

Medical Logistics Support to Iraq: The End of an Era

The lessons learned in drawing down medical logistics support in Iraq must be remembered in drawing down medical logistics support in Afghanistan.

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Since its inception in 2003, the United States Army Medical Materiel Center–Southwest Asia (USAMMC–SWA) (Provisional) has been the tip of the spear for the rapid infusion of medical supplies and equipment into Iraq and Afghanistan. In addition to medical materiel storage, distribution, and medical equipment maintenance, USAMMC–SWA provides technical and functional medical logistics expertise to all military forces throughout the U.S. Central Command (CENTCOM) area of operations (AOR). USAMMC–SWA is pivotal in establishing, maintaining, and retrograding medical materiel within the supply chain system. Nine years of continued medical supply chain refinement have come to a close in Iraq, but the lessons USAMMC–SWA has learned can be applied to the operation in Afghanistan as it begins to downsize.

In the Beginning

USAMMC–SWA was established to serve as the single integrated medical logistics manager (SIMLM) for the CENTCOM AOR in support of Operations Enduring Freedom and Iraqi Freedom (OIF). CENTCOM named 3d Army/Army Central as the SIMLM to support the other armed services by taking operational responsibility for medical logistics, developing a health service logistics support plan, and requesting forces as needed. In 2006, USAMMC–SWA was designated as the theater lead agent for medical materiel (TLAMM) as recommended by the Defense Logistics Agency with concurrence from the Chairman of the Joint Chiefs of Staff.

In the beginning, USAMMC–SWA Soldiers deployed to Camp Doha, Qatar, from the 6th Medical Logistics Management Center, Fort Detrick, Maryland; the 388th Medical Logistics Battalion, Hayes, Kansas; and the 424th Medical Logistics Battalion, Pedricktown, Pennsylvania; alongside Air Force (USAF) logistics and medical maintenance teams in support of Air Force Central's (AFCENT) Patient Movement Item (PMI) Program.

USAMMC–SWA's mission is to provide, project, and sustain medical logistics support and solutions across the full spectrum of military healthcare missions throughout the CENTCOM AOR. Over the years, the force structure has

changed to include contractor support, but the mission has stayed the same.

Materiel Support

At the height of OIF, USAMMC–SWA supported customers with more than 720 separate Department of Defense activity address codes across Iraq. It shipped more than 2,950 tons of materiel valued at \$220 million to 9 aerial ports of debarkation annually.

USAMMC–SWA originally used the Theater Army Medical Management Information System (TAMMIS) to order and process class VIII (medical materiel) requests. This single server based architecture worked well but lacked an enterprise view of medical materiel support requirements.

In 2009, the Army Medical Department deployed the Theater Enterprise Wide Logistics System (TEWLS) to USAMMC–SWA. TEWLS provides an enterprise view of the medical materiel supply chain and links the strategic provider with the operational TLAMMs (the USAMMCs in Europe, Korea, and SWA). By providing a picture of the supply chain from top to bottom, TEWLS made it possible for USAMMC–SWA to continually adjust to the ever-changing conditions associated with the force drawdown in Iraq.

Unlike TAMMIS, TEWLS provides single-point data entry and immediate data sharing across the entire medical logistics enterprise from the national level to the TLAMMs. It supports theater-level medical materiel management, warehousing, and distribution functions as well as medical assemblage creation, build, and management.

Live, complete, real-time data can be viewed from any TEWLS-enabled computer terminal. This enterprise view allowed planners and executors a common view of medical materiel flowing into Iraq and allowed materiel managers to gradually reduce the supply chain requirements as units and personnel departed. USAMMC–SWA also furnished Comprehensive Health Services with TEWLS historical demand data that aided the contractor in planning for known materiel transitions and providing continuity of support to the Department of State mission in Iraq.

Biomedical Maintenance

USAMMC-SWA in partnership with the U.S. Army Medical Materiel Agency's (USAMMA) Forward Repair Activity-Medical (FRAM) provides expert medical maintenance in the highly technical areas of pulmonary equipment, imaging equipment (x ray and computed tomography (CT) scanners), and laboratory test equipment such as chemistry analyzers and microbiology units.

