



Core Competencies for New Veterinary School Graduates in Equine Practice

Veterinarians in equine practice perform a wide variety of tasks with widely varying frequency. The following skills are identified as “core competencies” for new graduates. Educators and employers are encouraged to use this information when determining the training necessary for new graduates to achieve career success.

The AAEP’s identification of core competencies is based on the following published article resulting from a survey of equine practitioners: *“Frequency of activities and procedures performed in private equine practice and proficiency expected of new veterinary school graduates”*, Perspectives in Professional Education, JAVMA, Vol 232, No. 1, January 1, 2008, John A. E. Hubbell, DVM, MS, DACVA; William J.A. Saville, DVM, Ph.D., DACVIM; Rustin M. Moore, DVM, Ph.D., DACVS.

Skills an equine veterinary graduate should be able to perform:

Medical Knowledge

- Take a medical history
- Estimate weight
- Interpret a hemogram (CBC)
- Interpret a serum biochemical profile
- Develop a vaccination strategy
- Recognize and treat pain
- Estimate age from dentition
- Estimate degree of dehydration and develop an appropriate treatment plan

Examination

- Perform a physical examination on an adult horse
- Auscult and interpret respiratory sounds
- Auscult and interpret heart sounds
- Perform an oral and dental examination
- Auscult and interpret gastrointestinal sounds
- Perform a neonatal examination
- Perform a post-foaling examination

Techniques

- Administer medication PO (paste)
- Administer an IM injection
- Perform jugular venipuncture
- Administer an IV injection
- Administer an SC injection (medication and fluids)
- Use an HCT tube and tabletop centrifuge to determine PCV
- Demonstrate use of hoof tester
- Use a refractometer to determine total plasma protein concentration
- Place and secure a catheter in the jugular vein
- Pass a nasogastric tube
- Administer liquid medication with a nasogastric tube
- Perform fluorescein staining of the cornea
- Perform and interpret a test for measuring IgG concentration in foals
- Perform an enema
- Perform a skin scraping

- Aspirate a mass
- Flush a nasolacrimal duct
- Perform a fecal flotation
- Perform a Gram stain
- Examine the retina

Reproduction

- Place a tail wrap on a mare
- Rectal palpation for late-stage
- Examine the cervix with a vaginal speculum
- Obtain a uterine sample for culture
- Rectal palpation for mid-stage pregnancy

Surgery

- Apply a wound dressing
- Apply a bandage to a limb
- Apply a bandage to a foot
- Remove sutures and staples from a healed surgical wound
- Clean and debride a wound
- Suture proficiently
- Perform surgery; properly gown and glove and aseptically prepare a patient for surgery
- Identify and treat a foot abscess
- Perform hemostasis; isolate, clamp, and use hand and instrument ties to ligate a bleeding vessel
- Demonstrate proper postoperative patient care including wound evaluation
- Properly prepare and sterilize a surgical pack
- Place a drain into a soft tissue lesion (e.g., abscess)
- Perform a caslick operation

Anesthesia

- Sedate an adult horse
- Perform a line block for local anesthesia
- Sedate a foal
- Monitor the depth of anesthesia

Husbandry Techniques

- Apply a lip twitch
- Approach, capture, and attach a halter and lead
- Elevate a hind limb
- Elevate a forelimb
- Perform proper animal restraint
- Tie a quick-release knot
- Restrain a foal
- Apply a tail tie

Client Education and Regulatory

- Complete a health certificate
- Explain gastrointestinal parasite identification, treatment, and prevention
- Write clear instructions in lay terminology
- Explain medical conditions to a client clearly and concisely in an understandable manner
- Explain proper healthy animal nutrition to client

Business of Veterinary Medicine

- Maintain complete and concise medical records
- Effectively communicate over the telephone
- Recognize major breeds by appearance

Dentistry

- Float teeth

Business of Veterinary Medicine

- Manage time efficiently

Post-internship or one-year post-graduation skills:

Medical knowledge

- Establish a prognosis
- Formulate a plan for treating diarrhea
- Formulate individual and herd health and wellness programs
- Recognize and treat laminitis
- Formulate a plan for treat pneumonia
- Interpret an abdominocentesis
- Interpret results of an arterial or venous blood gas sample

- Develop a problem list with differential diagnoses, develop a diagnostic plan, and develop a treatment plan
- Formulate a plan to evaluate and care for a patient with colic

Examinations

- Assess lameness and perform a soundness (lameness) examination
- Perform a neurological examination
- Perform a breeding soundness examination on a mare
- Perform a prepurchase examination
- Examine the upper airway with an endoscope
- Assess lameness and perform a soundness (lameness) examination

Anesthesia

- Perform local anesthetic blockade of the upper eyelid
- Complete a pain assessment with a scoring system and clinical observation
- Perform local anesthesia of the carpus, tarsus, and distal portion of the limb
- Perform arthrocentesis and local anesthesia of the carpus
- Perform arthrocentesis and local anesthesia of the fetlock
- Perform endotracheal intubation
- Perform arthrocentesis and local anesthesia of the distal interphalangeal joint
- Anesthetize a healthy patient for 60 minutes
- Perform arthrocentesis and local anesthesia of the pastern
- Properly place leads and record and interpret an ECG
- Perform arthrocentesis and local anesthesia of the stifle
- Anesthetize a healthy patient for a short period (20 minutes)
- Perform local anesthesia of the foot
- Perform local anesthesia of the fetlock and distal portion of the limb

Reproduction

- Determine the estrus status of a mare
- Pharmacologically manage a mare's reproductive cycle
- Perform ultrasound diagnosis of a 16-day pregnancy
- Perform rectal palpation for a 25-day pregnancy
- Devise a treatment plan for a uterine infection
- Treat retained placenta
- Obtain an endometrial biopsy sample and perform cytologic examination
- Correct simple dystocia
- Inseminate a mare
- Perform rectal palpation for a 45-day pregnancy

Client Education and Regulatory

- Communicate a prognosis and anticipated cost of treatment
- Manage client expectations
- Perform a ration analysis
- Identify appropriate reporting agencies for a foreign animal disease
- Compassionately communicate when the situation dictates that euthanasia is an option

Radiology

- Make and interpret radiographs of the stifle
- Perform and interpret ultrasound of tendons
- Make and interpret radiographs of the skull
- Make and interpret radiographs distal to carpus or tarsus
- Make and interpret radiographs of the tarsus
- Make and interpret radiographs of the carpus

Business of Veterinary Medicine

- Develop accurate estimates and charge appropriately for work performed
- Understand the cost of maintaining a veterinary practice

Techniques

- Perform an abdominocentesis
- Use test to predict foaling
- Perform a transtracheal wash

Surgery

- Perform a castration
- Repair an eyelid laceration
- Apply a splint
- Perform regional perfusion

Husbandry Techniques

- Capture a horse with a rope

Dentistry

- Remove wolf teeth