MILITARY HEALTH SYSTEM

Strategic Partnership

The Blue Book:

Military-Civilian Partnerships for Trauma Training, Sustainment, and Readiness

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Military-Civilian Partnerships for Trauma Training, Sustainment, and Readiness

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Foreword

The Military Health System (MHS) has always been a key enabler to support the defense of this nation and response to disasters and humanitarian crises. Over the past two decades, members of the U.S. Military Health System have deployed repetitively to support military operations, including Operation Enduring Freedom and Operation Iraqi Freedom as well as many others. The system of care for the ill and injured has been progressively improved and has achieved the highest survival rates in recorded history for war despite increasing injury severity scores. Much of the improvement in care and survival rates can be attributed to implementation of a Joint Trauma System based on the American College of Surgeons (ACS) Optimal Resource Guide for the care of trauma victims. This process reinforces a long history of the Military Medical System working with American surgery, and in particular the American College of Surgeons, to advance care. During periods of war, advances in technology and strategies for care diffuse into civil society to benefit all, and during periods of peace or low-level conflict, advances in medical and surgical care in the civilian sector inform requirements for military medicine.

The Blue Book, *Military-Civilian Partnership for Training, Sustainment, and Readiness,* provides the template for cementing the important and crucial relationship between military medicine and American surgery through the American College of Surgeons, which has always been at the forefront of setting standards for care and improving surgical science. This book is an outgrowth of the collective efforts of leaders in military medicine and the American College of Surgeons through the strategic partnership, Military Health System Strategic Partnership American College of Surgeons (MHSSPACS) that was established six years ago. The book outlines models for establishing military-civilian partnerships for trauma training that benefit both the readiness of military medicine and civilian systems and increase the ability to respond to war and major disasters. The Blue Book serves as a reference manual for those trauma centers or trauma systems wishing to establish these important partnerships with specific attention to administrative issues, curriculum, and tools for evaluation.

Preparing to save lives and reduce complications resulting from trauma whether due to war, disasters, or accidents is a collective responsibility of both the military and civil societies. Establishing military-civilian partnerships for trauma training and research enhances our nation's capacity to meet this mission. Like other initiatives of the American College of Surgeons in quality improvement, cancer care, and surgical education, this book provides needed leadership and guidance to address a gap in preparing those who would go in "harm's way" with the needed skills to save the lives of those who defend this nation. The American College of Surgeons, authors, and contributors as well as those who will use this guide to establish military-civilian partnerships should be congratulated on their commitment to this important endeavor.

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Part I: Overview

A. Introduction

The purpose of this book is to outline the criteria to be considered in the selection of and subsequent evaluation of institutions that wish to participate in military-civilian partnerships (MCP) designed for trauma training, sustainment, and readiness for military trauma providers. Although several formal and informal training platforms already exist, recent Congressional legislation has mandated the expansion of such partnerships and provides a funding mechanism. Section 708 of the **National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2017** tasks the Secretary of Defense with establishing a Joint Trauma Education and Training (JTET) Directorate to ensure that the traumatologists of the Armed Forces maintain readiness and are appropriately prepared to be rapidly deployed for future armed conflicts. Additionally, this legislation allows the Secretary to enter into partnerships with civilian medical centers in order to provide integrated combat casualty care teams, including forward surgical teams, with maximum exposure to a high volume of patients with critical injuries. These partnerships will be funded through the Pandemic and All Hazards Preparedness and Advancing Innovation Act (PAHPAI) via a granting process centralized through the Defense Health Agency (DHA).

The Military Health System Strategic Partnership with the American College of Surgeons (MHSSPACS) is coordinating with the Department of Defense (DoD) to set the standards by which MCPs will be chosen, validated, and subsequently evaluated. The American College of Surgeons (ACS) has a long and successful history of setting the standards and verifying that those standards are being met for several surgical programs, including trauma, cancer, pediatric surgical care, bariatric surgery, and patient quality and safety. An assessment of institutional commitment, governance, administrative support, programmatic goals, evaluation, and physical and human resources are common elements to each of these programs. Each of these elements, and how they apply to MCP, will be addressed in detail in subsequent sections of this manual.

Although these partnerships are designed for combat casualty care teams, the benefit to the civilian counterparts must also be appreciated. Partnering with the military in a civilian center allows for a two-way exchange of knowledge between the battlefield and the civilian trauma system. Research focuses can be expanded to include military-relevant topics that translate into civilian trauma care. Involvement with military teams enhances the response to civilian disasters and mass-casualty events. Additionally, participating in MCPs offers a unique opportunity for civilians to provide service to their country.

B. Historical Aspects of Military-Civilian Partnerships

Formal relationships between military and civilian medical services are not new; in fact, they have been in existence for more than 100 years. In World War I, 38 civilian hospitals provided care for military casualties as they returned to the United States. These 38 facilities, referred to as American Red Cross Army Base Hospitals, served a critical and fundamental role in military medical care over the next 30 years. During World War II, these same hospital units were mobilized en masse to the European and Pacific theaters. The advantage of this system was that it provided an entire hospital unit with individuals who were familiar with their roles and functions by virtue of their previous associations within their civilian institutions. These American Red Cross Army Base hospital units were disbanded following WWII and replaced by the U.S. Army's Mobile Army Surgical Hospital (MASH), 1945–2006.

