



Staff Sgt. David Kolodziejczak draws blood from a Reserve Officers' Training Corps cadet at Madigan Army Medical Center.

The Structure, Operations, and Challenges of Army Medical Centers' Logistics Divisions

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Medical logisticians arguably have the most varied, specialized, and challenging duties of any logistician in the Department of Defense (DOD). As logistics is the foundation of the DOD's operational capabilities, so medical logistics (MEDLOG) is the foundation of the Army Medical Department's (AMEDD's) capabilities. Without MEDLOG there are no supplies, no functioning equipment, and no treatment facilities.

MEDLOG is more than just class VIII (medical materiel) commodity management. It is more than just equipment maintenance, facility maintenance, property accountability, optical fabrication, housekeeping, capital equipment procurement, or human resources management. MEDLOG is all of these functions, which must be executed simultaneously while following all DOD regulations and civilian industry standards.

MEDLOG is accomplished both in garrison and during deployments. The challenges that medical logisticians confront during deployments are well-documented; however, the challenges of MEDLOG in fixed facilities are not. Little training or guidance is available to prepare medical logisticians for fixed-facility operations, but the responsibilities found there immediately affect the lives of hundreds of thousands of people.

The goal of this article is to provide

an overview of the structure, duties, procedures, and challenges found in the logistics divisions of fixed-facility Army medical centers in order to assist newly assigned staff members in understanding and navigating this environment.

Fixed-Facility Manning

Medical treatment facilities (MTFs) in garrison are not manned according to a modified table of organization and equipment (MTOE) like field units are. Fixed-facility hospitals and clinics are organized instead through a table of distribution and allowances (TDA).

MTF TDAs are not set or uniform; each is structured to meet the mission requirements of the community served. The facility's leaders are allowed to request TDA changes periodically, and if justified, military and civilian personnel authorization are increased or adjusted. Managers can also hire civilian personnel as "over-hires" to meet needs—an important capability that allows MTFs to react faster to changing circumstances than TDA changes allow (since these can take several years).

Since the 1970s, the number of general schedule (GS) civilian employees have proliferated in the AMEDD. Civilians now make up two-thirds of the total workforce. They are the continuity in the facilities and the long-term change agents for improvement. However, the civilian workforce comes with its own set of challenges for leaders and managers, especially for officers and non-commissioned officers (NCOs) with no experience in or understanding of the civilian personnel system.

Army medical centers are commanded by an AMEDD colonel with three deputy commanders (also colonels) for nursing, clinical services, and administration respectively.

The logistics division falls under the deputy commander for administration. In medical centers, the chief of logistics is a Medical Service Corps medical logistics (67A70K) lieutenant colonel. (In smaller com-

munity hospitals and medical activities, the chief is usually a major.) The division is a mix of military and civilian employees with a military occupational specialty (MOS) 68J (medical supply specialist) master sergeant as the NCO-in-charge.

The logistics division structure, like that of the MTF, can vary based on the mission. For example, Madigan Army Medical Center (MAMC), located at Joint Base Lewis-McChord (JBLM) in Washington, is a 250-bed teaching medical center with 5,200 employees, including 1,600 uniformed personnel. MAMC supports 110,000 beneficiaries including active military from all of the services, family members, and military retirees.

The facility has over 2 million square feet of floor space, 51,000 pieces of equipment on the property book, and an operating budget of \$500 million per fiscal year.

To complete the logistics mission for MAMC, the Logistics Division is staffed with 115 GS employees, 145 contractors, and 29 military members.

The Logistics Division Mission

The MAMC Logistics Division's mission is to provide comprehensive logistics support to MAMC and the JBLM power-projection platform and to provide a safe and supportive environment of care for patients and staff.

Logistics support includes the following:

- The purchase, management, and distribution of medical and non-medical materiel.
- Medical equipment maintenance.
- Property management.
- The acquisition of capital investment equipment.
- Housekeeping services.
- Linen services.
- Waste disposal.

