RCVS SETTING VETERINARY STANDARDS

VISITATION TO THE ROYAL VETERINARY COLLEGE 2010

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Visitation to the University of London Royal Veterinary College

22 – 26 February 2010

Report to the Council of the Royal College of Veterinary Surgeons (RCVS) in accordance with Section 5 of the Veterinary Surgeons Act 1966,
and
to the Education Committee of the European Association of Establishments for Veterinary Education (EAEVE) in compliance with European Directive 2005/36/EC

RCVS, June 2010

Contents

List of visitors

Professor Stuart W J Reid BVMS PhD DVM DipECVPH FRSE MRCVS
University of Glasgow
Chairman of the Visitors

Mr David H Black BVM&S DBR MRCVS
Practitioner
Visitor for Large Animal Clinical Studies

Dr Susan Dawson BVMS PhD MRCVS
University of Liverpool
Visitor for Basic & Paraclinical Sciences

Professor Edward J Hall MA VetMB PhD DipECVIM-ca MRCVS
University of Bristol
Visitor for Small Animal Clinical Studies

Professor Dr Truls Nesbakken, Dipl. ECVPH Dr Philos. Dr Med Vet Dr Scient (Ph D) DVM
Norwegian School of Veterinary Science, Oslo
Visitor for Food Hygiene and Veterinary Public Health and nominee of EAEVE

Professor Dr Juergen Rehage
University of Hannover
Visitor for Animal Production and nominee of EAEVE

Professor Reuben Rose was present as an observer nominated by the Australasian Veterinary Boards Council (Inc)

Mrs Freda Andrews, Head of Education at RCVS, was present for the duration of the visit, together with **Miss Anne Jermey**, Education Committee Manager at RCVS.

Introduction

1. This report is prepared in accordance with the provisions of Section 5(1) of the Veterinary Surgeons Act 1966, "for the purpose of securing that the courses of study to be followed by students training to be veterinary surgeons and the standard of proficiency required for registration in the register shall be such as sufficiently to guarantee that persons registered in the register will have acquired the knowledge and skill needed for the efficient practice of veterinary surgery".

2. The Visitors were also mindful of the Directive of the Council of the European Communities (2005/36/EC, Annex V.4, section 5.4.1) of September 2005 concerning the requirements for the study programme for veterinary surgeons. The evaluation was undertaken in accordance with the evaluation criteria defined by the European Association of Establishments of Veterinary Education (EAEVE) agreed at the EAEVE General Assembly in Copenhagen, 8 May 2008, these criteria having been incorporated within the RCVS procedures for visitations. The visit was conducted in accordance with the procedures set out in the document "Criteria and Guidance for RCVS Approval of Veterinary Degree Courses in the UK and Overseas", as revised May 2009.

3. The EAEVE Standard Operating Procedures agreed in 2008 comprise two stages, the first covering essential standards for a degree to comply with the requirements of the EU Directive 2005/36, and the second covering standards of ongoing quality assurance. Compliance with the first stage enables the degree to be "approved" by the Education Committee for Veterinary Education (ECOVE) which is a joint committee of EAEVE and the Federation of Veterinarians of Europe. Compliance with both Stages One and Two enables the degree to be "accredited" by ECOVE. For continued recognition by RCVS, a veterinary degree needs to comply with both stages. Two separate Self Evaluation Reports were provided by RVC, one for each stage of the process.

4. The Visitors were appointed by RCVS Council and included two nominations from EAEVE, as well as an observer from the Australasian Veterinary Boards Council with which RCVS has a mutual recognition agreement. The Visitors' remit was to report on the courses of study, staffing, accommodation, and equipment available for training in veterinary surgery, and the other arrangements and facilities for such training with reference to 1 and 2 above.

5. The Visitors were present at the University from 22 – 26 February 2010 inclusive, having attended a briefing session for Visitors on Sunday 21 February. The Visitors divided into two groups to tour the facilities at the RVC campus in Camden and at Hawkshead, and stayed together as a group for the majority of the meetings with staff and students. The Visitors divided into smaller groups to visit other facilities at Northpoint and Westpoint practices, an abattoir, Boltons Park Farm and the Blue Cross Animal Hospital. The Chairman of Visitors and the two EAEVE nominated Visitors together considered the RVC's Stage 2 Self Evaluation Report, and evaluated the College's compliance with the Stage 2 standards during the visit.

6. The Visitors held a final meeting with the Principal and Deputy Principal on the last day of the visit to provide a summary of their main findings.

7. The programme for the visit is attached at **Annex 3.**

8. The Visitors thank the Principal, Professor Quintin McKellar, and all his colleagues at the RVC for their help and hospitality during the visit. A self-assessment document was prepared by the College and provided to the Visitors before the visit, and the Visitors were also given access to the RVC's intranet in order to view other documents. Additional documents including timetables, examination papers, external examiners' reports, course material, accounts, were also made available to the Visitors.

9. The Visitors commend the RVC on the quality, commitment and motivation of its veterinary students. All those that the Visitors were able to meet made positive and constructive contributions to the visit and their comments were most helpful to the Visitors. Equally, the staff were enthusiastic and committed to the mission of the College and the Visitors were most grateful for the time that they each contributed to the visit.

Changes since the last RCVS visitation in 2000

10. Since the last RCVS visit in 2000, the RVC has undertaken an extensive programme of refurbishment and building works at both the Camden Campus and at Hawkshead. The major building projects since 2000 have been as follows:

Date	Project	Campus
2000	Microbiology Laboratories	Hawkshead
2001	Hall of Residence	Camden
2001	London Bioscience Innovation Centre (LBIC) Phase 1	Camden
2002	LBIC Phase 2	Camden
2002	Learning Resources Centre	Camden
2003	Large Animal Clinical Centre	Hawkshead
2003	Eclipse Building	Hawkshead
2004	Clinical Skills Centre	Hawkshead
2004	Conversion of Hobday Building, 3rd and 4th Floors	Camden

2004	Lecture Theatre Refurbishments	Camden & Hawkshead
2005	Mary Brancker House (hall of residence)	Camden
2005	LBIC Phase 3	Camden
2005	Re-modelling of Catering Facilities	Camden
2006	Animal Welfare Research Unit	Hawkshead
2006	Main Reception remodelling	Camden
2006	LIVE Centre (Centre for Excellence in Teaching & Learning – "Lifelong Learning in Veterinary Education" Project)	Hawkshead
2006	Remodelling of the Finance Department Offices	Camden
2006	Creation of new Anatomy Museum	Camden
2006	Creation of Category 2 Teaching Laboratory	Camden
2007	Locomotion Research Laboratory	Hawkshead
2007	Refurbishment of the Treadmill Building	Hawkshead
2007	Creation of Pfizer Clinical Research Centre (CIC)	Hawkshead
2007	Provision of Student Social Facilities	Camden & Hawkshead
2008	Remodelling of Student Support & Student Admin offices	Camden
2008	QMHA Phase 3	Hawkshead
2009	Centre for Emerging, Endemic and Exotic Diseases - CEEED	Hawkshead
Under construction at the time of the visit	Equine Clinic	Hawkshead

Under construction at the time of the visit	Social Learning Facilities	Camden
In design	Teaching and Research Centre	Hawkshead
In design	Student Accommodation	Hawkshead
In planning	Sports and Social Facilities	Hawkshead & Camden

11. The RVC has invested in high quality, state of the art equipment such as extending the range of imaging modalities to include MRI and CT, enhancing rehabilitation services by the construction of a hydrotherapy pool, purchasing major items of equipment such as confocal microscopes, a DNA Sequencer, 4 RT-PCR machines, a FACSaria machine and a FACS machine. The Structure and Motion Facility has also been equipped with state-of-the-art equipment for biomechanics research. Since the last RCVS visit the College has invested over £12 million in research infrastructure with funds coming from a variety of sources, including the Science Research Investment Fund, Biotechnology & Biological Sciences Research Council, and the Wellcome Trust.

12. The College has made a significant investment in e-media with the development of its E-Media Unit, and been recognised by the Higher Education Funding Council for England (HEFCE) as a Centre for Excellence in Teaching and Learning (CETL). The CETL project has provided additional resources, both recurrent (£500,000 per annum upto 2010) and capital (£2.4m in total), to support educational research and development, the construction of the new Clinical Skills Centre and anatomy and pathology teaching spaces.

13. The Report of the 2000 RCVS visitation made three recommendations:
    - that the issue of the availability of farm animal material for students be further addressed by the RVC and reviewed as a priority at the normal interim enquiry;
    - that the RVC continue to review its teaching in veterinary public health and that the progress made in this area be examined carefully at the interim enquiry;
    - that the RVC review the content and consistency of training programmes for clinical scholars, both for their veterinary and teaching responsibilities.

14. The College responded to these recommendations at the time of the follow-up enquiries in 2006, and has continued to strengthen its provision in these areas by:
    - increasing the availability of farm animal material for student teaching through the Joint Venture Practice and Welsh Regional Veterinary Centre initiatives;
    - reviewing the teaching of Veterinary Public Health;
    - introducing a structured MVetMed degree that all Senior Clinical Training Scholars are expected to pursue.

Chairman's summary of visitors' comments and findings

15. The RVC is to be congratulated on their efforts in seeking to remain amongst the innovators in the field of veterinary education and in coping with the rapid growth of their school. Each of these brings challenges. The visit was complicated by the fact that, in essence, it was an evaluation of two schools: one with an old curriculum and buildings on the point of decommission and another with a new curriculum, new buildings, and an exciting construction programme.

16. **The recommendation of the Visitors is that RCVS and EAEVE should continue to recognise the BVetMed degree offered by the RVC, through the University of London. Given that the implementation of the new curriculum is only in its third year the Visitors also recommend that there is a revisit within three years to evaluate the outcome of these radical and innovative curricular changes.** The recommendation is for full recognition with a revisit to assess the changes. By this recommendation the Visitors acknowledge the efforts made to reduce student overload and endorse the direction of travel of the new curriculum, despite having significant issues with specific aspects.

17. **The Visitors commend RVC on:**
    - the advances made since the visit in 2000 which have in many instances, totally transformed the school
    - a governance structure that allows RVC to access funds innovatively and proactively in a way dissimilar from other schools of veterinary medicine, leading to a responsive and relatively robust financial model
    - the many positive developments in the facilities including but not limited to the Queen Mother Hospital for Animals, imaging suites, library facilities and the use of technology in theatres - both lecture and operating
    - the library facilities and learning resources including LIVE and other e-learning modalities.
    - the positive improvements in animal husbandry including access to and enthusiasm of farm staff
    - the imaginative and entrepreneurial approach to food animal provision at Westpoint/Northpoint and in Wales
    - the Gateway and widening participation programmes
    - the collegiality, focus, energy, commitment and, above all, approachability of academic staff

- the enthusiasm and devotion of residents, postgraduate and undergraduate students

- the performance and accessibility of the Academic Registry, particularly with reference to EMS, as well as welfare services in the face of increasing student numbers and needs

- the introduction of initiatives such as “You said…we did”

- The Colleges performance and commitment to research: in particular the College’s performance in the Research Assessment Exercise in 2008, the engagement of the undergraduates in research, and the electives and Research Project 2

- the strength of the CPD programme and the leadership in the RCVS Certificate in Advanced Veterinary Practice

18. The list of **recommendations** is more difficult, confounded as it is by the new curriculum.

19. Evidence was presented that communication is an issue within the College. With rapid growth and a split campus this is no surprise. RVC is a large and complex organisation and it is suggested that appropriate assistance and advice in addressing the two way flow of information is sought.

20. The new curriculum is not without its challenges. Chief amongst these is the critical need for well defined structure AND learning objectives for the whole five years, which it is suggested are established as a matter of priority.

21. It is recommended that certain issues relating to assessment are addressed, including the need for all assessors to receive training in assessment and the need for a policy on conflict of interest to be promulgated to all those in an assessor’s role.

22. It is suggested that thought be given as to how the College might identify best practice and best benchmark its curriculum and training against appropriate external benchmarks such as that found in other schools nationally and internationally – this is in distinction to the exhaustive internal QA processes already in place.

23. Whilst facilities are in general excellent, the Beaumont Animals’ Hospital, much of the Camden site, and the food animal facilities at Hawkshead cannot be considered world leading – serious investment is required to meet the aspirations of the College as a leader.

24. It is recommended that the definitions of Intra Mural Rotations (IMR), Extra Mural Rotations (EMR), Extra Mural Studies (EMS) and all the permutations of these terms be considered and clarified as a matter of priority given the implications for quality assurance, health and safety and the like. In particular, the confusion amongst staff and students over what Northpoint/Westpoint and the Blue Cross are offering confirms the need for this – EMR (or IMR offsite) is not EMS.

25. It is recommended that appraisals of certain systems be performed. Those identified include the admissions process, the personal tutor system and the feedback mechanisms to students (cf National Student Survey). Evidence was presented that there is inconsistency and variability ranging from very good to very poor in, for example, the personal tutor system.

26. The direction of travel of EMS, particularly against the new RCVS recommendations should be pursued with all vigour.

27. The greatest concerns relate to individual farm animal clinical training, an area of which the College is aware. Whilst the Visitors are of the view that this is not a category one deficiency, there are several issues that must be addressed urgently. These include, clinical case load at Hawkshead, the lack of robust legal contracts with Westpoint and Northpoint and the need to address RCVS requirements on a "distributed system" arrangement. The current situation is not tenable, is only just acceptable against RCVS/EAEVE reporting requirements and urgent attention is required. A progress report to RCVS within 12 months will be recommended. There is a need for investment, a robust approach to legal and staff training arrangements, particularly for those off site who are not direct employees of RVC, and above all a rethought cohesive and well defined strategy.

28. A full list of recommendations and other suggestions is summarised below and the College is invited to report periodically on its progress in addressing these.

Conclusion

29. **The Visitors are satisfied that the RCVS/EAEVE criteria for both approval (stage 1) and accreditation (stage 2) have been met. They recommend to RCVS that the BVetMed degree should continue to be recognised. They also recommend that a further visit be undertaken in three years time to:**
    - **evaluate the full implementation of the new curriculum,**
    - **inspect the outcome of the building and refurbishment works which were underway during their visit, and**
    - **evaluate the College's compliance with other suggestions and recommendations detailed in this report.**

List of recommendations and suggestions

(Reproduced from elsewhere in this report)

Recommendations

1. The specific learning objectives and timetables for Years 4 and 5 of the new curriculum must be agreed as a matter of urgency and communicated to students. *(Chapter 4, Curriculum)*

   The Visitors recommend as a matter of priority that the status of farm animal clinical resources within RVC are reviewed and consideration is given to the following:

   i. upgrading the large animal clinical areas at Hawkshead
   ii. formalisation of the joint venture partnership with signed and enforceable agreements in place which meet the RCVS requirements for distributed clinical training
   iii. a contingency plan in the event of any breakdown in relationship with external providers of core placements
   iv. clarification for all involved that these activities are part of core curriculum and treated as such
   v. staff involved with teaching students at these facilities are trained in teaching and assessment techniques, or are closely supervised by a senior member of staff at RVC who has been so trained, in line with RCVS requirements for distributive clinical training feedback, recording and monitoring of tasks at these centres is maintained with intervention levels identified. *(Chapter 4, Curriculum, Production Animal Clinical Studies, and Chapter 6, Facilities and Equipment)*

   The College should ensure that there is a more structured and formal appraisal of the curriculum content to eliminate gaps and overlaps. *(Chapter 4, Curriculum)*

2. The College should emphasise the learning objectives for abattoir placements, whether these are undertaken as EMS or as a core rotation. Students and EMS placement supervisors should be reminded of the importance of the recently produced GVS/BMPA guidance "Getting experience in the food sector: Meat production & processing" setting out learning objectives and protocols for training in meat plants. *(Chapter 4, Curriculum, Food Hygiene and Veterinary Public Health)*

   The College should ensure that students have the opportunity to access various husbandry systems within the curriculum and encourage this further during IMR and EMS. *(Chapter 4, Curriculum, Animal Production)*

   The College should ensure that students who wish to gain additional knowledge in pigs and/or poultry have that opportunity within electives and EMS. *(Chapter 4, Curriculum, Animal Production)*

   The College should ensure through mapping that all the EAEVE required topics for animal production are being covered in the new curriculum, including animal behaviour, and that

these take account not only of food producing animals, but also major non-food animals such as the cat and dog. *(Chapter 4, Curriculum, Animal Production)*

3. The College should ensure that the curriculum adequately covers the Principles of Certification. *(Chapter 4, Curriculum for Professional Knowledge)*

4. The College should review the feedback mechanisms for directed learning sessions to ensure that formative feedback is provided to students promptly and consistently. *(Chapter 5, Teaching of Basic Sciences)*

   Some structured teaching should be introduced during the Northpoint and Westpoint IMRs. *(Chapter 5, Teaching of Animal Production)*

5. In the absence of alternative intra-mural provision for students to see first opinion small animal cases, the placements at the Blue Cross Animal Hospital and at the PDSA should be structured in such a way that they meet RCVS's requirements for off-campus distributed teaching. *(Chapter 5, Teaching of Clinical Sciences)*

   The College should review and improve arrangements for providing feedback to students on their progress in order to encourage effective learning. *(Chapter 5, Monitoring and Assessment of Students)*

   The College should ensure that all individuals involved in the assessment of students are appropriately trained in assessment, and ensure that the explicit policy on managing potential conflicts of interest is promulgated and consistently applied. *(Chapter 5, Monitoring and Assessment of Students)*

6. The College should review the standardisation of grading in rotations in order that students have full confidence in the system, including ensuring that all those responsible for assessing students during rotations are adequately trained in assessment. *(Chapter 5, Monitoring and Assessment of Students)*

   The College should develop rigorous systems to monitor and improve the consistency, effectiveness and 'reach' of the tutorial and student support services, particularly as these affect pastoral care. *(Chapter 5, Student Welfare)*

7. The College should ensure that student welfare and support services also extend to external sites where core teaching is taking place. *(Chapter 5, Student Welfare)*

   The farm animal clinical facilities at Hawkshead need upgrading and this must be addressed. (Chapter 6, Facilities and Equipment, and see also Chapter 4, Curriculum, Production Animal Clinical Studies)

   The planned refurbishment of the Beaumont Animals' Hospital should be expedited to improve the environment. *(Chapter 6, Facilities and Equipment)*

8. The College should ensure that facilities for teaching topographical anatomy are improved as part of the upgrade of Camden's facilities. *(Chapter 6, Facilities and Equipment)*

   The College should ensure that it continues to monitor carefully the case load available to, and experienced by students as part of their learning, in terms of species and degree of complexity (first opinion versus referral). Care will be required to ensure that EAEVE ratios are maintained within accepted guidelines. *(Chapter 7, Animals and Teaching Material of Animal Origin)*

   The College should ensure that all students are exposed to adequate companion animal first opinion case material. If the PDSA and Blue Cross placements are seen as being the primary means of providing core first opinion training for students, then the College must ensure that their status as intra-mural rotations is clarified, rather than seeking to change them to EMS placements. *(Chapter 7, Animals and Teaching Material of Animal Origin)*

   The College should develop a system to allow students (with tutor guidance where appropriate) to identify learning objectives for each EMS placement, which should be communicated to the EMS practice. During clinical EMS these could be mapped to Day One Skills. *(Chapter 14, Extra Mural Studies)*

   The College should review the format of animal husbandry/pre-clinical EMS reports to ensure they capture student experiences as distinct from factual records about the farming enterprise. *(Chapter 14, Extra Mural Studies)*

   The College should Introduce log books or other recording systems for EMS to enable students to record and reflect on their learning during EMS. Improve the accuracy of tracking systems so that the time spent with different species is recorded. *(Chapter 14, Extra Mural Studies)*

   The College should develop a more robust system of feedback to students which is less reliant on individual tutor nuances. It is particularly important to identify students who are having negative or sub-optimal experiences on EMS placements. *(Chapter 14, Extra Mural Studies)*

   Arrangements for intramural rotations that take place off campus, such as time spent at The Blue Cross, should be strengthened to come into line with RCVS's requirements for distributed training sites. If such a placements were designated as EMS, however, then alternative arrangements would be needed 'in-house' to provide students with core training in small animal clinical skills. *(Chapter 14, Extra Mural Studies)*

Suggestions

It is suggested that the College should seek some appropriate assistance and advice to help address communications within the College. (*See Chairman's summary)*

The College should consider benchmarking the new curriculum against best practice in similar teaching institutions both in the UK and overseas. *(Chapter 4, Curriculum)*

The College should ensure that it maps the curriculum to EAEVE subject headings to ensure there are no unintentional gaps in coverage. *(Chapter 3, Curriculum, Basic Subjects & Sciences)*

The Visitors suggest that some attention should be given to ensuring that all students are able to follow cases through clinical examination and investigations, including pathology, which is an important part of clinical learning. (This applies to both companion and production animals.) *(Chapter 4, Curriculum, Clinical Sciences, and see also Chapter 5, Teaching of Clinical Sciences)*

The College should consider increasing the emphasis on herd health investigations. (*Chapter 4, Curriculum*)

The College should ensure that the use of 'virtual' animals in the skills laboratory does not take over from 'real' animals.*(Chapter 4, Curriculum)*

The College should consider whether sanctions need to be strengthened for any students who fail to attend communication skills sessions. *(Chapter 4, Curriculum for Professional Knowledge)*

9. The introduction of laboratory practicals in food microbiology would help to strengthen the course and ensure that it fully meets the RCVS/EAEVE requirements for VPH and food hygiene. *(Chapter 4, Curriculum for Food Hygiene and VPH)*

   The Visitors suggest that it would be valuable to engage practising veterinarians to contribute to the animal production course and to demonstrate how the role of the production animal vet is changing. *(Chapter 5, Teaching of Animal Production)*

   The College should consider developing a new first opinion small animal practice to increase students exposure to first opinion cases including rabbits. *(Chapter 5, Teaching of Clinical Sciences*)

10. The College should review the educational value of single student-owner interactions in the small animal facility at Camden and consider increasing monitoring, for example by increasing staff or at least peer review or feedback sessions (*Chapter 5, Teaching of Clinical Sciences)*

    Bearing in mind that students after graduation should "be capable of being trained as Official Veterinarians by the Competent Authority", the practical abattoir-based training should be strengthened by ensuring there is a greater degree of monitoring and follow-up of student learning. *(Chapter 5, Teaching of Food Hygiene/Public Health)*

11. If possible and if permitted by the FBO, students should be encouraged to undertake EMS placements in pairs so that they can work together and discuss issues and experiences connected to the different aspects in the abattoir during their stay. (*Chapter 5, Teaching of Food Hygiene/Public Health*)

12. The College should consider arranging for student accommodation to be provided at Sevenoaks, or alternative arrangements to assist with travel. *(Chapter 7, Animals and Teaching Material of Animal Origin)*

13. The College should continue to keep the library opening hours and accessibility of study facilities at Camden under review. *(Chapter 8, Library & Learning Resources)*

    As part of the 'Predictors of Success' project, the College should review the value of the BMAT, and consider whether different interview techniques and character assessment tests may help in the selection of applicants. *(Chapter 9, Admission and Enrolment)*

    The College should consider increasing the involvement of stakeholders at various stages of the admissions process *(Chapter 9, Admission and Enrolment)*

14. Adequate resources should be provided for the management and the assessment of modules from the RCVS Certificate in Advanced Veterinary Practice. A risk assessment and disaster recovery strategy is needed in case HEFCE funding is withdrawn (*Chapter 11, Continuing Education)*

15. The College should consider developing a more structured timetable for clinical training scholars working towards their Masters degree to encourage them to spread their workload. *(Chapter 12, Postgraduate Education)*

    The College should consider moving the one week introductory on-site EMS off site – or alternatively, do not count this as EMS. *(Chapter 14, Extra Mural Studies)*

    The College should review the feedback mechanisms for practices to encourage practices to provide more informative feedback on students. This could entail revising the questions asked on the feedback forms, and/or encouraging free-hand reporting – either on paper or electronically. Review mechanisms for providing feedback in return to EMS providers *(Chapter 14, Extra Mural Studies)*

Stage 1

Findings and comments from the visitors in relation to RCVS and EAEVE essential requirements

Chapter 1 - Objectives

(NB. Text appearing in the shaded boxes is taken from the EAEVE/RCVS Stage 1 requirements)

The objectives of veterinary training institutions are to provide adequate, ethical, research-based veterinary training that enables the new graduate to perform as a veterinary surgeon capable of entering all commonly recognised branches of the veterinary profession immediately on graduation or of being capable of performing adequately after a generally accepted period of practical experience. The training must cover the broad requirements for veterinary graduates and comply with EU Directive 2005/36/EC. Veterinary education should be based on scientific grounds and proven experience and provide students with adequate learning opportunities thus laying the basis for life-long learning. Considering that more than 50% of active veterinarians in Europe are engaged in clinical practice, a clinical focus is expected to be maintained during the basic training in veterinary medicine.

In addition the institutions should conduct research, provide postgraduate and specialist training and play a role in continuing veterinary education (see also Stage two).

They should, furthermore, provide services to members of the veterinary profession and the community as a whole.

Findings

The RVC states that its vision is to provide leadership and excellence in veterinary science through innovative scholarship and pioneering clinical activity. Its mission is to enhance its global reputation as an outstanding independent veterinary college by:

- improving the quality of the student experience educationally and socially
- delivering excellent education through the best methods and progressive practice
- undertaking research of international quality in focused areas of global significance for animal and human health
- improving animal health and welfare by the provision of outstanding clinical activity across animal species
- engaging with the business community and exploiting novel ideas
- promoting public health and supporting society through the study of the relationships between people, animals and food
- engaging fully with local, national and international communities and all its stakeholders.

Each element of the mission statement is underpinned by a set of strategic aims, designed to enable the College to progress towards its long-term goals, set out in its Corporate Plan for 2009-13.

Comments

RVC's objectives are set out in its Corporate Plan, and clearly meet RCVS/EAEVE requirements.

Chapter 2 - Organisation

Veterinary training must take place within institutions of higher education (university, a higher institute providing training recognised as being of an equivalent level, or under the supervision of an university, Directive 2005/36/EC), formally recognised as such in the respective country, and should be undertaken preferably by a free-standing unit, specifically established for that purpose. If it is undertaken by one or more departments of a parent institution, some of which also have other teaching commitments, the veterinary curriculum must be properly integrated, with effective central veterinary control. The number of veterinarians provided as educators (usually a minimum of 80 individuals working full time in the Faculty) must be high enough to ensure co-coordinated delivery of the teaching programme. Such a programme must be afforded the same recognition, status and autonomy as other professional training programmes in the institution and/or the state.

The organisational structure should make possible an objective evaluation of the quality of the training provided and the skills of the graduates. The training of the graduates should be monitored for quality at the subject and institutional levels, laying the basis for a confident system of quality assurance (see Stage two).

In order to ensure that the veterinary training meets the objectives and requirements of EU Directive 2005/36/EU, the organisational structure should allow input not only from educators and students but also from stakeholders (e.g. members of the profession and from the public) (see also Stage two).

Findings

The RVC is one of 19 colleges which comprise the federal University of London. The RVC is funded directly by the Higher Education Funding Council for England (HEFCE) and pays the University a contribution towards the costs shared by all constituent colleges, e.g. the cost of running the central University of London Library. The University has no power over how the College spends its income.

The University authorises individual colleges to award taught degrees of the University of London, within broad parameters and subject to overall approval by the University of quality assurance processes. Under this federal structure, the College makes its own Regulations, including those governing the assessment of students and the award of degrees; it approves proposals for new courses of study, and changes to existing courses; it appoints Boards of Examiners, including External Examiners.

In common with most other colleges of the University of London, the RVC has recently been granted the power to award its own degrees. However, its intention is to continue to award degrees of the University of London, rather than to exercise its own degree awarding powers. The BVetMed degree which is the subject of this visitation will therefore continue to be awarded officially by the University of London.

The Principal of the College (at the time of the visitation, this was Professor Quintin McKellar BVMS PhD DVM DipECVPT MRCVS FIBiol FRAgS FRSE) is appointed by the College's Council for a term of five years, renewable for one further term. Vice-Principals are appointed by the Council, on the recommendation of the Principal, from among senior and experienced RVC staff, for a term of office of normally three years with the possibility of extension. Heads of Department are appointed on a similar basis.

The Council is the governing body of the College, normally meeting four times a year. It has legal responsibility for the strategic direction, governance and control of the College. It has 18 members, including 11 independent members appointed on the basis of their expertise; the Principal and three academic Vice-Principals; two academics appointed by the Academic Board; and the President of the Students Union Society (SUS). It is supported by a number of committees - Finance and General Purposes Committee, the Audit Committee, Safety Committee, Ethics and Welfare Committee, Nominations and Fellowships Committee, and the Remuneration Committee.

The Academic Board considers and advises the Council on all academic matters affecting the educational policy of the College, including the organisation of teaching and research**.** The Board is chaired by the Principal and meets three times a year. It comprises all Heads of Department, Professors and Readers, seven elected academic staff and the President of the Students Union Society. It is supported by five committees, each of which has delegated responsibility for a major functional area of the Board's remit: Learning, Teaching and Assessment, Research Degrees, Research Strategy, Student Support, and Teaching Quality.

Academic staff are represented on all major committees of the College including the Council. There is student representation on all committees which consider matters of concern to the student body, either through direct election, or via nomination by the Council of the Students Union.

There are over 200 academic members of staff at the RVC, of whom 138 are veterinarians. More details are provided in Chapter 10.

External stakeholders are involved in College matters:

- there are external members, some of whom are members of the profession, on the Council and its committees, on all committees reporting to Academic Board, and on Course Management Committees
- all degree courses employ External Examiners and, for the BVetMed, the majority of these are members of the veterinary profession
- academic staff appointment panels include external advisers from the profession
- selection panels for the BVetMed degree often include a veterinary practitioner.