The First Gulf War was the first large military medical mobilization after Vietnam, and it demonstrated significant shortfalls in the state of medical readiness. The highly mobile and kinetic nature of the advancing warfighting units rapidly outstripped the fixed and immobile medical support facilities left far behind in rear locations. Perhaps more importantly, the Gulf War also demonstrated the substantial gaps in medical readiness of military medical providers. Criticism both internal and external to the military medical corps was rapid and focused on the need to train medical providers for a wartime mission. Perhaps the most insightful review of these gaps was that of COL Donald D. Trunkey, MD, FACS, USAR, who was both an iconic thought leader in American trauma surgery as well as a deployed military hospital commander. In his review, Trunkey pointed out the need to "train as we would fight" and the necessity of maintaining currency in trauma care for the military surgeon by training in a contemporary civilian trauma center.

Following the Gulf War, both the Government Accountability Office (GAO) and the NDAA issued a call for military medical readiness training programs that incorporated military medical personnel into large, urban-based U.S. civilian trauma centers (1994–1998). The military responded to this directive by creating the first joint trauma training platform in Houston, TX, at the Ben Taub Memorial Hospital in June 1999. This program was staffed by a joint cadre of US Army, Navy, and Air Force medical providers, including physicians, nurses, and allied health personnel. The initial experience of the embedded team was overwhelmingly positive, but the inevitable growing pains and administrative struggles of this novel program soon began to tax its viability. Ultimately, administrative and legal issues proved to be insurmountable, and the center closed two years after its opening. The initial (albeit brief) success of the Joint Trauma Training Center/Houston compelled all three medical corps (Army, Navy, and Air Force) to implement Military Service-specific solutions to answer the call for military-civilian trauma training platforms. Beginning in 2000, the US Army established a training program at Miami Dade Ryder Trauma Center (Florida); the US Navy at the University of California, Los Angeles County Trauma Center (Los Angeles, CA); and the US Air Force at the University of Maryland Shock Trauma Center (Baltimore, MD), St. Louis University (St. Louis, MO), and the University of Cincinnati Trauma Center (Cincinnati, OH).

C. Partnership Objectives

MCP for trauma training and skills sustainment must have clear objectives in order to meet the goals of both partners. From a military perspective, the overarching objective is sustainment of a ready medical force that is continually prepared to deploy in support of contingency operations worldwide. On the civilian side, the primary objectives of partnerships with the military include early access to military lessons learned, the addition of trained military medical personnel to the civilian medical staff, and the opportunity to demonstrate support for the military medical mission. For both partners, an additional objective is identifying and conducting research of interest to combat casualty care in the civilian setting. Specific objectives for a partnership are also established based on an assessment of the needs of the military as well as the interest, capability, and capacity of the civilian partner institution. Individual and team objectives can be categorized as *training* or *sustainment* of critical care and trauma skills that are necessary in a deployed environment. This objective must be clearly defined for each population involved at any given partner institution. Failure to clarify such objectives, including individual roles and responsibilities, may result in frustration for both partners. For example, a surgeon who perceives that the objective of a particular civilian partnership is sustainment of trauma skills will naturally expect to be allowed to practice with a high degree of autonomy. If that individual is only allowed to observe trauma care or practice with direct supervision, he or she will not be satisfied with the experience. Additionally, the structure and administrative foundation of the partnership must support the objectives, including areas such as credentialing and licensing requirements. Competing learners must also be considered when establishing a partnership, as many civilian trauma centers are also responsible for graduate medical, nursing, and technician education that may impact access to clinical situations. A clear definition of objectives for each military member on an individual basis will ensure realistic expectations and allow military members to be matched to partnering civilian facilities that will meet their readiness needs.

Partnership models are designed to both train and to sustain trauma skills. Training is defined as "acquisition of new skills through instruction." This requires direct supervision of military trainees on the part of the trainer initially with progression to indirect supervision as skills progress. In clinical environments, the military partner should expect to work directly with a civilian peer or higher-level provider and/or a member of the permanent military cadre in order to receive guidance and feedback. A defined list of skills to be acquired ensures that training needs are met and expectations are realistic. Simulation training may be used to augment clinical experiences. Sustainment is defined as "maintaining previously learned skills through practice." After initial training, military members must have opportunities to remain clinically active in the care of seriously injured trauma and critical care patients, as well as emergency general surgery patients, in order to establish or maintain expertise. Sustainment typically requires only indirect or no supervision and applies to military providers (including physicians, registered nurses, physician assistants, technicians, medics/corpsmen, paramedics, and potentially others) practicing within their scope of practice who are fully credentialed and/or licensed at the partnering institution. Examples of skill sustainment partnerships may include military members embedded full time as faculty within a civilian hospital (a cadre) or those working part-time at a civilian hospital near their home station. Military personnel will be expected to uphold all standards of care at the participating institution, collaborate with civilian colleagues, and integrate with all processes and protocols at the partnering facility.

