## ACMVET4X10 Prepare for and monitor anaesthesia and analgesia in animals

#### Application

This unit of competency describes the skills and knowledge required to prepare patients and equipment for the administration of anaesthetics and analgesics for a broad range of surgical and medical procedures. It includes knowledge of types of anaesthesia and analgesia, procedures for administering and the knowledge and skills necessary to monitor anaesthesia and analgesia effects.

The unit applies to veterinary nurses who work under the supervision of a registered veterinarian in a veterinary practice, and who hold and apply specialised knowledge of animal anatomy and physiology.

**Licensing, legislative, regulatory requirements**

Legislative and regulatory requirements apply to the administration of anaesthetic and analgesic agents by veterinary nurses and level of necessary veterinarian supervision 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 for anaesthesia | 1.1 Prepare treatment area and ensure personnel are ready for anaesthesia procedure  1.2 Prepare and test equipment to ensure appropriate function for procedure  1.3 Set-up anaesthesia and analgesia monitoring equipment according to practice policy and procedures  1.4 Ensure the correct use and storage of anaesthetic gases including scavenging of gases according to practice policy and procedures  1.5 Follow safe work practices according to work health and safety (WHS) and practice policies and procedures |
| 2. Prepare patient for anaesthesia | 2.1 Handle, restrain and position patient safely according to practice policies and procedures using low stress handling techniques  2.2 Check the patient’s identity, review patient history and assist veterinarian in assessing the patient’s physical health status and body condition, noting any abnormalities  2.3 Perform pre-anaesthesia evaluation of the patient according to practice policies and procedures, ensuring test results are recorded and available, if required  2.4 Prepare anaesthesia and analgesia plan for the patient, under the guidance of the veterinarian  2.5 Prepare anaesthetic and analgesic drugs as instructed by the veterinarian  2.6 Identify and locate animal anatomical features relevant to the administration of drugs for induction of anaesthesia and anaesthetic monitoring |
| 3. Assist in administering anaesthesia and monitoring patient | 3.1 Assist in the induction of anaesthesia according to legal scope of practice and practice policies and procedures  3.2 Assist with endotracheal (ET) intubation  3.3 Monitor patient and chart patient’s vital signs  3.4 Identify stages and planes of anaesthesia and communicate with the veterinarian any abnormal values and be able to initiate an appropriate response to correct abnormality  3.5 Identify an anaesthetic emergency and provide assistance under the guidance of the veterinarian  3.6 Monitor and record changes in the post-operative period |
| 4. Assist in administering analgesia for patient | 4.1 Monitor patient pain by evaluating behaviour, vital signs, clinical signs and using recognised pain scoring scales  4.2 Communicate observations to the veterinarian to assist assessment of analgesic or supportive therapy requirements  4.3 Administer veterinarian prescribed analgesic to manage patient pain, within legal scope of practice  4.4 Provide supportive therapies to manage pain  4.5 Recognise and respond to emergencies immediately according to practice policies and procedures |

#### Foundation skills

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| **Learning** | **Reading** | **Writing** | **Oral communication** | **Numeracy** |
| 3 | 3 | 3 | 4 | 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 prepared for, and monitored anaesthesia and analgesia, for a minimum of two different patients, and has, for each:

* assisted with pre-medication, induction and monitored anaesthesia and anaesthesia recovery
* assisted with endotracheal intubation and extubation
* monitored patient for signs of pain and assisted with administration of analgesic or pain therapies
* prepared, set up and used anaesthesia and analgesia administration and monitoring equipment according to manufacturer and practice policies and procedures.

Performance must be demonstrated in a veterinary practice or an environment that accurately reflects a veterinary practice where procedures requiring anaesthesia and analgesia are carried out on real animals.

**Knowledge evidence**

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

* principles and practices for monitoring anaesthesia and analgesia in animals
* anaesthesia risks including species specific considerations and precautions

exotics

equines

* procedures for pre-anaesthetic evaluation on animals, including:

clinical examination

pathology, including haematology and biochemistry

American Society of Anesthesiologists (ASA) status

* physiological effects of anaesthesia and analgesia drugs on different body systems, including:

respiratory

cardiovascular

central, peripheral and autonomic nervous systems

renal

hepatic

* fluid therapy, including purpose, types of fluids and rates, monitoring parameters
* clinical indicators of anaesthesia emergency, including:

respiratory

cardiovascular

thermoregulation

regurgitation

* emergency situations and first aid responses, including:

