

Veterinary Medical Education in Texas: *Why the Texas A&M Veterinary Medical Center Partnerships Work for Texas*

Eleanor M. Green, DVM, DACVIM, DABVP, Carl B. King Dean of Veterinary Medicine

Kenita S. Rogers, DVM, MS, DACVIM, Executive Associate Dean

1. What are the factors that lead to a high quality veterinary education and full accreditation?

A high quality education in veterinary medicine must incorporate a strong base in foundational science, critical thinking, problem solving, diagnostics, therapeutics, and a profound breadth and depth of cases in multiple species. While all of these are required for a comprehensive training program, other skills are also important to a fully competent healthcare professional and are provided in the best programs. High quality veterinary education programs include training in communication skills, leadership, professionalism, ethics, wellness, financial literacy, emotional intelligence, resilience, and cultural competency. College faculty must have practical expertise and experience in educating students with a wide variety of learning styles.

Accreditation of DVM programs is achieved through the American Veterinary Medical Association Council on Education (COE). This body accredits programs based on a rigorous set of standards developed to ensure quality and consistency of veterinary medical education. Full COE accreditation is granted for seven years with additional requirements for annual reports. Not all programs can meet the standards, and even those that do, must sustain all of these standards. Full COE accreditation is required for graduates to be eligible for licensure. The Texas A&M College of Veterinary Medicine & Biomedical Sciences (CVM) received full accreditation status yet again in 2016.

2. Student debt is an issue across the U.S. right now. How can veterinary students be trained most economically and yet maintain the high quality of education required to support a premier healthcare professional?

It takes a multi-faceted approach to ensure that veterinary students receive the best education possible at a cost that is affordable. The CVM has a remarkable track record in this area with the best debt to income ratio, the second lowest level of student debt, and one of the lowest tuition rates in the nation. Maintaining affordability has been accomplished while the CVM has remained one of the premiere veterinary training programs in the world and has sustained a world class veterinary medical teaching hospital. Considerable resources are devoted to scholarships for DVM students; in fact, scholarships are one of the highest development priorities. The CVM has concentrated on serving Texas students who wish to follow their passion for serving animals and people. This is an area where the CVM will continue to lead...affordable education of the very highest quality.



3. I understand that there is a variable number of students who leave the state to train elsewhere each year. Why?

Over the past few years, the number of students who have left the state for their veterinary medical education have ranged from approximately 25 to 75 students each year. Follow up with some of these students has revealed various reasons for going out of state. Some choose to stay at the university where they completed their undergraduate education, some wish to complete their degree out of state for the diverse experience, and some were not successful applicants to the CVM. Of the unsuccessful applicants to the CVM, many are able to gain acceptance to the CVM on their next application. Because the CVM is in the process of increasing its class size by 30 additional positions, even more students will be admitted and stay in Texas. Unlike most colleges of veterinary medicine, many of which take up to 50% out-of-state students, the CVM class is made up almost entirely of in-state students with only a small number of out-of-state students, in order to best serve the needs of Texas.

4. What are the factors that influence new graduates to choose a career in a rural community?

The shortage of veterinarians in rural communities across the U.S. is real, and this is true in Texas as well. While this is an extremely complicated issue, there are some universal factors that contribute to this shortage. First, there needs to be an economically viable career in the rural community, i.e., the veterinarian must be able to make a living and thrive. Second, living in a rural community is clearly a lifestyle choice. As might be expected in a predominantly urban society, in which only 1% of the population resides on farms today, the largest numbers of applicants to veterinary school come from the large urban centers within the state. Those making such a choice may consider factors like quality of schools, accessibility to healthcare for the family, and other community factors.

The CVM actively encourages students with interest in rural and food animal practice. The DVM curriculum is structured to allow students to concentrate their studies in mixed animal practice, large animal practice, or food animal practice. A robust food animal mentorship program keeps interested students engaged, informs them of career opportunities in food animal and rural practice, and provides high impact learning experiences at the CVM and offsite, such as with practicing veterinarians.

The charge by the Texas Higher Education Coordinating Board in 2009 to increase class size, the number of rural and food animal veterinarians within Texas, and diversity was taken very seriously and provided much of the impetus for funding the newly completed Veterinary and Biomedical Education Complex. This facility allows an immediate increase in class size, as well as increases over time to completely serve the needs for veterinary medical education in the state of Texas now and well into the foreseeable future. As the CVM increases its class size, it has a clear focus on applicants from rural communities who are more likely to “return home” and continue to enjoy the lifestyle in which they grew up. This is a very intentional and direct way to serve these communities within Texas. The new Texas A&M Veterinary Medical Center – Statewide Partnerships offer additional opportunities to recruit, encourage, and mentor young people from rural communities across the state who are then more likely to return to their local communities after graduation.

