AMSUS Meeting

The conference continued today. The day began with an emphasis upon the global response to the Ebola outbreak in West Africa. Breakout sessions followed that, with a series focusing once again upon the Military Health System (MHS)

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The best tool for building relationships: a case of wine.
- **COL Czarnik**, on building the US response to Ebola in Africa

Ebola is not a biblical plague...life is going on.
- **Surg Rear Admiral Walker**, on Ebola in Sierra Leone

There is some thought about aggregating the seven MHS Centers of Excellence (CoEs) under the aegis of the Defense Health Agency (DHA) Research, Development & Acquisition (RDA) Directorate.
- **DHA Director General Robb**
DOD DEPLOYMENT TO WEST AFRICA: The Military Medical Department Ebola Virus Experience
  o LTC E. Lee Bryan, USA, military liaison to USAID Ebola Response Team

LTC Bryan compared the US Government response to the Ebola outbreak to a game of chess, with a lot of moving pieces. DoD supports CDC, which supports USAID. Of course, there are many other government entities also involved in the process.

The Response Management Team (RMT) is the strategic organization that coordinates the whole of government response. The Disaster Assistance Response Team (DART) is more operational, as it operates on the ground. The DART does have primacy in making recommendations as to what should happen next.

Bryan sees his main role on the RMT as helping the flow of communication. He has to understand policies and capabilities, and put them both in context so they can be implemented effectively in the response.

Bryan emphasized the need to blend in during interagency activities. For example, he does not wear his uniform to the office during this assignment, in order to better blend in with his coworkers. This could lead to a cultural change with greater confidence and trust between organizations, which is most definitely needed.

JFC-OPERATION UNITED ASSISTANCE: The Joint Force Command’s Response to the Ebola Crisis in West Africa (observations and recommendations)
  o COL Jim Czarnik, JFC Command Surgeon, US Army Africa/SETAF, Command Surgeon

COL Czarnik stressed that people are of top importance. Quality is more important than quantity, and cannot be mass produced. Any organization must have quality medical people in their ranks before a crisis occurs.

He described the steps through which the Command entered the current mission. From the very beginning, there were a lot of unknowns as to how this would proceed. He related that he went to do a “leader’s recon” on September 19, but never left.

Czarnik said that, when he and his people arrived in Liberia, there was a general sense of despair. This pervaded even the US Embassy there. He said that the “sense of hope” generated by the 14 uniformed service members who got off the plane was palpable. The issue went beyond just the disease; there was also a psychological impact.
Czarnik emphasized that DoD has unique capabilities, especially command and control. That equates to an ability to synchronize other activities. DoD is not in charge in this mission; they are in the role of synchronizing what others come in and do.

DoD was also tasked with building up to 17 Ebola treatment unit (ETU) and to train up to 500 health workers a week. However, no one had the plan of instruction to be followed in that training. Czarnik and his people then had to sit down with the two main groups already on the ground responding to the crisis to hammer out a plan. This was complicated by the fact that those two groups disagreed in some points on how to care for these patients.

The number of forces needed changed over a short period of time, as well. The force request was originally based on best guesses. As more was learned about what actually had to be done and what resources were available on the ground (such as contractors who could do some of the actual building), they discovered that they did not need the full 3,000 troops originally requested.

Czarnik stressed that the deployment to Liberia was much, much different than to Afghanistan and Iraq. Some military elements showed up without having planned for their own logistics such as aid stations and food, because they were used to those things already being in place. This was a result of poor information being provided to them ahead of time.

Over the last 13 years, combat mortality has dropped to historic lows. While this is a good thing, it has also raised expectations within Congress and other stakeholders about the level of support and care that will be provided to US deployed military members. This became a major planning issue for Czarnik.

Having more troops on the ground increases the risk of people getting hurt, even though capabilities increase. It also increases the amount of money needed to sustain that force. Czarnik said that, when determining the optimal level to deploy, leadership must carefully balance capability and risks.