The Logistics Systems Analyst

One critical position that answers directly to the division chief is the logistics systems analyst. The individual holding this GS-12 position must

have a thorough understanding of information technology and DOD logistics processes in order to properly support the division.

The logistics systems analyst's main focus is the Defense Medical Logistics Standard Support (DMLSS) system, which has separate modules for materiel, equipment, and facility and property management.

The analyst ensures the system's updates are successful, resolves interface issues with other systems such as the General Fund Enterprise Business System, and data mines information and statistics to help managers with decision-making. As the logistics division relies more on information technology to execute its mission, the analyst's importance grows.

Logistics Division Branches

There are four branches within MAMC Logistics Division: materiel, readiness, equipment management, and environmental services. Other facilities, especially those located on bases with a basic training mission, include an optical fabrication branch.

Smaller community hospitals and medical activities also have a facilities management branch that handles all repair, maintenance, and building renovations. Supervising this enormous responsibility takes up at least half of the logistics chief's time.

The job is so significant that in all medical center facilities, management is broken out as its own separate division run by a GS-13 engineer. (The Joint MEDLOG community runs a two-week medical facilities management course at Joint Base San Antonio, Texas, as well as a recently created TDA medical logistics orientation course.)

Materiel management. A logistics division's materiel management branch is led by a GS-12 and an MOS 68J sergeant first class NCO-in-charge. It is divided into several sections that vary somewhat from installation to installation and has civilian and uniformed personnel.

Functions include acquisition, inventory management, warehous-



Maj. Veronica Damasco, a physician at Madigan Army Medical Center at Joint Base Lewis-McChord, Washington, examines Parker McPherson, who is held by his mother, Brea. The center supports active military from all of the services, family members, and military retirees. (Photo by John Liston)

ing, and receiving. At MAMC, the branch supports not only the MTF but also active duty and reserve component units in a seven-state catchment area.

Because JBLM is a power projection platform, the materiel account is funded by Defense Logistics Agency (DLA) Troop Support in Philadelphia. (Smaller MTFs are funded by the Defense Health Program.) All assets are sold to customers and the inventory is then refunded and replenished. Ultimately, DLA is the executive agent for class VIII across the Department of Defense.

Readiness. MAMC's readiness branch was developed in the last decade because JBLM needed a full-time coordinator to attend planning conferences and meetings and to manage materiel procurement, equipment maintenance, and training for the constant rotation of deploying units. This is required because the Logistics Division is designated as the Installation Medical Supply Agency (IMSA).

The branch also has the second commissioned officer slot on the logistics division's TDA. Across MTFs, company-grade administration posi-

tions have been eliminated or converted to civilian positions in the departments and divisions. So the positions that provided experience for future senior leaders no longer exist.

Some logistics divisions have retained a junior officer as the chief of materiel, but the size and complexity of MAMC's account led to the creation of a GS-12 materiel chief and accountable officer position to ensure ordering, receiving, storage, and distribution were controlled by one person.

MAMC moved the officer position to a new readiness branch so that individual could coordinate deploying unit support, coordinate with military and civilian organizations for disaster relief, and act as the deputy division chief to prepare for future assignment a division chief.

The readiness branch also conducts monthly staff assistance visits to ensure each department and clinic has its materiel ordering, property management, and equipment maintenance reviewed at least once during each fiscal year.

Equipment management. Led by a chief warrant officer 3 or 4 biomedical equipment technician and an

MOS 68A (biomedical equipment specialist) master sergeant, the equipment management branch is usually made up of three sections: medical maintenance, property management, and Capital Expense Equipment Program, Super Capital Expense Equipment Program, Medical Care Support Equipment (CEEP/Super-CEEP/MEDCASE).

Environmental services. The Environmental Services Branch (ESB) is led by a GS-12 and has no military members assigned. Made up of GS employees and contractors, the ESB handles hospital housekeeping, laundry contracts, regulated medical waste (RMW), recycling, and waste disposal.

The contracting officer's representative is the branch chief who has several government workers that inspect and provide contract quality assurance to ensure proper environmental services with the least disruption to patient care across the facility.

