



## Frequently Asked Questions

Where the term “CBVE Framework” is used, it specifically refers to the AAVMC CBVE Framework

### SECTION 1: DO WE WANT TO USE CBVE?

#### What are the benefits of CBVE for the profession, faculty and students?

Competency-based education has become the preferred model in healthcare education. CBVE informs employers, graduates, educators and students of the entry-level competencies that a career-ready new graduate should have, and the process by which these may be attained. There are multiple benefits to this outcomes-based approach for various stakeholders including the learner, the educator, the profession, and society:

##### Benefits for the Learner

- Learners visualize what is needed to become a veterinarian through competencies.
- Learners have a clear roadmap to becoming a veterinarian through milestones.
- Learners develop confidence for Day-1 practice through performing entrustable professional activities.

##### Benefits for the Faculty

- Educators use Day-1 competencies to distill what is needed to train a competent graduate.
- Educators use milestones to guide and support learners' growth through developmental stages to achieve competence.
- Educators use backwards design to develop curricular content and activities constructively aligned with competencies and milestones.
- Educators use entrustable professional activities to guide workplace-based assessment and feedback.
- Educators benefit from a more engaged learners who take responsibility for their learning and seek feedback.

##### Benefits for the Profession

- Veterinary graduates reliably master strategically identified competencies, ensuring the reputation and relevance of the veterinary profession.
- Upon graduation, veterinarians are optimally equipped to assume an array of professional roles relevant to rapidly evolving health and environmental landscapes.

##### Benefits for our Patients, Employers and Society

- Graduates demonstrate essential competencies to effectively serve individual patients, animal populations and their societies.

- Employers use competencies to establish expectations and to mentor new graduates in professional development.
- Graduates are better prepared to engage in interprofessional collaboration and systems-thinking to solve complex problems.

### **Benefits for Veterinary Programs and Academic Leadership**

- Veterinary educational programs use standardized outcomes to optimize curricular development.
- Veterinary educational programs use a common framework for collaboration on shared curricular models.
- Veterinary educational programs share instructional and assessment tools to efficiently and effectively achieve high quality educational outcomes.
- Educational leaders use standardized rubrics for evaluating curricular outcomes to facilitate quality improvement and accreditation.

### **Do we know that competency-based education is better than what we are currently doing?**

Competency-based education (CBE) is not a new concept and has been implemented in a variety of professions for more than a decade (*Frank et al. 2017*). Since it is centered around competency, it ensures that all graduates meet standards for entry-level competence at graduation regardless of where, how long, or with whom they trained. Many also argue that by making training learner-centered, trainees take more responsibility for their own learning (*Frank et al. 2010*). Milestones help trainees understand the development process and gauge their own level of achievement (*Holmboe et al. 2010*). Finally, it encourages academic training institutions and their regulators to review their curriculum with a focus on outcomes rather than process (*Brightwell & Grant 2013*). While there is little educational research yet to support or refute these claims, CBE is evidence-guided and intuitively transparent so that all stakeholders (learners, faculty, administrators, and the general public) can be confident that a program is producing competent practitioners (*Norman et al. 2014; Ross et al. 2018*).

### **If my program wants to use the CBVE Framework, will we remain compliant with the AVMA Council on Education for accreditation?**