Czarnik said that the existence of the first case of Ebola in the US changed the dynamic of how returning troops will be reintegrated. At that point, DoD decided that quarantine would be needed rather than just monitoring. Czarnik said that this decision caused the Italian government to question what the troops would be doing in Africa that had not previously been revealed, since the military had previously assured that government that the troops would be at very low risk. However, Czarnik said, the military families were also very concerned about their own safety as their family members returned home. Even if it is not based upon actual science, sometimes these things should be done to reassure people.
UNITED KINGDOM RESPONSE TO EBOLA

- Surg Rear Admiral Alasdair Walker, OBE, QHS FRCS, Director Medical Policy & Operational Capability

As of November 21, the World Health Organization (WHO) reports that there are 15,319 Ebola cases in West Africa, and that there have been 5,444 deaths.

Admiral Walker said that it appears that the number of Ebola cases appear to be increasing in all three of the affected countries. In many of these areas (especially in Sierra Leone), the health care system has broken down.

Secondary impacts such as food shortages and civil breakdown are also already being seen. Walker said that the impacts of this epidemic will continue to be seen in this area for many years after the disease itself is eradicated.

Walker said that, too often, policymakers in non-affected countries are coming up with bizarre suppositions, as they are not fully cognizant of the science behind the Ebola virus.

On the ground in Sierra Leone, logistics are very difficult. There has been civil unrest and looting, although much of that has stopped. However, it is difficult to get around the country. Just to get from the airport to the main town requires a ferry ride across a river.

Walker talked about the need to conduct extensive risk assessments each time operations are changed. They have worked very hard to keep the level of risk as low as possible.

Much as the US military has in Liberia, the UK military has set up a treatment unit devoted to health care workers in Sierra Leone. They have also put in place a training program for new workers. This has been one of their greatest successes, in fact.

There has been mission creep, as the length of time has been increased and the scope has increased. The UK military was initially only supposed to create the first treatment unit, and that has been expanded into areas such as training foreign workers. They have created a simulation training location in a big warehouse in York. However, Walker noted, there is a lot of difference between training in a simulated environment and doing the real thing.

Within the UK, at risk individuals are being asked to self-monitor and to report to authorities regularly. If they refuse to cooperate, the law already allows the government to forcibly quarantine them.

Walker also said that, within the governmental response, there have been inter-departmental tensions.
Walker found it interesting that most of the people the UK deployed to Sierra Leone never deployed to Iraq or Afghanistan. This reflects the fast turnover of people with the military.

INTERNATIONAL MILITARY MEDICINE COORDINATION: International Committee of Military Medicine (ICMM)

Colonel (GS) P. Neirinckx, MD, Deputy Secretary General

Colonel Neirinckx explained that the committee grew out of post-WWI concerns about global health. It started with only eight countries, and today boasts over 100 member countries.

The committee aims to maintain and strengthen the bonds between all medical services of the member countries, and to promote scientific activities. This is an intergovernmental organization represented by the Service Surgeon Generals. The colonel stressed that they keep geopolitical issues out of their discussions.

He talked about the need to target the younger generations of military health care providers for international military medical education. They are looking for ways to make their courses more accessible, including lower costs for attending.

There is also a growing need to unify military medical ethics around the globe. The committee is looking to create a common educational program of military medical providers.

COMMAND SURGEONS PANEL: INTEROPERABILITY

MG Nadja West, Joint Staff Surgeon (moderator)
Surg Rear Admiral Alasdair Walker, OBE, QHS FRCS, Director Medical Policy & Operational Capability (United Kingdom)
RADM Colin G. Chin, USN, PACOM
CAPT David K. Weiss, USN, AFRICOM
Col Mark E. Mavity, USAF, CENTCOM
Col John P. Mitchell, USAF, MC, FS, EUCOM
COL James A. Young, USA, Deputy Command Surgeon, NORTHCOM
COL Rudy Cachuela, SOUTHCOM
Col Chris Torres, MC, USAF, STRATCOM
Col Dave O’Brien, USAF, TRANSCOM

General West noted that world events constantly underscore the need to increase and improve interoperability with international partners. This needs to be more than just a catchy term used in powerpoint presentations. They need to work at making it happen.
Admiral Chin said that interoperability is extremely important in PACOM due to its sheer size. The Services need to be able to work with each other in a wide array of missions. They also need to be able to work with all of the stakeholders in the region. Finally, interoperability again arises when the military goes to work with other parts of the US federal government.

