Chapter 6

# THE ARMY EMERGENCY MEDICINE PHYSICIAN ASSISTANT

*Monica Casmaer, PA-C, DSc; Sharon Rosser, PA-C, DSc, MPAS; and Ryan Curtis, PA-C, DSc, RDMS*

The Army's Emergency Medicine Physician Assistant (EMPA) residency program produces the world's most highly trained Emergency PAs. Fully capable of resuscitating critically ill or injured patients, they have and are decreasing morbidity and mortality both in the Medical Treatment Facilities and on the battlefield. Highly sought after for their advanced training, EMPAs bring modern trauma resuscitation to wounded warriors, saving lives and allowing them to return home to their families.

*—Colonel (Retired) Ian Wedmore*
*Former Emergency Medicine Consultant to*
*The Army Surgeon General*

## Emergency Medicine Physician Assistant's Mission

The mission of the US Army emergency medicine physician assistant (EMPA) is threefold: (1) to be a force multiplier by providing emergency medical and trauma resuscitative care on and off the battlefield (Figure 6-1); (2) to perform as a clinical scientist to better serve Military Health System beneficiaries; and (3) to enrich the physician assistant (PA) profession with expertise in emergency medicine. This mission is met through producing EMPA residency program graduates with proficiency in clinical emergency medicine and resuscitative trauma management.

EMPAs provide rapid and thorough evaluation and management of emergent medical, surgical, neurologic, polytrauma, and critical patients (Figure 6-2). They perform emergent bedside procedures to

**Figure 6-1.** Captain Brian Ahern, an emergency physician assistant assigned to a Defense POW/MIA Accounting Agency (DPAA) recovery team, performs an ultrasound on a local worker during excavation operations in the Houaphan province, Laos, February 16, 2019. As part of the humanitarian mission, DPAA hosts a medical outreach event to treat local villagers. The team deployed in support of DPAA's mission to provide the fullest possible accounting of missing personnel to their families and the nation by searching for the remains of service members lost during the Vietnam War. Photograph by Staff Sergeant Michael O'Neal, US Army.
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stabilize critical medical and traumatically wounded patients within military medical treatment facilities (MTFs). EMPAs improve access to emergency medical care in MTFs and optimize emergency department (ED) throughput and productivity, which reduces the overall health care cost burden in the current period of physician shortages.[1] EMPAs also increase medical knowledge and performance improvement (PI) by conducting research approved by the institutional review board and other PI projects related to emergency medicine.


**Figure 6-2.** Captain Ryan Curtis, 36th Area Support Medical Company, and trauma surgeon Lieutenant Colonel Corydon Siffring, work to achieve hemostasis on a coalition partner suffering from a gunshot wound to the face. Both were assigned to the Role 2 forward surgical element at Forward Operating Base Ghazni, Afghanistan. They were deployed in support of Operation Enduring Freedom.
Photograph courtesy of Corydon Siffring, Lieutenant Colonel, Medical Corps, US Army.

## Residency Program

### *Vision*

The vision of the EMPA residency program is to create the benchmark for postgraduate EMPA education through the pursuit of academic and clinical excellence. This vision is realized by developing clinical scientists who are prepared to conduct advanced scientific research, as well as to provide quality emergency care for patients with a wide variety of illnesses and traumatic injuries in the ED and on the battlefield. These EMPA clinical scientists will develop as future leaders and mentors by establishing scholarly excellence for the PA profession.

### *History*

In 1981, in response to an Army-wide emergency medicine physician shortage, the Army initiated training in emergency medicine for PAs. PAs were trained to augment physician staff in the perpetually busy EDs. Most assignments were to understaffed MTFs located throughout the continental United States. Selected PAs were enrolled in a training program at Darnall Army Community Hospital, Fort Hood, Texas, which already had an existing emergency medicine physician residency. The program of study was 12 months long and paralleled the second postgraduate year training for emergency physicians. However, suffering a severe PA shortage in line units and poor PA retention, the Army reduced or stopped most postgraduate training for PAs in 1986. A total of 12 EMPAs were trained during those 5 years.

In 1989, the American College of Emergency Physicians (ACEP) published a position paper in the *Annals of Emergency Medicine* on the utilization of PAs in military emergency medicine.[2] While there was some division among physicians as to the practicality of utilizing PAs in emergency medicine, the authors made the important point that training PAs in this field prepared them for the type of trauma anticipated in combat.[3] The authors maintained that EMPAs could be a valuable asset to a military ED, stressing that PAs should be used as physician extenders and not as physician substitutes. ACEP advocated that all EMPAs receive a formal course of training in either a fellowship or residency program for at least 12 months, and that the training be conducted at an approved emergency medicine physician residency program.

