The Onderstepoort PD Challenge: Is the Breed'n Betsy® simulator as good as live cow training for bovine pregnancy diagnosis?

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Increasing veterinary student numbers and demand for improved skills constrain current teaching methods. The objective was to determine if training method affects accuracy of bovine pregnancy diagnosis (PD) by trans-rectal palpation.

Fourth year veterinary students (n = 138) were exposed to a single PD training session in groups using either simulator training on Breed'n Betsy® (BB) or conventional training on live cows (C). Students completed a questionnaire on gender, back-ground and career choice. Students' PD accuracy was determined three weeks after training when each student palpated 6 cows with known pregnancy state. Accuracy of PD was measured as sensitivity and specificity (the ability to correctly identify the presence and absence of pregnancy respectively). Mixed-effects logistic regression included student and cow as random effects and training method as fixed effect.

Sensitivity tended to be lower in the BB than in the C group (0.84 vs 0.90 respectively, OR 0.55, 95% CI 0.29 – 1.05, P = 0.07), sensitivity was lower in students from a city back-ground (OR = 0.43, 95% CI 1.12 – 8.93, P = 0.02) and also in cows <6 months pregnant (OR 0.28, 95% CI 0.15 – 0.53, P < 0.01), adjusted for other factors. Within cows <6 months pregnant, sensitivity was lower in the BB than the C group (0.68 and 0.84 respectively, OR 0.41, 95% CI 0.18 – 0.95, P = 0.04). Specificity was not affected by any of the factors considered.

It was concluded that training on Breed'n Betsy® resulted in lower PD sensitivity in cows <6months pregnant.

The full length manuscript is under review in JVME.