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Visitation to the University of Nottingham 27 November – 1 December 2017

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RCVS SETTING VETERINARY STANDARDS

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Report to the Council of the Royal College of Veterinary Surgeons (RCVS) in accordance with Section 5 of the Veterinary Surgeons Act 1966

Contents

List of Visitors

Ms Amanda Boag MA VetMB DipACVIM DipACVECC DipECVECC FHEA MRCVS (RCVS Chair)

Professor Marina Spinu DVM PhD (EAEVE Coordinator)

Professor Edward Hall MA VetMB PhD DipECVIM-CA MRCVS (RCVS)

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Dr Frederick McKeating BVMS FRCVS (RCVS)

Professor Gaspar Ros BSc(Vet) BVSc PhD (EAEVE)

Mr Anil Turer (EAEVE Student representative)

Mrs Joanne Oultram BVSc CertCHP DBR MRCVS (RCVS Observer)

Also present

Mr Jordan Nicholls (RCVS Staff)
Mrs Britta Crawford (RCVS Staff observing on Monday 27 November)
Mr Duncan Ash (RCVS Staff observing on Tuesday 28 November)

Summary of findings

Standard 1 - Organisation

Suggestions

1. The translation of the School's strategic plan into a functional and widely understood Operating plan merits review. It is suggested the Operating plan has clear and detailed cascading objectives, accountability and timelines.
2. The School should consider the broader involvement of alumni and other external stakeholders in the School's decision-making processes.

Recommendations

3. In terms of risk mitigation and long term planning of clinical rotations, it is recommended that a structured process be put in place for an annual review meeting with the Clinical Associates. Alongside review of the clinical teaching, this should include, but not necessarily be limited to, evaluation of caseload trends, the physical facility and the financial health and ongoing business planning of these partners.

Standard 2 – Finances

Suggestions

1. Consideration should be given to providing a budget allocation in future for building maintenance to ensure the infrastructure and facilities of Clinical Associates will continue to support the mission and objectives of the School.
2. Discussions on the business development plans of the Clinical Associates should be a routine part of the annual review to ensure the robustness of the clinical training model is maintained and enhanced.
3. With the increased student numbers driving income, the School should ensure expenditure is directed appropriately to maintain the student experience.
4. Considering the recent establishment of the four Strategic Research Areas, the opportunities available within the University in terms of interdisciplinary co-operation, human resources and infrastructure should be leveraged to increase the numbers of successful research grant applications.
5. We encourage the University to maintain the School's current forecast absolute level of financial contribution in recognition of the unique nature of the veterinary programme.

Standard 3 – Facilities and equipment

Suggestions

1. Although teaching facilities in the School have been expanded to support the increase in student numbers there are only two lecture theatres available to accommodate the increased class size. The University should be encouraged to increase lecture hall facilities.
2. Staff office and research space should be kept under review.
3. The School should encourage the Clinical Associates to maintain comfortable and uncluttered facilities.

Recommendations

4. The School must ensure that all of its Clinical Associate partners maintain a clinical working environment that enables best practice, which includes appropriate isolation facilities and timely resolution of any material damage to flooring and furniture.

Standard 4 – Animal resources

Commendation

1. The School is commended for successfully implementing a Community Based Teaching Model.

Suggestions

2. Consequent to the increasing year size, the adequacy of animal resources should be kept under close review.

Standard 5 – Information resources

Commendation

1. The School and University are to be commended on their innovative and student-focussed approach to teaching content accessibility via their on-line learning platform.

Standard 6 – Students

Suggestions

1. The School should improve the range of clinical residency programmes and invest in clinical supervisors.
2. The School should establish a programme to develop a broader and more international orientation among students, and challenge students to look further than the present strong focus on a career in practice.
3. The School should continue to advocate the importance of diversity among staff and students. To increase ethnic diversity in the student population the School could explore further different initiatives aimed at encouraging applicants with different religious and racial backgrounds to overcome some of the cultural inhibitions which may reduce their interest in veterinary medicine as a career.

Standard 7 – Admission and progression

Suggestions

1. The School should investigate and address factors limiting application and admission of individuals from ethnic and non-English speaking backgrounds.

Standard 8 – Academic and support staff

Suggestions

1. The School should progress recruitment of academic staff to ensure core disciplines have expert academic leadership and expertise.
2. Processes to enable the development and progression of technician and administrative staff will enable the School to retain them and advance their careers.
3. It is positive to note that all staff have had training in unconscious bias and the School is encouraged to ensure lessons learnt from this training are implemented.

Standard 9 – Curriculum

Commendations

1. The School has an ethos where student learning and personal and professional development are of prime importance, with clear evidence of staff engagement with the School's teaching and learning philosophy.
2. The opportunity to review the basic sciences taught in Years 1 and 2 during the teaching of clinical disciplines in Year 4 reinforces student learning.
3. The Self-Directed learning activities in small groups promote co-operative working and embed Life-long Learning skills in students.
4. The curriculum mapping software is a powerful tool, and its integration with the students' Virtual Learning Environment (Moodle) allows them to see how the intended learning outcomes map to the Day One Competences.
5. The organisation of EMS and the support and feedback offered to students is excellent.

Suggestions

6. The School should implement the planned conversion of compulsory Emergency/Out of Hours EMS to an assessed rotation
7. The School should encourage students to consider a broad range of career options as opposed to having a focus on a career in clinical practice. The School should consider introducing non-clinical rotations and/ or tracking or elective rotations for students interested in these fields.

Standard 10 – Assessment

Commendation

1. In many areas the development and implementation of modern, innovative assessment methods can be considered best practice and exemplars for other veterinary educational establishments.
2. Bespoke eAssessment software (Rogo) provides a secure method of providing online assessments with appropriate statistical tools for analysis of student and question performance.

Suggestions

3. Sampling of key practical skills through DOPS, in general, provides an adequate means of assessing practical skills. However, assessing the physical examination of a single organ system cannot assess a students' ability to conduct a full clinical examination in all species. Whilst formative feedback on this skill is likely to be provided during clinical rotations, the School should consider methods of assessing the complete examination of both small and large animals.
4. Explicit indirect assessment of students' clinical competence, in addition to professionalism should occur in final year clinical settings.

Standard 11 – Research programmes, continuing and higher degree education

Commendation

1. The School is commended for the financial support for the student third year projects and congratulated on the high proportion of these that progress to abstract presentation and publication.

Suggestions

2. Considering the Strategic Research Areas have only just been implemented, it is suggested that a structured programme of review with clear expectations and measures of success is put in place at the earliest possible opportunity.
3. One Virology is the clearest example of One Health research and the School is encouraged to explore other One Health opportunities
4. The School should formalise access to clinical case records for research purposes.

Standard 12 – Outcomes assessment

Suggestions

1. The School should engage staff with review and alignment of the School action plans, operating plans, mission and goals.
2. The School should implement increased explicit indirect measures to evaluate students' clinical competence.

Standard 1 – Organisation

1.1 The school must develop and follow its mission statement which must, as a minimum, embrace all the accreditation standards.

1.2 The school must have a strategic plan and an operating plan.

1.3 An accredited school of veterinary medicine must be a part of an institution of higher learning accredited by an organisation recognised for that purpose by its country's government. A school may be accredited only when it is a major academic administrative division of the parent institution and is afforded the same recognition, status, and autonomy as other professional schools in that institution.

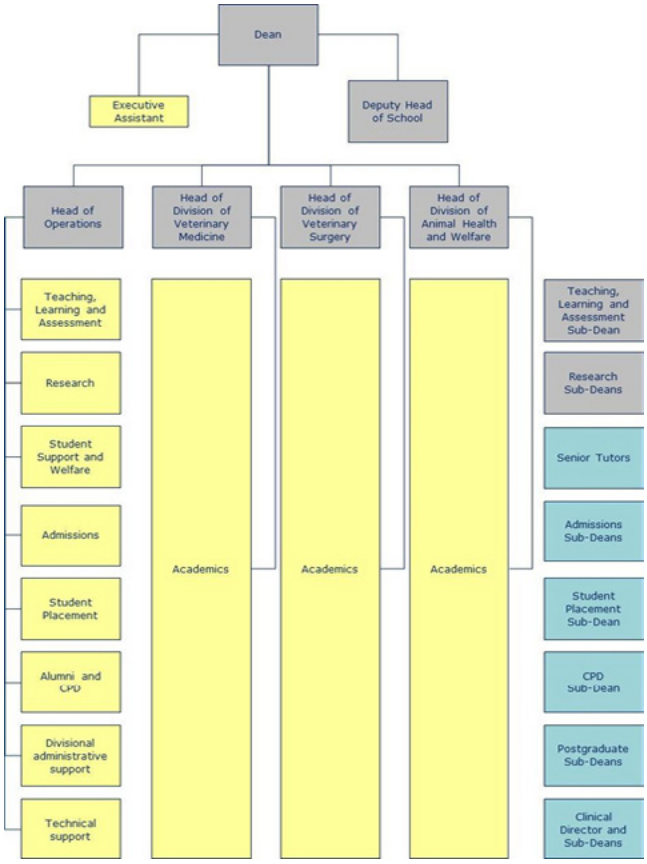
1.4 The head of school or dean must be a veterinarian and must have control of the budget for the veterinary programme. There must be a veterinary surgeon(s) responsible for the professional, ethical, and academic affairs of the veterinary medical teaching hospital(s)/clinic(s).

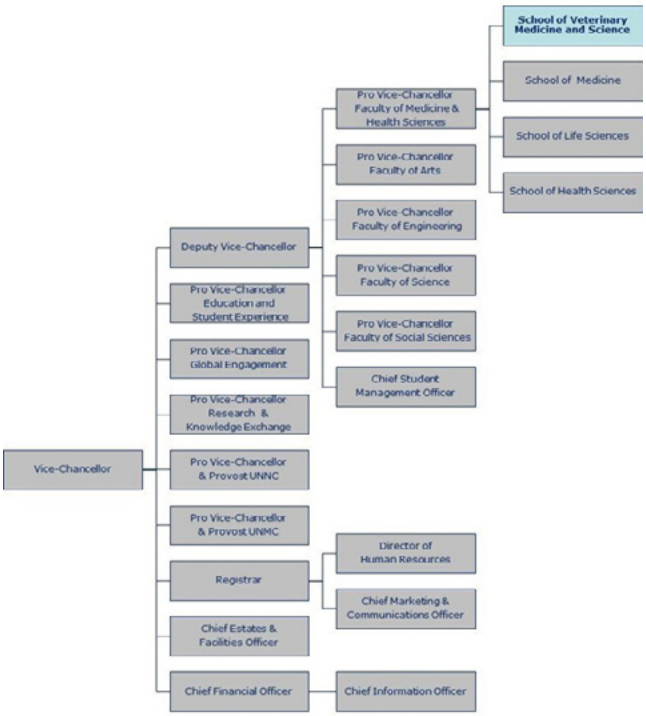
1.5 There must be sufficient administrative staff to adequately manage the affairs of the school as appropriate to the enrolment and operation.

1.6 The school must provide evidence that it manages concerns about, or risks to, the quality of any aspect of the veterinary programme.

Background

1. The School of Veterinary Medicine and Science is part of the University of Nottingham and was established in 2006. The School is part of the Faculty of Medicine and Health Sciences, which also comprises the School of Medicine, the School of Health Sciences and the School of Life Sciences. It has the same recognition, status and autonomy as other University Schools. The veterinary programme is owned and operated entirely by the School, with some aspects of the curriculum taught and overseen by academics in a community-based model within partner Clinical Associate organisations.
2. The School's mission is to enhance society by carrying out research to tackle key issues in fundamental science, animal health and global sustainability. The School aims to educate veterinary surgeons to enable them to have a broad impact on animal health and welfare and to public health, and to contribute significantly to the veterinary profession as a whole.
3. The Dean of School, Deputy Head of School, Clinical Director and Teaching, Learning and Assessment Sub-Dean are all qualified veterinary surgeons and members of the RCVS.
4. Two main bodies are involved in the governance of the University, the Council and the Senate, which include representatives from staff and students. The day-to-day management of the University is the responsibility of University Executive Board (UEB). The primary decision-making Committees are the weekly Faculty Executive (of which the Dean is a member along with other School Heads, the Faculty Pro-Vice-Chancellor, Faculty Associate Pro-Vice-Chancellor for Education and Student Experience, Faculty Associate Pro-Vice-Chancellor for Research, Faculty Finance Manager) and monthly Faculty Board (membership as per Executive together with Head of Operations for all schools, Faculty Associate PVC for Equality, Diversity and Inclusion, Faculty Global Engagement Lead and Faculty HR Manager). A number of University Committees provide strategic oversight and governance; these Committees have either Faculty or cross-University representation from academic Schools.
5. The University allows Faculties significant freedom to run their operations as they see fit and as directed by the Faculty Pro-Vice-Chancellor. The University budget model assigns budget based on an assumed contribution level which relates to the costs within a School. Future budget is therefore a function of student fee income, Higher Education Funding Council England (HEFCE) grants, research margin and services margin. All income associated with clinical work by staff, Residents or Interns is retained by the Clinical Associate.
6. The School is led by the Dean of School, a veterinary surgeon, who is fully responsible for the strategic direction, quality management and operational and financial performance of the School. The School is organised into three Academic Divisions (Divisions of Veterinary Medicine, Veterinary Surgery and Animal Health and Welfare) and an Administrative Division, which primarily act to provide a line management structure (Figure 1). A number of Sub-Deans have been appointed to provide strategic input into discrete functional activities; these are supported by an administrative team or individual, normally in the School, although for Postgraduates and Student Welfare these staff are part of central Student Services.





Clinical Associates

7. In order that students encounter the most appropriate primary care, as well as second and tertiary caseload, and acquire true 'Day One' clinical competences, SVMS has developed a community-based teaching model, in which teaching is delivered at a number of Clinical Associates. Rotations are overseen by School staff and students are taught by both School and Clinical Associate staff. The School has contractual relationships with nine Clinical Associates :
    - Defence Animal Centre, Melton Mowbray (Equine)
    - Dick White Referrals, Newmarket (Small Animal)
    - Minster Veterinary Practice, Sutton Bonington (Poultry and Farm Animal Pathology)
    - Oakham Veterinary Hospital, Oakham (Equine, Small Animal)
    - PDSA, Derby (Small Animal)
    - PDSA, Nottingham (Small Animal)
    - Pinfold Vets (Small Animal)
    - Scarsdale Veterinary Group, Derby (Equine, Farm Animal, Small Animal)
    - Twycross Zoo (Zoo)

In addition a contract is in negotiation with Bransby Horses.

8. The individual contract varies per Clinical Associate in terms of the financial, resource and staff investment, and also the length of term of the contract. The community-based teaching activities (Intra-Mural Rotations) are planned overall and assigned by the Clinical Director, supported by a senior administrator. The Clinical Director is aided by 3 species leads (Farm, Small Animal and Equine) and by Rotation Leaders, who have responsibility for developing and overseeing the delivery of learning outcomes and the overall organisation and student experience for each rotation.

9. The School has embedded quality within its culture, such that there is a wide recognition of the importance of quality assurance and control and it has become part of normal School operations. Risk is managed explicitly by quarterly review of the School's risk register at a Management Team Meeting; in addition there is quarterly review of both School performance and risk by Faculty Board. Risk associated with normal School operations is managed by Standard Operating Procedures, and Risk Assessments and also implicitly by quality assurance and control.

Comments

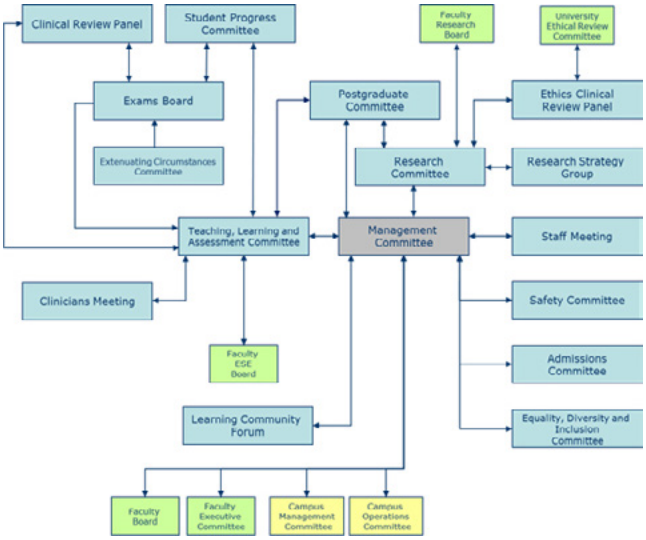
10. The School has a high level of autonomy co-existing

with a good relationship within the Faculty of Medicine and Health Sciences. Of particular note is the strong representation on wider University committees by senior members of School staff.