The ESB chief should be a certified health care environmental services professional. The deputy and quality assurance inspectors are expected to be certified executive housekeepers or registered executive housekeepers, and the staff must have completed the Transport of Biomedical Materials Course.

The ESB inspectors maintain environmental and infection control standards in the medical center and its outlying clinics. The ESB also provides customer education during orientation briefings and as needed or requested; this may include site visits to assess current practices.

The ESB, along with the medical maintenance section, has a large role in earning and maintaining the Joint Commission for Accreditation of Healthcare Organization's environment of care standards.

Materiel Management

The inventory management section of the materiel management branch is responsible for the acquisition and management of stock for the materiel account. Acquisition may be done

through a Prime Vendor program distributor, the Electronic Catalog (a DLA acquisition module), local purchase, or credit card. In some locations, many military-unique items are available from a troop support depot.

The acquisition process requires detailed knowledge of contractual requirements and limitations, standardized product groups, and clinically acceptable substitutes.

Contractual requirements. DLA Troop Support manages both the pharmaceutical and medical surgical (MEDSURG) Prime Vendor contracts. Both contracts have a primary and backup vendor, but the backup can only be used after the primary vendor cancels. And, in most cases, the lead time from the backup vendor is lengthy.

Prime Vendor contracts enable the IMSA to acquire products directly when the vendor has a distribution and pricing agreement (DAPA) with DLA Troop Support. When a DAPA is established, it is the IMSA's responsibility to request that a Prime Vendor ordering number be assigned to the product. The vendor will establish the number from their catalog, and once it is loaded in the Medical Master Catalog, it will download into DMLSS and the product can be sourced correctly.

This concept seems rather easy to adopt, but it is fraught with limitations. If a MEDSURG item has a DAPA, it does not necessarily mean that the vendor has to make it available for purchase. If the DAPA holder does not work with the primary vendor, the vendor is not obligated to assign it a catalog number or distribute the product.

If the vendor has a relationship with the DAPA holder, it is required to stock items that the IMSA properly forecasts and designates as "usage." The IMSA is responsible for properly forecasting usage given to the vendor. If it provides the vendor a faulty forecast, it may have to buy the vendor's excess or dead stock.

Contract limitations. All other

items are considered nonusage items; the vendor does not stock those items and must get them shipped from the manufacturer. The primary vendor does not have to support nonusage items at all, and if the item is not stocked locally, the lead time can be between two and six weeks.

The limitations of the Prime Vendor program are problematic; Army Medical Command (MEDCOM) metrics directly conflict with the verbiage of the Prime Vendor contracts. MEDCOM units are required to significantly reduce local purchases and credit card use, but obtaining DAPAs has become more difficult because of import restrictions and the lack of support and long lead times for nonusage items.

Standardized product groups. Standardizing product groups is intended to reduce variability in a product line. The MTF has a standardization committee, the region has a DOD Medical Materiel Enterprise Standardization Office, and the Office of the Assistant Secretary of Defense for Health Affairs has oversight. The hope was that with committed sales volume from all DOD facilities, spending for MEDSURG supplies would significantly decrease.

Although there has been some cost avoidance, a lot of frustration has been experienced in selecting manufacturers of product groups. In many cases, the supplies that have been standardized cannot be converted across the board because of product shortages, clinically unacceptable product selections, supplies that cannot be used in conjunction with particular equipment, or the expense of the products.

MTFs are encouraged to volunteer to test product groups, but it is very difficult to have one product line meet everyone's needs. Converting product groups requires working with the prime vendor to obtain samples for clinical requirements testing, coordinate training, and deplete or sell old stock.

Credit card use. Attempting to support patient care and MTOE units

without increasing credit cards and local purchase use is not possible. That is why MAMC's inventory management section is creating a consolidated section for credit card purchases.

The section will have medical and nonmedical item managers that will use credit cards to buy items as necessary for the departments and divisions. This will reduce the overall number of credit cards that need to be reconciled each month from 187 to approximately 50.

