I would like to discuss with you what it takes to conduct the medical mission in urban operations. In my experience, all too often the medical support requirements are an afterthought. So, I would like to focus today on the planning and execution of the medical mission in MOUT.
Pre-Deployment

- Intelligence Preparation of the Battlefield (IPB)
  - Get and study the plan or the order
  - AFMIC Products
    - Country Study/Classified Studies
  - Internet
    - USAID Reports/Country News/NGO’s (ICRC)/WHO
  - Country Military Group/Embassy

Upon receipt of a deployment order, it is critical to study carefully the OPLAN or OPORD. One needs to note, in particular, the nature of the mission as it relates to the medical support required by the force and by the civilian population. For example, in Hurricane Mitch the main effort dealt with medical and engineering support to the disaster victims, whereas in Haiti, the mission was to establish conditions to allow for free elections to be held and to stabilize the country.

Questions to address include: Are there any special restrictions in terms of the medical care to be provided? Is the mission to give care only to the deployed force, or is medical support to the civilian population also encouraged? Is there a “nation building” intent or a large refugee population to be cared for? Each will require a different set of packages and medical planning. Other inputs include force and civilian casualty estimates and whether one will be supporting a joint or combined operation.
Next, one should obtain and study all of the country’s and that particular city’s medical and intelligence data. The sources may be classified for security reasons, as are these from the Armed Forces Medical Intelligence Center (AFMIC). However, probably the most up-to-date information will come from the Internet and such organizations as USAID, the country’s newspapers, NGOs, WHO, and the ICRC, among other sources. These will provide additional information on medical issues such as disease outbreaks, the status of the health care infrastructure, and the like.

Also, always consider talking with the country group beforehand and with personnel both at the embassy and with other military groups, such as foreign military officers studying at one of the U.S. war colleges. If available, they can help inform you about events in their own country and identify points of contact for you beforehand.
To continue with the discussion of Intelligence Preparation of the Battlefield (IPB), it is important to analyze country and urban data sources. Key information will include demographic data such as the age distribution of the population, what languages are spoken, and what religions are practiced. Again, these factors need to be incorporated into the planning process.

Weather and environmental factors will be the most immediate threats upon deployment to a particular area. Heat or cold injuries can be one of the first threats to be encountered. For example, on my first deployment to the Sinai, we were the first group to jump in and had to do a march in full combat gear to the south camp. As a result, we experienced a number of heat casualties that perhaps could have been prevented.

In addition, it is critical to understand the particular diseases prevalent in the city. Different threats will behave differently in urban areas due to the fact that high concentrations of people can increase the probability of the spread of infectious diseases. Further, if a city's
infrastructure has been compromised, then the force may be dealing with contaminated water, raw sewage, or other problems, all of which can lead to epidemic situations. In particular, one should do a close study of high-risk diseases such as HIV, cholera, tuberculosis, dengue, and malaria. These diseases are of greatest concern in tropical and underdeveloped countries. Further, there may be other threats to consider, such as terrorists or the potential for deployment of a chemical or biological weapon.

Before deploying, it also is important to have a good working understanding of the urban medical infrastructure. What is the quality and availability of professional medical personnel, medical equipment, clinics, hospitals, and organization of the health care system in that country or city? Are the NGO activities coordinated? Is there a good medical supply infrastructure? For example, the medical infrastructure may be intact but there may be a shortage of medical personnel, or the distribution network for medical supplies may have been disrupted. Again, AFMIC is a good source of information on a country’s medical infrastructure.
During the predeployment planning phase, key considerations include the medical rules of engagement (MROE) and how to ensure that the force understands what to do when assisting with casualties, in particular civilian casualties. For example, in Haiti, the MROE were part of General Order #1. Every soldier was instructed on how to respond to casualties and where to take individuals, whether civilian or military. The U.S. military hospital in Haiti was small, which meant that we had limited capability and resources to take care of patients. Supporting the force was our primary mission. So in Haiti, the MROE dictated that if a civilian casualty was encountered, the soldier should provide first aid and then transport the person to a civilian hospital unless the injury was the direct result of a military action. In general, if the MROE are not clear, then force members will bring all civilian casualties to the nearest military treatment facility, regardless of the patient’s condition, how the injury occurred, or the availability of local medical resources.

Key to force protection are the preventive measures required for a given area of operations. Some of these measures will include im-
munizations, prophylactic medications, safe water, food, and hygiene measures. Not only U.S. forces, but all of the forces in a coalition operation will need to be trained on preventive medicine measures. Often our forces rely on bottled water and plastic latrines while in theater. These amenities are nice to have, but they are not critical and pose a serious burden to the logistical infrastructure. If planning to use other systems, it will be necessary to train personnel on field sanitation techniques and to bring in the right equipment. The regions of the world to which we are now deploying often have limited sanitary infrastructure, so it will be essential to be prepared.

