

## Providers Face Challenges Maintaining Deployment-Ready Skills at Garrison Hospitals

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As the US military drawdown proceeds in the Afghanistan Theater, challenges to maintaining procedural skills for emergency physicians will continue. Every medical specialty has developed based on the need for a special knowledge base, procedural skill set, or, more commonly, both. Emergency physicians are trained to develop a broad diagnostic acumen and to possess the treatment capabilities to resuscitate and stabilize patients until definitive care is available. In the setting of combat operations, it is simply not feasible to place a trauma team in all corners of the combat theater. Thus, emergency physicians are specialists well fit to labor in far-forward areas where the proper application of their special skill set sustains Soldiers' lives until definitive care is possible.

Significant challenges persist in maintaining procedural skills at a level ready for deployment. The current operational tempo (OPTEMPO) has reached a steady-state where predeployment training can often be attended just prior to deployment to "retune" those essential skills. However, as seen early in the Joint Combat Operations, the OPTEMPO was often unpredictable and resulted in short-notice deployments. If the past is a predictor of the future, it is likely that we may face the same challenge again. Thus, our emergency physician force must stay in an always-ready status.

The current model for procedural skills maintenance assumes that working at military treatment facilities (MTFs) is sufficient. With our colleague Kristin Cox, we conducted a survey study that questions whether the current model is accurate or adequate based on the perceived needs of the physicians who may actually have to perform these technical skills in a resource-limited environment. The majority of the MTF emergency departments are often low acuity, and as evidenced by the data presented, low in procedural volume, including the larger medical center. All 47 physicians surveyed felt their current position at an MTF was insufficient to stay procedurally ready.

Similar to training for sporting events, successful teams invest more resources in the athletes themselves than in the equipment they use. Physician procedural skills are similar: they require repetition, which is why many specialties require a minimum quantity of procedures to graduate residency and become board certified.<sup>1,2</sup> It is reasonable to infer that procedural skills will perish if not maintained.

Several modalities have been evaluated to gain and maintain procedural competency, including simulation, live-tissue models, and off-duty employment. Simulation models are the method most widely used. However, simulation is not without its own challenges. Little data exists correlating the use of simulation models to patient outcomes,<sup>3</sup> although there appears to be some confidence gained following simulation.<sup>4-7</sup> These models come at significant cost, with some high-fidelity mannequins priced in excess of \$300,000 (personal communication). In addition, they often need trained, dedicated staff to manage the simulators. This may be cost limiting when small MTFs may have only one or two active duty emergency medicine (EM) physicians who will use them. Further research is needed to determine how the high-fidelity training simulators can support the EM physicians to maintain a deployment-ready status.

Live-tissue models provide advantages over the simulation models, since they create a real-time sense of urgency that may not be experienced with simulators. However, recent Department of Defense changes have limited the ability of this modality for training, and its use will likely continue to decline.<sup>8</sup>

The most cost-effective method for skills maintenance may be the use of off-duty employment (ODE). ODE costs the military virtually nothing, yet provides EM physicians the opportunity to evaluate and treat higher-acuity patients, and encourages (even demands) the use of resuscitative skills. However, ODE is not uniformly supported throughout the military. Broader support for

this option may provide EM physicians with the procedural exposure necessary to stay deployment-ready as the OPTEMPO continues to change.

## References

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