Warehousing and Distributing

The warehousing and receiving sections may be combined or separated into two entities. In addition to stocking 1,900 lines of medical supplies, warehousing responsibilities may also encompass shipping, management, and maintenance of medical gas cylinders, a vault for medications and pilferable items, temperature sensitive vaccines, and contingency operations items, including medical chemical defense materiel. Warehousing responsibilities also include quality control and maintaining and distributing supplies to the MTF and outlying clinics.

Customer support personnel must work closely with clinicians to convert to standardized product groups and find substitutions for critical items. They must also coordinate customer support of manually scanned supply areas (medical supply shelves that need to be scanned in order to notify the materiel branch when stock is depleted), point-of-use system maintenance, and customer area inventory management within the DMLSS Customer Assistance Module.

The DMLSS Customer Assistance Module may support external customers, but it does not support large quantities well through the Prime Vendor process because of contracting constraints. The manual process can be just as problematic when MTOE units provide incorrect units of issue and incorrect or defunct national stock numbers and when customer requests have short suspenses.

Researching external customer re-

quests is extremely time-consuming. It is critical that customer assistance personnel and inventory managers have a good basis of clinical knowledge in order to correctly interpret customer requirements.

Medical Equipment Maintenance

The medical maintenance section is responsible for maintaining 14,000

organization for Standards (ISO) 9000 quality management certification.

Property Management

The property management section is led by a GS-11 property book officer (PBO) who manages property for the hospital, dental activity, veterinary activity and other supported satellite facilities. The mission of the

visions assigned to them for oversight.

Equipment managers, through progressive levels of logistics training and experience, serve as subject matter experts in their fields. They stay abreast of current regulatory guidance and apply their technical skills in order to provide customer service.

CEEP/SuperCEEP/MEDCASE

The SuperCEEP and MEDCASE programs are centrally funded and provide the large dollar investment in capital equipment required for MTFs throughout the world. The CEEP/SuperCEEP/MEDCASE section, in coordination with the hospital staff, develops the hospital's short-, mid-, and long-term equipment acquisition plans and is responsible for the purchase and acquisition of all equipment except office and medical supplies. The section is led by a GS-9.

The three program categories are defined by the dollar amount to be spent. CEEP encompasses equipment with a unit cost of less than \$100,000 purchased with Defense Operation and Maintenance funds. These funds are allocated by the hospital commander and the resource management division.

SuperCEEP is equipment costing between \$100,000 and \$250,000 per unit and is purchased with Defense Health Program and Operations and Maintenance funds. MEDCASE equipment has a unit cost of \$250,000 or more and is purchased through Defense Health Program and Operations and Maintenance funds.

Medical device requirements originate at the activity level or through a local command-approved technology assessment and requirements analysis. The proponent and funding source for the MEDCASE and Super CEEP programs is MEDCOM.

Housekeeping Services

The MAMC housekeeping contract is a \$12 million contract that provides 140 housekeepers. The housekeepers are trained to follow national health care and environmental cleaning

Medical logisticians must oversee complex operations and lay the foundations for health care, enabling skilled providers to deliver the highest quality services possible.

pieces of high-maintenance medical equipment in MAMC. Biomedical equipment specialists install, maintain, calibrate, and repair medical equipment used for patient care at the MTF. They also maintain equipment for a number of outlying health, dental, and vet clinics, military entry processing stations, and deployable units on an as-needed basis across a multistate area.

Some maintenance is done by in-house technicians, but for more sophisticated equipment, the section partners with the manufacturer or contractor technicians. The military biomedical equipment specialist is a graduate of the Joint Biomedical Maintenance School, and civilian technicians have degrees in biomedical technology or engineering.

Technicians can obtain certifications that demonstrate their competencies and experience. These certifications include certified biomedical equipment technician, certified laboratory equipment specialist, and certified radiology equipment specialist.