5. What are the current needs for graduates in the state of Texas in rural communities now and into the future?

The needs for veterinarians in rural Texas are well-documented. The importance of rural veterinarians to communities is high, but the actual numbers needed are modest. It is important to note that basing the calculation of needs on a simple count of counties without a veterinarian or a simple count of animals is flawed. Again, this issue is complicated with many factors in play, including the local economic base of support for a veterinary practice, attractive community infrastructure, the willingness of animal owners to seek and support veterinary care, and even fluctuating economic influences within the livestock industries. The CVM is dedicated to helping Texas solve the need for veterinarians in rural communities in a number of ways. The CVM can meet the needs in Texas for rural and food animal veterinarians in an affordable and efficient manner for both the student and the State of Texas.

6. What is a Veterinary Medical Teaching Hospital, how is it valuable, and what does it cost?

A veterinary medical teaching hospital (VMTH) is a veterinary hospital that is a state-of-the-art facility with the most advanced diagnostic and treatment capabilities. Being similar in scope and capabilities of a human hospital, it is staffed by veterinary specialists, such as board certified veterinary surgeons, internists, cardiologists, neurologists, ophthalmologists, dermatologists, oncologists, anesthesiologists, criticalists, radiologists, theriogenologists (reproduction specialists), behaviorists, veterinary practitioners (similar to



family practitioners), clinical pathologists, pathologists, microbiologists, and more. Veterinary technicians, similar to nurses, support the veterinarians in patient care. A VMTH is a complex entity that serves a multitude of functions. It provides state-of-the-art care to animals, ranging from wellness to complex diseases to critical care. It serves as a referral center to support practicing veterinarians, their clients, and animals in Texas and beyond (the Texas A&M VMTH has received patient referrals from 36 states and some from outside of the U.S.).

The VMTH serves an essential role in education on several fronts. Veterinary students work alongside nationally and internationally renowned veterinarians as part of their education. There is emphasis on primary care in a dynamic environment, such as preventative care, general surgery, and shelter medicine, in required rotations for all students. As such, they learn the practical, every day components of veterinary medicine they will apply in their practices after graduation. They also learn what patient care is available at the highest levels, so they know when and how to refer their patients, when needed. Indeed, this is a requirement for accreditation. Residency training programs are an important educational component as well. Residents are graduate veterinarians seeking board certification, and thus specialist status, in preparation for future careers as academicians in veterinary colleges or specialists in private practice. Residency training programs have enabled the creation and expansion of specialty hospitals in communities throughout the U.S., bringing higher quality care close to home. Veterinary technicians also receive their clinical training in the hospital, preparing them to serve veterinarians broadly.

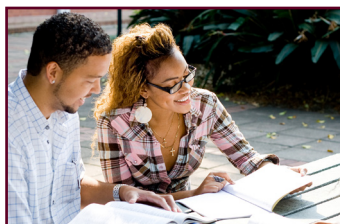
The VMTH is essential in elevating the quality of veterinary medicine worldwide. The latest, most sophisticated equipment and technologies are tested and adopted early, before they are utilized in private practices. With owner approval, clinical trials allow animal patients access to promising novel medications, such as cancer treatments. These trials fast-track effective treatments to both human and veterinary markets, saving the lives of animals and people. Epidemiology studies can identify disease trends in populations, allowing proactive measures to prevent disease. In other words, the VMTH is important to advance the edge of knowledge and discovery.

Today, the VMTH is of critical importance to veterinary medicine. If VMTHs ceased to exist, the veterinary profession would suffer and veterinary care of animals would not advance as quickly. Today, animals receive veterinary medical care comparable to that for people, largely because of the VMTH.

There are upfront and ongoing costs to operate a VMTH. The physical facilities and equipment costs are considerable. A fully equipped, state-of-the-art VMTH could cost approximately \$100 million. The sources of funds vary and may include private gifts, permanent university funds, perhaps legislative assistance, etc. Once constructed, the VMTH must be self-sustaining by income derived from hospital services. Unlike some state health related institutions, the CVM does not receive hospital support from the state, nor does it receive residency related funding like some health institutions. The DVM program, like any other academic program for a general academic institution, relies on formula funding based on weighted semester credit hours.

