing other job creation programmes such as fish farming, agriculture, sewing and tailoring, building and roadwork, information technology
- Establishing and running training courses, conferences and lectures
- Setting up in Oxford University a Medical Research Unit, and publishing its findings.

Locations: Iran, Iraq, Lebanon, Pakistan, and Afghanistan

Current Efforts:

Lebanon

Recent openings of two new health centers include one along the Southern border where there has been no healthcare for obvious reasons. Future plans include opening of a center on the Syrian border and one in the Pica valley. Ultimate goals include placement of four to six new centers in this region.

Iraq

Each month AMAR delivers health and education to 500,000 people and enables 35,000 medical consultations with doctors and health professionals, who are undergoing constant training. A further 7,500 people each month are reached using Mobile Health Centres in areas that are too far away from AMAR health centres. With a network of more than 1,500 Women Health Volunteers, AMAR reaches 350,000 people every month through the Health Education in Schools Program. AMAR reaches 27,000 children with over 13,500 routine vaccinations delivered every month. Democracy, political participation, heritage, and literacy training reaches 3,500 people per month. There is a continuous program to work with local leaders and there is the closest possible cooperation with the Ministry of Health and Health Directorates. The Pentagon (particularly in Baghdad) provides several programs and training is done either in conjunction with the ministry or at the ministry. Additionally, AMAR provides several services that are not provided by the ministry of health, such as traditional birth attendants, community education, women health volunteers, school health education, and health counselling. AMAR employs over 2,000 people to do this work. One of AMAR's donors commented, "...at a cost of

US \$3.80 per year per target beneficiary AMAR delivers excellent value for money on this program.”

Services:

Therapeutic services include treatment of acute illnesses, management of chronic diseases, control of diarrheal diseases and oral rehydration therapy, and management of acute respiratory illness.

Preventive services include maternal healthcare, child healthcare, and environmental healthcare.

Laboratory care: In Basra in April 2003, there was no laboratory in the south of Iraq and all samples had to go back to Baghdad. We suspect this to be one of the key reasons why healthcare in the area was found to be at such low levels. We have since intervened and there has been a greater than 50% increase in the number of patients served by the laboratories. We are able to collect almost twice as many samples and run 70% more tests as compared to baseline. Our labs provide greater capabilities than previously available, including the ability to run serology, chemistry, cell count, sputum cultures, urine cultures, and direct microscopy. Improved laboratories greatly enhance the efficiency of the medical care provided.

Medical training: We conduct regular weekly training of our medical staff, paramedical staff, and traditional birth attendants (includes mid-wifery). This training is conducted in conjunction with the Ministry of Health and is carried out consistently in every health center, as well as the ministry. The paramedical staff is comprised of our *Women Health Volunteers*. These are women who have not worked prior. We recruit 25 women per class.

We also conduct community education of the general public to include local leaders. We intermittently call together meetings which are often held in nearby universities (Head office in the south is located in Basra University). The Ministry of Higher Education has invited us to setup a university in Baghdad. This will be done in partnership with Baghdad University, with whom we are currently building a relationship. With further assistance, we hope to place the School of Public Health and the School of Nursing at this location.

Women Health Volunteers (WHV):

They are all affiliated with a catchment area health center. The catchment area is comprised of the local neighborhood. It is the same area where the teachers in the community are from, the same area where the patients come from, and the same area where we do community teaching. The concept of the catchment area aims to lift the health of an entire area using multiple different, but simultaneous, approaches. Women health volunteers are critical to this mission, because after training, each lady is allotted fifty families whom she visits monthly and refers back to the health center. She typically develops a close relationship with the families, and as such, she is able to identify problems and provide assistance in a timely manner. She provides assistance with not only medical care, but also with teaching, morale, and social support. Up to a third of the families supported are widows. It is not uncommon that the women volunteers are the only visitors the widows have. Many of the children are orphaned and on the streets. The women health volunteers help to reach out to this population as well. They are in no way affiliated with any organization other than AMAR and the community recognizes these women as their allies and representatives.

Health Education:

The women health volunteers use specially printed textbooks for their regular family visits. They also help secure community trust and participation in the Ministry's health initiatives, such as polio vaccination drives. Over 16,000 health documents have been printed by AMAR for this work. We have found that by using these specially printed materials which rely on the use of symbolism and drawings, the women at home conceptualize and see an association between a word and action. These initiatives have helped bring people forward to the literacy classes, where we teach an average of 5000 people weekly. We teach the English language and are in the process of developing information technology classes in the hopes of encouraging a greater participation of the young men in the community.

Benefits of the Women Health Volunteer Program of the AMAR Integrative Health Programs:

Within the local community, becoming a health volunteer is revered. As a result, the volunteers have a good status in the community and derive a sense of personal dignity. The program creates a career for these women and helps human resource development. The women learn transferrable lifetime skills and are provided job opportunities at AMAR or other agencies. The women are given an honorarium and reimbursed for all associated costs. The WHV create a new professionally trained network that we find helps stabilize society locally. Its educational efforts are succeeding in bringing people off the streets and into the classroom, promoting a sense of community, and team building. The AMAR Foundation rests on capacity and institution building. To continue to develop it is essential to establish a school of public health.

In summary, we believe that the WHV demonstrate, perhaps for the first time, the concept of coordinated and targeted volunteerism. The program has been tested satisfactorily within Iran, Iraq, and Afghanistan. We believe that our whole program is indeed a tool for peace

and security, perhaps the strongest tool. To deflect civil unrest and bring societies back together again, we place our health centers in strategic locations after careful research and permission. We go ahead only after invitation by the tribal leaders, the local imams, and the local people, particularly the women. Therefore, there is already a piece of glue that brings society together.

When we put all these programs in place, one can see how the whole community starts to work again as one and starts to benefit. When we expand into other countries, we should focus on fragile, failing, or post-failed states. This is particularly important where conflict situations can escalate and have unintended consequences in other parts of the world, such as Yemen, Pakistan, Afghanistan, and some African countries. The AMAR integrative public health programs rest on capacity and institution building. We find that that the WHV fulfill those goals impeccably, though it is imperative to keep in mind that it is not a standalone program.

The AMAR integrative public health programs are a long term investment. If established successfully, we may all be able to build a network that far surpasses the networks such as Al-Qaeda. Health in all facets is the ultimate healing tool for fractured hearts and minds. The commitment requires persistent and sustained levels of effort, but the rewards are countless.

COL (Dr) Ron Poropatich, Deputy Director Telemedicine and Advanced Technology Research Center

We have the capability to do mobile computing on a cell phone. Last year was the first year that digital images exceeded images on print film. Epocrates was a major milestone in getting personal digital assistants (PDA) to be more utilized. The next major breakthrough was the iPhone. New generation cell phones, such as the iPhone with its big screen, camera, computing capabilities and network, are making a significant impact on telemedicine today. A recent report estimated that 3% of Africans have access to the internet. The percent access for

North America is about 60%. It is estimated that by 2011, 70% of all physicians will use a smart phone in day to day activities. If all providers are already using smart phones, then we are able to eliminate the training issues and other barriers to carrying out telemedicine. Some issues are centered on security, particularly if we are proposing moving personal health information over cell phone lines. We anticipate that the security component will be addressed with continued progress.

How do we use cell phones in stability operations? This question was addressed in depth at the recent Mobile Health Summit. The discussion summary is available at www.health.mil. This meeting was the stepping stone in terms of formulating our thoughts regarding how we use cell phones in AFRICOM. Current thoughts are notional at this point, however the implications of cell phone technology in the realm of medical education delivery to remote areas is significant. There are pervasive problems of manpower, but very simple education downloads can be made available to very remote parts of the world.

Over half the world's population has a cell phone (4 billion people), while less than 10% has a computer. As cell phones become better, faster, and cheaper with improved cameras, computing power and network availability, one begins to see how it becomes the one singular technology that will change healthcare delivery more than any other technology. The cell phone revolution is here already. We need to get these abilities into the hands of the nations and the people that we are trying to serve. I believe the next big push is public health. How do we work with cell phones so that technology and information can be pushed down to the individual, be it the patient or the healthcare provider? In many instances where there is need, the skill set for healthcare providers is very limited. We need to provide the tools to these providers so that they

may in turn further deploy it. There are over three billion cell phones, more than any other computing device.

In Africa, there has been a tenfold increase in cell phones. It is now a trillion dollar industry, with a 30% growth rate sustained for 20 years. A 1% increase in mobile phone penetration in developing countries is correlated with a 4.7% increase of average per capita income. A recent Lancet article reports that in Kenya there were 270 patients on antiretroviral therapy during the crisis after the contested election. With the subsequent unrest, they were able to show that 220 of the 270 patients were able to maintain communication via cell phone and still able to take their antiretroviral therapy. This has a significant implication on the potential for use in disease management. The challenge is to figure out how to organize and utilize the technology. The technology and resources are poised for a convergence of the life sciences, health and wellness resources, and wireless technologies for the delivery of mobile health. The key focus areas are clinical consultations, education, research, bio-surveillance, and disease management.

In Africa, 1 million new phones are being obtained every day. It is a growing market and is continually getting bigger. Africa is the first continent to have more mobile phone users than fixed lines users. The mobile phone is the world's fastest growing market and 95% of the subscriber base in Africa is prepaid. Simple text messaging is much cheaper compared to voice, which further facilitates the kind of application utilized in the Lancet article in the Kenya scenario. It provides a simple and inexpensive way to reach out to patients. As Africa continues to liberalize its telecoms markets and opens up to further competition with foreign investment, the mobile sector will be a vital component of future growth. With 74% of all telephone users in

Africa having access to cell phones, there is now an ideal environment to deploy the mobile health initiatives with other federal agencies and humanitarian groups.

The objectives of the recent Mobile Health Summit sought to address the issues of deploying mobile health. It sought to examine the current and emerging cell-based application of M-Health and mobile telemedicine, assess priority issues within the DoD, explore critical success factors for implementation, and identify potential next steps for multi-sector collaborations. Requirements from multiple perspectives were evaluated in the setting of prior experience. There was collaboration with industry agents, humanitarian services, academia, as well as physicians involved with M-Health from different geographic areas of the country. The consensus was to keep it simple and avoid the bells and whistles. The solutions that we develop need to address universally common issues and be able to mesh military M-Health interests with international as well as local infrastructure.

Improving current infrastructure will aid in combating some of the problems imposed by the lack of manpower. Remote education and intervention would be a very feasible option and instrumental in improving public health efforts. The general NGO perspective agrees that there is a need for information and communications technologies (including mobile communication and computing devices) to support health and health-related areas. Recommended new technology would ideally interface between data capture devices and cell phones. It would have quick interoperability with local wireless providers, with a supply of SIM chips keyed to major African service providers. This would maximize availability of unlocked GSM or multi-standard multiband phones for US military health workers. Logistical issues that need to be addressed include providing means for recharging phones and using devices that optimize battery power. Text messaging works well and it's cheaper and more robust than voice. The downside again is

literacy, but this may also be circumvented perhaps with video clips or picture messages that may facilitate understanding.

