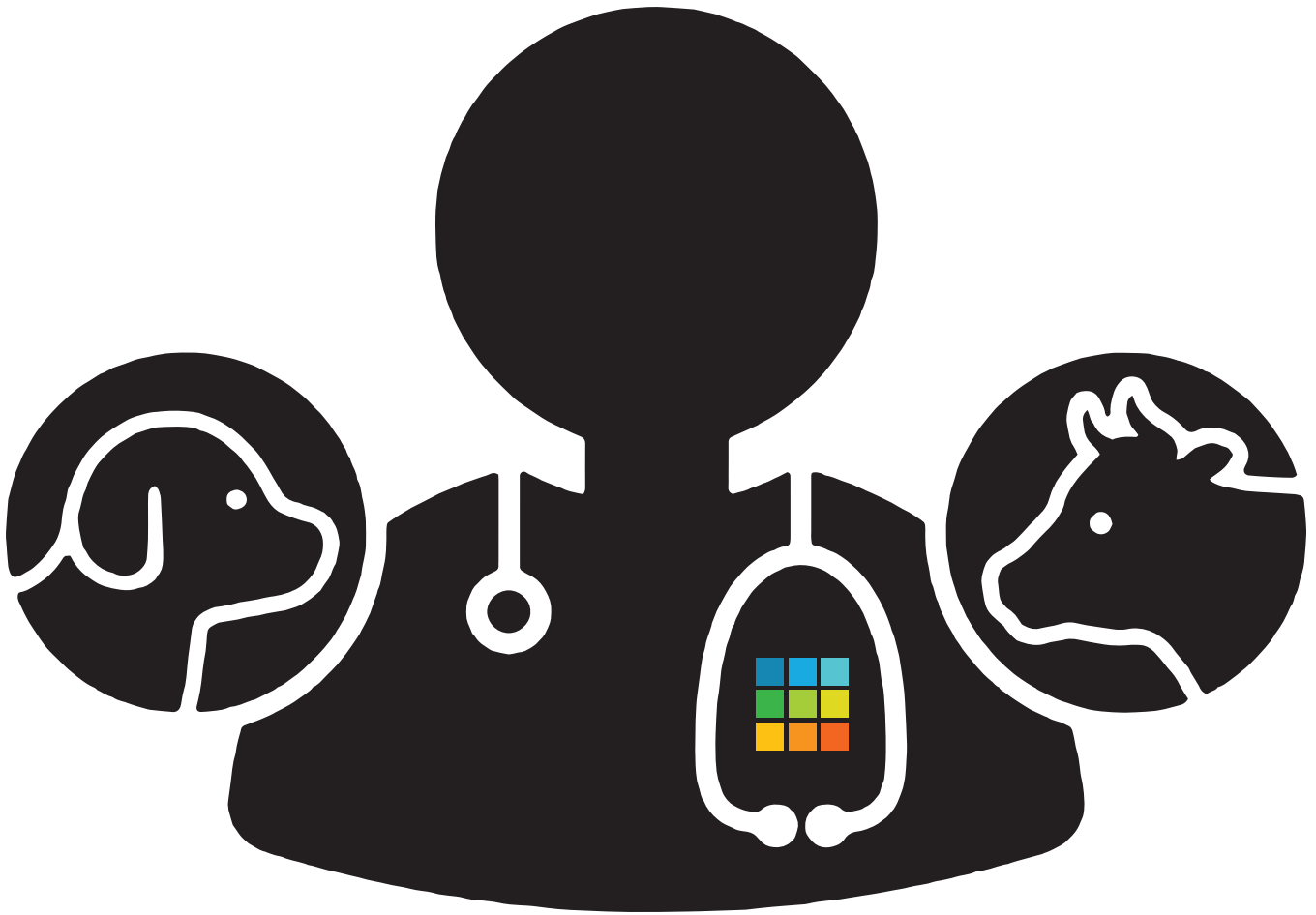




Competency-Based Veterinary Education: Entrustable Professional Activities (EPAs)



CBVE: Entrustable Professional Activities (EPAs)

Entrustable Professional Activities are essential activities that veterinarians perform in the workplace. These activities are described at a high level so that they can be performed and observed in variable contexts (e.g., different species, clients, settings).