Due to the nature of military operations, multiple populations of medical providers require various levels of proficiency in critical care and trauma skills and abilities. These range from general practitioners to board-certified trauma surgeons and trauma team members. The population to be trained or sustained must be considered when establishing the partnership objectives. A partnership may include multiple different military populations who can participate. The objectives for each population may range from exposure to proficiency to mastery of trauma and critical care skills. Military units may train together as teams to enhance team performance or as individuals to focus on individual skills and abilities. When military team training is the objective of the partnership, the team must be allowed to practice together within the clinical environment. Within the military, 16 critical wartime combat casualty care specialties have been identified (Table 1, page 9). Other specialties that are integral to trauma team performance include medics and technicians assigned to surgical teams. It is important that all team members be considered when planning partnerships for training and sustaining trauma skills.

D. Types of Partnerships

There are currently five mature MCPs that have functioned since 2001. These include the US Army Trauma Training Center at Miami Dade Ryder Trauma Center (Florida), the US Navy Trauma Training Center at USC/LA County (California), and the US Air Force Centers for Sustainment of Trauma and Readiness Skills (CSTARS) located at the University of Maryland (Baltimore), the University of Cincinnati (Ohio), and St. Louis University (Missouri). Each of these partnerships was formalized by developing a Training Affiliation Agreement (TAA) or a Memorandum of Understanding (MOU) between these universities and the respective military branch of Service. At the inception of the first five MCP programs, each Service (Army, Navy, and Air Force) approached these documents using Service-specific processes and templates. These templates continue to be modified over the years by each individual Service, but it has been recognized by both the civilian and military communities that a standardized process across the Services and platforms would improve the process and expedite the opening of additional platforms going forward. This process will be simplified by allowing the Defense Health Agency (DHA) to become the central coordinating authority as outlined in the NDAA. The purpose of the TAA or MOU is to define the roles and responsibilities of the military medical Services as well as the hosting institution. The TAA outlines the provision of military personnel that will be assigned to the civilian military partnership. Examples of types of partnerships include:

- *Military permanent cadre at a civilian institution:*
  - Military medical personnel assigned to the facility at a civilian institution by their command as a permanent change of station (generally for a period of at least three years)
  - Requirements include licensing and credentialing in a fashion identical to their civilian counterparts within that institution
  - These assignments are designed for various purposes, including, but not limited to:
    - Maintaining the wartime readiness skills
    - Serving as teaching faculty
    - Providing supervision, leadership, and mentorship of rotating military trainees at the civilian institution
- *Rotating military trainees at a civilian institution:*
  - Rotate to the civilian institution in order to train in or to sustain key highly perishable mission essential medical skills (HPMEMS) sets necessary for readiness
  - Are fully credentialed staff providers (may be exceptions) who are licensed and credentialed at their parent military institution
  - Have direct patient contact at the civilian center (may be exceptions) and therefore a path for credentialing by the civilian partnership must be established
  - Participate in a prescribed military training educational program
- *Military personnel taking call at a civilian institution:*
  - Integrate into call schedules on an intermittent basis in order to sustain the HPMEMS of the military provider preferably at a civilian trauma center nearby their home military installation
  - Are credentialed at a level equivalent to the civilian professional staff, including specific state licensure or equivalent.

The enlisted military career fields such as respiratory therapy, radiologic technology, and certain areas of prehospital medical care require further coordination based on military versus civilian qualifications. In some instances, the enlisted medical personnel have a more limited scope of practice, and in others they may have a much broader scope of practice within their assigned military readiness duties. This is especially true for many of the military advanced level prehospital care providers who are often credentialed at the level of independent practice with advanced procedural skills as required in an austere military combat setting. This scope of prehospital practice for the military medic/corpsmen currently includes such skills as collecting, preparing, and transfusing whole blood and freeze-dried plasma as well as several advanced lifesaving interventions. The scope of practice of the military enlisted personnel is outlined by each individual Service. The Tactical Combat Casualty Care guidelines found at *https://jts.amedd.army.mil/index.cfm/PI_CPGs/cpgs* provide an example of what the prehospital provider is required to perform in the austere prehospital setting with no direct oversight.

E. Challenges with MCP

Challenges certainly exist within MCP. These challenges are especially frustrating with the myriad of federal and state regulations intersecting with local institutional polices. The primary challenge areas are related to malpractice, billing, privileging, and interaction with graduate medical education (GME). Some institutions have mechanisms to overcome these challenges when military surgeons perform off-duty employment (ODE) at civilian centers. The issues are more complicated when the military surgeon works at the same local hospital in a military capacity. The first three areas (malpractice, billing, and privileging) are complicated and vary by local institutions. A "best practices" strategy can be employed to overcome some challenges with the caveat that a definitive solution may be at the individual institutional level (see the "Best Practice Model" section below). Regardless of the challenge, a manageable solution must be in place prior to entering the partnership. Issues related to these areas can create significant delays. With respect to GME, "best practices" can be more broadly applied.