The key points are evaluating patient care issues and supporting public health and patient education. We should consider placement of networks that allow for our purposes as well as commercial use by hosts countries. There are multiple educational programs that help to facilitate remote education. For example, there is a super course put together by the University of Pittsburgh It is a global library of PowerPoint lectures that covers a myriad of healthcare topics. Lectures are contributed by worldwide experts in their respective fields. There are numerous other similar programs with numerous servers that are already networked. We might be able to improve accessibility to such sites and impact continuing medical education in remote parts of the world. Such initiatives might require additional input, such as providing some of the hardware as well as software required to give a lecture, but this would be a onetime expense. There are robust opportunities for M-Health, keeping in mind the need to create solutions that are stable, easy to implement, secure, and expandable.

There numerous satellites being pushed in various locations to include CENTCOM, Iraq, Afghanistan, and the AFRICOM theater, all of which allow more bandwidth to facilitate the necessary connectivity. The President's AIDS initiative, with its 10 million dollar public/private partnership, is focusing on reaching out to millions of HIV positive patients in Africa using cell phones and PDAs. This project has been successful in Rwanda, Tanzania, and other countries. The DoD is working on a public /private partnership with the global AIDS coordinator, which is a modification of the PEPFAR project. The plan is to leverage the existing infrastructure in Tanzania to enable the DoD to send text messages to the host nation active military stationed in remote or cross border areas. A similar military-military pilot program is being planned in

Kenya, where they plan on completing pre as well as post surveys targeting HIV knowledge and attitudes among military personnel in remote areas.

In summary, Africa already has an expanding mobile phone market, which provides an excellent opportunity to develop integrated mobile health information systems. Wireless healthcare applications are evolving. The US Government wireless project with PEPFAR as well as USAID is global. It would be ideal for our purposes to partner with these agencies. Our key focus is to leverage current mobile health projects and partner with other public/private groups in the African continent to accelerate the delivery of healthcare solutions.

COL (Dr.) Grey Heppner, Deputy Commander, Walter Reed Army Institute of Research

Much of the work we do underpins the stability operations that bring most of us here today. WRAIR is the nation's oldest school of public health. The DoD has its largest concentration of Infectious disease physicians at WRAIR, and we are very privileged to be co-located with the naval research center.

We have multiple special foreign activities, the largest of which are in Thailand and Kenya. Our goal is to develop medical solutions. We have developed many of the vaccines or drugs that are routinely in use (e.g. Mefloquine, hepatitis vaccine). We have a budget of about 200 million dollars, thirty million from outside sources (NGO's including the Gates foundation). We are well supported by the Agency for International Development on key projects, and of course the PEPFAR.

Our military psychiatry unit has played a central role in identifying key points for intervention in soldiers. There is a forward unit in Heidelberg Germany as they enter and exit theater from Heidelberg. Our laboratories in Bangkok, Thailand work closely with the GEIS

program and have developed many anti-malarial drugs. Their work on dengue, as well as Japanese encephalitis, is also very well known. A recent letter in NEJM discusses emergence of artemisin resistance. These labs are closely integrated with the host nations, working with the military, ministries of public health, and universities that represent countrywide as well as regional presence.

Hepatitis E vaccine was developed in Nepal. Our labs were the first ever to demonstrate a vaccine could have activity against hepatitis E, which of course has a tremendous mortality in pregnant women. It can also affect soldiers and is of global health importance.

We were invited in 1969 to work on the problem of trypanosomiasis by the Kenyan government. We have maintained a presence since then. The United States Medical Research Unit (USMRU) is one of several groups that work in partnership with the Kenyans. The paradigm is one of collaborative support. We work both with the IRB for protocols in Kenya as well as the Surgeon General and the U.S. FDA. In fact, one of the first clinical investigation chapters for clinical research associates was founded by the group in South Africa. The focus areas are the diseases of global health, public health, and military relevance to soldiers deployed to the area. This unit focuses on malaria drugs and vaccines, in conjunction with PEPFAR and GEIS. Work is performed in diarrheal disease and vector control. In fact, the recent outbreak investigation of rift valley fever was conducted by Army working with Kenya Medical Research Institute, CDC, and entomologists. The group described the novel vector for rift valley fever which affected the population and as well as wild stock.

How is research related to stability operations? Essential stability tasks include support of public health programs, assessment of public health hazards, evaluation of need for additional medical capabilities, prevention of epidemics through immediate vaccinations, operation of

existing civilian medical facilities, and promoting and enhancing host-nation medical infrastructure.

We address a lot of this in our longitudinal program. We maintain a working relationship with the host nation and the Ministry of Health. More importantly, there is a relationship of trust with the Kenyan medical research institute. When we bring a protocol or plan, it enables it to go forward expeditiously. We have played a critical role in improving the ability of Kenya to critically evaluate new interventions such as drugs or vaccines.

We operate a center in east Africa which trains four Africans each year in microscopy. This initiative ensures accurate diagnosis and helps to mitigate unnecessary expenditure of a critical supply of anti-malarial drugs. There is continued emergence of multi-drug resistant malaria and the center is now developing an intrinsic ability to identify resistance patterns and effective drug regimens. We have worked on this in cooperation with the Kenyans.

There has been a large body of literature supporting the concept of disease interaction between HIV and malaria. This interaction is now evident due to excess mortality from both disease entities. Studies suggest that viral loads increase in the presence of malaria, which perhaps results in an increased likelihood for person to person transmission during a single encounter.

WRAIR in recent years has played an increasingly large role in PEPFAR. The DoD supports HIV programs in African countries such as Tanzania, Uganda, Kenya, and Nigeria. Our institute is responsible for \$53 million in annual disbursements to treatment, diagnosis, and prevention of HIV in these nations. The U.S. military HIV research program employs a full spectrum of care, ranging from preventing vertical transmission to taking care of orphans, counseling, community outreach, and education.

It also forms an ethical basis for the conduct of medical research in Africa. It would be impossible to go and evaluate a diarrheal disease, malaria vaccine, or an intervention for tuberculosis and not know a participant's HIV status. Once you've obtained this information, it is our belief that it is important to provide some means of treatment. This therefore provides a framework for addressing one of the most important public health issues where we conduct medical research.

In Kenya we work in the Rift Valley and also in the areas in and around Kosumu. In Nigeria we work with the military, but these facilities are open to local civilian populations. In Tanzania we work in the highlands. In Uganda it's a fairly circumscribed area known as the Kiyumya district.

Our scope of operation is increasing from FY04 \$6 million/yr to FY 08-09 closer to \$60 million with major emphasis in Tanzania and Kenya. Overall, we conduct a sizable operation involving 189 points for patient care and interaction. We employ all modalities in treatment, diagnosis, and prevention. We have found community engagement to be essential to all initiatives. Because there is no tried and true method for success, we are constantly examining our operating paradigms. We keep constant communication between WRAIR and host countries. We are always seeking means for improved effectiveness to aid in the transfer of information to the local people. We are currently working to improve diagnostic capabilities.

Diarrhea itself is a predictor of your lifelong trajectory. Just as a child who's suffered from cerebral malaria is unable to reach full capacity due to residual brain damage, we also know that chronic diarrhea leads to chronic malabsorption, and in some cases, delay of developmental milestones, hence affecting the trajectory of a child's life.

The Institute for some years has worked on salmonella and cholera vaccines and we are beginning to work on simple interventions in Kenya that would be applicable both to soldiers as well as the civilian Kenyan population. The use of zinc sulfate has been evaluated and found to be useful in the pediatric population. We are currently examining a population of adults in Victoria. We are in the beginning stages of a study intended to evaluate the possibility of adding zinc sulfate into a Powerbar that would be added to a soldiers rations.

One of the highest transmission areas in the world for malaria is in east Africa. The burden there is tremendous and we are working in conjunction with the world's largest non-profit organization to create a vaccine against tuberculosis. This is our first effort, but it is our goal to continue to expand. Tuberculosis remains a major concern from a public health viewpoint.

Every minute three children die from malaria. Aside from the enormous mortality effects, the secondary effects can also be life-limiting. The highest incidence is reported in sub-Saharan Africa where it affects mostly children under the age of 5. WRAIR has played a key role in all the FDA approved medications that one might take for prevention or treatment to date. The two drugs for multi-drug resistant malaria are either quinine or quinidine and artemisin. In the United States it is almost impossible to get quinidine and its side effect profile is such that it is really not acceptable in the modern era. Artemisin is widely available in the world, but there are such varied manufacturing standards that quality of drug is never quite reliable. The laboratories in Kenya have played a critical role in the development of this drug using FDA standards.

COL (Dr.) Karl Friedl, Director, Telemedicine and Advanced Technology Research Center

(TATRC):

It is difficult to top the real-time, real-world efforts of Colonel Heppner and the accomplishments of the Kenya lab. We are sort of the cleanup operation, the special ops of research one might say. We are funded primarily out of congressional special interest money and we try to steer that to fill the gaps with some agility within the different programs. TATRC tries to fill in when there is a quick transition, or maybe a novel approach, that would support WRAIR and quickly move to that target. We try to stay ahead of the ball by using other kinds of money and funding opportunities to link up resources with the needs.

In FY09, TATRC has 420 million dollars in special congressional interest appropriations with about 150 different designated recipients. There are opportunities where we can fill real-time needs that require completion within the next year or two, and in some cases, maybe even quicker than that. We often pull together meetings to help transition something across the finish line. We are currently taking things that don't require a lot of new technologies, but rather require stringing things together to make them work. That is another TATRC theme: let's just do it. Current TATRC projects may be applicable to stability operations in the Africa Command.

500 active projects:

1. **Medicine in austere environments:** This is relevant to the military and what one might do in an austere environment such as most African countries. We are thinking of things such as distance medical training and blood product safety. Corporately funded programs often overlap and we ensure that we link projects directly whenever possible
2. **Stability operations:** what do we have that is affordable, useable, sustainable and appropriate culturally.
3. **Medical training simulators:** Madigan Army Medical Center Simulation Group is currently working on post-partum hemorrhage simulator, which may be applicable in

austere environments. The rate of post-partum hemorrhage is higher in Africa than anywhere else in the world according to the UN. Most births in these regions are attended by midwives who may or may not be formally trained as midwives. USAID has begun utilizing low cost simulators for training in India and they have been able to show a significant positive impact. The UN goal is to reduce the incidence of post-partum hemorrhage by 75% by 2015. This is a key target to which we can apply some resources and provide support towards its accomplishment.

4. Transfer of existing data into electronic media: Texas Health Sciences Center in partnership with the TATRC and NASA are working on a system called GuideView. The concept allows for quick access to necessary data. This may allow for real-time medical guidance to personnel in the field.
5. A consortium of engineers and physicians in the Boston area, with funding from TATRC, are currently working together on the global health initiative. They are searching for innovative approaches to low cost effective interventions in some of these environments of interest. Sample projects include a NICU made out of Toyota spare parts. It obviates the problem of sustainability (i.e. the heater is from the headlight, the alarm is from the door alarm). This approach allows for ease of replacement and sustainment.
6. Diagnostics: Micro fluid systems, which are credit cards sized analytical systems, allow for blood testing and CD4 counts. It is placed over camera parts that are not very expensive and are easily transportable. This would be instrumental to medical decision making in these austere environments.
7. Blood products and blood safety: WRAIR is involved in the development of products that essentially use riboflavin and UV light. Riboflavin binds to anything that binds a nucleic acid, such as a pathogen or WBC. They are both awaiting FDA approval. This would be a substantial leap ahead to cleaning up the blood supply before you had to use it. They are still in the testing phase
8. Iron deficiency anemia is one of the most prevalent problems in environments of interest. Previously, we've come to the Institute of Medicine and teamed with USAID to report on what the composition of a basic refugee emergency ration should be. We queried whether or not it had to be something like the MRE. The MRE is not affordable. USAID needed a cheap, readily affordable option to provide to large numbers of people. Addition of an immune supplement such as glutamine was not an option due to cost. The question of sustaining immune function in these areas remains and there is a lot we can do with nutritional support.
9. There is a fair amount of excitement over the notion of natural orifice surgery. It has now been demonstrated that an appendectomy can be performed with this technique. You don't need a sterile field and this would be especially phenomenal in an austere

environment. This would conceivably lower morbidity and perhaps improve recovery. This concept of natural orifice surgery is now a priority at CIMIT.

