AAVMC American Association of Veterinary Medical Colleges

CBVE Competency-Based Veterinary Education

CBVE Newsletter – March 2022

Exciting News to Share

Welcome to the third installment of the CBVE Newsletter from the Council on Outcomes-based Education (COVE).

COVE and CBVE Working Group members recently met virtually and face-to-face at the AAVMC's Annual Meeting in Washington DC. It was wonderful to be able to connect again in this environment and develop strategic directions for 2022.

COVE and CBVE Working Group Members at AAVMC's Annual Meeting from the left: Drs. Karen Inzana (Long Island), Peggy Barr (Western), Heidi Banse (Louisiana State), Emma Read (Ohio State), Kristin Chaney (Texas A&M), Jody Frost (COVE Consultant), Jennie Hodgson (Virginia-Maryland), Jared Danielson (Iowa State), Kathy Salisbury (Purdue), Melinda Frye (Colorado State).

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, let us know what is going on in your colleges or sign up for the newsletter.

Updates from COVE

Join us! We will soon be calling for volunteers for the Advocate and Analyze CBVE Working Groups. We have detailed below the expertise we would like to enhance the groups, so that you can consider whether you would like to apply. We are looking for 1-2 new members of CBVE Analyze and 2 new members of CBVE Advocate. We will be sending out specific information regarding how you may volunteer to join these working groups soon.

The **CBVE Analyze Working Group** is charged with *advancing scholarship to improve veterinary education and professional development in teaching and assessment*. Individuals with expertise in one or more of the following areas are encouraged to submit their nomination for the CBVE Analyze Working Group:

- Workplace-based assessment.
- Qualitative research methods and data analysis.
- Quantitative research methods and data analysis.
- Data analytics.
- Needs assessment.
- Translation of evidence-based medicine into first-opinion practice.

The **CBVE Advocate Working Group** is charged with *engaging, influencing and educating stakeholders in veterinary education on CBVE and encouraging its adoption and acceptance*. Individuals with expertise in one or more of the following areas are encouraged to submit their nomination for the CBVE Advocate group:

- Engage, influence and educate other key stakeholders on the value of CBVE.
- Influence accreditation to support outcomes-based education.
- Influence licensure and the veterinary profession to support outcomes-based education.
- Communicate best evidence on outcomes-based education to the veterinary community.
- Information technology including website and newsletter design and publication.

What is CBVE?

This table illustrates some of the major differences between CBVE and traditional curricula. Of course, these differences are not strictly dichotomous. For instance, formative/authentic assessments can be found in traditional approaches, and there are summative evaluations in competency-based education.

In each CBVE Newsletter we will highlight a Point of Difference between traditional education and competency-based education. In this edition, the focus is on flow of information in CBVE between the teacher and the learner.

Points of Difference	Traditional Education	Competency-based Education
Curriculum	Inputs drive the curriculum	Outputs drive the curriculum
Focus	Discipline based	Graduate outcome abilities
Goal	Knowledge acquisition (Instruction)	Knowledge application (Coaching)
Flow	**Teacher ⟶ Learner**	**Teacher & Learner (partnership)**
Evaluation	Summative / High stakes	Formative / Authentic learning environments for assessment

"Flow is a state of motion and not a destination" John Tegzes; Western University of Health Sciences.

In traditional education, information tends to flow from faculty and teachers to the students and learners. It is hierarchical in the sense that the teacher is the one with the knowledge, and the one who decides what is given to the learners. The teacher is in control, and the flow of information is away from the teacher, and toward the learner. Students' motivations to learn might be mixed. While they desire to achieve knowledge to become effective veterinarians, they are often more motivated by jumping hurdles rather than gaining competence, simply trying to survive from exam to exam.

It's as if we are preparing students to do well on a game like Jeopardy, where random and often unrelated questions are aligned within specific categories much like traditional education organizes content and exams within subjects (i.e., categories). The more facts a student can successfully recall, the better they will score.

But this does not necessarily translate to competence in clinical practice sites if students do not know how to use what they have memorized. It is hoped that at some point the students learn to put everything together on their own so that they become competent veterinarians. Traditionally, they put it all together during clinical rotations that mostly occur during the final year of the veterinary curriculum, where they are expected to receive coaching from clinical preceptors. But it is important that this coaching relationship start at the very beginning of the veterinary curriculum.