11. The School's internal committee structure and terms of reference are clear. The staff (both academic and support) show good engagement with key committees and there is strong student representation across a wide range of committees.
12. There are strong and positive relationships with both long standing and newer Clinical Associates. However, effective and comprehensive review processes are not evidenced.
13. Support from administrative staff for students and the programme is good and the support staff have a strong and positive relationship with academic staff.

Suggestions

14. The translation of the School's strategic plan into a functional and widely understood Operating plan merits review. It is suggested the Operating plan has clear and detailed cascading objectives, accountability and timelines.
15. The School should consider the broader involvement of alumni and other external stakeholders in the School's decision-making processes.



Recommendations

16. In terms of risk mitigation and long term planning of clinical rotations, it is recommended that a structured process be put in place for an annual review meeting with the Clinical Associates. Alongside review of the clinical teaching, this should include, but not necessarily be limited to, evaluation of caseload trends, the physical facility and the financial health and ongoing business planning of these partners.

Standard 2 – Finances

2.1 Finances must be demonstrably adequate to sustain the educational programmes and the requirements for the school to meet its mission.

2.2 Schools with other veterinary-related professional and non-professional (eg. veterinary nursing, animal science) undergraduate degree programmes must clearly report finances (expenditures and revenues) specific to those programmes separately from finances (expenditures and revenues) dedicated to all other educational programmes.

2.3 Resources allocation must be regularly reviewed to ensure it meets the requirements for accreditation of the professional veterinary degree.

2.4 Clinical services, field services, and teaching hospitals must function as instructional resources. Instructional integrity of these resources must take priority over financial self-sufficiency of clinical services operations. Clinics must be run as efficiently as possible, for example with transparent business plans, in order to set an example of good business practice for students.

AVBC requirement – The school and university must provide reasonable evidence to AVBC that finances to sustain the veterinary programme are secure for the next 7 years.

Sufficient funds must be allocated for the acquisition and maintenance of buildings and equipment.

Background

17. The University returns a surplus year on year whilst investing in new teaching and learning technology, research priority areas, developing new partnerships and implementing new processes and systems. The University returned an EBITDA of £39m on a turnover of £635m in 2015/16, with capital investment of £101m, including the new £40m Sports village.
18. The University allows Faculties significant freedom to run their operations as they see fit and as directed by the Faculty Pro-Vice-Chancellor (PVC). A proportion of the income generated by each Faculty is directed to supporting the running costs of the institution, such as for libraries, Information Systems, Professional Services (Student Services, External Relations, Finance, HR). The percentage each Faculty and individual component School contributes is based on the costs of delivery within each Faculty, in a 'Contribution Based Budgeting' model; this targets each School to deliver a percentage of their income (where Research Margin and Services Margin is classed as income – not the gross income / costs of research). It also recognises the different sources of funding available to each Faculty (for example tuition fees, educational grants, research income, CPD).
19. The budget model incentivises Faculties to broaden their income base, as this gives them more control over how resources are spent. The School has the lowest University target contribution rate of 31.5% (after School costs, but before central charges; thus the School retains 68.5% of income). It is not possible, with the exception of funds associated with some research grants or services rendered projects, to retain any income or budget between years. The budget assigned to the School is required to support all operational costs incurred directly by the School, with the exception of central functions which are provided for from contribution, i.e. the School budget covers pay, consumables, school funded research and equipment but not, for example, IT services, library, sports centre, registry.
20. Budget for all aspects of the School's operations (except for research grants) is administered and flexibly managed centrally in the School by the Head of Operations, and allocated, with discussion with Dean of School, to individual project budgets on a yearly basis, based on prior year spend levels together with forecast future spend, including spend required on any replacement, maintenance or planned procurement of new equipment or buildings. Budgets are locally directed and utilised as required within the relevant budget envelope, by, for example, technical staff for consumables, the Research Manager for school-funded research, with procurement supported by a campus Finance Team. Research projects are funded as per the funder's commitment and are managed by the Principal Investigator.
21. The School has a Management Accountant who compiles monthly reports with oversight by a Faculty Finance Manager. Non-pay spend over £5,000, outwith normal expected operations (for example a request for a new piece of equipment), is reviewed and considered by the Management Team. Equipment over £30,000 is capitalised. The management accountant and Head of Operations discuss capital requirements as required; the

Table 2.1: Annual expenditure for the last 5 years					
Area of expenditure £	**2016/17**	**2015/16**	**2014/15**	**2013/14**	**2012/13**
a. Personnel					
a.1 teaching staff	6,345,987	6,079,961	5,766,056	5,251,467	4,841,096
a.2 support staff	1,317,881	1,381,825	1,370,875	1,182,466	1,230,534
a.3 research staff	598,110	982,561	806,348	732,511	700,666
Total for a	**8,261,978**	**8,444,347**	**7,943,279**	**7,166,444**	**6,772,296**
b. Operating costs					
b.1 utilities	334,220	327,667	332,000	331,667	331,333
b.2 expenditure relating to teaching	1,471,468	1,212,297	1,333,374	1,450,767	1,372,670
b.3 expenditure relating to research	1,787,865	1,831,142	1,807,885	1,781,564	1,975,882
b.4 expenditure related to services	173,000	179,604	244,043	172,533	143,813
b.5 general operations	468,753	309,420	433,623	413,676	266,543
Total for b	**4,235,306**	**3,860,130**	**4,150,925**	**4,150,207**	**4,090,241**
c. Equipment					
c.1 teaching	146,789	281,244	266,515	125,155	248,095
c.2 research	120,417	122,610	111,802	130,462	100,703
c.3 general (or common) equipment	100,524	131,692	165,208	59,939	80,057
Total for c	**367,730**	**535,546**	**543,525**	**315,556**	**428,855**
d. Maintenance of buildings	257,323	275,908	260,177	350,899	241,219
e. Other central charges	3,737,247	3,747,732	3,740,800	3,428,332	3,130,866
f. Total expenditure	**16,859,584**	**16,863,663**	**16,638,706**	**15,411,438**	**14,663,477**

level of capitalised equipment in the School has historically been small as the School has expensed items within yearly budgets.

22. The Dean and Head of Operations discuss the School's financial performance and plans quarterly with the Faculty PVC, and are able to make the case for additional spend in relation to any increased income, in line with the target contribution. The School is able to secure 50% contribution on small building developments from University Estates for projects up to £500,000. In addition there is a central University Strategic Development Fund process for usefunding new research or educational ideas (e.g. the School was successful in gaining £492,000 funding to establish the Advanced Data Analysis Centre).

Expenditure

23. The largest proportion of costs is pay at 49% of budget; teaching personnel costs have grown over time as the School has recruited academic and clinical staff to support teaching increased student numbers. Support staff costs have reduced in 2016/17 due to the transfer of 2.0FTE to central University Student Services. Personnel costs for research staff have fluctuated in response to levels of research income.
24. Utilities costs are incurred by the University on behalf of the School. Until 2014/15 the School was assigned central overhead charges, which includes utilities charges; these are £332,000 in 2014/15; for comparison, the same figure (inflated) is included in 2015/16 and 2016/17.
25. Expenditure for teaching has fluctuated but in general increased steadily with the exception of 2015/16 when additional budget was assigned towards clinical teaching staff in order to recruit staff and procure resources ahead of a larger number of year 5 students entering rotations the subsequent year. Teaching costs also include widening participation scholarship costs (£479,152 in 2016/17) and costs for farm Residents and zoo DVetMed students.
26. Expenditure for research includes both expenditure by the School, to support academics, for example, with pump prime support, strategic research (£141,690 in 2016/17) and postgraduate costs (£717,175) and also costs associated with externally funded research project delivery (£826,000) and donations (£103,000).
27. Expenditure for services has fluctuated in relation to services income, with the exception of 2014/15 where some of extra expenditure relates to writing off obsolete shop stock.
28. General operations costs remain at fluctuating levels, and represent costs for items such as photocopying, conference costs and general unspecified costs. The

Table 2.2: Projected future expenditure for the next 5 years					
Area of expenditure £	**2017/18**	**2018/19**	**2019/20**	**2021/22**	**2022/23**
a. Personnel					
a.1 teaching staff	6,667,264	6,970,201	7,331,363	7,524,422	7,674,911
a.2 support staff	1,510,766	1,560,456	1,591,665	1,623,499	1,655,969
a.3 research staff	661,909	678,298	695,093	712,305	729,945
Total for a	**8,839,939**	**9,208,955**	**9,618,122**	**9,860,227**	**10,060,824**
b. Operating costs					
b.1 utilities	340,904	347,722	354,677	361,770	369,006
b.2 expenditure relating to teaching	1,418,311	1,567,944	1,711,905	1,924,925	2,094,800
b.3 expenditure relating to research	1,859,278	1,881,871	1,961,396	1,992,258	2,072,057
b.4 expenditure related to services	184,496	188,517	192,757	196,843	203,323
b.5 general operations	496,195	496,304	529,695	533,899	566,912
Total for b	**4,299,185**	**4,482,359**	**4,750,430**	**5,009,695**	**5,306,099**
c. Equipment					
c.1 teaching	140,000	195,665	205,191	195,520	204,829
c.2 research	105,000	101,749	108,893	109,140	116,122
c.3 general (or common) equipment	50,000	48,452	51,854	51,972	55,296
Total for c	**295,000**	**345,866**	**365,938**	**356,632**	**376,248**
d.Maintenance of buildings	263,089	268,540	274,211	280,002	285,917
e.Other central charges	3,726,553	3,715,644	3,704,517	3,693,167	3,681,591
f.Total expenditure	**17,423,765**	**18,021,364**	**18,713,217**	**19,199,723**	**19,710,678**

increase in 2016/17 represents a new Faculty charge for overheads of £154,944.

29. Teaching equipment costs have risen over time to support resources for increased year sizes; an apparent dip in 2016/17 is overstated as a further £36,000 was capitalised. Research equipment costs have been held steady, with replacement and new expenditure as required; in 2016/17 a further £79,000 was capitalised. General equipment cost levels vary and peak in 2014/15 when the School purchased 2 further vehicles.
30. The School budgets for a small level of building maintenance costs but the majority is provided for by the University Estates department (previously as part of a central charge until 2014/15 and included, inflated in years thereafter)
31. The School has invested considerably in Clinical Associate teaching establishments, as it does not own a teaching hospital. To allow comparison expenditure (historical and future) associated with year 5 teaching and caring for teaching animals, data have been extracted from relevant cost categories in Tables 2.1 and 2.2 and are shown in Tables 2.3 and 2.4.
32. Support staff costs represent technical time associated with looking after the Schools teaching animals. Teaching staff represent costs for clinicians. No costs for maintenance of buildings or equipment is assumed as this is paid for by Clinical Associates. Costs of consumable items etc are variable; within this category are costs paid to Clinical Associates. This may include costs where at certain times, for example during recruitment hiatuses a fee in lieu of placement of School staff may be made to the Clinical Associate; this accounts for the majority of fluctuation in this cost category, with other costs representing costs associated with consumables, rotation travel and clinical postgraduates with teaching responsibilities.
33. Table 2.5 shows the annual cost of teaching a veterinary student with and without the inclusion of student-related central charges. There has been a slight overall reduction in costs over time as the cost base has been stretched with increased student numbers.

Revenues

34. Tables 2.6 and 2.7 show historical and planned revenues. The majority of the School's income is from State Funding Council grants for teaching and research and from student fees.

Revenue from the State

35. The revenue for the teaching of Home and EU (HEU)

Table 2.3: Sources of expenditure for the veterinary teaching hospitals for the last 5 years					
Costs	**2016/17**	**2015/16**	**2014/15**	**2013/14**	**2012/13**
1. Salaries for support staff	7,049	6,877	6,709	6,546	6,386
2. Salaries for teaching staff	2,086,156	2,159,254	1,876,785	1,687,845	1,555,950
3. Maintenance of buildings and equipment	0	0	0	0	0
4. Costs of consumable items etc	406,378	154,331	259,150	411,629	489,426
5. Equipment costs and depreciations	52,251	77,535	24,569	19,924	54,476
6. Costs of maintaining teaching animals	50,550	49,512	9,280	47,195	7,475
7. Total costs	**2,602,384**	**2,447,509**	**2,176,493**	**2,173,139**	**2,113,713**

Table 2.4: Projected future expenditure for the veterinary teaching hospitals for the next 5 years					
Costs	**2017/18**	**2018/19**	**2019/20**	**2021/22**	**2022/23**
1. Salaries for support staff	7,331	7,624	7,929	8,246	8,576
2. Salaries for teaching staff	2,359,224	2,406,408	2,676,295	2,729,821	2,784,417
3. Maintenance of buildings and equipment	0	0	0	0	0
4. Costs of consumable items etc	384,629	372,720	398,890	559,796	680,370
5. Equipment costs and depreciations	50,000	48,452	51,854	81,972	85,296
6. Costs of maintaining teaching animals	50,994	52,269	53,575	54,915	56,288
7.Total costs	**2,852,178**	**2,887,473**	**3,188,543**	**3,434,750**	**3,614,947**

Table 2.5: Projected future expenditure for the veterinary teaching hospitals for the next 5 years					
Costs £	**2016/17**	**2015/16**	**2014/15**	**2013/14**	**2012/13**
Annual cost of training a veterinary student (School budget only)	13,511	14,375	14,441	13,954	14,245
Annual cost of training a veterinary student (including student-related central charges)	15,275	16,320	16,444	15,911	16,168

undergraduate students is provided by HEFCE, the Higher Education Funding Council for England. Funds are allocated based on a unit of resource per student FTE according to the price group of the course with additional supplements depending on the level of the course, the intensity of teaching and whether the course is part time or full time. Veterinary science has the highest price group weighting of £10,180 in 2016/17 (£9,804 in 2012/13). As a result of the introduction of UK Government increased fees (see below), HEFCE funding has reduced per undergraduate student.

36. For HEU postgraduate students, HEFCE funding per postgraduate taught student is £11,300 (2016/17). The HEFCE Research Degree Programme grant is distributed according to the number (FTE) of research students for Schools that receive HEFCE Quality-Related Research (QR) funding, multiplied by a subject cost and quality weighting (this is £5,927 per student in 2016/17).

37. The School currently receives research related HEFCE QR funding associated with the grading resulting from the 2014 Research Excellence Framework (REF) assessment (and prior to that from the 2008 Research Assessment Exercise (RAE)). The QR formula has three elements: quality, volume and subject cost relativities. The assessment outcomes associated with quality are shown in the form of a profile detailing the proportion of work which reached each of four quality profiles. These ranged from 4* (world leading) to 1* (nationally recognised). Income up to 2015/16 was a result of the 23 staff submitted to the RAE in 2008; the income increased in 2015/16 as a result of increased numbers (41 staff) submitted for the 2014 REF. HEFCE Funding is also received on the basis of average research income from charities and business for the previous four years of published data. So, for 2017/18, this would be an average of such income in 2012/13, 2013/14, 2014/15 and 2015/16.

