
**AMERICAN MEDICAL STUDENT ASSOCIATION
HOUSE OF DELEGATES 2016
RESOLUTION: C13**

INTRODUCED BY:	Patrice Green
SCHOOL:	At Large
SUBJECT:	Amendment to Principles Regarding Vivisection in Medical Education
TYPE:	Resolution of Principles

WHEREAS the U.S. Department of Defense (DOD) conducts “live tissue training” (LTT) that involves inflicting gunshot wounds, limb fracture, dismemberment, propane torch burn, laceration and hemorrhage on thousands of live animals each year so personnel can attempt to practice human emergency medical procedures; and

WHEREAS U.S. military physicians have criticized LTT, stating animals are “poor surrogates for human anatomy ... [and] ... the use of animals raises ethical issues, as well as not allowing for repetitive practice, due to logistics and expense;” [1] and

WHEREAS realistic human patient simulators accurately replicate human anatomy and physiology and can fully replace animal use in LTT; and

WHEREAS studies show U.S. military personnel taught emergency medical procedures on human simulators are as proficient as, or moreso than, those taught using animals;^{ii,iii,iv,v} [2,3,4,5] and

WHEREAS a U.S. military researcher who conducts studies comparing the efficacy of human simulation versus LTT recently wrote that “the military should make the move away from all animal simulation when effective equivalent artificial simulators exist for a specific task,” noting that “[f]or emergency procedures, this day has arrived” since “artificial simulator models are at least equivalent to, if not superior to, animal models;”^{vi} [6] and

WHEREAS U.S. DOD regulations require the use of non-animal medical training methods, stating that the “[u]se of live animals in medical readiness training shall occur ... only when alternatives such as commercial training manikins, moulaged actors, cadavers, or virtual simulators are not appropriate to the training task;”^{vii} [7] and

WHEREAS more than 98 percent of U.S. and Canadian facilities teaching the most widespread civilian trauma training course,^{viii} [8] and military medical training programs in nearly 80 percent of NATO nations,^{ix} [9] have ended animal use in trauma training in favor of using exclusively human simulators and other non-animal teaching methods; and

WHEREAS in 2015 the U.S. Congress introduced the “Battlefield Excellence through Superior Training (BEST) Practices Act” (S. 587/H.R. 1095) to fully phase out the U.S. military’s animal use in LTT and require the use of human simulation-based training methods by October 1, 2020;

THEREFORE BE IT RESOLVED that the Principles Regarding Vivisection in Medical Education (p. 101) be AMENDED to read:

6. Regarding alternatives to animal laboratories:

- a. Strongly ENCOURAGES the replacement of animal laboratories with non-animal alternatives in undergraduate medical education (2007)
- b. URGES a directory of such alternative educational materials be produced. (1986)
- c. ENCOURAGES the utilization of non-animal teaching materials and methods in Continuing Medical Education. (1993)
- d. **STRONGLY URGES the U.S. Department of Defense to fully phase out the use of animals in trauma training exercises and require the use of human simulation-based training by October 1, 2020.**

Fiscal note: None

REPORT OF REFERENCE COMMITTEE C

DISCUSSION

BOT: Voted to adopt as written, unanimous

BRD: Voted to ***

PRD: Voted to ***

IRD: Voted to adopt as written, unanimous

ACTE: Voted to adopt as written, unanimous

Premedical Caucus: Voted to ***

Individual Members:

Liz Ghandekly, University of Maryland, herself

Supports as written

US last country in NATO to still use animals

Superior methods are available

NATO allies and civilian hospitals use human simulators; do not inflict harm on animals

Phaseout by 2020

Military slow to change but technology has advanced

Better way of doing things

JTM training group cost of using human sims (2014) \$450 per student

Tactical combat casualty care provider course

Deployment Medical International report cost of using animals in course of trauma \$1900 per student

Lina Rohman, University of Birmingham Alabama, chapter

Support as written

Emphasized benefits of computer programs and reiterated comments by Liz Ghandekly

Learning to stop bleeding in pigs is not the same as human; anatomical differences

Placing soldiers lives at risk

Gaby Enstice, James Madison University, herself

Human simulated better than animals; more realistic and practical

Human on human training better, more proficient

More humane

More investment of raising animals and disposing carcass

Anahita Dua, Medical College of Wisconsin, University of Texas Houston Center for Translation Research under John

Folcom, herself

Does research in military training

Goats and pigs vasculature on top of muscle rather than below as in humans

Many injuries result

Reject any human cadaver that displays abnormality so it is not consistent using animals that are different
DOD has agreed to phase out
Simulators allow repetition and better learning
Costs more to use animals
DOD standard military trauma course \$450 per student, \$1900 on animals

Roberta, University of Washington, herself

This AMSA member was in the Navy and said propane torches were not used as described in Whereas section and does not affect the resolution as it will be voted on in HOD.

SUMMARY OF DISCUSSION

PROS:

Cost effective
More anatomically accurate / medically appropriate
More humane
Allows for more practice
Ethically and morally upstanding to avoid killing living things
DOD has agreed to phase-out use of animals in military training

CONS:

No cons expressed

REFERENCE COMMITTEE COMMENTS

Widespread support from BOT, IRD and ACTE and several AMSA members from different schools.

REFERENCE COMMITTEE RECOMMENDATION

Adopt as written

-
- [1] Ritter ME, Bowyer M. Simulation for trauma and combat casualty care. *Minimally Invasive Therapy*. 2005; 12(4-5): 224–34.
 - [2] Sweet R. Comparing live animal and simulator alternatives for training and assessing hemorrhage and airway procedures in a tactical field situation. Presented at the Military Health System Research Symposium in Fort Lauderdale, FL (August 18-21, 2014).
 - [3] Savage E. et al. A comparison of live tissue training and high-fidelity patient simulator: A pilot study in battlefield trauma training. *Journal of Trauma and Acute Care Surgery*. 2015; 79(4): S157-63.
 - [4] Ali J, Sorvari A, Pandya A. 2012. Teaching Emergency Surgical Skills for Trauma Resuscitation-Mechanical Simulator versus Animal Model. *ISRN Emergency Medicine*, 2012.
 - [5] Hall AB, Riojas R, Sharon D. 2014. Comparison of self-efficacy and its improvement after artificial simulator or live animal model emergency procedure training. *Military Medicine*; 179 (3): 320–3.
 - [6] Hall A. Letter to the editor. *Military Medicine*. 2014; 179(7): vii.
 - [7] U.S. Department of Defense. Department of Defense instruction number 1322.24: Medical readiness training. October 6, 2011. Available at: <http://www.dtic.mil/whs/directives/corres/pdf/132224p.pdf>; Accessed: December 4, 2015.
 - [8] DeMuth R. Doing what's BEST for the troops. *The Hill*. November 21, 2013. Available at: <http://thehill.com/blogs/congress-blog/healthcare/191087-doing-whats-best-for-the-troops#>; Accessed: December 4, 2015.
 - [9] Gala SG, Goodman JR, Murphy MP, Balsam MJ. Use of animals by NATO countries in military medical training exercises: an international survey. *Military Medicine*. 2012; 177(8): 907-10.