## ACMVET5X20 Apply veterinary nursing pathophysiology

#### Unit outcomes

This unit covers fundamental knowledge of animal diseases and common disease processes, including clinical signs, diagnostic tests, treatment options and appropriate nursing care.

The unit is predominantly knowledge-based, contributing to and supporting effective veterinary nursing performance by developing theoretical depth and analytical capability to support higher-level clinical reasoning, disease recognition and treatment coordination expected of an experienced or advanced veterinary nurse.

Graduates will apply principles of pathophysiology to recognise abnormal physiological functions, implement veterinarian directed treatment plans, medications and nursing responses and use specialised skills to collect, process and handle diagnostic specimens.

This unit is designed for veterinary nurses working in general or specialist practice under the direction of a registered veterinarian.

**Licensing, legislative, regulatory requirements**

Legislative and regulatory requirements apply to the scope of practice of veterinary nurses, specifically in relation to veterinary acts of science/medicine including diagnosing disease and prescribing and administering treatments, medicines or poisons and vary across jurisdictions. Users must check with the relevant state/territory authority before delivering or assessing this unit.

#### Knowledge

* common species-specific animal disease processes and effects on normal anatomy and physiology across major body systems
* common infectious diseases and disease management principles, including infection and zoonosis preventions and controls
* interactions between causative agents, host response, and environmental factors in disease development and progression
* signs of disease processes common in the animal species serviced by the practice, and the methods used to identify these signs, including through comprehensive history-taking, systematic physical examination and interpretation of client-reported information
* purposes, indications, and limitations of diagnostic tests used in veterinary practice and principles and procedures for sample collection, preparation and preservation
* types and pharmacology of veterinary medications, including potential benefits from and adverse reaction to medications specifically for diseases commonly serviced within the practice
* evidence-based approaches to managing patients with common diseases, including nutrition, fluid therapy, environmental management, wound care, physical therapy and monitoring strategies
* state/territory legislation and regulations relating to the practice of veterinary science including responsibilities and limitations of practice for veterinary nurses assisting with diagnostic and treatment procedures, work health and safety (WHS) and animal welfare in relation to disease outbreak and management.

#### Skills

* collect, analyse and accurately document comprehensive patient histories, conduct detailed physical examinations of animals, recognise clinical signs consistent with common disease processes and communicate these to the veterinarian using correct terminology
* perform accurate sample collection for required diagnostic tests, safely and hygienically, and prepare, process, store and label diagnostic specimens to ensure validity and clinical usefulness
* integrate clinical findings with diagnostic results and assist to determine causative agents or contributing factors to support veterinary disease diagnosis
* assist veterinarian, within scope of veterinary nursing practice, in formulating and implementing evidence-based nursing support plans and treatment protocols, including preparation and administration of veterinarian prescribed medications
* provide clients with clear and accurate instructions for managing outpatients and maintaining treatment compliance
* **monitor inpatient and outpatient progress using** disease-specific indicators and respond appropriately to changes in conditions
* communicate clinical observations, diagnostic findings where appropriate and treatment progress clearly and professionally within the veterinary team, ensuring maintenance of accurate records consistent with legislative and organisational requirements

#### Application of knowledge & skills

This unit applies to work carried out by individuals in veterinary practice contexts who support the diagnosis, treatment and management of disease in animals within the limits of their job role and legal scope of practice.

Individuals will apply broad factual, technical and theoretical knowledge of pathophysiology, common disease processes, diagnostic testing techniques and treatment modalities to support clinical decision-making by supervising veterinarians.

They will use clinical judgement to interpret presenting signs, relate these to underlying disease mechanisms and identify indicators of abnormal body function across the major body systems. They will gather and integrate information from detailed patient histories, client reports and physical examinations, and perform authorised diagnostic sampling techniques to support the diagnostic process. Individuals will recognise factors that influence disease development and progression, such as host response, environmental conditions and causative agents, and use this understanding to inform nursing priorities and anticipate potential complications.

They will coordinate and implement veterinary treatment and nursing care plans, monitor patient responses to therapy and identify adverse or unexpected reactions requiring escalation. They will provide clear instructions to clients, support ongoing treatment compliance and contribute to follow-up procedures that monitor patient progress.

Work is performed under the general supervision of a registered veterinarian, with accountability for applying advanced technical skills, interpreting clinical information, adhering to infection prevention and control and WHS requirements, and following established protocols while recognising situations that require prompt referral or veterinary intervention.

