



Enhancing and supporting veterinary capability

A consultation on graduate
and professional development
phase outcomes

Royal College of Veterinary Surgeons
In partnership with Work Psychology Group

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Foreword

Dear Colleague,

It is no exaggeration to state that this consultation about graduate and professional outcomes is the most important review of veterinary education undertaken by the RCVS in the last 20 years. It is therefore even more important that we hear from as many different stakeholders within the veterinary professions as possible in order to fully understand how best to support and enhance veterinary capability in the future.

Originating from the Vet Futures project, the scope of this work is broad and there is a real opportunity to implement changes that can have a lasting and positive impact on the profession. I readily acknowledge the scope of this consultation means that it may require a significant amount of your time to complete. I should therefore like to thank you, in advance, for taking the time to send us your views.

The contents of this document have been developed by the RCVS Graduate Outcomes Working Party, chaired by Professor Stephen May FRCVS, with the invaluable input of veterinary professionals from a wide variety of backgrounds and sectors. The consultation itself is being run on our behalf by the Work Psychology Group (WPG), an independent research consultancy.

Whilst this document provides the detail of the matters under consideration and the questions being posed, responses will only be collected online, so that all views can be collated and analysed effectively.

WPG will email all registered veterinary surgeons and veterinary nurses in mid-November with a unique link to the consultation website, which I would encourage

you to use. This approach enables you to save your progress as you work through the questions, and return to complete the consultation at a later time if required. Of course, we would also warmly welcome feedback from veterinary students, veterinary organisations and all members of the veterinary practice team. Please visit www.rcvs.org.uk/go to access a generic link where you can respond to the consultation.

We are formally launching the consultation at the London Vet Show on 15 November, with an invitation to 'Be Part of The Big Picture'. I do hope you will be able to accept that invitation and join your colleagues throughout the veterinary professions in sending us your views.

Once again, thank you very much for your help.



Susan Dawson FRCVS
Chair, RCVS Education Committee



#GradOutcomes #TheBigPicture

Introduction

This consultation document has been developed by the RCVS Graduate Outcomes Working Group, which is seeking the views of the veterinary profession on a series of important issues, to shape the future direction of veterinary education in the UK.

To inform a joined-up approach and the best possible outcomes for the profession, the following four significant areas are being considered within the same consultation exercise:

1. **Day One Competences / Graduate Outcomes**
2. **Professional Development Phase (PDP)**
3. **Extra-mural Studies (EMS)**
4. **Clinical Education for General Practice**

We recognise that this means that responding to the consultation in its entirety will inevitably involve a significant amount of your time. However, we would be extremely grateful for your feedback on all aspects if possible, to ensure that future proposals fully represent the views of the profession and stakeholders.

Why do we need to re-think Graduate Outcomes?

The RCVS recognises the profession's concerns around the mental health and wellbeing of graduates that are contributing to recruitment and retention issues and a shortage of veterinarians. An increase in scientific knowledge and diagnostic and therapeutic techniques available to practitioners, as well as increasing expectations of clients, have led to a perfect storm for graduates. Consequently, universities are facing a challenge of curriculum overload in their task of ensuring the ability to develop broader professional competences, and moving away from the impression that success is all about knowledge, which may erode graduate confidence in being able to work independently. This consultation, therefore, seeks the views of the profession

on the action that should be taken in order to engender both confidence and capability at graduation and within the Professional Development Phase, empowering new graduates to embark on various career paths in which they will thrive.

Background to the Graduate Outcomes Project

In October 2014, the RCVS and The British Veterinary Association launched Vet Futures, with the aim of developing a vision and ambitions for the veterinary profession of 2030, and a way forward for achieving these. The Vet Futures report identified six major ambitions and was followed by the development of an action plan designed to deliver those ambitions. Actions I and J relate to a review of graduate outcomes and a review of extra-mural studies. The full Vet Futures Action Plan can be found here: <https://www.vetfutures.org.uk/resource/vet-futures-action-plan-2016-20/>

Whilst this project began with the Vet Futures Action Plan, it has evolved from that point as a result of the Working Group's discussions. The overall aim of the work has been to consider what it means to be a vet and the professional attributes/competences that are needed alongside clinical competence.

The current consultation sits alongside work being done on outcomes-based continuing professional development (CPD) and RCVS/veterinary school initiatives to address promotion of professional opportunities. Please note that there is a separate and wider discussion taking place regarding recruitment to the profession, involving the Veterinary Schools Council and other stakeholders.

For further background to this important work, membership of the Working Group and supporting principles, please visit our website www.rcvs.org.uk

The Consultation

The consultation is structured in four, interlinked sections relating to Graduate Outcomes (Day One Competences, Professional Development Phase, Extra-mural Studies and Clinical Education). We have chosen to present the sections in an order that will help respondents to answer the questions, rather than chronologically. However, since the four areas are interlinked, it is appreciated that changes made in one area may have a knock-on effect on others.

Whilst we would encourage those who feel able to comment on all sections to do so, we are also keen to hear from any individuals or organisations who have expertise in one or other area and who may wish to provide feedback on individual sections.

The RCVS is working in collaboration with Work Psychology Group (WPG) to run this consultation. The information you provide will remain confidential, ensuring that your responses are not attributable to you as part of any reporting.

WPG will email all RCVS-registered veterinary surgeons and veterinary nurses with a unique link to the consultation website, which will enable respondents to save their progress and complete the consultation at a later time if required.

Veterinary students, veterinary organisations and all other members of the veterinary team are invited to submit their views online via www.rcvs.org.uk/go

1. Day One Competences / Graduate Outcomes

Background

The RCVS has a statutory duty to set and monitor the standards of veterinary degrees for registration into the profession. The “Day One Competences” describe the knowledge, skills and attributes required of veterinary students upon graduation to ensure that they are prepared for their first role in the profession and safe to practise independently.

Competence in a job has been defined as “the ability to perform the roles and tasks required by one’s job to the expected standard”. The standard of competence expected at any given time will vary with experience and responsibility, and it is recognised that the Day One Competences represent a graduate at the start of their career. Competence is therefore a relative term, both in terms of task and fluency in its execution, and increasing levels of competence will be expected throughout the professional’s career.

Following graduation, veterinary surgeons are expected to complete the Professional Development Phase (PDP) to support their development in the workplace. The

educational outcomes for the PDP are described in section 2.

The Day One Competences are being reviewed as part of this consultation, to ensure they are fit for purpose and fully represent the skills and attributes required of veterinary graduates to work safely and independently upon entering the profession. This consultation is seeking feedback on a new “Model” to represent the Framework of Day One Competences and proposed changes to the individual competences listed within the document.

In looking at other international frameworks and developing the model, the Working Group felt that several key areas needed more emphasis within the Day One Competences.

The additional areas proposed are outlined in the table below (either as specific additional competences (a) – (i), or a description of how we feel the area should be revised in future). For reference purposes the existing Day One Competences can be found at appendix A.