Comments on governance

The RVC has a governance structure that is unique amongst veterinary schools. As an autonomous College of the University of London, the RVC has complete regulatory and fiscal authority over its activities, and functions in its relations with HEFCE, in a fashion similar to most other UK schools' parent Universities. This has both advantages, in areas such as decision making and financial flexibility, and disadvantages in terms of additional administrative responsibilities and governance considerations.

The RVC Principal is the Chief Executive of the organisation and the Visitors noted the involvement and demarcation between academic representation and operational representation on senior management. The RVC is to be commended on the professional approach to strategic planning. The Principal reports to Council and he has invested some considerable effort in restructuring Council in recent years. Undoubtedly a positive step, it is interesting that the impetus for change has come from the CE rather than from Council itself. Given this background, it is essential that there is sufficient autonomy in decision making between the Council and the College senior management. This appears to have been

achieved by the appointment of a skilled laity, with specific areas of jurisdiction in committee structure, at the same time as maintaining College representation. The Visitors noted that meetings of Council are only quorate when the lay members are in the majority. It is essential that this is maintained.

Governance throughout the College appears to be well defined and the quality assurance aspects of the governance structures are in place. Major decisions, as far as can be determined, are all taken in line with modern governance expectations.

Suggestions

None

Chapter 3 - Finances

Finances must be adequate to sustain the educational programmes, to allow for adequate research and to meet societal objectives of the Faculty. Universities and national ministries must recognise that veterinary education is more expensive than training in other science-based disciplines, since it includes clinical instruction based on public services (e.g. patient care). It must also be considered that veterinary education has to take place in a research environment and that salaries should be sufficiently high so as to attract and retain highly qualified staff.

The budget must allow the Faculty to:

- Perform adequate research based teaching
- Attract and retain highly qualified academic and support staff to reach, or exceed satisfactory teaching staff/student and teaching staff/support staff ratios.
- Ensure provision and renewal of up to date teaching (including IT) facilities, laboratory and clinical equipment (including vehicles for the ambulatory clinics).
- Ensure teaching and clinical training in premises with adequate hygienic and safety standards,
- Ensure adequate intramural clinical training by securing an adequate caseload, including emergencies, across animal species and adequate provision of stationary and ambulatory (mobile) clinical services, according to the most recent advances in veterinary medicine.

Bearing in mind the increasing demand for specialist training, funds should be made available for places for both clinical and research postgraduate students in areas in which the Faculty has expertise.

Findings

The RVC's financial model is one that the College itself has devised to meet its own operational and strategic needs. The largest single component of the College's funding is allocated for teaching and research and the sums involved are derived through formulae defined by the Higher Education Funding Council for England (HEFCE). Most of the remainder of the College's income is derived from research grants and contracts, student tuition fees, clinical earnings, and donations, and comes direct to the College, in full.

HEFCE has also provided capital funding to support new building developments. This has been calculated upon the College's overall HEFCE teaching and Quality Related (QR) research income, and the total research grant income from the UK Research Councils. In the seven year period from 2002-03 to 2008-09, the College received £10.1m in capital funding from HEFCE. The College has been allocated a further £7.1m for the two year period to 2010-11.

Resource allocation within the College is governed by a formula which is designed to ensure that activities are funded at a level that reflects their real costs, and that they are credited with resources that they earn. Thus an academic department will receive a proportion of the College's Teaching (T)

income based upon the contact hours for which it is responsible and the HEFCE funding rate for the students whom it teaches. This allocation is made after the distribution of institutional top-slices. As part of this process, new staff positions can be created and filled and it is for each Head of Department to determine the proportion of the departmental budget to be devoted to staffing, and the pattern of positions within the staffing budget (subject to approval by the Principal and hence the Council which ultimately approves the overall College budget).

New buildings may be funded from several sources. In addition to HEFCE capital funding, the College has also used part of its annual surplus to fund building developments, and has secured support for capital developments from philanthropists and charities. In circumstances where a new building will yield a future income stream, e.g. student residential accommodation, the College may borrow funds commercially.

The College has an Estates Strategy covering the period 2009-2018, which sets out the agreed priority areas for capital and maintenance expenditure on the estate. The College makes an annual budgetary provision for estates maintenance in accordance with its long-term maintenance strategy. Building maintenance programmes are managed by professionally qualified staff of the College's Estates Department.

Major equipment purchases may be budgeted for by departments in the annual resource allocation cycle. Where new equipment is required as part of a new building project (e.g. clinical equipment in the new hospitals) it may be budgeted for as part of the overall capital project cost. In addition, major items of equipment may be purchased through funds raised by the College's Development Office. The Development Office has been successful in raising donations to fund the refurbishment of the Beaumont Animals' Hospital and the creation of the Norbrook Centre for Veterinary Business and Enterprise. It is currently embarking on a £30 million fundraising campaign.

The College's autonomous position means that it receives funding direct, without the intervention of a central University administration, and deploys all of these resources in support of its mission without facing competition from other schools or departments. With the support of income from other sources, this has enabled the College to fund a period of growth. The ability to compete for funds from HEFCE's special programmes has brought benefits, such as the creation of the College's Centre for Excellence in Lifelong and Independent Veterinary Education (LIVE).

Comments

The current finances of the RVC appear to meet the RCVS/EAEVE requirements. A summary table of income and expenditure is provided at Annex 1, table 1. This indicates that the College is in surplus of approximately £0.5m to £1M per annum. Reserves have been pre-allocated to new building projects. Risks identified by the College to its finances include the likely reduction in funding from HEFCE (in common with other UK universities) which could especially affect postgraduate training. A reduction in applications from international students would also constitute a risk to continued sustainability.

The financial governance at RVC is autonomous. All income generated by the RVC is available for the College's use; similarly all costs associated with running the College must be met by the College. Based on comparison with similar institutions, the financial position of the College is satisfactory given the current economic climate and in keeping with the investment policies and commitments. Whilst surplus is less than best practice as defined by HEFCE, the College is solvent with major plans for

development and with the appropriate financial arrangement in place. Given the underlying positive balance of the accounts and positive projected budgetary position, the College would appear to be in good health. However, this position is heavily dependent on student numbers and whilst there is no indication that recruitment is a challenge for the foreseeable future, the College would be wise to ensure that performance monitoring (and intervention, where necessary) of individual activities and cost centres is robust. The Visitors were provided with assurances with regard to awareness and process that this is the case.

Suggestions

None

Chapter 4 - Curriculum

General aspects

Veterinary training must comprise at least five years' full-time theoretical and practical study in a University or equivalent higher education establishment. Longer veterinary basic training is a legal decision for the country.

It is imperative to acquire basic knowledge in all fields of veterinary science, particularly in clinical instruction, thus enabling veterinary surgeons to perform all their duties, as stated in Directive 2005/36/EC, Annex V. It is desirable that the students are allowed more advanced training (tracking) in one given field. This can be up to 20% if students meet the day1-competences.
Provided that the curriculum maintains an adequate level of training, faculties can follow the Bologna Declaration by offering a Bachelor's degree prior to finishing the 5-year full-time minimum undergraduate veterinary education, leading to the award of the professional title of Veterinary Surgeon (or equivalent professional title) as regulated by the Directive 2005/36/EC. Graduation after completing this veterinary education is equivalent to a Master's level and, depending on national regulations, this degree may be assigned to the Veterinary Surgeon (or equivalent professional denomination). The title of Veterinary Surgeon is the only professional title provided (Directive 2005/36/EC) after having completed these full-time studies lasting for at least 5 years.
Acquisition of generic competences such as skills in written and oral communication, problem-solving and professional attitudes at all stages of the curriculum are an important adjunct to practical and clinical skills.

The curriculum (e.g. the distribution of the theoretical and practical training among the various groups of subjects listed in Directive 2005/36/EC) must be acquired in such a manner that the educational aims are met.

Curriculum development is the responsibility of the institution as a whole, and should not be left to individual departments (see also Stage two).

The aims of the curriculum and the learning objectives/outcomes must be clearly explained to both staff and students (see also Stage two).

These aims must reflect the needs of the profession and of society, and mechanisms must be introduced to ensure this (see also Stage two).
Methods must be established to monitor and, where necessary, amend the curriculum. Faculties should aim towards the quality assurance mechanisms prescribed for Stage two.

The instruction provided must include basic clinical training across all common domestic species, e.g., companion animals (dog, cat), equine and the food-producing animals of the bovine, ovine, caprine, porcine, avian and farmed fish species. In cases where the Faculty cannot give adequate hands-on teaching in a species, arrangements should be made for students to learn this at another Faculty (freedom of learning – European Credit Transfer System principle).

The breakdown of the theoretical and practical courses between the various groups of subjects must be balanced and co-ordinated so that the students may acquire the knowledge, skills and experience mentioned in these guidelines. Practical training (particularly clinical training) requires the active participation of students under appropriate staff supervision in adequate ratios.

Extra-mural practical training may form part of a full-time veterinary course as long as it is supervised by the institution concerned and does not exceed six months of the total academic five-year training period (Directive 2005/36/EC). Extra-mural training is complementary, and can not be used to replace

training by the Faculty, but can be used to supplement the basic intramural training provided by the institution.

All students must have acquired “day-one” competences by the time they graduate including general academic and professional attributes and attitudes towards professional development as well as pertinent practical -generic and clinical- skills.

Provisions should be made for those undergraduate students who want to gain specific experience in research.

Findings

The curriculum is ‘owned’ collectively by the College, under the overall authority of the Academic Board. Discussion of the curriculum takes place in the BVetMed Course Management Committee (CMC), on which all departments and disciplines are represented.

The College has been working towards a fully integrated curriculum since the 1990s. At the time of the last RCVS visit, the College had implemented horizontally integrated, systems-based modules in the first two years of the course, and was extending this scheme to the remaining didactic components of the course in Years 3 and 4.

At the time of this visit, the curriculum for the BVetMed veterinary degree was in transition, with students in the years 4 and 5 following the old curriculum, and those in years 1 -3 following the new curriculum. The new curriculum is based on the following principles:

- increased vertical and horizontal integration, breaking down the pre-clinical/clinical distinction, with subjects taught “in context” where possible
- reducing contact time, eliminating unnecessary detail, and focusing subject content on an agreed “core”
- giving students more opportunity to gain further knowledge and experience with a preferred species, through more advanced classes and supplementary clinical rotations
- enhancing scientific rigour, and introducing exciting scientific themes
- a stronger focus on the achievement of Day One Skills, with emphasis on first opinion practice
- improving coverage of relatively neglected topics
- developing students as independent learners
- making productive use of e-learning
- implementing an assessment scheme that reliably assesses whether students have achieved the core outcomes of the BVetMed.

Under the new curriculum, classroom-based teaching during the first three and a half years is organised into eleven ‘strands’. Eight of these focus on major body systems, which will normally be encountered three times, so that the students’ knowledge of the system steadily increases and consolidates. The eight systems are: Locomotor, Skin, Cardiovascular and Respiratory, Neurology and Special Senses, Endocrine, Alimentary, Urogenital, Lymphoreticular and Haemopoietic.
Three other strands recur throughout the course: Principles of Veterinary Science, Professional Studies, Population Medicine and Veterinary Public Health (PMVPH).

Farm Animal Medicine and Veterinary Public Health are integrated in the 'Population Medicine and Veterinary Public Health' (PMVPH) strand in the new curriculum. Most VPH teaching is linked to husbandry and production teaching from Year 1. This is carried forward into the Farm Animal Rotation, where there is integrated discussion of VPH topics and an emphasis on the food chain. Public health aspects are also taught in relation to companion animals.

Students undertake a minimum of 12 weeks Animal Husbandry Extra Mural Studies (AHEMS) during their first two years. Between Years 3 and 5 they complete 26 weeks of Clinical Extra Mural Studies (EMS).

In the final stage of the new curriculum, from the mid-point of the 4th Year onwards, following the conclusion of the core classroom-based teaching, students will spend their time as follows:

- 22 weeks of core Intra Mural Rotations (IMR), followed by all students;
- 6 weeks of "tracking rotations" in a species or discipline of the student's choice;
- 9 weeks of taught elective modules in species or disciplines of the student's choice;
- 8 weeks devising and executing a research project on a selected aspect of veterinary science;
- all outstanding weeks of compulsory EMS.

Intramural clinical rotations form an integral part of the BVetMed course, and their assessment constitutes Part 1 of the final BVetMed examination. Students are continuously assessed during each rotation, and must pass all rotations prior to taking Part 2 of the BVetMed final examination. Students who will graduate up to and including 2011 must undertake 28 weeks of compulsory IMR during their Final Year. In the current ('old') curriculum, these rotations are set out in Table 1 below.

Table 1

Rotation Divisions	Rotation	Weeks
Small Animal Medicine	Cardiology	1
	Critical Care	1
	Internal Medicine	2
Small Animal Surgery & Radiology	Radiology	1
	Orthopaedics	1
	Soft Tissue Surgery	2
Small Animal Specials	Neurology	1
	Dermatology	1
	Blue Cross	1
	Emergency Medicine	1
Small Animal General	Beaumont Animals' Hospital	2
Equine Surgery	Equine Surgery1	1
	Equine Diagnostic Imaging	1
	Equine Surgery 2	1
	Out of Hours/Emergency	1
Equine Medicine & Ambulatory Practice	Equine Medicine	1
	Equine practice	1
Anaesthesia	Anaesthesia	2
Farm Animal	Farm Animal & Camelid Clinical Services (FACCS)	2
	Population Medicine & Veterinary Public Health	2
Pathology	Gross and clinical pathology	2

In the new curriculum the core rotations will be reduced to 22 weeks. The following rotations will become tracking rotations: Cardiology, Neurology, and Emergency & Critical Care. The following rotations will be reduced from two weeks to one week: Soft tissue surgery, Equine surgery, Pathology. The College is proposing to change the Blue Cross rotation from being an intramural rotation to a "compulsory" extramural week. A new rotation will be introduced in Veterinary Public Health / Abattoir Week.

The core rotations under the new curriculum will therefore be as set out in Table 2 below.

Table 2

Rotation Divisions	Rotation	Weeks
Small Animal Medicine	Internal Medicine	2
Small Animal Surgery & Radiology	Radiology	1
	Orthopaedics	1
	Soft Tissue Surgery	1
Small Animal Specials	Dermatology	1
	Emergency Medicine	1
Small Animal General	Beaumont Animals' Hospital	2
Equine Surgery	Equine Surgery 1	1
	Equine Diagnostic Imaging	1
	Out of Hours / Emergency	1
Equine Medicine & Ambulatory Practice	Equine Medicine	1
	Equine practice	1
Anaesthesia	Anaesthesia	2
Farm Animal/VPH	Farm Animal & Camelid Clinical Services (FACCS)	2
	Population Medicine & Veterinary Public Health (PMVPH)	2
	Veterinary public health (Langford)	1
Pathology	Gross and clinical pathology	1

Alongside the core rotations of 22 weeks, students will have six weeks of tracking rotations where they can elect to do additional weeks in their areas of interest.

Students are required to be present throughout normal clinic hours, and to participate in morning and evening rounds where these form part of the clinical routine. When on rotations which involve evening, weekend or overnight duties, students are required to take part according to a rota.
There are normally 20 students in each four-week rotation division, but these are broken down into multiple groups of four or five for specific clinical activities. When on rotation, students are normally full participants in the clinical team and take part in all aspects of clinical activity, under staff supervision, from admitting patients and taking their history, through carrying out tests, administering treatments (including surgical procedures), providing nursing care, to discharge. Details are provided for students in the IMR handbook, which also lists the learning objectives for each rotation.

Comments

The College is commended on the development of the new curriculum. The integrated curriculum includes early access to clinical knowledge and case based scenarios to give vertical integration throughout the five years. The 'spiral' curriculum, revisiting the main system strands three times over the first three years, allows the opportunity to re-visit certain topics throughout the course.

Whilst the principles behind the design of the new curriculum are laudable, further work is needed urgently to finalise the specification of detailed learning objectives and the timetable for Years 4 and 5. Although the general objectives and overall programme specification had been finalised, the details had not yet been agreed at the time of the visit.

Without specific learning objectives for Years 4 and 5 there is a risk of unintended omissions in the curriculum, and students reported their experience of some gaps and overlaps to Visitors. A clear sight of how the new curriculum relates to the requirements of the EU Directive must be maintained, and ownership of the whole curriculum and not just individual strands must be instilled in all staff so that all the relevant inter-connections are made. Effective delivery of the new curriculum will depend on clear communication being established and maintained by all those involved in its delivery.

In the new curriculum "tracking" is available for the 4th and final years in addition to 22 weeks of compulsory rotations. These options have been introduced (although the old curriculum also included 'electives') to allow students to develop beyond the day 1 competences in certain chosen areas. Such an approach is likely to improve student interest and satisfaction. Students will choose tracking preferences and where possible will be allocated to 1st or 2nd choice. This system for the new curriculum has not yet been completed by students so the outcome cannot yet be determined. Opportunities will be set up for students to carry out tracking rotations in areas not covered by the college such as swine medicine, and enquiries are currently being made with outside practices but no firm commitments have yet been made. Other tracking rotations will take place within the College and will include more advanced skills. The students on these tracked rotations will be assessed on these advanced skills and knowledge whereas students undergoing other tracked rotations may be assessed on day 1 competences.

The Visitors were satisfied by the evidence they examined that generic competences such as written and oral communication skills, problem solving and professional attitudes are adequately covered in vertically integrated themes throughout the curriculum.

In the new curriculum, the Professional Studies strands run throughout the first three years of the course. This strand encompasses ethics, communication and business skills and is a particular strength of the programme. Some of the topics are relatively new to the course and are likely to be further developed over the coming years with greater opportunity for students to carry on the development of business skills while undertaking the clinical rotations and their EMS. The College should ensure that the skills developed in the professional strands of Years 1 to 3 are continued throughout the remainder of the course.

All staff have had the opportunity for input into the new curriculum via several routes including 'away-days' which have run on an approximately annual basis.

Suggestions

Consider benchmarking the new curriculum against best practice in similar teaching institutions both in the UK and overseas. The RVC's mission is to be a world leader in veterinary education and, to be such, it must continually judge itself against the rest.

Recommendations

The specific learning objectives and timetables for Years 4 and 5 of the new curriculum must be agreed as a matter of urgency and communicated to students.

Ensure that there is a more structured and formal appraisal of the curriculum content to eliminate gaps and overlaps.

Curriculum - basic subjects and sciences

The instruction in basic subjects, (physics, chemistry, animal biology, plant biology, biomathematics) may be given as part of, or in association with, other disciplines of the veterinary course. They could also advantageously be taken prior to entry to the veterinary course. These subjects should provide a solid background in chemical, physical and biological sciences, with the objective of preparing students for the subjects to be taught later in the veterinary curriculum.

Instruction in basic sciences must provide students with an understanding of the fundamental biological principles and mechanisms underlying animal health, disease and therapy, from the molecular and cellular level to the level of the organ, the whole animal and animal populations. This includes an understanding of the biological basis of normal structure and function, the mechanisms governing homeostasis, the physiopathology of organ systems and the biological and pharmacological evidence-based mechanisms, by which disordered states may be returned to normal.

The teaching must also cover the biology of agents that cause and transmit diseases from animal to animal and from animal to man, the transmission mechanisms and the mechanisms by which animals defend themselves against infectious agents and how these mechanisms can be induced.

The basic sciences must include:

- Anatomy (including histology and embryology),
- Physiology,
- Biochemistry,
- Genetics,
- Pharmacology, and pharmacy,
- Toxicology (including environmental pollution),
- Microbiology (including virology, bacteriology and mycology),
- Immunology,
- Epidemiology (including scientific and technical information and documentation methods),
- Professional ethics.

Findings

In common with other veterinary schools in the UK, the teaching of “basic subjects” (chemistry, biology, maths, etc.) is covered before admission to the course. All students admitted to the five year programme must have achieved high grades in relevant science school examinations (A level, Scottish Highers, or equivalent) or in vocational qualifications. Graduates admitted to the four year programme must have undertaken a degree in a relevant science subject. Those admitted to the six year ‘Gateway’ programme with lower school grades must pass a one year ‘foundation’ programme in basic subjects before being admitted to the remainder of the course.

The hours allocated to the other 'basic sciences' that are listed in the EU Directive are shown at Annex 1 in Table 5.

Comments

The College is at an interesting juncture as there are now two groups of students progressing through the programme – those on the 'old' curriculum who are currently in Years 4 and 5, and those on the new curriculum in years 1 - 3. It is clear from the documentation and from inquiry that the old curriculum easily maps to the subjects laid out in the EU Directive and RCVS/EAEVE criteria. For basic subjects in the old curriculum, and taking into account entry criteria to the programme, there is clear documentation relating to learning objectives, course content and quality assurance such that the College meets the requirements as laid down in the accreditation guidelines. An analysis of hours mapped to the EAEVE defined subject headings was essential for this assessment and this is provided in Annex 1.

For the new curriculum, the mapping was less obvious but as far as could be determined by the Visitors, the students are provided with framework and support, as well as with sufficient didactic teaching to ensure that the basic subjects are covered, again taking into account the entry requirements. The so-called 'spiral' curriculum means that the subjects defined in the EU Directive and laid out in the accreditation guidelines are encountered by the students at a number of points during the five years of the programme, often in an integrated fashion given the integrative systems basis of the strands of the first three years and the taught tracking later in the curriculum.

Whilst all the basic science subjects required by the EU Directive appeared to be covered by the integrated system strands from first year, they were not readily identifiable as separate subjects in the curriculum materials seen by the Visitors. For example, Biochemistry is not identified as a taught subject, but appears under Digestion & Metabolism and Molecular Biology.

The paraclinical areas including pathology are taught alongside clinical subjects with horizontal and vertical integration of the course. This is likely to enhance the student learning experience and encourage retention of knowledge in paraclinical areas due to their integration into the clinical context. Some areas such as pharmacology do not appear as a block of time on the curriculum due to the integrated structure. However, during the development of the new curriculum, these disciplines were mapped onto the new curriculum to ensure coverage.

Suggestions

The College should ensure that it maps the curriculum to EAEVE subject headings to ensure there are no unintentional gaps in coverage.

Curriculum - clinical sciences

The course of instruction in the basic sciences (pre- and para-clinical subjects) should have laid the necessary groundwork on which to build clinical knowledge and skills.

Propaedeutic training, as listed in the Annex V.4 of Directive2005/36/EC, must provide the skills required to examine the patient or analyse the case, collect the clinical and laboratory data as the fundamental basis for a diagnostic and therapeutic plan for the case.

Intramural clinical training must be provided so all students receive a common clinical grounding, encompassing all species and disciplines, in accordance with the Directive 2005/36/EC, Annex V, and adequately enable veterinary surgeons to perform basic clinical duties in all species, if required (see the list of essential competences required at graduation, the so-called "day-one skills" in **Annex 4**. The time allotted for training in clinical sciences should account for at least 40% of the entire curriculum. This does not preclude the acquisition of additional knowledge in selected areas for which there is less demand as considered in the Directive 2005/36/EC.

Extramural clinical training and exposure to patient-driven clinical services are, albeit encouraged, only to be considered supplementary to the intramural clinical instruction provided by the Faculty, with equal consideration to teaching hospital (stationary) clinics or ambulatory (mobile) clinical services, which should remain the core of the intramural clinical instruction.

The clinical sciences must include:

- Obstetrics,
- Pathology (including pathological anatomy),
- Parasitology,
- Clinical medicine and surgery (including anaesthetics);
- Clinical lectures on the various domestic animals, poultry and other animal species;
- Preventive medicine,
- Radiology, (diagnostic imaging)
- Reproduction and reproduction disorders,
- Veterinary state medicine and public health,
- Veterinary legislation and forensic medicine,
- Therapeutics,
- Propaedeutics.

The above subjects are general subjects. Faculties should ensure that students are exposed to all major areas of clinical specialisation.

Findings

Instruction in clinical skills is included, in context, in systems-based teaching. For example: in the **Cardiovascular and Respiratory** strand students are taught to identify heart and lung sounds by

auscultation; to measure heart rates by auscultation and feeling the peripheral pulse; to measure respiratory rates; to raise veins in various species at common venepuncture sites.

In **Principles of Science** students are taught to handle a specimen for microbiological culture and sensitivity testing and to handle and examine live animals safely.

In the **Population Medicine & Veterinary Pubic Health** strand there is an introduction to farm-level risk assessment including risks to animal health and welfare, zoonotic, and economic risks.

In the current **Endocrine** module and in the clinical case scenarios in all the new third year systems strands, students are taught a logical approach to clinical problem solving.

In the **Locomotor** strand students are taught: to palpate equine distal limb structures (tendons, blood vessels, nerves), identifying diagnostic nerve block sites; to palpate common injury sites in greyhounds (gracilis tears, accessory carpal bone fractures, tarsus fractures); to identify and name the regions of the hoof, recognising the normal appearance of these regions / structures; to lift horses' feet safely; to recognize lameness in horses, using videos.

In the **Neurology** strand students are taught: to identify ocular structures visually and through the ophthalmoscope; to elicit palpebral & pupillary reflexes; to elicit musculoskeletal reflexes, e.g. patellar, panniculus reflexes; to examine cranial nerves.

In the **Alimentary** strand students are taught: to examine the rumen (auscultation, palpation of rumenal contractions, percussion); to auscultate the equine GIT; to palpate abdominal structures in the dog; to examine the abdomen through laparotomy / rumenotomy incisions in fresh cadavers; to use the haptic cow for an introduction to rectal palpation of the ruminant abdomen and GIT.

In the **Skin** strand, across the year 2 and year 4 visits, the following skills are developed: preparation, microscopic examination & interpretation of different types of skin samples; recognition of manifestations of skin & ear disease; otoscopic examination (& foreign body retrieval from ear canal) on canine cadaver.

All students spend one week as participants in the **Emergency and Critical Care** rotation in the Queen Mother Hospital for Animals and are involved in all aspects of emergency clinical activities. Student involvement in the treatment of hospitalised cases involves the student taking responsibility for a case, examining the animal daily and carrying out routine nursing and physiotherapy procedures.

Students participate in the activities of the farm animal and equine mobile clinics. The farm animal clinician based in the mobile clinic at Hawkshead takes up to three students on calls. Two students go to Northpoint farm animal practice every day, normally with one student accompanying each vet on visits. Up to three students receive clinical skills training (including foot trimming) on farms served by the Westpoint Sevenoaks farm animal practice twice a week. All students spend one week attached to the College's own Equine Ambulatory Practice, in groups of five. The Practice is staffed by four veterinarians (three staff clinicians and one clinical training scholar), who take students on visits on a one-to-one basis.

Comments

Clinical sciences

The specific pathology rotation in 4th and final year has reduced from two weeks to one week in the new curriculum. This has been counterbalanced by an introduction of pathology earlier in the course with presence at post-mortem examinations by students in 1st and 2nd year. The total number of post mortems is adequate for the number of students and systems appear to be in place to confirm that each student has sufficient post-mortem experience including taking of material for samples.

The teaching of the paraclinical subjects has been brought earlier into the course and is now integrated within the system strands as well as in the Principles of Science. Lectures as well as practical classes are included with sessions in the post-mortem room for each of the students with coverage of both companion animal and food producing animal post-mortems.

A clinical rotation week is identified as 48 hours. If that is the expectation of student involvement, care must be taken to ensure they receive adequate breaks.

Companion animal clinical studies

The small animal clinical service in the Queen Mother Hospital for Animals is exemplary and supports a commendable training scholarship programme. However, the RVC itself acknowledges in its SER the conflict of providing a secondary and tertiary small animal referral service and the delivery of a programme of direct relevance to veterinary undergraduates, yet it has to maintain an improving referral service for sustainability. It is therefore incumbent on the College firstly to make as much use of the case material in as relevant a way as possible. Secondly, it must try at least to maintain and preferably expand the exposure of students to small animal first opinion practice.

The exposure of students to rabbits and other 'common' small animal species other than in electives seems limited to the Beaumont Animals' Hospital and EMS placements.

Without a first opinion small animal practice of its own, other than the Beaumont Animals' Hospital, rotations through the Blue Cross Animal Hospital and placements in PDSA clinics are highly valued by students. They must be maintained as intra-mural teaching and not lost to tracking rotations or EMS.

The staff involved in the Blue Cross placement are of high quality and their enthusiasm helps compensate for any potential lack of direct support from the RVC. These placements need effort spent to develop and formalise the arrangements, with particular attention being paid to supporting and training non-RVC employees in teaching and assessment methods, as they have an important role to play in developing students.

Production animal clinical studies

The Visitors noted that there is considerably less emphasis on farm animals at RVC than other species, evidenced by the noticeably poorer food animal facilities at Hawkshead, the apparent greater emphasis on camelids than farm animals (even in the name of the facility/department) and the low numbers of animals passing through the College's farm animal clinic.

Some of this lack of case material has been addressed by novel initiatives with Westpoint and Northpoint Veterinary Groups and the development of the Welsh Regional Veterinary Centre and the Visitors commend this commitment to finding a solution.

There appeared to be confusion, however, in the minds of clinical staff, staff at the joint venture practices, the interns and the students as to the status of these units and their role in teaching. The Visitors understand that these are part of the intra-mural rotations and as such fall under the category of "distributed learning" centres, the requirements of which are laid out in Annex 7 of the RCVS Visitations Criteria and Guidance 2009. These requirements are currently not being fully met in relation to these intra-mural rotations.

The Visitors are concerned that although these initiatives are innovative and potentially very successful as teaching resources, and are being well received by the students, they are still in their infancy and are dependent on "informal agreements" and goodwill between RVC and the practices. If for any reason these initiatives failed, and in particular the Joint Venture Practice and associated relationship with Westpoint Veterinary Group, then there would be virtually no individual farm animal caseload available to the students and a significantly reduced opportunity to teach farm health planning and farm animal medicine generally. There do not appear to be any contingency arrangements in place.

