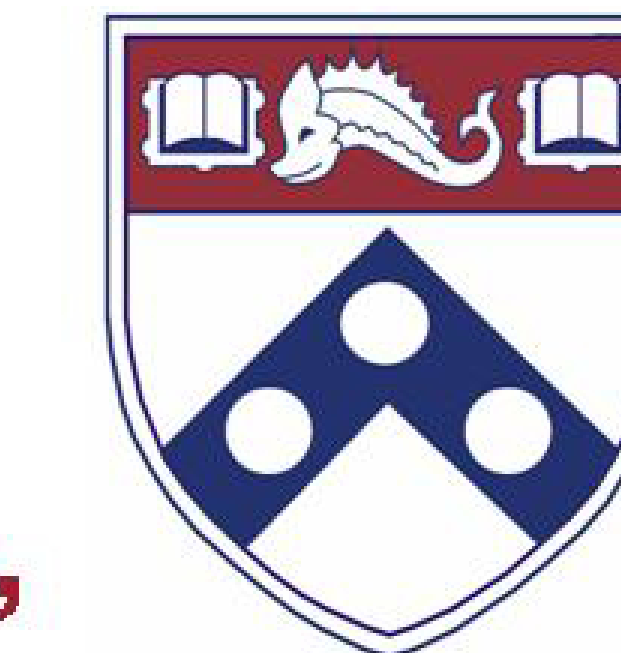


Bronchoscopy Guided Tracheostomy – A Hybrid Model Providing Airway Training for Residents



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INTRODUCTION

While following the ACS/APDS Surgical Skills Curriculum on airway management for our residents, we faced a challenge. There is no commercially available simulator for residency programs wanting to train residents in bronchoscopic guided tracheostomy, a vital skill required by general surgery residents and fellows in trauma and critical care while managing airway.

DESCRIPTION OF THE MODEL

We created a hybrid model using a high fidelity human patient simulator for anatomic replication of airway and recreation of physiological responses to the procedure and pharmacotherapy. This was integrated with standard equipment and instruments in a Simulated SICU, including Pentax Bronchoscope with monitor, to create a dynamic life-like learning experience.

RESULTS

Nine surgical residents received the training on our model. Residents learned assembling and troubleshooting the Bronchoscope, an essential skill they cannot learn on VR Simulators. Following this, the residents performed the procedure on our model. All residents found the simulation to be realistic and believed they have a better understanding of procedural steps and common pitfalls. Post-procedure feedback and performance assessment was done using an integrated video debriefing System.



CONCLUSION

This model highlights creativity and innovation as key concepts in simulation education. Educators can enhance the learning experience by creating hybrid models in simulation labs. This fills the deficits of commercially available VR simulators for Endoscopic training. Our model allows surgical trainees to practice the Bronchoscopy-guided tracheostomy to achieve proficiency in airway management.

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