EQU_001 Clinical Assessment in Horses

I. OBJECTIVE

To describe the expected standard of clinical assessment in horses, when used for scientific purposes [PLEASE NOTE: operationally veterinary discretion may be required to help guide this assessment].

II. DEFINITIONS

Competent - "the consistent application of knowledge and skill to the standard of performance required regarding the care and use of animals. It embodies the ability to transfer and apply knowledge and skill to new situations and environments." (as per, Australian code for the care and use of animals for scientific purposes, 2013)

III. COMMENTS / RECOMMENDATIONS

- Relative to animal ethics applications, when using this SOP, the following must be described in the individual ethics application: expected duration and frequency of animal use, any invasive ancillary assessment modalities (e.g. abdominocentesis, transrectal palpation or ultrasonography), and any variation to this SOP.
- Many of the common ancillary assessment modalities in horses have separate SOPs which may be used.
- Clinical assessment in horses should be considered a quick and non-invasive procedure (assuming a relatively compliant animal temperament).
- When using animals for scientific purposes all personnel must be competent in the procedures they perform or be under the direct supervision of a person who is competent to perform the procedure

IV. EQUIPMENT

- Relevant Personal Protective Equipment (PPE); appropriate clothing (e.g. overalls), closed-in shoes (preferably steel cap boots), disposable gloves
- Equipment for appropriate animal restraint (e.g. halter and horse crush/stocks)
- Stethoscope
- Digital thermometer
- Obstetric lubricant

V. PREPARATION

1. Ensure AEC approvals cover all procedures, personnel, and animal details for the planned work
2. If working with students, teachers must ensure that students have had the opportunity to discuss the ethical and social issues, and legal responsibilities, involved in the care and use of animals for scientific purposes, at a level appropriate to their learning ability and comprehension. This must occur before the use of animals commences.
3. Ensure good hygiene practices. This includes washing hands before and between horses of different epidemiological origins.

VI. PROCEDURE

1. **Distance exam** - Begin by observing the animal's environment, as well as the animal's appearance and general behaviour in its environment. From this, broad assessments can be made relative to environment and husbandry (e.g. weed *spp*. exposure), as well as the animal itself (e.g. the animal's demeanour, responsiveness, respiratory rate and effort, gait, body contour, symmetry, body condition, coat condition etc.)
2. **Restraint** - Once the animal is appropriately restrained for assessment proceed with the clinical assessment.

Conditions:

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3. **Respiratory rate sounds and effort** - Visually observe respiratory rate (recorded in breaths per minute), effort and pattern while the animal is at rest. With the stethoscope, auscultate the various lung fields for abnormal acoustic findings.
4. **Cardiovascular** – Using a stethoscope, auscultate the heart to obtain a heart rate while the animal is at rest (record in beats per minute). While auscultating with the stethoscope, consider any abnormal acoustic findings. Pulses should also be palpated to assess their rate and strength.
5. **Mucosal membranes** – oral mucosal membranes should be assessed for colour, moisture, as well as capillary refill time. Ocular mucosal membranes should be assessed for colour.
6. **Gastrointestinal sounds and faeces** - Using a stethoscope, auscultate various abdominal fields for gut sounds. Observe faecal contents and consistency.
7. **Rectal temperature** – after application of lubricant, gently insert the thermometer ~5cm into the horse's rectum. Most digital thermometers will beep once the temperature is measured – these thermometers are preferred.

VII. REFERENCE INFORMATION

Table 1. Reference ranges for the basic vital signs in horses.

Note: The normal vital signs for horses will vary according to the circumstances, e.g. transport, exercise and mental status. External and internal factors may influence them and due note should always be made of the circumstances under which they are obtained. There are some circumstances when abnormalities can be masked by temporary or intermittent physiological alterations in vital signs. There are physiological/natural variations that are the result of breed, age and stage of training. (Source: Knottenbelt & Malalana, 2015, Saunders Equine Formulary 2nd Edn., W.B. Saunders, https://doi.org/10.1016/B978-0-7020-5109-8.00001-8)

	Pulse rate (b/min)	Respiration rate (b/min)	Temperature (rectal) (°C)	Capillary refill time (seconds)
Foal (newborn)	100–128	14–15	38.5–39.5	< 2
Foal (7 days)	80–120	14–16	38.0–39.0	< 2
Foal (3 months)	60–100	14–15	37.5–38.0	< 2
Pony	45–55	12–15	37.5–38.0	< 2
Thoroughbred (resting)	35–45	12–15	37.5–38.0	< 2
Thoroughbred (fit)	25–40	10–15	37.5–38.5	< 2

Version #	Reviewing AEC (note: all other relevant AECs ratify the approval)	AEC Review Date	Approval To Date
4	PCA	20/04/2022	20/04/2025

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