With regard to the facilities at Hawkshead, there appeared to be confusion as to proper or accepted biosecurity protocols amongst senior staff.

Boltons Park Farm has excellent facilities for teaching animal husbandry but produces little volume of clinical cases. The Visitors commend the approach, ethos and staff at Boltons Park Farm and were particularly impressed how students were encouraged to make use of the facilities and animals at the farm to improve their handling and non-invasive techniques. More use could be made of the farm for clinical teaching.

From the 'Population Medicine and Veterinary Public Health' curriculum hours given, and discussions during the visit, the Visitors felt that the time spent teaching students how to collect and analyse disease and production data was relatively low, and that some consideration should be given to increasing the emphasis on herd health investigations which are a very important aspect of the work done by food production veterinarians in the field.

Practical training in the Clinical Skills Laboratory is to be commended. However, it must not be allowed to become a substitute for hands-on animal work. The haptic cow is a useful training aid, but undertaking real rectal examinations is still essential.

Training in farmed fish is provided in lectures, practicals and post mortem classes, but there appears to be as yet no provision for clinical fish medicine in the new curriculum, although the possibility of a tracking option was mentioned in the SER.

Suggestions

The Visitors suggest that some attention should be given to ensuring that all students are able to follow cases through clinical examination and investigations, including pathology, which is an important part of clinical learning. (This applies to both companion and production animals.)

Consider increasing the emphasis on herd health investigations.

Ensure that the use of 'virtual' animals in the skills laboratory does not take over from 'real' animals.

Recommendations

The Visitors recommend as a matter of priority that the status of farm animal clinical resources within RVC are reviewed and consideration is given to the following:

- upgrading the large animal clinical areas at Hawkshead
- formalisation of the joint venture partnership with signed and enforceable agreements in place which meet the RCVS requirements for distributed clinical training
- a contingency plan in the event of any breakdown in relationship with external providers of core placements
- clarification for all involved that these activities are part of core curriculum and treated as such
- staff involved with teaching students at these facilities are trained in teaching and assessment techniques, or are closely supervised by a senior member of staff at RVC who has been so trained, in line with RCVS requirements for distributive clinical training
- feedback, recording and monitoring of tasks at these centres is maintained with intervention levels identified.

Curriculum - Animal production

Animal Production is the broad term used to describe the entire discipline of breeding, rearing and disposal of food-producing animals and their products by sale, slaughter for food or as waste. Tuition must cover the major food-producing species (cattle, sheep and/or goat, pigs, poultry, rabbits, and equine) and one example of a farmed fish species. Knowledge of animal production in its broad sense is essential for the veterinarian in order that changes in normal behaviour and management can be detected, animals can be handled safely, treatment can be given in an appropriate manner and appropriate recommendations can be made for prophylactics and care.

The training must be oriented towards the application of prophylactics and clinical treatment on individual and herd basis, preventive veterinary medicine (e.g. herd health) and management of epidemic diseases, reproductive management, housing of animals and feeding regimes. The training provided should allow veterinarians to derive proper data for food chain information and possible risks to human health.

Training must familiarise students with the normal methods for the disposal or recycling of animal waste and the common requirements for ethical, environmentally-sound and hygienic disposal of the bodies of companion animals and the carcasses of food-producing animals.

Training must provide adequate knowledge on animal welfare issues, covering rearing and holding on-farm until slaughter.

Knowledge of the economics of animal rearing enterprises and their place in the rural economy is required to make informed decisions about disease control and euthanasia.

The importance of genetics in animal breeding and trade as well as for disease resistance should be understood.

Theoretical and practical training must cover the broad requirements of the individual member states.

Theoretical instruction should be accompanied by practicals which provide the confidence to handle major domestic animal species safely and the ability to carry out basic tasks in animal management, breeding and rearing.

The animal production subjects must include:

- Animal production (the domestic food-producing animal species in society and the economy)
- Animal nutrition (nutrition and feeding of food-producing species)
- Agronomy (cropping, grazing and land use in relation to food-producing animal species)
- Rural economics (animals as a business and their importance in the countryside)
- Animal husbandry (housing, management and reproductive management systems, including artificial reproduction techniques, e.g. artificial insemination, multiple ovulation and embryo transfer).
- Veterinary hygiene (farm layout, drainage, cleaning, disinfection and bio-security)
- Animal ethology and protection (behaviour, social organisation in animal populations and common welfare issues, including behavioural disorders and their remediation)

Relevant and appropriate consideration of the principles above should also be applied to the major non food producing animals like the dog and cat.

Findings

Animal Production is covered in the curriculum in Population Medicine and Veterinary Public Health strand, where veterinary public health teaching is linked to husbandry and production teaching from Year 1. This is carried forward in the 'old' curriculum into the farm animal rotation (two weeks) and the Population Medicine and Veterinary Public Health rotation (two weeks). In the new curriculum, there are five weeks of rotations devoted to farm animals and veterinary public health. Students undertake a minimum of 12 weeks of Animal Husbandry related Extra Mural Studies (AHEMS). The majority of this time must be allocated to work with farm animal species, with four weeks available for free student choice.

Animal Production and husbandry are taught at Boltons Park Farm, where the following subjects are covered:

- Herd fertility monitoring and related activities including each student carrying out rectal examinations.
- Lameness work and mobility scoring
- Castrating and disbudding calves
- Condition scoring
- Calving practices
- Herd health plans
- Husbandry, environmental and management issues
- Nutrition
- Lambing Practicals
- Foot trimming
- Sheep handling
- Anti and post mortem diagnosis
- Flock health plans
- Flock nutrition plans
- Poultry flock health plans
- Environmental improvements
- De-beaking
- Flock nutrition
- Humane dispatch and stunning
- Pig handling classes

Students can additionally practice animal handling and skills such as foot trimming on stock kept at the Biological Services Unit at Boltons Park. A pony herd of 22 breeding animals is kept at Hawkshead and used as a teaching resource, as well as alpacas, rams and Jersey cows.

Ambulatory services are delivered through a regional joint venture farm animal practice which combines a local commercial practice (Northpoint Veterinary Services) and the College practice. Additional Day One Skills are taught through a partnership with Westpoint Veterinary Services near Sevenoaks in Kent. Two or three students visit this unit twice a week and take part in activities including herd nutritional analysis, castration, fresh cow examinations and herd health visits, depending on the seasonal needs of local farms. Students spend two weeks at the Welsh Regional Veterinary Centre, visiting two herds per week.

Comments

As mentioned elsewhere in the report, the Visitors felt that Boltons Park Farm has excellent facilities for teaching basic production animal topics alongside animal husbandry. The Visitors commend the approach, ethos and staff at Boltons Park Farm and were particularly impressed how students were encouraged to engage with the tutors and utilise the facilities and animals at the farm outwith their timetabled classes. However Boltons Park Farm provides relatively basic and in some areas unusual concepts of commercial agriculture (eg waste wood chippings for bedding), so it is important that the other resources (Wales and Westpoint) are utilised to give exposure to many different systems.

The Visitors are concerned, as mentioned elsewhere, that the innovative off-site initiatives being utilised are potentially very successful as teaching resources, and are being well received by the students, but they are still in their infancy and not yet robust. There is a core part of animal production being taught at Westpoint Sevenoaks, but again this is on one dairy unit, which is not typical and the teaching and assessment skills of the Westpoint staff are not being audited.

The Visitors did not visit the Welsh centre, but from viewing the DVD provided, examining the course content from this placement and following discussions with staff and students, it would appear that students are given an opportunity to learn the basics, albeit there is a risk of repetition of the teaching. Feedback received during the visit from students and alumni suggested that the student experience in Wales is highly variable, ranging from excellent to unacceptable.

Given the nature of production animal practice, which is a rapid transition phase from ambulatory emergency work, to proactive consultancy and health planning, the visitors were impressed how the teaching staff at RVC had already started adapting their course to address this. It will be important to maintain this dynamism within this part of the curriculum.

The visitors commend the engagement of the RVC in the area of animal welfare – this is an important area of animal production, which is rightly given some priority within the curriculum.
Given that the RVC's veterinary degree is internationally recognised, and that many students are from overseas, the Visitors were concerned that there was insufficient pig and poultry content in the course if students were to work in other countries, for example elsewhere in Europe.

It was unclear to the visitors where in the new curriculum subjects such as "reproductive management systems, including artificial reproduction techniques", and "veterinary hygiene" fit.
Similarly, "Animal ethology and protection" was not identified in the SER.

Recommendations

Ensure that students have the opportunity to access various husbandry systems within the curriculum and encourage this further during IMR and EMS.

Ensure that students who wish to gain additional knowledge in pigs and/or poultry have that opportunity within electives and EMS.

Ensure through mapping that all the EAVE required topics for animal production are being covered in the new curriculum, including animal behaviour, and that these take account not only of food producing animals, but also major non-food animals such as the cat and dog.

Curriculum - food hygiene and technology and veterinary public health

The training must ensure that each student understands the fundamentals of veterinary public health, food science and modern food technology, the scientific basis of the relationship between food and human health, and the factors underlying the quality of hygiene (of food and the environment).

Directive 2005/36/EC, Annex V.4, 5.4.1, requires therefore adequate knowledge of the hygiene and technology involved in the production, manufacture and putting into production of animal foodstuffs or foodstuffs of animal origin. It further requires adequate knowledge of the laws, regulations and administrative provisions relating to the production of such foodstuffs. Veterinary public health/Food hygiene education for veterinarians must therefore ensure that, on graduation, they can be trained by the Competent Authority (CA) to carry out the audits described in the appropriate food hygiene regulations.

Study programmes should therefore build on a sound knowledge in the field of veterinary public health/food hygiene so that students:

- know how to carry out ante-mortem inspection on farm or in the abattoir and assess the welfare of the animals concerned.
- be familiar with veterinary public health and the respective legal regulations.
- understand post-mortem inspection and possess basic practical skills within the food production business and inspection requirements.
- understand the importance of risk-based monitoring of the processes (HACCP concept). These tasks require a sound knowledge of the pathology, microbiology, parasitology, pharmacology and toxicology of food animals, of epidemiology and of the legal requirements, allowing them to ensure public health and report back along the food chain to the farmer and to the Competent Authority.
- interpret the information returned by the Food Business Operator to the farm so as to benefit production, animal welfare and public health.
- acquire an acceptable knowledge of the principles of Food Hygiene Legislation at EU-level and in the individual state.

The veterinary food hygiene/public health subjects must include:

- Inspection and control of animal foodstuffs or foodstuffs of animal origin and of the respective feed-stuff production units
- Food hygiene and technology
- Food science including legislation
- Practical work (including practical work in places where slaughtering and processing of foodstuffs takes place).

The course of instruction must cover subjects necessary to prepare the graduate to perform effectively not only in the traditional veterinary practice, but also in other common professional roles. Undergraduates must receive broad information on the different opportunities of post-graduate training and specialisation.

Findings

Veterinary Public Health and Food Hygiene are integrated with farm animal medicine through the new 'Population Medicine and Veterinary Public Health' strand (PMVPH) which runs throughout the course from Year 1. In Year 1, it is linked to animal husbandry and production teaching as well as public health aspects of companion animals, and continues through the farm animal rotation, where there is integrated discussion of VPH topics such as biosecurity, the slaughter process and food processing (including a visit to a cheese factory and an abattoir). The farm animal rotation has been redesigned to incorporate an emphasis on the food production chain and 'farm to fork'.

A week's EMS experience in an abattoir is currently mandatory, but in the new curriculum there are plans to bring this into the core curriculum through a link with the Bristol Veterinary School to use the facilities at the Langford abattoir which is in turn being redeveloped as a teaching facility. In addition to their week of VPH EMS, students spend half a day at the abattoir near Carmarthen during their time at the Welsh Regional Veterinary Centre. Visits to a dairy plant, cheese factory and commercial deer herd also focus on the food safety aspects of these operations.

The College has established relationships with several major food retailers which take students on EMS and offer access to their processing plants.

Final year students receive a week of training in food production chain medicine as a standalone week in the farm animal rotation. They receive didactive instruction in applied VPH and epidemiology and, from the Welsh Centre, visit farms to collect data for risk analysis on bovine TB outbreaks.

Comments

Due to the integrated nature of the curriculum, it was not immediately clear to the Visitors how all the various VPH topics were covered. However, the zoonotic aspects in the food chain appeared to be adequately covered, together with teaching in microbiology and parasitology. Teaching in practical food microbiology is not based on a laboratory course and seems to rely on the course(s) in bacteriology. In total the curriculum for food microbiology (in particular) and technology appeared to be limited.

From the documentation considered and discussions held with staff during the visit, the Visitors noted plans to increase teaching in food science and technology. Teaching in food safety and veterinary public health has been increased by 25% in the new curriculum. Furthermore, it was reported that a laboratory course in food microbiology had been discussed and planned for the new curriculum. However, in tables detailing hours for the new curriculum in the SER, no hours have been allocated for this subject in the column "Laboratory and desk based work".

In 2009 the College awarded special project funding to the Veterinary Public Health teaching staff to produce a DVD instructing students on the veterinarian's role in the slaughterhouse". The Visitors noted that this DVD has not yet been produced as there had been some difficulty in identifying a suitable location for filming, although discussions are continuing.

Although students are required to have undertaken VPH lectures before their EMS placement, the Visitors noted that the impact of these lectures may in many cases have been lost by the time some students undertake their abattoir placement in the 5th year. Although students were supposed to have

been provided with detailed learning objectives prior to their VPH placement, this did not always appear to be the case, and there was some evidence that specific learning objectives had not been communicated to all relevant staff at the abattoir.

Suggestion

The introduction of laboratory practicals in food microbiology would help to strengthen the course and ensure that it fully meets the RCVS/EAEVE requirements for VPH and food hygiene. This would ensure that students are actively involved in practical training to consolidate their learning in theoretical courses, as well as provide them with further insight into how scientific knowledge is acquired. Practical training should involve more than the observation of demonstrations.

Recommendation

The College should emphasise the learning objectives for abattoir placements, whether these are undertaken as EMS or as a core rotation. Students and EMS placement supervisors should be reminded of the importance of the recently produced GVS/BMPA guidance “Getting experience in the food sector: Meat production & processing” setting out learning objectives and protocols for training in meat plants.

Curriculum - professional knowledge

Professional knowledge subjects must include:

- Practice management
- Veterinary certification and report writing
- Career planning and opportunities

Findings

The old curriculum contained a week devoted to Professional Studies. This has been strengthened considerably in the new curriculum, with a strand of Professional Studies running throughout the course from Year 1, with a total of 83 hours of mixed lectures, seminars, self-directed learning and desk based work. More than 30 members of staff contribute to the new interdisciplinary Professional Studies strand, which contains a substantial element of ethics, as well as coverage of business and enterprise studies. Communication Skills training follows the model set by the National Unit for the Advancement of Veterinary Communications Skills (NUVACS), with many clinical staff trained as communication skills facilitators.

Comments

The Visitors commend the strengthening of the Professional Studies component of the course, and specifically the development of the ethics, business and communication skills components of the new curriculum. There are opportunities for research projects based on business studies, and a careers day is provided for students.

There was, however, a concern that Principles of Certification needed further emphasis.

Suggestion

Consider whether sanctions need to be strengthened for any students who fail to attend communication skills sessions.

Recommendation

Ensure that the curriculum adequately covers the Principles of Certification.

Chapter 5 – Teaching, quality and evaluation

The teaching of basic sciences

One of the major objectives is the acquisition of problem-solving skills. To this end, instruction must cover the methods of acquiring, documenting and analysing scientific and technical data.

Practical training must serve to familiarise students with subjects studied in theoretical courses and to give them some insight into how scientific knowledge might be acquired. Practical training does not mean simply observing the teacher during demonstrations. Acquisition of generic problem-solving skills is required.

Findings

The College has a detailed Learning, Teaching and Assessment Strategy which sets out its pedagogic approach. A mixture of teaching formats allows for a blended learning experience and this occurs throughout the programme. With the introduction of the new curriculum there has been a reduction in the number of lectures with further contact hours spent in practicals and directed learning sessions. Formative multiple choice questions are set at the end of each week to allow students to ascertain which of the learning objectives they have met.

Comments

The new curriculum design appears to provide ample opportunity for students to develop learning and problem solving skills from Year 1.

Although directed learning sessions aid development of the students' attitude to lifelong learning and problem solving, it appeared to the Visitors that some students were struggling with this form of learning. Although the introduction of formative MCQs was seen as a useful tool, the Visitors were not convinced that these provided a substitute for personal feedback. Several students, even in the 4th and final years expressed concern that although they were being taught 'how to learn' they felt they were not always given enough guidance about whether they had reached the 'correct' answer, albeit there may have been a variety of 'correct' answers. This had been recognised by staff as an issue.

Feedback from staff and students on directed learning was mixed and it appeared that it could be possible for a student to struggle over a period of time without this being picked up. The tutor system, whilst excellent in most cases, appeared patchy with occasional students receiving delayed or little feedback on their progress.

Although the Visitors understand and support the objectives of this change in teaching style, their view is that more effort should be made to reassure students and to ensure that they are gathering the correct core basic information.

It was not entirely clear to the Visitors whether all students could in fact easily follow through cases from diagnostics to (in some cases) post-mortem examinations as was the stated intention.

Recommendation

Review the feedback mechanisms for directed learning sessions to ensure that formative feedback is provided to students promptly and consistently.

The teaching of clinical sciences

Clinical instruction must take place in groups that are small enough to ensure hands-on experience for all.

Students' problem solving and clinical skills should be developed through their full involvement in case management under suitable supervision. The mere observation of others practising veterinary medicine and surgery is not acceptable. The instruction provided must include basic clinical training across the common domestic species. Effective monitoring systems are to be provided in cases where the Faculty cannot give hands-on teaching in a species and the student must learn this at another institution.

Time-tabled lectures should be excluded from a substantial proportion of the clinical course as they may clash with students' case management activities.

Those responsible for theoretical clinical training must also be involved in the practical side dealt with in the institution's clinics.

The advancement of knowledge is a task involving all members of the profession. Therefore, interaction between students and clinical researchers working in the clinical field should be arranged in order to stimulate students' interest in research.

Findings

Clinical rotations are undertaken in groups of four or five students supervised by at least one academic member of staff and a clinical training scholar. On rotations, the aim is for students to take part in all aspects of clinical activity under supervision, admitting patients, taking histories, carrying out tests, administering treatments including surgical procedures, providing nursing care, through to discharge. Students participate in the activities of both the farm animal and equine mobile clinics, with between one and three students accompanying the College's farm animal clinician on calls, or accompanying the vet on visits from the Northpoint practice. Up to three students receive clinical skills training on farms served by the Westpoint Sevenoaks farm animal practice. All students spend a week attached to the College's equine ambulatory practice in groups of five. Students go out on visits on a one-to-one basis.

The final year of the course is lecture free. Students receive basic clinical training before starting rotations, using the College's 'LIVE' Clinical Skills Centre. Instruction in clinical skills is also included, where appropriate, in systems-based teaching in earlier years.

Comments

The course is not overburdened with lectures and self study time is allocated. The LIVE centre appears to be of particular benefit in allowing students to refine and practice their clinical skills on a regular basis without the need for constant access to clinical material. The development of e-learning opportunities with podcasts, wikis etc. is very encouraging for both undergraduate and post-graduate teaching and is to be commended.

During interviews with the teachers and students in the post-mortem room it was noted that students did not normally follow up their own cases by histology and/or make use of data from histology or results from other samples.

Teaching of companion animal clinical sciences

The lecture-free final year allows students to become immersed in clinical rotations and follow cases through in small supervised groups. Shift patterns of work, although not popular, allow exposure to emergency cases, and care is taken to ensure students are off duty the following day, even when moving to a new rotation.

Queen Mother Hospital for Animals
Excellent teaching in the QMHA is provided through direct teaching on case material and through small group tutorials. Surgery teaching is enhanced by CCTV transmission of the operative site, as direct student observation of long, complex referral surgical procedures is of limited educational benefit.

A rest area within the QMHA provides a relaxation and refreshment area for students. Although they have access to electronic learning resources in this area, students mentioned that they would also like ready access to relevant texts books. Students spoke highly of staff as being knowledgeable, helpful and supportive.

Each student reportedly averages 8 - 9 neutering operations through placements in the Beaumont Animals' Hospital, Dogs Trust and PDSA and this represents good exposure. However, any plans to move these placements into EMS could threaten that experience. The number of neuters was independently verified by final year students, but there is no formal system for logging their experience.

Beaumont Animals' Hospital
Although currently accredited to RCVS Practice Standards Tier 3 (Hospital) level, well equipped and undergoing planned refurbishments, the building is a depressing work environment in terms of space, layout and lighting. It is hoped that the refurbishments will improve the environment significantly, but the structure of the building may preclude it ever achieving the status of a leading first opinion practice without complete internal reconstruction.

Consideration should be given to the development of a new first opinion practice. This would have the added benefit of increasing the potential exposure to first opinion material (including rabbits), and a consequent reduction of reliance on potentially less valuable referral material.

This deficiency in the environment of the Beaumont Animals' Hospital is compensated for, in the eyes of the students, by their direct involvement in first opinion cases and neutering material, and by the enthusiasm of the staff. It was noted, however, that the appointment system potentially prevented them from following cases. Informal records of procedures undertaken by students are kept during the rotation to try to ensure that all students have adequate exposure to all aspects of practice, but there is no formal recording system. In order to provide adequate neutering material, students also visit a Dogs Trust Centre in Harefield, accompanied by a staff veterinarian, to undertake neutering.

The Visitors question the utility of single student-owner interactions in the small animal facility at Camden. Whilst there may be some value in this approach, the learning experience would be

enhanced if there was some way of monitoring performance, for example through feedback sessions, or the use of video.

Blue Cross Animal Hospital

The Blue Cross Animal Hospital in Victoria is a busy charity clinic in central London, and provides students with the opportunity to practise their consulting skills. Working in pairs or small groups they are given the time and space to run consultations, decide on management of cases and implement diagnostic and treatment plans. This is done without significant time pressure, and with great support from the vet who is an employee of the RVC. This was considered a very valuable experience.

Students are encouraged to follow cases beyond the consulting room and laboratory, and seminars focus on first opinion issues such as vaccination and worming. Such experience is highly valued by students who commented it was well worth the time and effort of travelling into the city.

Any plan to change the status of this rotation into 'compulsory EMS' must be abandoned, and indeed students would benefit from more rotations like this.

The 48 week teaching year inevitably results in times when the staff clinician is on vacation. Whilst the individual is usually replaced by an intern from the RVC, this diminishes the educational experience for the students, and raises concerns about assessment by unqualified staff.

PDSA

Currently students are obliged to undertake a two week placement in one of a number of PDSA Hospitals. None of the participating premises were inspected during the visitation. The arrangement is considered by the College as 'compulsory EMS'. The Visitors do not consider that this is tenable, and consideration must be given to how this can be developed into a more structured, and better assessed intramural rotation if it is to continue.

Equine Hospital

The current equine hospital is accredited at RCVS Practice Standards Tier 3 Hospital level, but is soon to be decommissioned and relocated to a consolidated site housing stables, treatment boxes, new theatres and diagnostic imaging. The plans appear sound and offer enhanced provision. The imaging facility now has state of the art digital radiography, head CT and standing MR imaging. Limb CT of anaesthetised horses is possible within the QMHA, and offers an excellent educational opportunity for students at core and advanced levels. The hospital is staffed by knowledgeable and dedicated staff.

Teaching of production animal clinical studies

See comments in Chapter 4, Curriculum, under the heading of production animal clinical studies.

Suggestions

Whenever possible, enable students to follow through their own cases, including following samples and material from post-mortem to histopathology.

Consider developing a new first opinion small animal practice to increase students exposure to first opinion cases including rabbits.

Review the educational value of single student-owner interactions in the small animal facility at Camden and consider increasing monitoring, for example by increasing staff or at least peer review or feedback sessions.

Recommendation

In the absence of alternative intra-mural provision for students to see first opinion small animal cases, the placements at the Blue Cross Animal Hospital and at the PDSA should be designated as intra-mural and structured in such a way that they meet RCVS's requirements for off-campus distributed teaching.

The teaching of animal production

Those teaching the theory of animal production subjects should also be involved in practical training with the major domestic animal species. Teaching should reflect the species balance and management systems of the country. For food producing animas, practical work should be farm- case-based as much as possible.

Practical extramural courses should be encouraged as long as adequate supervision is in force.

Findings

See Chapter 4 for information on Animal Production.

Comments

Students are most likely to get an opportunity to observe, learn about, and understand different husbandry systems and farming practices, as well as the economic realities of farming, while on EMS, and particularly on Animal Husbandry EMS (AHEMS). It was not clear to the Visitors how much preparation the students had prior to their AHEMS, but they commend the "Farm Report" which is part of the AHEMS, which ensures that students look at one farming system in some depth.

The Visitors commend the integration of the RVC teaching staff into the wider profession in the areas of production animal medicine – for example through their engagement in specialist forums.

Suggestions

The Visitors suggest that it would be valuable to engage practising veterinarians to contribute to the animal production course and to demonstrate how the role of the production animal vet is changing.

Recommendations

Some structured teaching should be introduced during the Northpoint and Westpoint IMRs

The teaching of food hygiene/public health

Practical training must familiarise students with the concepts of Food Business audit especially with regard to food of animal origin at various stages in the food chain, particularly in slaughterhouses. Students should develop Day-1 competences in the interpretation of food chain information, ante-mortem inspection and post-mortem inspection and be capable of being trained as official veterinarians by the Competent Authority.

The training must take place in groups that are small enough to ensure that all students are able to gain hands-on experience.

It should also give students the opportunity to monitor units involved in the production, processing, distribution and consumption of foodstuffs.

Extramural instruction in the training in veterinary public health and food hygiene may be used so long as it is properly supervised.

Findings

The teaching of food hygiene and public health aims to provide students with practical experience in the following areas:

- Food safety management procedures
- Animal welfare in meat production
- Awareness of principles of operational hygiene
- The procedures of ante and post mortem inspections, audit and verification
- The importance of official veterinarians (OVs) and their role between the food business operator (FBO) and the Government bodies on veterinary public health and as part of the inspection team
- The role of slaughterhouses in surveillance of zoonotic and notifiable diseases.

In the old curriculum, at least one week of Clinical EMS is devoted to veterinary public health (VPH), during which the majority of the placement is spent in a meat plant. The RVC maintains a register of slaughterhouses that welcome students, although the number of premises on this list continue to drop as more food business operators refuse to admit students (a problem which is not unique to the RVC).

Lectures and practical sessions as well as directed learning and computer-aided learning in public health are currently provided before rotations commence. Students are not allowed to undertake their VPH EMS placement until they have undertaken this preparatory course.

In addition to the mandatory week of VPH EMS, during their farm animal placement at the Welsh Regional Veterinary Centre students spend one morning at the slaughterhouse at Cross Hands, near Carmarthen, and a morning at either a dairy plant or a commercial deer herd, focusing on the food safety aspects of the operations.

Final year students receive a week of training in food production chain medicine delivered as a standalone week within the farm animal rotation. Students receive didactic instruction in applied

veterinary public health and epidemiology and, from a teaching base at the Welsh Regional Veterinary Centre, visit farms to collect data for risk analysis on bovine TB outbreaks.

Comments

Under the old curriculum, significant reliance is placed on EMS abattoir placements to provide the training necessary to meet RCVS/EAEVE requirements. From the evidence available to the Visitors, there is a risk that the learning objectives for VPH will not be met by some students, as they are reliant on the goodwill of the food business operator and Official Veterinarian on site who acts as supervisor.

There was no evidence that students were required to produce a report at the end of their placement, or that they were set any particular tasks to undertake whilst there. Without a greater degree of supervision and clear objectives set, the experience gained may therefore be limited and insufficient on its own to meet the RCVS/EAEVE requirements for practical training. As mentioned in Chapter 4, students and their placement supervisors are provided with clear learning objectives for their abattoir placements but the importance of these documents must be emphasised.

The Visitors were pleased to hear of plans to strengthen this aspect of VPH teaching, and in particular that VPH EMS will in future be brought into the core curriculum and replaced by an intra-mural rotation at Langford.

Suggestions

Bearing in mind that students after graduation should “be capable of being trained as Official Veterinarians by the Competent Authority”, the practical abattoir-based training should be strengthened by ensuring there is a greater degree of monitoring and follow-up of student learning.

If possible and if permitted by the FBO, students should be encouraged to undertake EMS placements in pairs so that they can work together and discuss issues and experiences connected to the different aspects in the abattoir during their stay.

Essential competences at graduation (Day One Skills)

Students must be provided with clear learning objectives for each of the essential competences at graduation (day one skills).

Findings

All students are provided with a copy of the “Day One Skills” handbook, which was produced at the College following an extensive mapping project. The booklet contains a detailed skills list which has been mapped to the curriculum, and to the RCVS Day One Competences.

Comments

The College is to be commended on mapping the RCVS Day One Competences to the new curriculum. The Day One Skills Handbook is a useful reference tool for both staff and students. Demonstration of ‘day one skills’ is required for graduation and there was evidence to show how each of the day one skills have been mapped to both the old and new curriculum.

Suggestions

None

The teaching and learning environment

The academic environment must be conducive to learning of the students and the didactic and pedagogic development of the teaching staff (see also Stage two).

Comments

The academic environment is research-based, but a strong interest in pedagogy and innovation in education has resulted in a novel curriculum and development of ground-breaking e-learning methods. The vast majority of academic staff and post-graduate students involved in teaching are highly supportive of student learning.