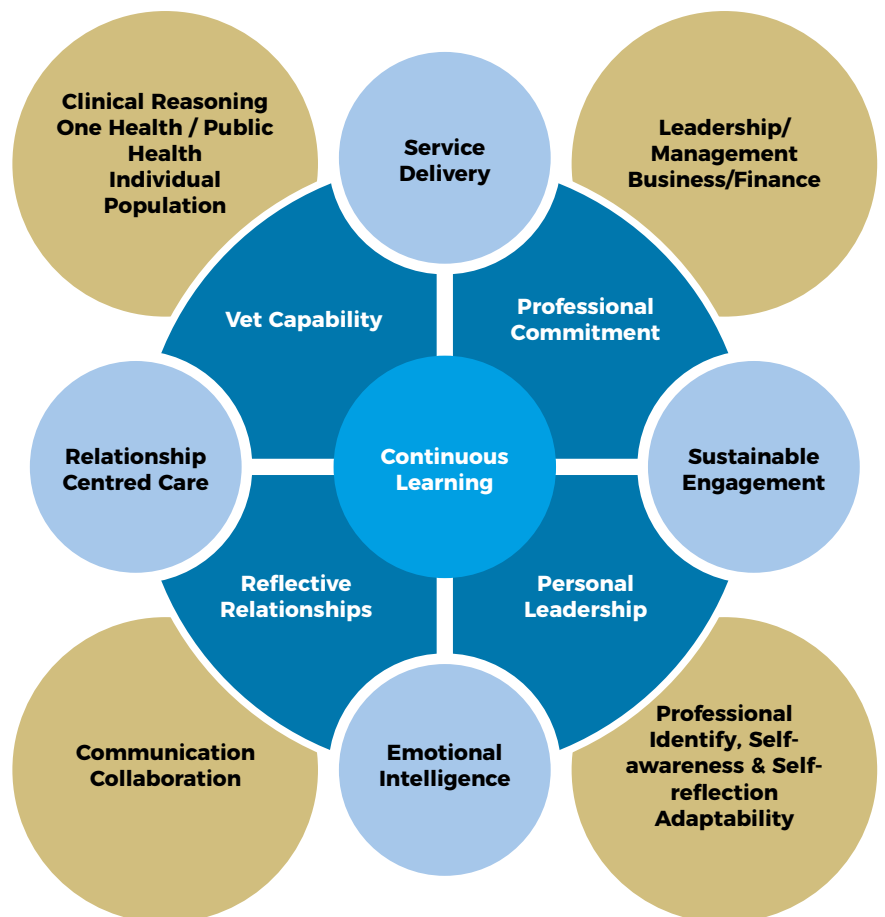
Table 1

Domain	Competences
	a) Synthesises and prioritises problems to arrive at differential diagnoses (Identifies problems, creates refined problem list, prioritises differential diagnoses).
	b) Prioritises situational urgency and allocates resources (Triage cases to address most urgent and important problems first, recognises emergent situation and directs action, recognises and responds to reportable, transboundary, epizootic and emerging/re-emerging diseases).
	c) Adapts knowledge to varied scenarios and contexts (Extrapolates knowledge to novel species or situations, adjusts existing protocol or procedure when standard measures are unavailable).
	d) Acts confidently in complex situations where there is ambiguity and uncertainty and where there may be no clear diagnosis.
Animal Population Care and Management	e) Applies population management principles in compliance with legal regulations and economic realities (Recommends disease prevention measures, advises on nutritional management, recommends housing and husbandry protocols, designs therapeutic plans for disease management).
	f) Recommends and evaluates protocols for biosecurity (Develops isolation protocols, selects disinfection protocols, recommends protocols for animal movement).
	g) Advises stakeholders on practices that promote animal welfare (Advocates for animal welfare through communication of the physical, affective and natural needs of the animal, explains ethical and welfare-related aspects of production processes and slaughter, recognises proper handling and/ or adequate production facilities by interpretation of appropriate animal behaviours, advises on animal husbandry and transport).

One Health/Public Health	h) Promotes the health and safety of people and the environment (Makes recommendations for management of animal waste, carcasses, and by-products, implements safety and infection control practices, advises on disaster/emergency preparedness and response, practises responsible use of antimicrobial agents, describes the role of the veterinarian in food safety).
Communication	Need to review current Day One Communications-related Competences in particular competence number 5 (see appendix A) to be more specific about the skills that are required. For example, communicating with diverse audiences, demonstrating empathy using appropriate terminology, listening attentively, making use of a variety of communication methods, educating clients, colleagues and other members of the veterinary team, demonstrating client centred communication, being able to elicit client goals, expectations, perspectives and constraints and engaging clients in difficult conversations such as financial decisions and end of life care, ability to pass on knowledge supporting peer learning, supporting the veterinary team.
Collaboration	i) Demonstrates inclusivity and cultural competence, though respect for diversity and encouraging diverse contributions within the workplace. Works effectively as a member of an interprofessional team, fully recognising the knowledge, skills and experience of each profession, and individuals within it, and contributes to the synthesis that ensures that team outputs are always optimal.
Professional Identity, self-awareness, self-reflection	Need to amend Day One Competences to emphasise the significance of resilience, self-awareness and self-reflection in order to give graduates the skills they need to be curious and continue to learn, self-directed, responsive and adaptable, collaborative and externally focused, resilient and empathetic, confident and content.

Figure 1: Proposed Model for the Day One Competences
The figure below shows the proposed 'Model' for the future Day One Competences, with four areas linked to 8 domains of competence.

For reference purposes, the existing 'Day One Competences' can be found in appendix A.



Consultation Questions

- 1) The draft model (*Figure 1. left*) shows four linked areas of competence: Vet Capability, Professional Commitment, Personal Leadership and Reflective Relationships. Do you think these capture the knowledge, skills and attributes of a well-rounded veterinary graduate?
- 2) Do you agree with the inclusion / revision of these six additional domains? We are interested in your feedback/rationale in response to this question.
 - Clinical Reasoning
 - Animal Population Care and Management
 - One Health/Public Health
 - Communication
 - Collaboration
 - Professional Identity, self-awareness, self-reflection
- 3) What are the three Day One domains of competence from the model which you think are most important to the success of a newly graduated vet?
- 4) Why do you think these are the most important domains of competences?

The following questions ask for your opinion about the full list of Day One Competences, including the additional areas described in Table 1 above. Further detail about the existing competences can be found in appendix A if you would like more information before answering these questions. When responding to these questions, please consider the finite amount of time that is available within the veterinary school syllabus.

- 5) Do you agree or disagree with the competences and / or revisions proposed in Table 1 (the consultation will allow you to comment on each area individually)
- 6) Are there any specific existing Day One Competences which you think are no longer relevant and should be removed?
- 7) Why do you think these are no longer relevant and should be removed?
- 8) Are there any competency areas that you think are missing? Please provide details.
- 9) What processes need to be in place to ensure that graduates develop the professional competences required of a veterinary surgeon?

2. Professional Development Phase

Background

The aim of the Professional Development Phase (PDP) is to help newly qualified veterinary graduates (or those returning after time away from practice, or overseas graduates) make the transition from life as a veterinary student to working in clinical practice as a professional veterinary surgeon. The PDP provides a link between undergraduate and further postgraduate development. The veterinary degree equips graduates with the essential Day One Competences needed for safe practice immediately on graduation, but these are only a starting point. Professional competence needs to be further developed in a structured manner during the first year or so in clinical practice, until a recently qualified vet can perform confidently as a fully-effective professional in the workplace.

The expected outcomes of the PDP are described in the RCVS “PDP Competences” (also referred to as “Year One Competences”, although it is recognised that PDP may take longer than one year in some cases). The current PDP involves self-assessment and reflection by the veterinary surgeon against these PDP Competences, recording within their Professional Development Record (PDR) and discussion(s) to review progress with their RCVS Postgraduate Dean. It is intended that the PDP provides a degree of structure for new and recent graduates to reflect on their progress in developing their confidence and competence across a number of clinical areas, measured against the general RCVS “PDP Competences”.

In 2017, the RCVS and the British Small Animal Veterinary

Association (BSAVA) jointly commissioned a piece of research, with input from key stakeholders, to evaluate the impact of the PDP in supporting veterinary graduates during the transition from veterinary school to veterinary practice. The aim of the research was to understand the positive and negative experiences of veterinary graduates and their employers with consideration of the wider stakeholders. This included looking into existing obstacles to learning and development, gaps in support provision, common areas of confusion, and areas of anxiety and concern.

The research identified that, while the overall purpose of the PDP is understood and valued, stakeholders do not feel that it is being fully achieved using the current system, and this needs to change. In direct response to this stakeholder feedback, the RCVS is proposing to develop a more structured PDP programme that could be delivered by practices which are, potentially, accredited and / or quality assured by RCVS. This consultation is seeking feedback from the profession in relation to this proposal.

If you feel you would like further reading on the background and context of the PDP, before answering these questions, please see below.

- General background to the PDP can be found in appendix B
- The RCVS “PDP Competences” can be found in appendix C
- The Executive Summary from the 2017 report from the evaluation of the PDP is appendix D

Consultation Questions

10. What do you think the focus of the PDP should be?
More than one area may be chosen.

- a. Mentorship
- b. Developing clinical skills
- c. Developing professional skills
- d. Developing confidence in area of practice
- e. Other

11. We want to get your feedback on what type of structure is required for the PDP, and the degree to which interventions should be implemented for optimal effectiveness. You may wish to consider the following in your response, e.g. mentoring support, supervision, professional development activities, informal assessment to guide reflection, formal assessment of PDP competences

12. Based on your response to the previous question, what do you think would be the main benefits of implementing a more structured PDP?

13. What do you think would be the main challenges of implementing a more structured PDP? For any challenges you state, can you provide any suggestions of mitigating factors?

14. Considering these benefits and challenges, would you support the development of a more structured PDP?

One alternative to a more structured programme would be to retain a similar model to the current PDP, but supported by a different system of recording that

emphasised professional skills alongside clinical skills, to which both the graduate and a mentor would contribute.

15. What is your view of this alternative compared to your preferences for a more structured approach described above?

We would also like your feedback around the possible accreditation or quality assurance of the PDP.

Accreditation refers to an initial review of the environment where the PDP is taking place, against standards set to ensure a quality PDP experience (e.g. including educational support). Accreditation could be similar to the format of the Practice Standards Scheme (PSS) Award and might involve a structured one- to- two-year programme, overseen by a trained supervisor. One requirement of accreditation could be the completion of up to ten hours' education-related CPD to support the role of mentor / supervisor, similar to the requirements for new graduate support in dentistry.

Quality assurance would involve ongoing monitoring of the practice where the PDP is taking place against the set standards.

16. Do you think that the PDP should be accredited by RCVS? We are interested in your rationale in response to this question.