Table 2.6: Annual revenue for the last 5 years					
Revenue source £	**2016/17**	**2015/16**	**2014/15**	**2013/14**	**2012/13**
a. Revenue from State					
a.1 UG student related	6,524,302	6,102,094	5,885,000	5,924,000	5,819,000
a.2 PG student related	353,399	379,374	458,000	349,000	279,000
a.3 Research related	1,431,665	1,412,022	1,157,000	1,167,000	1,069,000
b.Revenue from private bodies	**0**	**0**	**0**	**0**	**0**
c. Revenue from research	**1,749,000**	**2,321,785**	**2,092,000**	**2,231,000**	**2,343,000**
d. Revenue earned and retained by the School					
d.1.1 UG student fees (HEU)	5,842,071	4,847,792	4,068,000	3,217,000	2,358,000
d.1.2 UG student fees (overseas)	199,212	352,126	601,000	705,000	691,000
d.1.3 PG student fees (HEU)	214,318	264,372	296,000	230,000	203,000
d.1.1 PG student fees (overseas)	450,533	519,464	470,000	407,000	443,000
d.2 continuing education	141,812	139,303	89,000	52,000	44,000
d.3 clinical activities	0	0	0	0	0
d.4 diagnostic activities	105,084	102,813	87,000	41,000	33,000
e. Revenue from other sources	**195,604**	**182,755**	**279,000**	**350,000**	**264,000**
f. Total revenue from all sources	**17,207,000**	**16,623,901**	**15,482,000**	**14,673,000**	**13,546,000**

Revenue from research

38. All grants are costed (subject to funding body rules) on a full economic cost basis, in order that indirect / overhead costs are recovered from funders. Commercial work is costed at market rates.
39. The trend is fairly stable with minor fluctuations reflecting the way that the start /end of large grants can significantly affect the overall income profile. However, there was a 25% reduction in income in 2016/17 due to a marked fall in awards from UK Research Councils. These are high value and highly competitive. The main reasons suggested for the fall are the:

- Number of applications is down
- Proportion of awards being made by the Biotechnology and Biological Sciences Research Council (BBSRC) to areas in which we conduct research is lower than it has been historically

Revenue earned and retained by the school

40. Tuition fees are charged to all undergraduate and postgraduate students.

- All HEU undergraduate students pay a University fee of £9,000 per year (2016/17 entry). This fee also applies to graduates undertaking the undergraduate programme
- International undergraduate students on the 5-year programme are charged £28,320 per year (2016/17 entry)
- HEU postgraduates on taught programmes pay a fee as per the price of the course, currently this is £4,395 (Veterinary Medicine and Surgery) and £2,075 (Veterinary Education). HEU postgraduates on research programmes pay £4,121 fees
- International postgraduate taught students pay fees of £11,780 (Veterinary Medicine and Surgery) and £2,075 (Veterinary Education). Postgraduate Research students pay fees varying between £19,120 and £35,010 per year dependent on the type of research project

41. The School has increased the cohort size to 160; there are no plans to increase student numbers above this level to ensure that resources are effectively used and the student experience is maximised. International undergraduate student income has decreased through a strategic decision to admit the highest achieving students irrespective of nationality, as experience had shown that international students frequently failed to complete the course due to cultural and academic reasons.
42. Continuing education revenue has increased over time as the School has grown the number of courses offered.
43. Revenue associated with diagnostic activities is from three sources: NUVetNA , the Schools own Pathology diagnostic service and a great crested newt eDNA analysis service.
44. The School receives no income from clinical activities undertaken by School staff; all income associated with clinical activity undertaken by our academics, clinical Residents and Interns remains with the Clinical Associates as part of the contractual relationship. The School receives an income stream from its own Pathology service unit which accepts cases on a pro bono basis from our Clinical Associates but charges all cases from other submitting veterinarians (this revenue is shown in the

Table 2.7: Projected future revenue for the next 5 years					
Revenue source £	**2017/18**	**2018/19**	**2019/20**	**2021/22**	**2022/23**
a. Revenue from State					
a.1 UG student related	6,650,046	7,053,830	7,346,122	7,482,623	7,652,000
a.2 PG student related	329,081	274,669	274,500	274,737	274,737
a.3 Research related	1,362,853	1,362,853	1,362,853	1,362,853	1,362,853
b. Revenue from private bodies					
c. Revenue from research	**2,009,346**	**2,059,579**	**2,111,069**	**2,163,846**	**2,217,942**
d. Revenue earned and retained by the School					
d.1.1 UG student fees (HEU)	6,311,994	6,730,406	7,172,111	7,574,552	7,964,000
d.1.2 UG student fees (overseas)	165,355	198,918	230,524	263,528	301,000
d.1.3 PG student fees (HEU)	237,927	255,648	308,106	322,328	337,375
d.1.1 PG student fees (overseas)	414,998	478,377	573,199	601,854	632,000
d.2 continuing education	152,177	154,979	157,838	160,754	166,046
d.3 clinical activities					
d.4 diagnostic activities	112,764	114,841	116,959	119,120	123,041
e. Revenue from other sources	214,859	219,481	224,208	229,042	235,721
f. Total revenue from all sources	**17,961,400**	**18,903,581**	**19,877,490**	**20,555,235**	**21,266,715**

'Diagnostic Activities' category).

Comments

45. The School finances are sufficient to support adequately the requirements for the School to meet its mission, to achieve its objectives for education, research and services and to facilitate annual investment in priority areas. The Dean has appropriate levels of autonomy.
46. The expenditures and revenues are clearly presented in annual accounts. The financial records undergo monthly reviews and ad hoc reviews whenever needed (e.g., capital costs) to ensure that available resources meet the requirements.
47. The allocation of resources for the upcoming 5 years appears to be realistic and is based on the expenditures of the last 5 years, and includes appropriate increases in staffing levels.
48. The relatively low financial contribution level of the School to the University is noted. The level of this contribution is crucial to the ongoing financial health of the School and its ability to deliver the curriculum.
49. The recent and projected increase in student numbers is the predominant driver of additional income.
50. Although the School has no set capital budget, the increased capitalisation in 2016-17 is noted.
51. The research revenue has decreased over time although the School is making efforts to ensure that funds are available to allow staff to undertake research and to support grant applications.
52. The financial health of the Clinical Associates represents one of the selection criteria used when initiating the relationship but receives minimal attention once the relationship is established.

Suggestions

53. Consideration should be given to providing a budget allocation in future for building maintenance to ensure the infrastructure and facilities of Clinical Associates will continue to support the mission and objectives of the School.
54. Discussions on the business development plans of the Clinical Associates should be a routine part of the annual review to ensure the robustness of the clinical training model is maintained and enhanced.
55. With the increased student numbers driving income, the School should ensure expenditure is directed appropriately to maintain the student experience.
56. Considering the recent establishment of the four Strategic Research Areas, the opportunities available within the University in terms of interdisciplinary co-operation, human resources and infrastructure should be leveraged to increase the numbers of successful research grant applications.
57. We encourage the University to maintain the School's current forecast absolute level of financial contribution in recognition of the unique nature of the veterinary programme.

Recommendations

None

Standard 3 – Facilities and equipment

3.1 All aspects of the physical facilities must provide an environment conducive to learning.

3.2 The veterinary school must have a clear strategy and programme for maintaining and upgrading its buildings and equipment.

3.3 Lecture theatres, teaching laboratories, tutorial rooms, clinical facilities and other teaching spaces must be adequate in number and size, and equipped for the instructional purposes and must be well maintained. Students must have ready access to adequate study, recreation, locker and food services facilities.

3.4 Offices, teaching preparation and research laboratories must be sufficient for the needs of the academic and support staff.

3.5 Facilities must comply with all relevant jurisdictional legislation including health, safety, biosecurity and UK animal welfare and care standards.

3.6 The institutions' livestock facilities, animal housing, core clinical teaching facilities and equipment must:

- be sufficient in capacity
- be of a high standard and well maintained
- be fit for purpose
- promote best husbandry, welfare and management practices
- ensure relevant biosecurity and bio-containment
- be designed to enhance learning.

Clinical teaching facilities

3.7 Core clinical teaching facilities may be provided on campus and/or externally through a 'distributed' model. The school must ensure any hospitals and practices involved with core teaching must meet the relevant RCVS Practice Standards and (for UK schools) be accredited under the RCVS Practice Standards Scheme or to the relevant standard for the teaching undertaken at the establishment.

3.8 All core teaching sites (whether on campus or external) should provide adequate learning spaces including adequate internet access.

3.9 The School must ensure students have access to a broad range of diagnostic and therapeutic facilities, including but not limited to: pharmacy, diagnostic imaging, anaesthesia, clinical pathology, intensive/critical care, surgeries and treatment facilities, ambulatory services and necropsy facilities.

3.10 Operational policies and procedures must be posted for staff, visitors and students.

3.11 Appropriate isolation facilities must be provided to meet the need for the isolation and containment of animals with communicable diseases and operated to provide for animal care in accordance with accepted modern methods for prevention of spread of infectious agents.

Please note particular differences in ESEVT SOP as follows:

4.8. Core clinical teaching facilities must be provided in a VTH with 24/7 emergency services at least for companion animals and equines, where the Establishment can unequivocally demonstrate that standard of education and clinical research are compliant with all ESEVT Standards, e.g. research-based and evidence-based clinical training supervised by academic staff trained to teach and to assess, availability for staff and students of facilities and patients for performing clinical research and relevant QA procedures. For ruminants and pigs, on-call service must be available if emergency services do not exist for those species in a VTH. The Establishment must ensure state-of-the-art standards of teaching clinics which remain comparable with the best available in the private sector.

4.15. The transport of students, live animals, cadavers, materials from animal origin and other teaching materials must be done in agreement with national and EU standards, to ensure the safety of students and staff and to prevent the spread of infectious agents.

Background

58. The School is based at the University's 1,000 acre Sutton Bonington campus, which comprises the School of Biosciences, central teaching and research facilities, the James Cameron-Gifford Library, student residences, music room and sports centre, as well as essential amenities including a restaurant and café.
59. There have been 3 specific and bespoke major buildings developed for the School, together with access to multiple animal and farm facilities and shared teaching and research facilities. Furthermore, through the Clinical Associates the School has access to 9 clinical veterinary establishments.
60. The three-storey Academic Building is the main hub of the School and comprises:
    - 400-seat, 160-seat and 30-seat lecture/seminar spaces with full AV facilities, including lecture capture
    - 30-seat computer room, which can be used flexibly as a seminar room
    - 15 small-group teaching rooms
    - Laboratories and support facilities for virology and microbiology, cell and tissue culture, (immuno) histology, cell and molecular biology, immunology, clinical sample handling and specialist laboratories for transmissible spongiform encephalopathies, gas chromatography and imaging
    - Staff, research fellow, postgraduate and visitor offices, and social space
61. The predominantly single storey Clinical Teaching Building provides:
    - 160-seat dissection room, fully equipped with stainless steel tables, sinks, hydraulic table, extraction system, walk-in freezers and fridges, hoist system and radiograph viewers together with 2 preparation rooms and an adjacent 30-seat cadaver surgery suite
    - 13 small-group teaching rooms, together with a Year 5 hub comprising 2 small-group teaching rooms
    - 40-seat seminar room with AV facilities, electronic whiteboard and videoconference facilities
    - 6 bay / 36-seat Clinical Teaching Lab extensively equipped with examination facilities and clinical equipment including ultrasound, ECG, anaesthetic monitors
    - 40-seat Clinical Skills Centre with equipment including an imitation practice, specialised resources such as a virtual reality rectal simulator (haptic cow), clinical training models and aids as well as clinical diagnostic equipment. 40-seat Surgical Skills Centre containing 12 operating tables
    - Simulated radiography suite, containing decommissioned full size and dental x-ray machines
    - Museum
    - Staff offices
    - Support facilities including 8 walk-in dog and 6 cat kennels, laundry, locker and changing rooms
62. The three storey Gateway Building provides:
    - 120-seat seminar room
    - 120-seat computer room
    - Staff offices
    - Other offices, laboratories and facilities for the School of Biosciences
63. The School also utilises a new 200-seat campus high specification general teaching laboratory.
64. The School has access to the on-site fully licensed abattoir with commercial facilities, e.g. lairage with a number of pens, stunning facility, a scalding tank, an overhead line, slaughter floor and gut room. There are two large cold rooms, and a substantial cutting room and cold store.
65. The School's own Pathology service unit with 3 board certified pathologists and technical support staff is based on the Sutton Bonington campus, adjacent to the University Sports Centre on a 0.5 acre site. These premises were, until recently, used as a surveillance centre by the Animal and Plant Health Authority (APHA). The facility comprises purpose built, state-of-the-art post-mortem rooms with hoists, large hydraulic post mortem tables, class 1 and 2 safety cabinets. The University has invested in upgrading and expanding facilities to include changing facilities including showers, new lairage, large walk-in cold room, staff offices, a student 'common room' with a kitchen and library, and a large seminar room with a 10-headed microscope with live projection onto a wide screen monitor and video conference facilities. The development provides the facility for handling a range of animals including farm species, zoo animals' cats, dogs and horses. The facilities are shared with Poultry Health Services who involve students in interesting cases and teach poultry and large animal necropsies within the pathology rotation.
66. Clinical facilities are based at the Clinical Associate sites, where, dependent on the terms of the contractual relationship the School has invested in facilities and equipment:

Bransby Horses

67. Bransby is one of the UK's largest equine welfare charities and is based on a 600-acre site near Lincoln. Equine facilities include stocks, recovery box, induction and recovery box, equine theatre, ultrasound, endoscopy and digital radiography, laboratory and

pharmacy. There are hospitalisation places for 24 horses, an ICU barn, 2 intensive care boxes and 30 stables. Students at Bransby share study and amenity facilities with staff.

Defence Animal Centre

68. The Defence Animal Centre (DAC), which specialises in military equine and canine veterinary medicine and surgery, is based on a 360-acre site at Melton Mowbray in Leicestershire. Up to 140 horses can be stabled at the DAC, whilst a further 260 can be at grass. There is an extensive equine training facility and the Army School of Farriery has a purpose built facility for both students and instructors. The Canine Division has facilities for kennelling over 200 dogs, training barns and training houses. The Veterinary Division facility has fully equipped hospitalisation, imaging, operating and treatment facilities for both canine and equine care. Facilities include an equine surgery suite and small animal surgery suite, examination, hospitalisation and isolation kennels and stables, digital radiography, canine hydrotherapy, canine post mortem facilities and a horse walker. There is a dedicated student facility for teaching and learning and social space.

Dick White Referrals

69. Dick White Referrals is a state-of-the-art small animal veterinary referral hospital, based near Newmarket, Cambridgeshire. The centre combines modern clinical facilities with intensive care facilities, 12 consulting rooms, 5 operating suites, dedicated internal medicine investigation room, spacious climate-controlled accommodation for over 50 patients, diagnostic imaging including radiography and fluoroscopy and on-site diagnostic laboratory with extensive clinical pathology, histopathology and microbiology facilities. A separate building houses ultrasound, CT and MRI units. Facilities also include a dedicated physiotherapy unit, seminar room, and 6 student bedrooms and social space.

Minster Veterinary Practice

70. The Minster Veterinary Practice (whose poultry arm has recently rebranded as Poultry Health Services) is housed within the School's Pathology buildings and operates from 2 administrative offices; it utilises the School Pathology facilities to support the provision of their clinical poultry service regionally.

Oakham Veterinary Hospital

71. The Oakham Veterinary Hospital is a RCVS tier 3 Hospital and is set in a 9-acre site which includes equine and small animal departments. Within the equine hospital, facilities include 3 consulting rooms, 2 operating theatres, 2 examination facilities with stocks, scintigraphy room, standing MRI facility, digital radiography room, post-mortem room, 23 horse boxes including isolation facilities, reproduction facilities including a dummy mare, farriery unit, menage, 2 trot-up areas, lunge pen, and a learning and teaching space for students. The site has 8 acres of grassland in small turnout paddocks and stabling for 22 horses, including mare and foal facilities. The diagnostic laboratory includes HBLB/ British Equine Veterinary Association (BEVA) CEM testing and the equine unit is an approved Artificial Insemination (AI) centre.
72. The small animal facilities include 4 consulting rooms, 2 operating theatres, digital radiography rooms, isolation facility, kennels, separate cattery, teaching and seminar room.
73. In addition, the shared facilities include a fully equipped laboratory. The dedicated student room comprises locker and changing facilities, kitchenette, IT facilities, soft seating and workspace areas.

PDSA

74. The Derby PDSA PetAid hospital consists a waiting room, 6 consulting rooms, 2 operating theatres, operating preparation area, radiography suite, kennelling for 29 animals, isolation ward, and staff area. Students at PDSA Derby share study and amenity facilities with staff.
75. The Nottingham PDSA PetAid hospital consists 2 waiting rooms, 6 consulting rooms, 3 operating theatres, operating preparation area, radiography suite, kennelling for 30 animals, isolation ward and staff area. Students at PDSA Nottingham share study and amenity facilities with staff.

Pinfold Vets

76. Pinfold Vets is a first opinion small animal practice in East Leake, Leicestershire. There are 3 consulting rooms, 1 operating theatre, a digital radiography room, 8 dog and 4 cat kennels, options for isolation and a laboratory area. Students share study and amenity facilities with staff.

Scarsdale Veterinary Group (Markeaton: Farm and Equine)

77. Scarsdale is RCVS accredited as an Equine and Farm Animal General practice. The dedicated Farm and Equine unit has hospital and operating facilities for all species of farm animals. There are 6 pens for admission of adult cattle, numerous 'calf' pens for admission, and housing/isolation.
78. The equine facilities include 16 stables, including isolation facilities, boxes for critical care patients and foaling boxes, an operating theatre and induction

suite, stocks, trot up and hard lunge areas, and indoor school. In addition, the facilities include a full range of ultrasound, digital and computerised radiography and endoscopy. The equine unit is a BEVA approved Artificial Insemination (AI) centre.

79. The student room comprises learning and teaching space, locker and changing facilities, kitchenette, IT facilities and workspace areas.