7. What is a distributed model of veterinary education?

A distributed model of veterinary medical education typically refers to a curriculum that utilizes outside providers, including veterinarians in private practice, to deliver the fourth or clinical year of the curriculum in lieu of the university faculty in a VMTH. All veterinary schools use some form of distribution for clinical year training through externships at practices and other career-based sites, alternative tracks that allow students to specialize in specific areas and be trained outside the teaching hospitals, and core rotations at outside sites including shelters; however, the distributive model is based entirely upon outside providers of clinical education. The college is obligated to match the expertise and experiences provided by a comprehensive teaching hospital through a network of outside experiences. To provide less will result in a lower quality education and a less competent graduate. Each of the core distributed sites must fulfill all of the COE standards for accreditation. The COE accredited schools that utilize this method of clinical year delivery are Western University in California, the University of Calgary in Canada, and two Caribbean schools, Ross University in St. Kitts and St. George's University in Granada. A new school in Tennessee, Lincoln Memorial University and a new school in Arizona, Midwestern University, plan to use this model as their classes reach the fourth year.



8. What are the advantages of the distributed model vs. being trained in a teaching hospital?

The distributed model uses expertise that exists in surrounding practices and other training sites to replace the clinical education typically received in a VMTH. This provides students major exposure to “real-world” practice similar to what they will experience in private practice after graduation. There are very good veterinarians in practice willing to participate. The distributed model is often promoted as being less expensive because it avoids the upfront cost of a VMTH; however, this has not proven true because of all of the costs of operation associated with maintaining a network of quality training experiences, as well as costs that often passed along to students, including additional housing and travel expenses.

9. What are the disadvantages of using the distributed model and forgoing allowing students to train in a comprehensive teaching hospital?

There are several disadvantages cited for the distributive model of clinical education. One of the most notable disadvantages cited is that the students don’t get to experience the incredible breadth of case management that occurs in a modern primary care and referral teaching hospital staffed by nationally and internationally renowned clinical faculty who are at the leading edge of knowledge in their respective fields. The exposure to veterinary educators at the cutting edge of primary care, specialty medicine, and training in all species is an incredibly valuable experience in the students’ development as competent and confident healthcare professionals. Their future clients have expectations regarding the breadth and depth of cases that their new veterinarian has seen; this is best accomplished in a comprehensive state-of-the-art hospital. Saying that this experience can be fully replaced is a recipe for shortchanging their future clients and patients. Another disadvantage of the distributive model is the reliance on local veterinarians with successful practices to carry the burden of teaching veterinary students while still maintaining a thriving client-based business. The role of students in these environments cannot be simply observational, it must be hands-on and intentional with client-owned animals.

One of the common fallacies associated with a distributed model is that it is less expensive. Indeed, the program at the University of Calgary creates less debt for their students, but the fact that their tuition is remarkably subsidized by the Canadian government must be taken into account. The four U.S. colleges utilizing the distributive model are among the most expensive. Each distributive core site must be compensated for training veterinary students and must meet the same standards as a teaching hospital for radiation safety, drug inventory, infectious disease control, and many more items that require substantial, and often expensive, oversight. These practices must also be equipped to meet all accreditation standards for radiation safety, drug inventory, controlled substance logs, infectious disease isolation facilities, carefully outlined hospital processes and procedures, etc. Another expense for the student will be travel and lodging at the distant sites. Depending on where the network of high quality distributive training sites is located, the student will have these additional expenses to account for in their budget.

10. For a program that uses a distributed model for the clinical year, how do the pre-clinical years compare?

The educational content of the pre-clinical years must be of even greater quality in the distributive model due to less consistency of training in the clinical sites. Recall that unlike physicians, veterinarians must be trained in comparative medicine that translates across many species. For example, the gastrointestinal tracts of horses, cattle, dogs, and iguanas are completely different. The way that breathing occurs in cats, birds, and dolphins is completely different. Veterinarians are expected to be able to address all of these differences and competently diagnose and treat the animals entrusted to their care. Therefore, the pre-clinical training must be extensive, complete, integrated, and high quality. If the pre-clinical portion of the training fails, it makes little difference which clinical model is chosen. Further, it must be recognized that the veterinarian choosing to practicing in a rural environment, must receive the most comprehensive education due to less access to referral, the spectrum of species that are encountered, and the important role that they play in their community.

11. Does Texas need a second veterinary school at this time?

With the increased class size, new teaching facilities, statewide reach, outstanding infrastructure, and focus on diversity and high quality education, we agree with the Texas Higher Education Coordinating Board that a second veterinary school is not needed in Texas at this time. Texas A&M University is fully able to meet all of the veterinary needs of the state in the most cost efficient and progressive manner possible.