17. Do you think that the PDP should be quality assured? We are interested in your rationale in response to this question.

3. Extra-mural Studies

Background

Extra-mural Studies (EMS) refer to periods of time spent 'seeing practice' on work-experience placements, during the undergraduate veterinary degree.

EMS was introduced more than 80 years ago to address concerns over the adequacy of preparation by schools of veterinary surgeons for practice. The current requirement is 12 weeks of Animal Husbandry EMS and 26 weeks Clinical EMS. Alongside 'intramural' rotations representing core teaching (some or all of which may be off-site) overseen by veterinary schools, the Graduate Outcomes Working Group has discussed how best to achieve the original aims for EMS around experiential learning in the context of career destinations. The use of university hospitals which are essentially secondary/tertiary referral hospitals means that generalist/primary care learning content within some veterinary degrees (delivered by teachers who work in general practice) has progressively been reduced.

EMS is a huge contribution made by the profession to the education of the next generation of veterinary surgeons and is highly valued by universities and by the students who benefit. It has protected primary care exposure. However, all stakeholders recognise it is relatively unstructured and led by untrained mentors, so despite evidence of much good practice, student experience is variable.

PDP & EMS

The new approach to PDP described in section 2 above, including potential development of supervisors, could have consequences for EMS. Restructured EMS, for instance in the form of a long block in the final phase of the five-year programme, could act as a bridge into a first position and PDP. A further benefit may be that some practices might recruit to permanent positions from this final block, with the same supervisor overseeing EMS and PDP. The degree might be completed with a reflective portfolio based on this block.

If you feel you would like further reading on the background and context of EMS before answering these questions, please see below.

- Additional background information about EMS in appendix E
- An overview of changes to EMS proposed by the Veterinary Schools Council in a statement provided to the RCVS is in appendix F
- The AVS Extra-mural Studies guidance can be found in appendix G

EMS Consultation Questions

18. The RCVS is considering various options which could be introduced to improve the way EMS is currently delivered. The consultation asks you to consider each of these elements and indicate

to what extent you think it would be effective in preparing veterinary graduates for the world of work. Please note, each option is independent of others, ie the implementation of one does not depend on another, and more than one option could be implemented.

- a. Early Clinical Exposure – to support with reinforcing the relevance of non-technical skills education to support better understanding of the value of generalism and commercial practice.
- b. A Block Placement – this would fall at the end of the veterinary programme to aid transition to the workplace and better support a re-designed PDP.
- c. Parallel Animal Husbandry Extra-mural Studies (AHEMS) and Clinical EMS – this would be in the control of each individual veterinary school to allow for alignment with their individual approaches.
- d. Incorporation into the curriculum – this option would replace EMS with a system of “externships” (periods of structured workplace experience) that are the responsibility of each

school, which would contract with practices to provide placements. This would embed EMS within the veterinary curriculum and allow schools to align workplace experiences to their individual approaches. Elective externship elements would build on the defined learning outcomes of the core curriculum to address specific student needs and interests. It would be managed within university quality assurance processes, and incorporated into the overall clinical education requirements in RCVS standards and accreditation.

19. Are there any other options that you think should be considered that are not included above? We are interested in your rationale for why these would be beneficial.

PDP and EMS Consultation Questions

20. Do you think EMS should facilitate a transition into PDP? We are interested in your rationale in response to this question.
21. Can you envisage any unforeseen issues in any of the options outlined previously?

4. Clinical Education to prepare graduates for General Practice

Background

A key part of preparing veterinary graduates for a particular career is ensuring they have authentic workplace experiences. In order to better prepare new graduates for the realities of the world of work, the RCVS will need to ensure there is an appropriate balance of generalist (general practice) and specialist experience. The questions in this section, ask for your views about how this work experience should be delivered.

Consultation Questions

22. There are various ways in which workplace based learning could be supported. We are interested to know how effective you consider each of the following examples to be in preparing veterinary graduates for the world of work:
- General practice
 - Specialist/referral hospitals
 - Charity led clinics
 - Emergency/Out-of-Hours facilities
 - Diagnostic laboratories
23. Please describe any other ideas or suggestions you have for how learning in the workplace could be supported.
24. Of the domains of competence listed below, please indicate whether you think the type of workplace in which they are best learnt is general practice, referral practice or traditional university setting. Please give your rationale for each response.
- Clinical Reasoning
 - One Health / Public Health
 - Individual Population
 - Leadership/ Management

- Business/Finance
- Communication
- Collaboration
- Professional Identify, Self-awareness & Self-reflection
- Adaptability

The Working Group has also explored the potential viability of moving to a system of limited licensure and reached the general consensus that this is neither viable nor desirable at present, because it could limit the opportunities of UK graduates to work internationally.

However, there could be advantages to encouraging increased elective elements in the classroom component and increased clinical “tracking” as part of the veterinary degree, allowing a greater choice of modules and electives. This would allow students to focus on a particular species or group of species, for example, small animal, equine, farm animal or mixed tracks, or on a non-species-specific track, such as research. Currently, universities are advised that it is desirable that students are allowed more experience on one given (tracked) field. This can be up to 20% if students meet the Day One Competences, however, few universities take full advantage of this.

25. What do you consider to be the main advantages of increased tracking?
26. What do you consider to be the main disadvantages of increased tracking?
27. Overall, would you support a greater degree of tracking as part of the veterinary degree?

Appendices

Appendix A

Day One Competences

RCVS Day One Competences

1. This document sets out the minimum essential competences that the RCVS expects all veterinary students to have met when they graduate, to ensure that they are safe to practise on day one, in whichever area of the profession they start to work.
2. Competence is a concept that integrates knowledge, skills and attitudes, the application of which enables the professional to perform effectively, including being able to cope with contingencies, change, and the unexpected. The RCVS has adopted as a definition of competence in a job "*the ability to perform the roles and tasks required by one's job to the expected standard*"¹. The standard of competence expected at any given time will "*vary with experience and responsibility and take into account the need to keep up to date with changes in practice*". Competence is therefore a relative term, and increasing levels of competence will be expected throughout the professional's career.
3. Defined in this way, there is an important difference between 'competence' and 'skills'. An example of a competence would be "perform aseptic surgery correctly". This may include a number of associated skills such as scrubbing up, excising small tumours and cysts, routine castration, suturing etc, which would be recorded in the student's experience log as evidence of developing competence. The more generic "competence" requires more than just acquisition of technical skills: it involves applying relevant knowledge, and having the confidence and ability to transfer what has been learnt to a variety of contexts and new unpredictable situations.
4. 'Day One Competence' is the minimum standard required for registration with the RCVS and is the starting point for a variety of roles in the veterinary profession. After graduation, ongoing professional development will be needed in whichever field the new graduate decides to enter, and some roles may require postgraduate training and further qualifications (eg. pathology, government regulatory work, specialist clinical practice).
5. All new graduates in clinical practice should continue their development throughout the Professional Development Phase (PDP) until they reach 'Year One Competence'. Beyond this, they may wish to take postgraduate certificates, and seek accreditation as an RCVS Advanced Practitioner to demonstrate mastery in their field of interest. Those who want to specialise later in their careers will need to aim for a European Diploma to be accredited as RCVS and European Specialists.

¹ "Developing the Attributes of Medical Professional Judgement and Competence", Michael Eraut & Benedict du Boulay, University of Sussex, 2000. www.sussex.ac.uk/Users/bend/doh/reporhtml.html; www.sussex.ac.uk/Users/bend/doh/

6. **A new graduate who has achieved day one competence should be capable and confident enough to practise veterinary medicine at a primary care level on their own, while knowing when it is appropriate to seek direction from more experienced colleagues. New graduates are likely to need more time to perform some procedures. Support and direction from more senior colleagues should be available.** The amount of support and assistance needed by a new graduate should tail off over time, as they continue their development throughout the Professional Development Phase and work towards their 'year one competence'. The measure for achievement of 'year one competence' is that they are "*able to perform a range of common clinical procedures, or manage them without close supervision, in a reasonable period of time and with a high probability of a successful outcome*"².
7. Achievement of day one competence is necessary but not sufficient for a graduate to qualify for registration to practise in the UK. In addition to day one competence, all new graduates will have acquired a range of graduate-level attributes during their university degree course. These attributes include academic and professional capabilities as befits the award of a professional qualification at Masters³ level of the national qualifications framework. Benchmarks for this are set in the UK by the Quality Assurance Agency which oversees standards in UK universities.
8. The new veterinary graduate must be fully conversant with and abide by the [RCVS Code of Professional Conduct and its associated guidance](#), covering:
- professional competence
 - honesty and integrity
 - independence and impartiality
 - client confidentiality and trust
 - professional accountability.

These principles, and compliance with the professional responsibilities set out in the Code, must underpin all their work as veterinary surgeons. The latest version of the Code and supporting guidance can be found on the RCVS website www.rcvs.org.uk/advice-and-guidance/.

