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TITLE: Trust me, I'm a veterinarian: incorporating entrustable professional activities into veterinary education

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Trust me, I'm a veterinarian.

Last month the RCVS informed us once again that veterinary surgeons are amongst the most trusted professionals<sup>1</sup>. For those that are glass half full it might have made us nod to ourselves with a smile as we balanced Christmas clinical activities and family life to some degree. The more cynical might have thought that in the current socio-political climate, if we are being compared to politicians, bankers and journalists does this make us feel any better? Without questioning how the survey was run, it does appear that veterinary surgeons are trusted. Trust is paramount for patient treatment, safety and care. The public need to trust the veterinarians looking after their animals, and the veterinary team must trust each other. Teaching undergraduates in the clinical environment, supervisors entrust students to assume clinical responsibilities. This is not far removed from William Osler's clerkship system that was introduced in 1889 at the Johns Hopkins University in Baltimore. Osler moved teaching from the lecture theatre to the bedside and enable students to model from more experienced colleagues, gaining tacit knowledge in actual work-placed settings<sup>2</sup>. That model, combined with a variety of different educational theories, still dominates medical education today, and by proxy veterinary education.

More recently there is a trend in veterinary education to move away from solely knowledge-based assessment, and to include assessment of clinical competence. This usually involves a structured assessment either in the work place, for example a direct observation of a practical skill (DOPS) which could be, for example, placing an intravenous catheter, or in an assessment centre where an aspect of a clinical scenario is examined using a structured assessment tool; objective structured clinical examination (OSCE). There is certainly an overlap in what can be assessed, though an OSCE appears to have a greater reliability as a test, as it is standardised<sup>3</sup>. Most veterinary schools are using some form of these structured assessments in their programmes, however there is a lack of research into the reliability and validity of assessing competencies, though they are fair and here to stay<sup>4</sup>.

In 2015 the Association of American Veterinary Medical Colleges (AAVMC) formed a competency-based veterinary education (CBVE) working group with the goal to create a shared competency framework and develop eight core entrustable professional activities (EPAs)<sup>4</sup>. An EPA is made up of multiple competencies, such as performing a common surgical procedure on a stable patient, including pre-operative and post-operative management (EPA 6 in the aforementioned article<sup>5</sup>). EPAs are described as self-contained units of clinical practice which can be entrusted to a trainee for independent practice during their training. Surrounding these EPAs are levels of entrustment, ranging from knowledge only, to being able to supervise another (Box1; 5 levels of entrustment). Realistically, for most educational systems teaching veterinary undergraduates the entrustment could not be greater than level 3 for the majority of EPAs, but it would still be a consistent standard. Trainees going up through the levels of entrustment would appear to be a better fit in post graduate clinical training, where it would seem more appropriate for the trainee to be at the highest level of entrustment; a trainer. The CBVE working group acknowledged that and comment the uniqueness of a veterinary surgeon graduate compared to a medicine graduate as they can cover all aspects of veterinary work in all species.

Embracing the EPAs framework then we need to consider what do we, as veterinarians, expect a new graduate to be able to do? What do we trust them to do, and what do we think that the public should expect of a new graduate? This is what the authors, Favier, Godijn and Bok (2020) have answered for the veterinary graduates in the Netherlands in this week's issue of the Veterinary Record. The trio looked at their current university programme and they identified that 78 out of 182 skills that students were meant to attain were related to surgery. They then incorporated those 78 skills into 37 EPAs, which were then sent to be evaluated using a modified Delphi approach. Rather than the educators then deciding which should be removed they importantly included employers to identify key skills. These 37 EPAs were then whittled down to 13, three of which were added during the procedure (Box 2). The first three of their thirteen EPAs listed some might consider as competencies and can be assessed separately and certainly make up other EPAs, though as the authors comment these were considered separate and crucial to group.

Whether or not you agree with those specific EPAs the manner in which they were determined should be commended. EPAs improve on the isolated competency assessment by packaging them into an aspect of clinical practice. This should give greater confidence to the veterinary graduate, their employer and the public of their clinical ability in these specific EPAs and improve patient safety. It is likely that those veterinary schools who have AVMA accreditation across the globe will adopt the 8 core EPAs put forward by the AAVMC CBVE working group, as a global standard (or expectation). This should be considered a starting point and other EPAs could be added, using a similar approach as Favier, Godijn and Bok with national educators, employers and recent graduates contributing to their development.

This work is the first step in identifying and developing which EPAs should be incorporated into the veterinary undergraduate curriculum. The next steps will involve how the EPAs should be assessed using reliable and repeatable methods, and then is there a way that we can assess benefits, if there are any, to the veterinary graduates or their patients with these changes. The potential for EPAs to improve confidence in veterinary graduates as well as setting clear expectations of what clinical tasks and level of entrustment they should be able to graduate with, can only be beneficial in that challenging transition between undergraduate and veterinary surgeon. EPAs would also provide a framework for new graduates to continue to develop their skills under supervision from more experienced colleagues. Although EPAs are only starting to be used in post graduate veterinary clinical education, it likely that this trend will continue as it provides clear expectations of what a specialist can perform, for both the referring veterinarian and the public.

EPAs are a positive step in packaging many elements of clinical practice in a context that undergraduates will practice it in. Providing a structure for entrustment might also highlight that veterinarians are life-long learners and it takes time and practice to master a skill, rather than 'see one, do one, teach one'. We must incorporate professional aspects into these EPAs, something the CBVE working group have done, for example to direct the veterinary team and recognise their own limitations. We should also work out methods to reflect on these changes to curricula and consider the impact on those going through it and the profession. I'm not sure it is going to have as greater significance as Osler's clerkship,

though it might help keep veterinary surgeons on the list of most trusted UK professionals for a few years more.

#### Box 1

Five levels of supervision for EPAs<sup>6,7</sup>

- 1 knowledge but no permission to act (observation)
- 2 Permission to act with direct, proactive supervision (in the room)
- 3 Permission to act with indirect supervision (on request, on site and quickly available)
- 4 Permission to act with distant supervision (not directly available)
- 5 Permission to provide supervision to more junior students/colleagues.

#### Box 2

13 surgical skill EPAs<sup>7</sup>

- 1 Preparing the patient for surgery
- 2 Gloving and gowning (sterile technique)
- 3 Basic knot tying and suturing
- 4 Managing and treating a traumatic wound in the skin/subcutis
- 5 Removing a foreign body in the ear canal
- 6 Treating an othematoma (aural haematoma)
- 7 Removing a simple mass in or under the skin
- 8 Dental cleaning and extraction of teeth
- 9 Castration of a health dog, cat, rabbit and treating possible complications
- 10 Reconstruction of an umbilical hernia (without vital organs being clamped)
- 11 Suturing an eyelid injury
- 12 Repositioning of a luxation bulbi (proptosis)
- 13 Opening of an abscess

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