Chin said that they are practicing joint operability throughout the health enterprise, such as with joint medical staffs at the MTFs in the region. The Joint Theater Trauma System (JTTS) initiated for the wars in Iraq and Afghanistan will continue to be relevant throughout PACOM. Any patients in this region will have to be transported along great distances, and JTTS can help with tracking and communication along the way.

Chin told the audience about the military-to-military health training exercises in which PACOM has participated. He said that this level of interoperability is important looking forward to the next humanitarian crisis in the Pacific Ocean area, which is sure to happen.

PACOM is helping the global anti-malaria efforts being spearheaded by USAID and various non-governmental organizations (NGOs).

CAPT Weiss talked about the US military’s work on the African task forces to address malaria. These are part of international efforts to engage on the problem. The African Partner Outbreak Response Alliance (APORA) is an AFRICOM initiated but African led initiative on these issues.

He described various activities run by AFRICOM to train local healthcare workers to prepare for disasters and epidemic responses.

AFRICOM also runs casualty evacuation from the region. They have set up and successfully set up a casualty evacuation program.

Col Mavity noted that, even though PACOM comprises half of the world’s land mass and population, CENTCOM seems to have half of the world’s problems. The Theater Campaign Plan governs the US military’s interoperability operations. They are doing a great deal of work on increasing their capability at all levels of providing care. Much of this work is being done with partner nations in the region, and not just between US Services.

Mavity noted that this is a continuity of effort. What they did in the past informs what is being done now, and shapes what will be done in the future.

As they build partner capacities and capabilities, the US military must better understand those partners’ capabilities. Each country will have a different idea of what “right” looks like. US forces must decide whether they can “live with” the level of care and capability being provided in future missions.
Col Mitchell said that measuring success in interoperability is more of an art than a science. Regional interoperability will enable all of the players to extend their money and resources.

Among activities in this area is the creation of a regional NATO Role 2 medical capabilities in the Balkans. Six of the eight West Balkan countries are participating. While each country is creating its own kind of deployable hospital, they are interoperable and supported by the same countries outside the Balkans.

Col Young said that a delay in being linked with and providing a medical need in the case of an emergency or disaster will mean harm to American citizens, which is not acceptable. There are 15 different governmental agencies with which DoD must engage and coordinate in creating a medical response.

Young talked about the fact that NORTHCOM is involved in a wide array of national security issues. Last summer, they were heavily involved in the surge in unaccompanied children who came across the southern border last summer. That experience taught them important lessons on screening large groups for contagious diseases. It also caused them to identify next level facilities available to receive resulting cases. Those efforts were further spurred by the response to Ebola, both the cases in the US and the need to build a screening capacity at incoming airports.

As a result, the military has now identified additional facilities with these capabilities beyond the five isolation-capable facilities that were previously in existence.

COL Cachuela talked about SOUTHCOM. This is a diverse area with its own challenges. They are in charge of detainee operations; countering transnational crime (intercepting drugs); and building partner capacity. Above all, they work to protect the health of the force and to provide health leadership in the region.

Notably, they helped Chile build a combat casualty care course, which has become a regional course.

Health security is a key component of regional security. Therefore, they routinely work with not only partner militaries but also their health departments to build capacity.

Col Torres noted that STRATCOM is a functional command, tasked with building space and cyber capabilities as well as keeping the nuclear deterrent safe. Thus, they do not have any physical territory in which to operate. They also do not have assigned forces, and rely upon joint task forces to complete their missions. Thus, good interoperability is crucial to their success.
Torres said that there is a need for a single repository for worldwide and CONUS health surveillance and medical intelligence data. STRATCOM receives a lot of health-related data, and it is sometimes difficult to determine what is real and what is not. Such a database would help to prioritize and validate the information being received.