The **credentialing and licensing process** for military providers other than surgeons is also an important consideration when establishing MCP. This process should be streamlined and include all members of the trauma surgical team so that they may function independently once proficiency has been obtained. It is unrealistic to require rotating military teams to obtain licenses within the state where partnerships reside if they possess a license from a different state. Recognition of any state license is essential to the "federalization" process that is allowable during disasters and should apply to all active duty or reserve military providers. The military also trains many medical providers who do not have a civilian licensing equivalent such as combat and special operations medics/corpsmen and independent duty medical technicians. Such providers are critical to allow the military to maintain the highest level of trauma response in support of a full range of military operations. Civilian institutions partnering with these individuals must ensure a separate process to address their scope of practice in order to allow objectives to be met.

The Feres Doctrine prevents military health care professionals from being sued for **malpractice**. There are several ongoing legal arguments about the validity of Feres when applied to civilian patients and how the costs of lawsuits are attributed. Regardless, the Feres Doctrine remains in place, and this doctrine may not be acceptable to many civilian institutions that will still require malpractice coverage for participating military personnel. Purchasing malpractice insurance will depend upon the local practice, in other words, self-insured versus privately purchased or group-purchased insurance. Military providers should be included in the existing system within the institution with appropriate "tail" coverage. The military providers should not be directly charged for malpractice insurance coverage.

Similar to malpractice, there are certain institutional policies with regards to **billing**. Billing is more complex than it may first appear and includes professional fees and hospital-based billing. There is a myriad of government payors (TRICARE, for example) that will not reimburse professional fees when the care is delivered by a federal employee. Civilian partnerships must assess the volume of government-paid patients at the institution to determine the significance of the potential revenue loss. Civilian partnerships should set up the military providers in a similar manner to volunteer clinical faculty or providers on ODE. The military surgeons must be identifiable to the professional billing group as federal employees.

Privileging may be the easiest hurdle to overcome but also the one subject to the most local institutional influence. The military surgeons entering the MCP are active surgeons within the MHS. They are either board eligible or board certified in general surgery and some have completed fellowships, including surgical critical care or acute care surgery. They can be privileged as any civilian surgeon with the same credentials. For general surgeons, basic trauma skills are often included in general surgery privileging. These surgeons often get privileged to provide trauma care in moonlighting settings. An additional challenge is when the partnering institution requires critical care privileges for all surgeons providing trauma care, but the rotating military surgeon has not completed a critical care surgery fellowship. In that case, additional supervision by civilian faculty might be required.

The Accreditation Council for Graduate Medical Education (ACGME) and the Residency Review Committees (RRCs) are acutely aware that there are conflicts between different groups of learners in the same institution. This is most evident between residents and specialty fellows. Incorporating a rotating military general surgeon into a system is feasible and can benefit learners, but one must be careful how this is done with expectations clearly established ahead of time. Often fellows assume the role of junior staff surgeons with the oversight from a senior trauma surgeon. Clarification must be made with regards to who will be the primary surgeon for cases and who will be directing the day-to-day care of patients when a military surgeon joins the trauma team.

Larger trauma programs often have one or more trauma or critical care fellows taking care of patients alongside residents. The number of fellows is determined by the trauma volume, acuity of the trauma patients, the number of learners in the system, and other responsibilities of the fellows. Each program must achieve a balance for the needs of the learners. Some programs could accommodate more fellows but are limited by other factors outside of the clinical volume from increasing their fellow compliment. These programs would be ideal for MCP. One model for MCP includes incorporation of military general surgeons into the GME structure in a "fellow role" as junior attendings with senior oversight. The military general surgeons can assist with care and teaching as a fellow would, while at the same time learning the more complex aspects of trauma care. The senior attending surgeon then assumes the role of educator and, more importantly, ensures that the highest quality of care is delivered.

The Best Practice Model refers to the practice of onboarding of military surgeons in the capacity of "volunteer clinical faculty" (VCF). These surgeons carry an academic or non-university rank, typically as an assistant professor or a clinical instructor. The VCF position is included in the university's malpractice plan. The military providers are privileged as any civilian physician would be (they do require state licensure) and are identified to the professional billing group as active military health care providers. They function as faculty and do not compete with the residents or fellows for training. When the surgeon is not trauma trained, she or he will have a senior trauma surgeon on call with them. That senior surgeon often approaches the general surgeon as one would a fellow with the right balance of freedom and oversight.
A "host champion" may be the most important deliberation for the civilian center preparing to develop a military-civilian partnership. Over the almost 20-year history of the first five MCPs, one common theme has emerged—namely the essential role of a liaison or "host champion" at the civilian institution. With few exceptions, the five centers of excellence have had a singular, well-placed, and senior member of the hosting institution to serve as the champion of the partnership. This liaison role ensures access for the military cadres to the appropriate level of hospital administration and leadership. In addition, the singular presence of a persistent civilian advocate helps ensure continuity of the program as the embedded cadre are deployed and/or rotate to a new assignment on an average basis of every three years.

