Faculty First Grant Report - 2018
Interactive Teaching Cases for Veterinary Students
Focused on Large Animal Emergency Problem Solving
Veterinary Emergency Treatment Scenarios (V.E.T.S.)
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Project Overview and Course Overview
Clinical scenario-based discussions between faculty and veterinary students provide a valuable, critical-thinking exercise, emphasizing clinical presentation and medical management of hypothetical patients. Walking through scenario-based discussions is also a favorite learning exercise for many veterinary students; however, the rate at which students progress through verbal scenarios is quite variable. The online, interactive scenarios created through the 2018 OIT Faculty First grant provide scheduling flexibility and ensure consistency in the depth and breadth of the content covered for veterinary students. This Faculty First project allowed the development of the V.E.T.S. program (Veterinary Emergency Treatment Scenarios) consisting of four interactive large animal emergency teaching scenarios for veterinary student education. These scenarios enable students to apply problem-solving skills and step-wise diagnostic reasoning. These skills are critical because the urgency of case decision making requires knowledge and ability to apply skills in a setting where resources are often limited to the clinician. The scenarios cover a variety of large animal species and topics addressing common medical emergencies presented to veterinarians including: “colic” (abdominal pain) in horses, intestinal parasitism in goats, neurologic disease in llamas, and reproductive emergencies in cattle. The materials will be utilized on two clinical rotations: Equine Field Services (VM893) and Farm Animal Field Services (VM896), as part of the final clinical year for veterinary students.

Seminesters the course has been and/or will be taught
The developed scenarios will be implemented into the clinical rotations with the start of the new incoming fourth year veterinary students in late April 2019.

Number of students affected
All veterinary students enrolled in their final year of training, approximately 85-100 students annually, will receive this material as part of two core rotations.

Project outcomes and products
Four interactive cases have been developed through this project, as well as, a template for creating future cases. This groundwork can be used by other clinical veterinary rotations including developing cases concerning common small animal conditions as well. Articulate Storyline was the software utilized to develop the case scenarios. UT students will access the modules through Canvas initially, with the goal of expanding its use to the web in the future. There are approximately 12,000 individuals currently enrolled in veterinary colleges across the United States (30 veterinary colleges, average class size 100 students, 4 year
curriculum). The future accessibility of these learning modules creates a potential benefit for veterinary student education that will transcend state and college lines.

Through several clicks, students are able to gather pertinent information from the owner, access the patient, perform diagnostic tests, and see treatment outcomes.
Instructional videos are strategically placed throughout the scenarios to allow students to visualize procedures and skills.

Lastly, students are asked to choose appropriate discharge instructions for their patient to develop client communication skills.

**Student Evaluation**
Student testing groups have provided feedback on the scenarios and have been overwhelmingly positive. The material will be officially implemented with the next group of clinical veterinary students beginning late April 2019. We plan to gather data on student confidence intervals before and after the scenarios, as well as, knowledge pre- and post-participation. Data gathered will be compared in light of student demographics and backgrounds. The recording and reporting of assessment data will be collected with the goal of publishing data gathered on the utilization of this learning tool. Data collection will be complete and ready for evaluation in May 2020.
Project benefits for the department and UT
The College of Veterinary Medicine, and the specifically the Large Animal Clinical Sciences Department, is always looking for ways to innovatively reach students with practical, relevant information. The University of Tennessee has the long-term commitment to improve the quality and value of education, and this project does just that. Despite the unpredictable nature of the type and frequency of student case exposure and the variable caseload between rotations, this project provides consistency and continuity among student’s learning experiences. This project will also allow for data gathering and, expectantly, publication of an effective teaching tool for the future of veterinary medicine.

Conclusion

How has this project met your goals?

The scenarios and cases developed through this OIT Faculty First project were just ideas in my head - thoughts of how to engage students outside of actual cases - a way to consistently teach students essential large animal veterinary material in a fun and interactive way, but now they are so much more! The completion of this project has far exceeded my goals. The final project is even better than my imagination. The personnel that I worked with took pride and creativity in each step of the project, making it better than envisioned. Videos, animations, and photos utilized for the project are beyond my expectations also.

What worked well and what did not work well?

The software utilized for this program is highly functional for this purpose. There were some “kinks” to work out with certain triggers and buttons for accessibility, but all-in-all, it has proven to be an excellent choice for this project. The videos developed for the project turned out fantastic with edits and voice overs all being done without issue. The project proved to take more time than initially anticipated….but it has been all worth it!

What was your experience collaborating with OIT?

My experience working with OIT has been outstanding. I have recommended to several colleagues the utilization of the services and expertise that I have encountered. I have discussed my experiences with several faculty and encouraged them to seek a similar grant for their ideas and goals. Miriam Larson has dedicated countless hours to this project and made it better than imagined. Her professionalism and creativity have given this project LIFE!

What are your future plans/goals regarding this project’s outcomes?

I look forward to seeking publication of this teaching/training tool in a veterinary education journal. I also plan to work with other sections of veterinary medicine (surgery, small animal, etc.) to develop more cases for student’s enhanced learning experiences.