In 1991, the Army surgeon general approved a plan for a revised program. The first EMPA training began at Brooke Army Medical Center, Fort Sam Houston, Texas, on July 1, 1991. In 1992, a second program was established at Madigan Army Medical Center, Tacoma, Washington. A third program began in 1995 at Darnall Army Community Hospital (but closed the following year after graduating one class in 1996). All three training sites had active emergency medicine physician residency programs. Upon successful completion and graduation from EMPA training, graduates were awarded the M2 identifier to their area of concentration (65DM2).

In January 2007, ACEP issued a policy statement validating the necessity of additional training for PAs in the ED setting. The policy states that "Physician Assistants working in EDs should have or acquire

specific experience or specialty training in emergency care, should participate in a supervised orientation program, and should receive appropriate training and continuing education in providing emergency care."[4] This is the first time that a non-PA organization acknowledged the necessity for advanced education of PAs.

Traditionally, entry-level training for PAs was either a bachelor's degree or, now more commonly, a master's degree program. PAs desiring doctoral degrees had to pursue the traditional academic route such as the Doctor of Philosophy (PhD), available only in nonclinical subjects. Those desiring postprofessional education emphasizing clinical skills had limited options. Most of the current programs are based on distance learning with very little faculty oversight of the clinical experience. PAs who wanted to specialize in a clinical residency training program could attend a 12-month clinical program that issued a certificate of advanced competency in the specialty upon completion.

In 2006, the US Army partnered with Baylor University to create the world's first Doctor of Science in Physician Assistant Studies specializing in Emergency Medicine (DScPAS-EM) degree. To create the new doctoral degree, the previous 12-month certificate program was extended into an 18-month clinical emergency medicine residency program with a more robust curriculum and additional clinical contact hours. The residency program was developed to provide training in emergency medical care on and off the battlefield. With emphasis on individual research, evidence-based practice, and a superior clinical curriculum, the program is unique. No other existing EMPA residency and fellowship programs can match its strengths in all areas. It has established a standard that other programs are currently attempting to emulate. With this distinction and the prestige earned by its graduates, the DScPAS-EM residency program benefits the Army by serving as a tool to recruit and retain highly qualified military graduates who wish to further their education, specialize in a highly demanding field, and provide emergency medicine capabilities to military units and MTFs (Figure 6-3).

### *Program Curriculum*

The EMPA residency program selects residents from a pool of qualified Army PA applicants based on projected needs of the Army and per guidelines established in the annual long-term health education training


**Figure 6-3.** Role 3 emergency medical technician section officer in charge, Lieutenant Colonel Jason Naylor, and his team await the arrival of a patient from Baghdad International Airport. They were deployed in support of Operation Inherent Resolve in 2017.
Photograph courtesy of Jason Naylor, Lieutenant Colonel, Medical Specialist Corps, US Army.

message. New EMPA residents begin with a 2-week accelerated research course on how to design a research protocol that can be approved by an institutional review board, conduct research, collect data, analyze the research data, and complete a doctoral-level manuscript. Additionally, EMPA residents learn how to present their research in various platforms including poster presentations, scientific platform presentations, and defense of the doctoral research project.

The EMPA residents join their physician colleagues in an extensive, in-depth, 4-week introduction to critical care and emergency medicine to familiarize the PA with emergency, combat, and polytrauma medicine. During this training, the EMPA resident participates in numerous procedure labs and performs various lifesaving skills to resuscitate the sick and wounded. Next is a 4-week ultrasound training rotation that familiarizes and credentials the EMPA resident in point-of-care

(bedside) ultrasonography. Procedures performed during live tissue and cadaver labs include central venous access, pericardiocentesis, arterial line placement, transvenous cardiac pacing, chest tube thoracostomy, needle thoracostomy, resuscitative thoracotomy, venous cutdown, intraosseous device placement, and lumbar puncture. Additionally, residents perform lateral canthotomy, orotracheal intubation, rapid sequence induction, cricothyroidotomy, tracheostomy, supraglottic airway device placement, and ventilator management.

The program emphasizes patient care through hands-on learning. In total, the EMPA residency consists of 16 didactic sections and 20 clinical rotations comprised of approximately 740 hours of classroom instruction and nearly 4,000 clinical hours. It includes rotations through the medical, surgical, and cardiac intensive care units, the pediatric ED, and eight separate rotations at two level 1 trauma centers with extensive trauma surgery and resuscitation exposure.

### *Certifications*

The EMPA resident must complete the American College of Surgeons Advanced Trauma Life Support (ATLS), Advanced Life Support (ALS), Pediatric Advanced Life Support (PALS), and Basic Life Support (BLS) courses during the residency. Residents may choose to attend Advanced Burn Life Support (ABLS), Neonatal Resuscitation Program (NRP), and the Pediatric Fundamentals of Critical Care Support (PFCCS). After completion of the EMPA residency program, graduates are awarded the DScPAS-EM. Graduates from the DScPAS-EM program may apply for the 1-year ultrasound fellowship.