Scarsdale Veterinary Group

80. Scarsdale's Hospital at Pride Park, Derby, is a RCVS accredited Small Animal Hospital and Emergency Services Clinic. It comprises substantial client waiting areas divided into species-related zones, 14 consultation rooms, multiple diagnostic rooms including advanced imaging, 5 operating theatres, species specific wards, isolation wards, intensive care, and a dentistry room. Other facilities include endoscopy, digital radiography, MRI and CT and an extensive laboratory. There is a substantial pharmacy, client retail, hydrotherapy and animal boarding facilities. Students have a dedicated student room with learning and teaching space, kitchenette, library, and IT facilities.
81. The Shelton Lock practice is a branch practice which also hosts Blue Cross charity cases, it is accredited by the RCVS Practice Standards scheme. Facilities include 2 consulting rooms, a preparation room and operating theatre. In addition, there is a small laboratory, ultrasound and digital radiography, Kennels are available for outpatients. Students share study and amenity facilities with staff.

East Midland Zoological Society – Twycross Zoo

82. Twycross Zoo was established in 1963 and contains over 1,000 animals of 200 species. It occupies over 40 acres. Twycross Zoo has the largest collection of primate species in any zoo in the world.
83. Working out of a dedicated veterinary unit most work is carried out in animal enclosures and the necessary anaesthesia and other equipment such as ultrasound scanners and sampling equipment is taken to the patient. In the veterinary unit, there is a clinical treatment/surgical area, recovery room and pharmacy/laboratory, digital radiography, ultrasound, endoscopy. There is a small post mortem room, access to library and computers and basic laboratory facilities, with microscopes, a conference room and a seminar room, together with a dedicated student room.

Strategy and programme for upgrading and maintaining buildings and equipment

84. School facilities are managed through a combination of in-house process and support from central University Estates; formal oversight is by the School Technical and Facilities Manager. A reporting system exists within the School so that any staff member can report a facilities issue/defect – in addition to this, regular walk-arounds are carried out by technical and administration staff to identify and report issues or areas for improvement. The University Estates Office provides a range of professional services including repairs and maintenance via a dedicated helpdesk. An online system for reporting maintenance items or defects provides users to gain access to progress of the job reported and to receive an email on completion. Emergency requests for maintenance which occur outside of normal working hours can be made via the University 24 hour Security Control Room.
85. The School upgrades facilities as required, in conjunction with University Estates, with larger scale improvements as required to support strategic initiatives (for example, improvement in teaching facilities to accommodate an increase in student numbers). Where Clinical Associate facilities are expanded embedded staff provide input into design plans; these are monitored by the School through regular meetings between clinical sub-deans and Clinical Associate partners.

Health and Safety measures and compliance

86. The University has a documented Health and Safety Policy, Codes of Practice and Guidance. The University Safety Office is the primary contact point with the Health and Safety Executive, The Environment Agency and the Fire Service. It also oversees all aspects of health and safety, advises in developing safety policies or procedures and monitors the implementation of safety policies.
87. The School expects all staff and students to take reasonable care of themselves and others who may be affected by their actions. An outline of the School Health and Safety Management is provided in the School Staff Safety Handbook and Student Handbooks. New staff and students have an induction into the building safety and the emergency procedures of the University by the Safety Officer. Health and Safety is a standing item on the weekly Management Team agenda and Monthly Staff Meeting agenda. School safety guidance, risk assessments, Standard Operating Procedures (SOPs), and School Safety Committee minutes are available for all areas and activities through the on-line School Health and Safety Workspace and Moodle platforms. Central University safety information is available online.
88. Safety management in Clinical Associate practices is under their local safety management process. All Clinical Associates have health and safety policies and procedures in place to meet national requirements. The School undertakes to advise and assist Clinical

Associates with implementation of policies and procedures. Staff and students receive a detailed induction and undertake to adhere to local protocols. Clinical Associate safety is reported to the Schools Safety Committee by the Schools Safety Officer who visits the Clinical Associates sites.

89. Students undertaking EMS attend compulsory training on placement safety and animal handling. Placement providers are required to sign a Health and Safety agreement to confirm standard safety and insurance requirements. On placement students complete a personal standardised health and safety review to highlight risks. Prior to agreement for non-UK placements a standard checklist of requirements is completed and signed off by the student and School.
90. All incidents and near misses within the School are reported and recorded online. All reported incidents are investigated by the School Safety Officer and reviewed by the Central Safety Office. Required actions and notifications are made and a summary of all incidents are reviewed at the quarterly SSC meetings. Incident reports are maintained by the central University.
91. Annual safety audits of the School are undertaken by the University Central Safety Office. Local audits and checks are carried out at the required intervals by a combination of external contractors, University Fire Inspector, SSOs and the technical team to ensure compliance with safety policies and insurance requirements. School-managed derogated CL3 facilities are audited biannually by the University Safety Office.
92. The SSC reviews and records audits, incident reports and other activities of the School in relation to Health and Safety; the minutes are uploaded on the workspace and are accessible to all staff and students. Training records are maintained for individual staff and research students; these are reviewed by line managers/research leaders dependent on staff activities (minimum frequency annual).

Recreational, study, locker and food facilities available for staff

93. Each student has access within the School to a dedicated Small Group Teaching Room (SGTR) for the purpose of study which they can access 24 /7 – all SGTR's are equipped with a wide range of teaching resources and computing facilities. The James Cameron-Gifford Library located on site provides further facilities for study. The School provides locker facilities for all veterinary students and staff.
94. Various food facilities are available on campus for use by both staff and students including the Mulberry Tree Café, The Square Restaurant and Costcutter Convenience Store. Students also have access to a range of facilities provided through the SB Guild such as the campus bar and a kitchen facility. The School also provides vending machines which are available to both staff and students. A staff room is provided within the Veterinary School for use by both staff and postgraduate students and includes sufficient soft seating areas and facilities for the preparation and consumption of food. A further campus staff room is available in the Barn Building. Students have 24 /7 access to the Atrium with soft seating.
95. The Sutton Bonington Sports Centre, opened in 2008, houses a range of sporting facilities for both staff and students, including a large sports hall, squash courts, climbing wall and fitness suite together with various external sports pitches and courts. Further sporting facilities, including a 25m swimming pool are available on the University Park campus, where a £40m investment has been recently made into sports facilities. Students have the added benefit of numerous sports societies as well as a wide range of other recreational societies and facilities ran through the SB Guild such as The Music Society.

Diagnostic Laboratories and Clinical Support Services

96. Across the School and its Clinical Associates facilities are available for:

- Necropsy
- Histopathology
- Histology
- Microbiology
- Nutritional analysis
- Clinical biochemistry
- Haematology
- Cytology
- Immunohistochemistry
- Parasitology
- Serology
- Endocrinology

Necropsy Examinations

97. The School Pathology unit is capable of handling a variety of companion, livestock, exotic, zoo and wildlife species. The post mortem room comprises two large rooms with different sized tables (five for smaller to medium sized animals up to 250kg, one large hydraulic table for horses or other large animals up to 1000kg), a large, walk-in cold storage room, several freezers, and all the usual equipment needed for performing full post-mortem examinations (band-saw, oscillating saw, knives, scrubs, wellingtons, etc.). Integrated within the post mortem room is a separate facility for poultry necropsies provided by Minster (Poultry Health Services). A seminar room with a 10 headed microscope with live projection onto a wide screen monitor for teaching purposes of cytological (clinical

pathology) and histopathological (diagnostic pathology) sample analysis. A histology laboratory contains all the basic instruments for routinely processing slides for histological examination.

98. Gross teaching material can be stored chilled, frozen or in Klotz solution in the cold room, and general cadaver disposal is via skips that are removed by a licensed commercial service provider. A local 'knacker' provides a service for collection of equine carcases, delivered to the post mortem room and final removal of waste material. Other material is transported between Clinical Associate sites and the School by the School technicians with other material transported to the post mortem room by clients. Material is securely stored in clinical waste bags and transported in a School vehicle licensed for transport of this type of material. SOPs are available in the Pathology section of the Schools safety workspace. Further necropsy facilities are available at Twycross Zoo and Oakham (equine), while students may also undertake brief or partial necropsies on farms as part of the farm animal rotations, as this is often the case in private practice.

Histopathological Examination

99. Recovery of tissue from necropsy cases is carried out within the post mortem room. Histological processing and specialised staining is carried out by a School technician. Specialised histochemical and immunocytochemical staining techniques are available through third parties as necessary Stained microscope slides are returned for examination by pathologists. Supervised reports are generated based on gross findings by rotation students. Transmission and scanning electron microscopy, microCT and MRI are available on an ad hoc basis as required, on the Sutton Bonington Campus or at University Park. Extensive facilities for processing histology, histochemical and immunohistocytochemical stains also exist within the School.

100. In addition, Scarsdale has a small cytology facility and there is a significant throughput of cytological cases at Dick White Referrals and this also forms a focal point of the clinical rotation teaching of this discipline.

Microbiology Diagnosis

101. Within the School there are Containment Level 2 microbiology teaching facilities, including associated equipment. Diagnostic bacteriology, mycology and parasitological investigations arising from post mortem examinations are carried out using laboratory facilities at Scarsdale Pride Veterinary Centre or other private diagnostic labs like IDEXX or CTDS. Virology investigations for companion animal diseases use appropriate third-party specialist centres like IDEXX or CTDS. Diagnostic microbiology laboratories exist at Pride Veterinary Hospital with facilities including bacteriology, microscopy, microbial culture, etc.

Clinical Pathology

102. A clinical chemistry laboratory exists within the School; it is primarily used for the assessment of the nutritional status of farm animals. It has links with the Clinical Pathology Laboratory at Scarsdale Veterinary Group and with Division of Environmental Sciences at University Park.

103. Clinical pathology is included as part of the clinical rotations at locations which possess clinical pathology laboratories: Oakham, Scarsdale, Pride and Dick White Referrals. Equipment at Dick White Referrals includes: an Olympus A400 wet chemistry analyzer, an Advia AD200 haematology analyzer and an Immulite 2000 for endocrine testing plus coagulation testing, blood gas analyser, various snap-ELISAs, blood typing etc. There are 3 qualified lab technicians plus a Clinical Pathologist Diplomate and a resident staffing the lab. At Pride, there is a Randox Daytona, clinical chemistry analyser, IDEXX Procyte Haematology analyser, a TOSOH immunoassay analyser and a teaching video screen microscopes and 3 dedicated laboratory technicians. Students also have access to multi-head high quality teaching microscope in the necropsy facility and also LCD screen microscopes in 2 student learning rooms (Year 5 hub and the Pride Student seminar room).

104. During the Equine Skills rotation, students spend one-day at the Pride lab under the supervision of a School ECVCP Diplomate. During the Dick White rotation students has the opportunity to interact with 2 DipECVCP/FRCPath holders and/or clinical pathology residents. During the Elective Specialist EMS rotation students spend one-day at the Pride lab.

Central clinical support services

105. Clinical Associates host a range of facilities and equipment for clinical support including digital radiography, ultrasound, endoscopy, MRI, ECG, anaesthetic machines and monitoring, microscopes and laser thermometers.

Slaughterhouse facilities

106. The School has access to the on-site fully licensed abattoir for teaching. Students experience the full slaughter and inspection process within this unit during the final year VPH rotation. In addition, in the final year rotation they review the butchering of carcases. The abattoir is fully licensed for slaughtering of pigs, sheep and cattle, and has all the facilities which one would expect to find in a commercial slaughterhouse. There

is a small lairage with a number of pens for holding animals from different units. There is a stunning facility for sheep and pigs and a stunning pen for cattle, a scalding tank, an overhead line, slaughter floor and gut room. There are two large cold rooms, and a substantial cutting room and cold store. The facility has always been upgraded as necessary to be compliant with the changing regulations which govern slaughterhouse structure and function and is licensed to produce meat for human consumption. Equipment in the abattoir also includes guns and stunners for humane slaughter, hoists, winches, butchery equipment, and various other equipment (saws, mincers, grinders etc). In the final year VPH rotation, students also have day-long visits to a high throughput local red meat abattoir and a poultry processing plant. These are complementary to the low throughput facility based at the Campus.

107. The School also currently utilises a number of local slaughterhouses (with 15-80 miles) to provide various cadavers and animal material for teaching in the VPH and other modules.
108. In the final year veterinary public health rotation, students spend a day at Melton Mowbray Animal market – concentrating on transport and responsibilities relating to animal inspection and welfare within the market. A debrief is run at the School to discuss animal health and welfare, as well as biosecurity aspects related to the visit to the animal market.

Foodstuff processing unit

109. During the final year Veterinary Public Health rotation students all spend a day visiting a dairy products manufacturer, either a dairy farm that makes cheese from unpasteurised milk, or a dairy cooperative producing a Protected Designation of Origin (PDO) cheese. The focus of this visit is the monitoring and inspection of these businesses and Hazard Analysis Critical Control Points (HACCP) analysis. The students identify and address the critical control points in these premises.
110. The Lecture theatres, teaching laboratories and tutorial rooms are adequate in number and size for the current number of students. They are appropriately equipped for their purpose and are well maintained. Students have adequate access to self-learning, recreation, locker, sanitary and food services facilities. All core teaching sites provide adequate internet and textbook access.
111. The core clinical teaching facilities at Clinical Associate premises are sufficient in capacity and adapted for the number of students in clinical rotations in order to allow hands-on, evidence-based clinical training. They are high standard, well maintained and fit for purpose with one exception. At all facilities students have access to adequate pharmacy, diagnostic imaging, anaesthesia, clinical pathology, surgeries and treatment facilities for the caseload seen.
112. The students are encouraged to participate in 24/7 emergency services at some of the Clinical Associates, supervised by the staff trained to teach and assess.
113. The students have access to the equipment and facilities of the Clinical Associates and are able to use the information from the clinical cases for reflection and research. The staff have access to adequate facilities and patients for performing their clinical research although this appears to be reliant on the goodwill of the Clinical Associates
114. Offices, teaching preparation and research laboratories are sufficient for the needs of the academic and support staff and are fit for purpose. Level 2 biosafety laboratories are available. Both on the smallholding and in the teaching and research laboratories, health and safety, biosecurity and EU animal welfare and care standards are in place.
115. Mobile clinic services are available for student training purposes within the clinical rotations for equine and farm animals.
116. The transport of students, live animals, cadavers, materials from animal origin and other teaching materials complies with national and EU standards.
117. Establishment of further CL3 laboratory facilities on campus would enhance research opportunities.

Suggestions

118. Although teaching facilities in the School have been expanded to support the increase in student numbers there are only 2 lecture theatres available to accommodate the increased class size. The University should be encouraged to increase lecture hall facilities.
119. Staff office and research space should be kept under review.
120. The School should encourage the Clinical Associates to maintain comfortable and uncluttered facilities.

Recommendations

121. The School must ensure that all of its Clinical Associate partners maintain a clinical working environment that enables best practice, which includes appropriate isolation facilities and timely resolution of any material damage to flooring and furniture.

