Chapter 32

THE ARMY EMERGENCY MEDICINE PHYSICIAN ASSISTANT

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“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 Ian Wedmore
Emergency Medicine Consultant to
The 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 of the battlefield (Figure 32-1); (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 32-2). They perform emergent bedside procedures
to 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 healthcare cost burden in the current period of physician shortages. EMPAs also increase medical knowledge and performance improvement (PI) by conducting research approved by the institutional review board (IRB) and other PI projects related to emergency medicine.

Figure 32-1. First Lieutenant Monica Casmaer, 4-64 Armor Battalion, 2nd Brigade, 3rd Infantry Division, from Fort Stewart, Georgia, provides care to the local populace when the local medical infrastructure failed in Habbaniya, Iraq (near Fallujah), in Al Anbar Province in August 2003, in support of Operation Iraqi Freedom. Photograph by John Moore. Photographs in Figures 32-1 and 32-2 reproduced with permission from John Moore.
Figure 32-2. First Lieutenant John Frasure, 4-64 Armor Battalion, 2nd Brigade, 3rd Infantry Division, from Fort Stewart, Georgia, and his medics provide emergency medical care to a local national who was shot in the chest by the local Medina Division of the Republic Guard of Saddam Hussein’s army in the “four-headed palace” area (which later became the Green Zone) in Baghdad, Iraq, on April 2003, in support of Operation Iraqi Freedom. Photographs by John Moore.


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 under-staffed MTFs located throughout the continental United States (CONUS). 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 lack of 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.\(^1\) 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 that could be anticipated in combat.\(^2\) 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 already 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 have active emergency medicine physician residencies. 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.” 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 post-professional 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 of the battlefield. With emphasis on individual research, evidence-based practice, and a superior clinical curriculum, this program is unique in comparison to all other existing EMPA residency and fellowship programs, which are unable to match its strengths in all areas. It has established a standard that other residency
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.

**Program Curriculum**

The EMPA residency program chooses residents from a pool of qualified Army PA applicants based on projected needs of the Army and per guidelines established in the long-term health education training (LTHET) message. The new EMPA residents begin with a 2-week accelerated research course on how to design an IRB-approved research protocol, conduct research and data collection, interpret the research data, and devise a doctoral-level manuscript on the research conducted. Additionally, the EMPA resident learns how to present their research in various platforms including poster presentations, scientific platform presentations, and defense of the doctoral research project.

The EMPA residency program also includes 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 program that familiarizes and credentials the EMPA resident in point-of-care (bedside) diagnostic ultrasonography. Other procedures studied include bedside diagnostic ultrasound and the extended focused assessment with sonography in trauma (E-FAST) exam, central venous access, pericardiocentesis, arterial line placement, transvenous and transcutaneous cardiac pacing, thoracostomy tube placement, needle thoracostomy, resuscitative thoracotomy, diagnostic peritoneal lavage, venous cutdown, intraosseous device placement, lumbar puncture, lateral canthotomy, lifesaving airway management procedures including oral intubation, rapid sequence induction, cricothyroidotomy, tracheostomy, supraglottic airway device placement, ventilator management, burn and wound care, pediatric life support and resuscitation, and other lifesaving procedures.

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, with 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 also complete the American College of Surgeons Advanced Trauma Life Support (ATLS), Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), and Basic Life Support (BLS) courses during the residency. After completion of the EMPA residency program, graduates are awarded the DScPAS-EM. Graduates may also apply for the 1-year ultrasound fellowship.