Flow of information in the context of competency-based education is a collaborative partnership between teachers and learners. The teacher's role not only assesses knowledge but delves deeper into the student's application of facts learned. In doing so, the teacher can create individualized learning directed at improving learner's application of knowledge to clinically relevant situations, beginning on day one. In the first couple years, where the basic sciences predominate, it is important to provide context and relevancy to veterinary practice. This can be done by providing case-based discussions and examples of why certain facts have clinical relevance. Consider this example:

- Instead of teaching a simple fact like, "the axillary nerve innervates the teres major, minor, and deltoideus muscles" it can be transformed to deeper learning leading to competence by creating a classroom-based discussion about a dog that suffers trauma to its shoulder region resulting in poor mobility.
- The students can be asked to investigate the muscles and nerves that might be impacted, and the surgical approach to their repair.
- Rather than telling the students (i.e., flow of information from the teacher to the learner) the nerves that innervate certain muscles of the forelimb, we ask the students to discover the muscles that support the forelimb and shoulder, the nerves that innervate them, and a possible surgical approach to their repair if they were to become damaged through trauma.
- This sort of transformation can occur along all subjects and topics.

This process requires careful thought and planning by faculty, but the payoff to students can be immense. What we are aiming for is long-term understanding of complex topics rather than simple regurgitation of facts that may not serve students well when encountering patient problems in the clinical practice sites. In the example above, by having the students reason through the discovery process, they are more likely to retain

the information in long-term memory, and be able to transfer that knowledge in the care of future patients (i.e., the flow of information is a partnership between teacher and student where the teacher's role is to create opportunities for students to learn and apply knowledge, and to coach students when they have difficulty putting it all together). Hence, we are together building competence.

Must Reads

Milestones and Millennials: A Perfect Pairing-Competency-Based Medical Education and the Learning Preferences of Generation Y.

Desy JR; Reed DA; Wolanskyj AP.

This is a wonderfully quick, enjoyable, and thought-provoking article that supports the implementation of CBVE within our programs today.

In the article *Milestones and Millennials: A Perfect Pairing – Competency-Based Medical Education and the Learning Preferences of Generation Y*, by Janeve Desy and colleagues from the Mayo Clinic, the learning preferences and expectations of students in today's medical education programs were explored and characterized by years of their birth. Learners known as the "Millennial" generation, also known as Gen Y, are students born between 1982 and 2000 and are reported in this publication to be the most prevalent age group represented in undergraduate education, residency training and early career faculty positions in medicine. The Millennials are known to be confident and diverse; they are paradoxically motivated by self-interest yet they exhibit profoundly altruistic behaviors. They demonstrate a collective mindset and they have been described as hopeful, team-oriented, assertive, and self-liking. Their major influences are the internet (they have never known a world without technology at their fingertips), school violence and terrorist attacks, helicopter parents, and educational toys. This generation, also known as "digital natives" (a.k.a. "instant messaging generation", and "the trophy kids") are oftentimes considered challenging to teach because their educational development does not mirror that of many of the educators in faculty positions today.

Based upon a survey of 809 medical students, a 16 personality factor questionnaire was distributed in 2006 and found that Millennials scored significantly different in 10 of the 16 personality factors with highest scores in perfectionism, rule-consciousness, and emotional stability and with lower scores for self-reliance. A similar study of Millennial and Generation X (born between 1961-1981), found that Millennials have a need for feedback, interaction with peers, and feeling a sense of accomplishment for their work. Along with this information, it appears Millennials also share traits of greater narcissism, self-liking, assertiveness, and high expectations.

Given this information, it is not hard to understand that Millennials have a unique outlook on education and assessment and different expectations from learners of previous generations. Students in the Millennial generation value mentoring, personalized learning, working in teams, and the incorporation of technology into the educational program. For assessment, Millennials desire continuous, direct feedback and they have high expectations for their performance and that of their assessors.

From this information, it becomes clear that competency-based education is the perfect model for learners today. Students are a valued stakeholder in acceptance and adoption of the CBVE model of education. It is important that educators today understand what drives this generation of learners and are willing to adapt to their expectations in the classroom, laboratory, and authentic workplace environments.