He also wants to maintain an emphasis the Personnel Reliability Program (PRP). This program should have zero discrepancies, although this goal is difficult to achieve.

Col O’Brien said that TRANSCOM is also a function command, focused upon moving people and things around the globe. It is not that uncommon for them to become involved in global public health responses, which requires working with international and intergovernmental partners. The Ebola crisis in West Africa is just the latest example. TRANSCOM’s response has basically become a logistical response to an infectious disease.

Within the US, TRANSCOM has moved CDC specialists to where Ebola patients are located. They have also moved blood samples from the patient’s location to a specialized lab. O’Brien said that new issues arose, such as quickly getting a CDC scientist cleared to travel on an Air Force jet.

The lack of standardization across the US has presented a challenged in medical logistics. O’Brien said that professionalism has enabled them and their partners to overcome the resulting barriers.

MILITARY HEALTH SYSTEM (MHS) BREAKOUT SESSIONS

MEDICAL MODERNIZATION: Matching Requirements to Demand Signal
  o David Smith, MD

As part of Secretary Woodson’s effort to make the MHS operate more efficiently, they are working to match the requirements to the demand signal. This involves closing and restricting some of the military treatment facilities (MTFs).

Dr. Smith said that the restructuring is part of the larger effort to ensure that the MHS is situated to meet future demands. All of the DoD beneficiaries must receive care. However, DoD has some flexibility on the sites in which that care will be provided.

DoD’s average inpatient facility is 35 years old. This is better than just a few years ago, when the average age was 50 years old. However, they have too much inpatient capacity. The fact is that the practice of medicine has changed, with more being done in the outpatient setting. In addition, DoD’s population has
changed and moved around. This study examined whether resources are actually in place where the beneficiaries need them.

There are some large inpatient facilities in places without the population to support them. Conversely, there are also locations with large patient populations and inadequate facilities and capacity.

Smith emphasized that this study sought to maintain or enhance beneficiary access to and quality of care. They focused on the readiness of the uniformed force, to include a ready medical force (medics) and a medically ready force.

They were also looking for performance improvements that can be met by FY18.

The study began in FY13 with an examination of US specialty hospitals. In FY14, the scope was expanded to all MTFs worldwide.

Certain assumptions were made. The researchers assumed that DoD provides quality care. They also assumed that the best way to maintain a ready medical force is to have one that is kept busy. Finally, they assumed that the MHS is capable of recapturing patients from the private sector side of the benefit.

Smith said that they also took into account local factors such as whether the private sector healthcare market could pick up any care in excess of the DoD capacity in that area.

Each Service provided the study group with the number of members of the uniformed force is willing to pay for. This bottom line becomes the authorized force of medical providers in uniform and ready to deploy. They then tried to identify staffing models and requirements. This was quite difficult, since no one is really sure about how to do this. However, they worked up what he believes is a reasonable model based on reasonable surrogate information.

They then created a standardized way to determine the potential demined by specialty for each market. This is called the provider allocation model.

They also had to determine if they could set up a model for recapturing care into the direct care system, and then staff to provide that additional care.

As a result, they discovered that, in some markets, there may not be enough of a demand coming from DoD beneficiaries to keep parts of the medical staff sufficiently busy to maintain their readiness. There is enough of a demand for general surgeons pretty much everywhere, for example, but not necessarily enough in some areas for some kinds of specialists.
There is a large workforce in both uniformed and civilian cohorts in family and general practice medicine, because this is where the bulk of the workload lies, along with the largest need in keeping the force medically ready.

Overseas, much of the care being provided is in obstetrics. Moving mothers away from their families creates additional costs and complications (that is, use of the “stork’s nest”).

In conclusion, the study has concluded that some facilities need to close, while others need to be expanded. Across the enterprise, there needs to be a reallocation of some of the specialties.

The study’s authors are fully aware of the possibility (or likelihood) of political pushback. The Defense Health Agency (DHA) stands ready to reconsider recommendations if sufficient new evidence is presented.