The FRAM team is not designed as the first level of support. USAMMC-SWA's standard operating procedure designates the maintenance activity on the ground as the first level and the primary source for installation scheduled and unscheduled service. Several other levels of support are used before requesting support from the FRAM. These support options vary depending on each unit's function and location. The FRAM team from USAMMA's depots brings forward the highest level of support possible. The FRAM team and USAMMC-SWA's biomedical equipment technicians created a powerful lineup to send forward into different countries in the CENTCOM AOR.

In the OIF drawdown, FRAM teams conducted more than 500 man-days of repair work or training on specific medical repair procedures for forward biomedical equipment technicians forward. The FRAM team was tasked with disestablishing CT scanners, packing some of them for shipment back to the depots, and assisting in the trans-

fer of others to the Department of State's prime medical provider contractor as it established diplomatic support hospitals across Iraq.

PMI Program Support

PMIs are designated medical supplies and equipment that are required to move a patient during medevac or aeromedevac. USAMMC-SWA, in close coordination with the U.S. Transportation Command (TRANSCOM) Surgeon's Office, USAF Materiel Command Surgeon's Office, CENTCOM J-4 Joint Medical Operations Cell, and the AFCENT Surgeon's Office, provided PMI support to 10 different locations before the closure of the Iraqi theater of operations. The USAMMC-SWA PMI cell manager closely monitored PMI requirements and ensured that PMI support items were not erroneously transferred to the Department of State's prime contractor. By doing this, 391 items valued at \$3.9 million dollars were recovered for reuse in the global PMI system.

USAMMC-SWA PMI logisticians effectively maintained accountability of the equipment used throughout the CENTCOM AOR by using the PMI Tracking System (PMITS) to track the storage and movement of the items by scanning PMI in and out of service. USAMMC-SWA's biomedical maintenance technicians provided the direct support consisting of repair, calibrations, and services for

An Airman works on patient movement item equipment at the United States Army Medical Materiel Center-Southwest Asia.





Employees pack items for shipment at the United States Army Medical Materiel Center–Southwest Asia.

the AOR. The PMI team provided training to familiarize units and leaders with the PMI program and PMITS application to ensure that medical leaders understood how to correctly employ the PMI program.

As the Iraqi theater closes, USAMMC–SWA has become the PMI Center of Excellence in the AOR for both equipment (such as ventilators, suction devices, and patient monitoring systems) and durable items (such as litters, straps, and pads). Customers can put both types of equipment in one request. This practice, along with positioning PMI equipment at two forward medical logistics companies in Afghanistan and maintaining direct support for biomedical maintenance, ensures that USAMMC–SWA can provide responsive dedicated support throughout the CENTCOM AOR.

Supply Chain Distribution

Over the past 9 years, USAMMC–SWA delivered to as many as nine logistics hubs, including those at Balad Airbase, Mosul, Baghdad, Tallil Airbase, and Al Asad Airbase. These logistics hubs and other locations were essential to the hub-and-spoke network required to support troops at less developed locations that did not have fixed-wing aerial ports for delivery. However, as drawdown operations and troop reductions occurred, USAMMC–SWA still delivered more than 760,000 pounds of general medical cargo, more than 1,200 cold chain (temperature controlled) items, and 850 hazardous material shipments. Shipments were delivered using both commercial carrier and military airlift modes of transportation.

With close proximity to the USAF aerial port at Al

Udeid Air Base, USAMMC–SWA capitalized on the opportunity to integrate the use of Air Force 463L cargo pallets to move bulk shipments into the major hubs in Iraq located at Balad and Baghdad because these locations received daily ring route flights from Qatar. A medical logistics company (MLC) and its forward distribution teams (FDTs) received these bulk shipments and redistributed them to support units in and around their locations.

The combination of USAMMC–SWA’s capability to “pure pack” shipments (consolidate a single customer’s supplies on one pallet) for MLC and FDT customers and their forward distribution capability (intratheater relationships with commercial and military distribution nodes) expedited time-sensitive supplies to outlying locations.