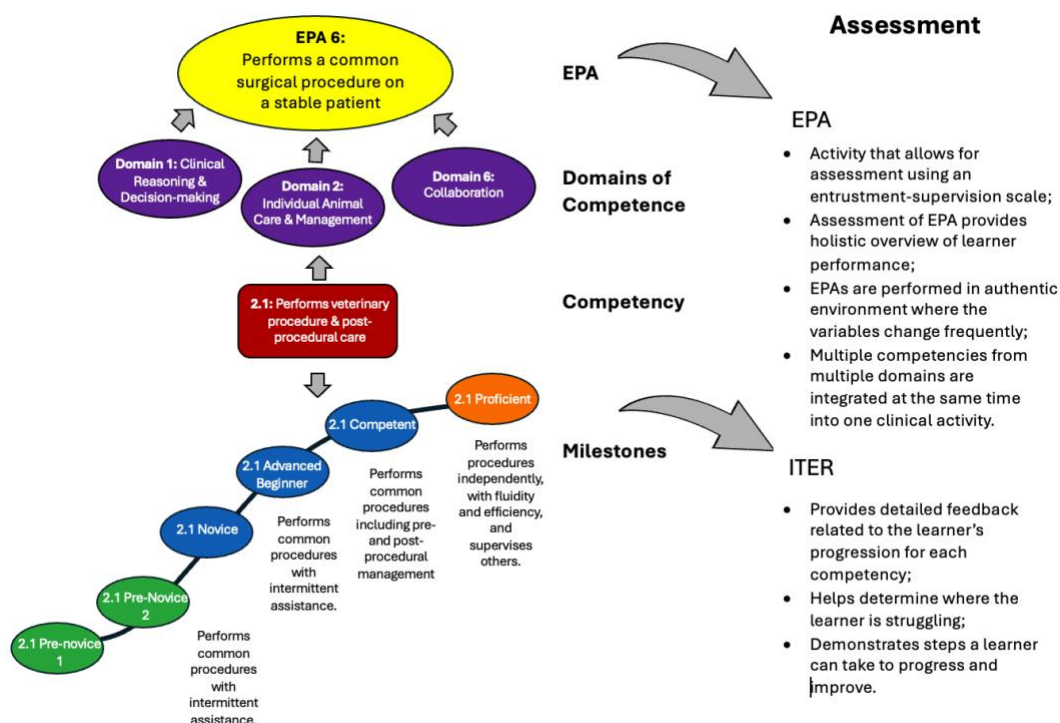
The CBVE Framework encompasses the nine clinical competencies established by the AVMA Council on Education (COE) as well as other content included in the COE accreditation standards. The COE will accept mapping to the CBVE Framework as a substitute for mapping to the nine competencies as long as the college's outcomes demonstrate alignment with the nine competencies. You may view the cross mapping guide between COE and CBVE [here](#).

## **SECTION 2: HOW DO THE COMPONENTS OF CBVE WORK TOGETHER?**

### **What is the relationship between the CBVE Framework, CBVE EPAs and CBVE milestones?**

Definitions of the CBVE Framework competencies, milestones and EPAs can be accessed by clicking on the links. The image below shows an example of the connections between the CBVE EPAs, Domains of Competence, competencies and milestones. The green circle represents an EPA, the purple ovals are Domains of Competence, and the red rectangles are competencies. An EPA is a complex activity that incorporates multiple competencies from multiple domains. CBVE milestones were written so that the

Competent level is the expected level for attainment by graduation. Milestones describe level of achievement for individual competencies.



## What parts of the CBVE Framework, EPAs and milestones can be customized to suit my individual program?

The CBVE Framework is designed to be shared internationally across veterinary colleges in pursuit of global adoption of competency-based outcomes training in veterinary education. Consisting of nine overarching domains of competence and 32 competencies, this framework is intended to be utilized widely without alteration to preserve the ability of programs to communicate and share assessments, content, and activities related to the outcomes as published. The component of the Framework that may be customized is the illustrative subcompetencies, which may be adapted by individual programs to support their local context and/or culture. Additional opportunities for customization by individual programs include development of preclinical milestones (prior to the novice level milestone or entry into clinical/workplace-based training) and additional EPAs to support your local context.

## SECTION 3: WHAT ARE THE COMPONENTS OF CBVE?

### CBVE FRAMEWORK

#### Why does the CBVE Framework focus on clinical graduate outcomes rather than public health, research, and other non-clinical career paths?

The CBVE framework outlines “clinical reasoning and decision making” in domain of competence 1, as a representation of the skills necessary to “think critically” in any aspect of the veterinary profession. No matter the career choice, “synthesizing and prioritizing problems” (CBVE competency 1.2) is an important aspect of the healthcare professions. Veterinary education maintains its foundation in the care for animals with more specific career pathways to be defined based upon regional and societal needs or foci of individual programs.

### **Where is my discipline in the CBVE Framework (e.g., epidemiology, physiology, radiology)?**

In the CBVE framework, domains of competence are inclusive of foundation/basic sciences. Individual subject matter is not outlined specifically as it is expected to be included in higher level thinking (i.e., outcomes for a veterinary graduate). For example, a learner that is competent in “CBVE competency 1.1 – Gathering and assimilating relevant information about animals” should be expected to perform and interpret results from the physical examination, which requires a working knowledge of physiology, anatomy, infectious disease, etc.

### **Where are specific technical skills in the CBVE Framework (e.g., post-mortem examination)?**

Specific skills such as intravenous catheterization or post-mortem/necropsy examination, for example, are not specifically listed in the CBVE competencies. The CBVE competencies are overarching and many of the specific technical skills can be found within those competencies. For example, a learner that is competent in “CBVE competency 2.1 – Performs veterinary procedures and post-procedural care” must be able to perform many technical skills.