Another significant accomplishment that has built trust with the MAMC medical maintenance section's customer base is that the section is the first MTF maintenance section in the DOD to earn the International Or-

section is to maintain 100-percent property book accountability for all 51,000 nonexpendable, durable, and expendable but reportable pieces of equipment on 246 separate hand receipts. Being a TDA medical facility, MAMC has flexibility on the types or amount of equipment it is allowed; that is decided by the local mission and the providers.

The section is responsible for hand receipts, transfers, turn-ins, equipment disposal, and equipment acquisition functions such as forecasting and budgeting for equipment requirements and purchases. It maintains accurate property accountability records using a module in DMLSS.

The property management section also receives and establishes accountability for all purchased, transferred, leased, or rented equipment (including temporary loans and displays), provides nonmedical supplies for health care and administrative activities, maintains equipment in storage, maintains document control registers, and ensures that appropriate action is taken to account for lost, damaged, destroyed, or stolen property.

Important to effective property accountability are equipment managers who serve as direct liaisons to customers. Each equipment manager has a set number of departments and di-

standards and guidelines set by the Association of PeriOperative Nurses and the Association for the Healthcare Environment.

Quality assurance inspectors have a randomly generated daily inspection schedule that takes them across the hospital and outlying clinics each day and on different shifts. They assess performance standards laid out in the contract. These standards are broken into six types:

- Services provided to operating, scrub and preparation, labor and delivery, and postpartum rooms.
- Services provided in critical care areas like the emergency room and neonatal intensive care unit.
- Services provided to patient rooms, isolation rooms, dining facilities, and public restrooms.
- Services provided to clinics, laboratories, veterinary facilities, dental facilities, pharmacies, and therapy areas.
- Service provided to administrative areas, storage rooms, and reception areas.
- Services provided to corridors, ramps, footpaths, lobbies, and elevators.

Each type of service is tied to a different payment for the contractor.

Linen Services

MAMC maintains 244 separate types of linen and has 160,000 pieces, including sheets, scrubs, lab coats, towels, and other items on hand. The laundry contract is worth \$1.3 million and handles two million pounds of linen a year. Housekeepers collect dirty linen and ensure fresh linen is distributed to the wards and clinics.

The contractor picks up dirty linen and delivers clean linen five days a week. The ESB also has an in-house seamstress who repairs and alters linens and an issue desk where duty-white uniforms and personalized lab coats are issued after cleaning.

Regulated Medical Waste

A yearly \$100,000 contract han-

dles 136,000 pounds of RMW that is collected in designated points across the facility and brought to the loading dock by housekeeping. Four categories of RMW are picked up by the contractor three times a week: sharps, red bag waste, chemotherapy trace waste, and pathological waste.

Staff knowledge and awareness, storage and space, and proper handling are important because there are federal, state, and local laws that govern RMW management. The ESB provides education and training to hospital personnel to ensure overall understanding for managing RMW.

Waste Disposal

An MTF can produce enormous quantities of recyclable materials. Recyclables are collected in bins in the hallways, wards, and clinics in small containers and in larger industrial bins for areas that collect large quantities such as the dining facility. Recyclables are transported to the loading dock by the housekeepers and picked up twice a week by the contractor.

Non-recyclable trash is also collected by housekeepers and brought down to the loading dock. Almost 2,000 tons of trash is collected each month. It is compacted and picked up for disposal by the contractor three times a week. Over the last decade, MAMC has made progress in reducing waste and finding new items and ways to recycle.

Clearly, MEDLOG management is a unique area of Army logistics. Medical logisticians must oversee complex operations and lay the foundations for health care, enabling skilled providers to deliver the highest quality services possible. Junior officers and NCOs must be prepared through training and developmental jobs to take on future rolls as division chiefs and NCOs-in-charge in MTFs.

MTFs are not only critical in ensuring a deployable force and care for our families and retirees, but they are also centers of education for our surgeons, nurses, radiologists, and technicians as they hone their skills and

prepare for possible deployments.

Without the education, experience, and dedication of medical logisticians across a wide range of specialties, Army medicine cannot make the contributions that it does both in garrison and on the battlefield.

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