



The new Medical Education and Training Campus (METC) will graduate 36,000 medical support specialists per year.

“METC will be the world’s largest medical education and training institution.”

## Building Collective Strength: Transforming Military Medical Education and Training

An Army medic takes a deep breath, places the scalpel on the patient’s stomach, and makes an incision. A Navy corpsman applies pressure to stop the bleeding, while an Air Force medic stands ready to stabilize the wounded soldier for evacuation. The three try to stay focused against the din of enemy gunfire.

This scene—complete with simulated battlefield conditions, manikins capable of bleeding, and enlisted medical recruits from the three services training together—is one of many that will play out in classrooms of the new joint Medical Education and Training Campus (METC) under construction at Fort Sam Houston, Texas. When fully operational, the 7.9 million square-foot campus will have an average daily student load of 9,000, with 36,000 graduates per year, and a staff of nearly 4,000. MITRE serves as chief architect and systems engineer to the Department of Defense (DoD) for this precedent-setting endeavor. The company was selected for these dual roles based on our experience implementing large, complex government programs and our longstanding support to the armed services.

The new facility is part of the military’s long-term plan to transform its medical education practices by leveraging the benefits of joint training. Instead of attending one of five service schools operated by the Army, Navy, and Air Force, all enlisted medical support specialists—medics, respiratory technicians, dental assistants, phlebotomists, and other healthcare personnel—will train under one roof, with service-specific training as required. The anticipated result will be a force better prepared to carry out increasingly complicated missions worldwide.

“METC will be the world’s largest medical education and training institution,” says Don Sparrow, a senior principal multi-discipline systems engineer who is leading MITRE’s support of the consolidation. “You can imagine the technical complexity of this undertaking, from the physical facilities needed to the IT infrastructure necessary to support students, faculty, and staff from the five schools.”

And a smooth transition is vital, as METC must meet the DoD’s demand for medical support personnel from the first day its doors open.

### Preparing for the Battlefield of the Future

METC’s origins lie in the 2005 Defense Base Closure and Realignment Commission Report, which directed co-locating the armed services’ medical training schools at Fort Sam Houston by 2011. The Base Realignment and Closure Act (BRAC) was signed into law the same year, allowing six years to complete the largest BRAC consolidation in DoD history. The 2006 Quadrennial Defense Review Roadmap for Medical Transformation further outlined why joint training is essential: “to prepare healthcare leaders to succeed in joint, performance-based environments, including Force Health Protection and beneficiary care missions.” To this end, the DoD is transforming military medical training to equip health professionals to meet not only current battlefield realities, but also those of 2025.

Medical personnel in all branches of the military must adapt to rapidly changing battlefield conditions and communicate within and across the services in often unpredictable situations. Their ability to work cooperatively has a direct impact on the health of military and civilian populations. Training together capitalizes on the strengths of each service’s curriculum and provides a natural forum for sharing best practices. Additionally, as METC matures, fewer resources will be needed to prepare the same number of military medical professionals. The new training center embodies a strategic shift in approach and marks a significant step toward the DoD’s objective to create a unified, interconnected medical force.

(continued...)



"This historic event marks the beginning of another chapter in the quest for finding a common purpose in the training of military medical professionals in whose hands lay the lives of the nation's heroes, the men and women serving in the armed forces," said keynote speaker, Air Force Maj. Gen. Melissa Rank, Air Force assistant surgeon general, Medical Force Development, and chair, METC Flag Officer Steering Committee.

"Physiology is physiology, regardless of the color of the uniform you wear."

Three services combining their training also means merging three curricula. While service-unique training will still be required (for example, administering medical care in flight requires different training from giving care at sea), Sparrow and his team are working with the DoD to identify the commonalities in training.

"Physiology is physiology, regardless of the color of the uniform you wear," says Sparrow. "The Army might have a basic anatomy class that also meets the requirements of the Air Force and Navy training. At this point, 99 percent of the courses have commonality. They're not the same, but at least one module is common."

These areas of overlap, with modifications as needed, will form the basis of the combined training for all basic and specialty enlisted medical professionals at METC. Some students will stay on campus for a three-week course, where others will stay for three to four months, depending on instruction requirements. Offering multiple courses at varying lengths of time translates into an annual graduation capacity that dwarfs those of other medical training facilities.

MITRE is also assisting the DoD to determine the most effective way to capture and benefit from the lessons learned by officers and soldiers returning from Iraq and other areas. "The realities in the field, such as techniques to minimize infection, are invaluable for preparing tomorrow's military medical specialists," explains Sparrow. "It's quite amazing what we ask these kids to do. These are 18 and 19-year-olds trained to be medics. Soon after, they're on the battlefield in Iraq, treating wounds caused by IEDs [improvised explosive devices]. This is real heroic stuff."

### Wired for Success

Concurrent with identifying common training elements, MITRE is configuring the knowledge management and IT framework for the state-of-the-art campus. This is a monumental undertaking in itself. Eleven facilities are under construction on the site of the Army's existing medical training facility in San Antonio, which will double its population by the time METC is running at full capacity. The new structures include three 1,200-student dormitories, 1.2 million square feet of instructional and laboratory space, a dining hall, five academic buildings, a recreation center, and a Navy and Air Force command building. In addition, several Army buildings are being remodeled and upgraded. All of these facilities must communicate with one another and with the services they support.

Sparrow and his colleagues are helping define what will be needed at METC in terms of desktop management, the help desk, and so on—the back office functions required for a seamless transition. "Think of METC as a large community college, but with three separate schools operating within it," he says. "New classes begin every week, so the system has to keep track of the influx and output of students, has to update the three services' systems, track completion of modules, grades, and be up to date on the readiness posture of each student." The current schools each have their own infrastructures and software, "so we're also looking at future integration strategies. It's costly to operate three different systems," he adds.

### Breaking New Ground

A ceremonial groundbreaking in July 2008 generated much excitement among the tri-service community. The event symbolized the successful collaboration among the Army, Navy, and Air Force to enhance the military's overall capacity to deliver medical care to the men and women fighting on our nation's behalf.

METC is scheduled to open in stages during 2010 and 2011. "We've established three phases," Sparrow says. "The first is construction and co-location. Then we'll work on synergies, when ideas begin to flow from the fact that all three services are together. Finally, we'll begin de-bugging the systems, which is impossible to do without the students and faculty in place." All the while, the military's demand for medical support will continue and, Sparrow notes, quite possibly accelerate.

"When the doors open, you need to be able to produce trained medical specialists. The quality of the product must be sustained."

—by Karina H. Wright

#### Contact:

For more information on this and other MITRE programs, see [www.mitre.org/news/digest](http://www.mitre.org/news/digest)

©2009 The MITRE Corporation. All rights reserved. Approved for Public Release; Distribution unlimited; Case number: 08-1632