## Ultrasound Fellowship

The ultrasound fellowship is designed to train acute care clinicians to be leaders in bedside ultrasound. It is dedicated to the principle that ultrasound is part of the clinical practice of every emergency physician and PA. The fellowship adheres to the ACEP *Emergency Ultrasound Guidelines* (2013) specifically pertaining to the site qualification requirements and fellowship criteria for graduation.[5] The program focuses on four primary competency areas: sonographer/sonologist training; ultrasound educator; scholarly activity; and administration of ultrasound continuous quality improvement programs.

The EMPA ultrasound fellow is expected to personally perform at least 1,000 ultrasound exams during the fellowship. The fellow must master the applications of diagnostic and procedural emergency ultrasound prior to graduation.[5–7]

## Duty Descriptions

The positions for the specialized PAs (orthopedics, emergency medicine, and general surgery) with similar roles and responsibilities are provided in more detail in Chapter 4, Academic Leadership Roles, Professional Education, and Training Opportunities. The following are the duty descriptions specific to EMPAs.

### *Emergency Medicine Physician Assistant in the Emergency Department or Combat Support Hospital*

- Provides direct expert patient care to patients in the ED or combat support hospital under high-stress situations. Provides care and clinical supervision for a wide range of patient presentations, ages, and conditions including emergent, urgent, and non-urgent complaints.
- Responsible for the rapid and thorough triage, evaluation, and management of the pediatric, psychiatric, obstetric, geriatric, surgical, and traumatically injured patients in the ED or combat support hospital. Performs invasive and noninvasive diagnostic and therapeutic procedures including lifesaving procedures within personal credentials and privileges delineated by the hospital.
- Responsible for utilizing considerable ingenuity in identifying symptoms of presenting patients that are often subtle or present with overlapping symptoms due to the presence of more than one condition or ailment, and that require extensive analysis and testing to determine the nature and scope of the problem.
- Orders appropriate laboratory, x-ray, and other diagnostic tests; interprets the total medical and surgical evidence, incorporating information into an accurate diagnosis or appraisal; institutes proper treatment and develops the appropriate patient care plan.
- Facilitates patient access to continuing medical care by appropriate referrals to other health care providers, operating within the policies and regulations of the hospital or MTF. Skillfully interacts with a

variety of patients and consultants in an effort to obtain desired compliance and cooperation. Maintains health and clinical records in accordance with current regulations and standards. Maintains the appropriate level of physical fitness necessary to respond to any emergency medical or trauma situation.

***Emergency Medicine Physician Assistant in the Forward Deployed Surgical/Resuscitative Element, Critical Care Transport, US Disaster Response Team, Damage Control Resuscitation Team, and White House***

- Responsible for the rapid and thorough triage, evaluation, stabilization, and management of urgent medical, surgical, or traumatically injured patients.
- Performs invasive and noninvasive diagnostic and therapeutic procedures including lifesaving procedures within personal credentials and privileges delineated by the hospital or MTF.
- Responsible for utilizing considerable ingenuity in identifying symptoms of presenting patients that are often subtle or present with overlapping symptoms due to the presence of more than one condition or ailment, and that require extensive analysis and testing to determine the nature and scope of the problem.
- Orders appropriate available laboratory, x-ray, and other diagnostic tests; interprets the total medical and surgical evidence, incorporating information into an accurate diagnosis or appraisal; institutes proper treatment and develops a patient care plan appropriate to the medical assets and facilities available in the area of operations.
- Facilitates patient access to continuing medical care by appropriate referrals to other health care providers and specialists and determines necessary evacuation to higher echelons of care, operating within the policies and regulations of the hospital or MTF.
- Enhances medical capabilities for forward emergency and resuscitative care and expands capabilities at the tactical level by providing specialized advanced trauma management and far-forward damage control resuscitation at or near the point of injury, to prevent deterioration and death in the urgent presurgical patient and reduce the number of deaths from potentially survivable wounds on the battlefield or in other austere conditions of operations
- Augments emergency medical expertise in the structure of the

operating forces, advising the brigade surgeon or appropriate authority on the management of trauma patients within the area of operations.
- Skillfully interacts with a variety of patients and consultants to obtain compliance and cooperation.
- Maintains health and clinical records in accordance with current regulations and standards.
- Maintains the appropriate level of physical fitness necessary to respond to any emergency medical or trauma situation.

