

# Chapter 2

## ROLES AND RESPONSIBILITIES OF THE MILITARY MEDICAL OFFICER

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### INTRODUCTION

#### THE UNIQUE MILITARY ENVIRONMENT

In Garrison

In the Field

Deployment

Human Performance Optimization and Medical Research

#### BEING A MILITARY MEDICAL OFFICER

The “Vector” Model of the Military Medical Officer

The Legal Context of Accountability as a Military Medical Officer

Training and Professional Military Education

Leadership as a Medical Officer

#### MILITARY HEALTHCARE

#### FORCE HEALTH PROTECTION AND MEDICAL READINESS

#### THE SPECTRUM OF ASSIGNMENTS

#### SUMMARY

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## INTRODUCTION

The new military medical officer (MMO) has joined a proud tradition of military medicine. That much becomes evident while reviewing the first chapter of this textbook, on the history of military medicine, which reaches back to long before the US military was even created. A new MMO follows in the footsteps of the likes of Ambroise Paré, Dominique Jean Larrey, John Pringle, Benjamin Rush, Robert Brocklesby, Jonathan Letterman, William Hammond, George Sternberg, and the countless modern military medical officers who have shaped this profession, saved thousands of lives, and improved the lives of thousands more. But unlike these historic figures who forged the way,

current MMOs enter into a well-established system of military medicine in which many of the hard-fought challenges have already been won. But what makes the military medical system different? What is unique about practicing medicine in the military as compared to the more common pathway of civilian medicine? The purpose of this chapter is to explore those questions, many of which will be amplified in later chapters in this textbook. This chapter will provide a framework for MMOs beginning to think about their new role as a uniformed medical officer in the US Army, Air Force, Navy, Coast Guard, or Public Health Service.

## THE UNIQUE MILITARY ENVIRONMENT

The discussion begins with a conversation about the unique aspects of the military environment. Typically, the public associates the military with combat. But the mission of the Department of Defense is much broader than just combat. A new MMO is likely to be placed in supporting units in a variety of environments, including in **garrison**, in the **field**, and **deployed**, each of which presents a unique set of challenges.

### In Garrison

The garrison is where it begins and where the MMO will spend most of his or her time. This is the permanent positioning of military assets throughout the world. A quick Internet search will reveal the breadth of geographic assignments available. The US military is deployed on a standing basis throughout the world and has military bases not only in the continental United States (CONUS) but also in a large number of countries outside the continental United States (OCONUS).

In garrison, permanent structures and buildings, well-established computer networks, and a generally resource-rich context form a familiar setting. Garrison hospitals, established in locations where service members are concentrated, generally function much as civilian hospitals do and are subject to many of the same constraints, including outside accreditation, interaction with the community, insurance billing, medical training programs, and the requisite administrative load. Yet even in garrison there are palpable differences from the civilian environment. While the patient population may look much like it does in a civilian hospital (including children, adult family members, aging retirees, and ill or injured active duty service members), the practice of medicine will often feel less restricted because access to care, financial con-

siderations, and medical insurance are generally not issues. The healthcare team will be mixed, including active duty providers, government employees, and contractors, and each group presents unique leadership challenges.

For the MMO within this setting (as in all others), leadership is an inherent part of his core responsibilities. Although the medical team will not generally be dealing with the immediate threat of combat, the complexity of the garrison environment makes leadership demanding. As a leader, an MMO is likely to struggle with balancing multiple superimposed missions and external influences while maneuvering through large organizational staffs that often lack cohesion<sup>1</sup> and may focus on varying aspects of the mission. Also, medical teams are often recovering from frequent and recent deployments with the inherent accompanying emotional burdens. As their leader, an MMO must be in tune with these challenges while attempting to balance the mission against team members' personal lives outside the workplace.

It is well established that in this context, boredom often leads to poor decision-making, which may result in unwanted injuries or fatalities, from causes including privately owned vehicle accidents, suicide, and recreational mishaps.<sup>2-5</sup> Addressing these hazards must be an ongoing focus for leaders. Additionally, the attention of effective leaders will center on the support and development of their team members as professionals through informal mentorship and formal programs, while also attending to their own personal growth and development. New MMOs must establish themselves as a physician and officer while becoming familiar with general life in the military.

The new officer will find a robust support infrastructure in garrison, including physical fitness facilities, recreational facilities, financial counseling,

emotional and spiritual counseling, professional mentorship, and a thriving community of military peers and neighbors to lean on. An assignment in garrison will ultimately prove rewarding as an opportunity to develop a sense of belonging and pride in being part of a longstanding military tradition.

### **In the Field**

Often, an MMO assigned to a fixed medical facility will also be attached to an operational unit as a secondary duty. The details of this responsibility vary throughout the different uniformed services and evolve over time. One constant, however, is that training remains a focus for operational units. Any time a military unit trains in the field, it is accompanied by a medical officer. The medical officer is usually integrated into the commander's staff as a command surgeon, similar to arrangements in the deployed setting. (The details of this role will be discussed in more detail in Chapter 8, *The Medical Officer on the Commander's Staff*.)