Table 3.1: Premises available for lecturing							
School							
1 (A30)	**2 (A29)**	**3 (A10)**	**4 (A14)**	**5 (LR9)**	**6 (LR2)**	**7 (LR3)**	**8 (LR4)**
400	**160**	**40**	**30**	**217**	**118**	**86**	**46**
9 (LR11)	**10 (SR5)**	**11 (SR6)**	**12 (SR7)**	**13 (SR8)**	**14 (B12)**	**15 (B13)**	**16 (Cwood)**
65	**18**	**24**	**26**	**16**	**66**	**36**	**120**
17 (A28)	**18 (B10)**	**19 (B08)**	**20 (B05)**	**21 (B09)**	**22 (A07)**	**23 (B01)**	
30	**12**	**14**	**23**	**26**	**120**	**120**	
DAC	**DWR**	**Oakham**	**Scarsdale FA & EQ**	**Scarsdale Pride**			
1	**2**	**11**	**1**	**1**	**2**	**3**	
100	**40**	**40**	**40**	**30**	**60**	**20**	**8**
Twycross							
1	**2**	**3**					
80	**25**	**10**					

Number of places in School lecture halls: 1813
Number of places in Clinical Associate lecture halls: 453

Table 3.2: Premises available for group work							
School							
1 (A06)	**2 (A07)**	**3 (A08)**	**4 (A09)**	**5 (A16)**	**6 (A17)**	**7 (A18)**	**8 (A19)**
12	**12**	**12**	**12**	**12**	**12**	**12**	**12**
9 (A20)	**10 (A21)**	**11 (A22)**	**12 (A62)**	**13 (A63)**	**14 (A64)**	**15 (A65)**	**16 (A66)**
12	**12**	**12**	**12**	**12**	**12**	**12**	**12**
17 (A67)	**18 (A68)**	**19 (A70)**	**20 (A71)**	**21 (A72)**	**22 (A73)**	**23 (A74)**	**24 (A75)**
12	**12**	**12**	**12**	**12**	**12**	**12**	**12**
24 (A08)	**25 (Library 1)**	**26 (Library 2)**	**27 (Pathology)**	**28 (A22b)**	**29 (A22c)**	**30 (A13)**	
12	**30**	**10**	**6**	**12**	**12**	**12**	
Bransby	**DAC**		**Oakham**	**Scarsdale FA &EQ**		**Scarsdale Pride**	**Twycross Zoo**
1	**1**	**2**	**1**	**1**	**2**	**1**	**1**
12	**12**	**6**	**18**	**10**	**6**	**8**	**5**

Number of places in School rooms for group work: 382
Number of places in Clinical Associate rooms for group work: 77

Table 3.3: Premises available for practical work

School							
1 (A42)	2 (A43)	3 (A49)	4 (B47)	5 (B63)	6 (B66)	7 (A05)	8 (A06)
15	25	50	10	10	8	35	35
9 (A12b)	10 (A59)	11 (A61)	12 (A52)	13 (A25)	14 (A27)	15 (A23)	16 (Superlab)
8	40	15	160	30	10	12	200
17 (Path 1)	18 (Path 2)	19 (A45)	20 (B62)	21 (B59)	22 (B52)	23 (C05)	
40	15	6	6	10	10	15	
Bransby	DAC	DWR	Oakham	Scarsdale Pride	Twycross Zoo		
1	1	1	1	1	1		
4	6	2	6	4	2		

Number of places in School rooms for group work: 765
Number of places in Clinical Associate rooms for group work: 77

Table 3.4: Places available for hospitalisation and isolation

		Bransby	DAC	DWR	Oakham	PDSA Derby	PDSA Notts	Pinfold	Scarsdale FA & EQ	Scarsdale Pride	Twycross Zoo
	Cattle								2		
	Horses	24	21		24				16		
Hospitalisation	Small ruminants		1						4		
	Pigs								2		
	Dogs		13	85	33	21	21	8		68	
	Cats			10	14	8	14	4		34	
	Other species								2	18	Various
	Small animals		45	4	4	5	7	1		21	Various
Isolation	Farm animals and horses	2	2		2				1	0	

Notes:

- Defence Animal Centre: Stabling is also available for 140 horses and 200 dogs in total
- Scarsdale Pride: 10 rabbit/small mammal, 5 vivaria and 3 parrot cages for hospitalisation
- Twycross Zoo: Hospitalisation and isolation facilities are in different enclosures according to species.

Standard 4 – Animal resources

4.1 Normal and diseased animals of various domestic and exotic species must be available for instructional purposes, either as clinical patients or provided by the institution. While precise numbers are not specified, the school must provide access to sufficient numbers of animals and quality of animal material to provide the necessary quantity and quality of animal husbandry and clinical instruction.

4.2 Schools must ensure that students are competent in animal handling relevant to the workplace learning and clinical work to be undertaken and that Health and Safety matters are briefed before the student begins their placement.

4.3 It is essential that a diverse and sufficient number of surgical and medical patients be available for the students' clinical educational experience including patients in primary care settings.

4.4 Experience can include exposure to clinical education at external sites, provided the school quality assures these clinical experiences and educational outcomes to at least the same standard as university owned facilities. Further, such clinical experiences should occur in a setting that provides access to subject matter experts at the appropriate level, reference resources, modern and complete clinical laboratories, advanced diagnostic instrumentation and ready confirmation (including necropsy). Such examples could include a contractual arrangement with nearby practitioners who serve as adjunct faculty members and off-campus field practice centres.

4.5 The teaching hospital(s) must provide nursing care and instruction in nursing procedures. A supervised field service and/or ambulatory programme must be maintained in which students are offered multiple opportunities to obtain clinical experience under field conditions.

4.6 Under all situations students must be active participants in the workup of the patient, including physical diagnosis and diagnostic problem oriented decision making.

4.7 Medical records must be comprehensive and maintained in an effective retrieval system to efficiently support the teaching, research, and service programmes of the school.

Background

Anatomy

122. Fresh and preserved ethically sourced complete and part cadavers of the major domestic species, are used for practical teaching of anatomy in Years 1 and 2. Specifically, students work in groups of 3 or 4 to dissect the body regions of the dog relevant to the systems studied in specific modules throughout Years 1 and 2. These dissections are supplemented with material from other species as required, including human. Further use of cadavers is made in the teaching of surgical techniques in Years 3, 4 and 5. Technical staff are trained in preservation techniques. Sourcing fresh companion animals cadavers remains a challenge, although the volume is currently adequate
123. Entire skeletons of each domestic species and a variety of high quality plastinated specimens, illustrative models and other learning materials are available in the museum, clinical building and dissection room. Each small group teaching room holds a skeleton of a dog and / or a cat, and various models. The School Museum also holds skeletons of less common and exotic species. This material is either bought or prepared by School technicians.
124. Live animals are normally used during anatomical classes and comprise dogs, cats, horses and exotic animals owned by the School, staff and students, together with cattle, sheep, pigs and chickens which form the Schools smallholding and also cattle from the Sutton Bonington Dairy Unit. Further access to live animals is provided by our partners giving sufficient numbers to allow students to practice clinical examination. Students also gain access to cadaveric material from our partners

Pathology

125. There is exposure to necropsy material throughout the Year 3 and 4 modules in which pathology teaching is embedded; here materials are harvested and presented to students rather than being full necropsy examinations. This additional necropsy material derives from the formal necropsies as well as local abattoirs and slaughterhouses particularly in relation to the teaching of public health and food hygiene.
126. The average number of post-mortems undertaken by a student would be around 10 per student based on the ratio calculated (Appendix 7), however students on the pathology rotation work in small groups, and so assuming an equal spread throughout the year an individual student is likely to actively participate in 6 food producing animal post mortems, 1 horse, 30 poultry/rabbits, 12 dogs and cats, and 1 exotic.

Animal handling/husbandry

127. All major species of farmed animals and companion

Table 4.1: Number of necropsies over the past 5 years

Species		Number of necropsies undertaken					Estimated % of necropsies observed by or undertaken by veterinary students in 2016/17
		2016/17	2015/16	2014/15	2013/14	2012/13	
Food Producing Animals	Cattle	60	65	65	59	58	75%
	Small ruminants	52	56	57	54	53	81%
	Pigs	55	55	61	55	56	80%
	Other	13	13	13	15	16	80%
Equine		36	50	49	59	54	90%
Poultry		1,064	1,078	1,076	1,083	1,080	50%
Rabbits		23	10	21	31	14	95%
Dogs		233	154	172	153	168	95%
Cats		109	84	101	76	71	95%
Other/exotic		24	24	31	27	32	95%

animals are available on Campus. In addition, contractual links have been made with local organisations and Clinical Associates to ensure a wide availability of a variety of animals for teaching basic sciences, animal husbandry and clinical subjects.

128. Live animals are used in a variety of classes during years 1 to 4 and resources comprise:

- School, staff and student owned animals (horses, dogs, cats, rabbits, birds, hamsters, lizards, tortoises, fish, etc.) are used for a wide variety of classes (e.g. ophthalmology, cardiology, animal handling). The School has a register of normal and clinical case teaching animals that belong to students, staff and the local public that are available to be used in teaching. Students are able to livery their horses at the School, and the School holds its own collection of children's pets and common exotic species
- All the major farmed species are available for teaching animal health and welfare on site. The 1000-acre University farm comprises dairy cows and sheep. A £6million expansion at the Dairy Unit is nearing completion which will result in an increase in herd size of 50% (currently 220 cows and 290 followers). The new unit will provide state-of the-art teaching and research facilities and will include a variety of technology-based sensor equipment
- The School also has a separate dedicated smallholding comprising cows, pigs, sheep, chickens and bees. All Year 1 students (in groups of 4 or 5) are required to care for the animals for 2 weeks each
- Visits to the Guide Dogs Breeding Centre for basic animal handling, dog care, dog behaviour, drug administration and reproduction
- Horses (250) and dogs (200) are provided at the Defence Animal Centre, Melton Mowbray, and are used to teach animal handling and animal health and welfare, including farriery
- Rodents and rabbits are provided on site for handling and animal health and welfare teaching
- Visits to local farms e.g. Underhill Farm, Standord-on-Soar, for bovine rectal palpation as part of routine fertility treatments
- Clients of local practitioners visit with animals for practical and client communication sessions (e.g. endocrine disorders)
- Poultry are available at Anslow Park Broiler Unit for husbandry and management
- Ante-mortem inspection to butchering of pigs at the School abattoir and visits to a number of local abattoirs (red and white meat)
- Suitable EMS placements will be arranged for any student expressing interest in Fish farming or other fish related industries

129. In addition, students will see a range of production animals during the 38 weeks of Extra Mural Studies throughout their course.

Food hygiene and Public Health

130. Students gain practical teaching in food hygiene, inspection and technology in Year 3 during the

Veterinary Public Health module and on Year 5 Veterinary Public Health rotation.

131. Students gain experience in a variety of situations including in the on-site abattoir, where they will be shown the complete process of slaughter from ante mortem inspection to post mortem and carcass examination. They also visit a number of local abattoirs (red and white meat). Each group of rotation students experiences approximately 100 red meat producing animals and over 15,000 birds being slaughtered at external abattoir visits in Year 5. Practical work in Year 3 includes ante mortem inspection, post mortem examination of fresh materials from ruminants, pigs and poultry collected from abattoirs, practical sessions in food microbiology to augment their lectures and small group learning in zoonoses and notifiable diseases and training in proper captive bolt guns use with cadaver specimens for the purpose of emergency/on-farm slaughter.
132. In Year 5, students spend two full days in the on-site abattoir, where the whole process of slaughter from ante-mortem inspection to butchering is reinforced. The School ensures that at least 2 pigs are procured for teaching purpose at slaughter every rotation; in addition Year 5 students are exposed to a variety of live animals at Melton Market and other abattoirs, and to bees at the School. The opportunities extensively reinforce their learning in veterinary public health including animal welfare, disease control and surveillance and residues control. Year 5 students also gain experience with raw meat, meat products, honey (and bee husbandry) and dairy products sourced from the School smallholding, University Farm, slaughterhouses, farms or food shops.

Caseload

133. Caseload data are compiled across Clinical Associates and are shown in tables 4.2, 4.3 and 4.4.
134. There has been no material difference with previously reported numbers in relation to production animals, with the exception that there the number of dairy farms visited for routine work has declined slightly (largely due to economic pressure on the UK industry) but that provision of herd health consultancy advice has increased. Other farm species caseload remains low with year to year variation, however it is currently adequate for teaching purposes.
135. Equine hospital caseload has increased predominantly due to recent increased patient visit caseload through the Army, relating to cases now being managed in-house in association with University clinicians. These include herd health programmes involving the Defence Animal Centre, Kings Troop Royal Horse Artillery, and Household Cavalry Mounted Regiment.
136. There is a significant and increasing canine and feline caseload, particularly due to growth in the caseload at Pride Veterinary Hospital and the addition of Blue Cross charity work undertaken at Shelton Lock. When compared with the prior reported data, reported numbers show a drop, however the data reported in this SER show those with student involvement rather than the total.
137. To ensure the student experience is not adversely affected with increased year and rotation group sizes, additional Clinical Associates have been recruited at Pinfold and Bransby Horses to facilitate excellent exposure to clinical cases. Further relationships are being developed to increase farm animal caseload and small animal caseload (RSPCA Strinesdale, Manchester).

Comments

138. The School is adequately involved in providing teaching via the Clinical Associates. This provides students with excellent opportunities for learning alongside interns and residents.
139. The number of animals is adequate for learning in the preclinical years. The new Centre for Dairy Science and Innovation will expose students to wider experience in animal and herd management.
140. Enhancing the tracking capability to assist undergraduates expressing particular interest in certain animal sectors offers possibilities to optimise animal use.

Commendation

141. The School is commended for successfully implementing a Community Based Teaching Model.

Suggestions

142. Consequent to the increasing year size, the adequacy of animal resources should be kept under close review.

Recommendations

None.

Table 4.2: Clinical Production Animal cases involving students, data to June 30 each year

Production Animals	(a) Received for consultation		(b) No. of hospitalised days		(c) No. of herds/flocks / average herd size		(d) No. of animals seen by students on farm/ herd health visits		(e) Estimate % of first opinion vs. referral cases per species seen by students			
									First opinion		Referral	
	16/17	15/16	16/17	15/16	16/17	15/16	16/17	15/16	16/17	15/16	16/17	15/16
Cattle	50	40	40	40	>300/90	350/90	47,089	47,879	99	99	1	1
Small ruminants	150	13	50	13	70/150	80/150	318	325	100	100	0	0
Pigs	15	6	5	2	0	0	12	9	90	90	10	10
Poultry	10	10	0	0	0	0	0	0	100	100	0	0

Note: These numbers do not include animals seen on the two week School-hosted Herd Health rotation which delivers consultancy advice to 14 farms (a total of just under 5,000 cows); each would typically receive 2-4 visits per year. These farms are clients of Scarsdale Veterinary Group or Farm Veterinary Solutions. Students on the Farm Animal Medicine and Skills rotation, may, when seasonal constraints allow, undertake a flock visit to a commercial flock in the local area and a flock health investigation of the University commercial flock during the rotation.

Table 4.3: Clinical Companion Animal cases involving students, data to June 30 each year

Companion Animals	(a) Received for consultation		(b) No. of hospitalised days		(c) No. of animals seen by students		(e) Estimate % of first opinion vs. referral cases per species seen by students			
							First opinion		Referral	
	16/17	15/16	16/17	15/16	16/17	15/16	16/17	15/16	16/17	15/16
Equine	7,527	7,494	4,119	4,364	7,527	7,494	69%	76%	31%	24%
Dogs	23,410	22,535	11,370	11,284	23,410	22,535	87%	86%	13%	14%
Cats	8,105	7,868	3,613	3,567	8,105	7,868	83%	84%	17%	16%
Caged pet mammals (Rabbits, gerbils etc)	435	391	78	60	435	391	100%	100%	0%	0%
Exotics and zoo animals	1,712	1,624	0	0	1,712	1,624	100%	100%	0%	0%

Table 4.4: Herd health programme, data to 30 June each year

Herd health programmes provided through private owned animals

Animal Species	2016/17		2015/16		2014/15		2013/2014		2012/2013	
	Sites	Animals	Sites	Animals	Sites	Animals	Sites	Animals	Sites	Animals
Dairy	82	15,000	88	16,000	91	16,500	96	17,250	100	18,000
Beef cow-calf	250	25,000	233	23,333	225	22,500	213	21,250	200	20,000
Beef feedlots	5	3,000	4	2,667	4	2,500	3	2,250	2	2,000
Sheep	80	20,000	87	20,000	90	20,000	95	20,000	100	20,000
Goat	50	200	67	267	75	300	88	350	100	400
Pig	0	0	0	0	0	0	0	0	2	600
Poultry	0	0	0	0	0	0	0	0	0	0
Fish	0	0	0	0	0	0	0	0	0	0
Horses	0	0	0	0	0	0	0	0	0	0

Note: Data is provided by Clinical Associates for 2016/17 and 2012/13 with interpolation for intermediate years. These numbers do not include animals seen on the two week School-hosted Herd Health rotation which delivers consultancy advice to 14 farms (a total of just under 5,000 cows); each would typically receive 2-4 visits per year. These farms are clients of Scarsdale Veterinary Group or Farm Veterinary Solutions. Students on the Farm Animal Medicine and Skills rotation, may, when seasonal constraints allow, undertake a flock visit to a commercial flock in the local area and a flock health investigation of the University commercial flock during the rotation. These numbers also do not include visits to military horse herds.