EPAs are:

- Complex activities that require integration of multiple competencies from multiple domains and are performed in the authentic workplace environment.
- Observable activities with a defined beginning and end.
- Activities that require learners to take responsibility for their decisions where there are real consequences.
- Activities learners should be entrusted to perform independently at the time of graduation.

EPAs are not:

- Activities for which specialized training or experience beyond veterinary school is required in order to perform.
- Activities that are performed in a simulated environment.
- Simple skills or activities that require only one competency.

There are eight EPAs published within the CBVE Model. These EPAs are considered core for all veterinary graduates. Schools may create additional EPAs that are important to their local context, but the total number of EPAs should be limited (8-12) to ensure that each student can be assessed performing each EPA multiple times across clinical training.

EPAs can be used to provide formative and/or summative assessment opportunities for learners and often contribute to a program of assessment. Assessment of a learner's ability to perform an EPA represents a snapshot in time; EPAs are most effective when used across the clinical training experience in a variety of contexts and are useful in assessing longitudinal progression of an individual learner.

Entrustment-supervision (ES) scales are commonly used to assess a learner's ability to perform an EPA independently. ES scales can be employed retrospectively, where evaluators report the level of supervision required for the learner to perform the activity or prospectively, where evaluators report how much trust they would place in the learner if performing the same task again.

Assessment of EPAs requires direct observation of the learner performing the EPA. In some cases, it may be more practical to observe a portion of the EPA, a subsection of the activity which can be assessed independently from the rest of the EPA (i.e., nested EPA). An example is EPA 1: Gathers a history, performs an examination and creates a prioritized differential diagnosis list. In clinical training, EPA 1 may be divided into separate nested EPAs: 1a. Gathers a history; 1b. Performs an examination; 1c. Creates a prioritized differential diagnosis list. A learner could be observed performing nested EPA 1a on one patient and nested EPA 1b on a different patient.

Guide to this section:

Each EPA is summarized and followed by a more detailed commentary about the activity to help readers understand the context. The relationship between each EPA and the domains of competence and competencies follows.

The most relevant domains of competence for each EPA are listed and depicted by large icons. The secondary domains are also listed and defined by smaller icons. Less relevant domains for a particular EPA are shown in gray.

Specific elements within the EPA are then listed along with the specific competencies that map to each element. This mapping is useful for developing assessment rubrics.

CBVE: Entrustable Professional Activities (EPAs)

1	Gathers a history, performs an examination, and creates a prioritized differential diagnosis list
2	Develops a diagnostic plan and interprets results
3	Develops and implements a management/treatment plan
4	Recognizes a patient requiring urgent or emergent care and initiates evaluation and management
5	Formulates relevant questions and retrieves evidence to advance care
6	Performs a common surgical procedure on a stable patient, including pre-operative and post-operative management
7	Performs general anesthesia and recovery of a stable patient including monitoring and support
8	Formulates recommendations for preventive healthcare



EPA 1

Gathers a history, performs an examination, and creates a prioritized differential diagnosis list