F. The MHSSPACS and the Clinical Readiness Program

Beginning in 2014, the American College of Surgeons entered into a partnership with the MHS, (MHSSPACS) for the purposes of exchange of information in the areas of surgical quality, surgical education and training, trauma systems, and military-relevant trauma research. One of the major goals of this strategic partnership is to ensure that military surgeons are always prepared for deployment despite their garrison practice. An additional objective is to assist in the preservation of the lessons learned over the last 18 years of conflict through the Joint Trauma System (JTS). To that end, the MHSSPACS has focused on identifying the essential skills and knowledge points for the deploying surgeon as part of a continuous process of maintaining readiness. These efforts were strengthened by the passage of Section 707 of the NDAA for FY 2017 that mandates the establishment of the JTS, and Section 708 mandates the establishment of a Joint Trauma Education and Training Directorate (JTETD), which directed that each branch of the military Service maintain and measure "critical wartime medical readiness skills and core competencies." The responsibilities of these two new entities are outlined here:

JTS Responsibilities

- Serve as the reference body for all trauma care provided across the MHS
- Establish standards of care for trauma services provided at Military Medical Treatment Facilities (MTF)
- Coordinate the translation of research from the Centers of Excellence (CoEs) of the DoD into standards of clinical trauma care
- **Incorporate lessons learned from the trauma education and training partnerships pursuant to section 708 into clinical practice**

JTETD Responsibilities

- Develop quality of care outcome measures for combat casualty care in coordination with the JTS
- **Establish goal-based criteria for entry into partnerships with civilian trauma centers and establish performance metrics for these partnerships**
- **Select and, at the discretion of the Secretary of Defense, enter into and coordinate partnerships with civilian trauma centers to provide integrated combat trauma teams exposure to a high volume of patients with critical injuries**
- Promote communication, coordination, and dissemination of lessons learned from such partnerships
- Develop standardized combat casualty care instruction for all members of the Armed Forces, including the use of standardized trauma training platforms

The JTS transitioned to the DHA in August 2018, and the JTETD was established as a branch of the JTS in March 2019. To address the mandate to maintain and measure "critical wartime medical readiness skills and competencies," the DoD, in partnership with the MHSSPACS, established efforts and resourced programs to develop the specialty-specific Knowledge, Skills, and Abilities (KSA) of a ready medical force. Section 725 of the NDAA for FY 17 Working Group (WG) identified 72 Critical Wartime Specialties, including 16 specialties of the Combat Casualty Care Team (CCCT) as outlined in Table 1.

Table 1. CCCT and CCCT+ Specialties

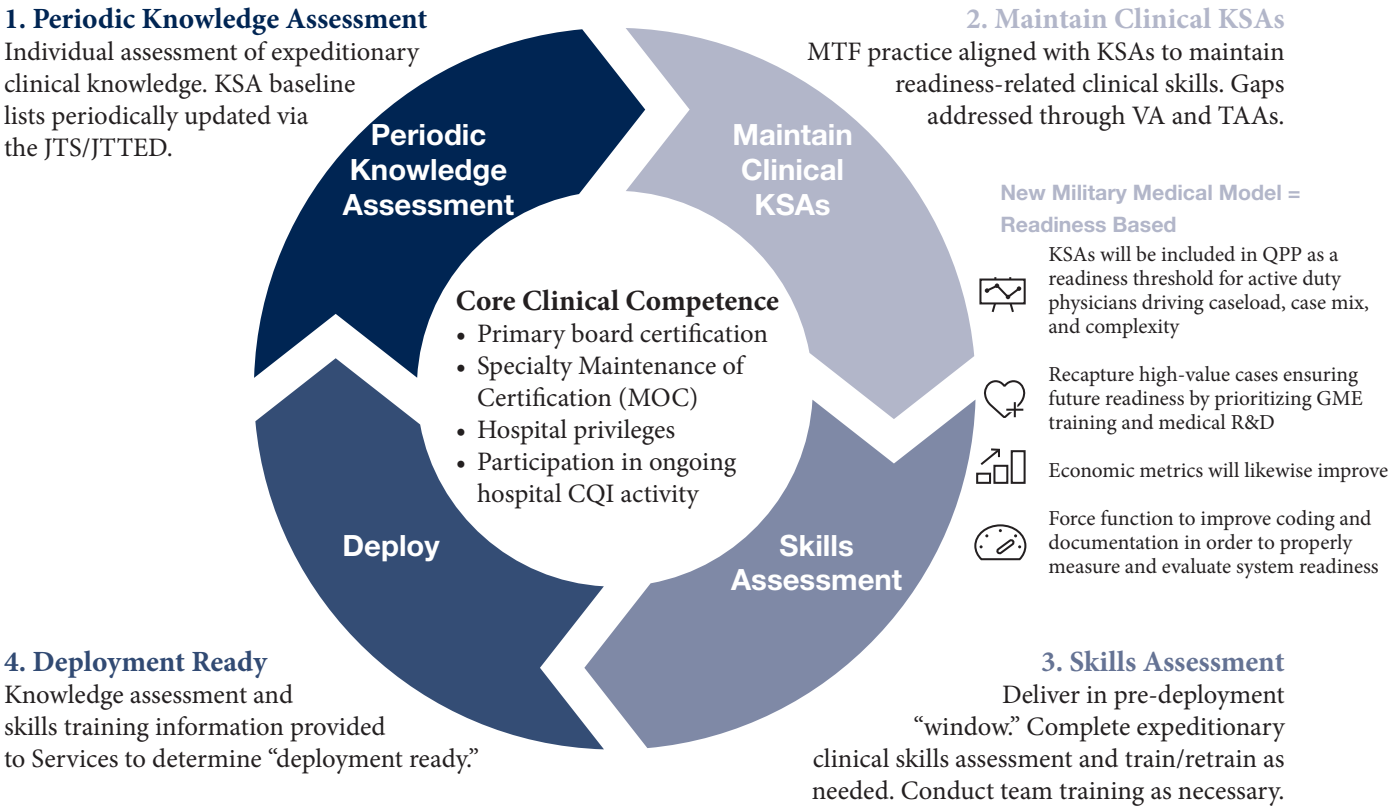
Combat Casualty Care Team	Combat Casualty Care Team+
General Surgery	Plastic Surgery
Orthopaedic Surgery	Urology
Emergency Medicine	Vascular Surgery
Critical Care Medicine	Cardiothoracic Surgery
Anesthesiology	Neurosurgery
Emergency/Trauma Nursing	Ophthalmology
Critical Care Nursing	Ear Nose Throat (ENT)
Trauma Surgery	Oral Maxillofacial Surgery (OMFS)

