

TITLE:**Educating Veterinary Students in an Intensive Care Unit about Transfusion Reactions: Development and Impact of a Formal Learning Module****AUTHORS:** - with affiliation(s)

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ABSTRACT: 300 word limit (when applicable, please include: purpose & background, methods, results, conclusions/discussion)

Background: Lack of physician education in transfusion medicine has been shown to lead to inappropriate blood product use and increased incidence of reactions. This is also a concern in veterinary medicine.

Purpose: To develop and test the instructional efficacy of an online learning module on transfusion reactions in small animals and to evaluate participants' satisfaction of the module.

Design: Randomized controlled trial.

Subjects: Fifty-five 4th year veterinary students at a university teaching hospital, 27 in a treatment group that received the learning module plus conventional rotation training and 28 in a control group who received only conventional training (no module).

Methods: Students received a pretest on transfusion reactions followed by a transfusion reaction learning module covering recognition, treatment, prevention, case examples, and self-assessment questions for 6 common transfusion reactions. Students received a module satisfaction survey, a posttest at 2 weeks post-module, and a retention test at 6 weeks post-module.

Measurements and Main Results: Previous transfusion medicine exposure did not affect pretest scores. The module group scored significantly higher on the posttest ($p < 0.001$) and retention test ($p = 0.002$) than the control group. Mean post test scores were 74.4% and 57.7% and mean retention test scores were 80.6% and 56.5% for the module and control groups respectively. The module group scored higher on posttest and retention questions involving reaction recognition ($p < 0.001$). Students were overall very satisfied with the module with an average score of 4.8 (1-5).

Conclusions: Though tested within a limited setting, an instructional module was delivered successfully to students on a clinical rotation with students taking the module scoring significantly better with longer retention of material as compared to students receiving only conventional training. The addition of a training module to rotation training can improve overall knowledge of transfusion reactions.