Ultrasound Fellowship

The ultrasound fellowship is designed to train emergency physicians and emergency medicine or surgical PAs to be leaders in emergency 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 (2008), specifically pertaining to the site qualification requirements and fellowship criteria for graduation. The program focuses on four primary competency areas: sonographer/sonologist training; ultrasound educator; scholarly activity; and administration of ultrasound continuous quality improvement (CQI) 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 outlined in the ACEP Emergency Ultrasound Guidelines, the ACEP Emergency Ultrasound Imaging Criteria Compendium, and some applications delineated by the American College of Chest Physicians consensus statement on critical care ultrasonography.
Duty Descriptions

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 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 healthcare 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 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 healthcare providers and specialists and determines necessary evacuation to higher echelons of care, operating within the policies and regulations of the hospital or medical treatment facility.
- 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 with 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 Interservice Physician Assistant Program Instructor

• Serves as associate professor for the University of Nebraska’s Master of Science in Physician Assistant Studies (MPAS) degree and as the emergency medicine and ultrasound educational expert for the Interservice Physician Assistant Program.
• Responsible for providing over 80 hours of instruction to Department of Defense PA students on emergent and non-emergent medical pathology, trauma, critical care medical conditions, disease processes, and point-of-care ultrasound. Didactic instruction includes anatomy and physiology, differential diagnosis, and emergency medical evaluation, with appropriate ancillary studies and management of the emergency medical patient.
• Provides clinical practicums on lifesaving and emergent medical procedures, point-of-care ultrasonography, wound care and suturing, and bedside clinical and trauma procedures in accordance with advanced trauma guidelines.
• Creates and refines lesson plans, lectures, and comprehensive examinations.
• Updates Interservice Physician Assistant Program curriculum and policy as a key member of program committees.
• Directly mentors five to fifteen Phase I PA students through routine and situational counseling, master’s thesis development, and professional development activities.
• Performs or assists in IRB-approved research and PI projects.
• Educates and trains consulting providers, PAs, nurses, and medics in trauma and urgent medical disease processes, pathology, management, and appropriate disposition.

Emergency Medicine Physician Assistant Research Director (Additional Duty)

• Responsible for tracking and assisting ongoing research efforts including publications, platform, and poster presentations. Also responsible for coordination with the Army Medical Specialist (SP)
Corps research cell and with the EMPA program manager to establish a collaborative research effort within the SP Corps.

- Ensures that all EMPA IRB-approved research projects are tracked and reported to the EMPA program manager, EMPA site program directors, the graduate education manager, and the SP Corps research cell.
- Maintains a list of preproposal research projects within the established lines of research and task areas and provides immediate coordination of proposal ideas to collaborators within the SP Corps.
- Ensures that each student’s research question has scientific merit (is novel and relevant) and is feasible to answer during the 18-month residency.
- Assists students in developing their protocol (study design as well as the IRB process) and makes sure the students are following the research timeline and submitting quarterly counseling comments to the program director at each residency site.
- Conducts individual written performance counseling as needed.
- Monitors the students’ staff mentor participation in their research; intervenes as needed to ensure adequate mentors.
- Reviews all students’ manuscripts and offers comments (may delegate this job to other EMPA staff, but the responsibility rests with the research director and staff EMPA research project mentors).
- Organizes and conducts the defense of the doctoral research project and arranged practice for the defense. Performs as the main point of contact for all the EMPA research.
- May be assigned additional administrative duties and will serve as a 0.50 full-time equivalent (FTE) provider to the ED.

**Emergency Medicine Physician Assistant Deputy Program Director**

- Responsible for assisting the EMPA program director and program manager with all aspects of the EMPA residency program.
- Performs and supervises the rapid and thorough evaluation and management of critically ill and injured patients in the ED and will serve as a .75 FTE clinical EMPA in the ED or MTF.
- Precepts and mentors EMPA residents during the 18-month doctoral residency. As assistant professor for Baylor University, responsible for all grade reports, rotation evaluations, transcripts, test pools,
and resident doctoral defenses with the dean of Baylor University Graduate School.