DESCRIPTION OF ACTIVITY	Obtains a history and performs an exam on an individual animal or herd/flock and assimilates the information collected to derive a prioritized differential diagnosis.
COMMENTARY	The history and examination should be tailored to the clinical situation and specific patient encounter. This data gathering serves as the foundation for evaluation and management. Expectations include integration of the scientific foundations of medicine with clinical reasoning skills to guide information gathering. Dividing this EPA into three nested EPAs (history taking, examination and differential diagnosis generation) may facilitate use in the learning environment.
MOST RELEVANT DOMAINS	1: Clinical Reasoning & Decision-making ■ 5: Communication ■
SECONDARY DOMAINS	2: Individual Animal Care & Management ■ 6: Collaboration ■ 8: Financial & Practice Management ■
ELEMENTS WITHIN ACTIVITY	<p>Consultation</p> <ul style="list-style-type: none"> Obtains a complete and accurate history in an organized fashion [1.1] ■ Demonstrates client-centered interview skills (establishes rapport, attentive to verbal and nonverbal cues, client culture, socioeconomic factors, demonstrates active listening skills) [5.1, 5.2] ■ Identifies the client complaint [1.1] ■ Identifies pertinent history elements associated with common conditions [1.1] ■ Demonstrates cultural competence in interactions with clients, recognizing the potential for bias [5.2, 6.4] ■ ■ <p>Examination</p> <ul style="list-style-type: none"> Performs exam (individual animal or group) [1.1] ■ Communicates findings [5.1] ■ Attends to patient welfare and safety of client, staff and self [1.4, 2.2, 8.3] ■ ■ ■ Documents findings in the medical record [5.3] ■ <p>Determining Differential Diagnosis</p> <ul style="list-style-type: none"> Creates a problem list and differential diagnosis list [1.2] ■ Justifies prioritized differential diagnosis(es) [1.2] ■ Consults or refers as needed [1.7] ■ Documents findings in the medical record [5.3] ■



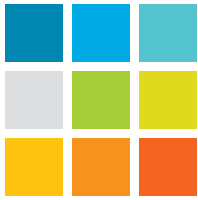


EPA 2

Develops a diagnostic plan and interprets results

DESCRIPTION OF ACTIVITY	Integrates individual animal or group data to create a prioritized differential diagnosis list and determines a diagnostic plan, obtains consent for diagnostic testing and interprets results.
COMMENTARY	Developing a diagnostic action plan is an iterative, reflective process that requires continuous adaptation to avoid common errors of clinical reasoning.
MOST RELEVANT DOMAINS	1: Clinical Reasoning & Decision-making ■ 5: Communication ■
SECONDARY DOMAINS	2: Individual Animal Care & Management ■ 6: Collaboration ■ 9: Scholarship ■
ELEMENTS WITHIN ACTIVITY	<ul style="list-style-type: none"> • Uses clinical reasoning skills to create a prioritized differential diagnosis list [1.2, 9.1] ■ ■ • Selects initial diagnostic tests/procedures even in the face of ambiguity [1.3, 1.4, 9.1] ■ ■ • Identifies when referral is indicated and consults or refers as needed [1.7] ■ • Performs diagnostic procedures [2.1] ■ • Explains working diagnosis and rationale for further testing [1.3, 5.1] ■ ■ • Develops a financial estimate and obtains and documents informed consent [1.4, 5.2, 5.3, 8.1] ■ ■ ■ • Interprets test results [1.1] ■ • Updates working diagnosis, diagnostic plan and client communication as new information is obtained [1.3, 5.2, 9.1] ■ ■ ■ • Documents diagnostic plan in medical record [5.3] ■





EPA 3

Develops and implements a management/treatment plan

DESCRIPTION OF ACTIVITY	Utilizes working diagnosis and client considerations to formulate a management/treatment plan for an individual animal or group (including referral or euthanasia when warranted), implements the plan and adjusts based on response.
COMMENTARY	Developing a management/treatment plan is an iterative, reflective process that requires consideration of the patient, client, veterinary team and resources as well as ethical and legal factors. Implementation of the plan includes performance of veterinary procedures, team collaboration and client education.
MOST RELEVANT DOMAINS	<ul style="list-style-type: none"> 1: Clinical Reasoning & Decision-making ■ 2: Individual Animal Care & Management ■ 5: Communication ■ 7: Professionalism & Professional Identity ■ 8: Practice & Financial Management ■
SECONDARY DOMAINS	<ul style="list-style-type: none"> 3: Animal Population Care & Management ■ 6: Collaboration ■ 9: Scholarship ■
ELEMENTS WITHIN ACTIVITY	<ul style="list-style-type: none"> • Uses clinical reasoning skills to integrate medical, ethical, legal and financial factors, and client goals, to create a management/treatment plan [1.3, 1.4, 3.1, 7.1, 8.2, 9.1] ■ ■ ■ ■ ■ • Acts in the face of ambiguity resulting from gaps in available information [1.3, 1.6, 7.3] ■ ■ • Explains treatment options to client and respond to questions [1.4, 5.1, 5.2] ■ ■ ■ • Performs therapeutic interventions, including euthanasia when warranted [2.1] ■ • Educates client or team to provide ongoing care for patient, and recognizes changes or concerns that trigger additional action [1.3, 5.1, 6.3, 9.2] ■ ■ ■ ■ ■ • Integrates new information as it is available to update management/treatment plan [1.3, 9.1] ■ ■ • Recognizes limitations and arranges for referral as needed [1.7, 6.1] ■ ■ • Documents therapeutic plan in medical record [5.3] ■ • Communicates with clients or team to determine patient status, compliance with recommendations, and/or capability to implement treatment plan. [5.2, 6.3] ■ ■ • Obtains informed consent and documents in medical record [5.2, 5.3] ■