The College is to be commended for the Centre of Excellence in Teaching and Learning in Veterinary Education (LIVE) which has been an enormous source of improvements, and has made the expansion of student numbers possible. The challenge for the College will be to maintain it after direct funding from the funding council ceases. The two clinical skills laboratories within the LIVE centre are a useful resource and the development of haptic simulators is ground-breaking. However, it must be recognised that it is not a substitute for live clinical material.

Suggestions

None

Monitoring and assessment of students

Student performance must be assessed regularly.

Written, project and practical work, generic competences such as professional attitudes, communication skills, problem-solving abilities must all be evaluated with equal emphasis to practical and clinical skills. Evidence must be produced that students meet day one competences.

Evaluation methods must be known and understood by the students.

Whenever possible, the use of external examiners/observers should be made.

Results of assessment must be documented properly.

Findings

Student performance is regularly assessed and the examination system has been developed within the context of the College's overall Learning, Teaching and Assessment Strategy. The timing and type of examinations used depends on the aspect of the curriculum being examined.

The College uses written papers (comprising MCQs, short answer questions) to test factual knowledge; problem solving questions and extended matching questions (EMQs) test clinical reasoning; essay questions are used to test understanding, analysis, problem solving, synthesis and critical thinking. In-course assessments are used for taught modules in the old curriculum. Project reports supplemented by oral defences are used where appropriate, and rotations are continuously assessed.

Formative MCQs are used at the end of each week for students to check their learning in Directed Learning Sessions.

Objective structured practical and clinical examinations are used to test 'day one skills'.
Students are allowed a maximum of two attempts at each examination (third attempts allowed following a successful appeal), and passes in each examination are required before a student can proceed to the next stage of the course.

As in all UK universities, external examiners are used as a central part of the quality assurance process.

The College's assessment practices were fully reviewed between 2007-2009, leading to the establishment of a Common Grading Scheme, and the confirmation of good practice in assessment regulations and processes, such as sampling and double marking of work.

Comments

The Visitors consider the assessment regime to be appropriate and noted that it involved external examiners and feedback from students as required. In addition, it was noted that feedback is also sought from practitioners on the graduates working with them and their abilities in relation to the 'day one skills'.

It was not immediately apparent whether all individuals (including senior clinical training scholars) involved in the assessment of students' final year rotations were adequately trained in assessment, nor did there appear to be adequate awareness of an explicit policy to guard against potential conflicts of interest.

The National Student Survey results for the College suggest that feedback to students is not done as effectively as it could be. The Visitors noted a difference in the level of educational feedback and support given to students depending on their route of entry to the programme. Gateway students are given significant academic support during Year 0, and the 'Graduate & Transfer' students are also supported, guiding them through the heavy workload incumbent in a four year course. However, it appeared that some overseas students had difficulty in making the transition to a more self-directed form of education, and even some undergraduates from the UK entering via the traditional route struggled initially with uncertainty. Whilst ultimately this process may result in a better problem-solving individual, there is a need to provide regular reassurance that they are on track. The weekly MCQ assessments partly address this issue, but they are not universally undertaken by students, and sometimes it might be better to simply tell them they are right or wrong. Interestingly 3rd year BVetMed students felt this was a less of an issue with directed learning in clinical areas; whether this reflects a different cohort of teachers, or a development of their learning styles should be explored to determine whether changes are required in earlier years.

Learning objectives have been set for the first three years of the new curriculum, and already exist for the clinical years under the old curriculum. A wide range of assessment methods are used to judge whether students have achieved these objectives.

External examiners are used for each examined part of the course. There was some lack of clarity amongst staff on where these reports are received, where they are acted upon and how feedback is given to students on issues raised.

Whilst there is an outline for Years 4 & 5 in the new curriculum, specific learning objectives for each component had not yet been set at the time of the visit, and it was therefore not possible for the Visitors to evaluate whether the assessment methods to be used were appropriate.

Recommendations

Review and improve arrangements for providing feedback to students on their progress in order to encourage effective learning.

Ensure that all individuals involved in the assessment of students are appropriately trained in assessment, and ensure that the explicit policy on managing potential conflicts of interest is promulgated and consistently applied.

Review the standardisation of grading in rotations in order that students have full confidence in the system, including ensuring that all those responsible for assessing students during rotations are adequately trained in assessment.

Monitoring and assessment of teachers and instruction

A system must be available to allow students to evaluate teacher performance and teaching.

Students must be able to participate in the development of the curriculum in general.

Findings

The College evaluates teaching and learning according to processes defined in its Quality Assurance Handbook. The evaluation includes a review of data from a variety of sources, including annual reviews of modules, reviews of each year of the course, data on student performance, a five-yearly review of each course including external membership on the review panel, scrutiny of external examiners' reports, analysis of graduate employment rates and scores in the North American Veterinary Licensing Examination, as well as feedback from students, graduates and employers. Standard questionnaires are used for students to complete at the end of a lecture, and final year students are also encouraged to attend an annual 'Rotation Feedback Forum' at the end of rotations. Staff in the LIVE centre are working with colleagues to monitor the student learning experience on the new BVetMed curriculum.

Issues arising from annual reports and quinquennial reviews are reported to the relevant committee and responses are followed up.

Comments

Peer observation has recently been introduced, and should be encouraged.
There is student representation on the appropriate committees for curriculum design and development.
There is good opportunity for student feedback throughout the course and evidence that comments from students will be taken into account and acted upon where appropriate.

Suggestions

None

Student welfare

Adequate measures should be taken to minimize the risk of zoonotic diseases as much as possible (e.g. vaccination against rabies)

The establishment must provide or have a right of access to a system of routine and special guidance for students, especially those with social problems or those having difficulties with their studies.

The guidance programme should also cover future career development and/or job selection.

Findings

The College employs a full time health and safety manager and two health and safety advisers, and also draws on external consultants where appropriate, for example for radiological safety and occupational health. Risk assessments are undertaken for all hazardous activities. Students are given a full induction on health and safety matters. Where applicable, immunisation against infectious diseases is available through GPs, or through the College's Occupational Health Service providers. There is a cafeteria and student lounge at Camden for student use, and student and staff social facilities at Hawkshead. All students, as members of the University of London students union have access to extensive sports facilities at the University in central London. Sports facilities are also provided at Hawkshead.

There is a full time Student Support Services Manager who oversees the service. To supplement in-house provision of student support services, the College buys in additional specialist services (eg. disability support, counselling,) from neighbouring universities and the University of London. Careers advice is available through the University of London Careers Services, and a careers fair attended by a range of veterinary employers forms part of the Professional Studies module.

Senior tutors and pastoral tutors on each campus are available for consultation by any student. Specialist learning support staff provide study skills sessions and individual support for students who 'self refer' or who are referred by the Academic Progress Review Committee (APRICOT).
The College Chaplain provides confidential support for students irrespective of religious affiliations, and there are links with local primary care trusts, mental health care teams and other professionals for both campuses.

Comments

The student support system is both comprehensive and generally accessible to students. Services are provided on both campuses although these are understandably not full time. Measures are in place for emergency situations.

The tutorial system, whilst excellent in some cases, may not provide the same quality of experience for all students. There did not appear to be a system to ensure that inadequate student/tutor communication is noted and acted upon.

Most students to whom the Visitors spoke were aware of the available support services, including the 'APRICOT' committee which monitors student progress. Although the support systems are generally accessed by self-referral or peer-referral, there are some systems in place to try and identify students with problems who might not otherwise refer themselves for support. Support systems appear to be most effective when there are academic shortcomings, but perhaps less so when the issues require pastoral support and the individual has not self-referred. There appeared to the Visitors to be a reliance on the individual tutor system to pick up problems, but both staff and students identified a lack of structure and auditing of this system. As a consequence, the student experience of the tutorial system can range from the exceptionally good to the very poor, depending on the proactivity and attitude of their particular tutor. Many students indicated that in many instances where they might perceive they had a problem they would first contact staff in the Academic Registry who were universally praised for their approachability, accessibility and thoroughness.

Given that RVC is in effect using the 'distributed' model of clinical education for some of its provision, it is important that the requirements in Annex 7 of the RCVS Criteria & Guidance document are adhered to, particularly regarding staff experience, staff training in teaching and assessment, teaching qualifications, participation on key committees, and student facilities including those for accessing information, and for student welfare and support

The "You said, We did" initiative was noted by the Visitors as being an innovative and well-received form of feedback to students regarding issues they had raised.

Recommendations

Develop rigorous systems to monitor and improve the consistency, effectiveness and 'reach' of the tutorial and student support services, particularly as these affect pastoral care.

Ensure that student welfare and support services also extend to external sites where core teaching is taking place.

Chapter 6 – Facilities and equipment

The site, buildings and its equipment should be conducive to teaching and adequate for the number of students enrolled.

Buildings, for both basic and specialist facilities must be adequate and suited to the teaching programme.

Health and safety standards must be conscientiously observed, as should the requirements of acceptable laboratory practice.

The practical side of animal production must be taught on the institution's own farms or on farms to which it has access, to sufficiently small groups of students, thereby allowing hands-on experience for all.

Adequate and hygienic facilities for the humane treatment of animals must be available, including provisions for hospitalisation, for operative surgery and recovery from anaesthesia, for exercise and the isolation of infectious cases.

The clinical and hospital buildings must be up-to-date, clean and well maintained, and should be at least as adequate as those available in the private sector in the individual states.

The diagnostic, medical and surgical equipment provided must promote state-of-the-art practice of veterinary medicine and surgery.

Institutions must have a mobile/ambulatory clinic for farm animals or equivalent facilities so that students can practise field veterinary medicine under expert supervision.

Where practical training involves the use by the institution of material obtained from slaughterhouses and unfit for human consumption, vehicles and facilities must be properly adapted, maintained and operated to ensure the safety of students and staff and to prevent the spread of infectious agents.

Findings

The College operates on three sites: Camden, Hawkshead and Boltons Park, with Hawkshead and Boltons Park, which are about a mile apart, referred to collectively as the Hawkshead Campus.

The Camden and Hawkshead Campuses are seventeen miles apart. Travelling time by road or train is variable but 45 minutes is an average time. There is a regular mini-bus service between Hawkshead Campus and Potters Bar Station, from where there are frequent fast trains to Kings Cross Station near Camden. During term-time the College provides a coach service for students living in Potters Bar and neighbouring villages.

Camden

The following are located at the Camden Campus in London:

- a Learning Resources Centre (LRC) and teaching rooms for the first two years of the BVetMed
- the greater part of the Department of Veterinary Basic Science
- the Beaumont Animals' Hospital
- the Finance Office

- the Research Office
- RVC Enterprise
- parts of the Senior Management Group, the Departments of Pathology & Infectious Diseases, the Biological Services Unit, Estates, and Academic Support and Development
- student residences
- Student Union offices
- London Bioscience Innovation Centre.

The major buildings at Camden are:

- the Hobday Building, which houses teaching accommodation, the Learning Resources Centre, Anatomy Museum, research laboratories, office space, the refectory, and student social facilities
- the Beaumont Animals' Hospital, the College's first opinion clinic
- a Biological Services Unit
- the Link Block and the MacFadyean Building, housing London Bioscience Innovation Centre, which provides state of the art laboratory accommodation and business support for biotechnology start-up companies
- the Amoroso Building, an ageing facility that is gradually being vacated
- College Grove, a student hall of residence.

Hawkshead

The following are located at Hawkshead, a rural site of 235 hectares near Brookmans Park in Hertfordshire, just outside the M25 motorway:

- the majority of the Senior Management Group
- a Learning Resources Centre and teaching rooms for the final three years of the BVetMed
- the Department of Veterinary Clinical Science, the major part of the Department of Pathology & Infectious Diseases, and parts of the Department of Veterinary Basic Sciences
- small and large animal clinics, and laboratory diagnostic facilities
- the Human Resources Office
- parts of the Biological Services Unit, Estates Office, and Academic Support & Development
- student residences
- Student Union offices
- Sports facilities.

The major buildings at Hawkshead are:

- the Eclipse Building, which houses a Learning Resource Centre, teaching rooms, the senior management suite, meeting rooms, a museum, and office accommodation
- the Clinical Block, which provides the main teaching accommodation for the campus, a range of research laboratories, and office accommodation for academic and support staff
- the Mill Reef Building, which provides a state-of-the-art autopsy hall and associated facilities, together with a 180-seat lecture theatre, clinical pathology laboratories, offices and seminar rooms
- the Link Building, which houses research laboratories, a teaching room with multi-headed microscopes, and offices for academic and support staff
- the Centre for Emerging, Endemic and Exotic Diseases (CEEED), which houses high standard containment laboratories for infection and immunity research, offices and meeting space
- the Queen Mother Hospital for Animals - the College's small animal referral hospital

- the Large Animal Clinical Centre (LACC), a hospital for large animals, chiefly horses, which comprises:
  - a two-storey Administration Block
  - a Diagnostic Block
  - accommodation for clinical cases in two adjacent barns
- the Sefton Equine Hospital, a fully-equipped equine hospital, constructed in the 1980s, but being replaced by an extension to the LACC in 2009/2010
- the LIVE Centre, housing the Centre for Excellence in Lifelong and Independent Veterinary Education, two clinical skills laboratories, a student computer room, a communication skills training suite and staff offices
- the Clinical Investigation Centre (CIC), housed in refurbished accommodation, attached to which is a large barn providing penning and examination facilities for farm animals
- the Biological Services Unit, which comprises a range of barns and similar units providing accommodation for different species of experimental animals
- the Structure and Motion Laboratory, accommodating treadmills and related facilities for the Biomechanics Research Group
- Hawkshead House, the ground floor of which houses a staff and student social facility, with the upper floor providing offices for administrative staff. Adjoining Hawkshead House is the Buttery Bar
- two student Halls of Residence, Northumberland Hall and Odiham Hall, which together provide 70 study-bedrooms, and College Close, a development of 16 houses providing 101 units of student accommodation.

Boltons Park

Boltons Park is situated about one mile away from the main Hawkshead site. It provides the Royal Veterinary College Farm, together with office and teaching accommodation for the College of Animal Welfare, with which the College collaborates in the provision of education for veterinary nurses, as well as additional designated Biological Services Unit facilities.

Boltons Park provides the College's primary facility for rearing and maintaining normal animals for teaching purposes. The farm comprises a range of standard accommodation for farm animals, for both experimental and teaching use. It includes a dairy unit of approximately 100 milking cows, 180 commercial sheep, a turkey rearing enterprise, a small free-range egg producing unit and a small pig fattening operation. The purpose-built dairy unit was opened in 1998 and incorporates purpose-designed and built facilities for cattle teaching, along with a teaching classroom, an autotandem milking parlour, with loose housing for dairy cows and handling facilities dedicated for teaching use. The dairy herd is officially 'Accredited Free of BVDV' under the CHeCS scheme.

Diagnostic Laboratories and Clinical Support Services

The College's diagnostic laboratories provide a comprehensive service in haematology, clinical chemistry, cytology, histology, immunohistochemistry, microbiology, parasitology, endocrinology, serology, postmortem examination, PCR, dermatopathology, muscle biopsies & related assays.

Anaesthesia is organised as a single services across the whole Clinical Services Division. Diagnostic imaging is being reorganised into separate small animal and equine imaging. Advanced CT and MRI equipment in the imaging centre next to the QMHA will be used for small animals and horses under anaesthetic. Pharmacy services are de-centralised to each clinical area.

Each hospital manager carries operational responsibility for health and safety within their clinical area, with overall management provided by the Assistant Director of Clinical Services.

Slaughterhouse facilities
The College has an arrangement with the slaughterhouse near Carmarthen, three miles from the Welsh Regional Veterinary Centre. The facility handles cattle and sheep and includes a boning plant. Discussions are also underway with Bristol veterinary school about shared usage of the Langford abattoir for teaching purposes.

Planned changes
At the time of the visitation, the College was undergoing building work and further work is planned over the next year:

- construction of the Teaching & Research Centre at Hawkshead, providing a new entrance to the campus and laboratory. Completion due March 2011.
- relocation of the Sefton Equine Hospital alongside the Large Animal Clinical Centre. The new unit will comprise two equine operating theatres, examination and investigation areas. Completion due March 2010.
- replacement of Northumberland Hall by new residential and restaurant facilities at Hawkshead, including en-suite residential accommodation for 191 students, dedicated CPD/training rooms, meeting rooms and 14 overnight en-suite bedrooms. Completion planned Summer 2011.
- 'Social Learning' facility at Camden – conversion of space in the Hobday Building to provide extension to the library with 'learning pod' enclosure, informal seating, terracing and coffee facility. Completion due March 2010.
- further upgrades and refurbishment of the Beaumont Animals' Hospital is planned over the next two years to improve clinical facilities.

Comments
Priority should be given to upgrading the farm animal clinical facilities at Hawkshead.
Boltons Park Farm would be greatly improved in terms of functionality, appearance, and particularly biosecurity if the areas surrounding the buildings were resurfaced with an impervious material (eg. concrete). It was noted, however, that the Farm is certified free from BVD – an indicator of effective bio-security procedures.

The facilities at Camden are compromised by the state of the old buildings and the difficulties of accommodating so many students. Many of the facilities appear 'tired' and fragmented, especially the Beaumont Animals' Hospital. The Beaumont requires significant investment if it is to meet the standards of a first opinion teaching practice in an establishment with the aspirations of RVC. Signage was less than adequate in several areas and had the appearance of being temporary, tired, or both.

Some further branding and development of the Beaumont Animals' Hospital is planned and this should have a positive effect in bringing new clients to the practice.

The teaching of topographical anatomy involves the use of facilities that are no longer adequate for a modern veterinary school.

In general the facilities at Hawkshead are outstanding, and the College is to be commended on the extensive building programme that has taken place over the last decade.

The QMHA, Beaumont and Equine Hospitals have all achieved RCVS Practice Standards Tier 3 (hospital) status, whilst the farm facility and ambulatory clinic are Tier 2. The current state of the Beaumont during building improvements may make it difficult to maintain RCVS accredited hospital status; for example, the state of the floor in the imaging suite is unacceptable although it is noted that refurbishment is planned.

The Visitors did not re-examine all the criteria necessary for accreditation against the relevant RCVS Practice Standards, but in general saw evidence of good practices. However, some potential problems were noted at the QMHA which would need attention:

- the small animal isolation facilities did not have a notice detailing the standard operating procedure for barrier nursing displayed in an obvious place at the entrance to the unit
- waste material from isolation is bagged and brought through the hospital to be autoclaved; a safer route should be found
- the cages for cats undergoing radio-iodine treatment involving prolonged hospitalisation were small with little environmental enrichment.

The QMHA has the necessary capacity for students and caseload, and many technological innovations. The facilities for endoscopy were somewhat cramped, but overall the QMHA is an outstanding facility.

Observation of health and safety requirements was generally of a high standard. Attention in some areas is still required as the Visitors witnessed some practices in some areas (eg post mortem room) which fell short of the otherwise high standards.

Recommendations

The farm animal clinical facilities at Hawkshead need upgrading and this must be addressed.

The planned refurbishment of the Beaumont Animals' Hospital should be expedited to improve the environment.

The College should ensure that facilities for teaching topographical anatomy are improved as part of the upgrade of Camden's facilities.

Chapter 7 – Animals and teaching material of animal origin

The farm/s where veterinary field training is performed should contain the major animal species relevant to veterinary practice in the individual state. Farm facilities and equipment should be up-to-date, and at least as good as those available in the private sector of the countries concerned. The farm should be a model of animal welfare for the profession and the students.

Adequate clinical material including all of the major species relevant to veterinary practice in the state concerned must be made available to the students.

The clinical material should be varied, providing experience in routine and complex cases.

The clinical services must have access to appropriate diagnostic support.

Clinical and hospital facilities should operate day and night for most of the year, i.e. like a normal practice.

The clinical department(s) must maintain close links with the pathology and other diagnostic services so that students can follow cases where animals die of natural causes or are euthanized, and conduct post-mortem examinations. If necessary, pathology material should also be obtained from outside the institution to enhance the learning experience.

An adequate data retrieval system must be available so that case studies can be undertaken.

The Faculty must ensure that the students are exposed to an adequate supply of teaching material in the veterinary public health (including food hygiene) areas.

Findings

Ratios for the animal material available for student teaching are provided in Annex 1, Tables 8.1 and 8.2. Case numbers are provided in Tables 8.3 and 8.4.

A range of cadaver and specimen material is available for anatomical training. Specimens are either commercially sourced, donated or collected from abattoirs. The College is also expanding development and use of plastinated specimens.

Necropsies cover a range of species, including cattle, small ruminants, pigs, deer, goats, alpacas, dogs, cats, poultry and rabbits. The College has a joint surveillance centre with the Veterinary Laboratories Agency which facilitates sourcing of necropsy material from food animals.

For animal production and food hygiene/public health teaching, the stock at Boltons Park Farm is as follows:

- Sheep: up to 320 lambs; 208 ewes; 6 rams
- Poultry: 200 chickens; up to 300 turkeys (seasonal)
- Cows: 98 cows; 46 heifers; 30 beef calves.

In addition, the Biological Services Unit at Boltons Park holds the following which are available for animal handling and skills training (eg. foot trimming):

- Goats: 80; Sheep: 120; Turkeys: 20; Pigs: 80; Young Cattle: 40.

The College Farm in Wales where students spend two weeks of their farm animal rotation has:

- Cattle: 400 dairy, 300 youngstock, 50 beef
- Sheep: 350 – 400 ewes depending on season

A wide range of small animal and equine referral cases are seen in the College's hospitals at Hawkshead covering a breadth of disciplines from nutrition and behaviour, to specialist orthopaedic surgery and oncology. First opinion small animal cases are seen at the Beaumont Animals' Hospital, Blue Cross, PDSA and the Dogs Trust. A small number of farm animal cases come through the College's farm animal clinic, and students see additional cases at the Welsh Regional Veterinary Centre, and at Northpoint and Westpoint practices. Ambulatory services are delivered through a regional joint venture combining Northpoint Veterinary Services and the College's farm animal practice. Additional Day One Skills are taught through a partnership with Westpoint Veterinary Services with a custom built teaching centre near Sevenoaks in Kent. From the Welsh Regional Veterinary Centre, students will undertake four or five herd visits during their two week rotation, each herd averaging 100 cows.

All the College's hospitals and clinics are open 52 weeks a year, seven days a week for emergencies, with varying opening hours for regular appointments and consultations.

The three hospitals use the same practice management software for billing, pharmacy, dispensing, and appointments. Information is fed from this system into a bespoke Clinical Record Information System which is used for clinical coding and retrieval of clinical data for hospital management, research and clinical governance. In addition to electronic records, paper case files are kept at the QMHA and the Equine Referral Hospital. There is a separate electronic system for diagnostic laboratory records, and a separate digital image storage system for radiographs, ultrasounds and ECGs.

Comments

Exposure of students to post mortem examinations and material appears to be adequately addressed. With the new curriculum the pathology rotation has decreased in Year 4 and 5 from two weeks to one week but this is balanced by an increase in exposure to post mortem examinations earlier in the course. During the first two years of the course students attend post mortem examinations as observers alongside 4th and final year students as part of their system strands. During the rotation week each student will be involved with carrying out post mortems and taking tissue samples.

The College itself recognises an imbalance in the amount of companion animal first opinion case materials compared to referral material. Plans to turn the PDSA and Blue Cross placements into EMS placements will not help this.

The production animal caseload was of major concern to the Visitors. The Visitors acknowledge the geographical challenges created by the changing demographics of agriculture in the UK, and commend the novel initiatives the College has taken to address the problem.
The linkages that the College has formed, however, appeared to be tenuous and, although the student experience to date is very positive, this is largely due to the current veterinary and support staff at these

centres who are exceptional. In the view of the Visitors, the risk is that these initiatives are still in a "honeymoon" period for all parties, including the relatively small number of farmers whose stock are being used for teaching. The system is held together mostly by goodwill, albeit in abundance.

A strategy for the next few years including contingency plans is imperative and must include formalisation of agreements. As mentioned elsewhere in the report, staff and students alike must clearly understand the distinction between extra-mural and intra-mural teaching at these off-site centres.

Travelling to these rotations is onerous on students both in terms of time and costs, and this was of considerable concern to students. Travelling to and from Sevenoaks each day of that rotation is a considerable investment and consideration might be given to providing student accommodation at Sevenoaks, or otherwise assisting with transport.

Initiatives to increase the throughput of animals at Hawkshead itself should also be reconsidered. With the ever increasing access to farm material through the distributed learning centres, the Visitors would recommend investigating the opportunities for bringing cases to the RVC. For example a subsidised or free collection service of cases either for treatment and return to farms, or for end-stage investigation would be useful.

The Visitors are also aware that the type and number of food production animals being used at Hawkshead is very dependent on the individuals in the veterinary teaching posts at any one time, and a strategy should be in place to ensure the sustainability of a balanced and steady supply of cases. The Visitors noted that, at Northpoint, it was not unusual for both students to be out with one vet, although the SER indicated that a maximum of one student accompanied each vet on visits. The Visitors however did not feel that this detracted from the experience the students were obtaining, although it does suggest that a more accurate system of monitoring student experience may be needed.

Pigs are seldom, if ever, seen by students as part of their training except for two husbandry EMS weeks during the first year.

Student involvement with research animal facilities was good.

Suggestion

Consider arranging for student accommodation to be provided at Sevenoaks, or alternative arrangements to assist with travel.

Recommendations

The College should ensure that it continues to monitor carefully the case load available to and experienced by students as part of their learning, in terms of species and degree of complexity (first opinion versus referral). Care will be required to ensure that EAEVE ratios are maintained within accepted guidelines.

The College should ensure that all students are exposed to adequate companion animal first opinion case material. If the PDSA and Blue Cross placements are seen as being the primary means of providing core first opinion training for students, then the College must ensure that their status as intra-mural rotations is clarified, rather than seeking to change them to EMS placements.

Chapter 8 – Library and learning resources

The Library and related services must help to meet the institution's objectives and lend support to basic training, research and postgraduate studies.

To this end, the Library must offer a comprehensive and up-to-date range of books and journals. Its opening hours, regulations and loan arrangements must facilitate self-learning. The institution must provide an adequate number of places for private study in the library or elsewhere on site. The Library must be professionally managed, have good working relationships with other libraries in the area, and provide modern on-line communication facilities for use by staff, students and researchers. In institutions where departmental libraries are available, the main library should have documentation on the material held in the other libraries.

The Faculty must provide audio-visual and information technology facilities meeting the needs of establishment.

Findings

The RVC maintains Learning Resources Centres (LRC) at both Camden and Hawkshead with both traditional print collections, substantial numbers of computers, electronic resources, photocopiers and study spaces. There are 120 reader places in the Hawkshead LRC, and 170 open access PCs at each campus. A full range of electronic databases (eg. Cochrane, CAB Direct, PubMed) is available to staff and students, with most available remotely. Around 3,000 electronic journals are available, with around 85% available remotely. A stock of over 500 CDs, DVDs and videos are available for borrowing. Textbooks are bought in multiples and can be supplied for loan with a maximum wait of 24 hours. Other material available for loan includes past student elective and project reports, past exam papers, laptops, video cameras, and iPods pre-loaded with resources produced by the e-Media Unit.

There are around 23 library and IT staff, 18 being full time. The library at Hawkshead is open seven days a week, from 8am to 8pm Monday to Friday, 9pm – 6pm Saturday, and 12pm – 4pm Sunday. Opening hours are extended during examination periods. The library at Camden is open from 8.30am to 8pm Monday to Thursday, 8.30am to 6pm Friday. It opens on Saturdays in the run-up to examinations. Open access PCs, study spaces, photocopiers and scanners are all available 24 hours a day, seven days a week.

The College has invested significantly in e-media to support student learning, and has a well developed e-Media Unit which is leading with initiatives such as podcasting of lectures, 'potcasts' (short videos available on iPods) and 'wikivet' (a collaboratively authored online veterinary encyclopaedia.

Comments

This is an area on which the RVC is to be commended. Library and learning resources has been one of the main areas of development over the last 10 years. The online facility using "Blackboard", e-media, video streaming from operating theatres, video conferencing, podcasts, etc., are all excellent developments and, although still in the relatively early stages of development, should be encouraged

so that comprehensive coverage of the course with online lectures and learning resources is completed.

Library and learning resource facilities are available on both campuses and have increased in number, catering for increased student numbers and also in line with recent curriculum developments. Laptops are available to borrow where students do not have their own and it was reported that they are not used at full capacity. As the new curriculum beds in it is likely that more use of the e-learning resources will be made so a continuous assessment of the requirements on an on-going basis is needed.

To cater for the increasing numbers of students and staff using the facilities, investment has been made to ensure adequate provision of books, journals, computers and study areas. The building developments are not yet complete so a full assessment cannot be made but great effort has been made to ensure student engagement in the development process to ensure that appropriate facilities are provided for the modern day student. Staff are engaged in gathering student feedback on the use of the facilities through several sources but often by direct communication with the students. Training for students in use of technologies is provided in different formats and includes one-to-one tuition sessions for those who need it.

The LIVE centre and clinical skills laboratory are learning resources available for students to help them develop and refine their day one skills. The skills labs also provide an opportunity for students to practise the type of examination they will encounter when undertaking summative OSCE assessments (objectives structured clinical examinations). This is an innovative development which enhances the student experience at the RVC. There is a booking system for some of the stations such as the haptic cow and there may be pressure on the facilities at certain times (eg. just before examinations) but the throughput appears to be such that students wishing to use these facilities can do so.

It was mentioned to the Visitors on several occasions during the visit that the library and other study facilities were not available at Camden at the weekends, and the College will need to keep this under review to ensure that students in the early years of the course are not unduly disadvantaged.

Suggestion

The College should continue to keep the library opening hours and accessibility of study facilities at Camden under review.