Providing medical support in the field environment serves as a rehearsal for deployments. Undergoing training without the stress of the combat environment will better prepare MMOs for future operational assignments. The MMO must learn to work without the infrastructure typical of the garrison hospital, adjusting to providing care in a resource-constrained setting, a universal feature of military operations. Exploring these pitfalls in the field environment where there is an "escape valve" (typically available in the nearby garrison) will prepare MMOs for missions in which no safety net will be present.

New MMOs are encouraged to seek opportunities to join the operational unit in training, which can provide some of the most rewarding experiences of a new military career. Such opportunities may include training outside the Army or Marine Corps garrison, flying on a cross-country mission with the Air Force, or going underway with a seaborne unit in the Navy or Coast Guard. Experiencing life at sea, in the field, or in the air is what truly makes a military medicine career unique. Short field exercises, cruises, or cross-country flights will require very little preparation; however, longer exercises demand early involvement with the unit and planning. Gaining new skills and new relationships with other service members will also go a long way toward building credibility within those units, particularly when MMOs deploy with the same unit. There is also no better opportunity than participating in the field exercise or training mission to develop leadership skills as an officer and staff member, skills which the junior medical officer will do well

to develop early; these skills will pay large dividends throughout a military medicine career.

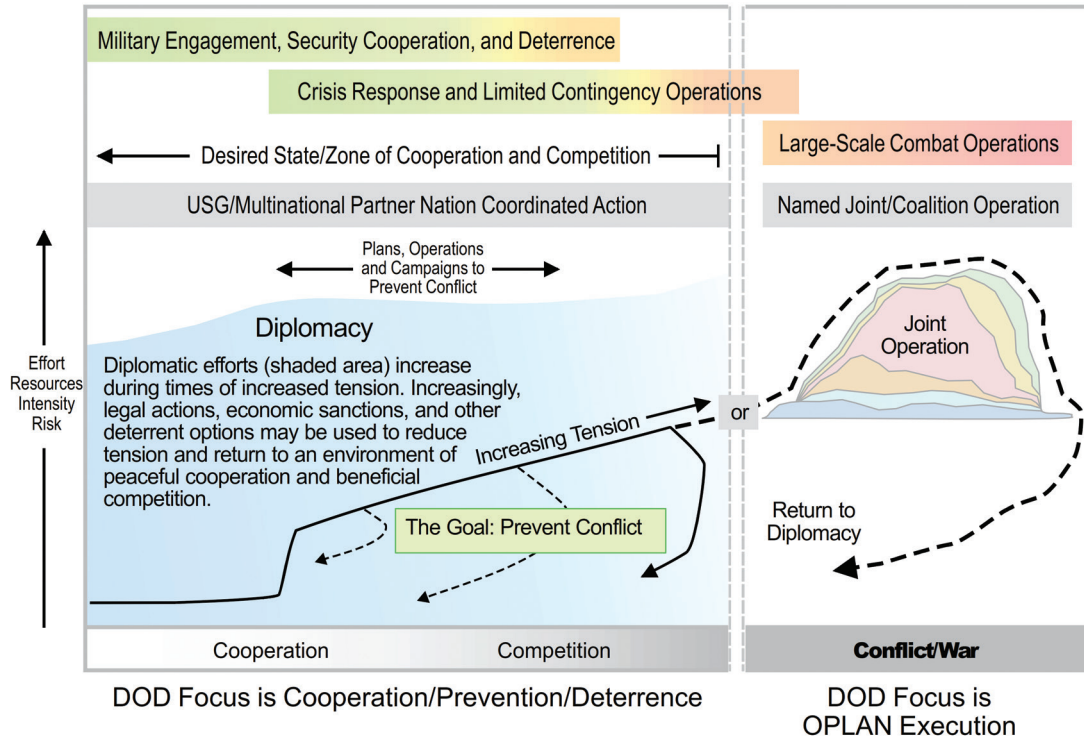
### **Deployment**

A "deployment" refers to any activity in which military personnel and materials are moved from their home station (garrison) to a specified destination, typically overseas (OCONUS), although domestic deployments are not uncommon, particularly in response to natural disaster relief efforts. Deployments come with a wide variety of missions, ranging from security operations in which the primary focus is diplomacy and conflict prevention, to large-scale combat operations, with many types of mission in between (Figure 2-1).<sup>6</sup>

Because the unit may have a mission that falls anywhere on this spectrum of conflict, and because the location of that deployment may be anywhere in the world (including CONUS), the nature of each experience will be unique. What is nearly universal, however, are long work hours often punctuated by long periods of boredom. Deployments are what military officers train for. It is the challenge of accomplishing the mission with usually limited resources in suboptimal conditions while testing leadership skills, medical skills, military skills, creative thinking, and problem-solving that make deployments rewarding beyond compare. Deployments are essential to developing a full spectrum of leadership and military medicine skills when and where they count the most.