haemorrhage

hypothermia or hyperthermia

respiratory distress

shock

hypotension

* techniques for cardio-pulmonary resuscitation (CPR)
* techniques and precautions for inserting and removing endotracheal tube (ET), including for different species
* information that should be documented for the administration of anaesthetic and related substances
* types of surgical and medical procedures that require local and general anaesthesia
* anaesthetic agents, including:

injectable

gaseous compounds

volatile substances

* methods used to administer injectable anaesthetics and analgesics, including intravenous (IV) and intramuscular (IM)
* methods to administer local anaesthetic
* audible, visual or measured signs of pain, including pain scoring guides
* methods and equipment used to monitor animals during anaesthesia and post anaesthesia
* vital signs and reflexes monitored under anaesthesia, including:

blood pressure

pulse rate, rhythm and quality

arterial oxygen saturation

respiratory rate and effort

rectal temperature

pulse oximetry

anaesthesia depth

capillary refill time

palpebral reflex

heart rate and identification of normal rhythm

mucous membrane colour

pedal withdrawal reflex

end tidal carbon dioxide

* planes and stages of anaesthesia
* anaesthesia equipment and supplies, including:

anaesthetic machine

gas sources

anaesthetic trolley/emergency crash cart

vaporisers

anaesthesia circuits (rebreathing and non-breathing)

scavenger and filtration systems

* monitoring equipment, including:

stethoscope

thermometer

pulse oximeter

blood pressure monitor

capnography monitor

electrocardiogram

* anaesthetic pre-medicants and analgesic agents
* sedatives and analgesics used in animals and the effects
* organisational policies and safe work procedures, including WHS and emergency procedures
* organisational policies and procedures for different classes of drugs
* safe animal handling techniques and procedures
* workplace hygiene standards, disinfectants, cleaning agents, cleaning techniques and cleaning equipment and materials.

**Assessment conditions**

Skills must be demonstrated in a veterinary practice or an environment that accurately reflects a veterinary practice where procedures requiring anaesthesia and analgesia are carried out on live animals.

Assessment must ensure access to:

* real animals undergoing procedure or treatment requiring anaesthesia
* anaesthesia equipment typically available in a veterinary practice and manufacturer’s operating instructions
* resources typically used for anaesthesia or analgesia procedures

organisational policies and procedures relevant to the administration of anaesthesia and analgesia, including state or territory legislation and regulations relating to scope of work and required supervision

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** |
| ACMVET4X10 Prepare for and monitor anaesthesia and analgesia in animals | ACMVET413 Prepare for anaesthesia and monitor animal anaesthesia and analgesia | Not equivalent | Minor title change.  Wording of Application changed.  Change references from ‘animals’ to ‘patients’ throughout for consistency.  PC1.1 broaden ‘surgery’ to ‘treatment area’  PC2.2 Remove reference to VN ‘assessing’ animal health status, rather assisting veterinarian to do so. PC2.3 add access to ‘test results’ recorded and available.  PC2.5 Change ‘**Calculate** and prepare anaesthetic and analgesic drugs specific for the animal under the guidance of the veterinarian’ to ‘**Prepare** anaesthetic and analgesic drugs **as instructed by the veterinarian’** to ensure within legislative requirement for veterinarian only to ‘prescribe’ including dose.  Remove PC2.7, as is included in KE  Reposition PC2.8 to PC1.5  PC4.4 moved to PC4.1 with minor wording change.  PC4.1 I**dentify, monitor and assess analgesic requirements** in animals and 4.2 **Provide analgesia** to manage pain in animals under veterinary guidance changed to:  4.2 Communicate observations to the veterinarian to assist assessment of analgesic or supportive therapy requirements  4.3 Administer veterinarian prescribed analgesic to manage patient pain, within legal scope of practice  Wording changes to PE including to remove repetition of PC. Remove ‘calculation of dosages’ and ‘assessing’ animal’s analgesic requirements.  Reference to specific number of hours associated with performance evidence has been removed, however evidence of performance is still required to be demonstrated in a workplace with real animals, and under veterinary supervision.  Minor changes to wording and sequencing of KE for clarity and flow.  Change to Assessment Conditions – remove reference to ‘interactions with [ ] or minimum of Certificate IV qualified veterinary nurse’ as CIV VN cannot themselves induce anaesthesia or analgesia without veterinarian supervision. |

### 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:**

Mandatory workplace requirements apply to this unit of competency and are specified in the Performance Evidence and Assessment Conditions of the Assessment Requirements.