10. There is a small company in the UK interested in stabilizing proteins to produce shelf stable vaccines and drugs. This would be applicable in austere environments where access to reliable electricity is minimal. If there is interest in this it can be targeted as high priority.
11. Soft landing systems to deliver blood by aircraft drop without it bursting when it landed might be an important thing. This is especially true in some parts of Africa where there might be limited access for up to six months of the year. Such systems would allow for uninterrupted delivery of supplies.

US Military Partners

USAMRMC HQs, USAARL, USACEHR, USARIEM, NHRC, Army & Navy Medical Centers

Extramural Partners

Pacific Telemed & Tech Hui, Center for Integration of Medical & Innovative Technology (CIMIT), Conemaugh, UTHSC-Houston, Loma Linda University, Center for Advanced Surgical & Interventional Technology (CASIT), Samuel Research Institute, Center for Excellence for Remote & Med. Under-Served Areas (CERMUSA), Windber Research Institute, Joslin Vision Network, Center for Military Biomaterials Research (CeMBR), Schepens Eye Research Institute, University of Maryland - Minimally Invasive Approaches to Surgery, Ryder Trauma Center

International Medical Military Partners

France, Norway, Canada, UK, Germany, Austria, Singapore, Japan

**Africa Command Health Symposium: Health as a Bridge to Peace and Stability
Summary of Remarks**

Day 2, January 9, 2009

Dr. Warner (Butch) Anderson, Director, International Health (OSD/HA)

The division of International Health has outstanding and unparalleled capabilities in Middle East health analysis and a number of different areas that I won't go into. I want to encourage you to take the time to get acquainted with all of us and what we do. Yesterday, I started out talking about the different cultures gaps. I'm reminded of a joke that I like to tell. Have you heard about the mission to secure a building? There is a study being done of three identical buildings that need to be secured. They tell the Marines to go secure the building. The Marines go in, kill everyone, place explosive, and collapse the building. They leave and say mission accomplished. They then tell the Rangers to go secure an identical building. So, the Rangers go and blow the door open with explosives, throw everyone on the floor, handcuff them, put snipers up on the roof, put anti-tank weapons on the perimeter, and call for a Chinook to extract them. Next, they send the Air Force to secure their building. The Air Force opens the door and says, "Anyone here?" They then turn off the lights, lock the door, and leave. My point is that those are three definitions of securing a building. While this is hyperbole, those of you in the military know it is not too far off. Words, again, mean different things to different people. Yesterday, we had a lot of acronyms floating around. Today if you use an acronym, please have the self awareness to define it for those who may not speak acronym. I want to introduce an acronym that I saw in the *Economist* this week. It is WOMBAT. It means waste of money, brains, and time. So that's an acronym that we can probably all use from time to time.

I want to move on and introduce Ms. Embrey. You can all read her biography, so I'm not going to go into a lot of detail. When I came on-board, she said, "Tell me what you are going to do." I said, "I don't know what International Health is going to do and can you give me about 3 months and we'll sort of figure it out?" And she said yes. I really appreciated that. The problem is that we have been so busy that we're almost a year out now and I still haven't figured out what our mission is. She is the person who resources me and keeps me out of jail. She is an extraordinary mentor and advisor. I've really appreciated the guidance that she has given me. She is very kind and knowledgeable. It's my absolute pleasure to introduce Ms. Ellen Embrey.

Ms. Ellen Embrey – Deputy Assistant Secretary of Defense for Force Health and Readiness

Thank you to Butch Anderson, COL Geller, and all of those who have traveled here to be with us. This is important to us. This is the first time we have been able to bring together the various stakeholders to talk about the possibilities and opportunities. I think we have a lot of hope, which we now have to translate into action. Many of you are from academia and the private sector and you can help us realize this goal. We very much appreciate your interest and participation as we develop partnerships.

Two years ago, the African continent was still a part of the world that was addressed by no less than 3 Combatant Commands, European Command, Central Command, and Pacific Command. Practically speaking, these Commands had many other responsibilities in other parts of the world. Africa, at times, became a third or fourth priority. Thanks to the vision of our President and his commitment to Africa, the Secretary of Defense, the AFRICOM Commander,

and COL Geller, I think we have a completely different story today. We now have a Unified Command dedicated solely to the continent of Africa.

AFRICOM is an acknowledgement of not only the growing strategic importance of Africa, but also to the U.S. defense and foreign policy. It is important to recognize that peace and stability there impacts peace and stability not only in America, but also around the world. Unlike other Combatant Commands, AFRICOM's mission emphasizes diplomacy and development as important paths to security and stability. This is particularly true in the areas of humanitarian assistance, civic action, security, military-to-military cooperation, and disaster response preparedness.

Instead of a traditional military structure, AFRICOM is actually physically structured in its management and staff to have significant representation from our friends here within the State Department, USAID, and other governmental and non-governmental organizations. And while we partner with them at other Combatant Commands, we've never had them on our staffs, and this is a significant change.

There are precedents for this type of collaboration. A U.S. Navy research unit was established in Cairo in 1942 and it remains there to this day. They work closely with the Egyptian Ministry of Health, USAID, NIH, CDC, and many others. The U.S. Army medical unit which was activated in 1969 is still conducting research on a variety of diseases to include malaria and HIV/AIDS in Africa. There has also been an Army research unit in Kenya for more than 30 years. AFRICOM takes our involvement much further. It recognizes not just assistance in the areas of health care and research, but also the intricate relationship between health, development, stability, and prosperity.

Part of AFRICOM's strategy is to develop a DoD medical strategy for the continent in regards to how we are going to interact with other countries to advance mutual interests. We are there to help build relationships between our respective militaries, improve medical capabilities, and develop the capability to respond to natural or man-made disasters. We also want to strengthen relationships and other government programs with other national governments. The work of the Command Surgeon is to realize that America is committed to focus not just on Africa problems, but its potential.

At a recent diner, President Bush recounted the travels of John T. Walker, the former Episcopal Bishop of Washington, through Uganda in the 1960s. That experience convinced the Bishop that Africa's greatest treasure is not its spectacular scenery or natural resources. It is, however, the determined spirit of its people. The President noted that he had a lot of uplifting experiences as President, but one of the most uplifting had been to witness a more hopeful era dawning on the continent of Africa. The President said, "It has been moving to watch Africans root out corruption, open up their economies, and invest in the prosperity of their people." Some have questioned why we should care about Africa with the current state of America. Bush said, "It is in our national security interests to defeat hopelessness; it is in our economic interests to help other economies grow as we work together to improve fiscal stability; and it is our moral interest when we find hunger and suffering to respond in a robust and effective way." I think that pretty well sums up the core mission of AFRICOM.

I would like to welcome Dr. Akukwe, Dr. Ebrahim, Dr. Lawry, and Mr. Schaaf. Each has their own role in today's program and I'm looking forward to hearing what they have to say as we work towards our common interests. Again, I'd like to thank all our diplomatic friends who have traveled far to give us their thoughts on the health challenges and opportunities in this

important area of the world. But more importantly, let us determine how we can build that bridge to peace and stability through health.

Dr Chinua Akukwe, Executive Chairman of the African Union Africa Diaspora Health Initiative

Presenting the Address of her Excellency Madam Amina Salumala of the African Union.

The Ambassador is unavoidably absent but sends her regards and thanks the AFRICOM for organizing the symposium. She believes that the focus on health as a bridge to peace and stability is very appropriate because without enduring peace and political stability, healthcare is often unattainable in most parts of the world. The focus on health partnership as part of this symposium is also timely because in resource challenged environments of the world, progress in health is often related to the capacity of national governments to work with domestic as well as international stakeholders.

The Ambassador was particularly interested in the focus on community health, medical research, capacity building, and emerging technologies. In her estimate, drawing on prior experience as a government minister in Tanzania including minister of foreign affairs, she understands very clearly that there needs to be a convergence of interest on health at the community level, capacity building, and emerging technologies in order to make a lasting difference.

Africa faces a fundamental challenge summarized by the WHO in 2006, “ The African continent accounts for 10% of the global population but represents 24% of the global burden of disease, it is home to only 3% of the global health workforce, and has only 1% of global healthcare spending.” Additionally, the continent also has the fewest ratio of healthcare workers

at about 2.5/1000 individuals. According to the WHO, for Africa to meet its healthcare needs, it needs to increase its healthcare force by 140% in less than 3yrs. We know that this may be virtually impossible.

The African Union (AU) as the primary continental organization for Africa has a primary objective to ensure that every child has a reasonable opportunity to reach his or her full potential. Since the absorption of the former Organization for Africa Unity, the AU has developed a more personal focus rather than the political rhetoric of the past. It believes that every person should have an opportunity to fulfill their potential. A very important means of fulfilling this potential is through healthcare. The African Union believes that healthcare delivery from the conceptual stages to the design implementation, monitoring, and evaluation should be based on a framework that provides all families with access to timely quality and affordable healthcare services. Every segment of the population should have access to basic health services. We believe there are four critical aspects to basic healthcare services:

- Preventive health
- Clinical Healthcare
- Rehabilitative services
- Social support services

At the core of the African Union vision of health is the concept of primary healthcare. The primary healthcare concept brings healthcare closer to the targeted population, establishes basic minimum health services, ensures accountability, and allows stakeholders to have a stake in their own health.

The AU organizes its activities through the concept of primary health care. Towards this end, the AU has begun working with member states to develop continental platforms for better health. These platforms include the active participation of other continental organizations,

regional economic organizations, professional groups, the civil society, and bilateral as well as multi-lateral agencies including the World Bank.

The AU organizes an annual meeting of African ministers of health, (Next April 09). There is attendance by Ministers from most of the African countries who work towards continual review of a series of technical frameworks as well as develop continental platforms for action. Within the last two years, the AU has transitioned from the conceptualization phases to implementation of specific steps.

In 2007, the Union established the Africa health strategy, which we view as the primary healthcare document for Africa until 2015. This document has been agreed upon by African health ministers and signed off by African Heads of State. The document mandates the strengthening of health systems and the current agenda focuses on means of achieving this mandate throughout the continent.

Additionally, in 2007 the AU adopted a new framework to achieve universal improvements in the awareness and management of HIV, TB, and malaria before the end of 2010. The consensus of current African Heads of State is that if we are able to strengthen response to these diseases at the community levels, we may begin to strengthen the overall health systems from the bottom up.