Deployments consist of four phases, during which the medical officer will play very different roles. During the **predeployment** phase, the MMO plays a critical role in ensuring all members of the unit are prepared for extended deployment from a medical perspective. During this phase, in addition to evaluating and supporting unit members' readiness for deployment, the MMO must ensure the medical team is trained and ready for the mission, as well as completing personal preparation.

During the **deployment** phase, while actually on the mission, the MMO's duties will span a spectrum of responsibilities no civilian medical provider would encounter. The scope of these responsibilities (discussed in more detail in later chapters) ranges from medical treatment to disease prevention to complex medical planning. During deployments, the medical officer is faced with challenges in the patient population (the unit) related to freedom of movement, fatigue, long working hours, threats from hostile action, endemic disease, stress-induced physiologic changes, and general physical and emotional demands related to the specific mission. The MMO's importance to the commander cannot be understated, and the better



**Figure 2-1.** The conflict continuum. Reproduced from: US Department of Defense. *Joint Operations*. Washington, DC: DoD; 2017. Joint Publication 3-0: VI-2.

prepared they are, the better they will perform as the principal medical advisor to the unit.

During the **postdeployment** phase, the MMO will play a key role in assessing the impact of the deployment on unit members. And finally, during the **reintegration** phase, the MMO will be a key set of eyes and ears for commanders as they endeavor to ensure unit members successfully overcome postdeployment challenges and rejoin their families and communities.<sup>7</sup>

### Human Performance Optimization and Medical Research

Whether in garrison, in the field, on a training mission, or deployed in a theater of operations, the demands on the military “patient” are generally amplified over that seen in the civilian occupational setting (although some civilian occupations or sports do present extreme exposures). Accordingly, one of the unique aspects of military medicine is gaining a thorough understanding of environmental and operational challenges and their countermeasures as summarized by the scientific discipline of human performance optimization (HPO). HPO refers to the process of enabling persons to perform with a high level of well-being and resilience and with minimal risk and stress, despite

the challenges of the operational environment. This field includes physical fitness, dietary supplements and nutrition, mind and body management, family and relationships, and environmental conditions (eg, heat, cold, altitude, aerospace, water, and extended operations).<sup>8</sup> The MMO is expected to be well-versed in the science of HPO in order to provide counseling to individual service members and commanders and facilitate the successful mission completion, regardless of environment. Accordingly, an entire section of this textbook (chapters 19 through 31) is dedicated to this science.

Because the military operates in the worldwide environment, it is also incumbent on the MMO community to continue engaging in medical research and development programs that focus on unique aspects of military medicine. This may include combat trauma management, HPO, human factors systems (eg, aviation, weapons systems, or combat vehicles), and a wide variety of other topics of unique interest to the military. Additionally, military medicine requires global biosurveillance programs that enable worldwide deployment with manageable risk for biological and disease threats, while also helping protect world populations against pandemic and epidemic disease.<sup>9</sup>

## BEING A MILITARY MEDICAL OFFICER

*“If you are looking for perfect safety, you will do well to sit on a fence and watch the birds; but if you really wish to learn, you must mount a machine and become acquainted with its tricks by actual trial.”*

—Wilbur Wright, from an address to the Western Society of Engineers  
Chicago, IL, September 18, 1901<sup>10</sup>

While it is possible for any medical provider to practice “medicine in the military,” it is the unique characteristic of the professional MMO to truly integrate all aspects of military medicine and officership into a dedicated practice of “military medicine.” Practicing military medicine requires that the individual develops skills in multiple dimensions. The MMO is a dual professional—both a physician and an officer—and must excel in each role to be successful. The nature of this duality will be further explored in Chapter 8.

### The “Vector” Model of the Military Medical Officer

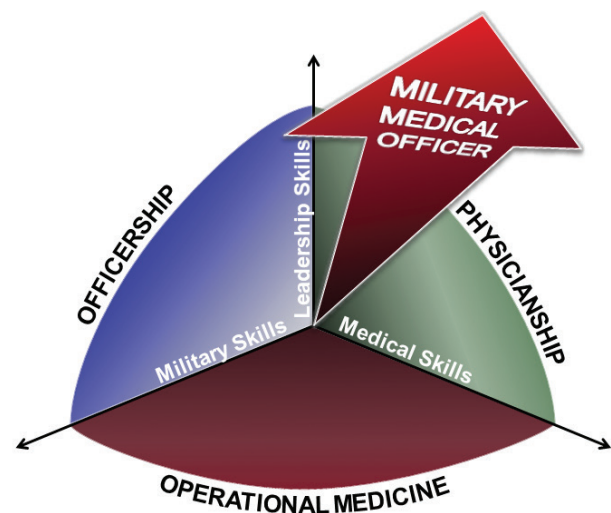
Through the years, attempts have been made to summarize the qualities of a good MMO, but most frequently these discussions devolve into a general statement of advice that “you just have to experience it to understand it.” While it is true that experience will elucidate the complexity of the unique role of the MMO, it is helpful to provide a simple visual model that embodies the full spectrum of characteristics of the ideal balanced MMO.

