The aims of the study were to examine the utilization of an animal model and compare it with two currently used Blue Phantom central line models to determine whether an animal model provides good or better simulated conditions for the performance of UGCVC insertion.” Hauglum et al (2018).

Abstract:

INTRODUCTION: Ultrasound-guided central venous catheter insertion (UGCVC) is a commonly performed procedure taught through simulation. The aims of the study were to examine the utilization of an animal model and compare it with two currently used Blue Phantom central line models to determine whether an animal model provides good or better simulated conditions for the performance of UGCVC insertion.

METHODS: Using a randomized cross-over study, 46 advanced practice nursing students were assessed using a task-specific performance tool in their performance of UGCVC insertion on both the animal model and the Blue Phantom models. The number of insertion attempts and time to performance was recorded. A preprocedure survey was used to ascertain their presimulation workshop experience, followed by a postprocedure survey. A cost comparison was completed as a secondary outcome.

RESULTS: A comparison was conducted on the performance scores and the postsurvey
results between the animal model and the Blue Phantom models. The number of venous access attempts was not significantly different when comparing the three models. A cost comparison showed the total cost of each animal model was US $15.66 as compared with the approximate cost for the Blue Phantom IJ model of US $1500.00 and the Gen I model of US $2700.00.

CONCLUSIONS: Current Blue Phantom models lack the ability to fully perform all the necessary steps critical to the performance of UGCVC insertion. At a total cost of US $15.66 per model, this study showed that training with an alternative economical model was comparable with more expensive mannequin simulators. The results of this study may serve to guide clinicians and educators who are seeking alternative simulation models to provide skill acquisition.

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