Finally, prior to deployment it is important to determine the evacuation policy and procedures for the force and the civilian population. If not established beforehand, evacuation policies may evolve on an ad hoc basis and potentially become a major cause of friction during the course of an operation.
Pre-Deployment

- Reconnaissance
  - Team: Log, Ops, Epidemiologist
  - Country Survey:
    - POCs: Embassy, USAID, WHO/PAHO, MOH, NGOs, other agencies like CDC
    - Standards of Care
    - Medical Infrastructure

If there is an opportunity to conduct a reconnaissance, then the team should be tailored to include a medical operations officer, a medical logistical officer, and an epidemiologist. Their job will be to conduct a survey of the resources available in-country. Sources of information will include USAID, Ministry of Health, WHO, and other key health care players in-country. The end product of the visit should consist of a good understanding of the medical infrastructure, the prevalent medical conditions, the urban medical needs, and the medical organization present in the city (including that of governmental organizations and of the NGOs).

Questions to address as part of that assessment include: (1) Has the city’s medical and other critical infrastructure been overwhelmed? (2) Does the host nation need technical assistance to help reestablish a functioning health care system or just a soft push to provide care for its population? (3) What are the city’s or country’s medical standards of care? For example, many European countries have standards of care similar to those in the United States, so we may be able to rely on a German hospital to care for U.S. soldiers if necessary.
But in other countries, such as Haiti, we would not be able to rely on any host nation medical assets.

The availability of medical supplies and distribution systems are also of critical concern. Surprisingly, there may often be multiple medical assets already present in an area of operations. For example, in Guatemala City there is a U.S. Center for Disease Control (CDC) field office. In various countries there are at times U.S. military medical laboratories, such as the Navy's laboratory in Cairo, Egypt. The assessment process should identify whether assets like these are present in the theater of operations.
Once the medical command has gathered all available pertinent information, one needs to conduct medical mission analysis. Particular attention should be given to tailoring the medical personnel, equipment, and supply package in order to accomplish the mission. If civilian care is expected, then pediatric, women’s health, and geriatric needs ought to be considered in structuring the medical force. I subscribe to the premise that, in general, it is better for the local medical infrastructure and host nation to provide care for its civilians, whereas the role of the military should be to support the local infrastructure with medical supplies, equipment, and perhaps some professional services. However, the guiding rule should be that the military is in a supporting role and that the civilian medical authorities are in charge.

From a planning perspective, key limiting factors will be time and transportation resources. It is essential to have a good understanding of these two factors early on in one’s mission analysis. For example, how much time do you have to respond, and what transportation assets will be available? Other factors to consider include
the need for combat stress control assets (don’t leave home without them), the logistical infrastructure, and the communications infrastructure.

Finally, translators are critical to the medical mission. Even when one may not be planning to provide care for civilian casualties, the Geneva Convention requires that military forces render aid to all patients with true medical emergencies when we come in contact with them. This will require us to be able to communicate with the patient and understand any cultural restrictions so as to be able to provide care and effect their transfer to the civilian medical authorities, if necessary.
Pre-Deployment

- Task Force Organization
  - Understand capabilities and composition of Joint and Combined Forces
    - What other medical assets are in the TF?
    - Assessment of their standards of care
    - Medical issues from home station
    - Preventive medicine status

When in support of a joint task force, one needs to understand what medical assets will be available from each service and how they are to be employed. For example, an Army medical company is not the same thing as a Marine Corps medical company. For joint missions, therefore, the medical planner needs to understand service differences in order to tailor the package appropriately. In the event of a multinational force, such as a NATO or UN-led force, a clinical assessment of each country’s capabilities and standards of care is required.

Preventive medicine measures are also critical to mission success. Units must be well trained, disciplined, and resourced to execute a sound preventive medicine program. If there is no soap, how can you clean the dishes? If the cooks are not trained, how can you prevent food-borne diseases?

In addition, there may be particular medical concerns from home station such as chloroquine-resistant malaria, drug-resistant tuberculosis, hepatitis E, HIV infection, and other serious diseases. For
example, in Haiti we brought in troops from the Middle East who happened to have a strain of malaria endemic to their country that is resistant to chloroquine. Haiti, on the other hand, does not have a strain of malaria that is drug resistant. In Asia, hepatitis E is quite common, but it is rare in the Americas. Such diseases, if brought into the theater by a multinational force, may tax the theater’s medical system and host nation capabilities as well as being politically sensitive. Further, they may affect not only the local populace but also the force. A military force should not introduce a new medical problem into a region that may already be in crisis.
Pre-Deployment

- Mission Analysis
  - Exit Plan
    - What is mission accomplishment?
    - How do we get there?
    - What do we agree to do from the medical standpoint?
    - How do we measure success?