### **Within the CBVE Framework, where are public health and One Health?**

The CBVE framework is considered core for all learners in all schools and developed to be achievable by all schools. Its design reflects the clinical professional degree and the competencies that are common across schools rather than outcomes that may be taught at a specific school given each school’s unique mission and philosophy. In the CBVE framework, domain of competence 4 is dedicated to public health: “The graduate responds to issues at the interface of animals, humans, and the environment, utilizing a global perspective and sensitivity to local cultures.” One Health fits well within the scope of this domain as outlined in CBVE competency 4.2 – Promotes the health and safety of people and the environment.

### **Where are difficult decisions included in the CBVE Framework (e.g., end of life, finances, etc.)?**

Domain 5 Communication states “the graduate communicates effectively with diverse clients, colleagues, other healthcare professionals and the public to promote animal, human and environmental health and wellbeing” and CBVE competency 5.2 states the graduate “Adapts communication style to diverse audiences.” There are subcompetencies listed in this domain that exemplify end-of-life discussions and this would be where other difficult discussions would be developed by individual programs.

## **EPAS**

### **Why are all EPAs clinical?**

EPAs are designed to represent core activities veterinary professionals will encounter at entry-level in the workplace, and are distinct from simulations in the practical laboratory or classroom. Colleges and schools may wish to create additional EPAs for their unique contexts and that are focused on additional workplace-based activities.

### **How would schools address the challenge of learners performing EPAs in clinics with limited primary case responsibility?**

For some of the EPAs, learners will require a clinical service where hands-on and primary case responsibility is possible. For other EPAs, performance may require more direct faculty supervision.

## **What is a nested EPA?**

A nested EPA is a discrete task that can be encompassed within a broader EPA, for example, physical examination is encompassed within EPA1. They can be considered integrated building blocks of a complete EPA that can be used as scaffolding in the preclinical or clinical curriculum to guide the development of clinical competence.

## **Is an EPA an assessment instrument?**

An EPA in itself is not an assessment, but rather provides the foundation for the development of assessment rubrics because it describes activities in the workplace. An EPA integrates multiple competencies and describes daily activities that graduates should be able to perform in the workplace. For veterinary education, EPAs are predominantly performed as learners rotate through various clinical experiences or in pre-clinical simulation exercises. EPAs are also useful to provide feedback and insight into learners' performance.

## **What is an entrustability scale and how can I use it in my program?**

An entrustability scale is used to characterize the level of supervision needed by a trainee during a workplace-based activity which reflects their progression towards independent practice. (*Rekman et al., 2016*).

An entrustability scale can be used to assess learner performance and provide targeted feedback based on the level of supervision needed by a learner during an EPA or other workplace-based activity. This reflects a learner's progression towards independent practice and can be used to direct future training.

## **How do EPAs relate to OSCEs?**

Objective, structured, clinical examinations (OSCEs) are timed units of assessment most commonly performed through models, simulation, and/or case-based experience in the curriculum. An EPA represents a workplace-based activity and provides a foundation for the development of workplace-based assessment. EPAs may be performed during the final year of the veterinary program over a period of time (e.g., within a clinical service rotation and across multiple rotations).

## **SECTION 4: HOW DO WE IMPLEMENT CBVE?**

### **We are interested in implementing CBVE at our school. What should we do first as a program?**

Identify a group of people who are invested in implementing CBVE at your school and seek leadership buy-in. This group will be your champions for the process. Develop a shared understanding of CBVE by reviewing the competency Framework, developmental Milestones, Entrustable Professional Activities (EPAs), and additional information on the CBVE website. Use this review to start conversations (e.g. at department meetings, town hall meetings, etc.) about your program's current strengths and areas for potential development. These conversations will help to build critical mass and further buy-in for the process of aligning your curriculum more closely with the CBVE Framework.

### **Can CBVE be implemented incrementally?**

Yes. You could start by mapping your existing competency framework or program outcomes (new graduate attributes) to the competencies in the CBVE Framework, mapping your subject/course level

learning outcomes to the CBVE Framework, or developing your curriculum in alignment with CBVE if you are completing a holistic curriculum redesign. This will help to identify strengths and gaps that you can then address to align your curriculum more closely with the CBVE Framework. An alternative option would be to start by aligning your clinical assessments with the EPAs, and then have certain services or rotations pilot the EPAs. This would help to apply the framework to what learners do in clinics every day.

### **How can CBVE be integrated into a program?**

You can reframe how your faculty think about your curriculum by focusing on the outcomes and creating a shared mental model. CBVE focuses on what a graduate can do.