The “vector” model of the MMO was first proposed at the Uniformed Services University in the early 1990s by then commandant of students, Colonel Barry Wolcott. An emergency medicine physician by training, Dr Wolcott understood the challenges of developing young medical officers and the value for those officers in providing visualization to help direct their growth. Modified slightly over time, the vector model simply places three primary domains of required skills for the ideal MMO onto the axes of a 3-dimensional graph (Figure 2-2). This graph illustrates the need for the individual to develop military skills, medical skills, and leadership. Effectively developing skills in these three arenas ultimately merges them into collective competencies in operational medicine, physicianship, and officership, which define the dual professional MMO. These terms, as applied in the model, are defined as follows:

- **Officership** is a set of skills that allows one to function effectively as an officer in the military. Underlying officership are principles, practices, and values that guide an officer’s

judgment, decisions, behavior, philosophy, and vision. Inherent in officership is effective leadership.

- **Physicianship** is a set of skills that allows one to function effectively as a physician with skill in the art of healing. A physician is educated, clinically experienced, and licensed to practice medicine.
- **Operational medicine** adds to standard clinical medicine all of the unique challenges of the practicing military provider in the operational environment, many of which may be non-medical in nature. This includes a combination of both military and medical skills and implies direct and indirect leadership within the context of the military mission.<sup>11</sup>
- **Leadership** is influencing people by providing purpose, direction, and motivation. It is the sum of the qualities of intellect, human understanding, and moral character to enhance the motivations, cognitions, and behaviors of individuals and groups for successful accomplishment of the assigned mission.<sup>12</sup>



**Figure 2-2.** The dual professional “vector” model. Figure courtesy of: Colonel (Retired) Barry Wolcott, Commandant of Students, Uniformed Services University of the Health Sciences, 1982–1993.

- **Professionalism** is the fundamental core of a medical officer's values and behavior, including the critical attributes of personal courage, respect, openness, fairness, empathy, self-improvement, social responsibility, integrity, honor, officership, non-judgment, altruism, and leadership.<sup>12</sup>

### The Legal Context of Accountability as a Military Medical Officer

Beyond the challenges of duality and environmental and operational variables already discussed, there is also a collection of constraints and requirements that are unique to practicing medicine in the military. The most important of these is the legal context of general military service, which will be discussed in further detail in Chapter 5, Military Law and Ethics.

However, it should be made clear that wearing the uniform inherently introduces accountability of the individual to the American public. The military officer is first and foremost a member of the military, meaning that he or she is subject to military law, which is founded in the Uniform Code of Military Justice, the Manual for Courts-Martial, and the military code of conduct.<sup>13</sup> The disciplinary measures applicable to other service members apply equally to the military physician, and because consequences of misconduct can be severe, disciplinary action for such conduct is also potentially severe.

Military officers are additionally obligated by law to demonstrate exemplary personal and public conduct (Exhibit 2-1).<sup>14</sup> Unfortunately, more than one new medical officer has become entangled in the legal landscape with the threat of imprisonment or other adverse legal and administrative action based on a failure to

#### EXHIBIT 2-1

#### CODE OF CONDUCT FOR MEMBERS OF THE UNITED STATES ARMED FORCES

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##### I

I am an American, fighting in the forces which guard my country and our way of life. I am prepared to give my life in their defense.

##### II

I will never surrender of my own free will. If in command, I will never surrender the members of my command while they still have the means to resist.

##### III

If I am captured I will continue to resist by all means available. I will make every effort to escape and aid others to escape. I will accept neither parole nor special favors from the enemy.

##### IV

If I become a prisoner of war, I will keep faith with my fellow prisoners. I will give no information or take part in any action which might be harmful to my comrades. If I am senior, I will take command. If not, I will obey the lawful orders of those appointed over me and will back them up in every way.

##### V

When questioned, should I become a prisoner of war, I am required to give name, rank, service number and date of birth. I will evade answering further questions to the utmost of my ability. I will make no oral or written statements disloyal to my country and its allies or harmful to their cause.

##### VI

I will never forget that I am an American, fighting for freedom, responsible for my actions, and dedicated to the principles which made my country free. I will trust in my God and in the United States of America.

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Reproduced from: 3 CFR, 1954-1958. Code of Conduct for members of the Armed Forces of the United States, 1955. Executive Order 10631.

understand their obligations under military law. Additionally, the system of military law has sometimes presented an ethical conflict in which the medical officer's obligation to follow lawful orders from the commander and superiors may come into conflict with the Hippocratic principles of medical care. Learning to balance concerns such as patient confidentiality and sometimes competing obligations to the commander can be challenging, but understanding expectations of personal conduct in times of peace and war may prevent troubles down the road.