Table 4.5: Off-campus rotation information for each Clinical Associate

Placement name	Species	Duration of rotation	Number of rotations per year	No. students per year	Patient numbers	Students per rotation	Core
Bransby Horses	Equine	2 weeks	25	0~30	Rotation in development	0-2	Core but location optional instead of OVH
Defence Animal Centre	Equine	1 day (with 2 weeks as an option instead of 2 weeks at OVH Equine)	25	120	1,035*	4-6	Y
Dick White Referrals	Small Animal	2 weeks (or OVH)	25	60	2,000*	0-6	Core but location optional instead of OVH
Minster Veterinary Practice	Poultry and Farm Animal(Pathology)	2 weeks (with Pathology)	25	120	1,216***	4-6	Y
Oakham Veterinary Hospital (Equine)	Equine	4 weeks (with 2 weeks as an option at DAC)	25	120	6,412*	4-6	Y
Oakham Veterinary Hospital (Small Animal)	Small Animal	2 weeks (or DWR)	25	60	14,233*	0-6	Core but location optional instead of DWR
PDSA Derby	Small Animal	2 weeks (or PDSA Notts and Pinfold)	25	60	2,280*	2	Core but location optional instead of Nottingham / Pinfold
PDSA Nottingham	Small Animal	2 weeks (with Pinfold; or 2 weeks PDSA Derby)	25	60	3,389*	2-4	Core but location optional instead of Derby
Pinfold	Small Animal	2 weeks (with PDSA Notts; or 2 weeks PDSA Derby)	25	60	New rotation	0-2	Core but location optional instead of Derby
Scarsdale Veterinary Group (Farm)	Farm Animal	2 weeks	25	120	47,419**	4-6	Y
Scarsdale Veterinary Group (Equine)	Equine	3.5 days	25	120	80*	4-6	Y
Scarsdale Veterinary Group (Pride)	Small Animal	3 weeks	25	120	11893*	4-6	Y
Scarsdale Veterinary Group (Shelton Lock)	Small Animal	1 week	25	120		4-6	Y
Twycross Zoo	Zoo	1 week	25	120	3,152*	4-6	Y

5. Information resources

5.1 Libraries and information retrieval are essential to veterinary medical education, research, public service, and continuing education. Timely access to information resources, whether through print, electronic media or other means, must be available to students and faculty. The library must be administered by a qualified librarian. The school must have access to the human and physical resources necessary for development of instructional materials.

5.2 The school must provide students with unimpeded access to learning resources which include scientific and other relevant literature, internet and internal study resources, and equipment for the development of procedural skills (e.g. models). It will demonstrate how the use of these resources is aligned with the pedagogical environment and learning outcomes within the programme, and have mechanisms in place to evaluate the teaching value of innovations in learning resources.

Background

143. All staff and students have access to all University libraries (https://www.nottingham.ac.uk/library), part of the Libraries, Research and Learning Resources (LRLR) function. The James Cameron Gifford (JCG) Library based at Sutton Bonington occupies 1,126m2 floor space, and offers seating for 324. Opening hours are: Monday to Friday 8am - 9.45pm; Saturday 9am - 4.45pm; Sunday 9.30am - 4.45pm. The library is open 24 hours at key points of the year, including during examination periods. There is wireless access throughout the library and self-service printing and photocopying facilities are available. There is also self-service check out and return facilities.
144. The JCG holds a wide range of resources associated with animal biology, animal welfare and care, veterinary sciences and allied subjects such as food production and agriculture. The JCG holds at least one copy of all the books on student reading lists, and multiple copies of key text books, together veterinary journals and access to veterinary eBooks, eJournals and databases.
145. Staff and students are able to access a range of library resources using the NUsearch library discovery system that allows students to search for books, reports and journals that are held across all eight University of Nottingham libraries. NUsearch provides a single interface through which all members of the University can access not only material held in the University libraries but also electronic resources available globally and relevant to their subject. The University library policy includes the purchase of eBooks where possible and has a total holding of 486,080 at present.

School information resources

146. Students have 24-hour access to a range of learning resources in their small group teaching room mini-libraries. The resources include all course textbooks, all British Small Animal Veterinary Association (BSAVA) Manuals, various other specialist and reference textbooks, skeletons, models and posters. Mini-libraries have been set up at each of the Clinical Associates used for placement in Year 5, together with the Year 5 teaching hub. In addition to hard copy material, the Virtual Learning Environment, Moodle, hosts a range of learning resources including embedded image and video resource hyperlinks to other sites and reusable resources.

Virtual Learning Environment

147. All teaching materials are delivered online and supported through the Virtual Learning Environment (VLE), Moodle. Moodle is used to organise and distribute course materials and schedules from a central location, as well as enhance students learning through interactive activities and resources. No paper handouts are provided to students; all relevant resources are available online, including presentations, briefing notes, and links to relevant videos, databases and web resources. Students and staff can access Moodle on and off campus through the internet. The School also uses audio recording (pod casting) and video recording (vodcasting), including Echo360 lecture capture, to support the learning experience and to disseminate information.

IT Infrastructure

148. All students on the 5 year course are provided with a laptop computer by the School for their own use at all times. Postgraduate students are provided with a desktop or laptop computer, as required for their research. In addition, all students are able to access School and Campus Computer Rooms on a 24 hour basis (1 room with 22 computers in School, and a further 5 computer rooms across SB Campus). This provides opportunity for all students to undertake self-study and access educational and research resources as required. Staff are provided with a laptop or desktop computer as requested, replaced on a 3 year cycle.
149. There are high quality high speed wired and wireless networks throughout the campus buildings. Internet access is provided to all students through the Eduroam wireless service which is available in all teaching and

Table 5.1: Library statistics (5 year comparison)					
Year	**2016/17**	**2015/16**	**2014/15**	**2013/14**	**2012/13**
Total Budget	**£13,912,000**	**£11,388,033**	**£11,604,458**	**£11,081,845**	**£11,948,459**
Total book budget	**£1,330,350**	**£1,152,000**	**£1,113,000**	**£1,040,000**	**£1,039,025**
JCG Library staff (FTE)	**6.1**	**6.1**	**6.3**	**6.3**	**6.3**
Library staff (FTE)	**163.7**	**166.3**	**152.4**	**171.1**	**151.4**
Vet School book budget	**£22,000 plus share of £245,000 e-book budget**	**£12,321**	**£11,634**	**£10,191**	**£9,470**
Total number of paid-for journals	**42,074**	**42,825**	**39,945**	**24,402**	**22,983**
Total journal subscriptions (£)	**£4,768,000**	**£4,485,526**	**£4,325,000**	**£4,065,543**	**£3,997,565**
Acquisitions *(Total)	**£6,098,350**	**£5,637,526**	**£5,438,000**	**£5,105,543**	**£5,036,590**

Note: Historical information in not available on volumes held, however the JCG currently provides access to:
Hard copy books: 26,681 total, of which 6,210 are veterinary specific
Hard copy journals: 73 total, of which 17 are veterinary specific
Electronic journals: 42,000 total, of which 145 are veterinary specific

communal areas of the University. The School has established a dedicated high-speed data network between the School and Clinical Associates, which mirrors the learning environment of the School to the Clinical Associates, such that students (and staff) have access to the same support and resources offered when on the campus; where this has not been possible students are provided with BT wi-fi dongles.

150. Lecture theatres across campus are fully equipped with the high quality audio visual facilities including video and slide projection, amplifiers, electronic visualisers, lecture capture facilities (Echo360) and audio capture for podcasting. Investment in state-of-the-art audio-visual facilities has been made throughout the teaching rooms of the School such that electronic whiteboards are commonplace alongside usual AV equipment in lecture theatres, seminar rooms, small-group teaching rooms and laboratories. Additional facilities include teaching microscopes, overhead high definition visualisers, and electronic voting handsets. Students are able to borrow digital video and photography equipment in relation to course activities. Teaching rooms at Clinical Associates include computing facilities and in some cases electronic whiteboards or LCD screens for presentations.

Learning and information technology support

151. The JCG Library is staffed by 6.1 FTE customer services staff who are available during core hours. The staff comprise one full time supervisor plus a team of Library Advisors who offer the front line service to students. Further support is offered by Senior Librarians from the STEM libraries. Funding for library materials is held by the library and is based on the number of staff and students. The School liaises closely (via the Teaching, Learning and Assessment Team) with the Library team leader for the JCG Library. On a quarterly basis, the TLA Team work with Module Convenors to collate a list of resource requirements for the library, which are then procured by the Library. Any feedback from the various School Committees (e.g. Learning Community Forum, Postgraduate Committee) is considered when formulating a list of requirements. The School is also represented by the Head of Operations on the Campus Operations Committee which provides a function to quality assure, monitor and review learning opportunities, and provide a mechanism for two way feedback.

152. The School Teaching, Learning and Assessment (TLA) team which comprises 7.0 FTE experienced administrative staff, support all academics, including providing specialist advice on development of new learning technologies and techniques. The TLA team liaises closely with the LRLR specialist Learning Technologies team who provide a systems, content and special projects function. The remit of the Learning Technology department of LRLR is to support staff and students in the area of technology enabled learning. This includes: developing, maintaining and upgrading the core University teaching and learning systems; providing multi-media and video production services for staff to develop creative and interactive learning resources; and providing consultancy support to students and staff in the use of learning technology

153. The University has a central IT Services function responsible for all aspects of IT provision, supported operationally by local campus based teams. IT Services operate an email and telephone helpline, which is manned 24 hours. The local IT Support team provide support for a wide range of equipment and

operating systems and operate an open door policy for students and staff to visit for assistance. The local team comprises 5 staff – a Group Leader and four IT technicians, one of which has a speciality in Audio Visual systems. The Head of Operations is the IT Representative for the School and has regular meetings with the IT Group Leader.

Comments

154. Access to information resources is clearly defined and implemented by the University both on and off campus.
155. There is an adequacy of information retrieval resources with a comprehensive programme of refurbishing, upgrading and expanding the information resources available to students and staff.
156. The IT and library staff are highly engaged, with adequate qualifications. There is good accessibility for students and academic staff on site and remotely.
157. There is a process to identify new needs and resources for the development of instructional materials aligned with the teaching programme with good support at Faculty and University level. Further, there is a clear process to evaluate the effectiveness of innovations.

Commendation

158. The School and University are to be commended on their innovative and student-focussed approach to teaching content accessibility via their on-line learning platform.

Suggestions

None

Recommendations

None.

6. Students

6.1 The number of professional veterinary degree students must be consistent with the resources and the mission of the school.
6.2 Veterinary schools should establish post-graduate programmes such as internships, residencies and advanced degrees (e.g., MSc, PhD), that complement and strengthen the professional programme.
6.3 Provisions must be made, by either the university or school, to support the physical, emotional and welfare needs of students. This includes, but is not limited to, learning support and counselling services, careers advice, and fair and transparent mechanisms for dealing with student illness, impairment and disability during the programme. This shall include provision of reasonable accommodations/adjustments for disabled students, consistent with all relevant equality and/or human rights legislation.
6.4 There must be effective mechanisms for resolution of student grievances (e.g. interpersonal conflict or harassment).
6.5 Mechanisms must be in place by which students can convey their needs and wants to the school.
6.6 The school must provide students with a mechanism, anonymously if they wish, to offer suggestions, comments and complaints regarding compliance of the school with the RCVS standards for accreditation. These materials must be made available to RCVS as part of the annual report.

Background

159. The School offers 2 undergraduate BVM BVS veterinary programmes, a 5-year course and a 6-year course including a Preliminary Year (for widening participation and also high achieving non-science students). The School aims to recruit 24 students for the Preliminary Year. International students are accepted to this Year, if for example they do not have science qualifications at the level required for direct entry to the 5 year course, however normally all students are from the UK, and occasionally EU. These HEU students are state subsidised or may be self-funding in the case of graduates. Progression is automatic to year 1 on meeting a high level of attainment across each module. On average 10-20% of the Preliminary Year exit the course due to failure to progress academically.
160. The majority of students are from the UK, with normally <10 from EU countries and <5 from other international countries in each year group. International students pay full fees.
161. The School has increased cohort size for the 5-year course to 160; there are no plans to increase student above this level to ensure that resources are effectively used and the student experience is maximised. The 6-year course will remain at an intake of 24 to ensure quality applicants for the course.
162. The teaching facilities in the School have been, and continue to be, expanded to support the increase in student numbers. However, there are only 2 lecture theatres available that will accommodate the increased class size. Timetabling currently ensures access as required but the School continues to make representation to the University to increase lecture hall facilities. As a result of offering new options for rotation tracks from 2018, the School is able to accommodate increased student numbers at existing Clinical Associates, with the exception of Farm rotations, where an additional local Clinical Associate will be utilised; to facilitate improved choice of tracks a further small animal charity Clinical Associate (RSPCA Strinesdale, Manchester) will be utilised. Clinical Associate facilities provide an exceptional clinical experience for students, although there are plans

Table 6.1: Applications, offers and acceptances data for the 5 year course

Year	UK and EU students	Overseas students	Total students			
	A/P*	O/A	A/P	O/A	A/P*	O/A
2016/17	1,485	296/158	128	9/1	1,613/160	305/159
2015/16	1,387	183/127	126	12/3	1,513/145	195/130
2014/15	1,491	144/125	94	7/2	1,585/135	151/127
2013/14	1,639	161/116	120	8/4	1,759/131	169/120
2012/13	1,491	129/102	94	15/8	1,585/130	144/110

A/P Applications/Places available O/A Offers made/Acceptances

*P Places are not assigned to home or overseas students, as the School will admit the best student irrespective of home location

Table 6.2: Students enrolled on the undergraduate veterinary programme					
Year	**2016/17**	**2015/16**	**2014/15**	**2013/14**	**2012/2013**
Prelim year	**24**	**24**	**26**	**24**	**14**
First year	**163**	**135**	**140**	**132**	**132**
Second year	**138**	**128**	**119**	**123**	**102**
Third year	**131**	**116**	**121**	**105**	**105**
Fourth year	**111**	**125**	**99**	**104**	**94**
Fifth year	**120**	**95**	**100**	**86**	**93**
# graduated	**120**	**95**	**99**	**84**	**90**

to improve support facilities.

163. All students graduate with a BVMedSci degree in year 3. Students who do not meet the BVM BVS progression requirements in years 1 and 2, but meet the lower University progression requirements can continue but are required to exit with a BVMedSci degree at year 3 . Students are able to intercalate degrees, most commonly after year 3, but occasionally after year 4. The School has funded 2 students to intercalate PhDs, and yearly offers 2 MRes positions and 3 PGCertificate in Veterinary Education intern positions. Students are also able to intercalate at other universities, albeit they need to self-fund or be successful in gaining other funding.
164. In addition the School runs a module in Principles of Animal Health and Disease for up to 60 students in years 2 and 3 from the School of Biosciences. These students utilise the small holding, stables and teaching laboratory facilities for a total of 12 hours per year in addition to a 3 hour session run at the Dairy Centre.

Postgraduate students

165. Intern students study for a 1 year PGCertificate in Veterinary Medicine, except the intercalated Veterinary Education Intern positions who study for a PGCertificate in Veterinary Education (Table 6.3). The number of Interns has fluctuated over the years, as the School has been successful in gaining external funding from Dick White Referrals, Merial, and Hills Pet Foods. The School funds Interns at DWR and Oakham, and Vet Education interns. Clinical students are based at our Clinical Associates where they gain access to a wide caseload.
166. Resident postgraduate students normally register for a 3 year MVM or MVS degree (Table 6.4). It is possible to convert (with extra study) from MVM to PhD. The School funds 2 farm Residents at Scarsdale Veterinary Hospital and 2 in Pathology. Two Oakham staff members are being supervised for residencies. Other positions are funded from external funders such as Crown Pet Foods. Students are based at our Clinical Associates where they gain access to a wide caseload. Numbers of Residents are low and relate to contractual relationships at Scarsdale Veterinary Hospital (Farm), with growth in Pathology Residents due to growth in the Pathology service and research.
167. Students can also register on other postgraduate programmes (Table 6.5). A PGCert in Small Animal Rehabilitation was offered in conjunction with, and delivered by 2 outside providers, the course closed in 2015/16, as it was felt this was not core business for the School. Numbers are small on the DVetMed and are likely to remain so, with the School funding 2 students based at Twycross Zoo on DVetMed degrees. MPhil is normally the exit degree from a PhD for students that fail to progress. The School invests in MRes positions and also PhD positions, particularly through matched funding. Example external funding sources for PhDs include BBSRC, TEAGASC, AHDB Dairy and commercial/industrial sponsors such as Zoetis. PhD numbers fluctuate in relation to success with funding and grant applications.

Student services and support

168. The School, the University centrally and other students provide both conventional and specialist academic and pastoral support to the students. Student support

Table 6.3: Students enrolled on veterinary Intern programmes				
Year	**Small Animal**	**Equine**	**Farm**	**Vet Education**
2016/17	**10**	**2**	**0**	**5**
2015/16	**15**	**3**	**0**	**0**
2014/15	**16**	**3**	**2**	**0**
2013/14	**7**	**3**	**1**	**0**
2012/13	**4**	**2**	**0**	**0**

Table 6.4: Students enrolled on veterinary Residency programmes					
Year	**Small Animal**	**Equine**	**Farm PhD**	**Farm + Pathology**	
2016/17	**1**	**2**	**3**	**1**	**3**
2015/16	**0**	**1**	**2**	**1**	**1**
2014/15	**0**	**1**	**3**	**1**	**1**
2013/14	**0**	**1**	**2**	**0**	**0**
2012/13	**0**	**0**	**2**	**0**	**0**

is provided immediately from pre-acceptance and throughout the course.