Before undertaking operations in urban terrain, one needs to establish an exit plan. This is probably the most important analytical step before executing the mission.

How does one define mission success from a medical standpoint? Each mission will be different. For example, are there specific medical or humanitarian assistance projects to be accomplished or timelines to be met? Will success be defined as when a host nation’s medical infrastructure becomes “functional”? If so, what is meant by “functional” will need to be clearly defined. If epidemiological data are to be utilized to measure when mission success has been achieved, then one needs a plan for collecting supporting data.

Ideally, the military will get host nation officials to agree with the exit plan and desired end state as well as how “medical success” will be measured. This facilitates departure, clarifies expectations, and can help ensure a smooth transition from the military to civilian authorities. For example, after Hurricane Mitch I met with the Minister of Health and we agreed in writing what U.S. military medical support
would be most useful during the three months of our deployment. It was clear what our exit strategy was. Once these questions are answered, one can proceed with the analysis of how to get there.
Two items of force protection that merit special training attention are the use of nonlethal weapons such as pepper spray and convoy operations in crowded urban centers—the most difficult operation in an urban environment from the medical commander’s perspective. In terms of nonlethal weapons, it is essential that medics be trained as well as the rest of the force in the use and deployment of these weapons because they are not part of the TTP process.

The entire force must be trained on how to use barrier protection (i.e., latex gloves) when rendering care to any person (military or civilian) in order to prevent the spread of such contagious diseases as HIV infection and hepatitis.

Another training issue that merits special attention is language and cultural training. For commanders, it is essential to have linguists available who have not only have mastered the language but can also do cultural translations. To illustrate, while in Central America I was in a meeting with another senior military officer and the political officer of the embassy. The host nation military officer was being
matter-of-fact and quickly moving through the different points of negotiation in order to reach an agreement. However, in the cultural context this style of negotiation was out of character and reflected problems with the relationship that hadn’t been picked up by the U.S. senior military officer. Further inquiries discovered that the host nation senior officer felt that he was out of the loop and was being slighted by us, and for that reason he was angry. Once we identified this issue, we were able to work out our communication problems. My point is that it is not enough to be able to converse in another language. You also need someone who can understand the cultural context and provide guidance to you on such issues.
Deployment

- Standard Operating Procedures
  - Civilian Care/ Evacuation Procedures
    - Local coordination
    - Training of the force
  - Casevac/Medevac/Repatriation Procedures
    - US/UN/Civilian
  - Establish a Medical Surveillance System

The care of civilians and evacuation procedures require detailed planning and coordination. It is critical to establish standing operating procedures (SOPs) so that all of the force involved will be able to execute them. When the mission involves a multinational force, the rules that apply to American forces may not necessarily apply to the UN or to the care and evacuation of civilian casualties. Coordination between these entities needs to occur beforehand and not when the crisis occurs—the least opportune time.

If you have to send patients across a national border, it is important to think and plan on how to get the proper visas and documents. In Haiti, when any force soldier was seriously injured we transferred him to Miami. For this reason, we worked out a routine system to get expedited visas at the U.S. Embassy in Haiti for any injured non-American soldier. It is better to plan ahead than have to do so in the heat of battle.

Establishment of a medical epidemiological surveillance system is also critical in order to be able to assess the health of the force and to
detect unusual occurrences that may herald preventive medicine problems or the deployment of biological weapons. Such a system enables us to track diseases within a country. Medical surveillance, however, requires cooperation from all the units in the deployed force. The system relies on all units reporting occurrences of such diseases as upper respiratory infections, flu, and diarrhea. This information can in turn help us to determine whether a disease occurrence, such as a case of cholera or anthrax, is within the normal range expected for that country or perhaps represents a disease outbreak or may even signal the possible deployment of a biological weapon.
Deployment

- Mission Execution
  - Care of Force
    - US Standard of Care
      - Supplies
    - Civilian Care
      - Based on their Standard of Care, we are in support
      - Force Protection Concerns
      - Infrastructure Development
  - Exit Plan

It is essential to assure that U.S. standards of care prevail for the whole task force while conducting operations in urban settings, otherwise one may risk division within the multinational force. Ensuring U.S. standards of care can create some interesting dilemmas, such as the use of only FDA-approved medical supplies. For example, U.S. soldiers can only receive FDA-approved drugs, whereas a Turkish soldier may receive Turkish medicine. However, in a coalition operation you cannot have two different standards of care being applied to the force.

At the same time, these standards may not necessarily apply to the host nation. The standard of care provided to civilians should be that of the community and may not necessarily conform to Western-style medicine or standards. In providing care to civilians there should be an emphasis on basic preventive medicine measures and primary care.

