Simulation: An Important Airway Training Strategy

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A meta-analysis shows that simulation-based airway management training leads to superior education outcomes.

Advanced airway management is an essential skill that can be difficult to achieve and maintain. Researchers performed a systematic review and meta-analysis of observational and controlled studies that evaluated use of technology-enhanced simulation training for advanced airway management (direct laryngoscopy, fiber-optic intubation, surgical airway, and supraglottic airway). The analysis included 76 studies that involved a total of 5226 health professionals (physicians, nurses, emergency medical technicians, and students).

Compared with no intervention, simulation training resulted in improved knowledge and skills, but not improved clinical behavior or patient outcomes. Compared with nonsimulation training (e.g., self-study, video, lecture), simulation training was associated with improved learner satisfaction, skills, and patient outcomes, but not greater knowledge.

**Comment:** The message is clear: It is likely that nothing can take the place of real-patient intubations for optimal skill development and maintenance. However, real-patient encounters are difficult to obtain. This well-designed analysis reinforces that simulation training is the next best way to translate these crucial skills into clinical practice. If there is no simulation center at your institution, consider a partnership with a local university that can provide this essential training.

**Citation(s):**


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