KSAs are in the process of being developed for each of the specialties listed above and are important to MCP as they serve as a component for selection and evaluation of these partnerships. The KSA are also an essential element of the Clinical Readiness Life Cycle (Figure 1, page 10).

A clinical readiness program has been developed as a component of the Medical Readiness Resource Management Decision Plan directed by the DoD in coordination with the Joint Staff and Military Services. The purpose of this program it to assess the extent to which each military treatment facility (MTF) provides the necessary workload volume and diversity of care to maintain defined Essential Medical Capabilities. The clinical readiness program is based on a continuous cycle of clinical currency through periodic knowledge assessment, clinical practice, and skills assessment. This life cycle includes the full MHS practice composite of the DoD MTF, federal partnerships (such as the Veterans Affairs/Public Health Service/International Health Service), and non-federal partnerships (in other words, MCP). The foundation of the clinical readiness program relies on the process developed to establish an evidence-based repository of KSA within the "expeditionary scope of practice" of the Critical Wartime Specialties listed above. The process begins with development

of a specialty-specific KSA repository, weighting the KSA through survey of the specialty community of practice, linkage of KSA to Current Procedural Terminology or International Classification of Disease codes, establishment of a practice performance threshold, and creation of a specialty-specific performance dashboard. Each of the critical specialties is in some phase of developing its own program, but the goal is to eventually have a consolidated program established within the DoD. One additional element in this process is the ability to demonstrate knowledge points and skills through periodic assessments, ensuring that the members of the CCCT are always deployment ready. Those civilian centers that choose to partner with the DoD in order to provide training/sustainment opportunities for members of the CCCT will be expected to offer opportunities for military providers to maintain readiness related clinical skills.

Figure 1. Clinical Readiness Life Cycle



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Part II: Standards

Note:

These standards are meant to be general guidelines and can be adapted for individuals versus teams and to training purposes versus sustainment needs. They serve as the basis for a formal Pre-Review Questionnaire that will be part of the application process.

A. Institutional Commitment

The support for any surgical/trauma training program must come from the upper echelon of leadership within a hospital or academic institution. In addition, military-civilian partnerships (MCP) must have a permanent civilian surgical leader committed to maintaining the partnership and to constant oversight of the program. The following items are considered evidence of administrative and institutional commitment:

- Written documented support from the dean of the medical school
- Written documented support from the hospital's chief executive officer
- Written documented support from the chair of surgery
- Written documented support and a curriculum vitae from the chief of trauma
- An identifiable surgical champion for the partnership with a plan for compensation in the form of salary support or the equivalent for the percent of his or her full-time equivalent (FTE) spent directing the program
- An administrative assistant dedicated to the partnership with a well-defined job description
- A budget commensurate with the needs of the partnership and an identified source of funding from the hospital's chief financial officer, including compensation for the surgeon champion, the administrative assistant's salary, space, housing, training facilities, and so on (see also the section on physical resources)
- An identifiable plan for "backfill" when military personnel are deployed or while fulfilling military training requirements
- A policy in place for addressing licensing requirements for both short-term military rotators and fully credentialed cadre
- A policy to cover the malpractice costs for rotating military providers
- An identifiable pathway for military providers to obtain credentials and privileges within the civilian hospital
- Evidence of an understanding of billing restrictions for services rendered by active duty military providers
- There is a mechanism in place to manage the relationship between military and GME training programs
- There is a memorandum of agreement or memorandum of the understanding in place to ensure that both embedded and rotating personnel are fully integrated into the trauma team