EPA 4

Recognizes a patient requiring urgent or emergent care and initiates evaluation and management

DESCRIPTION OF ACTIVITY	Recognizes a patient/situation that requires urgent or emergent care and triage based on severity. Initial emergency management should include procedures that support vital functions.
COMMENTARY	This activity requires application of knowledge and psychomotor skills as well as the ability to function as part of a team, to recognize own limitations, and to seek help when necessary. Initial evaluation of patient(s) should include level of consciousness and adequacy of ventilation and circulation.
MOST RELEVANT DOMAINS	1: Clinical Reasoning & Decision-making ■ 2: Individual Animal Care & Management ■ 6: Collaboration ■ 7: Professionalism & Professional Identity ■
SECONDARY DOMAINS	5: Communication ■
ELEMENTS WITHIN ACTIVITY	<ul style="list-style-type: none"> • Quickly assesses a situation to identify patient(s) that might require urgent or emergent treatment [1.1, 1.5] ■ • In the case of multiple patients, effectively triages patient care according to severity of condition [1.5] ■ • Evaluates patient status to determine and triage urgent problems [1.1, 1.5, 7.2] ■ ■ • Updates client on the urgency of the patient’s status, immediate management plans and obtains and documents informed consent [5.1, 5.2, 5.3] ■ • As necessary, initiates emergency management to support vital functions [2.1] ■ • Identifies potential underlying etiologies for the urgent or emergent patient and determines initial management plan [1.2, 1.3] ■ • Discusses patient status and initial management plan (including euthanasia when warranted) with client and identifies client goals [1.3, 1.4, 5.1, 5.2, 7.1] ■ ■ ■ • Optimizes patient care by engaging team members, determining when to function as a leader or team member and working within own limitations [1.7, 6.1, 6.2] ■ ■ • Documents initial patient assessment, interventions, possible diagnoses and management plan, and client communication in the medical record [5.3] ■





EPA 5

Formulates relevant questions and retrieves evidence to advance care

DESCRIPTION OF ACTIVITY	Identifies questions and information resources. Critiques the quality of the evidence and assesses the applicability to the clinical situation.
COMMENTARY	The use of evidence-based practices and self-awareness are essential to identify and remedy/correct knowledge gaps. Life-long learning is an essential professional practice to promote quality patient and population care.
MOST RELEVANT DOMAINS	1: Clinical Reasoning & Decision-making ■ 7: Professionalism & Professional Identity ■ 9: Scholarship ■
ELEMENTS WITHIN ACTIVITY	<ul style="list-style-type: none"> • Formulates focused pertinent questions and identifies gaps in knowledge [7.4, 9.1] ■ ■ • Assesses applicability and generalizability of published studies to specific clinical situations [1.6, 9.1] ■ ■ • Identifies, retrieves and appraises resources, including new information [7.4, 9.1] ■ ■ • Consults when appropriate [1.7, 7.4] ■ ■ • Evaluates animal/group response to interventions and uses available evidence to adjust care plan [1.3] ■





EPA 6

Performs a common surgical procedure on a stable patient, including pre-operative and post-operative management

