

Beyond Perception: Assessing Reproductive Modules within a Continuing Education Program for Dairy Veterinarians

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Introduction

Continuing education programs (CEP) are critical for veterinary practitioners to update and improve their skills and services (Moore *et al*, 2004 *JVME* 31, 146; Di Croce *et al*, 2008 *Reprod Fertil Dev* 20:86). CEP must offer an educational environment where veterinarians can effectively rejuvenate their knowledge, skills, and learn about new practices. Assessing learning activities is an important component in any CEP not only for program accreditation but also for post-delivery assessments. Continued support through collaborative learning and decision-making processes may help veterinary practitioners feel motivated to incorporate new practices, thus enhancing dairy sustainability. The purpose of the study was to evaluate the effectiveness of a CEP designed to enhance the flow of scientific-based reproductive techniques to dairy veterinary practitioners.

Materials and Methods

A comprehensive continuing educational program was developed for dairy veterinary practitioners (Ohio Dairy Health and Management Certificate Program). The 3-year program (~180 hours) consists of eleven (11) 2-3 day modules delivered quarterly (four modules per year). The two reproductive modules were delivered in 2009. Through this program, educators offered scientific-based knowledge in an intensive face-to-face workshop environment to dairy veterinary practitioners. Control of the estrous cycle, synchronization strategies (for heifers and lactating cows), assisted reproductive techniques, record-keeping systems, breeding soundness examination, and reproductive health issues were covered. Delivery method: A collaborative learning approach was used for both reproductive modules. Educational materials were delivered through in-class lectures followed by real-world case-based learning and group discussions. Additionally, laboratory hands-on demonstrations (one for each module) and an out-of-class assignment were

implemented. Program evaluation: A survey was developed to gather information on reproductive management practices. Attendees were evaluated using pre- and post-tests of knowledge to determine the level of knowledge gained in both reproductive modules. Participants had the opportunity to evaluate the program and provide their feedback (quantitative and qualitative) at the conclusion of each module. The evaluation instruments were reviewed by the Office of Responsible Research Practices and determined as exempt from IRB review.

Results

Overall, heat detection, presynch, and Ovsynch were the most popular strategies to breed cows, while semen evaluation technique was the least frequently used. The educational delivery methods implemented (in-class lectures, case-based learning and group discussion) substantially increased the knowledge level of the attendees (20.2% points increase from pre-test to post-test scores; $P < 0.05$). Veterinary participants agreed with the overall information provided, and they indicated that the presentations and discussions were useful and applicable.

Significance

In conclusion, results from participant's self-evaluation suggested that both reproductive modules were relevant and effective, offering new information/practices with immediate field application. For the program to be considered successful, a detailed follow up assessment of adoption/change of new practices/skills by participants and their on-farm impact is needed. This study has important implications for dairy veterinary practitioners since they are a vital source of information/service providers for dairy producers. Results suggested that substantial reproductive knowledge can be gained through a comprehensive educational program.