CBVE
Competency-Based Veterinary Education

CBVE Newsletter – August 2022

Exciting News to Share

Welcome to the fourth installment of the CBVE Newsletter from the Council on Outcomes-based Education (COVE). We want to hear from you so please use the following email address to reach us - vetmed@cbve.org. Let us know what's on your mind about CBVE, ask a question, make a suggestion, share activities happening in your colleges, or sign up for the newsletter.

We are excited to announce that we are developing CBVE version 2.0! To this end, we will be reviewing the current CBVE Education Model including the CBVE framework (domains and competencies), milestones and Entrustable Professional Activities (EPAs). As a reminder, the purpose of this educational model is to:

- Support the implementation of outcomes-based education at institutions globally
- Share a common language among veterinary schools
- Guide evidence-based data collection to support advances in teaching and learning

Part of this review process will involve obtaining feedback from stakeholders to ensure that the competencies, milestones and EPAs are aligned with current expectations of day-one veterinary graduates. We will soon be sending out a link to a survey to enable the members of AAVMC to provide feedback about what modifications (if any) are required for a possible CBVE version 2.0. We would encourage you to complete our survey and, when making suggestions for changes to the CBVE Model, remember that the CBVE Model is intended to meet the following characteristics:

- Professional (DVM) level
- Day-one ready (entry-level general practice) outcomes
- Terminology is consistent/enduring (not contemporary jargon)
- Global appeal (works across institutions internationally)
- Adheres to evidence-based principles of education
- Entrustable Professional Activities (EPAs) - essential activities from everyday general practice workplace

Thank you for your help with this important process.

What is CBVE?

Back to Basics!

In this edition of the CBVE Newsletter we will provide you with some tools to help explain the CBVE Model of Education, which includes three components: a framework of competencies, milestones and Entrustable Professional Activities (EPAs). The relationship of these three components is the cornerstone for understanding CBVE and for envisioning how these components can be integrated into implementation of CBVE at your institution.

To simplify these often-confusing relationships, we have developed an everyday example to demonstrate how the components are connected. A veterinary example will follow.

Let's start with the everyday activity of "riding a bike" and use this as an example of an Entrustable Professional Activity (EPA).

The skill of riding a bike is a complex activity that requires many coordinated actions to be performed correctly. The same is true for an EPA in veterinary education.

To successfully ride a bike, the actions that must be coordinated are the "competencies". Each competency could be grouped into a larger domain of competence which is the highest level of classification in the CBVE Framework. Although we have only shown one competency in each of the four domains in our example of bike riding, typically there are multiple competencies within each domain of a competency framework.
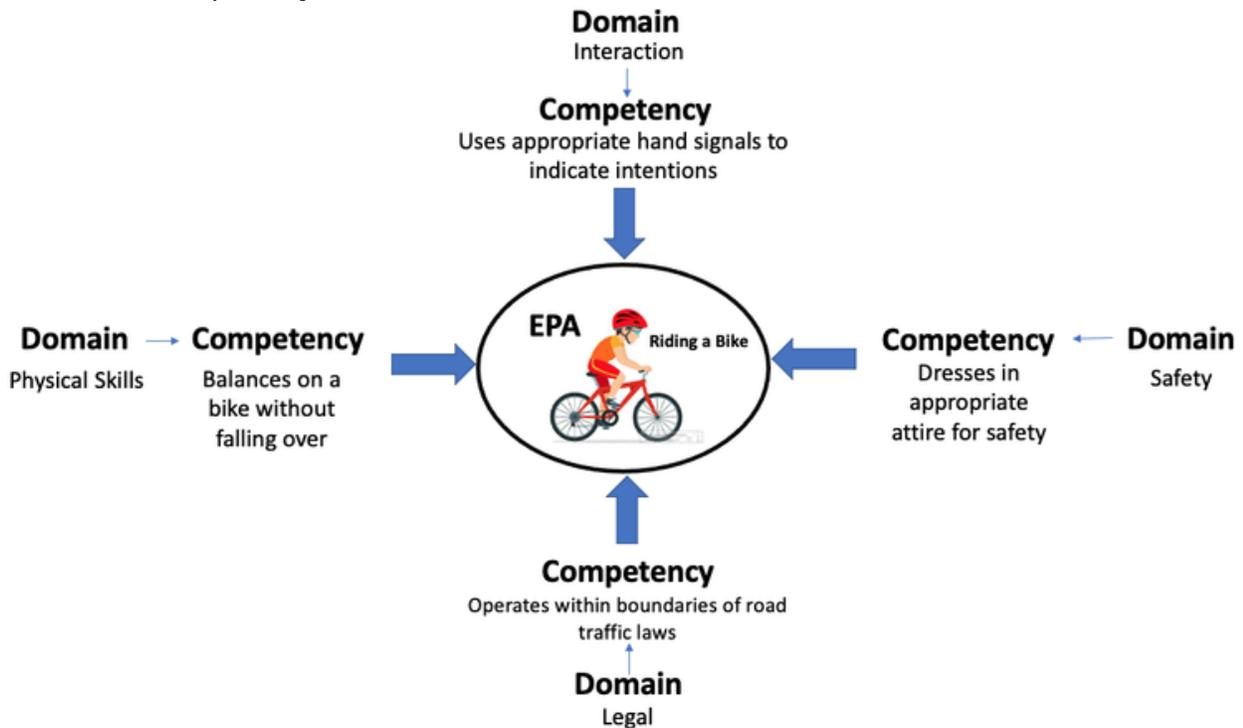