JOINT FORCE 2020 REQUIREMENTS: JOINT CONCEPT FOR HEALTH SERVICES
  o MG Nadja West, MC, USA, Joint Staff Surgeon/Health Services Division (J-4)

*General West* said that the medical part of the military needs to go along with what the rest of the force is doing in increasing joint operations. The complete Joint Concept for Health Services is expected to be released next August. Aligning the medical force with the emerging joint force is critical to the overall force.

West stressed that the move to a joint force is intended to be a way to more efficiently identify and use the Services’ medical resources, not to take them over.

Certainly, the Services are very good at coming together quickly on an *ad hoc* basis to make a mission successful. The most recent example of this is the response to the Ebola outbreak and the quick deployment to West Africa.

However, some areas in which the Services are currently operating jointly are not included in doctrine, such as aeromedical evacuation. Should any Service decide that it can no longer afford to support that mission, all of the Services would lose.

The goal of a joint force effort is to codify and standardize joint efforts, to institutionalize them more deeply. No one knows what the future will bring, and they need to be more adaptable.

West stressed that, once the joint medical concept is written and approved at all levels of leadership, it forces the rest of the forces to fully understand and
recognize the importance of medical. It will also help to explain to leadership why medical takes up so much of the budget.

US-UK MEDICAL COALITION: Strategic Partnership in Action
  o Surgeon Rear Admiral Alasdair Walker, OBE, CHS

Admiral Walker talked about the importance to not only train hard but also to train together. Joint operations are a reality for the foreseeable future.

Just as in the US, the UK Defence Medical Services have faced the need to cut spending and to downsize. They will be relying more on the Reserve Forces.

As for the Ebola crisis, Walker does not think that the various responding countries have truly joined up at the higher, strategic levels. Because the response is primarily humanitarian, they did do things on the joint level as well as they could have.

Walker warned that the cost of training doubles when contingency operations are necessary. In addition, the military must regenerate equipment used up and left behind during contingency operations (e.g., reset the force).

Walker stressed the importance of communication in order for different militaries to work together. Constant communication ensures that both parties know each other’s capabilities and interests. It also maintains relationships that ease cooperation and collaboration. He worries that, over time, the level of communication will decrease, leading to a decay of collaboration.

Walker left the audience with the warning that today’s leaders must maintain communication and collaboration, in order to leave a stronger structure for those coming after them.

When deploying in situations such as the Ebola crisis, it makes sense for deploying partners to share resources in order to avoid duplication of effort. However, there needs to be a formal structure governing those efforts. That said, Walker noted that, in such situations, one of the countries really has to be the lead nation.

MHS RESEARCH DEVELOPMENT AND ACQUISITION (RDA) DIRECTORATE: JOINT FIRST SOLUTIONS
  o RADM Bruce A. Dol, Director, Research, Development & Acquisition, DHA

Admiral Dol said that the Defense Health Program (DHP) is the largest funding sponsor in DoD. However, in recent years, the faucet has gotten very tight, especially as the Department operates under the continuing resolution (CR).

Each Service has specific areas upon which their focus in medical research field.
The RDA wants to be the global leader for discover and integration of innovative medical known and materiel solutions to continually enhance force health readiness, resilience and rehabilitation. Their actions must be relevant to the operational parts of the military.

As Director, Dol has an advisory committee, the Program Integration Advisory Committee (PIAC), which advises him on funding decisions.

Dol emphasized the importance of involving industry as early in the basic research efforts as possible. This way, they have a greater chance of developing a commercially viable product.

There needs to be greater transparency across the Services and agencies in order to avoid unnecessary duplication of effort. Sometimes, there is a good reason to have redundant efforts underway. However, if that happens, it should happen purposefully.

Dol outlined the various challenges facing research projects. He wants to see more standardization for getting through the process. Greater industry participation will help get more of these products to the marketplace. To that end, he would like to also see more patent protection in some areas, in order to provide greater rewards to those researchers who go through the entire process.

The Directorate works with national and international consortiums, that bring together academia, industry and government research efforts and resources.