What Millennials "Want"	How can CBVE support Millennial learners?
They want to feel a sense of accomplishment	CBVE focuses on graduate outcomes/abilities, and CBVE Milestones help learners understand their learning progression along the continuum towards competency acquisition.
They want and value personalized learning	CBVE promotes learner-centeredness and focuses on competency-based instruction that promotes the acquisition of competencies.
They want and value mentorship	In CBVE, faculty become facilitators of learning and students take responsibility for decisions they make about learning and monitor their own learning progress.
They desire continuous, direct feedback	CBVE EPAs are a great mechanism for providing feedback. As learners perform multiple competencies in a combined activity, assessors provide in-the-moment feedback in the authentic workplace environment.
They have high expectations for their performance (and that of their instructors)	CBVE promotes programmatic assessment which encourages multiple longitudinal assessments of learners across the program.

Ask the Experts

- Kathy Salisbury, Purdue University, College of Veterinary Medicine
- Karen Cornell, Texas A&M University, College of Veterinary Medicine & Biomedical Sciences

How would you describe the relationship between coaching and feedback?

According to Van der Ridder (2008), feedback in clinical education is "specific information about the comparison between a trainee's observed performance and a standard, given with the intent to improve the trainee's performance." Effective feedback describes the observed behavior. Feedback reinforces positive behaviors and identifies areas for improvement.

However, coaching goes beyond feedback by identifying performance goals in response to feedback and developing plans to achieve them.

In this context coaching:

- Is student-centered and individualized.
- Encompasses a broader set of conversations that include a collaborative discussion of goal setting, prompting of student self-assessment, delivery of specific, descriptive feedback by the clinician, seeking of student perceptions of and reactions to feedback, and joint brainstorming for changes that may be made to improve performance.
- Facilitates the development of student ability to critique their own performance which in turn allows the student to develop skills supportive of lifelong learning.

Throughout this process students develop the skills of self-assessment and self-regulation that are essential for veterinarians.

What is the role of coaching in CBVE?

Implementation of CBVE requires a coaching culture to help students achieve the outcomes. CBVE is student-centered and allows the learning experience to be tailored to the student. Deliberate practice, under the guidance of an expert coach, enables students to develop expertise. The role of the coach is essential.

To implement CBVE, the paradigm needs ***to shift from assessment of learning to assessment for learning.***

What do you consider to be the key features of coaching?

Development of a relationship between the coach and student is paramount. Coaching is most effective when there is:

- Learner belief in the abilities and knowledge of the coach.
- A clear understanding of the coach's intentions with the knowledge that the coach is working from a position of beneficence.
- A shared mental model of goals and desired outcomes which establishes trust and maintains learner safety.
- A plan for *how* learner improvements might be made/implemented and for *when* that competency or skill will be observed/assessed again for additional input.

In the current clerkship system, students spend 2 or 3 weeks on most clinical rotations. Within this system, it is challenging for students and clinicians to develop a trusting relationship and it is difficult for assessors to provide feedback over time to make summative assessments regarding progression. Additionally, students may work with multiple clinicians during a rotation and each clinician may have only occasionally observed the student's performance.

Do characteristics of the student and/or the instructor impact the benefits of feedback?

For greatest benefit, a growth mindset is critical.

- The coach views feedback as a growth opportunity for students, rather than delivering bad news.
- The student welcomes and seeks feedback as an opportunity to grow and improve.

Earlier in their professional development, medical students tend to receive feedback passively, and prefer to hear positive feedback as reassurance. More senior students often use feedback to inform their professional development, and value breadth in types and sources of feedback.

While the large majority of medical students reported that they value feedback, far fewer were able to identify where to seek it. Students often did not recognize informal feedback that was provided throughout their clinical day. Normalizing feedback early in training may encourage recognition and receptivity in later years.

Learners tend to seek feedback from those who communicate effectively, are reliably available, and who possess content expertise.

How do you transition to a coaching culture in a veterinary teaching hospital?

There are a several perspectives that must be considered to transition from a culture of *assessment of learning* (evaluation) to *assessment for learning* (coaching).