B. Governance/Administration

In order to ensure success, the governance of MCP must be clearly outlined and adhered to. A well-established plan for governance is essential to maintain both the quality of the care provided as well as the integrity of the program itself. In this section the following items are to be considered:

- The hospital is Joint Commission Accreditation Healthcare Organizations approved (or equivalent)
- The hospital is an American College of Surgeons (ACS)-verified trauma center (or equivalent)
- The hospital participates in the Trauma Quality Improvement Program (TQIP) or an equivalent risk-adjusted quality improvement program
- The hospital participates in the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP®)
- There is evidence of a coordinated approach to the care of emergency general surgery patients in addition to trauma and critically ill surgical patients
- The hospital has an Accreditation Council Graduate Medical Education program
- The Military-Civilian program has a recognized name throughout the institution
- There is a recognized civilian surgeon champion for the program
- There is a job description for the surgeon champion
- There is compensation for the surgeon champion (financial compensation or academic credit)
- The surgeon champion has the authority to choose faculty members to participate in the partnership
- The surgeon champion has the authority to dismiss faculty members for failure to provide support for the program
- There is an identified administrative assistant (contract/government civilian/military) for the program with one FTE salary and a commensurate job description
- There is evidence that the administrative assistant is tasked with supporting the military partners in the following areas: scheduling travel, securing housing and parking, scheduling rotations and required coursework, and applying for patient care and operating privileges
- There is a centralized database established for the program to capture patient encounters, cases performed, courses attended, and so on; the database will be managed by the program's administrative assistant, and information will be provided in a standardized format
- The members of the **Program Oversight Committee** are clearly identified, the goals of the committee are established, and meeting dates/minutes are recorded
- The members of the **Program Education Committee** are clearly identified, the goals of the committee are established, and meeting dates/minutes are recorded
- All information made or received by the government will be maintained in a compliant electronic recordkeeping repository and in accordance with National Achieves and Records Administration-approved disposition schedules
- The sponsoring Military Service or Defense Health Agency (DHA) (whichever is agreed upon in the MCP) is responsible for maintaining the consolidated records of this MCP; records include, but are not limited to: institution selection, institution evaluation, and committee files

C. Human Resources*

In addition to the surgeon champion and the administrative assistant for the program (see Section B, Governance/Administration), other key personnel who will interact with rotating military providers include the chiefs of surgical specialties, the trauma director and trauma program manager, trauma and emergency nurses, operating room personnel, as well as the trauma fellows and resident surgical teams. All of these individuals must fully embrace the partnership and provide an **atmosphere to enhance learning for rotating military providers.** The following individuals must be committed to the program and demonstrate their support:

- The Chair of the Department of Surgery
- The Chief of Surgery (if different from the Chair)
- The Program Director in General Surgery
- The Trauma Director
- The Trauma Program Manager
- The Chief of Neurosurgery
- The Chief of Anesthesia
- The Chief of Orthopaedics
- The Director of the Surgical Critical Care Unit
- The Director of the Burn Unit
- The Chief of Emergency Medicine
- Each member of the surgery/trauma faculty who will interact with the military surgeons/military teams
- The Director of Trauma Research
- Advanced practice providers on the trauma service
- Nursing representatives from the operating room, emergency department, and surgical critical care unit

***Note: When combat casualty care teams are part of partnership, this list should be expanded to ensure appropriate support for additional military providers, including nurses, anesthesia providers, medics, respiratory therapists, radiology technicians, critical care transport teams, and Extracorporeal Membrane Oxygenation technicians.**

D. Physical Resources

1. **Patient care:** The number of patients who undergo initial evaluation and treatment (including resuscitation, surgery, intensive care unit care [ICU]) by military personnel are considered essential elements, as are the injury severity and case mix of the patients encountered. Exposure to specialty surgery and emergency general surgical patients is also important. When selecting a trauma center for military-civilian partnerships, the following criteria are considered **desirable**:
    - A trauma patient volume of 1,200 admissions/year with 10% sustaining penetrating injuries
    - Sufficient volume for in-depth exposure to critically injured patients defined as those with an Injury Severity Score of 15 or greater in 20% of patients
    - Sufficient volume and case mix to meet the Knowledge, Skills, and Abilities (KSA) metrics for trauma and acute care surgery for the military provider/teams as outlined by the DHA Clinical Readiness Initiative
    - Participates in ACS TQIP or an equivalent risk-adjusted patient quality and safety program
    - Provides experience with receiving "un-prepped" trauma patients (for example, patients delivered by non-paramedic means, including police and private vehicles)
    - Provides opportunities to participate in mass-casualty drills and disaster planning
    - Provides experience in caring for injured patients at all locations, including the prehospital setting (helicopters and ambulances), the emergency department, operating room, ICU, and surgical wards
    - Provides opportunities to care for emergency non-trauma general surgery patients
    - Provides experience in a coordinated, highly-functional trauma program with patient continuity of care using a team approach
    - Provides experience in caring for and operating on specialty surgical patients, including but not limited to:
        - Vascular surgery
        - Neurosurgery
        - Orthopaedic surgery
        - Thoracic surgery
        - Burns
        - Ophthalmology
        - Gynecology
        - Pediatrics
        - Hepatobiliary/transplant surgery
2. **Equipment:** The deployed setting can vary widely in terms of available equipment, and in order to provide the best preparation the military surgeons and/or teams should have exposure in the civilian setting to:
    - Complex airway carts
    - Rewarming and rapid infusion devices
    - Massive transfusion protocols
    - Cell saver devices
    - Thromboelastography (TEG) and/or rotational thromboelastometry (ROTEM) machines
    - Ultrasound equipment
    - Computed tomography/angiography/fluoroscopy/magnetic resonance imaging radiological equipment
    - Endovascular equipment
    - Standard equipment trays such as for emergency department thoracotomy
    - Bronchoscopy, endoscopy tools
    - Standard and rescue ventilator equipment
    - Pelvic binders
    - External fixation devices
    - Intracranial pressure and Licox monitors
    - Electronic Medical Record
    - Trauma registry
    - Prehospital triage guidelines
3. **Resources specific for the military trainees**
    - Housing
    - Parking spaces
    - Office spaces
    - Meals
    - Supplies and educational materials
    - Computers
    - Access to the electronic medical record
    - Access to an electronic library and other Internet resources
    - Information technology support
    - Exercise facilities
    - Resilience support resources
    - Classroom space for teaching
    - Expanded space for military exercises/equipment storage