The AU has also developed other continental platforms including frameworks for drug manufacturing at country level, as well as frameworks for reproductive health. One of the most important strategies that the AU has adopted in the last few years has been the recognition of the potential role of Africans in the Diaspora.

In 2003, the AU adopted all Africans who are living outside of Africa as the 6th region of the continent. They have been bestowed all the rights, privileges, as well as responsibilities. A

major focus of participation of Africans in the Diaspora is their role in the overall health of the continent.

The AU notes that the American Medical Association has over 20,000 physicians of African descent. Similarly, it notes that there are thousands of African American healthcare professionals in the United States, as well as Canada. The AU believes that this pool of providers represent a large potentially mobilizable group to aid in achieving the ultimate goals of improved healthcare in the continent of Africa. To this end, in September 2008 the AU- Africa Diaspora Health Initiative was launched. The primary focus of this initiative is to move from idealistic discussions of the relationship between Africa and its brothers and sisters in the West to specific discussions on potential roles.

The Africa Diaspora Health Initiative has three major goals:

1. Support and enhance healthcare workforce in Africa. The goal is that within the next year scores of African Diaspora healthcare professionals will begin excursions to Africa, lasting from 6wks to 12months, to work on specific issues regarding improvement of the health workforce in Africa.
2. Support best healthcare practices in Africa. It is well known that many African countries do not have sustainable health policy because of the way healthcare is funded. Most current funding comes from external sources, who inevitable dictate the direction, objectives and goals of the healthcare industry. The idea now is to assist them to have the best healthcare practice either at policy or program level.
3. Advocate for better health in Africa. All partners will have a better idea of the needs and priorities of African countries. This is one of the major interests of the Ambassador regarding the African command. She looks forward to an opportunity where there will be dialogue with Africa Command on its health programs to ensure congruence with the priorities in Africa.

The newly established Africa Diaspora Health Initiative has a steering committee comprised of Africans in the Diaspora who have distinguished themselves professionally and are committed to making a difference on the ground in Africa. Her Excellency looks forward to recommendations from this symposium and the possibility of partnering with the health program

of the Africa Command as they move forward. Ultimately the vision of the AU is a continent that is healthy and prosperous and free of the burden of disease, disability and premature deaths.

Dr Shahul Ebrahim, United States Health Attaché to the African Union

Improving health is a security stabilization process. We hear a lot about child soldiers, but not about women soldiers. When very young women who in other circumstances would be in universities, working, or caring for the family are instead drawn to these conflicts, it represents a significant destabilizing impact not just on their families, but also to their immediate communities and societies at large. A significant aspect of bridging the divide is the provision of necessary human services to perhaps help bring these people back to civil society. Human security is freedom from death, poverty, pain, or fear of whatever makes people feel insecure. Vulnerability really is the lack of key assets, be it education, nutrition, or health facilities. When speaking of Africa, the focus is often on areas for improvement, and rightfully so, but we will also touch on some achievements that have been made to date. Over the past 40-50 years we have achieved tremendous gains. Irrespective of the HIV emergence, there has been in some areas up to a 2/3 reduction in infant mortality. Nonetheless, Africa still has the highest global burden in infant mortality. Despite this, what we can take away is that the successes to date prove that this is not an insurmountable task.

The community mobilization involved in smallpox eradication forty years prior was not a small feat, but it was achieved. It is a success story. Maternal mortality was identified as a significant public health issue in 1987, and since the initiation of the Safe Motherhood Initiative, there is promising data regarding the trend of maternal mortality over the last two decades. There have been small but measurable improvements in some areas of Africa. Sub-Saharan

Africa has the lowest prevalence of smoking in the world, though we anticipate this will change and expect an increase in current trends given ongoing tobacco companies' marketing targets. Now is a good time to intervene if we seek to maintain or even increase the current levels of smoking avoidance. There has been a 99% decline in the incidence of guinea worm disease and poliomyelitis has been eradicated in all but one country. There's been a significant reduction in childhood mortality and overall life expectancy has relatively improved in countries that are not overcome with the burden of HIV.

The global burden of disease approach uses the DALY as a reproducible measure of disease impact and burden. It takes into account not only fatalities, but disabilities as well. As we know, Africa has the highest burden of disease, a majority of which is attributable to communicable diseases, followed by maternal mortality, non-communicable diseases such as environmental diseases, and emerging issues of injuries. There is an increasing trend toward import of refurbished automobiles given the current emergence of the middle class. Given the backdrop of poorly enforced traffic rules and regulations, poor infrastructure, and limited capacities for handling emergency care, the rate of vehicular injuries leading to disability and fatality are rising.

Women's health is also a significant burden. Maternal mortality is still the highest in the world in about 25 African countries. Statistically, these countries account for about 60-70% of the global incidence of maternal mortality, especially in fragile states. There is ongoing advocacy on this subject, but significantly more needs to be done to draw attention. Most of the women involved die at about 25-30 years of age, often leaving behind 3-4 children per family as orphans. As a result, they are denied appropriate development opportunities. In many of these countries, non-formal employment accounts for up to 60% of the GDP and that is also severely

impacted by the loss of personnel. Additionally, the loss of a wife or mother from a preventable cause such as childbirth does cause people to lose trust in the system and perhaps align with non-governmental forces. It can be quite destabilizing. The problem is quite pervasive in hard hit countries. For instance, in Sierra Leone there is a 1 in 6 lifetime risk of death from childbirth. We know that approximately 85% of childbirth should occur without incident, however in a setting of minimal basic care, one would naturally expect an increase in the number of complications, as well as an increase in the number of fatal outcomes. There are no systems in place to address complications as they occur. Estimates to date show that with the appropriate resources, we can significantly impact the toll of this worsening trend. For an estimated 4 million dollars in Guinea Bissau a total of 28,500 mothers and infants could be impacted and 1800 children prevented from being orphaned.

Non-coercive family planning was successful in India in the 1960's. Unfortunately, this was not introduced in the same light in Africa and condom use did not become common-place until after the HIV epidemic. Nutritional deficiencies also rank high and will likely worsen due to the ongoing food crisis. South Africa has the highest incidence of fetal alcohol syndrome in the world. It is thought that the practice of paying for service with alcohol during the colonial and apartheid days served as the nidus for development of alcoholism. Since 2005, there has been an initiative by the WHO to assess the magnitude of FAS in other areas. Recent data suggests that there is a 30-35% incidence of alcohol abuse during pregnancy in Uganda.

Emerging diseases include zoonoses attributable to the large biodiversity. There is concern over migratory patterns and disease transmission. Travel patterns in today's society make it much easier to import and export disease processes. For instance, we know that it took 6 weeks for the 1918 flu to spread across the United States in an era when air travel was non-

existent and the population was not as large. Now look at Africa and imagine how long it will take a pandemic to spread. This is a real threat. What are we going to do about it?

Preparedness is at its lowest in the African regions, and this is an area for significant improvement and intervention. In most cases, the military services in Africa are often quite well organized and are probably the most functioning units in their respective countries.

From an environmental perspective, Africa is the lowest emitter of carbon dioxide. Despite this, they still do inherit the burden of environmental pollutants. About 30% of the DALY in Africa is attributable to environmental causes. Environmental sustainability is decreasing and so is the overall sustainability index. Prior estimates note that about 7% of the population has access to sustainable systems. This percentage is decreasing while the proportion of the population without access is steadily increasing.

Other notable barriers to successful implementation and sustainment of public health initiatives in the region include diversity of languages and ease of transport. The food crisis is also another challenge with 1/3 of the population undernourished. The African agriculture system did not pick up the great green revolution and as such has stalled. You can always look at a glass as half full or empty. Health is both an important outcome and input into Africa's security. For instance, we don't know what will happen if there is a flu outbreak in an HIV burdened area with people with low immune reserves. Fragile health systems, vulnerable populations, and fragile administrative infrastructure all contribute to the challenges facing intervention. Areas for intervention include solar energy, direct biotechnology, vaccine technology, agricultural interventions, and nutritional interventions to include initiatives such as fortified grains (e.g. folic acid fortification).

Dr. Ok Pannenberg, Senior Technical Advisor, The World Bank

From the World Bank's perspective, yesterday and today are quite special events in our view. The Department of Defense and military are not, to put it mildly, our traditional partners in health development. This event has opened our eyes a bit to the opportunities for collaboration. Yesterday, a distinction was made between collaboration and coordination. My former president, Mr. Jim Wolfson, at the World Bank used to say that no one wants to be coordinated.

The World Bank's portfolio in Africa is large and the funding varies slightly. Generally our portfolio for health investments in Africa stands at between \$6-10 billion per year and we are involved in most Africa countries.

I'd like to share two perspectives with you in regards to future collaboration. First, I was struck by how little reference has been given to finance and costing during this conference. The World Bank works very closely with all departments in African governments. Naturally, our first counterpart at the country level is the Ministry of Finance. But in health, it is always the Ministry of Health. One of our main concerns is long term sustainability. It may be very effective in the short term for Africa Command to assist African countries in a particular challenge that happens at that particular moment. But then the second challenge is how to make this sustainable, to ensure the U.S. intervention creates capacity for the country itself. We have in some, but certainly not in all, of our operations at county level links to the national military. At the central level, this is not always natural. When you look at university medical centers or the central hospitals, there is some capacity. Where the capacity is usually weak is in the remote and decentralized areas. For example, in you go to a remote area of Congo-Kinshasa, Mali, or

Uganda, they almost always have military presence, even though the district hospital has limited capabilities. So if you link up with the national military medical corps, you will see that there is capacity. Also, there is not an automatic link between the military medical services and the Ministry of Health. Quite often, they both operate in their own separate worlds.

There are also hundreds of NGOs providing various services that may not be tied-in formally with either the Ministry of Health or the military. There is potential for the U.S. military to support local militaries, create capacity, and be more inclusive. From the World Bank's point of view, we think communities are very important. While funding may be available for AFRICOM to undertake specific activities, the big challenge is how to engage in a way such that the host country military has the funding to sustain it after the U.S. leaves. Ultimately, all money for the military comes from the Ministry of Finance, so it is that triangular link that we would be interested in.

There are many good examples of collaboration. As we heard yesterday, Walter Reed has many ongoing research efforts. I chair the Standing Board of Tropical Disease Research (TDR) and I'm well aware of the collaboration on the research side. At the strategic level, I don't think we have ever had strong contacts between the senior managers at Walter Reed and TDR, but there are lots of opportunities there.

Saying one wants to collaborate and indentifying opportunities is one thing, actually doing it is quite another. It is very difficult, especially with the proliferation of actors in global health. With the U.S. military and AFRICOM potentially being major players in this field, finding how to make this work and be effective needs careful consideration. Where do we want to focus? If it is too wide, it will disappear in quick-sand. It needs to be focused and it needs to have the attention of the senior management at all the various institutions. The U.S. military has

its own rules and procedures. Many of the other active partners in global health have the same. The World Bank has all kinds of financial firewalls. To make this work is not a given. On the other hand, it is an opportunity that I would very much welcome from the point of view of the World Bank. It would be very interesting to have separate discussions after today to establish a small group for the Africa Command and World Bank to jointly follow this up. We could discuss target countries. Thank you. I look forward to a productive future together.