Chapter 9 – Admission and enrolment

The veterinary course is a rigorous one, and students admitted must have proven capabilities.

Although admission and enrolment are the legal responsibility of the individual countries, the selection should be competitive, based upon academic achievements and on other criteria.

Admissions must also be compatible with facilities and staff numbers, bearing in mind the need for low student/staff ratios, particularly in the clinical side of the course, and the amount of clinical and pathological material available.

Findings

The RVC provides a number of entry routes into the BVetMed programme:

- the standard five year programme (D100)
- a six year programme which incorporates an intercalated degree (D101)
- a six year programme aimed at increasing diversity and widening participation, incorporating a foundation 'year 0' (D190)
- an accelerated four year graduate-only entry route (D102).

Clear entry criteria are specified for each route, with high grades required in relevant school science examinations or achievement of a relevant science degree for entry to D100, D101 and D102. The D190 Gateway route accepts applications from students who meet certain widening participation criteria who may have lower school grades, and these students must pass a foundation 'Year 0' which brings them up to the required level in basic sciences. The College accepts applications from students who have demonstrated high achievement in relevant modules from vocational qualifications such as the BTEC National Diploma in Animal Care, thereby providing pathways for students from a variety of backgrounds.

Evidence of relevant work experience is required for entry, usually around two weeks in a veterinary practice and with animals; for D101 experience in a relevant scientific environment is also required The College requires most students to take the Biomedical Admissions Test, although it is reviewing this as part of its ongoing review of admissions criteria. In the last two years, the College has undertaken a review of the entry requirements for the BVetMed, to ensure that they remain fit for purpose, and to open up entry to applicants with a broader range of qualification.

The 'Predictors of Success' project run by the College involves evaluating the range of selection tools used for entry into the BVetMed (including BMAT, A levels including individual subjects, GCSEs and interview performance) for their predictive ability of student progression and outcomes. The College is collaborating with Cambridge Examinations (which runs the BMAT) on a comparative correlation of how BMAT scores relate to the performance of students on the BVetMed. Together with Nottingham Veterinary School, the College is looking at the Myers Briggs personality profile of both Nottingham and RVC students to see if there are any differences in the context of the two schools' very different selection processes.

The College is actively involved in programmes to widen participation in veterinary medicine by under-represented groups, through outreach to local schools and colleges, and through active participation in VETNET LLN, the national lifelong learning network led by the College as a collaborative project across veterinary schools and further education colleges.

Numbers applying for, and admitted through the various entry routes are shown in Annex 1, Table 7. The varying numbers admitted to each route ensures that the total number of students in the final years is maintained around 240, which is in line with the capacity of the College's facilities and staffing levels.

There is a very low attrition rate. In order to proceed to subsequent years of the course, students are required to pass all the examinations from the preceding year. A maximum of two attempts is allowed, with a third attempt only allowed following a successful appeal.

With the recent increases in numbers admitted, the number of students graduating each year has increased significantly from 141 in 2005, to 242 in 2009. The College has no plans to increase the intake further.

Comments

The widening participation measures undertaken by the RVC are to be commended. Data is being collated in order to track cohorts of students admitted under different entry criteria such as the Gateway programme through the course and beyond. This will be a beneficial exercise to identify which of the entry criteria can be used to ensure successful completion of the course and ultimate employment.

Sustainability of the degree course as a whole depends in part upon the College admitting a significant cohort of graduate students. Most are from North America and continued involvement in this market (and others) will be important in the future, with staff having to travel to interview overseas.
The added value of the BMAT admission test is not clear.

A large number of potential candidates are interviewed. Whether the current style of these interviews provides value relative to the effort and staff resources involved should be assessed. The Visitors support the work that the College is doing to review its admissions criteria and processes in line with the 'Predictors of Success' project. This project will hopefully provide some pointers to help with the further development of the admissions process.

Suggestions

As part of the 'Predictors of Success' project, review the value of the BMAT, and consider whether different interview techniques and character assessment tests may help in the selection of applicants.

Whilst practitioners are occasionally involved in interviews, the College should consider increasing the involvement of stakeholders at various stages of the admissions process.

Chapter 10 – Academic and support staff

The competence of the full-time academic staff must enable coverage of all the subject areas of the curriculum, allowing research based teaching except where alternative arrangements are made for outside teachers. The number of full-time academic staff (FTE) must allow teaching of small groups, thus maximising the learning opportunities for the students. A minimum percentage of 70% of the academic teaching staff should have veterinary training. Teachers of clinical veterinary subjects must be veterinarians, as should be those carrying out para-clinical services reporting to the public.

Part-time staff, residents and graduate students may lend support to full-time academic staff if they are appropriately integrated into the instructional programme. The Faculty should define which academic level is required.

Overall, the workload of the academic staff should be organised in such a way that apart from teaching and clinical duties, they should be able to perform research and other non-teaching-related academic activities within working hours.

Appropriate teacher supervision requires satisfactory teaching staff/student and teaching staff/support staff ratios.

Findings

Figures for the number of staff, including veterinarians, are given in Annex 1, table 9.1, and staff: student ratios are given at table 9.2. Annex 2 provides a full listing of teaching staff. Out of a total staff of 756.34 full time equivalents (FTEs), 201.46 FTE are employed in teaching and research, with 129.86 FTEs veterinarians engaged in teaching. From the staff list provided by RVC with the SER, 138 staff are veterinarians, of whom 126 are Members of RCVS. 83 members of staff are listed as Diplomates of either a European or American specialty College.

Comments

There are appropriate numbers of veterinary qualified staff across all areas of the curriculum, and indeed the staff/student ratio, and teaching staff/support staff ratios appear to be commendably low. Particular efforts have been made to ensure all staff have had the opportunity to be involved in the development of the new curriculum and those staff spearheading this initiative have made excellent progress. It is noted in the SER that for certain clinical areas there is only a small pool of suitably qualified people available from which to recruit. The staff list includes outside consultants and this may aid cover in some of these areas. Steps have been taken to encourage more favourable payment for clinical staff to encourage staff retention and recruitment into an expensive area of the country. The RCVS CPD Record Cards for staff were checked by Visitors and found to comply with RCVS policies for CPD.

Suggestions

None

Chapter 11 – Continuing education

(See also Stage Two)
The institution must co-operate with other professional organisations and competent authorities in the design, implementation and quality control of continuing education programmes.

Findings

The College's aim, set out in its corporate plan for 2009 – 2013 is to be a leading national provider of CPD programmes for veterinary and para-veterinary professionals. The College delivers over 100 CPD courses each year and was one of the first universities to be accredited to assess modules as part of the RCVS Certificate in Advanced Veterinary Practice. As at November 2009, it had 848 module enrolments. All clinical academic staff are expected to contribute to CPD provision, enabling the College to offer CPD across all its clinical specialities, including veterinary nursing and veterinary physiotherapy. The College delivers on-line lectures, and e-CPD courses as well as on-site provision. There are plans to build a dedicated CPD training unit with residential accommodation as part of the building works for the next year.

Comments

The College provides a wide range of continuing education courses for the general practitioner, building on its aim of instilling the philosophy of lifelong learning into its graduates and providing a service to this major stakeholder community. In addition, discounted courses for its graduates help bond alumni to the RVC, which in turn is useful for cementing links for EMS placements, new graduate employment and referral caseload. In discussion with the Visitors, graduates expressed an interest in being able to continue to access the library facilities, not only the physical library at the Hawkshead campus, but also online access to journals.

The College is to be congratulated on embracing the challenge of delivering the quality-assured assessment of the recently established RCVS Certificate in Advanced Veterinary Practice (CertAVP). The challenges of administering this undertaking are acknowledged, but the programme offered is exemplary.

Despite its value to the RVC and veterinary community as a whole, there are risks associated with the CertAVP provision: financial viability is currently dependent on support from HEFCE funding and sustainability will require this funding to be continued, an issue relevant in the current economic climate, but one that is outside the control of the RVC.

CPD provision is of the highest order and there is a clear policy on the RVC's expectation of staff. The policy appears to be accepted well by staff.

Suggestions

Adequate resources should be provided for the management and the assessment of the CertAVP. A risk assessment and disaster recovery strategy is needed in case HEFCE funding is withdrawn.

Chapter 12 – Postgraduate education

Towards a qualification in a specific area

The institution must co-operate with other professional organisations and competent authorities in the design, implementation and quality control of continuing education programmes leading to qualifications in the clinical and paraclinical fields, including the achievement of national specialist recognition.

Where appropriate, institutions should aim their programmes to meet the standards and regulations of the respective European specialist colleges and of the European Board of Veterinary Specialisation or equivalent bodies.

Research training

The institution must offer post-graduate training programmes by research (PhD or equivalent) based on an international-level programme in biomedical and veterinary research.

The programmes must be well designed and cover theoretical as well as practical training, leading to a certificate/degree within a period of three to four years.

The institution must provide an adequate number of places for research students

Findings

(figures here are from 2008-2009)

The College provides clinical training in 21 different specialties, leading to either European or American College Diplomas. Additionally, it has 153 full time and 15 part time PhD students, and one part time student working towards a Doctorate in Veterinary Medicine.

Masters programmes are offered in Wild Animal Health (10 students), Wild Animal Biology (16 students), Control of Infectious Diseases in Animals (10 students), Veterinary Epidemiology (15 students), Veterinary Physiotherapy (44 part time students), Livestock Health and Production (31 students) and Veterinary Epidemiology and Public Health (81 students). The latter two courses are provided by Distance Learning.

In a typical year, the College awards 25 – 35 PhDs, 70 – 80 Masters degrees or postgraduate diplomas.

Comments

The College has an active research performance as evidenced by their achievements in the 2008 Research Assessment Exercise. The core research activity is through the research groups; the research strategy is driven by the research strategy committee which in turn is given direction by the College plan and mission, and external drivers. There is a good research environment at both Camden and Hawkshead with appropriate facilities and regular weekly seminars taking place for all of the research community. Undergraduates are also free to attend.

The College offers a wide range of clinical training scholarships, many leading to a postgraduate clinical diploma in the relevant discipline. As well as the traditional scholarships, training in VPH through joint initiatives with the VLA and Defra are to be applauded.

The MVetMed course provides senior clinical training scholars with a more structured programme and a final qualification as well as providing the College with some additional HEFCE funding. Courses are provided to enhance the SCTSs ability to achieve a postgraduate clinical diploma. Some concerns were expressed both by scholars and supervisors as to the additional workload this qualification brings. That scholars complete the programme is a reflection of their personal motivation, and the College needs to monitor closely the effect on scholar performance both in clinics and in diploma examinations as well as ensuring that the flow of training is evenly distributed.

All scholars undergo annual appraisal by their supervisor and at least one other staff member.

Suggestions

Consider developing a more structured timetable for clinical training scholars working towards their Masters degree to encourage them to spread their workload.

Chapter 13 – Research

(See also Stage two)
It is desirable for undergraduate students to gain experience of research by undertaking a research project and writing a report on it.

The Faculty should provide an appropriate balance for these opportunities between basic, applied and clinical research.

The Faculty should assign an appropriate number of academic and technical posts specifically to research.

The Faculty should also allocate adequate facilities, equipment and operating funds to research.

Findings

Undergraduate students are exposed to research through several routes not least of which is the involvement of researchers within the College in teaching. The strand themes for the new curriculum encompass research led teaching with a review process each year to ensure regular up-dates. The Professional Studies strand includes research skills and this is delivered to the students throughout the course. Undergraduates complete two research projects, one during the second year and the other during the fourth and final year. The project during the second year is based around their Animal Husbandry EMS and must be completed by the start of third year.

The second more substantial research project takes place in Years 4 and 5. This is at least an eight week project split into two sections, with the first section taking place before the start of rotations. The outcome is a project report of up to 5,000 words which the student defends in a *viva voce* examination.

Students have the opportunity to undertake additional research in vacation studentships. Vacation awards for students to undertake a summer research project are available from several funding sources including the Wellcome Trust and BBSRC. Each year a number of students, in particular those between 2nd and 3rd year, have carried out research projects and others have attended summer schools including the summer school at Cornell University. Students are made aware of these opportunities via communication from teaching staff, a specific briefing session, seminars and e-mails. While the majority of the research projects will be at the RVC a proportion each year will be completed at laboratories elsewhere. Encouragement is given to the research groups to achieve publications, at least in part, from these projects. A number of students each year choose to intercalate. This may be on a degree course within the RVC such as the BSc in Veterinary Pathology but many students intercalate elsewhere. In addition, exceptional students can undertake an intercalated PhD and then return to complete 4th and final year of the BVetMed programme.

Comments

With more than 150 PhD students, and research firmly embedded throughout the undergraduate course through projects and teaching informed by current research, there is evidence of a very strong

research ethos at the College. The locomotion laboratory in particular was identified as providing a stimulating environment for clinically relevant research

The College is to be commended on the active encouragement given to undergraduates to engage in research

Suggestions

None

Chapter 14 – Extra Mural Studies (EMS)

EMS must be an integral and structured part of the education and training of veterinary students. Veterinary schools will need to be able to demonstrate how it is built into the overall curriculum.

Students must undertake a total of 38 weeks of EMS before they graduate:

Twelve weeks should normally be devoted to animal-husbandry related EMS so that students gain experience of the behaviour of normal animals in their own environments.

Clinical EMS must comprise at least 26 weeks across a broad range of areas.

EMS must include the equivalent of at least one week devoted to veterinary public health, during which time visits to meat plants are essential.

Students must keep a log of their learning and experience throughout their EMS.

There must be a system in place to enable EMS providers to report back to the school on their assessment of the performance of students during EMS.

The student's experience log and the feedback from EMS providers must form a part of the student's formative assessment against the RCVS's 'Day One' competences.

There must be a member of the academic, or academically-related staff, responsible for the overall supervision of all types of EMS, including liaison with EMS providers.

There must be a mechanism to enable students to formally report on the quality of the instruction and experience of EMS placements.

Students must have access to a suitable database of EMS placements, and must be able to seek and obtain advice and guidance on the suitability of EMS placements.

Findings

As for all UK veterinary schools, the RVC requires students to undertake 12 weeks of animal husbandry related EMS in Years 1 and 2, and 26 weeks of clinical EMS in Years 3 - 5. Animal husbandry EMS (AHEMS) covers two weeks lambing, two weeks on dairy cattle farms, two weeks with a commercial pig operation, two weeks equine experience and four weeks of the students choice.

Clinical EMS is being re-organised to reflect RCVS most recent recommendations, to include an 'introductory' week in 3rd year, six weeks of 'preparatory EMS' spread across three multi-vet general practices, followed by the equivalent of at least two weeks at each of a busy small animal practice, equine practice and large animal practice, a 'compulsory VPH week, a 'compulsory' two week

placement with the PDSA, and 10 weeks of free choice for the student to develop their experience in areas of interest.

The EMS programme is managed by the Director of EMS, and is administered on a day to day basis by the Academic Registry. Clinical tutors assist students in planning placements, and in providing feedback afterwards.

Comments

As well as discussions with staff and students generally about EMS, an audit of EMS records was undertaken during the visit, including an audit trail followed through to a sample of students, tutors and practitioners to investigate the effectiveness of feedback mechanisms. This was in line with RCVS's recent recommendations for EMS and proved to be a useful adjunct to the visitation.

The value and importance of EMS was well recognised by students. However, the Visitors noted that the criteria previously set by RCVS were not being fully met with regard to the clinical component of EMS. Students were not being required to keep a log of their learning and experience, and it was therefore questionable how students' experiences on EMS could form part of their formative assessment as required by the RCVS policy. However, it was also noted that the College is proceeding to implement the new RCVS EMS guidelines with immediate effect and that these shortcomings should therefore be rectified during the coming year.

The Visitors were impressed with the "EMS Driving Licence" developed in conjunction with Edinburgh University, designed to prepare students for their first EMS placements, and would encourage further development of this and similar projects.

It was clear to the Visitors that the distinction between intramural rotations (IMR), other external rotations (such as at the Blue Cross) and EMS – some of which is desgnated as 'compulsory' - is currently confused in the minds of staff and students. If the clinical training provided on a particular EMS placement is considered to be a mandatory part of the course not otherwise provided by the university, then it should be treated as a core component falling under the 'distributed' model, rather than being counted as EMS. Such placements must then meet RCVS's requirements for off-campus distributed teaching sites in terms of quality assurance, contractual arrangements, staff and facilities. Whilst it is appropriate to advise students on the types of EMS that would benefit them, EMS placements are intended to be complementary to core training, not a replacement for it. The compulsory core clinical rotations at the Blue Cross and PDSA – because they are core and compulsory – should not be counted as EMS. Similarly, the 'Introductory week' at the RVC should not be counted as one of the 26 weeks.

The exception to this for the present is the abattoir placement. The intention to replace the compulsory week of abattoir EMS in 2011 with a week at Langford is in line with the RCVS EMS Working Party's recommendations, but in the interim, students must be made fully aware of the learning objectives when undertaking their abattoir placements as noted elsewhere in this report.
A more accurate system of recording the time the students spend with each species on EMS is needed. If the feedback form from the practice quotes a distribution of the practice's overall caseload, then this is what tends to be used to record the student time allocation even though the student may have spent all their time working with one species.

The Academic Registry staff were universally praised by students for their assistance. The Registry does an extremely thorough and supportive job with regard to EMS throughout the course; there is a sensitive system for identifying and recording even slightly negative feedback from EMS providers and tutors are informed. Unfortunately there did not appear to be any system in place to record any actions taken by tutors or of any outcomes of discussions.

The use of personal tutors to give guidance on EMS can lead to variability in the quality of the advice. Tutors receive some guidance about what the EMS requirements are, but there appeared to be little feedback to the EMS Coordinator. The EMS Coordinator is no longer working full time at RVC, and although he is enthusiastic and provides very sound advice, the College needs to consider how it will provide onsite advice in the longer term.

Preclinical (Animal Husbandry) EMS is quite prescriptive and some added flexibility could improve the students' experience.

There is a potential lack of any small animal pre-clinical EMS.

Suggestions

The College should consider moving the one week introductory on-site EMS off site – or alternatively, do not count this as EMS.

Review the feedback mechanisms for practices to encourage practices to provide more informative feedback on students. This could entail revising the questions asked on the feedback forms, and/or encouraging free-hand reporting – either on paper or electronically.

Review mechanisms for providing feedback in return to EMS providers.

Recommendations

Develop a system to allow students (with tutor guidance where appropriate) to identify learning objectives for each placement, which should be communicated to the EMS practice. During clinical EMS these could be mapped to Day One Skills.

Review the AHEMS reports to ensure they capture student experiences – currently the student reports tend to be factual records about the farming enterprise and do not appear to record anything particular to that student's experience(s) on the placement.

Introduce log books or other recording systems to enable students to record and reflect on their learning during EMS. Improve the accuracy of tracking systems so that the time spent with different species is recorded.

Develop a more robust system of feedback to students which is less reliant on individual tutor nuances. It is particularly important to identify students who are having negative or sub-optimal experiences on EMS placements.

Arrangements for intramural rotations that take place off campus, such as time spent at The Blue Cross, should be strengthened to come into line with RCVS's requirements for distributed training sites. If such a placements were designated as EMS, however, then alternative arrangements would be needed 'in-house' to provide students with core training in small animal clinical skills.
As recommended elsewhere in this report, ensure that students and supervisors involved in abattoir EMS placements are familiar with and apply the protocols and learning objectives set out in the 2009 GVS/BMPA guide "Getting experience in the food sector: Meat production & processing".

Stage 2 – Internal quality assurance systems

Veterinary Schools must pass Stage 2 of the EAEVE Evaluation procedure in order to be deemed "accredited" by EAEVE. Schools that only pass Stage 1 will be deemed to be "approved" by EAEVE. For RCVS purposes, Schools must pass both Stage 1 and Stage 2 to be recognised for registration purposes in the UK.

The Faculty applying for evaluation at Stage two must have gained prior approval on the level of Stage-one evaluation. For Stage two evaluations the Faculty, in addition to Stage one requirements, is required to demonstrate how responsibility for quality is followed up with actual quality assurance. Faculties should have a policy and associated procedures for the assurance of the quality and standards of their programmes and awards. They should also commit themselves explicitly to the development of a culture which recognises the importance not only of quality, but also quality assurance. To achieve this, faculties must develop and implement a strategy for the continuous enhancement of quality. The strategy, policy and procedures should have a formal status and be publicly available. They should also include a role for students and other stakeholders. Hence a prerequisite for the status of an accredited institution will be the existence of a system of internal quality assurance that complies with the criteria set by the Standards and Guidelines for Quality Assurance in the European Higher Education Area established in 2005 by the European Association for Quality Assurance in Higher Education (ENQA, Helsinki, 2005) (*http://www.enqa.eu/documents.lasso*).

Comments

As an autonomous higher education institution within the University of London, the RVC is subject to regular external quality assurance audits in its own right by the Quality Assurance Agency (which is in turn accredited by the European Association for Quality Assurance (ENQA).

The conclusion of the most recent QAA audit, conducted between 2007 and 2009 was that "*confidence can reasonably be placed in the soundness of the institution's present and likely future management of the academic standards of the awards that it offers; confidence can reasonably be placed in the soundness of the institution's present and likely future management of the learning opportunities available to students*."

The College has recently been granted its own Degree Awarding powers, which is a mark of confidence in its quality assurance systems.

The full report of QAA's institutional audit is published on QAA's website at http://www.qaa.ac.uk/reviews/reports/institutional/RoyalVeterinary09/RG547RoyalVeterinary.pdf

1. Policy statement

Bearing in mind, that postgraduate education and research are the basis for the advancement of veterinary science and hence have a great impact on undergraduate education, the Faculty must provide a clear policy and set of procedures for internal quality control and quality assurance of its teaching and research programme. The policy should have a formal status and be publicly available. It should also include a role for students and other stakeholders. The policy statement is expected to include the:

- relationship between teaching and research so that an established definition of research education and research quality is evident
- Faculty's strategy for quality and standards
- organisation of the quality assurance system
- responsibilities of organisational units and individuals for the assurance of quality
- involvement of students in quality assurance
- ways in which the policy is implemented, monitored and revised

Comments

RVC has a Quality Assurance Strategy which is subject to annual review by the Teaching Quality Committee of Academic Board. Students and stakeholders have an input into the strategy. RVC's mission statement and Corporate Plan are publicly available on its website - http://www.rvc.ac.uk/corporateplan/Index.cfm

Conclusion

The Visitors can confirm that the RVC's policies for internal quality assurance and control of its teaching and research programme meet the requirements for Chapter 1, Stage 2 of the EAEVE evaluation criteria.

2. Assessment of students, postgraduate education, and student welfare

Undergraduate education - admission of national and foreign students:
Enrolled students must be assessed regularly using published criteria, regulations and procedures which are applied consistently. Student assessment procedures are expected to:

- be designed to measure the achievement of the intended learning outcomes and other programme objectives, e.g. day 1 competences
- have clear and published criteria;
- where appropriate, not rely on the judgements of single examiners;
- results of assessment must be documented properly;
- be subject to administrative verification checks to ensure the accuracy of the procedures.
- in addition, students should be clearly informed about the assessment strategy being used for their programme, what examinations or other assessment methods they will be subject to, what will be expected of them, and the criteria that will be applied to the assessment of their performance.

Post-graduate student education: academic track
Information on the following topics is required:

- admission of national and foreign students
- underlying study programmes, requirements and programme-assessment
- student assessment procedures and results

Post-graduate student education: professional track
Information of the following topics is required:

- types of programmes offered and admission procedures for national and foreign student
- cooperation with other institutions
- student assessment procedures and results

Student welfare
Information of the following topics is required:

- measures taken to prevent zoonoses
- general and specific student counselling

Comments

The College's policies and procedures for student admissions, assessment and examinations and student welfare are described in relevant chapters of Stage 1 of this report. All these policies and procedures are subject to regular monitoring and review.

Conclusion

The Visitors can confirm that the RVC's policies for the assessment of students, postgraduate education and student welfare meet the requirements for Chapter 2, Stage 2 of the EAEVE evaluation criteria.

3. Assessment of teaching staff

Institutions should ensure that their teaching staff recruitment and appointment procedures include a means of ensuring that all new staff have at least the minimum necessary level of competence.

Teaching staff should be given opportunities to develop and extend their teaching capacity and should be encouraged to improve their skills. Opportunities for didactic and pedagogic training and specialisation should be available. The institution should describe any systems of reward for teaching excellence in operation.

A system for assessment of teaching staff must be in operation and should include student participation.

Comments

The College uses rigorous appointment procedures to ensure that staff of the appropriate calibre are recruited. All staff are regularly evaluated, using feedback from students, peer review, and annual staff appraisal. For 2008/2009, 61% of staff received a score of "excellent", with 15% achieving one or more low scores. Excellence in teaching and assessment is a factor in promotion decisions for staff for whom teaching is a significant part of their responsibilities. Six awards of £1000 each are also awarded annually to staff who have excelled in teaching. All new staff must undertake a course in lecturing, as well as in-house training course in communication skills facilitation. The College runs workshops to develop proficiency in teaching and assessment, and also supports staff who wish to attend CPD activities outside the College.

RVC has recently introduced a new Masters degree and Postgraduate Diploma course in Veterinary Education, designed to enable staff to continue developing their pedagogic skills and knowledge.

Conclusion

The Visitors can confirm that the RVC's policies for the assessment of teaching staff meet the requirements for Chapter 3, Stage 2 of the EAEVE evaluation criteria

4. Assessment of learning opportunities

The Faculty must provide proof of a quality assurance system that promotes and monitors the presence of an academic environment highly conducive to learning including self-learning. Type, provision and updating of appropriate learning opportunities for the students should be clearly described as well as the involvement of students. The institution should also describe how it manages the promotion of up to date facilities for supervised and self-studies and the promotion of lifelong-learning.

Comments

Each major area of the College has an explicit statement of strategy, ie. Learning, Teaching and Assessment Strategy, the e-learning Strategy, the Estates Strategy. Quality assurance of learning opportunities is overseen by the Teaching Quality Committee. All courses undergo validation by a panel of internal and external experts before being delivered; each course is reviewed annually; each year of study is reviewed annually, and the whole course is subject to a full review by internal and external experts every 5 years. These procedures are outlined in the Quality Assurance Handbook. Students are involved in these processes, eg. student membership of all committees involved and formal feedback on all learning opportunities is sought by structured questionnaires.

Conclusion

The Visitors can confirm that the RVC's policies for the assessment of learning opportunities meet the requirements for Chapter 4, Stage 2 of the EAEVE evaluation criteria

5. Assessment of the training programme and the award of the title of veterinary surgeon

Assessment is expected to include:

- development and publication of explicit intended learning outcomes, including a description of essential competences required at graduation (the so-called "day one-skills")
- procedures for formal curriculum and teaching programme approval and regular reviews
- procedures monitoring delivery of the curriculum and teaching programme
- assurance concerning the participation of students in quality assessment activities
- parameters assessed and procedures to monitor regular feedback from stakeholders and graduates
- provision of a structure that promotes life-long learning

Comments

See above and elsewhere in Stage 1 report for description of quality assurance procedures, which ensure that the curriculum and teaching programme are subject to regular review at both a detailed and an overall level. The learning outcomes for RVC's BVetMed degree are aligned with the RCVS Day One Competences. All staff and students are provided with a booklet detailing the RVC Day One Skills – which have been mapped to the RCVS Day One Competences - all the Day One Skills are assessed as part of students' final examinations. The new curriculum has been specifically designed to promote lifelong learning through the provision of more directed self-learning sessions, reduction in didactic lecture hours, promotion of e-learning. The RVC has been recognised and funded by the Higher Education Funding Council for England as a national "Centre of Excellence in Teaching and Learning", as evidenced by the creation of the 'Lifelong Learning in Veterinary Education (LIVE) Centre.

Conclusion

The Visitors can confirm that the RVC's policies for the assessment of the training programme and the award of the title of veterinary surgeon meet the requirements for Chapter 5, Stage 2 of the EAEVE evaluation criteria.

6. Assessment of quality assurance systems for clinics, laboratories, and farm

The Faculty should describe the system(s) of quality assurance it possesses to monitor and assure clinical, laboratory and farm services

Comments

The Colleges clinical services are accredited to RCVS Tier 3 Hospital standard. There are comprehensive internal policies and procedures in place to ensure ongoing quality assurances of the services. The Colleges laboratories and diagnostic services are internally quality controlled and assured, and are also subject to external quality assessment schemes, such as the Randox International Quality Assessment Scheme, the Veterinary Laboratories Agency QA Unit, the UK National External Quality Assessment Service (NEQAS). The Boltons Park Farm facilities take part in various external accreditation schemes: the Assured Dairy Farm Scheme (for milk), FABBL – the Farm assurance scheme for beef and lamb production (the "Little Red Tractor" logo), Traditional Farm Fresh Turkey Association, EU Traditional Speciality Guaranteed, Golden Promise label, and the Cattle Health Certification Standards (CheCS). The farm has Accredited BVD Free Unvaccinated status.

Conclusion

The Visitors can confirm that the RVC's policies for the assessment of quality assurance for clinics, laboratories and farm meet the requirements for Chapter 6, Stage 2 of the EAEVE evaluation criteria.

7. Assessment of continuing education

The Faculty should describe its system for quality assurance to monitor and promote the design, implementation and quality control of its own, or joint Continuing Professional Development (CPD) programmes in specific areas of practical veterinary medicine.

Comments

The College provides a wide range of free-standing CPD short courses, as well as postgraduate degrees and diplomas as described in Stage 1 of this report. The College monitors the quality of its non-award bearing CPD programmes by using evaluation questionnaires completed by participants. As far as other postgraduate degrees and the modules for the RCVS CertAVP are concerned, these are quality assured in the same way as all other award bearing (degree) courses through internal validation, ongoing and Quinquennial Review involving external experts.