### **Training and Professional Military Education**

Upon entering military service, the new MMO is normally offered an opportunity to attend initial officer training (eg, the Army's Basic Officer Leadership Course, the Navy's Officer Indoctrination School, or the Air Force's Commissioned Officer Training or equivalent). This training provides an orientation to military customs and courtesies, administrative and legal education, and basic military knowledge and skills. This minimal training is intended to start a career with minimal delay, but by no means is it adequate preparation for a full career in military medicine. To develop officership, the military services provide a series of professional military education (PME) courses strategically placed at different points in the career timeline.

While the structure of this PME is different in each service, the intention is the same—to develop general knowledge and capabilities as an officer in the parent service as an individual matures in the ranks. The reality, however, is that medical education and the demands on an individual officer often interfere with or delay this training. In keeping with the earlier discussion about professional development along three axes, it is incumbent upon MMOs to advocate for themselves and seek out opportunities to attend this training at key points in their careers. Doing so will better prepare an MMO to integrate seamlessly into a multidisciplinary team when assigned to a military unit.

Additionally, the military offers a wide variety of short courses that focus on specific military skills, which may be relevant depending upon specific career choices and assignments. While it may seem low priority to attend such training while being heavily engaged in early professional medical development (eg, residency, fellowship), failure to receive appropriate PME may delay promotion, and more importantly, result in suboptimal preparation for deployment and integration with operational units.

MMOs must recognize that they are members of both the profession of arms and of the profession of

medicine. Programs such as those offered at the Uniformed Services University of the Health Sciences or in general PME can help jump-start careers in military medicine with an understanding of basic principles, but they are only a starting point. Experience will serve an MMO well; however, true professionals will continue to develop themselves as both officers and physicians through continuing medical education and continuing military education. This further education may take the form of personal reading programs, military short courses, and of course formal medical education such as residency and fellowship. Just as someone cannot expect to be a whole doctor after completing medical school, he or she cannot expect to be a whole officer and leader after attending an introductory military course. Success demands a commitment to professional development as an officer.

### **Leadership as a Medical Officer**

Leadership, one of the three pillars of military medical practice, is critical to an MMO's success. At the Uniformed Services University, leadership is taught through the "PITO" (personal, interpersonal, team, organization) model of leadership, adapted from the US Air Force Academy and using the "four Cs" of leadership (Character, Competency, Context, and Communication).<sup>15</sup> Leadership is a multidimensional process, which is discussed in detail in Chapters 4 and 8. It should be noted that while direct leadership is often required, the MMO must (perhaps uniquely) often provide tangible leadership when not in a position of direct authority. This aspect of medical leadership presents a unique challenge to the medical officer, one that must be mastered in order to most effectively influence the mission and the command. The ability to gather support from below as well as from above, or "leading up,"<sup>16</sup> is a critical component of the successful MMO. Leadership in the military is challenged by the diversity of personnel, the spectrum of missions, dynamic operations, and unique environments. A continual thread of personal leadership skills development accompanies the successful MMO's career. In addition to formal programs of education in leadership, which will only scratch the surface, officers are encouraged to engage in a personal reading program to broaden their perspectives and abilities to influence others to accomplish the mission, regardless of the types of assignments they encounter.

The military is no better than its people, and the American public has charged the MMO with caring for them. Taking care of his or her soldiers, sailors, airmen, and or marines is paramount. As a leader in

the military, the new MMO will also be responsible for a number of junior officers and noncommissioned officers. Accordingly, he or she will serve as both mentor and sometimes commander of these individuals. This requires effective mentorship. It requires extra time in a hectic military setting to submit awards recommendations when deserved, and to spend the extra effort learning how to write effective periodic evaluations, which enhance the promotion prospects of team members. These skills in and of themselves are not taught, but rather obtained through personal education and development, once more highlighting the need for self-directed education as a military officer. New MMOs should seek out those who understand the nuances of evaluation writing, such as the senior enlisted advisor for the command or fellow staff officers with more experience. One of the best ways to gain credibility with subordinates is by reaching out in mentorship to assist them in developing their own careers both in and after the military.

Successful military leadership, particularly with increasing rank and position, relies heavily on ef-

fective communication. This comes in the form of one-on-one communications that serve to provide specific guidance to individuals, meeting management, written communications, and often large-scale public speaking. Speeches may range from a short set of well-chosen words at a promotion ceremony to a command-wide briefing given to address a problem or provide motivation. In the military, all staff officers are expected to frequently provide briefings to senior officers, commanders, and large assemblies—opportunities to build (or lose) credibility. Briefings often have a formal structure MMOs need to be familiar with. The ability to eloquently deliver a public address is a universal requirement for effective military officers. Young and experienced officers alike are encouraged to build these skills by actively seeking opportunities for public speaking and large group teaching. Speaking skills will enhance their ability to lead and will improve vital skills as an educator (inherent in medical leadership). Military communication skills are further discussed in Chapter 11, Military Communication.