169. Students are provided with a wide range of information to help induction and enculturation into the School (e.g. campus map, clothing and equipment brochure, voucher to buy a laptop computer, congratulations card, Guild brochure, equine livery reservation form, new student information guide, student entry agreement, student handbook, study skills booklet, survival leaflet, Vet Society information, module details). Students are telephoned by their Personal Tutor to welcome them to the School.

170. A welcome week (Fresher's Week) provides a wide variety of induction events including an Opening Ceremony, School tour, initial animal handling practical on Day 1, Tutorials, Social events, Tutor group social events, a visit to Twycross Zoo, together with introductory talks on safety, School structure, the curriculum, assessment, student support and EMS. In addition, students receive profiles of all staff members, together with their equipment and clothing.

171. The School employs a number of measures to ensure that students experiencing difficulties with their studies or with any non-academic problems are identified and supported. In addition, students are directed to establish and maintain individual Portfolios and Skills Diaries for self-support both during and after their studies. Alignment of support processes, school philosophy and teaching reinforces core values (e.g. professionalism).

Academic support

172. Academic support is provided predominantly by the School, and provides support to learning utilising:

- Pre-registration information packs and online registration
- Pre-term animal husbandry training for international students
- School-based identification of dyslexia and other learning difficulties
- Induction and orientation weeks at the beginning of each year, including a Day 1 meeting with the Personal Tutor , followed by timetabled Tutorials to review academic progress
- Student handbook
- Portfolio and Skills Diary
- Provision of web-based learning environment that incorporates core curricular material and details, and facilities for learning support (e.g. self-assessment, learning objectives) and student feedback
- Pairings of clinical and non-clinical Personal Tutors
- Student Progress Committee for support of students with academic difficulties
- Students in higher years (via the veterinary family and Vet Soc run Big Vet, Little Vet system)
- Staff contact in practical classes
- Small group case studies with dedicated group facilitators
- Dedicated Student Placement team to facilitate EMS
- Student Experience focussed administrative staff
- One-to-one access to a Year 3 project supervisor
- Library facilities (paper-based and electronic), Twitter and Flickr resources
- Provision of a laptop computer to all 5 year course students
- Computing facilities, and basic IT skills training with access to computer-based self-learning packages
- 24 hour access to study room and museum with extensive teaching resources
- An open door policy providing access to all teaching and administrative support staff
- Access to University support services (e.g. study support, dyslexia support, disability support)

Pastoral and Welfare support

173. Pastoral and welfare support is currently provided by the following means:

- Personal Tutor, supported by Senior Tutors providing pastoral support and advice
- Dedicated Student Welfare Manager with the role to advise and support students, liaising as necessary with other University support agencies
- Disability Liaison Officer to provide a point of reference, advice and guidance for staff and students in the School about disability issues and support
- Pre-arrival Health Declaration questionnaire, reviewed by the University's Occupational Health team, identifies support requirements for each student and assures fitness to study
- Veterinary family and Vet Soc-run Big Vet, Little Vet schemes with trained older students providing mentoring for younger students
- Personal and Professional Skills module covering aspects of work-life balance

Table 6.5: Students enrolled on other postgraduate programmes					
Year	PGCertificate Small Animal Rehabilitation	MRes	PhD	MPhil	DVetMed
2016/17	0	4	67	0	2
2015/16	2	5	69	0	1
2014/15	14	5	71	1	2
2013/14	10	3	76	3	2
2012/13	8	0	74	3	2

- Welfare Week to promote support available across the School and University
- Access to University support and advice services (e.g. disability support, confidential counselling, mental health advisors, career development, advice and support on financial matters, accommodation advice, legal advice, visa advice to international students)
- The VetSoc, Student Guild and Student Union offers an extensive range of social and sporting activities together with various support services including 24 hour telephone help lines (https://www.su.nottingham.ac.uk/)
- International student global café
- Chaplains and prayer rooms for various faiths
- Sutton Bonington Hall Warden and Hall tutors
- University Warden for off-campus affairs
- Outside agencies, e.g. local Doctor, Samaritans, VetLife, Vet helpline

174. During term, the Student Welfare Team (Senior Tutors and Student Welfare Manager) meet weekly to discuss and action general matters in terms of professionalism, pastoral and academic progress across the student body. Members of this meeting are also interlinked with external bodies such as VetLife.
175. The School complies with the Faculty's dual 'Expression of Concern' process, which is divided into welfare and discipline issues. Any student or member of staff may raise a concern relating to a student's academic abilities, including performance on a clinical rotation, or for any other matter. The Concern is then reviewed by Senior Tutors and is acted on as appropriate to the circumstances (e.g. pastoral support, disciplinary proceedings, Fitness to Practise enquiry etc).
176. In addition to the University Support mechanisms available for undergraduates, postgraduates are able to access the support of the on-site Graduate Centre, Graduate School as well as campus Postgraduate Society. Complementary to the support provided by the two Postgraduate Sub-Deans, the School has appointed a Senior Tutor, dedicated to postgraduate pastoral and welfare support. Student elected Postgraduate Representatives attend Postgraduate Committee meetings, raising any issues and receiving advice or feedback on resolutions.

Support for ill and disabled applicants and students

177. All students are expected to declare any requirements for disability support (including dyslexia) early in the admissions process, in order that the School can evaluate and implement support needs throughout the admissions process and/or as soon as the student commences the courses. The School also meets students prior to admission to provide review and advice on potential reasonable adjustments that can be made to the course.
178. Applicants who declare a disability on their UCAS form are reviewed by the University Disability Support Team. The team, together with the Senior Tutor and Welfare Manager will meet students at, or prior to Assessment Centres if needed for further discussion, particularly around the potential demands of the veterinary course.
179. All students are required to complete a medical assessment form which is reviewed by the University Occupational Health Team prior to joining the course. This may result in referral to Occupational Health prior to admission or assessment by University of Nottingham Academic or Disability Support staff. Occupational Health will provide recommendations on the suitability of the applicant to study on the course. These assessments may result on preparation of either an Academic or Disability Referral Form. These will provide for reasonable adjustments to be put in place for teaching or examinations, which will be discussed with the School to determine whether providing these adjustments is feasible. The assessment may suggest reasonable adjustments required and in extreme cases, has required students to undertake a gap year in order to improve their health prior to joining the course. The Occupational Health team assesses students against national Higher Education Occupational Physicians guidance (http://www.heops.org.uk/guide.php) to ensure that students are able to meet RCVS Day 1 competences.
180. All students undertake a mandatory online dyslexia assessment during Year One.
181. Students who become ill or disabled during the course are supported in school by the Student Welfare Team or out of school by the University Student Service Centres. These teams can provide guidance and signposting to appropriate support services either within the University, including counselling, mental health, academic support and disability support services, or external to the University. Students may be referred to the University Academic or Disability Support staff who may suggest

reasonable adjustments so that the student is able to manage their illness or disability (for example additional time in exams, rest breaks etc). Students with long term illnesses or disabilities who engage with the School Welfare Team are offered regular reviews appropriate to their condition, especially prior to starting clinical rotations.

182. Students who believe that their performance in examinations or during teaching has been impaired can apply online for extenuating circumstances. These applications are considered against University of Nottingham procedures by a committee within the school which can make recommendations to the relevant Exam Board that the student should be allowed a further attempt at the affected assessment.

Methods used to identify and remediate failing students

183. All students gain feedback for all forms of summative assessment; this is provided individually for failing students in a discussion with the module leader (in years 1-4). Students who fail examinations are also invited to attend the Student Progress Committee who consider reasons for failure and mechanisms for remediation. Specifically during year 5, students who fail a Rotation Professional Assessment are required to meet with the Clinical Review Group to understand reasons for failure and ways to improve, and also whether further assessment is required (which may include repeating a rotation). In addition students who fail end of year assessments in year 5, may be able to repeat rotations prior to reassessment.
184. Students may also be recognised as struggling with the course, mentally or physically, in which case a Concern Form may have been raised by a concerned staff member or peer which is then formally addressed, or alternatively the Welfare Manager or Senior Tutor may informally meet with a student.

Careers and employment support to graduates

185. Career development and job selection and application techniques are taught within the Year 4 Personal and Professional Skills module, topics include CV writing, and interview techniques; students can also access the University careers team for advice and training. A "Careers Day" is held yearly for all students but especially year 4 students. This exposes students to a range of careers in the veterinary profession and hosts a job fair and talks from practitioners from across the profession.
186. Students work with their Personal Tutor to plan a variety of experience during their EMS study appropriate to their career and personal interests; students commonly build up strong relationships with hosts, which lead to job offers before graduation.
187. The School has developed an optional Nottingham Advantage Award module "Careers skills for vet students". This module aims to provide students with knowledge and a range of skills that will allow them to reflect upon issues surrounding personal development and professional aims in relation to a career in the veterinary profession.
188. Undergraduate and Postgraduate students can access support from the University Careers Service. Year 5 students have a Careers noticeboard where positions are advertised (and they are also circulated electronically). Alumni have an active Facebook group where job offerings are posted.

Mechanisms for student suggestions, comments and complaints

189. Students are involved in quality assurance at national, University and School level. The University student engagement policy covers the University of Nottingham's arrangements to ensure that students are fully involved and represented in all aspects of their learning experience, and have a range of opportunities to engage in the University's quality assurance systems, at University level, at programme and academic level. Students are able to influence the schools direction and decision making processes by a number of means, including making comments as to compliance with RCVS/EAEVE standards. Students are involved in influencing the School's direction, providing suggestions, comments and complaints by the following methods, with consideration and action as appropriate:

- Attendance at staff recruitment interviews
- National Student Survey (NSS) to provide opinion and feedback on the student experience completed by all UK final year students, considered on a detailed basis by both the School and University
- Association of Veterinary Students Survey on teaching, learning and student support completed by all students
- Student Evaluation of Module questionnaires (SEM) completed on every module to provide feedback on overall delivery and learning, with outcomes considered in module reviews
- Student Evaluation of Teaching questionnaires (SET) completed on all academic staff to provide feedback on teaching by individual; scores are considered by the Dean and also in promotion
- Student Evaluation of Year questionnaire is structured as per the NSS and is run by the School to gather feedback from students on their experience of the year of programme as a whole
- Rotation feedback questionnaires are compulsory for year 5 students and are completed at the end of every 2 week clinical rotation, reviewed by the Clinical Director
- Confidential feedback can be provided direct via CAR to the Clinical Director
- Learning Community Forum (LCF) meetings, are held

termly and discuss any matters (academic, welfare or social) that are raised by either students or staff.Matters are referred to an appropriate committee if the LCF feels that a referral is necessary. In practice the majority of operational issues raised at this meeting are resolved at the meeting

- Committee meetings including Teaching, Learning and Assessment and Postgraduate Committee
- Yearly student survey conducted by the University
- Undergraduate and postgraduate student membership of other relevant Committees and Sub-Committees at Faculty, Campus and University level
- Year representatives meet the TLA Sub-Dean and Head of Operations regularly to discuss various topics and provide feedback
- Veterinary students are highly engaged and motivated and individual students also commonly directly contact relevant Sub-Deans, the Clinical Director, the Head of Operations or the Examinations Officer with feedback on an ongoing basis
- Ad-hoc focus groups convened around particular topics
- The School also has an open door policy providing access at any time during the working day to all teaching and support staff; any student feedback is either directed to the appropriate review mechanism or addressed and actioned if appropriate
- Anonymous suggestion box in reception

190. Undergraduate students elect a School Educational Representative, who is the lead representative for the students. Each undergraduate year and each postgraduate programme also elects 2 representatives, who represent student views at Committees including:

- Learning Community Forum meetings
- TLA Committee meetings
- Postgraduate Committee
- Student membership of other relevant Committees and Sub-Committees at Faculty, Campus and University level

191. In addition, the three School funded Veterinary Education interns act as Student Liaison Officers, liaising between staff and students to help improve teaching and pastoral support.
192. In all routes of student feedback the relevant School Committee consider information and implement any required actions, with the exception of any negative feedback received as a result of student evaluation of teaching, in which case the Dean and member of staff would consider required improvements and/or development needs, in conjunction with the Divisional Head. Feedback on student feedback is provided, (e.g. as part of the examination feedback process). In addition, at the start of each academic year, a dedicated session is held so that the students are provided with a summary of their feedback and how issues raised have been addressed for the prior year and also details changes in their forthcoming year based on student feedback raised by students in the year above them.
193. The School follows University regulations on student complaints. It is desirable that complaints are resolved informally and quickly between the relevant parties, and the formal University process is only started if that fails.

Comments

194. In 2016 the School increased the cohort size for the veterinary course to 160. It appears that the school facilities, resources and staff are able to accommodate this increased number.
195. National Student Survey data indicates 100% overall satisfaction with the student experience by the students.
196. There is a strong community in which students, staff, support staff and the leadership work together in an open atmosphere and mutual feedback is appreciated.
197. The School has numerous and effective mechanisms available to provide students with comprehensive support. The Personal and Clinical Tutor system is well developed and staff appear highly engaged in this role. Pastoral and academic support is clearly organised and students understand how to access this support. Mutual feedback and reflection are provided and taken seriously throughout the whole programme, contributing greatly to the effectiveness of learning and professional development.
198. There are well established routes to enable students to give their views and to take responsibility for personal choices and decisions. The university-wide student participation programme (Students as Change Agents) is also implemented at the School where students can discuss problems, ideas and suggestions with clinical and administrative staff.
199. Information for students is structured, clear and well organised.
200. Students are strongly focussed on a clinical career within the UK. Many students do not appear aware or interested in the opportunities available to further their broader development outside the UK veterinary profession (e.g ‘Vet students as Global Citizens’).
201. To enhance widening participation of students from a disadvantaged background as well as high achieving non-science students, the School offers a 6 year programme (about 24 student a year) as well as the standard 5 year course.
202. Some internship and residency programmes are in place, however the number is low.
203. The student and staff community has little diversity in some respects. A small number of staff appeared to have limited skills in cultural competency.

Suggestions

204. The School should improve the range of clinical residency programmes and invest in clinical supervisors.

205. The School should establish a programme to develop a broader and more international orientation among students, and challenge students to look further than the present strong focus on a career in practice.

206. The School should continue to advocate the importance of diversity among staff and students. To increase ethnic diversity in the student population the School could explore further different initiatives aimed at encouraging applicants with different religious and racial backgrounds to overcome some of the cultural inhibitions which may reduce their interest in veterinary medicine as a career.

Recommendations

None.

Standard 7 – Admission and progression

7.1 The selection criteria for admission to the programme must be consistent with the mission of the school. The number of students admitted must be consistent with the resources available to the school.

7.2 In relation to enrolment, the school must provide accurate information in all advertisements regarding the educational programme by providing clear and current information for prospective students. Further, printed catalogue or electronic information must state the purpose and goals of the programme, provide admission requirements and procedures, state degree requirements, present faculty descriptions, clearly state information on tuition and fees along with procedures for withdrawal, give necessary information for financial aid programmes, and provide an accurate academic calendar. The information must include the accreditation status of the degree course (whether by RCVS or other relevant accrediting bodies), and the requirements for eventual registration/ licence, including fitness to practise.

7.3 The selection and progression criteria must be clearly defined, consistent, defensible, be free of discrimination or bias, and take account of the fact that students are admitted with a view to their entering the veterinary profession in due course.

7.4 An accurate description of the selection criteria and processes must be published and readily available to potential students. The school must regularly review and reflect on the selection processes to ensure they are appropriate for students to complete the programme successfully, including consideration of their potential to meet all the RCVS Day One Competences across the common UK domestic species.

7.5 Adequate training (including periodic refresher training) must be provided for those involved in the selection process to ensure applicants are evaluated fairly and consistently.

7.6 Potential students must be advised of the demands of the veterinary course and RCVS requirements for fitness to practise.

7.7 Factors other than academic performance should be considered for admission, with the aim of selecting students who will be capable of succeeding in a variety of fields within the profession.

7.8 The school must have a strategy for widening participation and engaging students from a variety of social backgrounds.

7.9 If not otherwise covered within the early part of the course, the entry criteria for the programme must include evidence that the student has a solid background in the chemical, physical and biological science and mathematics, in order to meet the requirements of the EU Directive on basic subjects.

Students with a disability

7.10 There must be clear policies and procedures as to how applicants with disabilities or illness will be considered and, if appropriate, accommodated on the programme, taking into account the requirement that all students must be capable of meeting the RCVS Day One Competences by the time they graduate.

Student Progression

7.11 The basis for decisions on progression (including academic progression and professional fitness to practise) must be explicit and readily available to the students. The school must provide evidence that it has mechanisms in place to identify and provide remediation and appropriate support (including termination) for students who are not performing adequately (including areas such as practical animal handling, client communication etc).