9. The day one competences below are set out under the broad headings of:
- General professional skills and attributes expected of newly-qualified veterinary surgeons
 - Practical and clinical competences expected of new veterinary surgeons
 - Underpinning knowledge and understanding
- This last section is an indicator of the extent of knowledge, but of course can never be a fully comprehensive list.

² "Guidance on the Professional Development Phase", RCVS, August 2012

³ The Quality Assurance Agency sets the level descriptors and benchmarks for higher education qualifications in the UK. Masters degrees are placed at level 7 in the framework for England, Wales and Northern Ireland, and at level 11 in the framework for Scotland. This equates to the European 'Bologna' framework for higher education, where Masters degrees are placed within the 'second cycle' of higher education. Details of the framework of levels can be found on the QAA website, www.qaa.ac.uk and at www.qaa.ac.uk/assuringstandardsandquality/qualifications/Pages/default.aspx

10. There are many ways in which these competences can be learnt and assessed, but the RCVS leaves the decisions on the details to universities, subject to periodic accreditation visits. Universities are responsible for developing the day one competence of their students and ensuring that they have met the competences by the time they graduate. They are greatly assisted in this by the practising arm of the veterinary profession, which provides extra-mural work placements so that students can practise applying these competences in the workplace.
11. The RCVS has developed an online Student Experience Log (SEL), which includes a list of procedures and skills that students may cover during their degree course, both in intra-mural rotations in university clinics, and also in extra-mural placements⁴. The skills in the SEL are not all day one skills – some may go beyond what might be expected at day one – but the SEL can be used by the student to keep a record of the practical and clinical skills they have covered in order to guide their learning. The SEL can be used by UK universities to judge whether a student has gained a good balance of experience before they graduate.

⁴ The SEL is one component of the RCVS Professional Development Record (PDR). After registering with the RCVS, new graduates progress to the PDP component of the PDR to record their year one competence. The CPD component of the PDR can be used by all members of RCVS to record their ongoing professional development plans and achievements.

RCVS Day One Competences

General professional skills and attributes expected of newly qualified veterinary surgeons	
Competence	Guidance
1	<p>Be fully conversant with, and follow the RCVS Code of Professional Conduct</p> <p>See www.rcvs.org.uk/vetcode.</p>
2	<p>Understand the ethical and legal responsibilities of the veterinary surgeon in relation to patients, clients, society and the environment.</p> <p><i>To abide by the principles in the Code of Professional Conduct, veterinary surgeons need to be able to make professional judgements based on sound principles. They must be able to think through the dilemmas they face when presented with conflicting priorities and be prepared to justify the decisions they make.</i></p> <p><i>As well as decisions relating to individual patients, animal groups, populations of animals and clients, veterinary surgeons must take account of the possible impact of their actions beyond the immediate workplace, eg, on public health, the environment and society more generally.</i></p>
3	<p>Demonstrate knowledge of the organisation, management and legislation related to a veterinary business.</p> <p><i>This includes:</i></p> <ul style="list-style-type: none"> • <i>knowing one's own and the employer's responsibilities in relation to employment, financial and health and safety legislation, the position relating to non-veterinary staff, and professional and public liability</i> • <i>awareness of how fees are calculated, of income, overheads and other expenditure involved in running a veterinary business</i> • <i>ability to work with various information systems to effectively communicate, share, collect, manipulate and analyse information</i> • <i>importance of complying with professional standards, protocols & policies of the business</i> • <i>knowledge of legislation affecting veterinary businesses, such as the disposal of clinical waste and safety of medicines.</i>

Competence		Guidance
4	Promote, monitor and maintain health and safety in the veterinary setting; demonstrate knowledge of systems of quality assurance; apply principles of risk management to their practice.	<i>This includes knowledge and explanation of the procedure for reporting adverse incidents and the procedures for avoiding them. It also includes following safe practices relating to the dangers in the workplace.</i>
5	Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the audience concerned.	<i>Effective communication includes effective listening and responding appropriately, both verbally and non-verbally, depending on the context.</i>
6	Prepare accurate clinical and client records, and case reports when necessary, in a form satisfactory to colleagues and understandable by the public.	<i>Patient records should be clear enough that they can be referred to by others and (if written by hand) legible, avoiding idiosyncratic abbreviations or jargon, so the case can be taken over by another professional for ongoing treatment if necessary.</i>
7	Work effectively as a member of a multi-disciplinary team in the delivery of services.	<i>The team may include veterinary nurses, practice managers, technicians, farriers, nutritionists, physiotherapists, veterinary specialists, meat hygiene inspectors, animal handlers and others. The veterinary surgeon should be familiar with and respect the roles played by others in the team and be prepared to provide effective leadership when appropriate.</i>
8	Understand the economic and emotional context in which the veterinary surgeon operates.	<i>Veterinary surgeons need to be resilient and confident in their own professional judgements to withstand the stresses and conflicting demands they may face in the workplace. They should know how to recognise the signs of stress and how to seek support to mitigate the psychological stress on themselves and others.</i>
9	Be able to review and evaluate literature and presentations critically.	<i>New graduates must be able to appreciate the difference in value to be attached to different sorts of literature and evidence, for example, recognising commercial and other forms of bias.</i>

Competence		Guidance
10	Understand and apply principles of clinical governance, and practise evidence-based veterinary medicine.	<p><i>More guidance on clinical governance is included in the supporting guidance to the Code of Professional Conduct.</i></p> <p><i>It includes critically analysing the best available evidence for procedures used, reflecting on performance and critical events and learning from the outcome to make changes to one's practice.</i></p>
11	Use their professional capabilities to contribute to the advancement of veterinary knowledge, in order to improve the quality of animal care and public health.	<i>The veterinary surgeon must think beyond the immediate case in hand, and take up opportunities to contribute to the processes of continuous improvement. This may include clinical audit, case discussions, research and adding to the evidence base for others to draw on in the future.</i>
12	Demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change.	<i>Veterinary surgeons must be able to manage cases and make decisions where there is incomplete or unclear data. It is not always possible to run a full set of tests or range of diagnostic procedures which may preclude the investigation of the 'perfect' case. They need to be able to adapt their approach to fit changing circumstances, know how to cope appropriately with contingencies and the unexpected, and identify appropriate options for further diagnosis, treatment and/or referral, should a case require it.</i>
13	Demonstrate that they recognise personal and professional limits, and know how to seek professional advice, assistance and support when necessary.	<i>Veterinary surgeons undertaking procedures on patients must at all stages in their careers be competent in their performance, or be under the close supervision of those so competent until such time as they can act alone.</i>

Competence		Guidance
14	Demonstrate a commitment to learning and professional development, both personal and as a member of a profession actively engaged in work-based learning. This includes recording and reflecting on professional experience and taking measures to improve performance and competence.	<i>It is a requirement of the RCVS Code of Professional Conduct that veterinary surgeons must maintain and develop their knowledge and skills relevant to their professional practice and competence. New graduates must be prepared to take part in the RCVS Professional Development Phase (PDP) and be ready on graduation to make the transition to being an independent learner responsible for their own professional improvement and development. This includes being able to reflect, learn, and share information gained with others.</i>
15	Take part in self-audit and peer-group review processes in order to improve performance.	<i>Veterinary surgeons must regularly review how they are performing in their day to day professional work, and play an active part in performance appraisal. New graduates in clinical practice must take part in the RCVS Professional Development Phase and keep a record of their continuing progress until they have met the year one competence level.</i>

Practical and clinical competences expected of new veterinary surgeons

16	Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment	
17	Handle and restrain animal patients safely and humanely, and instruct others in helping the veterinary surgeon perform these techniques.	<i>Safety applies not only to the animal, but also to others nearby. The new veterinary surgeon should be able to make a rapid risk assessment of all procedures as duties are performed, as dangers may appear in situations that initially appear to be safe. They should be prepared to take a range of measures including adaptation, seeking assistance or retreating from the task until safety measures can be put in place.</i>
18	Perform a complete clinical examination	<i>A complete clinical examination is not always required or appropriate in practice. Whilst the new veterinary surgeon should be able to perform a complete examination, they should know when it is appropriate to adapt their examination to the circumstances.</i>
19	Develop appropriate treatment plans and administer treatment in the interests of the patients and with regard to the resources available.	<i>This includes being able to tailor a treatment plan when there may be financial or other constraints, whilst prioritising the welfare of the patient(s), whether for an individual animal or the group.</i>
20	Attend all species in an emergency and perform first aid.	<i>The new graduate must be able to perform basic first aid, and know when and how to call for assistance from others if called to deal with an animal outside their immediate area of competence or where there are potential risks to health and safety. This involves being able to make a rapid risk assessment of the situation and taking appropriate action to protect the health and safety of themselves and those around them.</i>