***Emergency Medicine Physician Assistant Ultrasound Fellow***

- Provides education to physician residents, EMPA residents and fellows, medics, nurses, and faculty or medical students. The primary venue for teaching is scanning shifts, when the fellow will help staff hone their skills on the primary applications for emergency and critical care ultrasound, and expand their knowledge of evolving applications.
- Must be able to demonstrate 20 hours per month of hands-on teaching at the end of each 28-day rotation block.
- Runs the weekly ultrasound quality assurance review sessions, during which each bedside and training ultrasound exam is reviewed and critiqued. Exams reviewed include studies done by the fellow, residents, and students during their ultrasound electives. Responsible for educating residents and students in this forum under the supervision of the director.
- Integrally involved in the emergency medicine residency ultrasound curriculum. This involves a combination of pre-scheduled didactic and hands-on teaching sessions, ED scanning shifts, and assisting the fellowship director in leading journal review discussions.
- Presents a minimum of one grand rounds lecture during the course of the year on advanced emergency ultrasound topics.
- Assists and facilitates residents during ultrasound rotations in preparing video review clips and high-yield teaching points for grand rounds "Ultrasound Cases of the Month."
- Conducts research followed by peer-reviewed publication as a significant portion of the nonclinical workload.
- Serves as a primary investigator on one research project approved by an institutional review board and as associate investigator on a

second. Abstract publications as well as one additional publication in the form of images in clinical medicine, case report, case series, expert opinion, letter to the editor, or textbook chapter are also a requirement of the fellowship.

- Attends a national emergency medicine ultrasound section meeting during the fellowship.
- Learns how to set up, direct, and manage an ultrasound continuous quality improvement program. This entails developing a data collection instrument, a database for storing continuous quality improvement data, and a means of developing measures of quality.
- Initiates and conducts at least one interdepartmental quality assurance project to improve the use of ultrasound in the emergency medicine setting.
- Becomes familiar with national recommendations for credentialing and how they are carried out in a hospital-based emergency medicine practice.
- Attends interdepartmental and committee meetings throughout the hospital in relation to ultrasound use in the ED.
- Attends weekly emergency medicine grand rounds and departmental continuing education activities. Registered Diagnostic Medical Sonographer certification is encouraged.

***Chair, Emergency Medicine Physician Assistant Program***

- Identifies capability gaps the EMPA can fill. Provides recommendations on the use and placement of EMPAs throughout the Army to the emergency medicine consultant to the Army surgeon general, the PA consultant to the Army surgeon general and SP Corps chief, the PA requirements chief at the Directorate of Combat and Doctrine Development, and the Army Medical Department Personnel Proponent Directorate.
- Assists the EMPA program directors by ensuring the EMPA skill sets remain up to date and relevant to possible future capability gaps across the Department of Defense.
- Works closely with the PA graduate medical education committee and dean to ensure that the EMPA residency program is adhering to all standards and producing quality EMPAs. Provides input and recommendations to the PA graduate medical education committee and dean, PA chief, SP Corps chief, and SP Corps education

committee on recommendations for the EMPA program directors. Provides input on applicants to the EMPA residency program.

## Duty Locations

- Continental United States: California (Ft Irwin); Colorado (Ft Carson); Georgia (Ft Benning, Ft Gordon, Ft Stewart); Kansas (Ft Riley); Kentucky (Ft Campbell, Ft Knox); Louisiana (Ft Polk); New York (West Point); North Carolina (Ft Bragg); Oklahoma (Ft Sill); South Carolina (Ft Jackson); Texas (Ft Hood); Virginia (Ft Belvoir); and Washington (Ft Lewis).
- Outside continental United States: Alaska, Hawaii, Germany, and Korea.
- Fort Sam Houston: Medical Center of Excellence (Interservice Physician Assistant Program instructor); Brooke Army Medical Center (EMPA program director, EMPA program faculty, and EMPA program manager).

## Requirements

- Sincere desire and commitment to attain excellence in providing emergency medical care.
- Must have a Master's Degree in Physician Assistant Studies.
- Must meet Graduate Record Examination requirements for admission to Baylor University.

## Desired Skills and Attributes

- Must be an excellent role model with the desire to mentor and teach others.
- Solid leadership, administrative, and academic skills.

## Lessons Learned

These are important lessons learned for EMPAs:

- A 65DM2 is a subject matter expert in resuscitation.
- Resuscitation skills require honing and maintenance. This is best accomplished by working no less than 20 hours per week in an ED.

- The 65DM2 needs to be facile in integrating core emergency bedside ultrasound into the patient care flow.

## Tips for Success

Along with lessons learned, the following tips for success will enable the future EMPA to succeed beyond expectations:

- If emergency medicine is truly a passion, seek a 65DM2 mentor who is fully engaged in academics and patient care.
- Truly master routine medical complaints to allow the future EMPA to focus on the finer points of emergency medical care.
- Attend the Basic Skills Course to attain a true appreciation of the DScPAS-EM Fellowship.

## Conclusion

The EMPA Fellowship is an arduous training program. However, the program generates clinicians capable of handling any emergency at home or abroad. The 65DM2 will experience a career that is both challenging and extremely rewarding.

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