

SESSION 6 ANCILLARY SUPPORT SERVICES

** SAFETY NOTICE**

Before Explorers enter a working environment, review the hazards and risks faced in veterinary medicine; the precautions that are taken to prevent injury, illness, and disease transmission to caregivers and other animals; and the use of appropriate controls. Explorers should be provided appropriate training and personal protective equipment (PPE) before entering the working environment. Please consider whether they may need to be excluded from certain procedures, areas, or exams (e.g., X-rays or clinical laboratory procedures), and make appropriate safety accommodations. Due to the known hazards of ionizing radiation (X-rays), Explorers may not participate in the taking of radiographs. Trained laboratory technicians or their equivalent must be in immediate attendance whenever any clinical laboratory procedures are being carried out.

DESCRIPTION OF SESSION

This session provides participants with an introductory understanding of various ancillary diagnostic support fields that a veterinarian uses in providing animal health care. Radiology techniques, including x-ray and ultrasound, and clinical laboratory testing are just a few of the “tools” used by veterinarians to help diagnose and treat their patients that will be explored in this session.

CATEGORY

- Health
- Veterinary Medicine

ADVISOR NOTE:

As you engage your post in activities each meeting, please include comments, discussions, and feedback to the group relating to **Character, Leadership, and Ethics**. These are important attributes that make a difference in the success of youth in the workplace and in life.

OBJECTIVES

By the end of this session, participants will be able to:

- Understand the safety concerns and practices that must be implemented while working with these various instruments and machines.
- Understand the role these ancillary tools play in veterinary medical health care.
- Learn what a radiograph is and how to interpret its images.

- Learn what an ultrasound is, how to interpret its images, and how it differs from a radiograph.
- Differentiate the various types of clinical laboratory equipment used in veterinary medicine and the tests they perform. Understand the value of the test results these instruments provide to the veterinarian.
- Understand the educational requirements for veterinarians, including high school and college courses that would be beneficial to a career using these machines and instruments and interpreting the results they provide.

SUPPLIES

- Laptop computer or equipment to view videos
- Safety glasses
- Non-latex rubber gloves

ACTIVITIES

ACTIVITY 1

Speaker: Introduction to Ancillary Support Services

- Have the speaker (veterinarian, veterinary technician, or laboratory technologist) discuss the basic function of the radiographic process and radiograph machine (digital or film). Stress the importance of the practices used to ensure personal safety from exposure to x-rays.
- Have the speaker discuss the basic function of an ultrasound machine.
- Discuss the differences between the images that each machine captures and the value to the veterinarian in using one machine or the other.
- Discuss what a clinical laboratory is and its importance to the veterinarian in making health care decisions.
- Discuss the ethical concerns that must be considered in deciding whether or not to use these types of ancillary tools.
- Discuss which courses in high school and college might relate to careers in radiology, ultrasound, and clinical laboratory science.

ACTIVITY 2

Practical Experience With Radiology and Ultrasound

- Show videos introducing radiology (digital or film), ultrasound, and clinical laboratory science for veterinarians. Select videos from a reputable online source or other resource. View the videos in advance to make sure they are appropriate.
- Have the participants look at radiograph films or digitally produced radiographs and determine the body parts visualized. Provide instruction on what is considered normal and abnormal. Have the participants look at a contrast radiographic study and discuss what the study reveals.

- Have the participants observe a live animal ultrasound procedure (non-invasive). Provide instruction on what is considered normal and abnormal. If possible have the participants operate the ultrasound and see if they can identify anatomic structures in an animal.

ACTIVITY 3

Tour of Clinical Laboratory and Practical Experience

- Tour a clinical laboratory with a trained laboratory technician (or their equivalent). If possible, have the technician demonstrate how the laboratory equipment works and describe the results each instrument provides to the veterinarian.
- If possible have the participants perform a urinalysis (dipstick), view a fecal parasite exam with a microscope, do a heartworm exam, and observe the making of a fresh blood smear before viewing the preparation under a microscope.
- Hold a discussion about what Explorers have learned about the importance of clinical laboratory services.

ADVISOR NOTE

Some sample questions are below. They are designed to help the participants apply what they have learned to their own interests. You are welcome to use these questions or develop your own questions that relate to your post or specific area of focus.

REFLECTION

- *What aspects of the ancillary support services session interested you the most?*
- *What ethical concerns will a veterinarian encounter in this type of veterinary health care?*
- *What did you learn during this session about the variety of ancillary support devices available to a veterinarian for providing health care to animals?*
- *What can you do now, during your time as a student, to prepare yourself for a career in veterinary medicine? Why is this topic important?*

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