The best way to avoid ethical dilemmas is by keeping the local medical civilian authorities in charge of civilian health care. As has been
noted, the military’s medical role will be one of supporting the civilian medical authorities and infrastructure. Further, NGOs may want the medical mission of providing care to civilians and may be concerned that the U.S. military may supplant them. The best scenario is where the civilian medical infrastructure remains viable and our role is to provide them with a minimal amount of equipment and medical supply support.

In the event of having to support displaced civilian camps, the most important elements will be basic preventive medicine, water treatment, food, vector control, immunizations, black water disposal, and mental health care. I’m convinced that the best alternative is for the civilians to be organized and resourced to care for themselves, with force oversight. Again, do your best to find other organizations like the host government, the International Red Cross, or reputable NGOs to run these camps, if at all possible. The military may provide assistance such as medical supplies or equipment to them. However, the more self-reliant the civilian population is, the easier the transition from military to civilian support will be. Always keep your eyes on the exit plan!
With respect to humanitarian assistance or crisis situations such as occur during a major natural disaster, the military hopefully will not be the only “medical top dog” in town trying to assist the populace. One needs to determine what the available resources are locally and assess whether other organizations may be able (or be more appropriate) to assume a particular mission. Government organizations and NGOs bring medical personnel, money, equipment, and supplies to the table; the military should involve them when possible. On the other hand, the military brings to the table uniquely organizational skills that often may not be present in the civilian organizations, especially during a crisis. Some civilian organizations may be reluctant to coordinate with the military, however. Because the military has logistical, intelligence, security, and transportation assets that these other organizations do not have, this can be useful in helping to leverage their cooperation.
Deployment

- Challenges
  - CMOC Coordination
    - Conflict when the main mission is humanitarian
  - Politics
    - US Mission, Host Nation, UN, US Military

There are multiple challenges during a deployment. An important one is avoiding the conflict that can arise during routine establishment of the civil military operations cell (CMOC) or a humanitarian operations cell (HOC). If done improperly, this can lead to a duplication of effort between task force senior leaders and CMOC/HOC personnel. The responsibilities of the Task Force Surgeon or Engineer, for example, and those of the CMOC/HOC personnel, need to be defined early to avoid possible confusion.

Organizational issues and politics will always present a challenge. One needs to understand them as well as possible and work with them. Good medical intentions may have grave political consequences, as the Germans found out in Cambodia. I was told that the German hospital went out of its way to provide excellent medical care to the locals in its sector. The problem was that only one political faction lived in the German sector, and other factions saw this as political discrimination against them. As a result, this good German deed almost broke the political agreement.
We discussed providing medical support to the deployed force and to civilians. Another patient population to consider are VIPs such as congressmen, general officers, and U.S. and foreign ambassadors, among others. They will be part of any operation, and one had better be ready to provide care to them and have a plan for doing so. The plan should include how to provide security for them as well as how to provide for their clinical and personal needs.

Contingency planning needs to be ongoing. How will you deal with mass casualties? Are you using nonstandard evacuation procedures? Have you exercised these procedures and plans? How are you going to secure your personnel and equipment in the event of a hurricane, fire, or other natural disaster? How will you sustain your medical operations under different scenarios?

Telemedicine allows us to bring state-of-the-art care to remote areas. We can bring the best minds to bear, especially in cases of clinical or operational matters, using this asset.
The final challenge I would like to address deals with boredom. Soldiers must stay busy, and it is up to us as leaders to find them good employment. Training is always a source of good employment, but it has to be planned and resourced well if it is to be effective.
Re-Deployment

- Execution of exit plan
  - Downsize
    - Personnel/equipment
    - Disposition of supplies
    - Phase out of the missions

- Prepare the personnel for re-deployment
  - Returning briefing
    - Reunion with family members
    - Debriefing

As the force gets ready to redeploy, it is important to do so according to the exit plan. As the operation matures and the desired end state is achieved, the medical effort will decrease and there will be a phase-out of the missions. Expendable medical supplies will most likely remain in country to be donated to the host nation or NGOs, whereas the personnel and equipment will return home.

Before the force is redeployed, it is very important to brief its personnel about impending family reunion issues, and, if necessary, they should receive critical incident debriefings from psychological personnel before departing for home.
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Re-Deployment

- Medical Screen
  - Prophylaxis education
  - Required tests and examinations

Remember that no longer will U.S. forces deploy to different regions of the world without having a sound medical surveillance system in place. This is now part of standard procedures. Such a system will enable us to monitor and study exposure to potential risks, and to anticipate and prevent such problems as Gulf War Syndrome. So it will be important to plan for implementing such systems.

The planning and the execution of medical operations in support of urban operations requires a lot of thought and attention to detail. In addition, medical operations have direct operational and strategic implications. For these reasons, they have to be included in the initial mission planning and not simply as an afterthought.