Competence		Guidance
21	Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding.	<i>This applies to commonly presented cases and would not be expected to include advanced advice for complex cases.</i>
22	Collect, preserve and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of the test results.	<i>New graduates are expected to have a working knowledge of relevant tests for the condition under investigation. They should seek assistance to interpret results when appropriate.</i>
23	Communicate clearly and collaborate with referral and diagnostic services, including providing an appropriate history.	
24	Understand the contribution that imaging and other diagnostic techniques can make in achieving a diagnosis. Use basic imaging equipment and carry out an examination effectively as appropriate to the case, in accordance with good health and safety practice and current regulations.	<i>This competence includes taking images of diagnostically-useful quality, as well as the safe use of the equipment (eg ionising radiation regulations) in accordance with best practice ('ALARA' principle – as low as reasonably achievable). 'Basic' equipment includes, for example, x-ray, ultrasound and endoscopes, but a new graduate would not be expected to perform an MRI or CT scan. New graduates should be able to interpret common findings and know when to refer or seek more experienced interpretation if appropriate.</i>
25	Recognise suspicious signs of possible notifiable, reportable and zoonotic diseases and take appropriate action, including notifying the relevant authorities.	<i>This involves identifying the clinical signs, clinical course, transmission potential (including vectors) of pathogens associated with common zoonotic and food-borne diseases and transboundary animal diseases.</i>
26	Apply the RCVS Twelve Principles of Certification.	<i>The Principles of Certification are described in the supporting guidance to the Code of Professional Conduct, available on the RCVS website. New graduates must be familiar with the Principles and follow the RCVS supporting guidance.</i>

Competence		Guidance
27	Access the appropriate sources of data on licensed medicines.	
28	Prescribe and dispense medicines correctly and responsibly in accordance with legislation and latest guidance.	<i>New graduates must understand the requirements of the Cascade in prescribing. In particular, when prescribing or using antimicrobial agents, care must be taken to minimise the risk of antimicrobial resistance.</i>
29	Report suspected adverse reactions.	<i>The veterinary surgeon should follow the Veterinary Medicines Directorate procedures for reporting.</i>
30	Apply principles of bio-security correctly, including sterilisation of equipment and disinfection of clothing.	<i>This applies to all areas of veterinary practice. All veterinary surgeons must maintain high standards of biosecurity at all times in order to minimise the risk of contamination, cross-infection and accumulation of pathogens in the veterinary premises and in the field.</i>
31	Perform aseptic surgery correctly.	<i>The new graduate must appreciate the requirement for asepsis during procedures, and be able to perform simple, elective surgeries within the limitations of their experience, in an aseptic fashion.</i>
32	Safely perform sedation, and general and regional anaesthesia; implement chemical methods of restraint.	
33	Assess and manage pain.	<i>The new graduate should be able to score and evaluate pain.</i>
34	Recognise when euthanasia is appropriate and perform it humanely, using an appropriate method, whilst showing sensitivity to the feelings of owners and others, with due regard to the safety of those present; advise on disposal of the carcass.	

Competence		Guidance
35	Perform a systematic gross post-mortem examination, record observations, sample tissues, store and transport them.	<i>The new graduate should be aware of the limitations of such investigations, and the potential for conflict of interest where the veterinary surgeon has previously been involved with the case. It is important that they are able to differentiate between normal and abnormal, and that good quality records and samples are taken for further investigation by a pathologist if necessary.</i>
36	Perform ante-mortem inspection of animals destined for the food-chain, including paying attention to welfare aspects; correctly identify conditions affecting the quality and safety of products of animal origin, to exclude those animals whose condition means their products are unsuitable for the food-chain.	<i>Not all graduates will work in food-animal practice, but the ability to undertake a health and welfare assessment is an important competence, and is required of all new graduates to comply with European and OIE international recognition requirements. Further postgraduate training will be needed before the new graduate can take up official veterinarian duties.</i>
37	Advise on, and implement, preventative programmes appropriate to the species and in line with accepted animal health, welfare and public health standards.	<i>New graduates will need to be able to assess health and welfare records (and production records where appropriate) and implement health plans. This does not only apply to production animals but is important for any kept animals, particularly those kept in groups.</i>

Underpinning knowledge and understanding

In order to be able to undertake their professional duties effectively, new veterinary graduates will need a breadth of underpinning knowledge and understanding of the biological, animal and social sciences and laws related to the animal industries. This will include, but is not restricted to, the following:

- Understanding of, and competence in, the logical approaches to both scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each.
- Research methods and the contribution of basic and applied research to veterinary science.
- The structure, function and behaviour of animals and their physiological and welfare needs, including healthy domestic animals, captive wildlife and laboratory-housed animals.
- A knowledge of the businesses related to animal breeding, production and keeping.
- The aetiology, pathogenesis, clinical signs, diagnosis and treatment of the common diseases and disorders that occur in the common domestic species in the UK.
- Awareness of other diseases of international importance that pose a risk to national and international biosecurity.
- Legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases.
- Medicines legislation and guidelines on responsible use of medicines, including responsible use of antimicrobials and anthelmintics.
- The principles of disease prevention and the promotion of health and welfare.
- Veterinary public health issues, including epidemiology, transboundary epizootic diseases, zoonotic and food-borne diseases, emerging and re-emerging diseases, food hygiene and technology.
- Principles of effective interpersonal interaction, including communication, leadership, management and team working.
- The ethical framework within which veterinary surgeons should work, including important ethical theories that inform decision-making in professional and animal welfare-related ethics.

Appendix B

Background information for the current RCVS Professional Development Phase (PDP)

The aim of the PDP is to help newly qualified veterinary graduates (or those returning after time away from practice, or overseas graduates) make the transition from life as a veterinary student to working in clinical practice as a professional veterinary surgeon.

It provides a degree of structure for new and recent graduates to reflect on their progress in developing their confidence and competence across a number of clinical areas, measured against the general RCVS “PDP Competences”.

The PDP is also the first step in the recent graduate’s continuing professional development (CPD). The RCVS Code of Professional Conduct requires new and recent graduates to comply with RCVS PDP and CPD requirements. All practicing veterinary surgeons are required to continue their professional development and maintain their competence in the area in which they are working. They must keep records of their development and provide these to the RCVS when required. We consider the structured PDP to be the most appropriate form of continuing professional development for the initial period of clinical practice.

PDP Competences

The PDP is based around a set of general “PDP Competences” that a veterinary surgeon should normally have acquired after about a year in practice. These are currently supplemented by the list of clinical skills and procedures covering small animal, equine, and farm animal practice, which the RCVS developed in consultation with the profession, and against which the graduate records their day-to-day experience in clinical practice.

The “PDP Competences” cover the same general areas as the “Day One Competences”, which set the minimum standard for graduation, but with the expectation that at the end of their PDP “a graduate who has completed the PDP will be able to perform a range of common clinical procedures, or manage them successfully without supervision”. This is the standard that the graduate is asked to apply when making a judgement about their competence. They must consider not only their clinical

skills, but also their general professional skills and attributes.

The Employers’ Role in the PDP

Graduates or members returning to work after a career break should be supported by senior colleagues until they are confident of their own ability to provide a full professional service. The RCVS strongly recommends that employers support their continued development through an appropriate appraisal system, to enable them to complete the PDP.

The PDP is more effective if the new or recent graduate can discuss their performance and development with a senior colleague or more experienced peer who will act as their mentor. The mentor should be familiar with their work, and should be the graduate’s first point of contact if they experience a problem and need to seek advice about their work. It will help if the employer allows the graduate some time each week to update their PDP records and case notes.

Employers are not currently asked to formally examine or assess the graduate’s PDP competence for the purposes of PDP, although it is recommended some judgement is made informally in order to consider the degree of responsibility the new graduate should have in the practice.

Role of the Postgraduate Dean

The RCVS allocates each graduate to a Postgraduate Dean when they register for the PDP. The Postgraduate Dean will monitor their progress online from time to time, and will be the point of contact for assistance with their PDP.

The RCVS-appointed Postgraduate Dean is available online to provide guidance to each graduate about completing their records. When the graduate claims they have achieved the “PDP Competences”, the RCVS Postgraduate Dean will review the case records and reflective notes online, before confirming that they have completed their PDP. Once confirmed by the Postgraduate Dean, the RCVS will send a completion certificate to the graduate.

Appendix C

RCVS PDP Competences

A graduate who has completed the PDP will be able to perform a range of common clinical procedures, or manage them successfully without supervision.

