## ACMVET4X13 Apply veterinary diagnostic imaging routines

#### Application

This unit of competency describes the knowledge and skills required to undertake veterinary radiographic imaging following established industry sequences, radiation safety practices, and practice procedures. It includes preparing and positioning equipment and animals for x-ray images, including dental, and assisting with ultrasounds under the supervision of a registered veterinarian or a qualified veterinary nurse with a radiation operator licence, in a veterinary practice.

Veterinary nurses who perform imaging routines need to hold and apply specialised knowledge of animal anatomy and physiology.

**Licensing, legislative, regulatory requirements**

Legislation and licence requirements apply to the operation of radiography equipment and handling of radioactive materials but vary according to state/territory jurisdictions. Users must check with the relevant regulatory authority before delivery.

#### Pre-requisite unit Nil

#### Unit sector

Veterinary Nursing (VET)

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| **Elements** *Elements describe the essential outcomes.* | **Performance criteria**  *Performance criteria describe the performance needed to demonstrate achievement of the element.* |
| 1. Prepare the imaging environment and equipment | 1.1 Confirm imaging request and patient identity, using relevant industry terminology  1.2 Prepare the area and position imaging machine for the required procedure  1.3 Prepare the imaging equipment, positioning aids and materials for the required imaging request  1.4 Follow radiation safety and WHS procedures for self and others, including correct use of personal protective equipment (PPE) |
| 2. Implement imaging procedures under the supervision of a veterinary surgeon | 2.1 Measure size and thickness of the area to be imaged, collimate beam and set factors, according to workplace procedures  2.2 Prepare and position patient, applying protective and positioning aids  2.3 Assist licenced operator to produce radiographic image  2.4 Review radiographic images for diagnostic quality and compliance with positioning and exposure protocols  2.5 Recognise and correct common imaging faults  2.6 Assist with positioning patient for ultrasound  2.7 Monitor patient and record observations |
| 3. Carry out post-imaging procedures | 3.1 Return patient to housing or owner  3.2 Store images and outcomes and update animal records according to workplace procedures  3.3 Clean and sterilise imaging and positioning equipment |

#### Foundation skills

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| **Learning** | **Reading** | **Writing** | **Oral communication** | **Numeracy** |
| 4 | 4 | 3 | 3 | 4 |

**Assessment Requirements**

**Performance evidence**

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

* produced dental images for a minimum of three animals, covering at least three different species
* carried out imaging routines for a minimum of three different animals, covering at least three different body parts
* assisted with one ultrasound.

**Knowledge evidence**

* state or territory legislation and regulations relating to use of radiation equipment
* safe work practices in the use of radiography and other imaging equipment, including use of appropriate PPE
* organisational procedures for positioning animals for imaging and image requirements
* legislation and safe work practices in relation to animal handling and welfare in relation to radiography procedures
* animal sedation, restraint, anaesthetic monitoring and recording procedures related to imaging procedures
* preparation of imaging environment for different procedures
* imaging equipment and materials including:

computed radiography (CR) and digital radiography (DR) x-ray systems

portable x-ray machines

ultrasound

other imaging equipment and processes (nuclear scintigraphy, Computed Tomography (CT), Magnetic Resonance Imaging (MRI)

contrast media (injectable, rectal and oral preparations)

dental film, plates or sensors

* animal anatomy and physiology related to positioning animals for imaging
* anatomical orientation terminology in relation to positioning animals for imaging
* common positioning techniques for imaging procedures, including the use of protective and positioning aids
* positioning, bisecting angle techniques and terminology for a range dental images

common imaging faults and techniques to minimise.

**Assessment conditions**

Skills must be demonstrated in the workplace or an environment that accurately reflects a veterinary practice.

Assessment must ensure access to:

* a range of real animals and/or animal models
* equipment typically available in a veterinary practice, including ultrasound equipment and manufacturer’s operating instructions
* fully operational x-ray machine
* licenced radiography operator
* range of positioning and protective aids
* PPE
* organisational procedures related to positioning animals to achieve quality images.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

#### Unit mapping information

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| **Code and title current version** | **Code and title previous version** | **Equivalence status** | **Comments** |
| ACMVET4X13 Apply veterinary diagnostic imaging routines | ACMVET402 Apply imaging routines | Not equivalent | Title changed.  Unit merged with ACMVET503 Produce veterinary dental oral cavity images.  This unit has been updated throughout to reflect inclusion of dental x-ray, removal of endoscopes and greater emphasis on radiation safety.  Legislative, licensing and regulatory language has been clarified and strengthened.  Removed requirement to perform Performance Evidence in a real workplace on real animals, enabling application of skills to be simulated using animal models. |
| ACMVET4X13 Apply veterinary diagnostic imaging routines | ACMVET503 Produce veterinary dental oral cavity images | Not equivalent | Title change.  Unit merged with ACMVET402 Apply imaging routines.  This unit has been updated throughout to reflect inclusion of dental x-ray, removal of endoscopes and greater emphasis on radiation safety.  Legislative, licensing and regulatory language has been clarified and strengthened.  Removed requirement to perform Performance Evidence in a real workplace on real animals, enabling application of skills to be simulated using animal models. |

### Overview information

#### Modification History

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| --- | --- |
| **Release** | **Comments** |
| 1 | This unit of competency was first released in ACM Animal Care and Management Training Package Release 7.0. |

**Mandatory workplace requirements:**   
Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.