## MILITARY HEALTHCARE

At first glance military medical care is very similar to civilian medical care. Residencies and military training hospitals are similar to those in large academic medical centers throughout the country. As discussed earlier, the patient populations can be quite similar to the civilian population, which includes the full spectrum of humanity from fetal care to caring for the aged and dying. Military training hospitals require the same spectrum of full-service clinical capabilities and research programs as are found outside the military. While it may be possible for some MMOs to serve their entire military careers in an academic military medical center, these centers are not where all, or even most, medical care happens in the military. For MMOs who choose (or are selected) to serve outside the academic medical center environment, medical care delivery may take on a very different feel. In the unit, in the field, or on deployment, delivering medical care is integrated with the diverse administrative and leadership tasks that have been discussed thus far in this chapter.

MMOs will often be taking care of friends or colleagues who they have relationships with outside of the clinical setting. The unit's medical officer is implicitly trusted, often to the exclusion of other medical providers, unless he or she loses credibility. Establishing and maintaining a trusting relationship with the patient population in this setting is paramount to success in delivering medical care. MMOs without credibility in the unit will find themselves bored and

alone when their patients choose to go elsewhere or simply do not seek treatment. This dynamic highlights the importance of effective communications and leadership, as discussed earlier. To a large degree, while doctrine will provide a specific level of medical capability for the unit, the ability to provide care will be highly dependent upon the medical officer's diligence in establishing programs and relationships within the unit, and with neighboring and higher level medical units.

When a member of the unit reaches out for help with a medical or mental health concern, there may not be the benefit of privacy or a robust medical capability as is customary in a medical facility. Learning to do more with less is the rule rather than the exception. However, the goal should be to provide the same standard of medical care in the resource-constrained, remote, or austere environment as would be expected in the academic medical center. Knowing who the more experienced senior physicians and consultants are and how to consult them at all times is paramount, even when a consultation may require a helicopter or telemedicine. MMOs will also need to interact with higher level medical authorities or the medical treatment facility in order to facilitate the unit's medical mission. This may mean interacting with medical consultants on behalf of a specific patient for clinical concerns or working with other units for the sake of medical logistics or disease and nonbattle injury (DNBI) reporting. Once



again, understanding the MMO's place in the system will be critical for success.

Integrating medical practice with the unit's operational flow is not only critical, but can be very difficult, requiring extensive communication with commanders or key leadership personnel in the unit or across the military installation. Traditionally, "sick call" is held at times convenient to the command. Upon arrival at the unit, the MMO should learn about the systems of scheduling sick call that are currently in place or have worked (or failed) at that location. While it may be convenient to have all of the clinical workflow for the day show up at the same time, this methodology may not work well for the commanders or patients. On the other hand, in some settings distributed scheduling of medical appointments throughout the day may not be conducive to mission accomplishment. These considerations are not often encountered in civilian medicine and require the constant attention of the MMO.

Once evaluated, military patients are expected to return to duty as soon as possible. A critical role of the MMO is to evaluate the ability of service members to return safely to their regular duties. Given the nature of military operations discussed thus far, it should go without saying that this assessment must be made in the context of the occupational requirements for that individual's duty. This highlights the importance of participating in the local training to the extent possible in order to gain a personal understanding of the operational context. Throughout history, successful military medicine practitioners have advocated for medical officers to train with their units for this purpose, whether flying with an aviation unit, diving with a diving unit, or practicing on the weapons range with a combat unit. Getting into this habit earlier rather than later will help not only to build a personal military skill set, but more importantly will enhance the ability to communicate and interact effectively with the commanders. Accordingly, when the time comes to advocate for a patient's healthcare or duty restrictions, the MMO will be in a much better position to make appropriate decisions about patients while minimizing adverse effects on mission accomplishment.

In the military more than perhaps any other environment, medical care relies on established programs

and systems to provide a full range of medical capability. In a theater of operations, systems of medical evacuation and a hierarchical system of medical capabilities are established based on doctrinal principles.<sup>6,17</sup> Individuals are assigned throughout those systems to provide direct management and expertise for specific capabilities, which require specific training. The MMO may be expected to attend such training as well as to train others. Understanding who and what they are responsible for will help guide priorities, but MMOs should expect to be placed in positions with direct training responsibilities for hospital corpsmen, combat medics, physician assistants, nurse practitioners, nurses, or other medical personnel. The MMO may conduct formal training programs or simply provide continuing education for medical personnel. Commanders may have interest in developing common medical skills among their nonmedical personnel, in which case the MMO will be asked to supervise broader medical training programs such as the combat lifesaver program, which focuses on immediate combat casualty response for laypersons, or basic life support cardiopulmonary resuscitation programs. Whatever the case, conducting and supervising training will be a key component of any military medical practice.