Consider this example of riding a bike as an EPA, there are four larger, higher-level domains of competence: "Physical Skills", "Interaction", "Safety", and "Legal". Learners must work towards achievement of the competencies in each domain during the training program in order to successfully

perform this EPA. From this example, you can see that EPAs require learners/trainees to combine multiple competencies within multiple domains to perform this activity.

Now let's move into the third component of the CBVE Model of Education, the milestones.

We will use the same EPA of "riding a bike" and take the domain of competence "Physical Skills" and its associated competency "Balances on a bike without falling over" to illustrate how the milestones support learning to ride a bike.
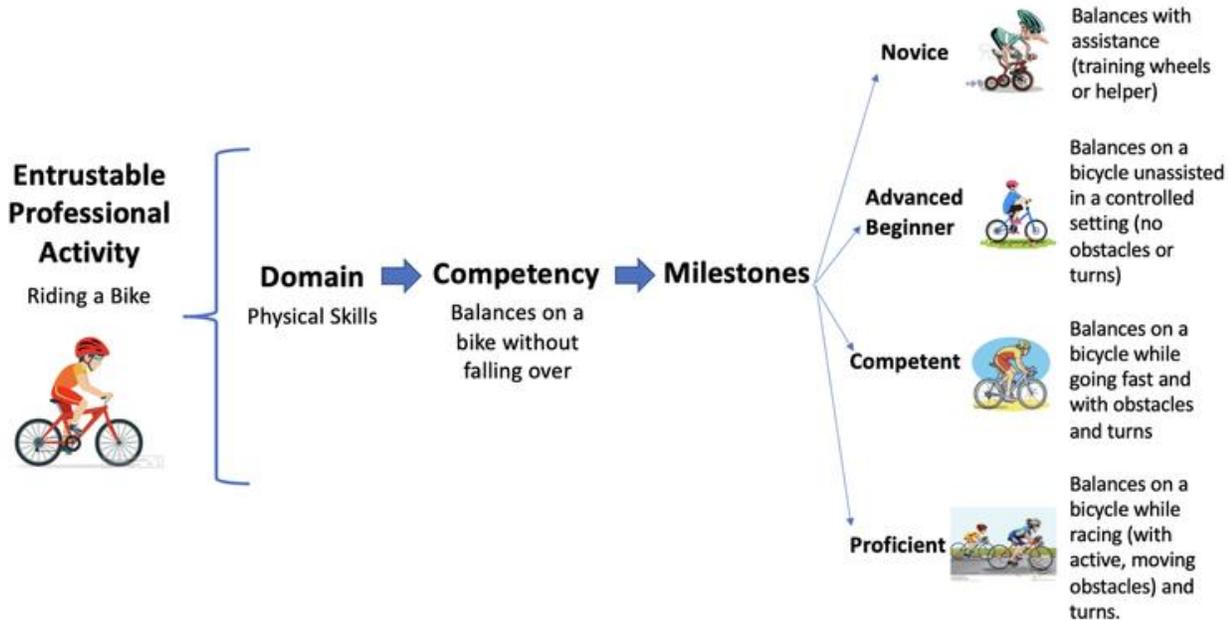

Here you can see that the milestones describe the levels of learning or achievement for the competency "balances on a bike without falling over". As learners progress through the training program, assessing their pathway toward achievement of each competency is an important step for guidance and ultimately for its achievement. As in medical education, the CBVE milestones are used to assess learner progression during clinical training. In the CBVE model, students are expected to enter clinical training having achieved the level of "novice", progress through the level of "advanced beginner" during the clinical training program, and reach the level of "competent" by the time of graduation. The level of "proficient" is aspirational and reserved for growth as a veterinarian in the years following graduation.