Conclusion

The Visitors can confirm that the RVC's policies for the assessment of continuing education meet the requirements for Chapter 7, Stage 2 of the EAEVE evaluation criteria

8. Assessment of research

The institution should describe its quality assurance systems to develop, maintain and audit research programmes. Of particular interest is how research provides opportunities for student training, staff promotion, and how research methods and results are conveyed into basic veterinary training.

Comments

The College's research programme is audited internally by regular reports to the Senior Management Group and Academic Board. The College is also subject to external audit by the UK wide Research Assessment Exercise (RAE), last undertaken in 2008, when staff publications are analysed against national and international performance benchmarks. Further details about the College's research are provided in Chapter 13 of the Stage 1 report. For undergraduates, there are multiple processes for ensuring that research methods and results are conveyed into basic training: courses are reviewed annually to ensure they incorporate the latest scientific advances; elective modules in final year incorporate content from staff research programmes; the Professional Studies Strand includes instruction in research methodology; students are required to undertake two research projects as part of their undergraduate course, one of which may lead to publication.

Conclusion

The Visitors can confirm that the RVC's policies for the assessment of research meet the requirements for Chapter 8, Stage 2 of the EAEVE evaluation criteria.

9. Assessment of internationalisation of education and research

The institution should describe how it promotes and assesses the development of international post-graduate education and of collaborative research projects with other countries, including developing countries.

Of particular importance is a description of the measures of encouragement applied to engage veterinary students and new graduates in international mobility of training (e.g. EU programmes such as Erasmus, Socrates, Tempus, Marie Curie etc) as well as the effectiveness of the activities.

Comments

The College has a developing International Strategy and has links with Hong Kong and China through a new company it has opened in Hong Kong to deliver veterinary nurse training. Undergraduates are able to undertake up to nine weeks of the EMS outside the UK. The Undergraduate Research Team undertakes a biennial expedition to a developing country focussing on research and animal health, and Development Education forms a component of the Professional Studies Strand, supported by the UK government's Department for International Development (DFID).

The College admits many international students, and the current academic staff profile includes staff from 25 countries, of whom 33 are from other EU countries and 24 are from outside the EU. The College undertakes collaborative transnational research, including EU funded research. The College has had two Commonwealth Scholarships per year for the last nine years to support students from developing countries study towards the MSc, and four scholarships per year from the BBSRC Masters Grant for Veterinary Epidemiology for the last three years. The Senior Clinical Training Scholarships recruit strongly from EU countries outside the UK from EAEVE approved schools.

Conclusion

The Visitors can confirm that the RVC's policies for internationalisation meet the requirements for Chapter 9, Stage 2 of the EAEVE evaluation criteria.

10. Assessment of cooperation with stakeholders and society

The institution should provide proof that it regularly publishes up to date, objective and accurate information, both quantitative and qualitative, about the study programme. Published information might also include the views and employment destinations of past students and the profile of the current student population. This information should be readily accessible and should not be used simply as a marketing opportunity. The institution should describe to what extent it meets its own expectations.

Comments

The College produces various publications which are available on its website, including its Annual Report, and its Prospectus which provides details about the course and the College for applicants. The College does not itself proactively publish quantitative and qualitative data about student profiles or employment destinations, but it is subject to the Freedom of Information Act and all such data and documents are available to the public on request. It also makes detailed data available to other external agencies, eg. the "Unistats" website (www.unistats.com) which publishes in a readily understandable format information on percentages in graduate employment, percentage breakdowns of the student population, student satisfaction ratings (from the National Student Survey), etc. The external audit reports published by the QAA about the College are also freely available to the public via the QAA website (www.qaa.ac.uk).

The College has an Alumnus Association, and maintains contact with past graduates through the 'Eclipse' magazine and through 'RVC4life' which provides graduates with an ongoing link to the College.

Conclusion

The Visitors can confirm that the RVC's policies for the assessment of cooperation with stakeholders and society meet the requirements for Chapter 10, Stage 2 of the EAEVE evaluation criteria.

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Annex 1 – Tables

Finance

Table 1.1: Income/Revenue (£000s)

Year		Income generated by faculty		Total		
	HEFCE + tuition fees	Income from services provided	Research		Non-faculty generated income	Total per annual accounts
2008/09	35,990	9,785	9,998	55,773	6,868	62,641
2007/08	32,237	9,772	8,495	50,504	7,846	58,350
2006/07	28,454	9,013	8,708	46,175	5,289	51,464

Table 1.2: Expenditure (£000s)

Year	Pay	Non-pay				Total
	Salaries	Teaching support	Research support	Clinical support	Other	
2008/09	35,335	5,152	6,888	4,039	10,370	61,784
2007/08	31,971	4,924	5,588	4,092	11,359	57,934
2006/07	27,927	3,060	5,823	3,872	9,254	49,936

Curriculum

Table 2.1: General table of curriculum hours taken by all students - old curriculum

Year	Hours of training							
	Theoretical training			Supervised practical training			Other	Total
	Lectures	Seminars	Self-directed learning	Laboratory and desk based work	Non-clinical animal work	Clinical work		
	A	B	C	D	E	F	G	
First	144	137.75	25	65.5	25			397
Second	149.5	93.75	36	76.25	14			369
Third	257.75	157	1	90.5	0			506
Fourth	181	49.75	5	29.75	0	886.5		1152
Fifth	2.25	50.5	13	19.5	43	233.5		361
Total	**734.5**	**488.75**	**80**	**282.5**	**82**	**1120**		**2786**

Table 2.2: General table of curriculum hours taken by all students - new curriculum

Year	Hours of training							
	Theoretical training			Supervised practical training			Other	Total
	Lectures	Seminars	Self-directed learning	Laboratory and desk based work	Non-clinical animal work	Clinical work		
	A	B	C	D	E	F	G	
First	152.75	46.75	4	54.5	41.5			299.5
Second	143	70.5	29.5	49.5	18.5			311
Third Terms 1 & 2	185.5	120	61	27	7.5			401
Fourth								
Fifth								
Total	**481.3**	**237.25**	**94.5**	**131**	**67.5**			**1011.5**

Table 3(a): Curriculum hours in subjects taken by each student - old curriculum

Subject	Theoretical training			Supervised practical training			Other	Total
	Lectures	Seminars	Self directed learning	Laboratory and desk based work	Non-clinical animal work	Clinical training		
	A	B	C	D	E	F	G	
CLASSROOM-BASED SUBJECTS								
Animal Husbandry	34	13		16	16			79
Integrated Structure and Function	2		25					27
Molecular, Cellular and Developmental Biology	50.25	70		20				140.25
Movement, Control and Measurement	37.25	22.75		24				84
Cardiovascular and Respiratory Systems	78.75	62.75	1	37.25	9			188.75
The Head	21.25	7	12	16	1			57.25
Digestion and Metabolism	30.75	9.5	17.25	26.5				84
Immunology	14.25	10	4	1				29.25
Endocrinology & Thermoregulation Year 1	12.75	22.75		1.75				37.25
Urogenital. Year 2 and Year 4	81	54	7.75	26				168.75
General Pathology	19.5	1		10				30.5
Special Species	18.75	8.5			12			39.25
Alimentary System	32.25	43.25		9				84.5
Locomotor System	25.5	9		11.75				46.25
Nervous System and Special Senses	30	8.5		2				40.5
Principles of Clinical Science	39.75	30		5				74.75
Principles of Microbiology	39.5	19.25		14				72.75
Principles of Parasitology	33	16.5		17				66.5
Endocrine System Year 4	12	6.75		3				21.75
Lymphoreticular and Haemopoietic System	10.5	5.25		3				18.75
Population Medicine and Veterinary Public Health	70.5			10				80.5
Skin	21	18		3.75				42.75
Professional Studies	18.75	1						19.75
Total number of hours	733.25	438.75	67	257.25	38	1248		1534

Table 3 (a), Curriculum hours in subjects taken by each student - old curriculum (continued)

Subject	Theoretical training			Supervised practical training			Other	Total
	Lectures	Seminars	Self directed learning	Laboratory and desk based work	Non-clinical animal work	Clinical training		
	A	B	C	D	E	F	G	
CLINIC-BASED SUBJECTS								
Small Animal Cardiology						48		48
Small Animal Critical Care		10				38		48
Small Animal Internal Medicine						96		96
Small Animal Radiology				7.5		40.5		48
Small Animal Orthopaedics		2				46		48
Small Animal Soft Tissue Surgery						96		96
Small Animal Neurology		5				43		48
Small Animal Dermatology		1	4			43		48
Small Animal First Opinion						48		48
Small Animal Emergency Medicine		4				44		48
Equine Lameness						48		48
Equine Surgery		4				44		48
Equine Diagnostic Imaging						48		48
Equine Emergency						48		48
Equine Medicine		3				45		48
Equine Practice						48		48
Anaesthesia		8	3			85		96
Farm Animal & Camelid Clinical Services (FACCS)						48		48
Farm health at WRVC						48		48
Population Medicine & Veterinary Public Health (PMVPH)		11		5	4	76		96
Clinical and Anatomical Pathology	2.25	2.5	6	7	39	39.3		96
Total number of hours	2.25	50.5	13	19.5	43	1120		1248

Table 3(b): Curriculum hours in subjects taken by each student -

New curriculum to End of Year 3, Term 2.

Subject	Theoretical training			Supervised practical training			Other	Total
	Lectures	Seminars	Self directed learning	Laboratory and desk based work	Non-clinical animal work	Clinical training		
	A	B	B	D	E	F	G	
CLASSROOM-BASED SUBJECTS								
Introduction to Animal Form and Function	4.5			3	1.5			9
Locomotor	16.25	2.5		2	7.5			28.25
Skin	4.5	2	2.5	2	0.5			11.5
Cardiovascular and Respiratory	54	25.5	16	9	7			111.5
Neurology and Special Senses	19.5	8		6.5	4.5			38.5
Embryology	5.25				3			8.25
Endocrine	9	3		3				15
Alimentary	48.25	27	10	12	10.5			107.75
Urogenital	57.85	28.75	13	16.5	13.5			129.6
Lymphoreticular and Haemopoietic System	7.25	4	3	3				17.25
Principles of Veterinary Science	124.5	78	28	58				288.5
Integrated Concepts	2	3						5
Professional Skills	51	25	5	2				83
Population Medicine and Veterinary Public Health	71.95	29	17	8	19.5			145.45
Additional Activities / thermoregulation	5.5	1.5		6				13
Total number of hours	481.3	237.3	94.5	131	67.5			1011.6

Table 3 (b), Curriculum hours in subjects taken by each student - new curriculum, (continued)

Subject	Theoretical training			Supervised practical training			Other	Total
	Lectures	Seminars	Self directed learning	Laboratory and desk based work	Non-clinical animal work	Clinical training		
	A	B	C	D	E	F	G	
CLINIC-BASED SUBJECTS								
Internal Medicine						96		96
Radiology						48		48
Orthopaedics						48		48
Soft Tissue Surgery						48		48
Dermatology						48		48
Emergency Medicine						48		48
Beaumont Animals' Hospital						96		96
Equine Surgery1						48		48
Equine Diagnostic Imaging						48		48
Out Hrs. / Emergency						48		48
Equine Medicine						48		48
Equine practice						48		48
Anaesthesia						96		96
Farm Animal & Camelid Clinical						96		96
Population Medicine & Veterinary						96		96
Veterinary public health (Langford)						48		48
Gross and clinical pathology						48		48
Total number of hours						1056		1056

Table 4(a): Curriculum hours taken as electives - old curriculum

Subject	Theoretical training		Supervised practical training			Other	Hours to be taken by each student per subject group
	Seminars	Self directed learning	Laboratory and desk based work	Non-clinical animal work	Clinical work		
	A	B	C	D	E	F	
Anaesthesia (Equine)	21		8				29
Anaesthesia (Small Animal)	21.75		3				24.75
Animal Welfare	14.5		1.5				16
Camelids	16		7			WS = 8.5	31.5
Cardiology	25		2.5				27.5
Clinical Nutrition	19	6	3				28
Dermatology	17.5		4				21.5
Diagnostic Imaging (Small Animal)	22.75	3	4.5				30.25
Diagnostic Imaging (Equine)	27.75		6				33.75
Emergency & Critical Care	17	3	5				25
Equine Medicine	32.5						32.5
Equine Orthopaedics	10.5	0.75	12.75				24
Equine Stud	7.5	4	4			WS = 8	23.5
Equine Surgery	9.5		14			WS = 6.5	30
Exotic Pets: Birds	16	3.5				WS = 6	22.5
Exotic Pets: Reptiles & others	24	6					30
Exotic Pets: Small Mammals	24.75						24.75
Farm Animal 1	16.5		7				23.5
Farm Animal 2	11		17				28
Farm Animal 3	9.5		10				19.5

Table 4(a) (continued)

Subject	Theoretical training		Supervised practical training			Other	Hours to be taken by each student per subject group
	Seminars	Self directed learning	Laboratory and desk based work	Non-clinical animal work	Clinical work		
	A	B	C	D	E	F	
Farm Animal Diagnostic Pathology	19		8.5				27.5
Feline	24.5						24.5
International Animal Health	24.5						24.5
Neurology	13.25	0.75				WS = 3	17
Practice Management Fundamentals 1	26						26
Practice Management Fundamentals 2	29						29
Reproduction: Animal Breeding and Genetics	8	6	4			WS = 4	22
Reproduction: Livestock & Farm Reproduction	19.75		11.25				31
Small Animal Medicine	26.5	2					28.5
Small Animal Surgery	6.5		30				36.5
Therapeutics (Large Animal)	22						22
Therapeutics (Small Animal)	22.5						22.5
VPH – Outbreak Investigation	22.75						22.75

Table 4b): Curriculum hours in clinical subjects offered and to be taken as tracking rotations - new curriculum

Subject	Supervised practical training
	Clinical work
2 X 3 weeks @ 48 hours per week	288 hours

Hours devoted to clinical rotations are based upon an approximate figure of 48 hours per week, in conformity with the Working Time Directive. Students are required to attend each rotation for minimum fixed hours, but may be required to be present for longer in order to provide continuity of care.

Table 5 – Curriculum hours in EU listed subjects taken by each student

The following table was not included with the SER, but was provided to the Visitors during the visit:

Subject	Theoretical training			Supervised practical training			Other	Total
	Lectures	Seminars	Self directed learning	Laboratory and desk based work	Non-clinical animal work	Clinical training		
	A	B	C	D	E	F	G	
Anatomy (incl histology & embryology)	66	50		92	2			210
Physiology	60	23		22				105
Biochemistry, cellular & molecular biology	31			24				55
Genetics (incl.molecular genetics)	4	2						6
Pharmacology & pharmacy	26	2						28
Toxicology (inc. environmental pollution)	4	6						10
Microbiology (inc.virology, bacteriology & mycology)	41	16		9				66
Immunology	15	16		1				32
Epidemiology (inc.scientific & technical information & documentation methods)	23	17		4		15	12	71
Professional Ethics	44	4						48
Total no. of hours	314	136		152	2	15	12	631

Table 6(a) food hygiene/public health - old curriculum

Subject	Theoretical training			Supervised practical training			Other	Total
	Lectures	Seminars	Self directed learning	Laboratory and desk based work	Non-clinical animal work	Clinical training		
	A	B	C	D	E	F	G	
Food Hygiene/ Public Health								
a) Inspection and control of animal foodstuffs or foodstuffs of animal origin and the respective feedstuff production unit	10	16			14			40
b) Food hygiene and technology	9	10						19
c) Food science including legislation	8	10						18
d) Practical work (including practical work in places where slaughtering and processing of foodstuffs takes place)					35			35
Total number of hours	**27**	**36**			**49**			**112**

Table 6(b) food hygiene/ public health - new curriculum

Subject	Theoretical training			Supervised practical training			Other	Total
	Lectures	Seminars	Self directed learning	Laboratory and desk based work	Non-clinical animal work	Clinical training		
	A	B	C	D	E	F	G	
Food Hygiene/ Public Health								
a) Inspection and control of animal foodstuffs or foodstuffs of animal origin and the respective feedstuff production unit	10	16			14			40
b) Food hygiene and technology	6	5						11
c) Food science including legislation	6	9						15
d) Practical work (including practical work in places where slaughtering and processing of foodstuffs takes place)					35			35
Total number of hours	**22**	**30**			**49**			**101**

Student numbers

Table 7.1: Intake of veterinary students in the past five years

Year	Number applying for admission			Number admitted		
	Gateway (D190)	BVetMed yr 1 (D100 + D101)	4 yr Accelerated (D102)	Gateway (D190)	BVetMed yr 1 (D100 + D101)	4 yr Accelerated (D102)
2009	166	1097	220	34	159	58
2008	158	1014	185	35	160	36
2007	151	871	185	33	179	32
2006	112	725	127	20	197	29
2005	100	856	104	23	212	19
Average over 5yr period	137.4	912.6	164.2	29	181.4	34.8

Table 7.2: Undergraduate student composition in year prior to visitation - 2008/09

Total number of veterinary undergraduates	1163
Total number of male students	213
Total number of female students	950
Foreign students	115
- from EU countries	28
- from non-EU countries	87

Animals and teaching material of animal origin

Table 8.1: Animals available for clinical training (in the clinics of the Faculty or seen through the Ambulatory clinic) as ratio to the number of students in last full year of clinical training

R 11:	no. of students graduating annually [a)] / no. of food-producing animals seen at the Faculty[1)] = 176/96 => 1/1.8	0.56
R 12:	no. of students graduating annually [a)] / no. of individual food-animal consultations outside the Faculty[2) 3)] = 176/8783 => 1/0.02	50
R 13:	no. of students graduating annually [a)] / number of herd health visits [3),4)] = 176/1494 => 1/0.12	8.3
R 14:	no. of students graduating annually [a)] / no. of equine cases[1)] = 176/1342 => 1/0.13	7.7
R 15:	no. of students graduating annually [a)] / no. of poultry/rabbit cases[1)] = Data not available	
R 16:	no. of students graduating annually [a)] / no. of companion animals[1)] seen at Faculty = 176/35822 => 1/0.005	200
R 17:	no. of students graduating annually [a)] / Poultry (flocks)/rabbits (production units) seen [2) 3)] = 176/29 => 1/6.07	0.17

Table 8.2: Animals available for necropsy

R 18:	no. of students graduating annually / no. necropsies food producing animals + equines = 176/339 => 1/0.52	1.92
R 19:	no. of students graduating annually [a)] / no. poultry/rabbits[1)] = 176/132 => 1/1.33	0.75
R 20:	no. of students graduating annually [a)] / necropsies companion animals[1)] = 176/314 => 1/0.56	1.79

Table 8.3 Number of cases: a) received for consultation, and b) hospitalised in the Faculty clinics, in the past three years.

Species		**Number of cases**						**Average**
		2006/07		**2007/2008**		**2008/09**		
		a	b	a	b	a	b	
Food producing	Bovine	7	7	1	1	19	19	96
	Small Ruminants	4	4	5	5	13	13	
	Porcine	1	1	1	-	-	-	
	Camelid	6	6	16	16	60	60	
	Cervine	-	-	1	1	-	-	
	Caprine	11	11			-	-	
Poultry		-	-	-	-	-	-	N.A.
Rabbits		-	-	-	-	-	-	
Equine		799	549	812	550	773	543	1342
Companion animals/exotics	Canine	15,531	4,412	14,656	4,766	15,140	4,697	35822
	Feline	11,164	3,459	10,683	3,596	11,724	3,989	
	Unspecified	804	283	957	345	895	367	

Table 8.4a: Number of cases seen by the Ambulatory (mobile clinics) in the past three years.

	Species	Number of patients			Average
		2006/7	2007/8	2008/9	
Food-producing animals	cattle	3,132	12,312	9,480	8783
	small ruminants	220	393	320	
	pigs	50	206	120	
	unspecified	31	35	50	
Poultry (no of flocks)		56	4	26	29
Rabbits (no production units)		0	0	0	
Equine		4,942	5,241	5,540	5241
Other (production units)		13	23	55	30

Includes cases seen at the Joint Venture Practice and Welsh Regional Veterinary Centre

Table8.4b: Number of herd health visits in the past three years.

	Species	Number of patients			Average
		2006/7	**2007/8**	**2008/9**	
Food-producing animals	cattle	1316	628	1838	1494
	small ruminants	63	96	219	
	pigs	22	43	80	
	poultry	56	4	26	
	others	13	23	55	

Staffing

Table 9.1: Personnel in the establishment provided for veterinary training

		Budgeted posts (FTE)		Non-budgeted posts (FTE)		Total (FTE)	
1. Academic staff		VS	NVS	VS	NVS	VS	NVS
	Teaching staff (total FTE)	127.55	58.5	2.31	0.5	129.86	59
	Research staff (total FTE)	3.4	12.19	19.6	48.8	23	60.99
	Total FTE	130.95	70.69	21.91	49.3	152.86	119.99
	Total FTE (VS + NVS)	201.64		71.21		272.85	
	*FTE providing teaching in 2008/2009	188.39		13.07		201.46	
2. Support staff							
a)	responsible for the care and treatment of animals	83.95		0		83.95	
b)	responsible for the preparation of practical and clinical teaching.	53.81		3.1		56.91	
c)	responsible for administration, general services, maintenance, etc.	306.23		1.6		307.83	
d)	engaged in research work	21.8		3		24.8	
e)	**others (please specify)	10		0		10	
	Total support staff	475.79		7.7		483.49	
3. Total staff		677.43		78.91		756.34	

Table. 9.2: Ratios students/staff

R 1:	no. total academic FTE in veterinary training / no. undergraduate veterinary students	= 201.46/1163 => 1/0.17	5.88
R 2:	no. of total FTE at Faculty / no. undergraduate students at Faculty	= 201.46/1457 => 1/0.14	7.14
R 3:	no. total VS FTE in veterinary training / no. undergraduate veterinary students	= 133.31/1163 => 1/0.11	9.09
R 4:	no. total VS FTE in veterinary training / no. students graduating annually	= 133.31/176 => 1/0.76	1.32
	no. total FTE academic staff in veterinary training / no. total FTE support staff in veterinary training	= 201.46/483.49 => 1/0.42	0.42

Annex 2 – Academic staff list

As at 15 December 2009

Title	Forename	Surname	Vet	MRCVS	Teaching Responsibilities on BVetMed
Dr	Robert	Abayasekara	N	-	Lectures, Directed learning and practicals to 2nd year BVetMed students in Endocrinology, Renal Function and Reproduction. Strand Leader: Endocrinology Deputy Strand leader: Urogenital
Miss	Sophie	Adamantos	Y	Y	Principles of Clinical Science module - various lectures, directed learning, CAL and clinical scenarios Respiratory module - lecture, DL and clinical scenarios Haematology and lymphoreticular module - Transfusion Medicine Module leader- Emergency and Critical Care elective; Rotation leader for ECC modules
Professor	Brian	Aldridge	Y	Y	Population Medicine; Farm Animal Medicine Farm Animal Rotation Director Teaching on Alimentary and Urogenital Strands; Farm Animal rotations and electives; PMVPH; Professional Skills
Dr	Hatim	Alibhai	Y	Y	Anaesthesia; Veterinary Anaesthesia Rotation Director; Teaching on Anaesthesia rotation and elective; Principles of Science
Dr	Steven	Allen	N	-	BVetMed Yr1: INH; BVetMed Yr1 and 2: tutorials
Dr	Karin	Allenspach	Y	Y	Rotational teaching on small animal medicine Module leader and teacher in alimentary teaching in 1st, 2nd , 3rd and 4th yr BVetMed (lectures, directed learning, practicals) Elective BVetMed teaching: Feline and infectious diseases electives
Ms	Silvia	Alonso-Alvarez	Y		Teaching of Veterinary Public Health within: Population level decision making – Year 2 Population Medicine and Veterinary Public Health Strand – Year 3 and Year 4 New Curriculum Population Medicine and Veterinary Public Health Module – Year 4 Old Curriculum.
Mr	Gareth	Arthurs	Y	Y	Teaching all aspects of small animal orthopaedics on clinics; 3rd year locomotor module
Ms	Charlotte	Avella	Y	Y	Equine Diagnostic Imaging intra-mural rotations Small group case based teaching and seminars in a clinical context
Dr	Sarah	Baillie	Y	Y	Farm Animal Rotation; Peer Assisted Learning; Business Skills; Anatomy (1st year bovine); Interprofessional Education
Mrs	Elizabeth	Baines	Y	Y	Diagnostic Imaging on rotations and electives Lecture: Musculoskeletal Radiology 5th yr BVetMed Elective course Small group teaching of students during IMR in all aspects of diagnostic imaging

Dr	Stephen	Baines	Y	Y	Deputy Strand Leader for Principles of Science Lectures & practical teaching in Principles of Science strand Clinical teaching on small animal surgery clinical rotation Lectures and practical classes for small animal surgery elective
Dr	Clive	Bate	N	-	Virology (3rd year)
Dr	Livia	Benigni	Y	Y	Diagnostic Imaging BVetMed: Clinical rotation in small animal radiology BVetMed year 4: Urogenital Module BVetMed year 5: Elective Diagnostic Imaging
Dr	Yoel	Berhane	N	-	Directed learning on the year 2 of the BVetMed course (Inflammation).
Ms	Clare	Blackett	Y	Y	Teaching on First Opinion Small Animal rotation
Mr	David	Bolt	Y	Y	Equine Surgery Rotation Principles of Clinical Science Alimentary System Locomotor System Equine Diagnostic Imaging Elective Equine Soft Tissue Surgery Elective Equine Orthopaedic Surgery Elective
Dr	Ross	Bond	Y	Y	Module leader Year 4 Dermatology Rotation Director, SAMS Specials Contributor to Skin strand in new curriculum.
Miss	Kate	Borer	Y	Y	PCS Module and Electives
Mr	Adrian	Boswood	Y	Y	Course director of the BVetMed (new curriculum). Strand leader of Cardiovascular and Respiratory strand.
Professor	Kathleen	Botham	N	-	Second year BVetMed module: Renal First year BVetMed module: Alimentary
Professor	Daniel	Brockman	Y	Y	SAMS 2 (clinical rotation) Cardio – Respiratory strand
Dr	David	Brodbelt	Y	Y	Anaesthesia and Epidemiology Lectures – 3rd year PCS Module. 3rd Year EBVM Module coordinator Anaesthesia Directed Learning sessions – 3rd year PCS Module Small group seminars on Epidemiology related topics, Final year
Dr	Harriet	Brooks	Y	Y	Post mortem instruction for IMR students; Deputy Strand Leader of the Skin (Dermatology) strand
Mrs	Fiona	Brown	N	-	Teaching clinical skills to undergraduate veterinary and nursing students both structured teaching responsibilities and on a drop-in basis. Helping with the organisation of OSCEs including examining.
Miss	Elizabeth	Browne	Y	Y	Teaching of IMR students in post mortem room Lectures in urogenital and public health module
Professor	Joe	Brownlie	Y	Y	Principles of Science, Year 2; Cattle Elective, Year 5
Ms	Marie	Cadiergues	Y	Y	Clinical rotation teaching
Dr	Michelangelo	Campanella	N	-	Antimicrobial Principles, Therapy and Use
Professor	Barbara	Cannon	N	-	Not currently assigned

Dr	Jackie	Cardwell	Y	Y	Supervising Research 2 (final year) research projects Teaching population skills (applications of basic statistics). Designing and facilitating directed learning sessions on companion animal zoonotic disease risk communication and respiratory disease outbreak investigation. Teaching data management skills and basic risk analysis to BVetMed students (Farm Animal Rotation).
Mr	Matthieu	Cariou	Y	Y	Small Animal Surgery (Soft Tissue and Orthopaedics) clinical rotation teaching
Dr	Brian	Catchpole	Y	Y	Strand Leader for BVetMed Principles of Science (yrs1-4) BVetMed Yr2 Lymphoreticular and Haemopoietic System: Lectures, Directed Learning and Practicals
Mr	Daniel	Chan	Y	Y	Principles of Science ModuleAlimentary ModulePMVPHProfessional Studies:Small Animal Elective – Clinical Nutrition (Director)Small Animal Elective – Emergency and Critical CareSmall Animal rotations (ECC) (final year students)Clinical Nutrition rounds (final year students)
Professor	Peter	Chantler	N	-	Molecular Biology Director of the Graduate Entry route Teaching on Cells: Structure and Function, and Inheritance
Dr	Zhangrui	Cheng	Y	-	Not currently assigned
Dr	Chantal	Chenu	N	-	Musculo-skeletal Biology
Professor	David	Church	Y	Y	Didactic teaching on internal medicine; Didactic teaching on electives: SA medicine and feline medicine; Clinical rotational teaching on SA medicine
Mr	Fabio	Cilli	Y	Y	Clinical rotation teaching
Professor	KW	Clarke	Y	Y	Anaesthesia section of the Principles (3rd year); Anaesthesia Elective
Dr	Bradley	Cobb	N	-	Principles of Science
Dr	David	Connolly	Y	Y	Small Animal Medicine Clinical Rotation teaching to final year students Lecturer in the Respiratory module Directed learning in the Cardiology module Directed learning in the Principles of Clinical Science module
Mrs	Nichola	Coombes	N	Y	Lectures/practical teaching covering animal handling / behaviour. Practical clinical teaching in the Clinical Skills Centre. Day 1 skills. Communications skills teaching to all years.
Dr	Sandra	Corr	Y	Y	Small Animal Surgery and Radiology Rotation Director Deputy Strand Leader for Locomotor Strand Orthopaedic Surgery Clinical Rotations
Ms	Tracy	Crook	N	-	Not currently assigned
Professor	Fiona	Cunningham	N	-	Lectures & small group directed learning sessions in pharmacology & therapeutics for: Year 2 students: Principles of science strand Graduate and Transfer Year BVetMed students: Principles of animal form and function module
Dr	Vicki	Dale	N	-	Professional Skills (communication, teamwork and interview skills, brain thinking preferences)
Dr	Monica	Daley	N	-	Gateway Animal Movement; Module Leader for Gateway Animal Movement BVetMed 1st Year: Comparative Animal Locomotion