There are over 500 projects just on PTSD and TBI. They absolutely have to look at all of them to see if there are places of redundant effort.

Going forward, the Directorate intends to continue to focus on working jointly to further research.

The advanced development part of the research cycle is new to the DHP. They are building upon the Army’s model.

It takes about 10 to 12 years to get from an idea to an actual product for patient use.

**DHA Director Gen Robb** said that they are now looking at how to best position the CoEs to get their products to market. The seven MHS CoEs will be held responsible for accomplishing this goal. Right now, the CoEs are each hosted by one of the three Military Services. There is some discussion on aggregating these CoEs under a central entity. That would most likely be the RDA Directorate within the DHA.
JOINT TRAUMA SYSTEM DEFENSE CENTER OF EXCELLENCE (CoE): MHS MODEL FOR STRATEGIC PARTNERSHIPS

- Col Todd E. Rasmussen, MD, USAF, MC, Director, US Combat Casualty Care Research Program
- COL Kirby Gross, MD, Director, US Joint Trauma System DCoE, Trauma Consultant to the US Army Surgeon General

**COL Gross** said that the Joint Trauma System allows for research to be gap driven, with a directed focus to ensure that research actually fills operational needs. With these capabilities, the case fatality rate will hopefully continue to decrease.

The coordinated movement of casualties from the battlefield to increasingly higher levels of care is a true innovation from the wars in Iraq and Afghanistan.

Gross stressed the larger amount of data available today on every single wounded and killed service member. Based on this information, evidence-based practice guidelines can be identified and disseminated.

**Col Rasmussen** emphasized the importance of strategic relationships to identify gaps in care. That information is then fed into a requirements drive Combat Casualty Care Research Program (CCRP) which endeavors to produce knowledge and material solutions to resolve those gaps.

The JTS vets the research outputs, and implements the results into practice. For example, new knowledge gets put into evidence-based clinical practice guidelines to inform best practices in the clinical setting.

The JTS DCoE and the CCRP leverage strategic partnerships with a wide variety of organizations in academia, industry, and throughout the military and government.

As Gross had noted, the model’s effectiveness is proven by the face that combat-related mortality is decreasing even as the injury severity is increasing.

In response to a question from the audience, the speakers noted the importance of leveraging resources and capabilities not only across DoD but also across the entire government, including NIH and other agencies.

In order to track morbidity among wounded service members, DoD will have to reach out to the VA to get a full picture.

One possible consortia would be with civilian trauma centers. Some civilian trauma cases do include issues of interest to military research, such as severe hemorrhaging.
OPIOID USE AND OVERUSE AMONG RECOVERING WARRIORS, AND SEEKING HELP

Veterans and recovering warriors are increasingly using opioids, often without the oversight of a physician. Many do find that they help with overcoming pain. However, they also know that they are using the drug as a crutch, and are often ashamed of themselves for purposefully getting high. The drugs are being used not only for pain, but also to overcome anxiety and as a sleep aid. In a series of interviews, veterans readily admitted to using the drug to get high.

Veterans interviewed in this study used alcohol so regularly that they did not even think to mention it unless specifically asked. Thus, virtually all of the sample mixed opioids, other drugs, and alcohol.

Not all of the service members and veterans who admitted to drug usage and even inadvertent overdoses were wounded. They began using drugs while in the Service, and continued to use while serving on ships and in other situations.

Periods of abstinence can also pose a risk of overdose. After not using a drug for months or even years, individuals who resume can overdose on their first use upon resumption.

The presenters said that these topics need to be brought up with veterans. Too often, these individuals are not fully aware of their own overdose risks. Even if they are, they also tend not to know about their options for easing off the use of opioids, including the availability of other medications to make withdrawal easier.

Providers should be talking to veterans about their overall feelings about using drugs and getting high. Often, veterans who are misusing these drugs are simply looking for a high, and are not aware of the possible impacts of what they are doing.

Some of the drugs that service members were using, such as synthetic cannabis, is now detectable through urinalysis. However, other methods are used, such as taking massive amounts of cold medicines. It is an ever-shifting effort.