It is important to consider how the activity of riding a bike should be assessed. In this example, there are two components of the CBVE Model of Education that are assessable: the EPAs which integrate multiple competencies and the individual competencies. Take a look at the large blue arrows in the "riding a bike" diagram below. You can see that EPAs are typically assessed using an

entrustment/supervision (ES) scale. An ES scale allows the observer to determine the level of trust a learner requires to perform a core veterinary activity without supervision. In this example, how much trust do you place in this learner to ride a bike without supervision the next time? Another way of assessing this learner could be to use milestones to provide feedback to the learner about how they are progressing relative to each specific competency. Using the example of riding a bike, it is important to determine where on the developmental continuum this bike-rider places for the competency "balances on a bike without falling over" at the time of assessment. Are they a novice, advanced beginner, or have they already achieved the competent or proficient level? In clinical training, milestones are most commonly incorporated using an In-Training Evaluation Report (ITER) as indicated by the other large blue arrow in the diagram. Competencies may be assessed many other ways (e.g. Direct Observation of Procedural Skills (DOPS), Objective Structured Clinical Examination (OSCE) etc).
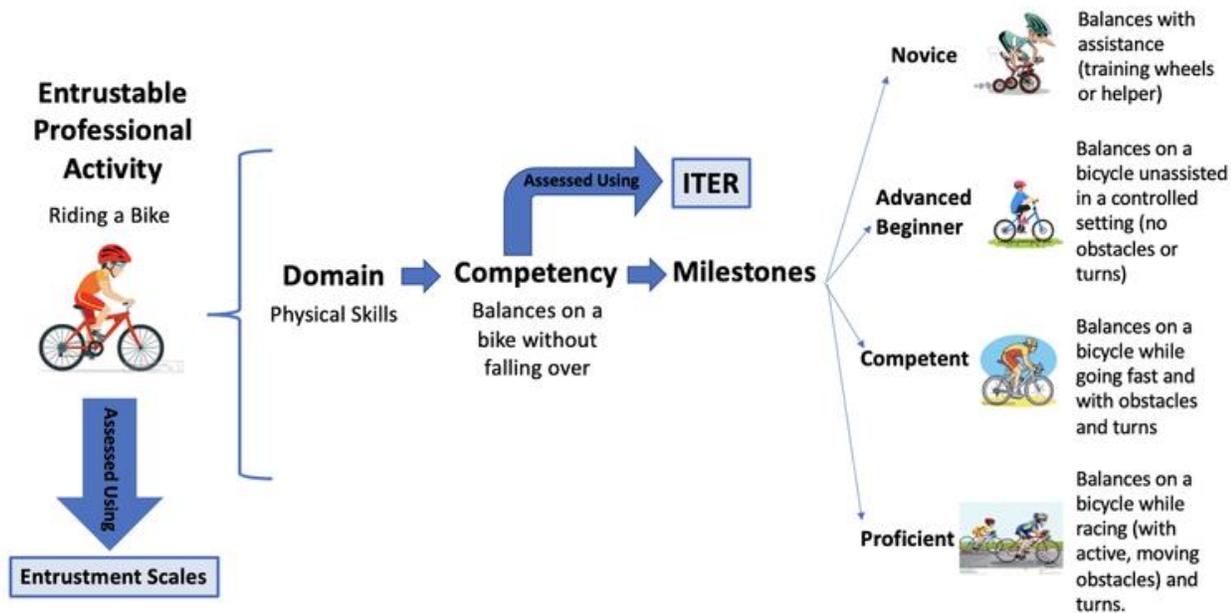
Now, let's switch to a veterinary example to demonstrate the same concepts. In the CBVE Model of Education, there are eight published CBVE EPAs. EPAs are a unit of professional work. You may download a copy of the CBVE EPAs and associated competencies here. We will take a look at "Performs a common surgical procedure" as our veterinary EPA example. As with the bike riding example, we provide the four CBVE domains of competence that are associated with this EPA, along with one example CBVE competency.
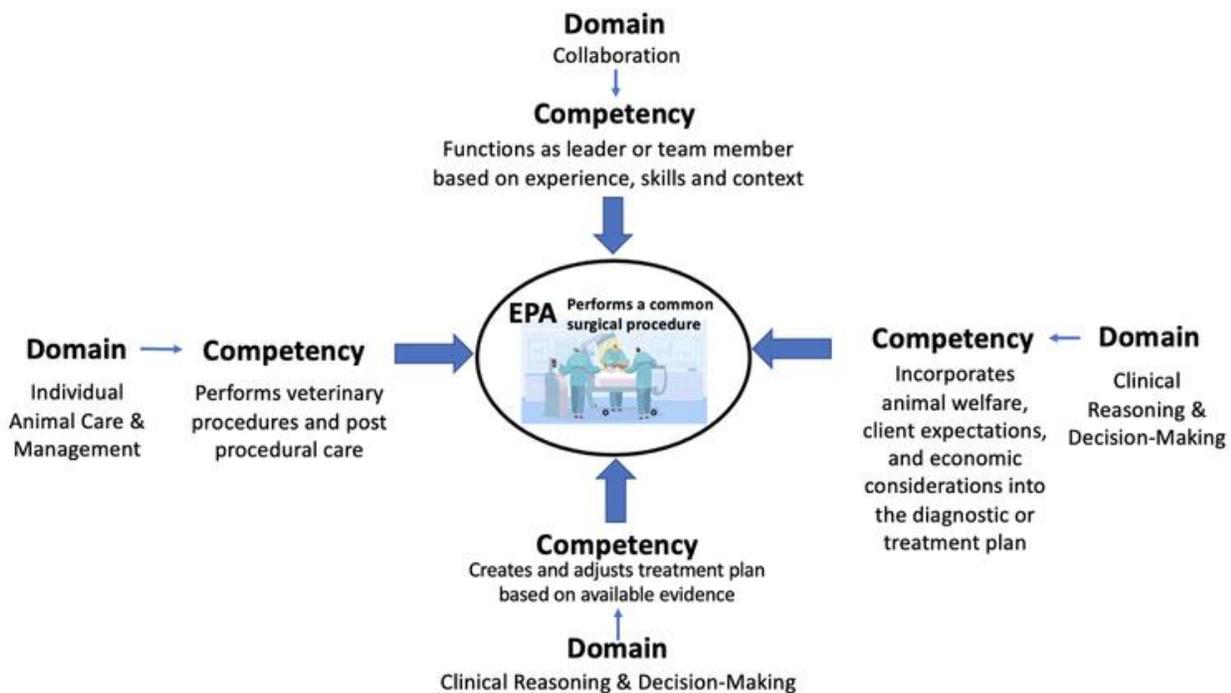
As we saw with the bike riding example, the CBVE milestones are used to guide and assess students along the developmental continuum for each competency across the pre-clinical and/or clinical training program. Milestones allow faculty observers to identify the appropriate student level of development for each individual competency assessed.
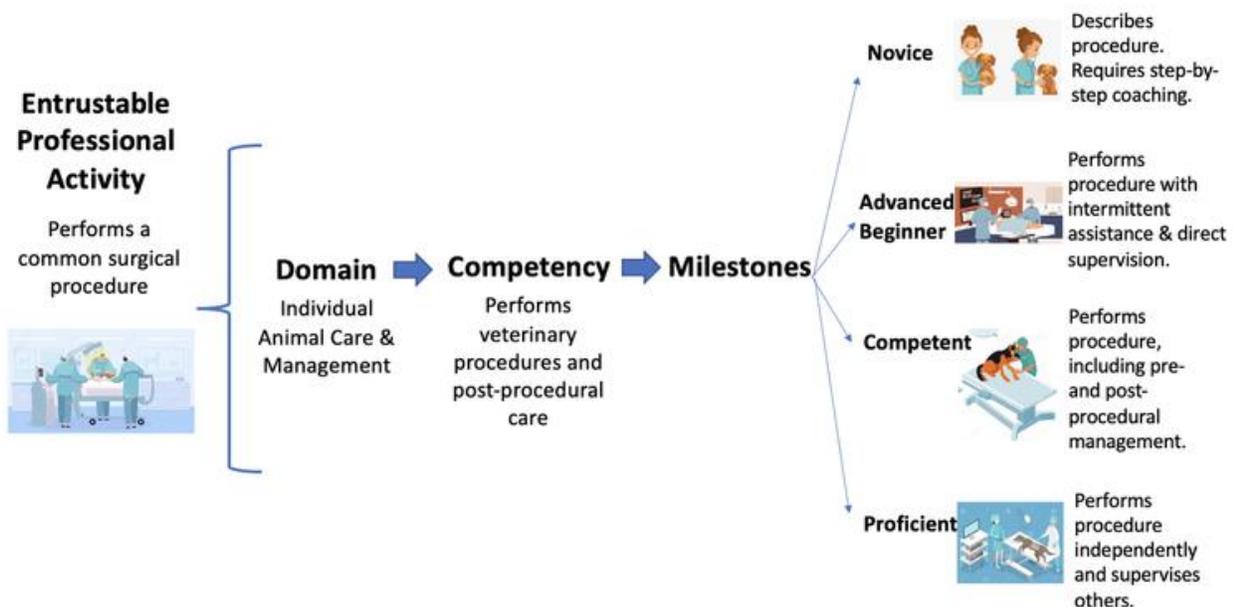
As noted in our earlier example, learners may be assessed using a variety of tools throughout the pre-clinical and clinical curriculum to ensure that learners are progressing towards competence for all domains and competencies within the CBVE framework. Each milestone is not necessarily a separate assessment, rather tasks will often address milestones for multiple competencies. Assessment of competencies in a clinical environment may be achieved using an ITER during a rotation allowing