Mr	Duncan	D'Arcy-Howard	Y	Y	Clinical rotation teaching
Miss	Emma	Davies	Y	Y	Clinical rotation teaching; BVetMed Year 3 - neurology and special senses module
Dr	Amanda	De Mestre	Y	Y	Reproduction; Immunobiology Teaching on Principles of Science; Urogenital Strand; Comparative Reproduction (Gateway); Equine Stud Medicine Elective
Mr	Simon	Dennis	Y	Y	Rotations Electives Year 3 Cardiovascular System Module
Dr	Gurtej	Dhoot	N	-	Subject leader in histology Teaching on Embryology, Alimentary Strand, Principles of Science
Dr	Felicity	D'Mello	N	-	Year 1 principles of infection (lectures, practicals and DL for both years 1&2); Year 2: Principles of Science; Gateway (Pathogens, diseases and immunity module) and G&T Year (Module leader for Infections and responses and deliver lectures and practicals in this module)
Dr	Jayesh	Dudhia	N	-	BVetMed Years 1, 2 & 4: Communication Skills; Graduate and Transfer Year BVetMed lectures: Locomotion
Dr	Bettina	Dunkel	Y	Y	Reproduction and neonatology:3rd year BVetMed Large Animal Therapeutics Elective Large Animal Soft Tissue Surgery Elective Endocrine module Lymphoreticular and Haemopoietic System Alimentary module
Dr	Ehud	Eliashar	Y	Y	Leader - locomotor module II Leader - Equine Orthopaedic elective module Clinical rotations years 4,5 – Equine orthopaedics and soft tissue surgery Lecturer in locomotor strand year 2 of new curriculum Lecturer in Equine Reproduction elective module
Professor	Jonathan	Elliott	Y	Y	Second year: Renal and endocrine modules Third & fourth year: Contribute to GI, Urogenital and Respiratory modules Final year: Clinical pharmacology Elective
Miss	Kate	English	Y	Y	Lecture to 4th and 5th year - various clinical pathology related topics IMR teaching of 4-5th year students
Mrs	Janneke	Erkelens	Y		Clinical rotation teaching
Dr	Kerstin	Erles	Y	-	Principles of Science module; Respiratory strand; Urogenital strand; Graduate Accelerated Programme: Virology
Mr	Arturo	Fernandez	Y	Y	Laboratory Animal Medicine and handling
Mr	John	Fishwick	Y	Y	Director of the Farm Animal Elective Modules 2004-2009 Contribution to teaching of the following modules: Respiratory, Alimentary, Urogenital, Preventative Medicine, Practical Clinical Studies, Locomotor, Farm Animal Rotation
Mr	Goncalo	Fonseca Esteves	Y	Y	Clinical rotation teaching
Dr	Ali	Fouladi-Nashta	Y	-	Reproduction Teaching on Principles of Science, Reproduction Elective, Reproduction module
Dr	Robert	Fowkes-Gajan	N	-	Endocrinology Teaching on Cells: Structure & Function (G&T); Endocrinology Strand; Principles of Science

Dr	Mark	Fox	Y	Y	Principles of Veterinary Parasitology (Years 1 & 2), Alimentary, Respiratory and Dermatology Systems Strands (Years 3/4), Graduate Accelerated Programme: Parasitology; BVetMed Years 4 & 5 research project supervisor; Graduate Accelerated Programme research project supervisor.
Dr	Oliver	Garden	Y	Y	Small Animal Medicine Feline Medicine Elective Leader Teaching on Feline Medicine Elective and Small Animal Medicine rotation Teaching on (i) Lymphoreticular and Haemopoietic and (ii) Principles of Science strands
Ms	Lucy	Gardiner	Y	Y	Small Animal Clinical rotation teaching
Dr	James	Gazzard		-	Business and EntrepreneurshipEntrepreneurship Elective LeaderTeaching on Professional Skills Strand and Entrepreneurship Elective
Dr	Barbara	Glanemann	Y	Y	Small Animal Internal Medicine
Mr	Robert	Goggs	Y	Y	Clinical rotation teaching
Dr	Liam	Good	N	-	Genetics and general microbiology Teaching on Principles of Science
Dr	Nigel	Goode	Y	Y	VBS Departmental Teaching co-ordinator Year Leader – Year 1 BVetMed D101 Course Director Strand Leader – Integrated Concepts - BVetMed Deputy Strand Leader – Alimentary - BVetMed
Professor	Susan	Gregory	Y	Y	Small Animal Soft Tissue Surgery Urogenital 2 Module Leader Teaching on Urogenital Module and Strand, Teaching on Professional Studies Strand
Professor	Neville	Gregory	N	-	Animal Welfare; Ethics; Animal Husbandry; Veterinary Public Health. Contributions to Animal Husbandry; PMVPH; Animal Welfare Elective
Mr	James	Grierson	Y	Y	Orthopaedic Surgery Teaching on Locomotor module and strand
Dr	Francisco-Javier	Guitian	Y	-	Epidemiology Strand Leader, Professional Studies Teaching on PMVPH, Professional Studies
Miss	Zoe	Halfacree	Y	Y	Dermatology Contributions to Alimentary strand; Principles strand; Urogenital strand; Small Animal Surgery rotation
Ms	Kathy	Hardcastle	Y	Y	Laboratory Animal Medicine and handling
Ms	Sarah	Hatton	Y	Y	Clinical rotation teaching
Dr	Anke	Hendricks	Y	Y	BVetMed year 4 dermatology module BVetMed year 5 elective teaching BVetMed year 4/5 clinical rotation teaching BVetMed skin strand teaching BVetMed skin strand leader BVetMed Year 3 / 4 leader
Dr	Carlos	Hermosilla	Y	-	Parasitology Teaching on Principles of Science and Skin Strands
Professor	Colin	Howard	N	-	Occasional lectures on business development and entrepreneurship; virus diseases; bioterrorism.
Ms	Karen	Humm	Y	Y	ECC Teaching on ECC rotation
Dr	John	Hutchinson	N	-	Evolution and Biomechanics
Dr	Brendan	Jackson	N	-	DLs in Biometry

Dr	Sonja	Jeckel	Y	Y	Teaching of IMR students in post mortem room Organising the farm animal diagnostic pathology elective week Lecturing in elective weeks Lectures in urogenital and public health module
Ms	Angeles	Jimenez Lozano	Y	Y	Teaching in the Principle Clinical Sciences for the third year veterinary students Leader for the Electives Module for the last year veterinary students 2010
Miss	Imogen	Johns	Y	Y	Teaching on: Lymphoreticular and Haemopoietic System; Alimentary System; Urogenital System; Principles of Clinical Science; Respiratory System; Cardiovascular System Electives – Equine Medicine; Equine Reproduction
Dr	Sharon	Kendall	N	-	Gateway to BVetMed: Pathogens, Disease and Immunity
Mr	Patrick	Kenny	Y	Y	Neurology elective module leader and contribute to the BVetMed 3 neurology module and clinical rotation teaching
Dr	Muhammad	Khalid	Y	-	Farm Animal Reproduction Teaching on Alimentary Strand; Farm Animal rotation; Reproduction module
Dr	Karin	Klinglmair	Y	Y	Animal Husbandry
Dr	Pilar	Lafuente	Y	Y	Small Animal Orthopaedic Surgery Small Animal Surgery rotation
Mr	Christopher	Lamb	Y	Y	Diagnostic Imaging BVetMed Yr 1. lectures in professional studies module BVetMed Yr 3. lectures in principles of science module BVetMed Yr 5. Joint responsibility for teaching during small animal radiology IMR; contributor to imaging elective.
Miss	Alison	Langridge	N		Instruction in clinical skills
Professor	Lance	Lanyon	Y	Y	Not currently assigned
Dr	Ana	Lara Garcia	Y	Y	Oncology Teaching for the third year BVetMed (Principles of Science) Teaching of final year students during the Oncology clinical rotation (2 days of the SAMS rotation)
Dr	Rachel	Lawrence	N	-	Module leader, Gateway course: Pathogens, Immunity and Disease 3rd Yr BVetMed (Parasitology)
Dr	Charlotte	Lawson	N	-	Gateway course: Homeostasis, Cell Communication; Gateway Course Director; Deputy Strand Leader for Cardiovascular and Respiratory
Dr	Karla	Lee	Y	Y	Small Animal Surgery
Professor	Peter	Lees	N	N	Pharmacology

Ms	Victoria	Lipscomb	Y	Y	Lectures in BVetMed 4th Year: Lymphoreticular & Haemopoietic Module Skin Module BVetMed 5th Year Small Animal Surgery Elective (Module leader): BVetMed 5th Year Dermatology Elective: surgery Teaching on Soft Tissue Surgery Rotation
Professor	David	Lloyd	Y	Y	Clinical teaching -Dermatology (Skin Module and rotations in QMHA), years 4 & 5, covering small animals, horses, farm animals; -Skin Module -QMHA rotations:
Dr	Anette	Loeffler	Y	Y	Clinical dermatology teaching in SAMS rotations Yr5 Dermatology module Yr4 Skin strand Yr2 PMVPH strand Yr3 Elective teaching (dermatology (elective leader), therapeutics, outbreaks/epidemiology)
Miss	Noelia	Lopez	Y	Y	Laboratory Animal Medicine and handling
Dr	Virginia	Luis Fuentes	Y	Y	Small Animal Cardiology Cardiology Elective Leader Teaching on Cardiology Elective
Ms	Rachel	Lumbis	-	-	Providing instruction in practical skills
Dr	Raymond	Macharia	Y	-	Neurology Integrated structure and function (ISF) Involved in supervising and teaching practical dissection classes in all other taught modules in BVetMed. 1st and 2nd year.
Dr	Jill	Maddison	Y	Y	Assistance with teaching in Principles stream of new curriculum, PMVPH stream of old curriculum. Elective teaching to final year (small animal medicine, therapeutics)
Mr	Paul	Mahoney	Y	Y	EMS Co-ordinator
Dr	Panagiotis	Mantis	Y	Y	Diagnostic Imaging Respiratory module Clinical radiology rotation Small Animal Elective Alimentary module
Professor	Stephen	May	Y	Y	BVetMed Year 3 - Professionalism and ethics BVetMed Year 5 - Elective in Equine Diagnostic Imaging
Dr	Imelda	McGonnell	N	-	1st year : Developmental Biology
Professor	Declan	McKeever	Y	Y	Lectures in parasitology, immunology 3rd Year
Professor	Quintin	McKellar	Y	Y	Elective Leader for the Small Animal and Large Animal Therapeutics Electives
Miss	Lucy	McMahon	Y	Y	3rd year gastrointestinal strand teaching 4th year Haemopoietic/lymphoreticular module
Ms	Jane	McNae	Y	Y	Not currently assigned
Dr	Nicola	Menzies-Gow	Y	Y	Contributions to: Cardiorespiratory strand 4th year Principles strand 3rd year Alimentary strand 4th years Endocrine module 4th years Lectures and practicals on equine medicine, equine diagnostic imaging and large animal therapeutics elective weeks Teaching final year students on equine medicine IMR
Dr	Yukari	Miyake	Y	Y	Anaesthesia
Dr	Jean-Philippe	Mocho	y	Y	Laboratory Animal Medicine and handling

Dr	Abir	Mukherjee	N	-	BVetMed1 Animal Cloning PDP Tutor BVetMed1 and 2
Miss	Donya	Najman	Y	Y	Clinical rotation teaching
Dr	Amanda	Nevel	Y	Y	Pig reproduction; pig respiratory; VPH; communication skills; electives; Pathology IMR
Dr	Stijn	Niessen	Y	Y	Small Animal Internal Medicine
Dr	Robert	Noad	N	-	Molecular Virology
Ms	Louise	Ogundere	Y	Y	Director of the BAH Rotation
Ms	Hilary	Orpet	N	-	Animal husbandry 1st yr; OSCE examiner
Dr	Donald	Palmer	N	-	Immunology; BVetMed tutor for 1st and 2nd students; Deputy Strand Leader for Lymphoreticular & Haemopoietic Strand
Dr	Matthew	Pead	Y	Y	Small Animal Orthopaedic Surgery BVetMed Assessment Leader Teaching on Small Animal Surgery rotation; Locomotor Strand; Small Animal Clinical Studies Elective
Mr	Justin	Perkins	Y	Y	Equine Surgery Equine Medicine and Surgery Rotation Director; Equine Surgery Elective Leader Teaching on Equine Medicine and Surgery Rotation; Equine Surgery Elective
Dr	Thilo	Pfau	N	-	Teaching on BVetMed Introduction Week; Objective gait analysis during Equine Elective week
Professor	Dirk	Pfeiffer	Y	-	Contributions to the VPH rotation
Dr	Richard	Piercy	Y	Y	Large animal neurology lectures, practicals and directed learning sessions in the Neurology and Special Senses Module and exercise physiology and muscle disorders in the Locomotor Module of the BVetMed. G&T programme lecturing. Supervise BVetMed elective projects
Dr	Andrew	Pitsillides	N	-	Year 1 BVetMed: Professional StudiesYear 2 BVetMed: Head Year 3 BVetMed: Wound healingElective teaching: Orthopaedics
Dr	Geoffrey	Pollott	N	-	Genetics Teaching on Principles of Science; Reproduction Elective
Dr	Giordano	Pula	N	-	Lectures in various modules of BVetMed year 2 and Gateway courses. Tutoring for BVetMed year 1 and 2
Miss	Sophie	Pullen	N	-	Year One: Horse husbandry (theory and practical)
Dr	Anne	Ridler	Y	Y	Module leader: Animal husbandry Deputy strand-leader: Population Medicine and Veterinary Public Health Modules/strands contributed to: Population Medicine and Veterinary Public Health strand Reproduction strand Principles strand Locomotor strand Cardio-respiratory strand Urogenital module (BVM4) Population Medicine and Veterinary Public Health module (BVM4) Farm Animal rotations Farm Animal electives
Dr	Jonathan	Rushton	N	-	Animal health economics lectures o Animal Husbandry (Year 1) o Population Medicine and Veterinary Public Health (PMVPH) strand (years 3 and 4) Coordinator and lecturer of PMVPH strand Year 3 week on pre-harvest risks, surveillance and legislation

Dr	Claire	Russell	N	-	BVetMed1 Embryology
Professor	Andrew	Rycroft	N	-	Year 3 Module Leader, Principles of Microbiology; Teacher, Year 3 & 4. Systems modules. Teacher BVetMed Year 1 Principles of Science - Microbiology. Teacher BVetMed Year 2 Principles of Science - Agents of Microbial Infections. Teacher BVetMed G&T Microbiology and Antimicrobial agents.
Ms	Mercedes	Sanchez Garzon	Y	Y	Laboratory Animal Medicine and handling
Professor	Rex	Scaramuzzi	N	-	Reproduction Elective Lecturer and project supervisor
Dr	Sandra	Schoeniger	Y	Y	Pathology Lectures and practicals to 3 and 4th year students
Professor	Cheryl	Scudamore	Y	Y	Toxicologic Pathology
Miss	Ruth	Serlin	Y	Y	Small Animal First Opinion Practice Director of Blue Cross Rotation
Mr	Christopher	Seymour	Y	Y	Anaesthesia Teaching on Principles of Science
Ms	Helen	Shore		-	Communication Skills; Study Skills
Mr	Nick	Short	Y	Y	Deputy Strand Leader for Professional Studies
Dr	Ayona	Silva-Fletcher	Y	-	Not currently assigned
Professor	Josh	Slater	Y	Y	Equine Medicine Equine Medicine and Ambulatory Practice Rotation Director; Equine Medicine Elective Leader Teaching on Equine Medicine Rotation and Elective; Reproduction Module
Professor	Kenneth	Smith	Y	Y	Strand leader for urogenital strand in new curriculum; lectures and practicals on respiratory and gastrointestinal pathology in new and old curricula; supervision of intramural students on pathology rotations; supervision of elective projects in pathology
Professor	Roger	Smith	Y	Y	Equine Surgery Teaching on Equine Diagnostic Imaging Elective; Locomotor Strand; Equine Orthopaedics. Equine Surgery Elective
Dr	Brian	Smyth	Y	Y	BVetMed2 , and Graduate and Transfer (G&T) courses- All General Pathology teaching in 'Principles of Science' and 'Infection and 'Infections and Reponses' strands, respectively. BVetMed2 - deliver Endocrine Pathology in Integrated Endocrine 2 Strand.
Dr	Laia	Solano-Gallego	Y	Y	Intramural rotation: Clinical Pathology. Module leader of small animal infectious diseases elective (starting 2010).
Professor	Katharina	Staerk	Y	Y	Old BVetMed 4th year BVetMed, Population Medicine & Veterinary Public Health module 5th year BVetMed, Farm Animal rotation and electives Elective – International Animal Health – Co-ordinator and lecturer New BVetMed 1st year Graduate and Transfer students, Animal Husbandry module 1st BVetMed and Gateway students, animal Husbandry module 2nd year BVetMed Preventive Medicine & Veterinary Public Health strand 3rd year BVetMed Preventive Medicine & Veterinary Public Health strand
Dr	Nadene	Stapleton	Y	Y	Clinical rotation teaching

Dr	Alun	Stedman	N	-	Animal Husbandry Nutrition
Miss	Anneliese	Stell	Y	Y	Lectures, CALs and DLs on PCS (POS), lymphoreticular (haematopoietic) and endocrine modules Seminars about cancer to final year BVetMed students during internal medicine/oncology rotation and therapeutics elective students Teaching of final year students with patients on internal medicine/oncology rotation Communication skills training for third and fourth year students
Mrs	Kim	Stevens	N	-	Statistics & Study Design 4th Year Module: Population Medicine and Public Health Elective (Epidemiology and Evidence Based Medicine)
Professor	Neil	Stickland	N	-	Lectures, DL and practicals on oral cavity and pharynx, urinary system, skin, GIT and ISF tutorials. Graduate Entry programme: lectures on urinary system
Mr	Graham	Stock	Y	Y	Pathology
Professor	Brian	Summers	Y	Y	Pathology
Dr	Andrew	Sunters	N		1st and 2nd year tutorials; lectures: principles of oncogenesis (3rd) Advanced skeletal pathology-Bone matrix. Gateway: Lecture/DL introduction to cell signalling, aspects of cell signalling.
Dr	Harriet	Syme	Y	Y	Regulation of blood pressure (2nd yr BVetMed, old curriculum). Hypertension (3rd yr BVetMed, old curriculum). Urogenital module (4th yr BVetMed, old & new curriculum) – acute and chronic renal failure, proteinuria, urolithiasis, FLUTD. Rotation teaching (5th yr BVetMed). Diuretics (G&T)
Dr	Balazs	Szladovits	Y	Y	Pathology Lymphoreticular and Haemopoietic Strand and Module Leader Teaching on Alimentary, Lymphoreticular and Haemopoietic, Urogenital, Principles of Science Strands
Dr	Mourad	Tayebi	Y	-	Neuroimmunology Teaching on Principles of Science
Mr	Alan	Taylor	Y	Y	Clinical and tutorial teaching of equine and farm animal anaesthesia Clinical teaching in small animal anaesthesia Elective teaching in anaesthesia
Dr	Christine	Thuranira-McKeever	N	-	Not currently assigned
Dr	Lisa	Thurston	N	-	Reproduction teaching on Introduction to Reproductive Biology (year 1) Urogenital Module Reproduction elective (year 5) Graduate & Transfer Year: Reproduction Module Year 1, Introduction to Reproductive Biology, Course Leader GATEWAY Year: Module Leader on Origin of Life Module
Professor	James	Timmons	N	-	Not currently assigned
Mr	Mickey	Tivers	Y	Y	Clinical rotation teaching
Ms	Jane	Tomlin	Y	Y	Deputy EMS Co-ordinator
Mr	Jason	Tupper	Y	Y	Clinical rotation teaching
Miss	Anna	Turk	Y	Y	Clinical rotation teaching
Dr	Steven	Van Winden	Y	Y	Population Medicine: 3rd, 4th and 5th year On farm training of students in rotations

Mrs	Anita	Varga	Y	Y	Main teaching is for final year students in internal medicine and surgery. Includes hands-on experience, case management and husbandry of farm animals. Also involved in the administration of case scenarios, directive learning sessions and practical sessions for mainly 3rd year students
Dr	Kristien	Verheyen	Y	Y	Farm Animal Rotations tutor Evidence-based Veterinary Medicine module (Professional Skills strand)
Dr	Isobel	Vincent	N	-	Lectures/practical demonstrations, covering such subjects as animal welfare/behaviour/handling, clinical and Day 1 skills.
Dr	Holger	Volk	Y	Y	Year 3 PRS3 CAL Examples of EBM in practice Module leader for BVetMed Nervous System and Special Senses Neurology clinical rotation coordinator Strand leader in Neurology Contributions to o NSSS module o Therapeutic elective o Neurology Clinical rotation
Miss	Gemma	Walmsley	Y	Y	Clinical Rotation teaching
Mr	Michael	Waters	Y	Y	Special Species Exotics Elective Leader Teaching on Principles of Science and Urogenital Strands; Exotics Elective
Professor	Christopher	Wathes	N	-	Y1 farm animal welfare and its assessmentY3/4 veterinary ethics - laboratory and farm animalsY4/5 animal welfare and veterinary ethics electivesY4/5 elective research projects in animal welfare and husbandry
Professor	Dorothy Claire	Wathes	N	-	2nd Year reproduction and thermoregulation lectures and practicals/DLs 2nd Year Integrated concepts Didactic Elective on Farm Animal Reproduction Gateway – contribute to module on Developmental Biology BVetMed Graduate year, contribute to reproduction module
Dr	Renate	Weller	Y	Y	Integrated Structure and Function tutorials Locomotor module: Diagnostic Imaging Alimentary module: Equine Dentistry Professional studies module 5th year, equine diagnostic imaging elective 5th year, orthopaedic elective 5th year, rotation teaching, radiology seminars
Mrs	Perdita	Welsh	N	-	Inter professional education (year 5); year 2 and 4 communications
Professor	Dirk	Werling	Y	Y	Not currently assigned
Professor	Caroline	Wheeler-Jones	N	-	Vascular Cell Biology Teaching on Cardiovascular & Respiratory Strand; Principles of Science
Miss	Claire	Whitehead	Y	Y	Camelids Teaching on Alimentary and Lymphoreticular & Haemopoietic Strands, Camelid Elective, Farm Animal Rotation
Miss	Lucy	Whitfield	Y	Y	Laboratory Animal Medicine and handling
Mr	Kim	Whittlestone	Y	Y	Communication skills tutor
Dr	Barbara	Wieland	Y	-	5th year elective: Outbreak Investigation Teaching on Farm Animal Rotation
Dr	Scott	Wildman	N	-	Integrated Structure and Function

Professor	Alan	Wilson	Y	Y	Biomechanics Teaching on BVetMed Introduction Week
Dr	Thomas	Witte	Y	Y	Equine rotation teaching; Equine Surgery Elective
Mr	Paul	Wood	Y	Y	Farm Animal Practice; BVetMed 3rd, 4th and 5th year, Rotation teaching and Elective teaching
Ms	Angela	Wright	N	-	Lectures, seminars and practical sessions on farm animal welfare. Primary focus on pig welfare and on-farm welfare assessment.
Ms	Belinda	Yamagishi	N	-	Leader of Communication Skills teaching; Study Skills

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Annex 3 – Timetable for the visit

Sunday 21 February to Friday 26 February 2010

Visitation timetable

	Meeting or Event	Staff involved to include:
Sunday 21 February 14.00	Visitors' meeting at Hotel	

Monday 22 February at the Camden Campus

Monday 22 Feb **08.45 – 10.00**	Organisation; Finances; Facilities & Equipment	All SMG members: Mrs Elaine Acaster, *Assistant Principal (Academic Support & Development) and Secretary to the Council* Professor Dan Brockman, *Head of Department, Veterinary Clinical Sciences* Professor David Church, *Vice Principal – Academic and Clinical Affairs* Mr Ian Darker, *Director of Human Resources* Mr Andrew Dyer, *Director of Finance* Professor Jonathan Elliott, *Vice Principal - Research* Professor Colin Howard, *Vice Principal – International and Strategic Development* Professor Stephen May, *Deputy Principal and Vice Principal - Teaching* Professor Declan McKeever, *Head of Department, Pathology and Infectious Diseases* Professor Quintin McKellar, *Principal*: Mr Ian Mehrtens, *Assistant Principal – Operations and Director of Estates* Mr Graham Milligan, *Director of Clinical Services* Professor Neil Stickland, *Head of Department, Veterinary Basic Sciences*
Monday 10.00 – 13.00	Tour of Camden (Day 1)	2 parallel groups of Visitors
Monday 13.00 – 14.00	Buffet lunch with students BVetMed Years 0, 1 and 2, and Graduate Entry	Visitors & students only
Monday 14.15 - 15.45	Teaching & Learning & Assessment, and Teaching Quality	Professor Adrian Boswood, *Course Director* Dr Brian Catchpole, *Teaching Coordinator for Pathology & Infectious Diseases* Mr John Fishwick, *Senior Clinical Tutor* Dr Nigel Goode, *Year 1 Leader* Dr Anke Hendricks, *Year 3 Leader* Mr Chris Lamb, *Chair of BVetMed Finals* Professor Stephen May, *Chair, Learning, Teaching & Assessment Committee* Dr Matthew Pead, *BVetMed Assessment Leader* Dr Andrew Pitsillides, *Chair, Teaching Quality Committee* Mrs Eve Pomerantz, *QA Manager* Professor Katharina Staerk, *Professor of Veterinary Public Health*

Monday 16.00 - 17.00	Admission & Enrolment; Student Welfare and Support	Mr Simon Beale, *Student Welfare & Financial Guidance Officer* Dr Julie Clark, *Academic Registrar* Ms Celia Cockburn, *Disability Officer* Mr John Fishwick, *Senior Clinical Tutor* Dr Nigel Goode, *Admissions Tutor* Ms Lisa Isaacs, *Counsellor* Ms Margaret Kilyon, *Head of Admissions* Mr Vincent King, *Corporate Health & Safety Manager* Ms Fiona Nouri, *Student Support Manager* Mr Jon Parry, *Head of Widening Participation* Ms Helen Shore, *Learning Support Officer* Rev Pippa Turner *College Chaplain* Ms Belinda Yamagishi, *Learning Support Manager*
Monday 17.00 – 18.00	Visitors' Private Meeting at Camden	
19.00	Visitors meeting at hotel	

Tuesday 23 February at the Hawkshead Campus

Tuesday 08.30 - 09.00	Meeting with Deputy Principal	
Tuesday 09.00 - 13.00	Tour of Hawkshead (Day 2)	2 parallel groups of Visitors
Tuesday 13.00 - 14.00	Buffet lunch with students BVetMed Years 3 (new curriculum), 4 and 5 (old curriculum)	Visitors & students only
Tuesday 14.00 - 15.00	IMR + Clinical Facilities	***Rotation Directors***: Professor Brian Aldridge, *Farm Animal* Mrs Louise Allum, *Small Animal General* Dr Hatim Alibhai, *Anaesthesia* Dr Ross Bond, *Small Animal Specials* Mr David Connolly, *Small Animal Medicine* Dr Sandra Corr, *Small Animal Surgery* Dr Karla Lee, *Small Animal Surgery* Mr Justin Perkins, *Equine Surgery* Professor Josh Slater, *Equine Medicine & Practice* Professor Ken Smith, *Pathology* Dr Brian Smyth, *Pathology* Dr Oliver Garden, *Phase 3 Committee Chair* Mr John Fishwick, *Senior Clinical Tutor* Professor David Church, *Vice Principal – Academic & Clinical Affairs*, *Director & Assistant Director of CSD:* Mr Graham Milligan Ms Sian Griffith
Tuesday 15.15 - 16.00	Library & Learning Resources	Mrs Elaine Acaster, *Assistant Principal, Academic Support & Development* Mrs Sally Burton, *Customer Services Manager, LISD* Mr Farukh Butt, *Networks & Systems Manager* Mr Brian Cox, *Multimedia Developer* Mr Simon Jackson, *Head of Library & Information Services Division* Mr Dan Messum, *Helpdesk Manager* Ms Bev Panto, *BVetMed Graduate working in e-Media* Mrs Sonya Powney, *Learning Resources Developer* Mrs Sarah Sherman, *VLE Manager* Mr Nick Short, *Head of e-Media*

		Mr Chris Trace, *BVetMed Graduate working in e-Media* Mr Kim Whittlestone, *Senior Lecturer in LIVE*
Tuesday 16.00 - 17.00	EMS	Dr Silvia Alonso, *Lecturer in Veterinary Public Health* Professor David Church, *Vice Principal – Academic & Clinical Affairs* Dr Julie Clark, *Academic Registrar* Dr Vicki Dale, *Lecturer in Veterinary Education* Mr John Fishwick, *Senior Clinical Tutor* Mrs Wendy Griffin, *Registry Administrative Manager* Mr Paul Mahoney, *Director of EMS* Dr Alun Stedman, *AHEMS Academic Lead* Ms Jane Tomlin, *Assistant Director of EMS* Mrs Carole Weightman, *EMS Placement Advisor* Mr Kim Whittlestone, *Senior Lecturer in LIVE*
Tuesday evening 18.30 for 19.00	Dinner with SMG and senior professors	Visitors, SMG & senior staff