RCVS PDP Competences	Guidance
Section A: General professional skills and attributes expected of veterinary surgeons on completion of the PDP. PDP completion usually takes between 12 – 24 months and at the end veterinary surgeons should be able to show that they can:	
1. Be fully conversant with, and abide by the RCVS Code of Professional Conduct and identify when it is appropriate to use the supporting guidance	The RCVS Code of Professional Conduct and supporting guidance is available on the RCVS website at www.rcvs.org.uk/vetcode
2. Understand the ethical, legal and professional responsibilities of the veterinary surgeon in relation to patients, clients, & society and demonstrate an ability to apply these in practice.	<p>To abide by the principles in the Code of Professional Conduct, veterinary surgeons need to be able to make professional judgements based on sound principles. They must be able to think through the dilemmas they face when presented with conflicting priorities and be prepared to justify the decisions they make.</p> <p>They should be able to support owners in meeting their obligations under the Animal Welfare Act (See Paragraph 14 of the supporting guidance)</p> <p>As well as decisions relating to the health and welfare of individual patients, animal groups, populations of animals and clients, veterinary surgeons must take account of the possible impact of their actions beyond the immediate workplace, for example, on public health, the environment and society more generally.</p> <p>Veterinary Surgeons should understand the need for informed consent, shared decision making where appropriate and confidentiality which extends to online activities including social media (see paragraphs 14 and 28 of the supporting guidance)</p> <p>Practical demonstration of ability in these areas could include the application of ethics to the process of supersession or referral, the handling of a complex euthanasia case or a case involving cruelty. Demonstrating application to wider society would include decision making in relation to zoonotic disease or responsible antimicrobial prescribing.</p>
3. Apply a basic understanding of the organisation, management and legislation related to a veterinary business.	<p>This includes:</p> <ul style="list-style-type: none"> • understanding one's own and the employer's responsibilities in relation to employment, and health and safety legislation, the position relating to non-veterinary staff, professional and public liability • awareness of how fees are calculated, of income, overheads, other expenditure and financial responsibilities involved in running a veterinary business and an understanding of the importance of fair and accurate invoicing • ability to work with various information systems in order to effectively communicate, share, collect, manipulate and analyse information • compliance with professional standards, protocols and policies of the business • knowledge of and compliance with legislation affecting veterinary businesses, such as the disposal of clinical waste and safety of medicines.

<p>4. Promote, monitor and maintain health and safety in the veterinary setting; apply knowledge of systems of quality assurance; apply principles of risk management to their practice.</p>	<p>Veterinary surgeons need an understanding of their own and an awareness of their employer's responsibilities in relation to employment and health and safety legislation and the position relating to lay staff and public liability.</p> <p>This includes knowledge and application of the procedure for reporting adverse incidents and the procedures for avoiding them. It also includes applying safe practices relating to the dangers in the workplace and taking personal responsibility for their own safety and that of those around them.</p>
<p>5. Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the audience concerned.</p>	<p>Patient records should be written in line with the supporting guidance to the Code of Professional Conduct (paragraph 13). They should be contemporaneous, clear enough that they can be referred to by others and (if written by hand) legible, avoiding idiosyncratic abbreviations or jargon, so the case can be taken over by another professional for ongoing treatment if necessary.</p>
<p>7. Work effectively as a member of a multi-disciplinary team in the delivery of services.</p>	<p>The team may include veterinary nurses other allied professions and technicians. The veterinary surgeon should be familiar with and respect the roles played by others in the team and be prepared to provide or accept effective leadership when appropriate.</p> <p>Please see the supporting guidance to the Code of Professional Conduct (paragraph 17).</p>
<p>8. Understand the economic and emotional context in which the veterinary surgeon operates and respond appropriately to the influence of such pressures.</p>	<p>Veterinary surgeons need to develop resilience and confidence in their own professional judgements and coping strategies to manage the emotional and economic stresses of the conflicting demands they may face in the workplace.</p> <p>They should be aware of where to seek help when there are concerns about the wellbeing of themselves and others Where appropriate, they should be willing to accept offers of support. (Link to Vet Surgeons Support Programme)</p>
<p>9. Review and evaluate literature and presentations critically in line with evidence-based veterinary medicine.</p>	<p>Veterinary surgeons must be able to critically assess different sorts of literature and evidence, for example, recognising commercial and other forms of bias.</p>
<p>10. Understand and apply principles of clinical governance.</p>	<p>More guidance on clinical governance is included in the supporting guidance to the Code of Professional Conduct (see paragraph 6).</p> <p>It includes reflecting on performance and critical events and learning from the outcome to make changes to one's practice.</p>
<p>11. Use their professional capabilities to contribute to the advancement of veterinary knowledge, in order to improve, animal health and welfare and public health.</p>	<p>The veterinary surgeon must think beyond the immediate case in hand, and take up opportunities to contribute to the processes of continuous improvement. This may include clinical audit, case discussions, research and adding to the evidence base for others to draw on in the future.</p>
<p>12. Cope with incomplete information, deal with contingencies, and adapt to change.</p>	<p>Veterinary surgeons must be able to manage cases and make decisions where there is incomplete or unclear data and communicate this to the client. It is not always possible to run a full set of tests or range of diagnostic procedures which may preclude the investigation of the 'perfect' case. They need to be able to adapt their approach to fit changing circumstances, know how to cope appropriately with contingencies and the unexpected, and identify appropriate options for further diagnosis, treatment and/or referral, should a case require it.</p>

13. Understand personal and professional limits, and seek professional advice, assistance and support when necessary.	It is a requirement of the RCVS Code of Professional Conduct that veterinary surgeons must maintain and develop their knowledge and skills relevant to their professional practice and competence. Those Veterinary Surgeons entering clinical practice following graduation must undertake the PDP.
14. Demonstrate a commitment to learning and professional development, both personal and as a member of a profession actively engaged in work-based learning. This includes recording and reflecting on professional experience and taking measures to improve performance and competence.	It is a requirement of the RCVS Code of Professional Conduct that veterinary surgeons must maintain and develop their knowledge and skills relevant to their professional practice and competence. Those Veterinary Surgeons entering clinical practice following graduation must undertake the PDP.
15. Take part in self-audit and peer-group review processes in order to improve performance.	Veterinary surgeons must regularly review how they are performing in their day to day professional work, and play an active part in performance appraisal and other review processes used within the practice.
Section B: Practical and clinical competences expected of a veterinary surgeon By the end of their PDP, veterinary surgeons should be able to demonstrate their competence, in relation to their chosen area of practice, in the following areas:	
16. Obtain an accurate and relevant history of the individual animal or animal group, and its/their environment	
17. Handle and restrain animal patients safely and humanely, and instruct others in helping the veterinary surgeon perform these techniques.	Safety applies not only to the animal, but also to others nearby. The veterinary surgeon should be able to make a rapid risk assessment of all procedures as duties are performed, as dangers may appear in situations that initially appear to be safe. They should be prepared to take a range of measures including adaptation, seeking assistance or retreating from the task until safety measures can be put in place.
18. Perform a complete clinical examination and develop a differential diagnosis allied to an approach for making a specific diagnosis.	A complete clinical examination is not always required or appropriate in practice. Whilst the veterinary surgeon should be able to perform a complete examination, they should know when it is appropriate to adapt their examination to the circumstances.
19. Develop appropriate treatment plans and administer treatment in the interests of the patient(s) and with regard to the resources available.	This includes being able to tailor a treatment plan when there may be financial or other constraints, whilst prioritising the welfare of the patient(s), whether for an individual animal or the group and obtaining informed consent whenever possible.
20. Attend all species in an emergency and perform first aid.	The veterinary surgeon must be able to perform basic first aid, and know when and how to call for assistance from others if called to deal with an animal outside their immediate area of competence or where there are potential risks to health and safety. This involves being able to make a rapid risk assessment of the situation and taking appropriate action to protect the health and safety of themselves and those around them.(Link to 24/7 guidance)

<p>20. Attend all species in an emergency and perform first aid.</p>	<p>The veterinary surgeon must be able to perform basic first aid, and know when and how to call for assistance from others if called to deal with an animal outside their immediate area of competence or where there are potential risks to health and safety. This involves being able to make a rapid risk assessment of the situation and taking appropriate action to protect the health and safety of themselves and those around them.(Link to 24/7 guidance)</p>
<p>21. Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding.</p>	<p>This applies to commonly presented cases within their area of competence and would not necessarily be expected to include advanced advice for complex cases.</p>
<p>22. Collect, preserve and transport samples, select or perform appropriate diagnostic tests, interpret test results and understand their limitations, seeking assistance where appropriate.</p>	<p>Tests to be undertaken include sampling in cases of infectious or contagious disease as well as appropriate investigative sampling from major body systems.</p>
<p>23. Communicate clearly and collaborate with referral and diagnostic services, including providing an appropriate history</p>	
<p>24. Understand the contribution that imaging and other diagnostic techniques can make in achieving a diagnosis. Use basic imaging equipment and carry out an examination effectively as appropriate to the case, in accordance with good health and safety practice and current regulations.</p>	<p>This competence includes taking images of diagnostically-useful quality, as well as the safe use of the equipment (eg ionising radiation regulations) in accordance with best practice ('ALARA' principle – as low as reasonably achievable). 'Basic' equipment might include, for example, x-ray, ultrasound and endoscopes, but NOT MRI or CT scanners.</p> <p>On completion of the PDP, the veterinary surgeon should be able to interpret images encountered in the selected species correctly or identify when a specialist opinion is required.</p>
<p>25. Recognise suspicious signs of possible notifiable, reportable and zoonotic diseases and take appropriate action, including notifying the relevant authorities.</p>	<p>This involves identifying the clinical signs, clinical course, transmission potential (including vectors) of pathogens associated with common zoonotic and food-borne diseases and transboundary animal diseases.</p>
<p>26. Apply the RCVS Principles of Certification.</p>	<p>The Principles of Certification are described in the supporting guidance to the Code of Professional Conduct, available on the RCVS website (paragraph 21). Veterinary surgeons must be familiar with the Principles and follow the RCVS supporting guidance.</p>
<p>27. Prescribe and dispense medicines correctly and responsibly in accordance with legislation and latest guidance and ensure that medicines and waste are safely stored and/or disposed of.</p>	<p>Veterinary surgeons must be able to access the appropriate sources of data on licensed medicines and understand the requirements of the Cascade in prescribing. In particular, when prescribing or using antimicrobial agents, care must be taken to minimise the risk of antimicrobial resistance. They must appreciate the importance of obtaining informed consent preferably in writing when administering or prescribing off licence drugs.</p>