development across individual competencies to be evaluated. EPAs, representing the routine activities that veterinarians perform on a daily basis, may be assessed by direct observation using an ES scale in the authentic clinical setting. To further clarify, a student performs an EPA and the evaluator assigns a level of trust or required supervision for that student, for that activity, for that specific time, related to the degree of supervision required for the student to perform the activity safely and effectively. Entrustment is a valuable form of clinical assessment because it allows learners to understand how they are developing as independent veterinarians, performing workplace-based activities in an authentic setting.
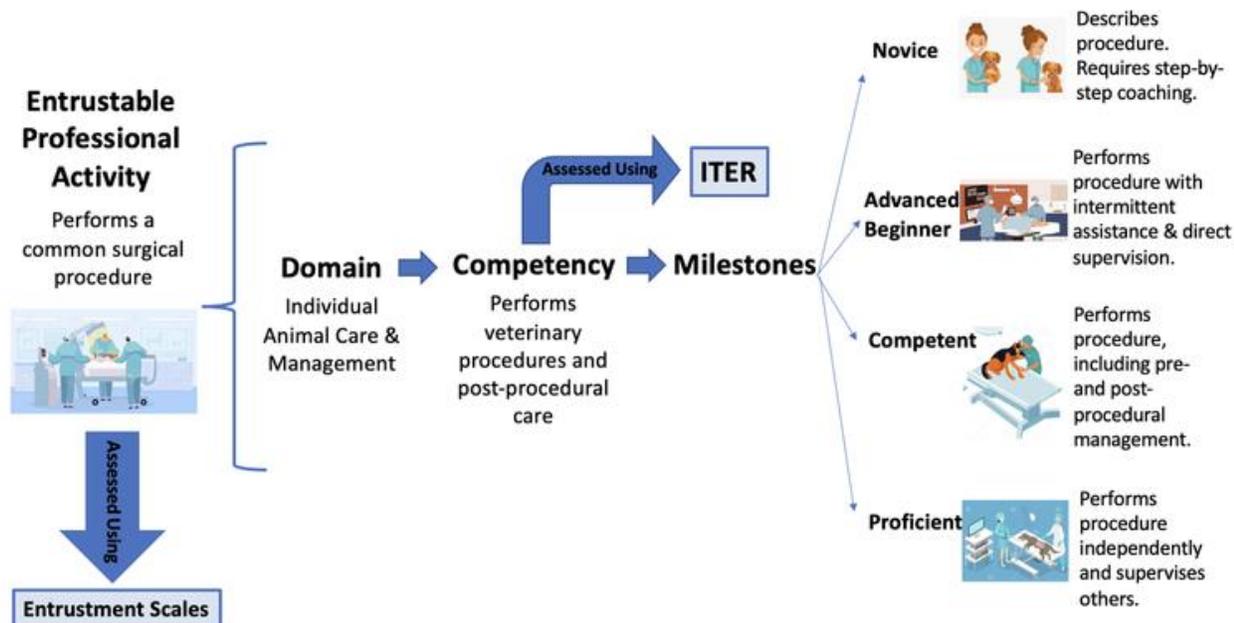
In summary, the relationships between competencies, milestones and EPAs are important to understand in order to correctly implement the CBVE Model of Education. In the next installment of the CBVE Newsletter, we will continue to examine how to operationalize the components of the CBVE Model and explore opportunities for implementation within your curriculum.

Upcoming Events

CBVE Summer Session 2021 Town Halls #1 and #2

- To view the PPT and video of the sessions, please visit the website

CBME 2021-2022 Webinar Series

- Each month, starting October 2021, click here for schedule and to register

AMEE and Ottawa - Lyon 2022

- Both Conferences will be held as separate hybrid events August 27-31, click here for more information

CBVE Town Hall - September 23, 2022

- The CBVE Model - How to Operationalize CBVE within your Program - more details to follow