

ASU Caduceus News



Spotlight On: Veterinary Medicine

Each week we will be spotlighting a different health profession. In addition, we will also put out editions focusing on common questions like, should I be an MD/DO or a PA? Today's spotlight is on Veterinary Medicine. If you have a health profession or question you think should be addressed, feel free to email us and let us know at prehealthtempe@asu.edu

What is Veterinary Medicine?

Whether they're pets, livestock or working animals, animals matter to individuals and society. Every community needs veterinary professionals to provide animal health care, but veterinarians also do many other kinds of jobs. They make sure the nation's food supply is safe. They work to control the spread of diseases. They conduct research that helps both animals and humans. Veterinarians are at the forefront of protecting the public's health and welfare.

Besides medical skills, veterinarians often take a holistic approach to human well-being and animal welfare that, combined with communications and problem-solving skills, makes veterinarians uniquely qualified to fulfill a variety of roles. Many veterinarians, of course, provide care for companion animals through private medical practices, but veterinarians are also involved in promoting the health and welfare of farm animals, exotic animals, working animals (like those in the equine industry), and those that need a healthy environment in which to thrive, whether that environment is a rain forest, a desert or even the ocean.

Outside of companion animal practice, the largest employer of veterinarians in the United States is the U.S. Department of Agriculture's Food Safety and Inspection Service, but veterinarians are found throughout government in roles where they contribute to public health, the environment, and even homeland security, as well as working in research and public policy.

Many veterinarians are engaged in work at the intersection of both human and animal health. For example, veterinarians play an important role in food safety, where epidemiological

research is crucial to forecasting the threat of food-borne diseases and outbreaks. They work to keep cattle and other food animals healthy by developing and testing various farm control methods that help to detect, limit, and prevent the spread of food that might be contaminated by salmonella, E coli or other pathogens. And they're often on the front lines of surveillance where their extensive medical training can help them to detect and treat the outbreak of diseases that have the potential to make the jump from animals to humans.

Qualities and Competencies of Veterinarians

- Dealing with sickness — While being with animals every day might sound like an awesome career, many of the animals you encounter are likely to be very sick. Treating injured animals can be a highly emotional and upsetting role. Additionally, there may be blood, faeces, infection and unpleasant smells to deal with. Being a vet is certainly not a glamorous job!
- Euthanasia — There is no denying the emotional toll of euthanasia on vets is very real. The stress and anxiety that relates to euthanasing animals on a regular basis and dealing with pet owners' grief can have a significant and devastating impact.
 - It's important that anyone wanting a career as a vet recognises the potential impact of euthanasia, knows the warning signs to look out for and is aware of helpful ways in which to deal with the emotional side of performing euthanasia.
- Compassion fatigue — Being exposed to heart-wrenching emotional situations and trauma regularly can and does take its toll emotionally. While not unique to vets, compassion fatigue is common among those who work in veterinary practice. Being aware of the condition, knowing the symptoms and the risk factors are an important part of being a vet.
- Communication: A veterinarian must be able to elicit information, establish rapport, offer explanations, and to describe changes in behavior, activity, and posture to clients. Communication includes not only speech, but also interpretation of nonverbal cues. Understanding that a veterinarian's passion is typically animals, but their work is primarily communication with humans, is an important distinction to consider when exploring veterinary medicine.
- Veterinarians get to know animals, but they also get to know members of their community. Helping families save their pet, often regarded as a member of the family, can create a sense of deep fulfillment and job satisfaction. Veterinarians serve as a mentor and counselor to families during times of difficulty: The decision to euthanize an animal is not an easy one, but can be made easier with the support of a good vet. As such, vets help not only pets, but families.

Career Options in Veterinary Medicine

Veterinary medicine is focused primarily on 4 species - **equine** (horses), **bovine** (cows), **canine** (dogs), and **feline** (cats). Although Veterinary positions are also found at zoos, aquariums, and other wildlife centers the veterinary curriculum will focus on these four species in particular.

Many pre-vet students identify an interest in caring for “**exotic**” **pets** - for purposes of veterinary medicine, *the term exotic refers primarily to pocket pet rodents such as guinea pigs and hamsters, and small reptiles*. Exotic veterinarians rarely focus only on these and will often service these species as part of a larger, small animal clinic catering to canines and felines.

Private practice refers to either general practice or (with advanced training and experience) a specialty field, such as ophthalmology, orthopedics, aquatic animal medicine, marine biology, wildlife animal medicine, or emergency animal medicine. Private practice is inclusive of privately-owned clinics in addition to large, national organizations such as Banfield (PetSmart), VCA, and Blue Pearl.

The Federal Government employs veterinarians through the United States Department of Agriculture (USDA), National Institutes of Health (NIH), Centers for Disease Control (CDC), and Food and Drug Administration (FDA) working on biosecurity, environmental quality, public health, meat inspection, regulatory medicine, and agricultural animal health, or the investigation of disease outbreaks.

The U.S. Army Corps and U.S. Air Force offer career opportunities in areas such food safety and military working dog veterinary medicine. The military also provides advanced training in specialty areas for those who commit to service.

Shelter medicine refers to those working with communities, and private or public agencies to ensure the health and well being of animal populations housed in shelters.

Pre-Veterinary Requirements

Students planning to enter veterinary school should focus on academic and non-academic factors prior to application.

