Medics were trained to perform five combat casualty care tasks (surgical airway, needle decompression, tourniquet application, wound packing, and intraosseous line insertion)" Savage et al (2015).

Reference:

Savage, L.E., Tenn, C., Vartanian, O., Blackler, K., Sullivan-Kwantes, W., Garrett, M., Blais, A.R., Jarmasz, J., Peng, H., Pannell, C.D. and Tien, C.H. (2015) A comparison of live tissue training and high-fidelity patient simulator: A pilot study in battlefield trauma training. The Journal of Trauma and Acute Care Surgery. June 30th. .

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Abstract:

BACKGROUND: Trauma procedural and management skills are often learned on live tissue. However, there is increasing pressure to use simulators because their fidelity improves and as ethical concerns increase. We randomized military medical technicians (medics) to training on either simulators or live tissue to learn combat casualty care skills to determine if the choice of modality was associated with differences in skill uptake.

METHODS: Twenty medics were randomized to trauma training using either simulators or live tissue. Medics were trained to perform five combat casualty care tasks (surgical airway, needle decompression, tourniquet application, wound packing, and intraosseous line insertion). We measured skill uptake using a structured assessment tool. The medics also completed exit questionnaires and interviews to determine which modality they preferred.

RESULTS: We found no difference between groups trained with live tissue versus simulators in how they completed each combat casualty care skill. However, we did find that the modality of assessment affected the assessment score. Finally, we found that medics preferred trauma training on live tissue because of the fidelity of tissue handling in live tissue models. However, they also felt that training on simulators also provided additional training value.

CONCLUSION: We found no difference in performance between medics trained on simulators versus live tissue models. Even so, medics preferred live tissue training over

simulation. However, more studies are required, and future studies need to address the measurement bias of measuring outcomes in the same model on which the study participants are trained.

LEVEL OF EVIDENCE: Randomized controlled trial, education, level I.

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