Dr. Lynn Lawry – Senior Health Stability/Humanitarian Assistance Specialist, Department of Defense

This was a very difficult talk to put together because much of what China does can only be found by looking at multiple sources of literature. Contrary to media reports, China's aid is about more than "just oil." Africa aid policy evolved from the 1950s to the 1970s. The motive and driving forces in the beginning were communist ideology and political benefits which have waned over the years. They wanted to strengthen political and diplomatic ties to fight against imperialism and colonialism and maintain national liberation and independence.

Between 1950 and 1970, China put 8 principles in place.

1. Equality and mutual benefit
2. Strict respect of sovereignty; no strings attached, no privilege required
3. Provide economic aid interest-free/low-interest loans; repayment could be delayed if needed
4. Help recipients develop self-reliance and economic development independently
5. Make quick effects/success with minimal investment
6. Provide the best quality equipment and material of its own manufacture at international market prices
7. While providing technical assistance, PRC assures recipients fully master technology (capacity building)
8. Chinese aid experts should be paid as same as their own experts of recipient countries. They are required to not have any special requirement or enjoy any special amenities. ("go native")

Since the 1970s the motive and driving forces have changed. It is now pragmatic and economic driven. Why? Because China has now become an economic power. Instead of having to get money from the old Soviet Union, they now have their own funds, ability, and air-lift to do this on their own. Their aim is to seek mutual economic cooperation and common development. The “Eight Principles” were changed in 1983 to the “Four Principles.”

1. Equality and mutual benefit
2. Practical results
3. Diversity in forms of aid
4. Pursuit of common progress

The diversity of aid came in different forms. These included grants which were the policy in previous decades, investment, cooperative/joint ventures, and engineering and/or contract business. There were driven by industry and what I would call capitalism. Although, I don't think the Chinese would classify it as capitalism. There are three dimensions to their aid; foreign direct investment, aid, and trade. The trade arrows are much larger going from China to Africa. It is also in support of strategic natural resources such as oil, iron ore, cotton, diamonds, and lumber.

In October 1995 there was a policy evolution during which preferential loans were introduced. These were mostly used for joint ventures by Chinese and local enterprises. They also provided mechanical and electrical products made in China. Today, Chinese products are seen throughout many African hotels. They established infrastructure and social welfare projects which would guarantee repayment of the loan. The first preferential loan project was an oil exploitation program in Sudan in 1996. Under this new policy, 100 projects developed up to 2004.

If you look at the foreign and direct investments that the Chinese make, you will notice that they tend to be in areas that the U.S. is not heavily involved in. In regards to transparency, the International Monetary Fund said in 2007 that China's outward foreign direct investment in 2005 was 5 percent that of the United States. Eighty percent was apparently going to the tax havens of Hong Kong, Cayman Islands, and the British Virgin Islands. The Chinese are not just in AFRICOM, but in all the Combatant Command AORs. The final destinations of their contributions were impossible to trace. Overall, there is a lack of transparency for money transactions in and out of Africa and in humanitarian disaster aid situations. Independent accounting of the Chinese contribution to the tsunami effort can only account for about a third of what the Chinese say they gave. However, China sits fourth behind Singapore, India and Malaysia in African investments. Their Asian investments are third behind UK (30B) and US (19B). China has had a 10-fold growth in Africa since the 1980's, but there has also been a 14-fold growth for Western countries. They are the third largest trading partner behind US and France.

China repeatedly states involvement has been in support of its need for "strategic natural resources." Why does China need iron ore? Beijing is the top arms supplier to Africa currently, including jets and military vehicles (\$240 million). They have supplied Sudan's Junta with fighter planes, tanks, bombers, RPG, and helicopters. They gave arms to both Ethiopia and Eritrea (\$1 billion despite UN Arms Embargo). In August of 2005, the Ethiopian PM made a formal agreement with China for a military relationship, training, and military technologies. Zimbabwe has formal military tie as well.

There is something called the Forum on China-Africa Cooperation (FOCAC) which was started in 2000. In 2006 it was held in Beijing along with the Beijing Summit and it resulted in

China's aid to Africa being further widened and enriched. Attendees included heads of state, government delegations, ministers of foreign affairs, and ministers in charge of economic cooperation. Forty-eight African countries were present. The purpose was to build on the success of the summit and conference and chart the course for China-Africa cooperation in all areas for the next three years. It intended to promote friendship, peace, cooperation, development, and formulate and adopt an action plan.

There were agreements on topics such as high-level visits, dialogue, consultation and cooperation mechanisms, contacts between legislatures and local governments, human resources development, environmental protection, culture, tourism, news media, and people exchanges.

The most significant agreements were in consular and judicial cooperation. In order to complete aid projects, a substantial import of Chinese workers and supplies is required. This has led to angst over the use of Chinese companies instead of using local companies or the indigenous population. Chinese overseas operations have already begun to experience fallout from their activities. Chinese oil drilling sites and well-workers have been attacked, kidnapped, or killed in Sudan. Similar incidents have occurred in Somalia, Nigeria, and elsewhere in Africa.

They also developed an economic cooperation in the fields of agriculture, investment, and business. They canceled government interest free loans that had become due by the end of 2005. They take an active part in debt relief operations for Africa within the international multilateral framework. They seek cooperation in trade, finance, infrastructure, energy, resources, science and technology, information, air and maritime transport, and quality inspection. They actively participate in bilateral and multilateral assistance plans for African countries in post-war reconstruction, humanitarian rescue and relief and poverty reduction.

Cooperation in international affairs agreements at FOCAC 2006 included the PRC and Africa agreeing to strengthen counter-terrorism cooperation, condemning and opposing terrorism, supporting the United Nations and UN Security Council in playing a leading role in the international campaign against terrorism, and helping African countries improve their counter-terrorism capability. I'm not sure what these mean, but these are their statements after the conference.

In development assistance and debt relief, they will continue to provide development assistance to African countries to the best of its ability. By 2009, China plans to double the size of its assistance to African countries. It will provide \$3 billion in preferential loans and \$2 billion in preferential export buyer's credit to African countries over the next three years on more favorable terms.

Medical care and public health initiatives included assisting African countries in building 30 hospitals. They gave a \$300 million grant for providing anti-malaria drugs to African countries. They are building 30 demonstration centers for prevention and treatment of malaria 2006-2009. Plans exist to send new and additional medical teams to Africa in the next three years on the basis of China's own capacity and the need of African countries. They will continue to provide medicines and medical supplies needed by African countries and help them establish and improve medical facilities and train medical workers, some of which they are doing with Cuba.

In regards to education, China plans to help African countries set up 100 rural schools from 2006-2009, increase the number of Chinese government scholarships to African students from 2,000 to 4,000 per year by 2009, and provide annual training for a number of educational officials as well as heads and leading teachers of universities and other schools in Africa.

Confucius Institutes will be established in African countries to meet their needs in the teaching of the Chinese language and encourage the teaching of African languages in relevant Chinese universities and colleges.

There is also cooperation between China and the African Union to build up Africa's strength through unity, maintain regional peace, advance regional cooperation and economic development, and take an active part in UN peace-keeping operations in Africa. Again, there is some militarization occurring in addition to the aid part. China and Liberia had diplomatic relations in up until 1981 when Liberia became “confused” about China’s One China policy. Aid was discontinued until Liberia recognized One China. Since then ties have strengthened and projects have included the Barreke sugar mill, Kpatawee rice project, multi-purpose sports stadium and its annex, wasteland reclamation, hospital renovation, and the office building of the Health Ministry. Chinese companies began to enter the Liberian labor market.

Now after Liberia’s “understanding” of the “One China Policy”, China will build the Fendall Campus of the University of Liberia (\$21.5 million), to be completed April 2010. It includes a four story comprehensive teaching building, 4 two-story dormitory buildings for students, 5 three-story apartment buildings for faculty members, water tower and water treatment room, generator house, sports field , two basketball courts, and two tennis courts. It would be very difficult for USAID to justify building a basketball court. They also sent sixty Chinese medical experts to go work in malaria treatment centers. Liberians will go for 10-day professional trainings at the Provincial Verminosis Control Center of Jiangsu in East China.

How does China succeed where the West does not appear to be able to? Much of it is in the way they phrase their language. The West says words like civil war, poverty, disease, refugee, corruption, and underdevelopment. China would likely use the words peaceful

coexistence, friendship, win-win, sincerity, mutual respect, and common development. If you speak to many of the Ministers of Health in Africa, they might say something like, “I have found that a contract that would take five years to discuss, negotiate and sign with the World Bank takes three months when we have dealt with Chinese Authorities.” Because of the need for regulation, bureaucracy, and accountability, things just don’t get done when they deal with the West.

Chinese aid policy is a One China Policy. There are no political strings attached as long as you recognize rule #1. They are honest about the “scramble for resources.” They take a non-interference approach to political situations like Darfur and Zimbabwe. This is because they don’t want their own civil rights issues examined. Chinese money comes with none of the good governance requirements, human rights conditions, approved-project restrictions, or environmental quality regulations that characterize Western government investments. Unrestricted investments are part of its win-win international strategy. There is a strong focus on infrastructure, although changes seen to include capacity building. Projects are completed in very short time periods to prevent “baskets of broken promises.”

China’s motivation and beliefs for aid policy in Africa include a shared history and respect for “dignity” and “sovereignty.” China doesn’t want its own internal affairs interfered with by outsiders, such as Taiwan and Tibet. China has found its own development path and believes that Africa can do it as well. It avoids the word donor and many other words that the West uses to describe development. China’s transparency is obscured. In the end, China needs the resources that Africa has.

So who does these policies within China? It turns out there are actually four separate ministries involved. The Ministry of Commerce (MOC) is the lead ministry for aid. The

Economic Counselor's Office in the Chinese Embassy deals with aid. The Department of West Asia and African Affairs does the policy, advice, and information distribution. The Department of Foreign Economic Cooperation regulates Chinese companies involved overseas. Department of Foreign Aid has the leading role regulating and administering China's aid projects.

China is Cuba's No. 2 trading partner after Venezuela. They are in a \$70 million phase of \$350 million in Chinese credit to renovate Cuban hospitals and ports. Hu thanked Cuba for sending doctors to China after last year's devastating earthquake and for educational programs on the island attended by about 2,000 Chinese, including medical students. China's trade with Latin America jumped to \$103 billion last year from \$10 billion in 2000. You are now starting to see Cuban doctors in Africa.

Mr. Bryan Schaaf, Health Officer, Bureau of Population, Refugees, and Migration, U.S. Department of State

We will briefly introduce the State Department, highlight potential areas of collaboration between AFRICOM and civilian partners, and discuss a few best practices in civil military cooperation. The new Secretary of State will take over 267 missions overseas, including diplomatic relations with 189 countries; as well as some bilateral relations, typically led by an Ambassador (COM) and supported by the Country Team.