Academics:

All veterinary schools require you to complete prerequisite coursework prior to admission. These courses serve as the foundation for your basic health sciences during the first two years of veterinary school. While you do not need to take additional sciences to be considered, many students find taking additional sciences continues to prepare them for the rigors to graduate professional school.

A prerequisite chart is available from our office which outlines the most commonly required courses. In addition, a prerequisite chart is available through the [AAVMC](#) which provides specific information for all veterinary schools.

Letters of Recommendation:

Veterinary Medical schools will require you to submit letters of recommendation along with

your application. Letters should come primarily from academic science professors you've had in a classroom setting. At least one letter should come from a Veterinarian. Students may also consider a research PI/mentor for additional letters. You should be introducing yourself to faculty members and engaging throughout the semester to build a good working relationship prior to asking for a letter. Coming from a large university with large classes will not absolve you from needing letters. Letters are an important component to your application and are reviewed prior to admitting you to an optometry program.

Non-Academics:

Veterinary Exposure

Exposure to the field of veterinary medicine is essential to articulating why you are interested in entering the profession. Students should aim to spend time shadowing, volunteering, or working in settings with veterinarians throughout their time as an ASU student. While there is no minimum number of hours students should complete, the more exposure you gain the better understanding you will have of the pros and cons to entering the profession.

Students should aim to gain as much information about the field of Veterinary Medicine as possible. *Having and caring for a pet is typically not acceptable exposure or experience in the eyes of a Vet school*, though rare exceptions do occur. **Students should aim to have at least one experience where they are under the guidance of a licensed veterinarian prior to applying to veterinary schools.**

Places to look for Veterinary Exposure

- Private Clinics
- Animal Shelters
- Animal Hospitals
- Active Farms, Zoos, or Aquariums

Note - Veterinary Technicians are a licensed degree and require additional schooling - it is not necessary to obtain a Vet Tech license prior to entering Veterinary school. Many students are volunteers, interns, or even find work as veterinary assistants. Veterinary assistants do not typically require any certification prior to entry. Consider all possibilities, but try to gain exposure to clinical aspects of the facility.

Other Non-Academic Experiences

Students should also plan to engage outside the classroom through internships, volunteer work, student employment, part/full-time employment, and/or research. What you choose to do with your time will help schools build a picture of who you are, what your interests are, and what responsibilities you had in addition to being a student. There is no preference for students to engage in one type of activity over another. Note that there is a higher need for large animal veterinarians than small, although small animal interest makes up a large percentage of each

incoming vet class. Gaining exposure to large animals, while not necessary, can help round out an application.

Veterinary Medical Schools

Currently, there are 30 accredited veterinary medical schools in the U.S and students typically apply to 6-10.

There are two Veterinary Medical schools in Arizona:

- Midwestern University College of Veterinary Medicine in Glendale, Arizona
- The University of Arizona College of Veterinary Medicine in Oro Valley, Arizona (3-year accelerated program)

Veterinary school is 4 years

- The first two years and a half years consist of basic animal and health science classroom learning - classes in anatomy, microbiology, physiology, pharmacology, and more are taken. Students will also have the opportunity to gain clinical exposure in a simulation lab where you will practice clinical skills and diagnosis on virtual patients and engage in simulated exercises.
- The last 18 months of veterinary school mostly involves on-site clinical rotations. Students will provide direct patient care for a variety of patients to ensure students have a wide variety of experiences.
- Some programs will have a student decide on their path - small animal, large animal, or mixed.
- Students will rotate through a required number of pre-selected clinical sites or specialties in addition to a select number of elective rotations.

In order to practice as a veterinarian, you must complete your degree and pass the licensing exams in your fourth year of school. The licensing exams consist of written and clinical portions.

***Note - UA College of Veterinary Medicine is a 3 year accelerated program - students will not have any breaks (i.e. summers) during their classroom didactic learning**

Veterinary Medical School Applications

Total Applicants - 7,820

Total Matriculated - 3,700

Total Women - 80%

Total Men - 20%

Average Science GPA - 3.6

Average GPA - 3.65

GRE - 70% verbal, 60% quantitative

Veterinary Outlook

Employment of veterinarians is projected to grow 16 percent from 2019 to 2029, much faster than the average for all occupations. Overall job prospects are expected to be very good.

Cost

[GRE Test](#): \$205

- Results sent to 4 schools or programs
- \$27 per score report for additional schools

GRE Prep: Average \$500, but can increase to over \$1000

[VMCAS Application](#): \$220 + \$115 for each additional program

- Average: \$900

Supplemental Applications: \$50-100

- Average: \$500

[VMCAS Fee Reimbursement](#)

Interviews: Varies

Veterinary school is an expensive endeavor. The costs of attending veterinary school are similar to those attending medical or dental school.

Average in-state residency four-year cost of attendance - \$250,000

Average out-of-state four-year cost of attendance - \$350,000

Average debt for veterinary graduate - \$200,000

Average veterinary salary - \$95,000 with bonus potential

Videos and resources for more information:

[AAVMC](#) - Association of American Veterinary Medical Colleges

[AAVMC Veterinarian Spotlights](#)

[SAVMA](#) - Student American Veterinary Medical Association

[VMSAR](#) - Veterinary School Admissions Requirements

[AAVMC Prerequisite Chart](#)

[AAVMC General Information Chart](#)

[AAVMC Supplemental Application Chart](#)

[VetRanch](#) - YouTube Channel

Podcast a Vet - podcast

Vet School Unleashed - podcast