DESCRIPTION OF ACTIVITY	Performs a surgical procedure, including pre-operative preparation of the patient and surgeon and post-operative care.
COMMENTARY	This activity requires attention to patient and surgeon preparation to minimize contamination, knowledge of the procedure and regional anatomy, manual dexterity to competently and efficiently complete the procedure, reflection and response to changes, and formulation of post-operative care plan.
MOST RELEVANT DOMAINS	<p>1: Clinical Reasoning & Decision-making ■</p> <p>2: Individual Animal Care & Management ■</p> <p>5: Communication ■</p> <p>6: Collaboration ■</p>
ELEMENTS WITHIN ACTIVITY	<ul style="list-style-type: none"> • Formulates surgical plan incorporating pre-operative considerations [2.1] ■ • Obtains and documents informed consent [5.1, 5.3] ■ • Directs the veterinary team to assist in procedure [6.2] ■ • Aseptically prepares self and surgical site [2.1] ■ • Performs surgical procedure [2.1] ■ • Applies principles of asepsis and surgery [2.1] ■ • Recognizes own limitations and asks for assistance when required [1.7] ■ • Responds to changes in patient status [1.3, 1.5] ■ • Formulates analgesic and post-operative care plan [1.3, 2.1] ■ ■ • Communicates surgical findings and post-operative care to client [5.1, 6.3] ■ ■ • Documents surgical procedure, post-operative care plan, and client communication in the medical record [5.3] n





EPA 7

Performs general anesthesia and recovery of a stable patient including monitoring and support

DESCRIPTION OF ACTIVITY	Induces, maintains and recovers a stable anesthetic patient (ASA 1 or 2), including monitoring vital functions and providing supportive care. Evaluates patient status and determines a suitable anesthetic and analgesic protocol.
COMMENTARY	Applies knowledge of anatomy, physiology, pharmacology and the procedure as well as psychomotor skills to execute the protocol safely. Recognizes and manages complications.
MOST RELEVANT DOMAINS	<ul style="list-style-type: none"> 1: Clinical Reasoning & Decision-making ■ 2: Individual Animal Care & Management ■ 5: Communication ■ 6: Collaboration ■ 8: Practice & Financial Management ■
ELEMENTS WITHIN ACTIVITY	<ul style="list-style-type: none"> • Evaluates patient based on history, physical examination, results of diagnostic tests and procedure for suitability for anesthesia (ASA status 1 or 2) [1.1, 1.3] ■ • Formulates a general anesthetic and analgesic protocol including premedication, induction, maintenance and recovery. Selects drugs and equipment [1.3] ■ • Shares plan with team members and answers questions [6.1] ■ • Executes anesthesia and recovery safely [2.1]. ■ • Collaborates with others to update plan as needed [6.1] ■ • Complies with legal requirements for use of controlled substances [8.2] ■ • Maintains records including drugs, vital signs, important anesthetic and procedural events and complications [5.3] ■





EPA 8

Formulates recommendations for preventive healthcare

DESCRIPTION OF ACTIVITY	Creates a preventive healthcare plan, considering the animal/group needs and the care setting, to optimize health and welfare, and to prevent spread of disease.
COMMENTARY	Prevention of disease is a core veterinary activity that protects the health of animals and the public.
MOST RELEVANT DOMAINS	2: Individual Animal Care & Management ■ 3: Animal Population Care & Management ■ 5: Communication ■
SECONDARY DOMAINS	1: Clinical Reasoning & Decision-making ■ 9: Scholarship ■
ELEMENTS WITHIN ACTIVITY	<ul style="list-style-type: none"> Evaluates animal/ group needs, considering age, health status, exposure risk [1.1, 2.2, 3.1] ■ ■ ■ Makes recommendations regarding disease screening [1.1, 2.2, 3.1, 5.1] ■ ■ ■ ■ Educates clients and stakeholders on disease prevention measures [2.2, 3.1, 3.3, 5.1, 5.2, 9.2] ■ ■ ■ ■ ■ Performs preventive healthcare measures [2.1] ■ Documents recommendations and procedures in the medical record [5.3] ■



