



4-1-2011

Changing Times, Changing Needs

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Penn Vet addresses new trends in veterinary medicine with curriculum updates that speak to the times

BY KELLY STRATTON

This year marks a significant milestone for veterinary medicine: 250 years ago Claude Bourgelat established the first school of veterinary medicine in Lyon, France, thereby also establishing the profession.

The first veterinary students were required to take an array of classes that studied physiology, splanchnology (the study of internal organs), bandaging and proper use of medications. In addition to lectures, students were required to copy – verbatim – the information Bourgelat required them to learn and then recite the text without error to show they had learned the material.

Students also received assignments for animal care and facility maintenance, which required them to keep the dissection room, stables and forges clean. Students practiced skills under the authority of a teacher, performed consultations, monitored hospitalized animals and learned to prepare medicines.

Only two years after Bourgelat opened the first school of veterinary medicine, the profession earned the respect – and the financial backing – of the king. In 1763, a major cattle disease, rinderpest, broke out in France. Bourgelat sent educated students to combat the disease and soon it was under control. This success earned Bourgelat and his students the confidence of the king who then ensured the school's funding indefinitely.

COMING TO THE AMERICAS

In North America, the earliest veterinary medical schools were established in the late 1800s. With an emphasis on agriculture at national and state/provincial levels, important financial and popular support for colleges of veterinary medicine in the US and Canada came mostly from state and provincial departments of agriculture, respectively, thereby assuring the health of beef, dairy, swine and poultry populations raised for food and trade.

It was during that era, in 1884, that Penn Vet was established at the urging of the School of

Medicine whose leaders recognized that prevention and control of animal diseases had important implications for human health.

CHANGING LANDSCAPES

Over the years, the focus of veterinary medicine has changed. What started in the early 19th Century as a profession largely responsible for care of horses and agricultural animals has now become a profession that is important in improving sanitation and food safety as well as taking care of family pets, while still caring for agricultural animals and horses.

Today, with the globalization of food, goods and services, partnered with greater mobility and a worldwide population of nearly seven billion people, food production has gone from small-hold family farms to large agri-business. In addition to a greater need for safe food, pets in humans' homes are becoming more and more commonplace in developed nations, making care for pet dogs and cats (and other species) a popular necessity.

Solo practicing veterinarians have increasingly joined with others to work in multiple-owner practices where partners can share knowledge and costly equipment more effectively and provide better all-around services to their clients.

As a result of the changing times, curricula for veterinary students must adapt to keep pace.

CHANGING TIMES, CHANGING CURRICULA

Today, there is a perfect storm of influence navigating the course for a veterinary medical education.

In 2008, the Association of American Veterinary Medical Colleges (AAVMC) established the North American Veterinary Medical Education Consortium (NAVMEC) to identify a cost-effective veterinary medical educational system that would produce graduates with competencies on day one



THE FIRST CLASS GRADUATED
1887

Penn Vet in its early days. From top, students learn how to make horseshoes; people wait for equine exams; the old library; small animal clinic; the first graduating class in 1887.

post-graduation that are required and valued by society, including the public and employers.

At the same time, the American Veterinary Medical Association's Council on Education (AVMA COE), the body that accredits Penn Vet's curriculum as well as the curricula of other vet schools in the US, set new requirements for clinical competency outcomes assessment (CCOA).

In addition to these two organized bodies, Penn Vet recognized the need for an update. While not a new phenomenon at Penn Vet – the faculty is constantly reviewing its curriculum for students to ensure each graduating class is ready and prepared for their futures and changes are made on a frequent basis – accreditation requirements set forth by the AVMA put special emphasis on this review.

EVOLVING EDUCATION AT PENN VET

One of the most important educational missions of the School of Veterinary Medicine is to prepare students for multiple career opportunities.

The Penn Vet mission statement for Education includes the following:

- Training veterinarians for primary-care practice and preparing them for advanced study;
- Training veterinarians at post-doctoral levels for advanced clinical practice and research;
- Communicating advances to graduate veterinarians through continuing education; and
- Educating the public and the government about links between animal and public health.

Currently, the Penn Vet curriculum emphasizes basic sciences in the first year; pathologic basis of disease in the second year; clinical aspects in the second and third years; and clinical rotations in the third and fourth years.

MORE CLINICAL, HANDS-ON LEARNING

One of the outcomes of these review processes has allowed for an increase in the efficiency of teaching in both the preclinical and clinical parts of the curriculum to allow students to be more involved with hands-on experience, case management, client communication and financial aspects of cases.

In the process of developing and implementing clinical competency evaluations, Penn Vet faculty recognized the need for earlier exposure to clinical experiences. The result is a new course for second-year veterinary students – *Introduction to Clinical Veterinary Medicine IV* – that allows students to attend clinical rotations in the Ryan-VHUP wards during the mornings before classes and in the afternoons, in Ryan-VHUP's Emergency Service and in the Community Practice. In addition,

students spend time on weekends in the George D. Widener Hospital for Large Animals at New Bolton Center.

In order to allow time in the curriculum for *ICVM IV*, course organizers of all second-year courses were asked to evaluate their courses in relationship to the rest of the curriculum and determine if hours could be reduced by either eliminating redundancies, consolidating materials or moving material into our web-based curriculum on Learn.Vet. As a result of these efforts, classes for the second-year students end on most days by 3PM, allowing them time to be in the clinics as well as to review online information.

Additional changes to allow students more individualized learning and supplementary clinical hours include:

- Increasing elective private practice experience rotations from four weeks to six;
- Allowing students to receive credit for private-practice rotations;
- Increasing the time and credit limits on externships;
- Reducing intramural rotation requirement from 70 credits to 65 for all majors.

NEW PROGRAM

In addition to increasing clinical, hands-on hours, a new program is being developed at Penn Vet: the VMD/MBA program. This program is a combined veterinary degree and master of business administration from the Wharton School at Penn. While the program has been informal for several years, Dr. David Galligan, a former member of the Education Committee and director of the program, is working out the details of this program with a committee from Penn Vet and Wharton.

ENGAGING ALUMNI TO ASSESS OUTCOMES

Penn Vet routinely surveys alumni and employers of alumni within the first three years after graduation to get feedback on changes alumni would like to see to the curriculum to ensure students are career-ready.

We are confident that we, as a profession and as a School, can meet the changing needs of the world today successfully, but it will require efforts not just by the School, but by our alumni, veterinary organizations, licensing boards, accrediting bodies and others.

If you have any suggestions for how we can better prepare our graduates or have thoughts on how we can meet these challenges, contact Dr. Tom Van Winkle, associate dean for education, at tomvw@vet.upenn.edu.



Penn Vet today. From top, students participate in labs; hands-on scrubs with faculty veterinarians; attending a lecture in one of the School's original classrooms; clinical rounds in the ICU; hands-on labs that directly impact clinical experience.