One way to begin integration of CBVE is to alter assessment strategies (ensuring alignment with outcomes) and increase opportunities for application within the current curriculum. For example, learners may already work in pairs or groups in various courses but may not be trained in how to work as members of a team or assessed on their abilities to collaborate.

In addition, the CBVE Framework can be mapped to an existing curriculum to help identify strengths and gaps. The curriculum can then be modified to address the gaps. Additional illustrative sub-competencies can be created that may be specific for that program. This will help provide a clear road map for the learners and faculty.

### **How much extra work does CBVE create for the faculty?**

This would depend on the current curriculum of the college. It may involve changes in:

- mindset in order to focus on competency rather than content
- organization and presentation of the curriculum to focus on competencies
- assessment techniques
- types, amount and frequency of feedback

It is possible that there may be no *extra* work; the work simply could be *different* from what is already being done.

### **What tasks, skills and attributes are expected of a teacher in a CBVE program?**

In CBVE, in addition to imparting knowledge and assessing performance, teachers need to have coaching skills. Good coaches have excellent observational skills and a holistic understanding of what is required to be a successful veterinarian.

Skills that make teachers successful as coaches in a CBVE program include:

- Understanding and preparing for anticipated learning needs of learners working toward competency.
- Facilitating active and effective learning experiences.
- Gauging current competence of learners and supporting learner progress through milestones towards competence.
- Providing opportunities for learners to practice using their knowledge in the same way they will be using it in the clinical environment.
- Designing assessments that support and documenting the progressive development of competencies.
- Giving timely, specific, learner-centered feedback.
- Using program assessment tools to document observed learner performance according to the level of training.
- Promoting and stimulating clinical reasoning and problem solving.

- Employing reflective practice to refine clinical supervision.
- Embodying the roles, attitudes, and competencies of a veterinarian.

### **In a CBVE program, what are the roles veterinarians in the community can play?**

Input from veterinarians in the community is important in identifying areas for curricular improvement related to CBVE. Veterinarians will provide input into the learning contract and learners' attainment of competencies. They will provide input on the format of the assessment instruments to ensure they are practical.

Practitioners serving as educators and assessors of learners will need to be trained in the basic components of CBVE and be familiar with the competencies and associated milestones. This includes giving coaching feedback, promoting a growth mindset, controlling personal bias in assessment, and fostering professional development of learners in the workplace.

### **What is the role of veterinary technicians/nurses in CBVE?**

Veterinary technicians/nurses are integral to teaching of clinical skills and professional skills in the curriculum. They can coach, provide feedback, and assess veterinary students in performing some EPAs.

## **SECTION 5: HOW DO WE ASSESS CBVE?**

### **What role does a competency committee play in CBVE?**

A competency committee is a group of educators that collects and evaluates assessment data on learners to ensure level-appropriate progress and makes recommendations or decisions for advancement (*Monrad et al, 2019*). In competency-based education, it is necessary to evaluate longitudinal feedback and learner assessments from multiple sources, which is considered a component of programmatic assessment. The committee should use this data to support learner progression across each semester and each program year.

### **How is the approach to student evaluation / learner assessment different if we adopt CBVE?**

Student evaluation must focus on program outcomes throughout the educational curriculum. This may require your program to revise the methods of assessment and processes for decision-making on learner progression (e.g., passing grades may not indicate competency).

## **SECTION 6: HOW CAN CBVE BE APPLIED TO PRECLINICAL OR POST-GRADUATE CURRICULA?**

### **How can the CBVE Framework be applied to the preclinical curriculum?**

Competencies can be divided into components (skills, knowledge, and attitudes) that may be used as milestones to develop the pre-clinical, or foundational curriculum. Veterinary education programs include pre-clinical instruction that provides the foundation to prepare students for patient management in the authentic workplace. In CBVE 2.0, milestones for the pre-clinical curriculum are identified as Pre-Novice

1 and Pre-Novice 2 where learners are developing competence within controlled and simulated environments.

### **How can competency-based education be applied to residency training (or other post-graduate) programs?**

Competency-based education is an outcomes-based approach to the design, implementation, learner assessment, and evaluation of an educational program, using an organized framework of competencies and can be applied to residency training or other post graduate programs. In fact, competency-based medical education originated in post-graduate medical training programs. The CBVE 2.0 Framework can be developed from the Proficient veterinary graduate milestone that is aspirational after graduation to include other post-graduate (i.e., residency) milestones. In order to ensure the fidelity of the CBVE 2.0 Model, general residency milestones can be developed that broadly encompass all specialties, then specialty-specific EPAs could be developed to customize the Model to each discipline.

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