Wednesday 24 February at the Hawkshead Campus

Wednesday 08.30 - 09.00	Meeting with Deputy Principal	
Wednesday 09.00 - 10.00	Professional Studies	Dr Javier Guitian, *Strand Leader* Professor Stephen May, *Vice Principal - Teaching* Mr Nick Short, *Deputy Strand Leader* *Strand teachers:* Dr Sarah Baillie Dr Jim Gazzard Professor Colette Henry Rev Pippa Turner Professor Katharina Stärk Professor Sue Gregory Mr Martin Whiting Mrs Belinda Yamagishi
Wednesday 10.15 - 11.45	Systems Strands	Systems Strand Leaders and/or Deputies: Dr Robert Abayasekara, *Urogenital, Endocrine* Dr Karin Allenspach, *Alimentary* Professor Adrian Boswood, *CVR* Dr Harriet Brooks, *Skin* Professor David Church, *Endocrine* Dr Sandra Corr, *Locomotor* Dr Nigel Goode, *Alimentary* Dr Anke Hendricks, *Skin* Dr Charlotte Lawson, *CVR* Dr Donald Palmer, *Lymphoreticular & Haemopoietic* Professor Ken Smith, *Urogenital* Dr Balazs Szladovits, *Lymphoreticular & Haemopoietic* Dr Mourad Tayebi, *Neurology* Dr Holger Volk, *Neurology*
Wednesday 12.00 - 13.00	Principles of Science	Dr Stephen Baines, *Senior Lecturer in Surgery* Dr Brian Catchpole*, Senior Lecturer in Immunology* Dr Dan Chan, *Lecturer in ECC and Clinical Nutrition* Professor Peter Chantler, *Professor of Veterinary Molecular and Cellular Biology* Dr Mandi de Mestre, *Lecturer in Veterinary Basic Sciences* Dr Kerstin Erles, *Lecturer in Veterinary Virology* Dr Nigel Goode, *Senior Lecturer in Biochemistry* Dr Mark Fox, *Senior Lecturer in Veterinary Parasitology*

		Professor Andrew Rycroft, *Professor of Clinical and Veterinary Microbiology* Dr Chris Seymour, *Senior Lecturer in Anaesthesia*
Wednesday 13.00 - 14.00	Buffet lunch with students: Clinical Training Scholars	Visitors & students only
Wednesday 14.15 - 15.15	Tour of Boltons Park Farm	Prof. Rehage, Prof. Nesbakken, D.Black, F. Andrews
Wednesday 14.15 - 15.15	Electives and Research Projects	Dr Robert Abayasekara, *Undergraduate Research Champion* Professor Adrian Boswood, *Course Director* Dr Oliver Garden, *Phase 3 Chair* Dr Anne Ridler, *Animal Husbandry* Elective Course Directors: • Dr David Brodbelt, *Epidemiology* • Dr Jim Gazzard, *Business & Enterprise* • Dr Pete Mantis, *Small Animal* • Mr Michael Waters, *Exotics & Wildlife* • Professor Claire Wathes, *Reproduction*
Wednesday 15.30 - 16.45	PMVPH Population medicine and veterinary public health	Professor Brian Aldridge, *Professor of Production Animal Medicine* Dr Silvia Alonso, *Lecturer in Veterinary Public Health* Professor David Church, *Vice Principal – Academic & Clinical Affairs* Mr John Fishwick*, Senior Lecturer in Dairy Herd Medicine* Professor Neville Gregory, *Professor of Animal Welfare Physiology* Dr Muhammad Khalid, *Senior Lecturer in Animal Reproduction* Dr Mandy Nevel, *Veterinary Investigation Officer* Dr Anne Ridler, *Lecturer in Flock Health Medicine* Dr Jonathan Rushton, *Senior Lecturer in Animal Health Economics* Professor Katharina Stärk, *Professor of Veterinary Public Health* Dr Alun Stedman, *Lecturer in Nutrition* Dr Steven van Winden, *Lecturer in Production Animal Medicine* Professor Christopher Wathes, *Professor of Animal Welfare*
Wednesday 17.30	Meet alumni, employers and EMS providers	Visitors, alumni & employers
18.30 onwards	Visitors' meeting and dinner at the hotel	

Thursday 25 February at the Hawkshead Campus

Thursday 08.30 - 09.00	Meeting with Deputy Principal	
Thursday 08.30 - 14.30	Visit to Northpoint & Westpoint –	Visitors: David Black & Juergen Rehage
Thursday 08.30 - 11.30	Visit to Blue Cross	Visitors: Prof. Ed Hall, Prof. R Rose
	Visit to abattoir	Visitors: Prof. Truls Nesbakken, Mrs F Andrews

Thursday 09.00 - 10.00	Research & Postgraduate Education	Professor Jonathan Elliott, *Vice Principal for Research* Selected MSc & MVetMed Course Directors: Dr Richard Piercy *(MVetMed)* Mr Michael Waters *(MSc Wild Animal Health)* Professor Fiona Cunningham *(Head of the Graduate School)* Miss Anne Sidney *(Graduate School Administrator)* *Research Group Leaders:* Professor Katharina Stärk Professor Caroline Wheeler-Jones *Directors of CTS programmes:* • Miss Sophie Adamantos • Professor Josh Slater • Professor Ken Smith • Miss Claire Whitehead
Thursday 10.15 - 11.15	CPD (including CertAVP)	Miss Rachel Hackett, *CPD Manager* Dr Jill Maddison, *Director of CPD* Professor Stephen May, *Vice Principal - Teaching* Dr Matthew Pead, *Assessment Leader* Mr Tim Potter, *Farm Animal CPD teacher* Mr Hans-Jörg Kuller Rabaca, *CertAVP Admin Manager* Mr Nick Short, *Head of e-media*
Thursday 13.00 - 14.00	Buffet lunch with Research Students	Visitors & students only
Thursday 14.00 - 14.30	Confidential meetings (time available for staff/students to meet Visitors confidentially if required)	
Thursday 14.30 - 17.00	Visitors' private meeting, including review of examination material.	
17.30	Visitors' meeting and dinner at Hotel	

Friday 26 February, Hawkshead

09.00 - 09.30	Final meeting with Principal and Deputy	Professor Quintin McKellar Professor Stephen May

University response

The Royal Veterinary College

Formal Comments and Observations

on the

Report of the RCVS and EAEVE Visitation, February 2010

The Royal Veterinary College (RVC) read with interest the report of the Visitors from the Royal College of Veterinary Surgeons (RCVS) and the European Association of Establishments for Veterinary Education (EAEVE).

The College welcomes such visitations since it considers them an essential means of benchmarking itself against the highest standards of international excellence. Further, the advice that the Visitors provide is often extremely valuable.

The College is grateful for the care taken by the Visitors in their visitation of February 2010 and is pleased to note their conclusion that its undergraduate veterinary degree meets the requirements to continue to be recognised by the Order of the Privy Council of the UK.

The College appreciates the visitors' acknowledgement of the College's significant progress since the previous visitation in 2000. In particular the College welcomes the commendations, in paragraph 17, of many aspects of the College, covering the full range of its activities, including:

- the governance structure
- the robust financial model
- developments in physical facilities
- the library facilities and learning resources including LIVE and e-learning
- improvements in animal husbandry
- the enthusiasm of farm staff
- the imaginative and entrepreneurial approach to food animal provision
- the Gateway and widening participation programmes
- the quality of the academic staff
- the enthusiasm and devotion of all students
- the performance and accessibility of the Academic Registry and welfare services
- initiatives such as "You said…we did"
- the Colleges performance and commitment to research
- the strength of the CPD programme and the leadership in the RCVS CertAVP

Comments on the Recommendations

Whilst appreciative of these acknowledgements of good practice the College realises that the report includes some legitimate criticism. These areas are being addressed systematically and thoroughly. The Report has a series of recommendations, some of fundamental significance, others relating to matters of detail. We are treating them all with the seriousness deserving of a report on the continuing fitness for purpose of a registrable degree. Our response to the Report's specific recommendations is as follows:

Recommendation 1

"The specific learning objectives and timetables for Years 4 and 5 of the new curriculum must be agreed as a matter of urgency and communicated to students."

At the time of the visit, these were at an advanced stage. They have now been finalised and made available to the students concerned.

Recommendation 2

"The Visitors recommend as a matter of priority that the status of farm animal clinical resources within RVC are reviewed and consideration is given to the following:

i. upgrading the large animal clinical areas at Hawkshead
ii. formalisation of the joint venture partnership with signed and enforceable agreements in place which meet the RCVS requirements for distributed clinical training
iii. a contingency plan in the event of any breakdown in relationship with external providers of core placements
iv. clarification for all involved that these activities are part of core curriculum and treated as such
v. staff involved with teaching students at these facilities are trained in teaching and assessment techniques, or are closely supervised by a senior member of staff at RVC who has been so trained, in line with RCVS requirements for distributive clinical training
vi. feedback, recording and monitoring of tasks at these centres is maintained with intervention levels identified."

i. Having carried out major re-developments of small animal and equine clinical facilities in the last five years, we are currently investing £25k in improvements to the building that provides farm animal clinical accommodation on-site. This will significantly improve the facilities to create a flexible large animal and camelid examination handling and hospitalisation space that can also be used for animal handling exercises.

ii. The process of formalising the agreement with the Joint Venture Practice (JVP) is in progress and it is anticipated will be completed shortly. The previous agreement needed to be reviewed in view of the changing levels of activities at the JVP at Sevenoaks and the RVC's Farm Animal Hospital at Hawkshead. As this has necessitated changes in the numbers of hours worked and hence remuneration as described in the 2010 version of RCVS's guidelines for off-campus distributed learning sites, further discussions have been required.

iii. The external providers for Farm Animal core placements are the Joint Venture Practice with the Westpoint Group at Sevenoaks; classrooms at Coleg Sir Gar, Carmarthen, supporting the Welsh Regional Veterinary Centre; and the abattoir placement with the University of Bristol. The contingency plans for these are as follows:

a) clinical experience at the JVP and Sevenoaks practice: the College is opening a new Farm Animal practice in Dorset in 2010/2011 which will provide an alternate source of individual animal clinical training which could be used in the unlikely event of a breakdown in the current arrangement provided by the JVP and Westpoint. We plan to have this operational in time for the start of the new tracking rotations. Additionally, the increasing clinical caseload being seen by the FA hospital at Hawkshead (a doubling of the caseload over the last 12 months) will mean there is substantially greater potential experience provided on the Hawkshead site. This will be further enhanced by the planned expansion of the activities at the College Farm.

b) classrooms and offices at Coleg Sir Gar: the Welsh Regional Veterinary Centre's activities have developed to such an extent that the major farm-based activities are carried out on a range of farms in the region. Consequently, the principal resource currently provided by Coleg Sir Gar is classroom accommodation for a maximum of ten undergraduates. If this became unavailable we would provide alternative facilities through renting either privately provided facilities or, more likely, facilities provided by another regional educational institution.

c) abattoir placement with the University of Bristol: this activity will begin in February 2011. If this initiative were to break down, the RVC has identified a number of abattoirs which would happily take our students on the scheduled basis being provided by Bristol. The additional cost of this is unlikely to be substantially greater than the current resources being utilised for this initiative.

iv. Staff (of both the RVC and its collaborating partners) and students should be fully aware that Farm Animal clinical activities are part of the core curriculum. This will be reinforced at appropriate opportunities.

v. The vast majority of staff involved in teaching at these external facilities are either current academic staff or honorary lecturers of the RVC, or current faculty of the University of Bristol. As such all will participate in continuing professional development in a range of disciplines including undergraduate and postgraduate education. It has been agreed that training in teaching and assessment will be a continuing requirement for all staff involved in the various centres regardless of whether they are members of the RVC or the University of Bristol, or staff employed by our external partners.

Additionally, at the JVP locations in Chelmsford and Sevenoaks, and at Coleg Sir Gar, the RVC has provided all resources required for access to the RVC's VLE and all library resources which are thus available to not only our undergraduate students but also to staff involved in teaching at these sites.

vi. All matters related to student activities including grading as well as formal and informal feedback on their performance are carried out in the same fashion and with the same guidelines

and requirements as on all other intramural rotations. Individual grades and written feedback are provided via the VLE at the end of each rotation block and students are given the opportunity to provide anonymised written feedback on their experiences on each rotation. These comments are circulated to the rotation director for distribution to all involved in teaching on the rotation, as well as to the Chair and Deputy Chair of the Teaching Quality Committee and the VP for Academic and Clinical Affairs. Comments are reviewed monthly and utilised in the continuous process of improving the educational experience on each rotation and addressing any problems. All of this material is recorded on the RVC's VLE and is thus available for review and analysis to ensure that summative feedback to students is delivered in an effective, constructive and timely fashion.

Recommendation 3

"The College should ensure that there is a more structured and formal appraisal of the curriculum content to eliminate gaps and overlaps."

The process of designing the new curriculum was predicated on ensuring that all content considered essential was included in the core, and that there was no unnecessary duplication, whilst accepting that some repetition is necessary as a means of reinforcing key concepts, and that students will understand some topics more effectively if they learn about them from more than one perspective. Content will continue to be appraised through the well-structured (and tested) annual process of Strand Review and Year Leaders' Annual Reports. We also intend to use the cohort-wide reporting tool in the Day One Skills log book to identify whether there are areas of the curriculum where students are struggling to achieve competence, so that we can adjust the curriculum accordingly.

Recommendation 4

"The College should emphasise the learning objectives for abattoir placements, whether these are undertaken as EMS or as a core rotation. Students and EMS placement supervisors should be reminded of the importance of the recently produced GVS/BMPA guidance "Getting experience in the food sector: Meat production & processing" setting out learning objectives and protocols for training in meat plants."

From February 2011, the abattoir EMS placement will be replaced by a more structured intramural rotation undertaken at Langford abattoir in collaboration with the University of Bristol Veterinary School. This development has been agreed and contracts have been signed. Learning objectives for the week have been published and are in line with the GVS/BMPA guidance "Getting experience in the food sector: Meat production & processing". Students will undertake this part of the course in groups.

Recommendation 5

"The College should ensure that students have the opportunity to access various husbandry systems within the curriculum and encourage this further during IMR and EMS."

Students currently have access to various husbandry systems at the College Farm at Boltons Park. Working with the management of the Farm, we are committed to making it a learning resource supporting the breadth of the curriculum from animal husbandry to clinical medicine. This is supplemented through experiences on IMR and EMS. It is impractical to expose the students to every economically viable husbandry system, but they are instructed in those they will routinely encounter in practice, and taught to understand the principles of husbandry systems such that they will be able to critically appraise any system.

Recommendation 6

"The College should ensure that students who wish to gain additional knowledge in pigs and/or poultry have that opportunity within electives and EMS."

As part of the newly designed tracking rotations, students with an interest in pigs and poultry will be able to gain additional knowledge on these species. There will also be additional didactic coverage within taught electives.

Recommendation 7

"The College should ensure through mapping that all the EAEVE required topics for animal production are being covered in the new curriculum, including animal behaviour, and that these take account not only of food producing animals, but also major non-food animals such as the cat and dog."

This mapping has not been conducted yet.

Recommendation 8

"The College should ensure that the curriculum adequately covers the Principles of Certification."

This is a topic in the Professional Studies Strand in Year Four of the new curriculum.

Recommendation 9

"The College should review the feedback mechanisms for directed learning sessions to ensure that formative feedback is provided to students promptly and consistently."

As detailed in our response to Recommendation 12 below, the College recognises the importance of effective formative feedback from all learning experiences. Directed learning sessions will be included in our plans for improved feedback.

Recommendation 10

"Some structured teaching should be introduced during the Northpoint and Westpoint IMRs."

As we explained to the Visitors, there is already some structured teaching during the Northpoint/Westpoint rotation. We would not wish to extend this further, since the primary purpose of the rotation is experiential learning. The more time spent on structured didactic teaching the less time available for active participation in the JVP's actual clinical activities and daily routines.

Recommendation 11

"In the absence of alternative intra-mural provision for students to see first opinion small animal cases, the placements at the Blue Cross Animal Hospital and at the PDSA should be structured in such a way that they meet RCVS's requirements for off-campus distributed teaching."

We consider that there is appropriate intra-mural provision in first opinion small animal cases for all students, through the two-week intramural rotation undertaken by all students at the Beaumont Sainsbury Animals Hospital.

Recommendation 12

"The College should review and improve arrangements for providing feedback to students on their progress in order to encourage effective learning."

The College has undertaken a thorough review of feedback arrangements, leading to a detailed report that was delivered in 2008/2009 and followed by a workshop attended by nearly 100 staff. Since then we have been identifying the most effective means of implementing the report's findings. In particular, we recognise the importance of ensuring that students appreciate when they are being given feedback on rotations, and ensuring that they reflect upon it and use it to improve their performance.

Recommendation 13

"The College should ensure that all individuals involved in the assessment of students are appropriately trained in assessment, and ensure that the explicit policy on managing potential conflicts of interest is promulgated and consistently applied."

There are two quite separate issues here. In respect of training, all new academic staff are required to complete an induction course which includes instruction in assessment theory and practice. In the past, new staff have attended this course at either King's College, London or the University of Bedfordshire. From September 2010 they are attending the RVC's Postgraduate Certificate in Veterinary Education, accredited by the Higher Education Academy. In-service training in assessment is also an integral part of the College's CPD scheme for academic staff, and forms the focus of the annual Examiners' Forum. However, we recognise that some non-academic staff who serve as Assistant Examiners have received only informal instruction in their roles. We will identify where there are training gaps, and ensure that they are filled.

In respect of conflicts of interest, we recognise that this can apply to a variety of contexts, not only the specific circumstances of concern to the Visitors. This is covered by a number of policies, but we have

no comprehensive policy covering all aspects of the issue, and relating to staff, students, research students and clinical training scholars. Given the potential ramifications, this must be handled carefully.

In light of the report, the College is reviewing its current policies and procedures on conflicts of interest, and considering the most appropriate way of addressing the concerns raised. This will include consultation with relevant parties, including the trade unions, and a review of best practice elsewhere in the sector. Our aim is to introduce a comprehensive policy (or series of policies if more appropriate) before the end of 2010/11. This would be supported by appropriate briefing via the induction process, and training for those most directly affected, including PhD supervisors.

Recommendation 14

"The College should review the standardisation of grading in rotations in order that students have full confidence in the system, including ensuring that all those responsible for assessing students during rotations are adequately trained in assessment."

All rotations are graded according to the same standardised criteria, and we need to ensure that the students appreciate that this is the case. Therefore, we feel that this recommendation is referring more to the quality of the process rather than the standards, with two areas being questioned: communication to students and staff training. We are again reviewing the rotation grading system, accepting the possibility that a simpler, more clearly communicated system may generate more confidence among the students. As noted above, we will ensure that all academic and non-academic staff are given appropriate training in assessment of rotation performance.

Recommendation 15

"The College should develop rigorous systems to monitor and improve the consistency, effectiveness and 'reach' of the tutorial and student support services, particularly as these affect pastoral care."

Tutorials

After a thorough review of the tutorial system and associated structures in early 2009, the College is already engaged in a process to ensure there is a common 'safety net' of tutorial support across all of our taught courses. This is being steadily rolled out under the guidance of Senior Tutors at each campus each with their team of Assistant Senior Tutors. There have been associated staff development sessions for those involved. For the BVetMed course in particular, this is being rolled out with the new curriculum as it flows through the years.

This has been accompanied by a more rigorous approach to the monitoring and improvement of tutorial activity. Each term we have monitored the occurrence of tutorials to begin to ensure more consistency of contact. This summer we are analysing the first annual common format student evaluation of the tutorial systems in our courses. This specifically addresses the students' perception of tutors' ability to help them with non-academic matters by onward referral to specialist services, as well as their general approachability, and the value of the content of the actual tutorials. It is possible to indentify the evaluation of individual tutors from this survey. From this we can feed back to individual tutors and pick up any training needs for groups or individuals, and inform the development of the tutorial system.

The Assistant and Senior Tutor teams have interaction with key members of Student Support and annual, informal but important, updating events are planned so that the two teams work hand in hand.

Tutors are of course available by phone and email when students are off site.

Support Services

In terms of student support services we are aware that the monitoring of the services by Student Support Committee on a service-by-service basis has served us well in the past but needs re-focusing to see the services from a course perspective which is closer to the students' experience of the services.

As a result we have recently proposed that the evaluation is coupled more closely with student evaluation and that the Committee looks at service use and evaluation on a course by course basis. We hope this will enhance student engagement with the process of evaluation and suggestions for improvement.

We are pleased to have recently won some project funding to develop web-based money advice for students; this will increase the reach of this part of the service. Money advice is being integrated into the curriculum through the Professional Studies strand of the new curriculum.

The Academic Registry has recently undergone a partial re-structure. As a result we have moved extra resource into Student Support in the form of an existing strong and capable member of Registry staff. This staff member will have responsibility for improving the on-line support for students which should improve the 'reach' when off-site through the use of her existing administrative strengths. She has also received much training in detailed student support matters and will be our Student Support 'first port of call' person at Hawkshead. This gives us consistent day to day cover at both campuses for this level of advice.

Recommendation 16

"The College should ensure that student welfare and support services also extend to external sites where core teaching is taking place."

The improvements underway for web-based information will improve the reach of advice from these services. Of course staff are always contactable by email and telephone. Much initial advice can be given by telephone. It is not feasible to have staff present at external sites.

Recommendation 17

"The farm animal clinical facilities at Hawkshead need upgrading and this must be addressed."

We are currently investing £25k in improvements to the building that provides farm animal clinical accommodation on site and this will significantly improve the facilities. Please see also response to 2 (i) above.

Recommendation 18

"The planned refurbishment of the Beaumont Animals' Hospital should be expedited to improve the environment."

As explained at the time of the visit, the comprehensive £1.3 million refurbishment of the Beaumont Sainsbury Animals' Hospital has been underway since early April and will be completed by the early Autumn. The refurbishment includes attention to all clinical areas in terms of maintenance, decoration, equipment and facilities, as well as the student rest area/seminar room, which is now equipped with large screen display and internet access to facilitate webinars etc. Major improvements have been made to imaging, piped gases, wards, isolation facilities, theatres and nurses' residential accommodation, and a separate dental procedures room has been established.

Recommendation 19

"The College should ensure that facilities for teaching topographical anatomy are improved as part of the upgrade of Camden's facilities."

The £300k project to provide new and enhanced anatomy facilities in Camden is at an advanced stage and will be completed for the start of the new academic year in September.

Recommendation 20

"The College should ensure that it continues to monitor carefully the case load available to, and experienced by students as part of their learning, in terms of species and degree of complexity (first opinion versus referral). Care will be required to ensure that EAEVE ratios are maintained within accepted guidelines."

The College provides first opinion small animal exposure through the Beaumont Sainsbury Animal Hospital, the Emergency service of the QMHA, the Blue Cross and the PDSA. Equine first opinion exposure is via the RVC Equine Ambulatory Practice and the Farm exposure is via the Joint Venture Practice with Westpoint. We currently track the caseload according to the standard format set out by EAEVE/RCVS, and the Heads of Veterinary Clinical Sciences and the Clinical Services Division will continue to cross-check the experience provided by the RVC and its partners against EAEVE ratios.

Recommendation 21

"The College should ensure that all students are exposed to adequate companion animal first opinion case material. If the PDSA and Blue Cross placements are seen as being the primary means of providing core first opinion training for students, then the College must ensure that their status as intra-mural rotations is clarified, rather than seeking to change them to EMS placements."

The College's considered view is that BVetMed students are exposed to "adequate companion animal first opinion case material" via the range of clinical experiences listed in response to Recommendation 21 above. The second part of this recommendation reflects misunderstanding about the current and

future status of specific off-site rotations. The Blue Cross rotation is currently an intramural rotation, under the direct control of a member of RVC academic staff based at the practice. In the new curriculum it will become an EMS rotation, the status currently enjoyed by the PDSA placement. The clinical experience, the levels of responsibility afforded the students, and the standards of performance demanded, will be the same whether these are classed as IMR or EMS, and students will be unable to graduate unless they complete them satisfactorily.

Recommendation 22

"The College should develop a system to allow students (with tutor guidance where appropriate) to identify learning objectives for each EMS placement, which should be communicated to the EMS practice. During clinical EMS these could be mapped to Day One Skills."

It has been agreed that of the six planned tutor sessions per year for students in the clinical years, EMS has been allocated 3 structured whole tutor group discussions in addition to any drop-in individual discussions that will take place between the tutor and tutee. The Autumn Term meeting is the introductory meeting where students can discuss their AHEMS reports; there is also the opportunity to discuss identifying and booking suitable EMS placements, and the EMS guidelines (the students will have been given their introductory EMS lecture and have access to the EMS Guidelines by this stage). The Spring Term meeting is specifically designed to discuss learning objectives, SWOT analysis and the Day One Skills (as per the iEMS weeks this year). The Summer Term meeting is to discuss feedback and the students' experience on their Easter EMS placements, so that strategies can be developed for making the most of the Summer placements.

We have recently implemented a system whereby students are advised to develop a list of learning objectives in advance of each placement through reference to their Day One Skills booklet and discussion with their tutor, and convey these objectives to the EMS practice supervisor in advance of each placement via an introductory letter. This system was introduced for the current year 3 students and we will be assessing the uptake and benefit of this at the end of their Summer EMS period.

Recommendation 23

"The College should review the format of animal husbandry/pre-clinical EMS reports to ensure they capture student experiences as distinct from factual records about the farming enterprise."

The students do comment on their learning experience via the Placement Summary Reports outline in the AHEMS Handbook. However, we recognise that, despite changes we have made in recent years, some students still tend to submit "over-factual" reports rather than reflective accounts of what they have learnt from their animal husbandry experiences. We will again review the format of the Animal Husbandry report, taking into account good practice elsewhere.

Recommendation 24

"The College should introduce log books or other recording systems for EMS to enable students to record and reflect on their learning during EMS. Improve the accuracy of tracking systems so that the time spent with different species is recorded."

We are currently pursuing these related issues through a range of initiatives and developments. As noted above (Recommendation 23) we are developing an on-line log book facility through VetConnect, and this is already at an advanced pilot stage. Simultaneously, we are developing our EMS booking and recording information system, which will result in improved tracking of students' EMS experience.

Recommendation 25

"The College should develop a more robust system of feedback to students which is less reliant on individual tutor nuances. It is particularly important to identify students who are having negative or sub-optimal experiences on EMS placements."

Our current system relies on each tutor to provide the feedback to their tutees. This is the most appropriate format for this. We are, however, aware that there are variations in the quality of feedback to students following EMS placements. This will be addressed in part by the roll-out of the academic tutorial system in the new curriculum, and by gathering systematic feedback on the tutorial system, including the performance of individual tutors, as described in the response to Recommendation 15 above. We will also continue to have a "safety net" whereby the staff in the Academic Registry view all feedback en route to the tutors, and any "problem" feedback is flagged up to the Director or Deputy Director of EMS, who are available to talk to any the student who is experiencing sub-optimal placements, and to follow this up with the practice concerned where appropriate. Where there are notable difficulties, the Administration will trigger a meeting with the Student Progress Committee.

Recommendation 26

"Arrangements for intramural rotations that take place off campus, such as time spent at The Blue Cross, should be strengthened to come into line with RCVS's requirements for distributed training sites. If such a placements were designated as EMS, however, then alternative arrangements would be needed 'in-house' to provide students with core training in small animal clinical skills."

We do not agree that the current arrangements at the Blue Cross, where students are supervised by a full-time member of RVC staff, and are assessed according to the same criteria as any other intramural rotation, fail to meet the RCVS's requirements for distributed training sites. In the new curriculum the Blue Cross rotation will no longer be classed as IMR. We do not, however, agree that there will be any need to make "alternative arrangements" for core training in small animal clinical skills, since all students will continue to experience nine weeks of compulsory Small Animal intramural rotations, including two weeks at the Beaumont Sainsbury Animal Hospital.

Additional Comments

A number of comments elsewhere in the Report indicate that the College made itself insufficiently clear both at the time of the visitation and in response to the requests for scrutiny for factual accuracy. The following fall into this category:

Para. 70 comments “A reduction in applications from international students would also constitute a risk to continued sustainability.”

A reduction in the enrolment of international students would inevitably reduce the College’s income, but would not endanger its sustainability. The College was a thriving and successful institution prior to the relatively recent increase in international student numbers, and would continue to be so even if these numbers fell.

Para. 125 comments: “With regard to the facilities at Hawkshead, there appeared to be confusion as to proper or accepted biosecurity protocols amongst senior staff.”

We have followed up this comment, given its seriousness. It reflects uncertainty on the part of one staff member under the stressful circumstances of a high profile visit. We are now satisfied that senior staff are fully aware of the correct biosecurity protocols.

Para. 141 comments: *“Feedback received during the visit from students and alumni suggested that the student experience in Wales is highly variable, ranging from excellent to unacceptable.”*

We have reviewed the data upon which this feedback was based. Whilst the student experience was variable in the early days of the WRVC rotation, we are confident that the improvements made since then, and described to the Visitors, have addressed this issue.

Para. 262 comments: “The teaching of topographical anatomy involves the use of facilities that are no longer adequate for a modern veterinary school.”

Although the building is not modern, we do not judge that the facilities for teaching topographical anatomy are inadequate. We are refurbishing and adding a part mezzanine floor in the dissection room which will be an improvement and enable more material to be on display. We also have a modern museum and, since May 2010, the extension into the south lightwell.

Cover image: Photograph of stained glass window in reception at the RCVS, Belgravia House

Royal College of Veterinary Surgeons Belgravia House 62-64 Horseferry Road London SW1P 2AF
T 020 7222 2001 **F** 020 7222 2004 **E** education@rcvs.org.uk **www.rcvs.org.uk**