Determining Relevant Competencies for National Veterinary Food Animal Curricula

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Introduction

Most veterinary colleges in the US have not traditionally sought the help of practitioners to aid in curriculum development. Veterinary faculty are removed by time and distance from private practice and the rapidly changing animal agriculture industry. The logic behind this project was that expert practitioners could define and describe their job more accurately than anyone else. The objectives of this study were to: 1) have practitioners identify and validate the entry-level knowledge requirements and skills (competencies) needed by new veterinary graduates as they enter food animal practice and 2) disseminate the findings to national and international veterinary colleges so this information is available to improve and modernize veterinary food animal curricula throughout the US and the world.

Methods

This real world approach to curriculum development is a continuation of a previously reported study. A process called Develop A Curriculum (DACUM) was used to develop the entry-level competency lists for cow-calf, dairy, feedlot, small ruminants and swine practice. The competency lists were developed by five practitioner groups who work daily with each of these commodities. The individual competencies necessary for entry-level food animal practitioners were assembled under broad headings (duty bands). Approximately 100 practitioners throughout the US then validated the competencies on each developed list as to frequency of use, importance to know, and difficulty to learn. This practitioner-generated data was entered into an Access database and analyzed by a SAS program. The analysis divided the number of high frequency, high importance and high difficulty answers by the total number of valid responses for each competency. The competencies on each list were then ranked from low to high as to frequency, importance, and difficulty; by a combination of frequency and importance; and by a combination of frequency, importance and difficulty. The information under each duty band was analyzed by the same method. Only cow-calf, dairy and feedlot results are reported in this presentation.

Results

All commodity categories, except swine with 20, had 18 duty bands. The number of competencies within each duty band varied from one to 69. The cow-calf list had 126 competencies, feedlot 237, dairy 236, small ruminants 171 and swine 177. The combination of importance and frequency was selected to rank necessary competencies, as analysis indicated that importance was correlated with frequency ($p<.0001$) in the cow-calf data. Difficulty was not correlated with importance ($p=0.65$) or frequency ($p=0.155$). The importance and frequency of use for common (core) competencies and for duty bands varied between different commodity groups.

Conclusions

This project has made available for the first time professional, workforce-generated core and species-specific competencies for the food animal segment of veterinary curriculums. This will enable veterinary colleges to establish course content and to schedule courses based upon the skills, knowledge, and competencies needed, thus reducing redundancies and inefficiencies that can occur. This should result in a more efficient process for both students and faculty.