#### Pre-requisite unit Nil

#### Unit sector

Veterinary Nursing (VET)

#### Foundation skills

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| --- | --- | --- | --- | --- |
| **Learning** | **Reading** | **Writing** | **Oral communication** | **Numeracy** |
| 5 | 5 | 4 | 5 | 4 |

**Assessment Requirements**

**Performance evidence**

Individuals must apply the knowledge and skills specified in the unit of competency to:

* identify abnormal body function in a minimum of three real animals of at least two different species, through collection of detailed patient histories and a comprehensive physical examination of at least two of the animals
* collect, process and store diagnostic samples for a minimum of ten pathology tests across five or more patients, where samples include at least one each of:

blood

cytology

skin

faeces

fluid

* perform a minimum of one real or simulated collection of urine by ultrasound-guided cystocentesis
* administer fluid therapy to a minimum of three patients, where fluid includes at least one blood product
* administer medication intravenously to a minimum of three different patients, including using a fluid pump at least once
* provide specific instructions for treatment or management of disease to a minimum of two clients, including procedures for monitoring patient progress.

Performance must be demonstrated in a veterinary practice or an environment that accurately reflects a veterinary practice where pathophysiology is being undertaken on real animals under the supervision of a registered veterinarian.

**Knowledge evidence**

To demonstrate the application of the knowledge specified in this unit of competency, individuals must have knowledge of:

* anatomy and function of the eleven body systems
* pathophysiological mechanisms underpinning common disease processes including functional and biochemical changes associated with inflammation, infection, neoplasia, immune-mediated disease, endocrine disorders, toxic and metabolic disorders, vascular disturbances, congenital abnormalities and degenerative conditions
* diagnostic test purposes and procedures, including:

antigen test

biochemistry tests for proteins, sugars, lipids or enzymes

haematology tests such as complete blood count or coagulation

biopsy

blood cross match

cytology

faecal floatation

fluid analysis

fine needle aspirate

fungal assay

hormone assay

microscopy, culture and sensitivity (MC&S) test

sediment examination

serological tests including enzyme linked immunosorbent assay (ELISA) tests

smear

skin scrape

urinalysis

* protocols and procedures for the collection of samples
* physical examination procedures and techniques
* common disease processes and clinical signs
* causative agents and mechanisms, environmental factors contributing to disease and infection and host responses
* types and pharmacology of veterinary medications, including:

anaesthetics

analgesics

antibiotics

anticonvulsants

antiemetics

corticosteroids

cytotoxics

emetics

hormones

non-steroidal anti-inflammatories

sedatives

vitamins

* nursing procedures to administer fluid therapy, intravenously administer medication and provide specialised nursing practices for wound management, disease management and infection prevention
* legislation and practice requirements for disease and medication management

**Assessment conditions**

Skills must be demonstrated in a veterinary practice or an environment that accurately reflects a veterinary practice where pathophysiology procedures are undertaken on real animals under the supervision of a registered veterinarian.

Assessment must ensure access to:

* a range of real animals, including animals with abnormal body function and/or existing diagnosis of disease
* equipment, instruments and resources typically available in a veterinary practice where pathology tests are analysed and treatments and procedures are routinely performed
* organisational policies and procedures
* laboratory equipment operating manuals
* current legislation, regulations and relevant codes of practice relevant to WHS, handling and administering medications and poisons and veterinary nursing scope of practice
* clients
* drug and poison schedules and safety information

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** |
| ACMVET5X20 Apply veterinary nursing pathophysiology | ACMVET510 Apply veterinary nursing pathophysiology | Not equivalent | Unit redesigned from an **Elements & Performance Criteria** structure to an **Application of Knowledge & Skills (ASK)** format, to enable greater theoretical depth and clearer articulation of knowledge standards rather than procedural tasks.  Greater emphasis on **pathophysiology**, including mechanisms of disease, disease progression and system-level effects not explicitly detailed in the original unit.  **Diagnostic testing content updated and broadened**, with explicit inclusion of **ultrasound-guided cystocentesis** as a required practical skill. Performance Evidence revised for increased focus on **integration of clinical reasoning**, recognition of abnormal body function and consistent application of volume and frequency of performance.  Knowledge Evidence expanded to include **pathophysiological mechanisms**, species-relevant disease signs, diagnostic purposes and procedures, and disease management.  Specified number of mandatory work placement hours removed, although performance still needs to be demonstrated in an appropriate veterinary practice or work environment. |

### 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.