28. Report suspected adverse reactions including lack of efficacy.	The veterinary surgeon should follow the Veterinary Medicines Directorate procedures for reporting adverse reactions and suspected lack of efficacy.
29. Apply principles of bio-security and infection control correctly, including sterilisation of equipment and disinfection of clothing.	This applies to all areas of veterinary practice and all species. All veterinary surgeons must maintain high standards of biosecurity at all times in order to minimise the risk of contamination, cross-infection and accumulation of pathogens in the veterinary premises and in the field.
30. Perform aseptic surgery correctly.	The veterinary surgeon must take measures to ensure appropriate asepsis during procedures.
31. Safely perform sedation, and general and regional anaesthesia; implement chemical methods of restraint.	
32. Assess and manage pain.	The veterinary surgeon should be able to evaluate and/or score pain then tailor analgesia protocols according to the species and physiological state of the patient.
33. Safely perform euthanasia using a method appropriate to the species and circumstances showing sensitivity to the needs and feelings of the owner.	<p>Veterinary surgeons should follow the supporting guidance of the Code of Professional Conduct (paragraph 8).</p> <p><i>They should demonstrate an understanding of issues that may surround euthanasia such as welfare concerns, owner not present or ownerless animals and consent, animals as well as Veterinary surgeons should be able to advise on options for carcass disposal.</i></p>
34. Demonstrate a thorough understanding of what can be gained from a gross post-mortem and give appropriate advice and guidance to clients. If performing a post-mortem examination, record observations, sample tissues, store and transport them.	Veterinary surgeons should be aware of the limitations and benefits of undertaking a post-mortem in practice and should know when to refer a case to a pathologist. The potential for conflict of interest where they have previously been involved with the case should be recognised. It is important that good quality records and samples are taken for further investigation by a pathologist if necessary
35. Where appropriate, perform ante-mortem inspection of animals destined for the food-chain, including paying attention to welfare aspects; correctly identify conditions affecting the quality and safety of products of animal origin, to exclude those animals whose condition means their products are unsuitable for the food-chain.	Not all veterinary surgeons will work in food-animal practice and further postgraduate training is needed before taking up official veterinarian duties.

<p>35. Where appropriate, perform ante-mortem inspection of animals destined for the food-chain, including paying attention to welfare aspects; correctly identify conditions affecting the quality and safety of products of animal origin, to exclude those animals whose condition means their products are unsuitable for the food-chain.</p>	<p>Not all veterinary surgeons will work in food-animal practice and further postgraduate training is needed before taking up official veterinarian duties.</p>
<p>36. Recognise when a health care programme is indicated. Advise on implementation when appropriate and in line with accepted animal health, welfare and public health standards.</p>	<p>Veterinary surgeons will need to be able to, assess health and welfare records (and production records where appropriate) and implement health plans. This does not only apply to production animals but is important for any animals, particularly those kept in groups.</p>

Section C: Underpinning knowledge and understanding

Veterinary surgeons will have acquired a wide scientific background by the time they graduate. After graduation and throughout their career this underpinning knowledge must be kept up to date and applied to the area in which the individual has chosen to work. The veterinary surgeon should therefore ensure that they maintain their knowledge and understanding of the following:

1. The logical approaches to both scientific and clinical reasoning, the distinction between the two, the strengths and limitations of each and common clinical signs.
2. Research methods and the contribution of basic and applied research to veterinary science.
3. The structure, function and behaviour of animals and their physiological and welfare needs, including healthy domestic animals, captive wildlife and laboratory-housed animals.
4. The businesses related to animal breeding, production and keeping.
5. The aetiology, pathogenesis, clinical signs, diagnosis and treatment of the common diseases and disorders that occur in the common domestic species in the UK.
6. Awareness of other diseases of international importance that pose a risk to national and international biosecurity.
7. Legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases.
8. Medicines legislation and guidelines on responsible use of medicines, including responsible use of antimicrobials and anthelmintics.
9. The principles of disease prevention and the promotion of health and welfare.
10. Veterinary public health issues, including epidemiology, transboundary epizootic diseases, zoonotic and food-borne diseases, emerging and re-emerging diseases, food hygiene and technology.
11. Principles of effective interpersonal interaction, including communication, leadership, management and team working.
12. The ethical framework within which veterinary surgeons should work, including important ethical theories that inform decision-making in professional and animal welfare-related ethics.

Appendix D

PDP Research Evaluation Executive Summary



Work Psychology Group
Thinking differently

Evaluation of the Impact of the Professional Development Phase in Supporting Veterinary Graduates

Evaluation Report to RCVS & BSAVA

Charlotte Flaxman
Dr Máire Kerrin
Prof Susan Rhind
Prof Liz Mossop
Dr Sheena Warman

1. Executive Summary

- 1.1 Work Psychology Group in collaboration with Edinburgh, Nottingham and Bristol Veterinary Schools were commissioned by the Royal College of Veterinary Surgeons (RCVS) and British Small Animal Veterinary Association (BSAVA) to evaluate the Professional Development Phase (PDP) that was implemented across the Veterinary Profession in 2007 to support graduates in their transition between Veterinary School and practice.
- 1.2 The objectives of the evaluation were to (1) evaluate the impact of the PDP on the development of clinical and non-clinical skills, (2) understand the challenges faced by new graduates and their employers, (3) understand the support needed by graduates and employers to successfully complete the PDP and (4) explore how reflection is understood within the veterinary profession and the impact of reflection.
- 1.3 A multi-method approach to the evaluation was developed consisting of a desk and literature review, stakeholder and graduate consultations (including interviews and focus groups) and online questionnaires (for both graduates and stakeholders).
- 1.4 Stakeholders (e.g. employers, mentors, veterinary school representatives, Postgraduate Deans [PGDs], BSAVA representatives and British Vet Association representatives) and veterinary graduates took part in a range of activities as follows; interviews (N=39), focus group (N=6) and graduate (N=734) and stakeholder (N=198) questionnaires. Within the sample, there was representation from the various areas of practice (e.g. small animal, equine, farm, mixed and non-practice including research and government).
- 1.5 Six key areas with emerging themes were evident from the qualitative analysis; (1) Perceptions of the PDP (graduate perspective), (2) Perception of the PDP (employer perspective), (3)

Graduate Challenges, (4) Support Available through the PDP, (5) Role of Reflection and (6) Recommendations for Improvement (emerging from the consultations).

- 1.5.1 Perceptions of the PDP (graduate perspective): Overall graduates understood the purpose of the PDP and what it was trying to achieve but felt it was not currently achieving these aims. Many felt it was too much of a 'tick-box exercise' and there was too much emphasis on quantity rather than confidence gained in completing procedures/ tasks.
- 1.5.2 Perceptions of the PDP (stakeholder perspective): Whilst it was felt that the concept of the PDP was helpful and needed within the profession, there was a lack of understanding regarding the process and of the current benefits. A need for a greater focus on professional skills and challenges raised regarding being able to find time to support their graduates.
- 1.5.3 Graduate Challenges: Challenges were focussed around the non-clinical skills including independent decision making, client communication and relationship building, in addition to challenges applying 'best-practice' learning and veterinary school to practice. Further, a lack of resilience within graduates was noted leading to low levels of retention.
- 1.5.4 Support Available through the PDP: There were mixed views on the guidance available from the RCVS and in relation to the role of the PGD. Whilst the BSAVA Resource Bank received positive feedback, the majority of stakeholders
- and graduates were unaware of this resource. The importance of employer support and a broader network of support for graduates was also noted.
- 1.5.5 Role of Reflection: The importance of reflection and associated benefits were recognised across the profession, with many engaging in informal reflection activities on a regular basis. Written reflection was noted as more challenging. It was acknowledged that the PDP helps to provide structure to graduate reflection but that more could be done to improve the quality of these reflections.
- 1.5.6 Recommendations for Improvement: Recommendations for improving the PDP that emerged from the consultations fell into four themes; redefining the purpose and objective, wider engagement across the profession, resources available and functionality.
- 1.6. Similar findings were found within the quantitative data analysis across both the stakeholder and graduate questionnaires.
- 1.7. A number of conclusions and recommendations have emerged following completion of the evaluation. These are organised into three areas; (1) Communication & Engagement of the Profession, (2) Short-Term 'Quick Wins' and (3) Medium Term Goals.
- 1.7.2. Tables 16-18 in the main report (Section 7) provide a summary of each recommendation, in addition to the key evaluation findings from where they have emerged, practical implications, benefits and where appropriate supporting research evidence.

