



Australian Government

Department of Education, Employment and Workplace Relations

ACMEQD402A Determine equine oral function efficiency

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This Unit of Competency covers anatomy and physiology of the equine head, including oral structures and dentition, and how they relate to general health and in particular, dental conditions and disease.

Application of the Unit

This Unit is applicable to the equine industry where it may be necessary to perform equine dental services. It requires dentistry practices to be related to equine anatomy and physiology with particular focus on oral structures including dentition. In addition to legal and ethical responsibilities, all Units of Competency in the ACM10 Animal Care and Management Training Package have the requirement for animals to be handled gently and calmly. The individual is required to exhibit appropriate care for animals so that stress and discomfort are minimised.

Licensing/Regulatory Information

Information Licensing, legislative, regulatory or certification requirements may apply to this Unit. Therefore, it will be necessary to check with the relevant state or territory regulators for current licensing, legislative or regulatory requirements before undertaking this Unit.

Pre-Requisites

There are no pre-requisite Units for this competency standard.

Employability Skills Information

This Unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Identify the structures and understand the function of the equine oral cavity	1.1 <i>Structures within the oral cavity</i> are defined by name and location 1.2 Functions of oral cavity structures are determined 1.3 Structures and body systems that affect growth and health of oral functions are identified and defined 1.4 Process of prehension <i>mastication of food</i> are described and related to normal oral function
2 Relate the prehensile and masticatory function to teeth types	2.1 <i>Equine teeth are classified</i> by name and location using equine dental formulae and established terminology 2.2 <i>Structures of equine teeth</i> and periodontium are identified by name and location 2.3 <i>Stages of development and eruption</i> of equine teeth are identified and defined 2.4 Normal development and eruption is identified 2.5 <i>Abnormalities of development and eruption</i> are identified 2.6 The <i>function of individual equine teeth</i> is defined
3 Age the horse by interpreting tooth eruption, dental wear patterns and tooth angles	3.1 <i>Stages of equine dental eruption and age indicators</i> are identified and defined 3.2 Incisor angles in relation to age are determined 3.3 Occlusal wear and shape of teeth throughout the horse's life are identified and defined 3.4 The age of the horse is estimated based on examination findings (presence or absence of deciduous and permanent teeth, wear patterns, tooth shape and tooth angles) 3.5 Dental status is documented including age estimation using industry notation methods

Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

Ability to:

- analyse and solve problems using available information and resources including recording information and prioritising daily tasks
- apply interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities
- classify equine teeth and describe their location using established terminology and charts
- communicate effectively to fulfill the job role including questioning, active listening, asking for clarification and consulting with or seeking advice from other appropriate service providers
- comply with animal welfare legislation, animal care guidelines, state and territory veterinary surgeons or practitioners legislation and regulation, relevant equine dental association code of conduct, equine dental service provider accreditation requirements and standards
- describe location of anatomical features using scientific terminology
- employ safe and environmentally responsible organisational systems and procedures when working with and handling horses
- follow sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of defined tasks
- identify and describe the functions of oral anatomical features
- identify efficient and abnormal masticatory function in relation to lateral excursion, rostro-caudal movement and occlusion
- maintain the highest standards of hygiene and infection control at all times to reduce the risk of infection and cross-infection considering zoonotic and exotic disease possibilities (biosecurity)
- numeracy skills to estimate, calculate and record routine workplace elements
- read, understand and follow required policies and procedures, including OHS, infection control and waste management
- record oral findings using charts and other recording methods including photography
- use safe manual handling techniques and/or equipment
- use safe, hygienic and environmentally friendly waste handling and disposal procedures.

Required knowledge includes:

Knowledge of:

- anatomy and physiology of the equine head and oral structures including features and functions of the equine mouth and teeth including normal and abnormal functions
- anatomical directional terminology
- contagious disease symptoms, prophylaxis and biosecurity protocols

- masticatory processes
- principles of animal welfare
- recognise dental encoded systems for example: modified triadan number system and symbols
- relationship between equine dental related anatomy and physiology
- relevant legislation, regulations and codes of practice, including OHS, animal welfare and ethics, veterinary practices, restricted dental practices and waste disposal
- stages of tooth development, growth and ageing
- workplace hygiene standards (biosecurity) including: disinfectants, cleaning agents and techniques, cleaning and appropriate disinfection or sterilisation of equipment, materials and personal protective equipment (PPE).

Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>The evidence required to demonstrate competence in this Unit must be relevant to workplace operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this Unit. Assessors should ensure that candidates can:</p> <ul style="list-style-type: none"> • define by name, location and function oral cavity features • describe the process of prehension, mastication and the role of normal oral function in relation to lateral excursion, rostro-caudal movement and occlusion • identify the features of equine teeth and classify tooth types • use dental formulae and established terminology to describe and document tooth status and oral conditions • determine the age of a horse using tooth development, wear, shape and incisor angulation. <p>The skills and knowledge required to determine equine oral functional efficiency must be transferable to a range of work environments and contexts and include the ability to deal with unplanned events.</p>
Context of and specific resources for assessment	<p>Assessment for this Unit is to be practical in nature and will be most appropriately assessed in a workplace where equine dentistry is provided or in a situation that reproduces normal work conditions.</p> <p>There must be access to a range of horses and anatomical models and the appropriate equipment and/or resources to enable one to demonstrate competence.</p>
Method of assessment	<p>To ensure consistency in performance, competency should be demonstrated, to industry standards, on more than two occasions over a period of time in order</p>

	<p>to cover a variety of circumstances, cases and responsibilities and over a number of assessment activities.</p> <p>The assessment strategy must include assessment of competency in a work environment. Suggested strategies for this Unit are:</p> <ul style="list-style-type: none"> • written and oral assessment of candidate's required knowledge • observed, documented and first-hand testimonial evidence of candidate's application of practical tasks • simulation exercises that reproduce normal work conditions • case studies • third-party evidence • workplace documentation • portfolio. <p>This Unit may be assessed in a holistic way with other units of competency relevant to the industry sector, workplace and job role.</p>
Guidance information for assessment	<p>Assessment methods should reflect workplace demands (e.g. literacy and numeracy demands) and the needs of particular target groups (e.g. people with disabilities, Aboriginal and Torres Strait Islander people, women, people with a language background other than English, youth and people from low socio-economic backgrounds).</p>

Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Structures within the equine oral cavity</i> may include:</p>	<ul style="list-style-type: none"> • lips • cheeks • gums • tongue and hyoid apparatus • hard palate • palatine artery • palatine raphe and ridges • dental papillae • soft palate • teeth including: <ul style="list-style-type: none"> • incisors • canines • premolars (including wolf teeth) • molars • supernumerary • vestigial teeth such as wolf teeth • periodontal structures and function • bone structure of the maxilla and mandible • pharynx • salivary glands and ducts.
<p><i>Process of mastication of food</i> may include:</p>	<ul style="list-style-type: none"> • biomechanics of: <ul style="list-style-type: none"> • mandible and maxilla • temporomandibular joint (TMJ) • feed mastication and formation of food bolus • role of: <ul style="list-style-type: none"> • masticatory muscles • rugae • teeth: incisors, premolars and molars • curve of spee • occlusal angles • occlusal ridges • saliva • tongue.

<p><i>Equine dental classification</i> may include:</p>	<ul style="list-style-type: none"> • functional nomenclature: <ul style="list-style-type: none"> • incisor • canine • premolar • molar • functional status: <ul style="list-style-type: none"> • incisor function • canine function • premolar and molar function • numerical nomenclature: <ul style="list-style-type: none"> • triadan system • anatomical nomenclature: <ul style="list-style-type: none"> • universal system • type and timing of eruption: <ul style="list-style-type: none"> • deciduous • permanent
<p><i>Structures of equine teeth</i> and periodontal structures may include:</p>	<ul style="list-style-type: none"> • apical foramen • alveolar socket • cementum • cusp and zone terms • dental cavity • dentine • enamel • infundibulum • nerves • pulp canals or chamber • periodontal ligament • root and crown.
<p><i>Stages of development and eruption</i> of teeth may include:</p>	<ul style="list-style-type: none"> • bud stage • cap stage • bell stage • apposition and calcification of enamel and dentine • eruption • attrition (wear) • exfoliation • eruption and shedding ages for all deciduous teeth.
<p><i>Abnormalities of development and eruption</i> may include:</p>	<ul style="list-style-type: none"> • absence of teeth (oligodontia) • underdevelopment of cementum or enamel (hypoplasia)

	<ul style="list-style-type: none"> • overdevelopment of cementum or enamel (hyperplasia) • dentigerous cysts • super-eruption (e.g. of unopposed teeth) • impaction (failure of tooth to erupt) • lack of wear • parrot mouth (brachygnathia) • sow mouth (prognathia) • supernumerary teeth • wry mouth (campylorrhinus lateralis)
<i>Function of individual teeth</i> may include:	<ul style="list-style-type: none"> • food prehension • food mastication • relationship to effective digestion • relationship to behaviour and performance.
<i>Stages of equine dental eruption and age indicators</i> may include:	<ul style="list-style-type: none"> • presence or absence of deciduous teeth • presence or absence of permanent teeth • presence or absence of infundibula • observation of teeth in wear.

Unit Sector(s)

Equine dentistry