Capabilities include DoS Budget: \$33 billion (FY08, enacted), DoD Budget: \$480 billion (FY08, enacted), and 57,300 Total Employees Worldwide. The most recent changes in the Department of State (DoS) include:

- 1) The establishment of the Foreign Assistance Section which oversees all civilian foreign assistance

- 2) The S-CRS falls under the Foreign Assistance umbrella and they play an important role in civilian-military cooperation, as well as bolster civilian response capacity during emergencies
- 3) Office of Global HIV-AIDS, which is the largest initiative targeted towards a single disease in history

Typically, officers rotate through positions fairly often, but there are always desk officers for the different countries. There is a political military bureau which functions to protect the health of the State Dept employees (B-Med). The Office of Environmental Science handles international health affairs such as the G8 and it has health officers situated in embassies throughout the world. The Office of Population, Refugees and Migration (PRM): Handles health as well as civil military affairs.

The Refugee section:

- Supports organizations that protect and support refugees and conflict victims
- Coordinating USG policy on population issues,
- Promotes humane migrations,
- Has worked with DoD on contingency planning for mass migration in the Caribbean

Key partners include:

- International Organizations
- United Nations High Commissioner for Refugees (UNHCR)
- International Committee of the Red Cross (ICRC)
- United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)
- International Organization for Migration (IOM)
- Governmental Partners:
- USAID/Office of Foreign Disaster Assistance
- USAID/Food for Peace
- HHS/Centers for Disease Control and Prevention

Ninety percent of available funds are utilized for international organizations and missions.

The Office of PRM has a number of refugee coordinators based at different embassies in Africa, Cairo Addis Ababa, Nairobi, etc. The coordinators oversee the program of the non-governmental organizations in their assigned areas. They are a good resource as well as contact

points to help in the determination of projects for implementation. They also minimize duplicative efforts. Health programs in Africa as well as other locations are implemented in a multi-lateral fashion to include input from the host governments, USG, international organizations (IO), NGO partners, as well as faith based groups. The ultimate goal for any initiative is to provide enough support to facilitate the host government to assume stewardship of initiated programs.

Health services are a visible sign of a government's capacity to meet the needs of its citizens. For health to be a bridge it has to be provided to the entire population without regard to religious, ethnic, or regional differences. In the absence of such impartial practices, resentment against the host government as well as local authorities becomes almost inevitable. When a government cannot or will not provide health services to its citizens, it creates room for dissent and likely opportunities for non-state activists to flourish.

Where does AFRICOM fit in? The possibilities include building capacities of respective militaries that respect human rights, enhancing capacities to respond to natural disasters, promoting security, enhancing ability to meet the health and HIV related needs of military forces, providing logistical support to humanitarian responders if and when they make a request, and providing humanitarian assistance. It is important to keep in mind the different motives for humanitarian assistance between the military and the civilian population. The civilian perspective aims to relieve human suffering based on assessed needs, while the military perspective focuses on building trust and support within a population in order to facilitate a mission. Ultimately, it is important that the host nation take the lead whenever possible despite the numerous stakeholders.

In summary, prior to implementing any new programs, it is good practice to utilize good health diplomacy. Take the initiative to start a dialogue with USG and other civilian partners in the area, keeping in mind that a lack of visibility does not necessarily imply absence. Some NGO's remain out of sight intentionally. Host nation's embassy health officers are often a good place to start. Consulting local civilian partners before under-taking any HA project will help limit duplicative efforts. Engage local partners to make capacity building the center-piece of AFRICOM's efforts. Monitor and evaluate to strengthen weak programs and make strong programs better. The use of similar evaluation and measurement methods as the humanitarian assistance community enhances communication and improves continuity.

Additional resources: The Sphere Handbook available in numerous languages at <http://www.sphereproject.org/> .

CAPT (Dr.) Edward Simmer, Senior Executive Director for Psychological Health, Center of Excellence for Psychological Health & Traumatic Brain Injury

I'd like to talk a bit about how to protect your folks while they perform humanitarian missions. As our staff members are doing humanitarian missions, they are exposed to some pretty tough things and difficult things to see. Protecting them from that as much as we can is important both from a mission readiness standpoint and the person's long term wellbeing. I want to talk about some ways you can protect them both through prevention and early intervention.

Everyone talks about PTSD and it is an important problem. But, you probably won't see a lot of it amongst your staff during operations. You may see it in the population that you are

treating however. What you will likely see is operational stress, but this can progress to PTSD if it is not addressed. .

The five required criteria for PTSD are exposure to a severe traumatic event (insult on personal integrity), re-experiencing (nightmares), avoidance (won't watch news), hyperarousal, and a duration of symptoms of at least 30 days. In contrast, operational stress is a normal response to abnormal stress, not an illness or disorder. Symptoms may include insomnia, irritability, nightmares, and increased startle response. These responses are in fact a positive adaptation to battlefield conditions because they are protective. The duration is usually short and often resolves with limited interventions. However, we want humanitarian responders to be able to turn off this reaction after they are out of the acute environment. Most people exposed to operational stress do not develop PTSD. One also has to be on the lookout for signs of depression, substance abuse, suicide, anger, or violence.

There are protective factors for people on humanitarian missions compared to combat missions. Generally, people are focused on helping others, the people being helped are usually appreciative, the mission is often time limited, there is tangible evidence of success, and workers often have support from public, friends, and family for their efforts. This is in contrast to someone who has just returned from working at a place like Guantanamo Bay, where there may be ambivalence about the value of the mission. The positive feedback people receive after working a project like the tsunami relief can be very protective.

Potential risk factors for PTSD include exposure to dead bodies (especially children), extreme destruction, having to defend oneself in combat, overwhelming mission need, feeling that efforts are futile, harsh living/working conditions, previous exposure to trauma, uncertain

mission length/date of return, lack of clarity about role, excessive use of substances, and other “unrelated” (marital, financial, etc.) stress.

How do we building resilience, the ability to be flexible and bounce back? It is through training and education. Knowledge is power! Try to provide as much information about the mission as possible. The training should also be realistic. Keep groups together throughout training and missions as much as possible, particularly with mixed civilian (NGO)/military missions.

Training topics should include such things as type of situation, planned response, ability to communicate with outside world, buddy care for stress issues, and others involved in response. Each person should know their intended role, but should also have sufficient training to ensure flexibility. One should brief participates regarding potential risks such as violence, health risks, ways to protect self/others, and media relations.

During the actual mission, one should continue to keep information flowing, keep families informed/engaged, encourage constructive recreational activities, focus on basics (sleep, shelter, food), try to give one day off every 7 if possible, maintain role structure, encourage continued spiritual practices, encourage exercise/PT, and encourage buddy care.

Leaders need to set the example. They should take care of themselves by having sufficient food, sleep, and exercise. You should schedule time for yourself. Keep up contact with friends/family. Find someone you can confide in and whose advice/observations you can trust. You should delegate when appropriate. Leaders and peers should monitor and provide early intervention.

Leaders also need to look for warning signs such as fatigue, irritability, withdrawal, changes in sleeping or eating, substance use, the “1000 mile stare”, or changes in usual behavior.

Early non-medical intervention includes talking with the person, pulling him or her off stressful duty for a day while providing other meaningful work, and “3 hots and a cot.” Try to address particularly significant stressors if you can. Keep expectation that they will be going back to regular duties in the next day or two. If this is not effective, then consider talking with a medical/mental health provider or a chaplain. If referral is needed, maintain active contact with the individual, focus on expectation of return-to-duty (if appropriate), encourage peers/colleagues to maintain contact, welcome back the same as you would any injured Warrior.

Remember that Homecoming starts before you deploy; even for short missions. Homecoming briefs should be provided for both mission participants and families before the participant returns home. More people have trouble upon their return than do on the mission. Ensure access to confidential and professional assistance if needed. Make sure to award and recognize excellence. You should try to keep groups that worked together with each other on the way home. Continue buddy care and leader care. The goal is to make humanitarian missions a growth experience.

Africa Command Health Symposium

Health as a Bridge to Peace and Stability

January 8-9, 2009

Speaker Biographies

S. Ward Casscells, MD

U.S. Department of Defense



Prior to his appointment as Assistant Secretary of Defense for Health Affairs on 16 April, 2007, Dr. S. Ward Casscells served as the John Edward Tyson Distinguished Professor of Medicine (Cardiology) and Public Health at the University of Texas Health Science Center in Houston. He was also the Director of Clinical Research at the Texas Heart Institute, where his clinical practice and research programs focused on prevention of heart attack and stroke using advanced diagnostic techniques to identify vulnerable patients

early, so that treatment with lifestyle changes and medications decrease heart attack, stroke, and need for surgery. Dr. Casscells is a proponent of patient-driven health care; he was an early advocate of public access defibrillation, telemedicine, and electronic health records. In 2004 he received the American Telemedicine Association's General Maxwell Thurman Award. A Colonel in the US Army Reserve, Dr. Casscells was mobilized in 2005 and assisted in the Army's response to Hurricanes Katrina and Rita, for which he was awarded the Army Achievement Medal. For guiding the Army's avian influenza preparedness, he received the Meritorious Service Medal. In 2006 he was deployed to Iraq as the liaison from Multinational Force-Iraq to Ambassador Zalmay Khalilzad. He received the Joint Service Commendation Medal, and was made an Honorary Member of the Iraqi Medical Regiment.

Ellen P. Embrey

U.S. Department of Defense



Ms. Ellen Embrey is the Deputy Assistant Secretary of Defense for Force Health Protection and Readiness in the Office of the Assistant Secretary of Defense for Health Affairs. She oversees Department-wide efforts to develop and implement policies and programs relating to DoD deployment medicine, force health protection, national disaster support, and medical readiness for 2.3 million service members. Under her direction, Force Health Protection and Readiness

Policy and Programs proactively initiates policies and programs that address deployment-related health threats to the welfare of U.S. service members and their families, as well as integrating medical lessons learned from previous conflicts into current policy, doctrine and practice. Before coming to Health Affairs, Ms. Embrey held a variety of senior and executive level positions in the Office of the Assistant Secretary of Defense for Reserve Affairs (OASD/RA) from 1987-2001. Prior to her OASD/RA assignments, Ms. Embrey held staff and management positions at the Defense Contract Audit Agency Headquarters and the U.S. Office

of Personnel Management. She began her career as a management intern at the U.S. Civil Service Commission.

Schuyler Geller, MD

U.S. Department of Defense



Colonel Schuyler K. Geller is the Command Surgeon, HQ USAFRICOM currently based at Kelley Barracks in Stuttgart-Mohringen, Germany. He reports to the Commander, US Africa Command and is also the Medical Division Chief, OPLOG Directorate. He is responsible for all medical and health service support activities throughout the AFRICOM AOR. Col Geller establishes the policies within the command for the employment of theater medical resources during crisis and contingency operations, provides recommendations regarding theater evacuation policy, oversees theater medical plans and coordinates and integrates all service component health service support activities. Colonel Geller received a Reserve Commission as a Major in November 1990 and entered active duty in March 1991. He served as a Staff Internist, Director of Special Care Unit, Chief of Internal Medicine, Deputy Chief of the Department of Medicine, Chief of Executive Health, NASA Flight Surgeon for Europe, Chief of the Medical Staff at two AF Medical Centers and has successfully commanded at the squadron, clinic, hospital and medical center levels throughout his distinguished career. Colonel Geller is certified by the American Boards of Internal Medicine (Geriatrics), Pediatrics and Preventive Medicine (Aerospace, Public Health and General Preventive Medicine). He assumed his current position in January 2008.