The demands of military operations have resulted in remarkable achievements in military medicine throughout history. Recent conflicts have seen the introduction of new approaches and training programs that have resulted in improved survivability on the modern battlefield.<sup>17</sup> Specifically, the Tactical Combat Casualty Care system of emergency medical response, which emphasizes altered priorities of emergency medical delivery in the combat threat environment, now governs the approach to the combat casualty. This program is taught in a variety of venues targeting the full spectrum of military medical providers. Beyond the immediate life-saving response, casualties must be moved through an evacuation system that requires specific expertise in en route care and health service support planning. Later sections in this textbook will address the delivery of healthcare in the tactical environment and operational health service support, both pillars of military medical practice.

## FORCE HEALTH PROTECTION AND MEDICAL READINESS

Arguably more important than responding to combat trauma or other health-related events is preventing them. Casualty prevention is a key component of what is referred to in the US military healthcare system as **force health protection**. Force health protection includes a broad spectrum of prevention and protection

capabilities, including preventive medicine, health surveillance, combat and operational stress control, preventive dentistry, vision readiness, laboratory services, and veterinary services.<sup>17</sup> The key element of this system, which is somewhat unique to military medicine, is a focus on the population. In contrast, tra-

ditional medical education and practice places focus on the individual patient. For the MMO, the entire unit is the “patient.” As described in Figure 2-3, MMOs must attend to the individual patient while simultaneously caring for the population. This requires a focus on leadership, public health, preventive medicine principles, and systems-based practice. It typically means integrating with established force health protection systems at the macroscopic level while simultaneously creating effective force health protection systems at the local level.

An important aspect of force health protection is managing physical standards for military service. Through experience, the military learned it had to evaluate the medical fitness of its members to ensure they were free of medical conditions that could limit their performance in the military operational environment. Current physical standards for induction or continued service in the armed services are published by the Department of Defense<sup>18,19</sup> and implemented according to service-specific regulations (eg, Army Regulation 40-501,<sup>20</sup> Air Force Instruction 48-123,<sup>21</sup> and NAVMED P-117<sup>22</sup>). While new recruits are typically processed in military entrance processing stations across the country, applicants for entrance into officer commissioning programs or special duties often present directly to the MMO for evaluation. Furthermore, service members are subject to separate (and often higher level) physical standards when they apply for special duties (eg, aviation, Airborne, undersea, or special operations). The MMO must be familiar with

published physical standards for general and special duty as applicable in their respective service. Specific administrative processing of such applications often permeates the military medical practice of the physician assigned to an operational unit.

The same physical standards apply when an individual service member becomes ill or injured. In these instances, temporary restrictions to duty may be necessary. Specific systems of communicating such restrictions to the service member’s leadership are in place to prevent misunderstanding. Such “limited duty (LIMDU) chits” or “profiles” reflect the published physical standards for each service and must be mastered by the MMO. In developing appropriate duty restrictions, the MMO effectively protects the service member from further injury while at the same time protecting the unit by eliminating unsafe or ineffective duty performance.

Under certain circumstances, such as when a new diagnosis is made or a temporary condition lingers for an extended period of time, the service member may no longer be physically qualified for continued military service under the published physical standards. In these cases, a formal review process is invoked, during which the service member must undergo a medical and physical evaluation board process, and possibly service-specific formal boards, that evaluate the service member’s limitations against their ability to perform their assigned military occupational specialty. Understanding and working with this process is a necessary part of military medicine. Placing individual medical disposition decisions in the context of a thorough understanding of the military environment and the task that the individual service member has to perform further enhances the MMO’s value to the command team.

In addition to managing individual service members’ conditions and duty disposition, the MMO performs a preventive medicine function to identify and employ countermeasures (carefully coordinated with the command team, as discussed in Chapter 1, History of the Military Medical Officer) for the prevention and control of communicable diseases and endemic, occupational, or environmental threats.<sup>17</sup> History has shown that DNBI have had a more significant impact on military outcome than combat injuries. Accordingly, a tremendous emphasis has been placed on preventing DNBI. Immunization programs, preventive dentistry, area assessment, and disease monitoring and reporting are important aspects of force health protection. At all levels of medicine in the military, someone is tracking and reporting disease incidence with the intent of identifying trends and epidemics and implementing preventive countermeasures.

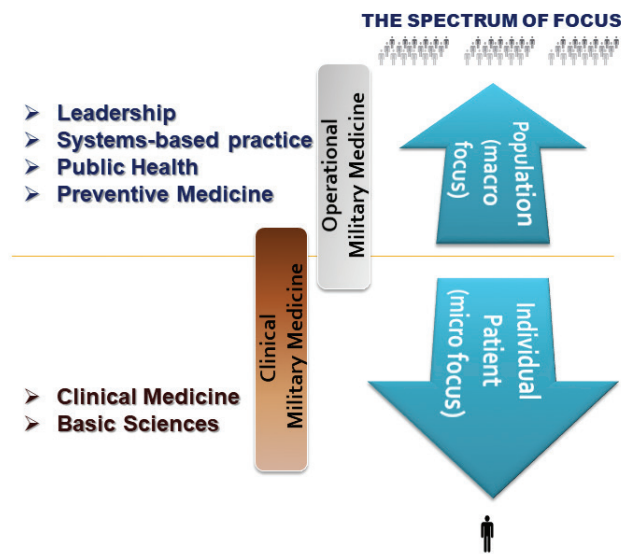


Figure 2-3. The spectrum of focus for military medicine.