The environment and mission of veterinary teaching hospitals (VTHs) must be considered. VTHs provide a workplace-based experience that is intended to transform students into competent veterinarians. This need to teach is often overshadowed by the mission of the VTH to provide top quality patient care and client service because it is essential that patient care be the highest priority. A coaching culture can be developed by shifting clinicians' frame of reference from providing patient care first and teaching second to teaching being an essential component of excellent patient care. Faculty are responsible for modeling best practices in the hospital as well as ensuring that veterinary students provide safe and effective patient care This requires direct observation of student performance with coaching feedback to help the student develop competence. Direct observation is essential for effective coaching. It's not possible to coach someone on how to golf without directly observing them swinging a golf club. Likewise, veterinary students must be directly observed in the workplace doing the activities of a veterinarian, also known as entrustable professional activities (EPAs).

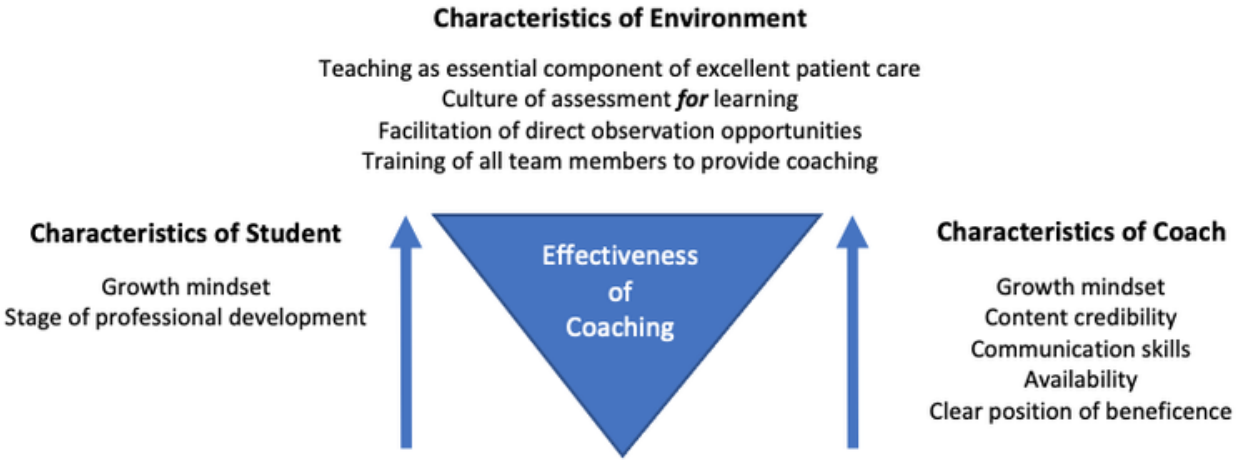
Meaningful feedback is formulated by comparing these observations to a standard of practice. Instructors should be well versed in current standards of practice so that their feedback is accurate. Clinicians may require training to bring their knowledge and skills up to the current standard of care and to improve their observation skills. Student coaching can become an integral part of clinical practice by examining work processes and identifying small changes to allow direct observation of student work and brief, immediate feedback without hampering the work flow.

There is the perception that feedback takes a lot of time, so it is often one of the first things to go when clinicians become busy. Effective, efficient feedback can be provided by:

- Brief, focused, in-the-moment feedback – this takes little time and is highly effective.
- Frequent, short observations which are usually better than one long observation when supported by targeted feedback.
- Directly observing a portion of an EPA, such as obtaining a history; it is not necessary to observe the entire patient/client encounter.
- Many short observations by multiple instructors.

Providing better feedback to students will improve their skills and improve patient care.

The entire healthcare team should be trained in best clinical practices in their area of expertise and in how to coach students. If all team members have a coaching mindset, the learning environment will be more supportive and encourage students to stretch themselves by attempting skills they need to learn.



For more detailed information on coaching and feedback, visit the website.

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

INs and OUTs of EPAs - Utrecht 2022

- April 7-9, 2022, click here for more information

Primary Care Veterinary Educators Symposium

- April 20-23, 2022, Oklahoma State University, College of Veterinary Medicine
- To register, click here

Veterinary Educator Collaborative (VEC) Symposium

- June 28-30, 2022, hosted by Kansas State University, College of Veterinary Medicine
- For more information, click here

AMEE and Ottawa - Lyon 2022

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