E. Educational Component

Education is the key element essential to military-civilian training platforms, both in patient care and in didactic and skills-focused training. Providing opportunities for both supervised training and autonomy in practice is crucial. The level of appointment for a rotating military provider should be commensurate with her or his experience and skills. A curriculum must be clearly outlined and take into account the needs of the particular individual and/or military team. The participating trauma center must:

- Provide evidence that the curriculum is focused on the needs of the military surgeon and/or surgical team based on the individual or team's performance on the KSA assessment (written and skills testing)
- Demonstrate progression through a graded curriculum with increasing complexity and progressive autonomy
- Outline an organized didactic curriculum, including weekly teaching conferences, patient rounds with attending surgeons, case conferences, peer review, and performance improvement/patient safety conferences
- Describe the role of each member of the faculty who is contributing to the curriculum (including both trauma and surgical specialty faculty)
- Provide access to standardized courses, including Advanced Trauma Life Support, Trauma Nursing Core Corse, Basic Endovascular Skills for Trauma, Advanced Surgical Skills for Exposure in Trauma+, ultrasound, Pediatric Advanced Life Support, and others as needed
- Provide access to an ACS-Accredited Education Institute, including simulation
- Outline in advance the planned rotations for military personnel, including the call schedule
- Outline in advance how military personnel will be proctored/monitored and how they will be given opportunities for autonomy
- Provide training in performance improvement/patient safety and trauma systems
- Document Continuing Medical Education (CME) Credits for military trainees
- Conduct clinical and/or basic research and provide opportunities for military personnel to be exposed to and/or participate in trauma-related research
- Provide opportunities for military personnel to receive information on professional development, including emotional intelligence, team building, and continuity of care
- Provide education in and exposure to critically ill and emergency general surgery patients

F. Evaluation Tools

MCP evaluation criterion relevance will be centered on the ability for the trauma team/member to be able to sustain proficiency of their HPMEMS in support of a full range of military operations. While this data will not be readily available for each center, it should be an overarching goal to demonstrate the value of each partnership to the readiness mission based on operational support after action reviews/evaluations. On an annual basis, each center must provide the Department of Defense (DoD) with the following information:

- A robust financial report disclosing how federal dollars were utilized in support of the program (fiscal responsibility)
- Evidence of continued commitment to the partnership, including an annual evaluation of the surgeon champion and the administrative staff
- Demonstration of quality of care measures, including peer review meeting notes, loop closure, quality improvement projects, and all TQIP reports
- KSA metrics met for all military providers
- An annual 360-degree evaluation of all providers and military personnel
- Detailed faculty evaluations from residents, fellows, and military personnel
- Evidence that Clinical Practice Guidelines (CPG) were utilized and their relevance to military CPGs
- Number of patient exposures, initial evaluations/resuscitations performed, operative logs, ICU patients encountered, and so on, as documented in the military-specific data base/registry kept by the program administrator
- Documentation of CME for participating military personnel
- Documented research productivity as measured by peer-reviewed publications, presentations as regional and national meetings, and grant support
- A list of all courses and conferences attended/rotations completed by military personnel as captured in the military database
- An assessment of the impact of the program on residents and fellows in GME and non-GME programs at the civilian institution
- Provide evidence the program provided both mentorship and opportunities for autonomy
- Provide evidence that there is communication between the surgeon champion/point of care (POC) and the responsible military POC to ensure that the program is meeting the goals outlined for that particular partnership
- Provide evidence that the administrative assistant is tasked with supporting the military partners in the following areas: scheduling travel, securing housing and parking, scheduling rotations and required coursework, and applying for patient care and operating privileges

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