

The Use of Live Animals for Emergency Medicine Residency Training at Dartmouth-Hitchcock Medical Center

SUMMARY

- Dartmouth-Hitchcock Medical Center in Lebanon, N.H., uses live sheep to train emergency medicine residents.
- While Dartmouth-Hitchcock faculty haven't revealed which procedures are taught, the Physicians Committee's experience with other residency programs tells us that all emergency medical procedures can be taught using nonanimal methods – including open thoracotomy, cricothyroidotomy, chest tube placement, and pericardiocentesis.
- This animal use is at odds with current standards of practice. Today, 91 percent of emergency medicine residency programs in the United States (143 of 157) surveyed by the Physicians Committee use only nonanimal training methods, such as human-based medical simulation, cadavers, and partial task trainers.
- Other New England emergency medicine programs—such as Boston University, the University of Massachusetts, Maine Medical Center in Portland, and the University of Connecticut—exclusively use human-based training methods.
- Procedural training during emergency medicine residency is widely taught using human-based methods. For example, Simulab's TraumaMan System—a realistic anatomical human-body simulator with lifelike skin, fat, and muscle—is used by nearly all Advanced Trauma Life Support programs (including at Dartmouth-Hitchcock) to teach many of the skills commonly taught in emergency medicine residency procedural labs. In addition, other validated training methods include Laerdal's SimMan 3G, SynDaver's Deluxe Cric Trainer, CAE Healthcare's Adult Intraosseous Trainer, and human cadavers.
- Dartmouth-Hitchcock already has a state-of-the-art simulation center—the Patient Safety Training Center—that could replace the use of animals in the emergency medicine residency.
- The anatomical differences between sheep and humans present numerous problems when teaching emergency medicine. Compared with humans, sheep have smaller torsos, lighter limbs, and are quadrupeds rather than bipeds, as well as important differences in the anatomy of the head and neck, internal organs, rib cage, blood vessels, and the airway. These differences are critical when trying to apply medical procedures to human patients in an emergency situation.
- The Physicians Committee is a national nonprofit representing more than 12,000 physicians. The Physicians Committee advocates for higher standards in medical education and research.