How Credentialed Veterinary Technicians Impact Public Safety

"*no regulation shall be imposed upon any occupation unless required for the safety and well-being of the citizens of the State*".

Animals provide people with important benefits including food, fiber and companionship. While interactions with animals provide well proven benefits for individuals and communities, there is also the risk for zoonotic infectious diseases (diseases that can be transferred from animal to humans). To maintain safe communities, it is important to have professionals, such as credentialed veterinary technicians* who are competent in the recognition and prevention of zoonotic diseases.

Credentialed veterinary technicians also play an important role in maintaining the health and wellbeing of livestock and poultry in Minnesota. The agriculture sector in Minnesota depends on these animal health professionals in a variety of areas including animal production, animal health, food safety, and food production. In addition, veterinary technicians are on the front lines and are prepared through their training to recognize agroterrorism, as they are the ones talking to the owners, seeing the animals initially, collecting the samples, and often, running the laboratory tests.

During their formal training, veterinary technicians learn about infectious diseases and disease transmission. Importantly, they also learn and practice communication skills that help them translate scientific information and give instructions to clients in a manner that helps in understanding and compliance. Good communication helps ensure that diseases will be correctly treated, infection spread will be prevented, and public health will be protected.

Below are some topics taught during a veterinary technician's education:

Microbiology:

- How diseases are spread
- Behavior and replication of bacteria and viruses
- Antimicrobial resistance

Pharmacology:

- Basic knowledge of how drugs work in the body
- Importance of Minimum Effective Concentrations
- Antimicrobial stewardship
- Understanding of how insecticides work on a variety of pathogenic parasites

Physiology:

- Basic knowledge of normal and diseased body systems
- Basic knowledge of how immunity prevents infection

Disinfectants & Antiseptics & Sterilization:

- Understand which disinfectants/processes are appropriate when
- Proper dilution and contact time of disinfectants
- Understand the science behind different types of sterilization and quality control

Animal Restraint:

- Proper restraint of a variety of animals to prevent injury from scratches and/or bites
- Recognize behavior signs in a variety of species in order to take appropriate action to safeguard co-workers and pet owners

Parasitology/Hematology

- Recognize a variety of parasites and parasitic ova from fecal, urine, tissue and blood samples
- Understand the lifecycles of a variety of pathogenic parasites

Clinical Skills

- Standard precautions and proper infection control procedures
- Surgical preparation and draping to maintain asepsis

There are many important zoonotic diseases of public health significance, some of which are reportable to the Minnesota Department of Health (MDH) and the Minnesota Board of Animal Health (BAH). Please see the attached supporting document (Reportable Disease List) from the BAH.

Some of the more common and/or serious diseases where credentialed veterinary technicians can have an impact and that you may be familiar with include:

- Blastomycosis
- Dog and cat roundworms
- Bovine Spongiform Encephalopathy (BSE), aka “mad cow” disease
- Lyme disease
- Rabies (human and animal cases)
- Salmonellosis
- Raccoon roundworm infection
- Foot and Mouth Disease (FMD)
- Velogenic Newcastle Disease
- African Swine Fever
- Highly Pathogenic Avian Influenza

The veterinary technician is often the first line of defense. Here are a few examples of how a credentialed veterinary technician impacts public safety:

EX #1: When a person calls a veterinary clinic with questions or concerns, the receptionist often forwards the call to a veterinary technician. It is important that the technician recognizes signs and symptoms and is knowledgeable regarding zoonotic and/or infectious diseases, so that they can make appropriate recommendations for the situation - or consequences could develop. Many serious human and animal health situations have been averted due to the quick thinking and good judgement of the veterinary technician who takes that first call.

EX #2: The technician is responsible for performing the majority of in-house laboratory testing. Veterinary technicians are at the center of the diagnostic process in a veterinary clinic because of their laboratory and observational skills, and veterinarians depend on them. Veterinary technicians contribute greatly to animal and public health and safety in Minnesota.

*After graduating from an American Veterinary Medical Association Accredited Veterinary Technician program and passing the Veterinary Technician National Examination, a veterinary technician becomes credentialed. In Minnesota, the credential is certified and is currently voluntary. To maintain certification, credentialed veterinary technicians are required to attend continuing education (10 credits/2 years) which helps ensure that the individual is keeping current with emerging diseases, as well as new testing and treatment recommendations.