- Responsible for provider, resident rotational, and ED scheduling; coordinates emergency medical-related rotations; builds and administers test pools; updates curriculum; performs didactic instruction including presentations, oral boards, simulation labs, and procedure labs; mentors residents in clinical research; oversees, rates, evaluates, and counsels all EMPA residents.
- Performs and assists in IRB-approved research and PI projects.
- Educates and trains consulting providers, PAs, nurses, and medics in emergency and critical care medicine.
- Ensures all faculty members are compliant with FTE and relative value unit (RVU) productivity requirements based on duty description and additional duties per ED and regional policy and standard RVU productivity requirements.
- Must have a DSc degree and maintain National Commission on Certification of Physician Assistants (NCCPA) certification and BLS/PALS/ACLS/ATLS certifications. May be assigned additional administrative duties including research director, primary or associate investigator for research projects, and other duties per local ED policy and requirements.

**Emergency Medicine Physician Assistant Program (Site) Director**

- Has overall responsibility for the EMPA residency program.
- Performs and supervises the rapid and thorough evaluation and management of critically ill and injured patients in the ED or military MTF.
- Precepts and mentors all EMPA residents during the 18-month doctoral residency.
- As assistant professor for Baylor University, responsible for all grade reports, rotation evaluations, transcripts, test pools, and resident doctoral defenses with the dean of Baylor University Graduate School.
- Responsible for provider and resident rotational and ED scheduling, coordination of emergency medical-related rotations, training affiliation agreements, and program letters of agreement; builds, updates, and administers test pools; updates curriculum; performs didactic instruction including presentations, oral boards, simulation
labs, and procedure labs; mentors residents in clinical research; oversees, rates, evaluates, and counsels all EMPA residents and staff members.

- Assigns, performs, and assists in IRB-approved research and PI projects.
- Educates and trains consulting providers, PAs, nurses, and medics in emergency and critical care medicine.
- Must have a DSc and maintain NCCPA certification and BLS/PALS/ACLS/ATLS certifications.
- May be assigned additional administrative duties, including research director, and serves as a 0.50 FTE provider to the ED.
- Ensures all faculty members are compliant with FTE and RVU productivity requirements based on duty description and additional duties.
- Works closely with the PA graduate medical education director and graduate education manager to identify applicants; update program requirements; update long-term health education and training application requirements and messages; forecast future EMPA and faculty requirements, gains, and losses; and ensure that EMPA graduates adhere to all requirements of the EMPA doctoral residency.

**Emergency Medicine Physician Assistant Ultrasound Fellow**

- Provides education to physician residents, EMPA residents and fellows, medics, nurses, and other 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 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 three grand rounds lectures 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 non-clinical workload.
- Serves as a primary investigator on one IRB-approved research project 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 CQI program. This entails developing a data collection instrument, a database for storing CQI 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 or Registered Diagnostic Cardiac Sonographer certification is encouraged.

**Emergency Medicine Physician Assistant Program Manager**

- Identifies capability gaps the EMPA can fill and provides recommendations on the use and placement of EMPAs throughout the Army to the emergency medicine consultant to the surgeon general, the PA consultant to the surgeon general and SP Corps chief, 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 (GME) 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 GME committee and dean, PA chief, SP Corps chief, and SP Corps education committee on recommendations for the EMPA program directors, and provides input on applicants to the EMPA residency program.

**Duty Locations**

1. CONUS: Ft Belvoir, VA; Ft Bragg, NC; Ft Gordon, GA; Ft Carson, CO; Ft Hood, TX; Ft Sill, OK; Ft Jackson, SC; West Point, NY; Ft Irwin, CA; Ft Riley, KS; Ft Campbell, KY; Ft Polk, LA; Ft Knox, KY; Ft Lewis, WA.
2. Outside CONUS: Korea, Germany, Alaska, Hawaii.
3. Ft Sam Houston: Army Medical Department Center and School (Interservice Physician Assistant Program instructor); Brooke Army Medical Center (EMPA program director, EMPA program faculty, and EMPA program manager).

**Requirements**

• Extensive experience (including deployments) in battalion and brigade PA positions.
• Completion of LHET is a plus.
• Rank of major (captain promotable and lieutenant colonel may be considered).
• Intermediate Level Education (ILE) graduate preferred (or enrollment in ILE distance learning).

**Desired Skills and Attributes**

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