Appendix E

Additional background and context: EMS

EMS stands for extra-mural studies. Extra-mural placements are an essential element of undergraduate veterinary education. Students must complete a minimum of 38 weeks EMS during their course, which should normally consist of 12 weeks Animal Husbandry and 26 weeks of clinical EMS placements.

When done well, EMS provides students with an unrivalled opportunity to gain real-life work experience that enhances their university-based studies. However, there is evidence that EMS placements are variable in quality, and therefore there is a risk that the opportunity to get high-quality work-experience and the opportunity to practise skills where learned during the Veterinary Degree programme may be missed.

Whilst the universities are responsible for teaching the skills that the student needs to practice when they first graduate (the 'day-one competences'), including through the "Intra-Mural Studies" (core teaching) within their programme, it is on EMS placements that students can further practise the animal-handling and clinical skills that they first learn at university, as well as build up their experience of dealing with clients and with members of the veterinary team.

Aims of EMS

The aim of EMS is to enable students to gain practical experience in as many aspects of veterinary work as possible, including the handling of animals, to achieve proficiency in routine techniques, and give students first-hand experience which will help them to develop as professionals. Specifically, EMS should enable students to:

- develop their animal handling skills across a range of common domestic species
- develop their understanding of the practice and economics of animal management systems and animal industries
- appreciate the importance of herd health and the epidemiological approach to production animal work
- develop their understanding of practice economics and practice management
- develop their understanding and gain further

experience of medical and surgical treatments in a variety of species

- develop communication skills for all aspects of veterinary work
- expand their experience to those disciplines and species not fully covered within the university
- appreciate the importance of animal welfare in animal production and in the practice of veterinary medicine
- gain experience to help them appreciate the ethical and legal responsibilities of the veterinary surgeon in relation to individual clients, animals, the community and society
- gain experience of a variety of veterinary working environments.

Regulations

As veterinary students are required to undertake acts of veterinary surgery as part of their clinical training, the acts that they can undertake are set down in the "Veterinary Surgeons (Practice by Students) (Amendment) Regulations 1993".

The Regulations indicate that students may:

- examine animals, carry out diagnostic tests under the direction of a registered veterinary surgeon,
- administer treatment under the supervision of a registered veterinary surgeon and
- perform surgical operations under the direct and continuous supervision of a registered veterinary surgeon.

RCVS has interpreted these as follows:

- 'direction' means that the veterinary surgeon instructs the student as to the tests to be administered but is not necessarily present,
- 'supervision' means that the veterinary surgeon is present on the premises and able to respond to a request for assistance if needed and,
- 'direct and continuous supervision' means that the veterinary surgeon is present and giving the student his/her undivided personal attention.

Further information on EMS is also available on the RCVS website

Appendix F

VSC Statement on EMS



Chair

Professor Ewan Cameron

Executive Director

Dr Katie Petty-Saphon

VSC Position Paper on EMS

Value of EMS

Veterinary graduates, current students and veterinary schools are united in their view that EMS has been, and remains, of immense value to veterinary education and training. Although difficult to quantify objectively the effect of EMS on the development of Day One Competencies and preparation for work, it is widely acknowledged that EMS successfully consolidates university based learning and refines skills. It allows students to develop their communication skills in real-life situations and gives them greater awareness of the perspective of vets and clients on the profession, animal care and welfare. Moreover, EMS provides students with diverse learning experiences that it is not possible to cover within a core curriculum, including overseas placements and niche areas of activity. Previous reviews and recent surveys (2013, 2016) have indicated that EMS is considered a valuable and indeed an essential component of veterinary training. There are reciprocal advantages as many in the profession are interested in current thinking on a range of clinical conditions and in finding out how veterinary education has changed since they graduated. Finally, many UK students report that they feel they have an advantage over their US, Australian or European counterparts where work experience tends to be more limited. It is reported that this greatly adds to their confidence in their first position after graduation.

Concerns Relating to Current EMS System.

Equality of Opportunity - There is little doubt that many UK students are dependent on parental and/or family support to undertake 38 weeks of EMS, mainly during vacation time. In reality, this perpetuates homogeneity amongst the student population and ultimately the profession by restricting veterinary medicine to those from a particular economic background. All of the schools are working hard to increase diversity within the student body, including offering more opportunity to those from more disadvantaged backgrounds, and the inflexibility of the current system is a significant barrier to this.

Assuring Quality of Experience - although each school takes steps to ensure every student maximises the opportunities offered by EMS (e.g. setting learning objectives and reflecting on the learning), it is impossible to control the quality of the learning experience. Improving quality assurance places a greater burden on those delivering EMS and this is a delicate balance.

Student safety and wellbeing - Although not technically in loco parentis, the schools have a duty of care towards their students. It would never be possible for the schools to risk assess every potential placement. Although adverse incidents are, thankfully, rare, school staff increasingly feel uncomfortable about compelling students to put themselves in positions where their personal safety and wellbeing might be compromised; this is especially relevant for pre-clinical EMS.

Full economic cost of EMS - Traditionally, a very large number of private businesses in the UK and overseas participate in the education of veterinary students. This support has been dependent upon the very commendable goodwill of the profession, motivated by an altruistic desire to support the next generation. However, there are some indications that things might be changing and there are a variety of reasons for this. The schools currently find themselves in the unenviable position where they are responsible for ensuring the students undertake EMS but are not in control of its future provision. Good quality supervision and training is expensive and currently the profession is bearing some of the considerable costs associated with the provision of EMS.

Mutual recognition of veterinary degrees - In common with many other veterinary organisations, the Veterinary Schools Council is acutely aware of the challenges that accompany the UK's exit from the European Union, not least the importance of this country continuing to benefit from the desire of EU graduates to settle and work in the UK. This workforce has greatly contributed to all strands of the profession benefitting education, research, animal health and welfare as well as food security. Post Brexit it seems likely that the RCVS will seek to continue to recognise degrees from those European schools that can satisfy RCVS accreditation standards, perhaps in partnership with EAEVE. In this context an important anomaly could arise whereby the EU schools satisfy the RCVS accreditation requirements but where EMS cannot be mandated. It is unlikely that EU schools would move to insist their students satisfy the current EMS requirements. Enhancing the standards, particularly those relating to graduate outcomes, could result in the EU schools making greater use of work experience in their educational programmes. It is noteworthy that EMS is one of the key distinctions of the RCVS Accreditation Standards when international harmonisation is considered.

Recommendations.

The Veterinary School Council has discussed and considered these challenges and in doing so has consulted with school staff responsible for education and the oversight of EMS. Inevitably a range of views has been expressed. However, the following suggestions represent the majority view of the UK Heads of School. The principle recommendation is that EMS should no

longer be mandated by the Royal College of Veterinary Surgeons. That stated, it is essential to emphasise that first opinion clinical and other work-based experience should remain and be an increasingly integral part of the veterinary programmes in the UK. As previously stated, the veterinary schools place a huge value on the experiential learning currently delivered by EMS and would not wish to threaten either the student experience or the existing partnerships with the profession. However, it is the majority view of the Heads of School that going forward this can be best delivered if work based placements become the responsibility of the individual schools. This approach would introduce greater flexibility; align the experience to the schools' different approaches and the learning objectives of individual students. This activity should be protected by strengthening the current RCVS accreditation standards; recognising the value of experiential learning in supporting graduate outcomes and in the development of the Day One Competencies. Whilst there is a strong desire to diversify the scope of student skills and attributes, including transferable skills that broaden our profession's contribution to society and widen graduate careers, it is essential that there remains a specific focus on first opinion and general practice clinical skills, in part delivered through exposure to "real-life" working environments.

Extra Mural Studies (EMS) should be renamed to describe a wider range of experiences that could benefit students, the favoured suggestion being "externships". The term EMS is not well understood outside the veterinary profession in the UK and therefore does not have the same currency as terms more broadly used in other professions and industry. The distinction between EMS and distributed core teaching (covered in Annex 5 of RCVS Accreditation Standards) causes confusion both within and out with the UK. Externships provide a better way describing the range of student experiences envisioned for the future.

Veterinary Schools Council, January 2018



Professor Ewan Cameron
Chair, Veterinary Schools Council

