

An equine neck model was created that allows repetitive practice of jugular phlebotomy, intramuscular injection, and intravenous catheterization” Williamson et al (2016).

Abstract:

Simulation in veterinary education offers a solution for bridging the gap between observation and performance of clinical skills. An equine neck model was created that allows repetitive practice of jugular phlebotomy, intramuscular injection, and intravenous catheterization.

The aim of this study was to validate the model for jugular phlebotomy and intramuscular injection. We surveyed experienced veterinarians on the model's realism and the comprehensiveness of its features. In a randomized experimental study, we compared the learning outcomes of first-year veterinary students trained on the model (n=48) and students trained on equine head-neck cadavers (n=45). There was no difference in post-training performance of phlebotomy on the live horse between cadaver-trained students and model-trained students when assessed by a checklist (cadaver 6.87 ± 0.33 ; model 6.89 ± 0.77 ; $p = .99$) or a global rating scale (cadaver 5.23 ± 0.87 ; model 5.32 ± 0.77 ; $p = .78$). No difference was found between post-training scores for intramuscular injection when assessed by checklist (cadaver 6.87 ± 0.34 ; model 6.89 ± 0.31 ; $p = .76$) or global rating scale (cadaver 5.23 ± 0.87 ; model 5.32 ± 0.77 ; $p = .75$). Veterinarians (n=7) found this low-fidelity model acceptable and supported its use as a training tool for veterinary students. Students reported in a post-lab survey that they felt models were as helpful as cadavers for learning the procedures. These results support the use of the model as a component of first-year veterinary student curriculum.

Reference:

Williamson, J.A., Dascanio, J.J., Christmann, U., Johnson, J.W., Rohleder, B. and Titus, L. (2016) Development and Validation of a Model for Training Equine Phlebotomy and Intramuscular Injection Skills. Journal of Veterinary Medical Education. April 13th. .

Thank you to our partners for supporting IVTEAM