Chinua Akukwe, MD, MPH

African Union

Dr. Chinua Akukwe is the Executive Chairman of the Africa Union Africa Diaspora Health Initiative, a continent-wide program focusing on linking Africa Diaspora health experts with specific health needs in African countries. Dr. Akukwe is also a lecturer in Global Health and in the Department of Prevention and Community Health at George Washington University. He represents the Department in the University's Africa Center for Health and Human Security, where he chairs its Technical Board. He is also the Chair of the World Bank Africa Diaspora Health Forum and is on the board of directors of the Constituency for Africa. Dr. Akukwe has extensive experience in HIV/AIDS Strategies, Policies and Programs in Africa; Maternal and Child Health (MCH) services in the United States and abroad, with special focus on infant mortality and early childhood development; and, community oriented primary care. Since 1995, Dr. Akukwe has served on National Expert Review Panels for MCH programs for the US Department of Health and Human Services. He is the former Vice Chairman, of the National Council for International Health (Global Health Council) and a former member of the Editorial Board of the American Journal of Public Health. He previously served as a Senior Visiting Fellow at both the National Medical Association and at the American Council for Voluntary International Action (InterAction). Dr. Akukwe is a Fellow of the American College of Epidemiology, the Royal Society of Medicine in London, and also the National Academy of Public Administration. Dr. Akukwe has authored books on healthcare issues and on development challenges in Africa.

Alan Bournbusch, PhD

U.S. Agency for International Development

Dr. Alan Bournbusch is a Public Health Adviser in the Commodity Security and Logistics Division of USAID/Washington's Office of Population and Reproductive Health, Bureau for Global Health. He is currently the Cognizant Technical Officer for the USAID I DELIVER PROJECT, a \$2.75 billion, five-year project dedicated to increasing the availability of essential health supplies in low and middle income countries. Dr. Bournbusch has a doctorate from Duke University and a bachelor's degree from Williams College.

Shahul H. Ebrahim, MD, MSc, PhD

U.S. Department of Health and Human Services



Dr. Shahul H. Ebrahim is the first U.S. Health Attaché to the African Union, and Chair of the health portfolio of the 37 member donor community, The African Union Partnership Group. Prior to his appointment, he was a Senior Scientist at the U.S. Centers for Disease Control (CDC). During his CDC tenure, Dr. Ebrahim provided consultation to the World Health Organization, NASA, World Bank, and the Governments of China, Denmark, India, Mongolia, Malawi, Malaysia, Philippines, Zambia, South Africa, Tanzania and Indonesia. Dr. Ebrahim has contributed to key U.S. public health initiatives including the U.S. Burden of Disease Study, the Preconception Care Initiative, and the U.S. Presidential Policy on Community Mitigation of Pandemic Influenza. His long term in-country clinical work prior to joining the CDC includes Zambia, Germany and the Philippines. Dr. Ebrahim is an Adjunct Professor of Global Health and adjunct faculty at the Royal Tropical Institutes in Amsterdam and Berlin and the Guangxi University in China. In 2005, he received the Governor's award from the Guangxi Province of China for Outstanding Contribution to HIV Policy Development in that province. Dr. Ebrahim has published extensively and has lectured widely in China, India, and Germany.

Grey Heppner, MD

U.S. Department of Defense



Colonel Grey Heppner is Director of the Division of Malaria Vaccine Development at the Walter Reed Army Institute of Research (WRAIR). He leads DoD malaria vaccine development in the USA and Europe, and clinical and field trials in the USA, Thailand, Mali, and Kenya. He was Chief of Medicine & Immunology at the Armed Forces Research Institute of Medical Sciences in Bangkok, Thailand (1993-1997), then Chief of Immunology and later Director of Communicable Diseases and Immunology at WRAIR. COL Heppner deployed to the Middle East as a part of a Biologic Warfare Countermeasures team in 2003. He has published on malaria in leading journals, including the New England Journal of Medicine, the Lancet, PLoS Clinical Trials, Infection and Immunity, and the Journal of Infectious Diseases. COL Heppner holds a B.A. in Biochemistry and German and a M.D. from the University of Virginia, and completed residency and fellowship training at the Universities of Minnesota and Maryland. He is board certified in internal medicine and in infectious diseases, and is a member of the Order of Military Medical Merit. COL Heppner is a Fellow of the American College of Physicians and of the Royal Geographical Society (London).

Kent Hill, PhD

U.S. Agency for International Development



Dr. Kent R. Hill was sworn in on November 2, 2005, as Assistant Administrator for the Bureau for Global Health, U.S. Agency for International Development (USAID). He had served as acting Assistant Administrator from January 21, 2005, until his confirmation by the Senate on October 7. As Assistant Administrator for the Bureau for Global Health, Dr. Hill is responsible for a bureau which in FY08 manages or co-manages health programs totaling \$2.6 billion, of which \$1 billion is contributed to international organizations. The Bureau seeks to provide global leadership in the effort to improve the quality, availability, and use of essential health services. From November 2001 to October 2005, Dr. Hill served as Assistant Administrator for the Bureau for Europe and Eurasia at USAID. Before coming to USAID, he served as President of Eastern Nazarene College in Quincy, Mass., from 1992 to 2001. From 1986 to 1992, he was president of the Institute on Religion and Democracy in Washington, D.C. He taught European and Russian history at Seattle Pacific University from 1980 to 1986. A graduate of Northwest Nazarene College in Nampa, Idaho, he has a master's degree in Russian studies and a Ph.D. in history from the University of Washington in Seattle. He has published books, articles, or reviews on human rights, intellectual history, international development, and matters related to religion in the former Soviet Union. Dr. Hill is a noted expert on democracy, international development policy, human rights, and international religious freedom issues.

Elizabeth Kibour, MA

U.S. Agency for International Development

Ms. Elizabeth Kibour currently serves as the Africa Regional Specialist in the Global Health Bureau, Office of Regional Country Support. Prior to joining USAID/Washington she served as the Health Team leader for the USAID/Guinea Mission's comprehensive health program and Acting team leader for the USAID/Guinea Technical Office managing the entire range of the mission's activities. Ms. Kibour comes with over 10 years of field experience in West Africa. Ms. Kibour has a MA in African Studies with a major in Public Policy and Development Planning.

Lynn Lawry, MD, MSPH, MSc

U.S. Department of Defense



Dr. Lynn Lawry is a specialist in internal medicine, disaster research, and epidemiology. She is currently the Senior Health Stability and Humanitarian Assistance Specialist in the International Health Division of the Assistant Secretary of Defense Health Affairs. In her 15 years in humanitarian aid she has been in more than a dozen complex humanitarian disasters and has researched health and human rights issues in Taliban-controlled Afghanistan, Sierra Leone, Iraq, Nigeria, Darfur, and Hurricane Katrina communities, and Liberia. She is the author of many publications including book chapters and journal articles relating to these health and human rights issues. In addition to her position above, she is Director of the Initiative on Global Women's Health in the Division of Women's Health, faculty at Brigham and Women's Hospital and Harvard Medical School, and an Associate at Johns Hopkins School of Public Health. Dr. Lawry earned her medical degree at East Carolina University School of Medicine, a Master of Science in Public Health from the University of North Carolina- Chapel Hill and a Master's of Science in Epidemiology from the Harvard School of Public Health.

Franklin Moore

U.S. Agency for International Development

A career member of the Senior Executive Service, Franklin C. Moore, was appointed as Deputy Assistant Administrator for U.S. Agency for International Development's (USAID) Africa Bureau in January 2008. Previous to his appointment, Mr. Moore served as Director of the Office of Environment and Science Policy within the Agency's Bureau for Economic Growth, Agriculture and Trade (EGAT) since October 2002. Additionally, Mr. Moore has served as the Acting Deputy Assistant Administrator and Director for the Agency's Global Center for the Environment. Prior to joining USAID in 1998, Mr. Moore held positions in the areas of agriculture, environment and national resource management with the U.S. Environmental Protection Agency, with Africare in Zimbabwe; with the Peace Corps and as a Lecturer at Virginia State (College) University and the University of Science and Technology in Kumasi, Ghana. Mr. Moore has a bachelor's degree in Economics with a minor in Art History from Yale University. He received a master's degree in Agricultural Economics, as well as a certificate in African Studies from the University of Wisconsin-Madison. Mr. Moore has lived in both West and Southern Africa; he has worked in approximately 40 countries overseas.

Emma Nicholson, MEP

AMAR International Charitable Foundation



Baroness Emma Nicholson of Winterbourne, MEP is the Founder and Chairman of the AMAR International Charitable Foundation, which was set up in 1991 to provide emergency aid for refugees in southern Iraq, and the Iraqi marshlands, in response to the acute humanitarian crisis that was taking place. Baroness Nicholson is a Life Peer and member of the House of Lords. She is also a member of the European Parliament for South East England, and a member of the Liberal Democrats party. She was first elected as a Member of the European Parliament in June, 1999 and re-elected in June 2004. Baroness Nicholson is Vice President of the EP Committee on Foreign Affairs and a member of the Delegation for relations with Iran, the Mashrek Delegation, and of the European Mediterranean Parliamentary Delegation. She was the co-founder of the AMAR-UNESCO Standing Conference, which promotes understanding between European and Islamic civilizations. In 2002, Baroness Nicholson was appointed as the World Health Organization Envoy on Health, Peace and Development. She is also the Patron of, or holds honorary positions in, over fifty charities.

Ron Poropatich, MD

U.S. Department of Defense

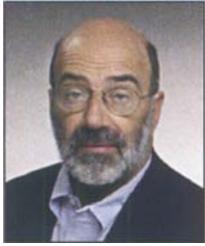
Colonel Ron Poropatich, MD is assigned to the US Army Medical Research and Materiel Command (USAMRMC) at Fort Detrick, MD as the Deputy Director to the Telemedicine and Advanced Technology Research Center (TATRC) which manages over \$400 million/year in congressionally funded research in advanced medical technology and also works towards wide-scale implementation of **IM/IT** solutions and telehealth applications across the Army Medical Department. He is a former President and Board Member of the American Telemedicine Association and a practicing Pulmonary/Critical Care Medicine physician at the Walter Reed Army Medical Center, Washington, DC. He currently serves as an Associate Editor for the "Telemedicine and e-Health Journal".

Bryan Schaaf

U.S. Department of State

Mr. Bryan Schaaf oversees the refugee health portfolio of the State Department's Bureau of Population, Refugees, and Migration. In this capacity, he is responsible for developing and coordinating the Bureau's health policies and programs with other governmental, non-governmental, and international partners. This includes identifying mechanisms for improving the capacity of international partners, particularly as related to infectious disease preparedness and response. He works with USAID, CDC, and DOD partners to improve the monitoring and evaluation of humanitarian assistance program. In addition to refugee health, he works on issues relating to civil-military coordination, relief to development, and monitoring and evaluation. Prior to his current position, he was with the Department of Health and Human Services. He was a Peace Corps Volunteer in Haiti from 2000-2002.