Commercial carriers served a pivotal role in the USAMMC–SWA supply chain. During times of intense fighting and numerous casualties, cost efficiencies became less important than delivery speed. Commercial airlift under TRANSCOM authority provided Medical Air Tender to move materiel into Iraq and deliver it to the customers’ locations within 96 hours of pick up from USAMMC–SWA. Commercial carriers were depended on not only to fly supplies into theater but also to provide intratheater air and ground transportation to locations that traditional military assets could not reach as quickly. Commercial carriers planned and coordinated local-national distribution assets from the time cargo was picked up from USAMMC–SWA, thereby expediting ground movement once it arrived in theater. However, this expedited transportation method was expensive. During the height of conflict and troop surge in Iraq,

commercial transportation costs for medical supplies averaged \$1 million to \$2 million a month.

Although standard ship-to times were established to support medical units in Iraq (96 hours for general cargo and 72 hours for cold chain cargo), the transportation mode varied depending on conditions on the ground. As drawdown operations became accelerated at the onset of 2011, and troop strength and casualties decreased, speed was no longer as important as cost efficiency.

In mid 2011, bulk cargo reverted to military airlift, and commercial carriers were relied on solely for cold chain movement (commercial carriers had invested in refrigerated trucks) and transport to far forward locations with decreased military transportation assets. The distribution modes reverted to presurge commitments of 70 percent military airlift and 30 percent commercial carrier.

Distribution Challenges

As the force drawdown continued, several distribution challenges developed—some mimicking the challenges experienced during the build-up years of the campaign. The early redeployment and lack of a backfill for the MLC degraded the ability of separate units to have a sole point of contact in theater for medical logistics support. As a result of this course of action, USAMMC-SWA became the supply support activity for Iraq, and an ad hoc hub-and-spoke concept developed, resulting in second- and third-order effects. Brigade medical supply offices assumed the MLC's roles and responsibilities and became regional support organizations instead of being solely brigade focused. They were managing more external customers, which meant more supply and storage requirements and accountability. The brigade supply medical offices were further relied on to forward supplies outside of their traditional boundaries and supply lines.

Additionally, as bases began to downsize for closure, commercial carriers who had established customer service infrastructure on the bases were being asked to leave early and to turn over space. This resulted in either a stop of customer support to that location or longer shipping times because supplies had to wait outside of the gate for unit escort. Decreased commercial carrier support forced medical support units and sections to coordinate external distribution through traditional military lines of communication, which was difficult because units had become so dependent on commercial carrier practices.

Commercial carriers loaded the cargo at the customer's location, processed the paperwork, and provided an easy method of tracking (web-based tracking site), which required no specific username access or passwords, just the shipment airway bill. (The shipment airway bill provides the shipper with a digital signature from the customer on the other end.)

In the absence of the commercial carrier, units had to conduct distribution planning with the local movement control team (MCT), deliver the supplies to the MCT

cargo holding yard, and conduct verbal reconciliations with supported customers to track shipment receipt—all of this as theater infrastructure was decreasing.

The takeaway to keep in mind for future downsizing operations is that leaders need to ensure that the young logisticians are knowledgeable of the practices of traditional military distribution and lines of communication when faced with the absence of commercial distribution infrastructure.

USAMMC-SWA will continue to support the CENTCOM AOR by providing both medical materiel and biomedical maintenance support medical logistics sustainment for theater security cooperation missions, Army pre-positioned stocks 5 reconstitution, ships afloat conducting counterpiracy operations, and units in Afghanistan. As units in Afghanistan need to evacuate medical equipment, inventory excess materiel, or receive training on medical logistics operations such as cold chain management, USAMMC-SWA's will stand ready to support.

USAMMC-SWA's support to the CENTCOM AOR will continue because our environment is uncertain and unpredictable. Senior leaders want the flexibility to respond to any unforeseen crisis, and we have a perpetual commitment to the region. USAMMC-SWA will restructure as it has done since its inception in 2003 in order to maintain much needed medical logistics footprint in an ever-changing and volatile region of the world.

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