Additionally, preventive immunization programs are mandated throughout the military, and compliance with these requirements is routinely reported at the command level. At the local unit level, and occasionally when assigned in a specific staff role at a higher level, the MMO can expect to prepare periodic reports and briefings on DNBI rates and individual medical readiness for the unit. As Benjamin

Rush recognized, command authority is necessary to effectively employ countermeasures to prevent disease.<sup>23</sup> But it is the MMO who must identify both the problem and the appropriate corrective action. These and many additional force health protection factors that make military medical practice unique will be further discussed in the second section of this textbook.

## THE SPECTRUM OF ASSIGNMENTS

While it would be attractive to place a career map on the table to guide the way, it is simply unrealistic to articulate a specific pathway that each new MMO should take. Although attempts to define a career lifecycle for MMOs have been made, the reality is that such structure has never stood the test of time. There are simply too many variables and too many opportunities (in terms of types of assignments) to explore. New officers should talk to as many people as possible to explore what types of missions and assignments may be pursued. With some planning and effort, MMOs can craft their own military medical career.

In the Army, the first decision is whether to pursue an assignment in a tactical or a nontactical unit. Each has its own rewards and challenges. In a tactical unit, the MMO works closely with combatants, likely as a member of the command and staff team (discussed in detail in Chapter 8). In these units an MMO has the opportunity to function in a truly operational capacity as a member of a multidisciplinary team pursuing a military mission in the unique operational environment. On the other hand, an MMO may choose to focus on nontactical assignments such as academic medicine, or to engage in unique research or challenges in clinical medicine. The choice is personal, but the best advice has been described as sharing time between “white coat” assignments and “muddy boots” assignments. Doing so provides the broadest perspective on Army medicine and best preparation for promotion to the ranks of general officer. Whether or not this aspiration prevails, a diversity of assignments and experiences are waiting, and the full spectrum of opportunities should be explored.

In the Navy, a critical decision is whether to pursue assignment in the seagoing Navy or in the Marine Corps. They are very different communities, and each has its own proud traditions. While it is possible to

share time between them, most naval medical officers choose to focus on a progression of assignments in one or the other. If the interest is in tactical assignments, the Marine Corps has a wide variety of missions requiring support from highly motivated MMOs. On the other hand, shipboard medicine presents unique opportunities for international travel and expeditionary medicine. Aviation medicine, undersea medicine, and naval special operations are other unique opportunities.

In the Air Force, the primary choice is whether to join a flying or a nonflying unit. In either case, the MMO should become a flight surgeon. The Air Force is all about aviation, and understanding aviation medicine is a key component of Air Force medicine. The Air Force is an expeditionary force and also presents its own opportunity for ground-based expeditionary medicine. If the MMO’s passion is to establish medicine in far-reaching places across the globe, this may be the right choice. On the other hand, there is possibly no more rewarding opportunity than to work with the high-performance combat equipment in the world’s largest and most advanced Air Force—equipment that challenges the limits of human performance. Mastering human performance optimization may be the MMO’s passion, and what better place to do it than the US Air Force?

In the Public Health Service, opportunities are available in a wide variety of assignments. The Indian Health Service will take the MMO to remote locations with resource constraints similar to those of the military deployed setting. There are also roles available supporting the US Coast Guard with opportunities in operational or aviation medicine. Or the choice may be to work in various agency jobs shaping national healthcare policy with an opportunity to impact the health of the entire nation.

## SUMMARY

Regardless of the type of assignments encountered, a career in military medicine will be exciting and rewarding. Nowhere else will there be the opportu-

nity to engage in such a diverse range of experiences. While frustrations abound in any type of work, the rewards of service in military medicine far outweigh

any inconveniences an MMO may encounter. Opportunities to gain new skills through education programs in both military and medical disciplines, unique life experiences, and being a part of the distinguished heritage of the armed services all contribute to the allure of military medicine. Having said that, it should be emphasized that this career is only as good as the individual makes it. MMOs must be their own advocate; they should seek out opportunities to challenge themselves and to experience the full spectrum of military service. MMOs should actively endeavor to fulfill their goals, stay proactive, manage their personal administrative requirements, and seek

out the best training opportunities and assignments. Speaking regularly with a senior military mentor and a career manager can help to shape the MMO's military medicine as desired.

The remainder of this textbook is designed to provide exposure to the unique aspects of military medicine introduced in this chapter. Reading and assimilating this knowledge will build a firm foundation for beginning a career as an MMO. However, it is incumbent upon the new MMO to commit to a career-long personal development program in leadership, military skills, and medical skills in order to truly become a dual professional MMO.

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