Ronald Waldman, MD, MPH
U.S. Agency for International Development



Dr. Ronald Waldman began his career in the Global Smallpox Eradication Program and subsequently worked at the Centers for Disease Control and Prevention for 25 years, during which time he was instrumental in developing the epidemiology of refugee health and coordinated response efforts to numerous complex emergencies as Director of the Technical Support Division of the International Health Program Office. He led cholera control efforts at the World Health Organization for four years and, later, was the founding director of the Program on Forced Migration and Health at Columbia University's Mailman School of Public Health, where is still an active member of the faculty. He currently heads USAID's Pandemic Planning and Humanitarian Response Team. His presentation today focuses on USAID's \$100 million H2P (Humanitarian Pandemic Preparedness) program, that is trying to assist up to 25 countries to plan to mitigate the consequences of a major disaster.

Africa Command Health Symposium: Health as a Bridge to Peace and Stability

Registered Participants

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Mr.	Scott	Buchanan	OSD Policy
Dr	Edwin	Burkett	USJFCOM, Office of the Command Surgeon
Mr.	Peter	Buxbaum	Government Health IT
Mr.	Peter	Buxbaum	Government Health IT
Mr.	Stuart	Campbell	OTSG - UK LNO
COL	James	Carroll	HAF/SGR
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CAPT	Philip	Coyne	Uniformed Services University
Mr.	William (Bill)	Crane	USAWC
Mr.	Richard	Crow	AMAR International Charitable Foundation
CAPT	Miguel	Cubano	US Southcom
LT	Kathleen	Dagher	Navy
CAPT	Chris	Daniel	NMRC

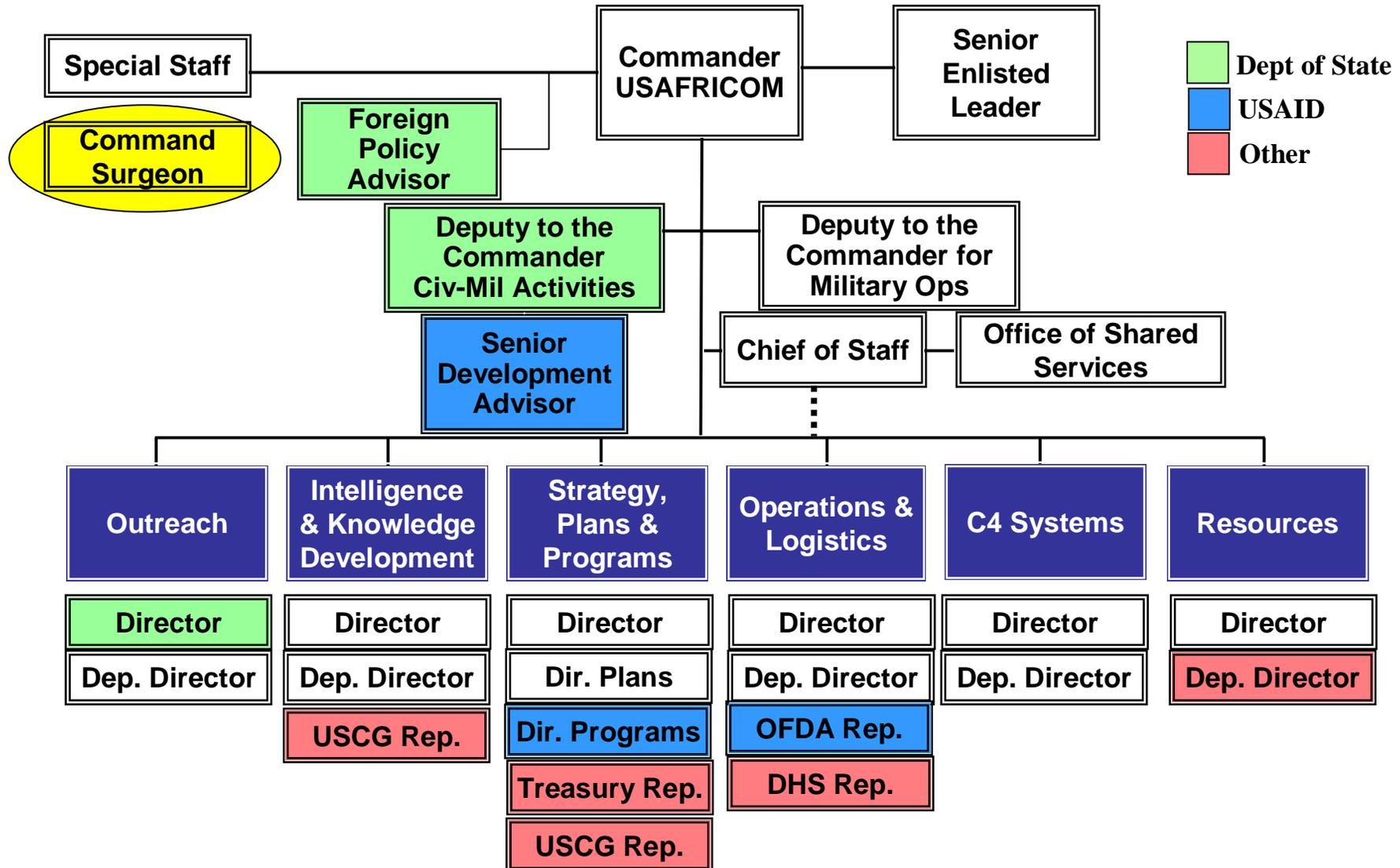
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Ms	Camellia	Falcom	Booz Allen Hamilton
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Col	Jim	Feighner	Johns Hopkins University APL
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Mr.	Brian	Hurley	Self
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Ms	Sheri	Lewis	JHU/APL
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Dr.	Joseph	Martin	USUHS
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Mlle	Sarah	Means	Medicine International
Mr.	Abdalla	Meftuh	Africare
Mr.	Paul	Meyer	Voxiva
Mr.	Jeffrey	Miotke	US Department of State
COL	John	Mitchell	Defense Medical Readiness Training Institute

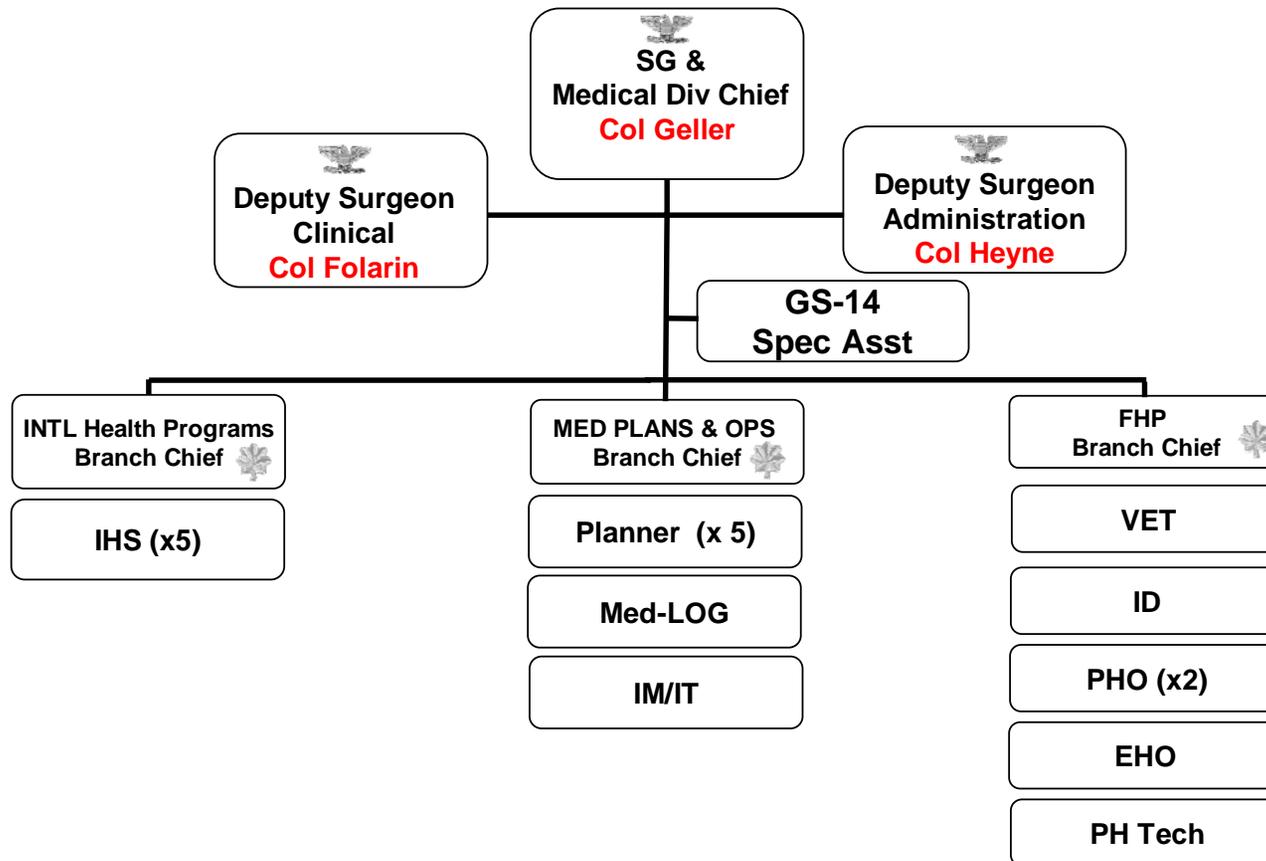
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Dr	Michael	Mouri	DOD/JSOTF-HOA
	Robert	Mugisha	Survivor Corps
Dr	Seong	Mun	Virginia Tech
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Ms.	Ginny	Nagy	CDHAM
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Mr.	Gerald	Oberndorfer	Department of State, EUR/ACE
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Ms.	Terese	Schlachter	Dept of the Army
Ms	Lynne	Schneider	Stars and Stripes
Mr.	Jeff	Schogol	Uniformed Services University
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Mr.	David	Simon	USAID
Mr.	William	Slater	OCJCS
RADM	David	Smith	MITRE Corporation
Mr.	Don	Sparrow	SPSA, LLC.
Mr.	Bill	Strang	The Louis Berger Group
Mr.	William	Stuebner	

Ms.	Michele	Sumilas	U.S. Congress
Dr.	Gordon	Sumner	Employer Support of the Guard and Reserve
CPT	Bruk	Taeme	WRAMC/Dental
Dr	David	Tarantino	USUHS
Mr.	Erik	Threet	U.S. Africa Command
Dr.	Kate	Tulenko	World Bank
Mr.	Raymond	Uren	Medical Support Solutions Limited
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Mr.	Kenneth	Wade	Office of the US Army Surgeon General
Ms.	Danielle	Walker	US Chamber of Commerce
Mr.	William	Warshauer	Voxiva
Major	Judy	Webb-Hapgood	HQ USAF/SG
Mr.	Kevin	Wensing	Deputy Secretary of Defense
Mr.	Charles	Wetherill	The Whitaker Group
Mr.	Dano	Wilusz	Department of State
Ms.	Calita	Woods	United Nations World Food Programme
LtCol	Jon	Woods	CDHAM
CAPT	Kenneth	Wright	OPNAV (N931)
LTC	Eyako	Wurapa	95th CA
Ms.	Pamela	Wyville-Staples	USAID
Ms	Anne	Yu	DOD/OASD (Health Affairs)
ms	joan	brisson	Comprehensive Health Services
Mr.	Pieter	de Weerd	Medical Support Solutions Limited

Organization w/ Interagency Leaders



Medical Division Organization



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