7.12 The school must have mechanisms in place to monitor attrition and progression and be able to respond and amend admissions selection criteria and student support if required.

Student Exclusion

7.13 Mechanisms for the exclusion of students from the programme, either for academic reasons or under fitness to practise procedures, must be explicit.

Appeals and misconduct

7.14 School policies for managing appeals against decisions, including admissions, academic and progression decisions, should be transparent and publicly available. The process for exclusion of students on any grounds must be explicit.

7.15 Policies for dealing with student misconduct and fitness to practise must be explicit.

Background

207. The School has a formal Admissions policy, approved by the Admissions Committee, which comprises School and University staff, external veterinary professionals and local secondary teachers. The policy defines admissions requirements and processes, including the requirement for training of assessors. The Committee reviews data relating to the prior admissions cycle yearly and reviews proposed changes for future cycles.
208. The admissions policy aims to encourage a more diverse range of people to apply and gain admission to study Veterinary Medicine at Nottingham.
209. The School provides a range of information to pre-applicants: UK Secondary Schools receive a School brochure; comprehensive information is available on the School website (http://nottingham.ac.uk/vet/prospectivestudents/index.aspx); the School visits secondary schools and career fairs and holds 4 interactive Open Days for pre-applicants per year. A summer workshop provides support to prospective students from disadvantaged backgrounds. Information provided describes the personal, financial and academic demands on students and expectations for regulated veterinary professionals.

Admissions process

210. To be admitted, students must meet the stated academic requirements, demonstrate motivation, practical aptitude, communication, enthusiasm, and other attributes that are linked to professional success and provide evidence of a minimum of 4 weeks' animal-related work experience. These selection requirements are linked to the attributes and qualities required of a new veterinarian as articulated in the RCVS 'Day One Competences' and 'Code of Professional Conduct for Veterinary Surgeons'.
211. Phase 1 – Academic Review: All Students must apply through UCAS. Applications are reviewed to ensure they meet minimum academic standards.
212. Phase 2 – Non Academic Personal Qualities Review: Personal and Referees Statements on the UCAS form are scored for understanding of the profession, motivation and interests.
213. Phase 3 – Widening Participation and Work Experience Detail Collection (via online survey): Information related to Widening Participation criteria and work experience, collected by on-line survey, is assessed.
214. Phase 4 – Motivation, ability, attitude and attribute assessment: The online questionnaire collects further information on the applicant's motivation, ability, attitudes and attributes for a career in the veterinary profession; as well as other experiences or achievements (e.g. sporting achievements, expeditions, music etc). The questionnaire is marked by veterinary qualified staff and is derived from RCVS Guide to Professional Conduct.
215. **Stage 5 – Situational Judgement Test:** The Situational Judgement Test (SJT) is a set of hypothetical scenarios relevant to the veterinary profession that applicants complete on-line. Applicants make judgements about possible responses and are assessed for competency in four attributes; empathy and building client relationships, professional integrity and trust, resilience and team work.

216. **Stage 6 – Assessment Centre:**

Candidates are ranked and top applicants attend the Assessment Centre.

- An interview is conducted by two members of staff, one of whom is a veterinary professional. The interview uses a scoring scheme to evaluate motivation, insight into a veterinary career and interest in veterinary topics together with communication skills, animal orientation and personal attitudes and attributes. Non-EU international applicants may be interviewed by Skype.
- A practical aptitude assessment is undertaken by UK and EU applicants. Applicants deal with animal material and clinical information and are scored using a scheme that assesses enthusiasm and aptitude including observational and analytical skills and animal orientation.
- A team working exercise is conducted with domestic applicants in a group situation to assess the individual's ability to work with a peer group

Staff involved in admissions assessments receive initial training, are offered refresher training yearly and are briefed in detail at every Assessment Centre session.

217. **Phase 7 – Offers:**
Assessment Centre data is standardised to reduce differences in marking between assessors, and students are then ranked. The information is reviewed by the Admissions Team and Admissions Sub-Deans. Applicants are considered solely on the basis of their merits, abilities and potential, regardless of gender, ethnic or national origin, age (subject to the University regulations on minimum age), disability, religion, sexual orientation or other irrelevant distinction. Successful applicants are made a conditional or unconditional offer by telephone, or are rejected by letter. Any offer is made subject to an Occupational Health assessment. All students offered a place on the course are required to accept the Veterinary School Code of Practice by signing a Student Entry Agreement.
218. For international students, the applicant may be interviewed by Skype, and may not undertake the practical or team assessments, and the full 4 weeks' work experience may not be required. International applicants must meet English language criteria (British Council IELTS test with a minimum score of 7.5 and 7.0 in each element).

Table 7.1: Undergraduate student demographic data (5 year course only)					
Year	Small Animal	Equine	Farm PhD	Farm + Pathology	
2016/17	1	2	3	1	3
2015/16	0	1	2	1	1
2014/15	0	1	3	1	1
2013/14	0	1	2	0	0
2012/13	0	0	2	0	0

Widening participation and enhancing diversity

219. The School remit to increase diversity in the veterinary profession in the UK, is addressed by a range of recruitment, admissions and access measures (e.g. summer workshops, School visits, contextual offers, Preliminary Year course).

Progression requirements

220. Progression criteria are provided in student handbooks and yearly through the circulation of an addendum to the handbook which covers all aspects of assessment (assessment timetables, detail on types of assessment, extenuating circumstance claim processes and progression criteria etc.)
221. For students on the 5 year course, to progress between years students must pass all modules at 50%. In all years there are non-mark bearing 'must pass' elements (OSPEs, Portfolio and Skills Diaries). For year 2 OSPEs and year 3 OSCEs students are required to pass 70% of stations. Students without valid extenuating circumstances have one opportunity to resit their assessments before they are required to leave the 5-year veterinary course, with the exception of AHDOPS (Animal Handling Directly Observed Procedural Skills), held in years 1 to 3 where there is no limit to the number of resits available.
222. In addition to passing all year 3 exams, students are required to have passed all Animal Husbandry DOPS, completed Animal Husbandry EMS and gained a minimum of a 2.2 BVMedSci degree in order to progress to year 4.
223. The average attrition rate in the veterinary program is 4.6%. Students who transfer course mostly transfer to the BVMedSci only course (students who do not meet the BVM BVS progression requirements in years 1 and 2, but meet the lower University progression requirements (40% compensatable pass mark per module) can continue but are required to exit with a BVMedSci degree at year 3. Absolute attrition reasons are predominantly long term ill health or career change. The reasons for attrition are monitored to inform admissions requirements and welfare support.

Academic misconduct and fitness to practice

224. Suspected cases of academic misconduct during teaching or examinations are regulated by University of Nottingham procedures. Following initial investigation by the Dean or nominated representative proven allegations may result in either a school-imposed penalty such as a written warning or the award of a mark of zero. More serious offences may be referred to the University Academic Misconduct Committee for consideration under the University of Nottingham Student Code of Discipline. In the most serious cases University Ordinances allow for exclusion of a student from the University.

225. Fitness to Practise is regulated by the University of Nottingham Faculty of Medicine and Health Sciences Fitness to Practise Board, which is attended by two members of School staff. Investigations into allegations are initially undertaken in school with preparation of a report which is considered by the Faculty of Medicine and Health Sciences Fitness to Practise Board which may recommend school based sanctions or escalation to a formal Committee investigation. The formal committee has the power to apply sanctions up to and including exclusion from the course. More minor, non-Fitness to Practice disciplinary issues are considered by Senior Tutors, which may result in a formal warning or if the disciplinary issue is outside School operations then it is considered under the University Code of Discipline.

Policy for appeals

226. The School abides by the University policy for appeals against academic decisions and progression. Students cannot appeal matters of academic judgement of an individual or Exam Board.
227. Students are made aware of the appeals procedure through their student handbook, in an assessment addendum (detailing examinations timetable, progression information etc) and are also given advice as required by their Personal Tutor, Examinations Officer or Teaching, Learning and Assessment Sub-Dean.

Comments

228. The School has a diverse and innovative range of methods used during the selection process and good

Table 7.2: Attrition of veterinary students

Entering class	Total Students	Reason for relative attrition			Absolute attrition		Total Attrition	
		Academic failure	Personal	Transfer to other UoN courses	Academic	Personal	n	%
2012	132	1 (0.8%)	3 (2.3%)	6 (4.5%)	0	4	14	10.6%
2013	132	2 (1.5%)	1 (0.8%)	6 (4.5%)	2	5	16	12.1%
2014	140	3 (2.1%)	8 (5.7%)	2 (1.4%)	0	2	15	10.7%
2015	135	2 (1.5%)	2 (1.5%)	0	2	1	7	5.2%
2016	163	0	0	0	0	2	2	1.2%

Attrition = Relative attrition + absolute attrition

Relative attrition = students moving to an earlier year or transferring to other University courses

Absolute attrition = students who leave and never return (excluding those on other University courses)

Students who intercalate are not included in this table

engagement of staff and applicants with this process.

229. The School has a cohort of students which progresses well throughout the veterinary programme, receives targeted support relevant to individual needs, and graduates with strong employment outcomes and employer feedback.

230. The widening participation programmes have increased participation of disadvantaged and first generation university students, but rates of ethnic diversity are low and declining. International student admissions have declined.

231. The number of students admitted has risen and the cohort could reach the recently revised target of 160.

Suggestions

232. The School should investigate and address factors limiting application and admission of individual applicants from ethnic and non-English speaking backgrounds.

Recommendations

None.

Standard 8 – Academic and support staff

8.1 The institution must ensure that all staff are appropriately qualified and prepared for their roles.

8.2 The total number, qualifications and skills of all staff involved with the programme, including teaching staff, 'adjunct' staff, technical and support staff, must be sufficient and appropriate to deliver the educational programme and fulfil the school's mission.

8.3 Staff who participate in teaching must display competence and effective teaching skills in relevant aspects of the curriculum, regardless of whether they are full or part time, residents, interns or postgraduate students, adjuncts or off-campus contracted teachers.

8.4 Academic positions must offer the security and benefits necessary to maintain stability, morale, continuity, and competence of the academic staff. Academic staff should have a balanced workload of teaching, research and service depending on their role; and should have reasonable opportunity and resources for participation in scholarly activities.

8.5 The veterinary school must provide evidence that it utilises a well-defined, comprehensive and publicised programme for the professional growth and development of staff; including formal appraisal and informal mentoring procedures, especially for junior academic staff. Staff must have the opportunity to contribute to the school's direction and decision making processes.

8.6 The school must be able to demonstrate that it has a programme for staff development in tertiary teaching theory/practice, and how that programme is managed.

8.7 Promotion criteria must be clear and explicit. Promotions must recognise excellence in, and place equal emphasis on all aspects of teaching (including clinical teaching), research, service and other scholarly activities.

Please note particular differences in ESEVT SOP as follows:

9.1. The Establishment must ensure that all staff are appropriately qualified and prepared for their roles, in agreement with the national and EU regulations. A formal training (including good teaching and evaluation practices, learning and e-learning resources, biosecurity and QA procedures) must be in place for all staff involved with teaching. Most FTE academic staff involved in veterinary training must be veterinarians. It is expected that greater than 2/3 of the instruction that the students receive, as determined by student teaching hours, is delivered by qualified veterinarians.

Background

233. There are currently 140.5 FTE / 159 headcount staff in the School, of which 51.2 FTE / 61 headcount are vets (27.7 FTE / 32 headcount of are Specialists (possessing a Diploma)).
234. Academic staff are recruited to one of three main career paths within the research and teaching job family dependent on the focus of the role:
- A combination of research and teaching;
- Wholly or mainly involved in research;
- Wholly or mainly involved in teaching and learning.

235. The School is organised into three Academic Divisions and an Administrative Division, which primarily act to provide a line management structure. The Divisions of Veterinary Medicine, Veterinary Surgery and Animal Health and Welfare contribute teaching and clinical input throughout all years of the course. Each of these academic divisions comprises academic staff from all grades; there is no sub-structure to the Divisions (albeit Postdoctoral Research Assistants and Postgraduate students report to their supervisors). Allocation to Divisions is made on similarity between research and teaching interests of the individuals.
236. There are 26.8 FTE technical staff and 18.8 FTE administrative staff in the School; in addition, there are 24.6 FTE of central University Professional Services staff that support the School. Technical staff are either entirely dedicated to supporting teaching (e.g. the

preparation of material for dissection, organising and demonstrating clinical equipment, looking after animals etc) or in a combined research/teaching role, where the majority of focus is on supporting staff with research and also providing input and guidance to postgraduate students and Year 3 project students. There are 5 levels of technician in the School. There are 6 levels of administrative staff in the School, who undertake a range of activities.

237. Staff are appointed to permanent or fixed term contracts. The majority of staff are appointed on permanent contracts, funded by the Higher Education Funding Council for England and Student Fees. No staff are appointed in relation to Clinical income (as this is retained by the Clinical Associate), staff theoretically may be employed from service income, however there are no staff funded in this way. Staff on fixed term contracts are predominantly recruited to Research Associate/Fellow positions on fixed term research grants, or recruited to provide cover for example maternity leave.

Staff recruitment and retention challenges

238. The School has put in place financial incentives to attract clinical staff including a consolidated and pensionable 10% or 15% market supplement. In addition, a further clinical supplement is available for staff based at Clinical Associates undertaking clinical work and out of hour's activities, this supplement is 15% or 20% of salary after addition of the market supplement. Clinical supplements partly meet the difference between academic and commercial salaries, however there are additional tangible and intangible benefits associated with employment in an academic institution (e.g. academic environment, pension scheme, sports facilities etc).
239. A number of School staff are employed on part time contracts, in particular 0.2 FTE roles for staff facilitators of clinical relevance sessions. Part time staff are treated as members of University staff.
240. There are a variety of University policies designed to maintain a stable cohort of academic and support staff. The School supports requests for part-time or other flexible working arrangements. Divisional Heads develop bespoke programmes for individuals.

Staff support and development

241. At the annual appraisal meeting Divisional Heads review workload and approve personal development plans. The University Professional Development Unit provides development advice and courses for all staff though a varied programme of short courses and accredited qualifications. Themes such as professional and personal development, managing people and projects, and equal opportunities are delivered through a variety of methods such as web based training, forums and traditional courses.
242. Each academic member of staff has a yearly fund to attend scientific meetings or professional development. A centrally held training budget can subsidise additional attendance at relevant professional development opportunities where there is justification that attendance would aid a member of staff's personal development. The School supports staff to undertake academic qualifications, currently 3 staff are undertaking PhDs, and 2 are also undertaking study for the DipECVPH. Support staff also access this funding to undertake professional development.
243. A 'buddy' Peer Observation of Teaching process is in place. All academics are assigned to work in a group of 2-4 and are encouraged to observe teaching of other members of the group on a yearly basis. All academic members of staff are aligned with a senior staff research mentor with whom they meet once a semester to discuss research and funding opportunities, to identify and cultivate collaborations and discuss career opportunities and development.
244. Funding for relief teaching, examining, or administrative duties up to a maximum of £5,000 is provided by the School to support research development and sabbatical visits. The sabbatical scheme supports visits for a period of 3 to 6 months or shorter.

Table 8.1: School staff support for teaching and research

	Technical staff FTE	Administrative and other staff FTE
Responsible for the care and treatment of animals	**15.3**	**0**
Responsible for the preparation of practical and clinical teaching		**0**
Responsible for administration, general services, maintenance etc	**0**	**17.8**
Support staff primarily engaged in research	**11.5**	**1.0**
Total	**26.8**	**18.8**

The teaching technical team care for School teaching animals (approximately 0.2 FTE) and prepare for practical teaching so the category is merged.

In addition there are 24.6 FTE staff based in central University functions (e.g. Student Services, Estates, HR, Dairy Farm, and Finance etc.) that directly support the School.

Table 8.2: Non Veterinary qualified FTE staff						
Status	Title	Non degree (and unassigned for Clinical Associates)	Bachelor degree	Bachelor + PhD	Bachelor Masters+PhD	Higher Degree and Fellows
	Administrator					
	Professor			2.0		4.0
Full time	Associate Professor			6.0	4.0	2.0
(>75%)	Assistant Professor			5.0	5.8	1.0
	Teaching Fellow	2.0				
	Research Fellow		1.0	5.0	2.0	
	Administrator					
	Professor			0.4	0.5	
Part time	Associate Professor					
(<75%)	Assistant Professor				0.6	
	Teaching Fellow	1.2		0.5		
	Research Fellow			0.5		
	Clinical Associate Staff	0.6				
Total		3.8	1.0	19.4	12.9	7.0
Total non veterinarians	44.1					

Higher degree is DSc; Fellows include FRCPath, FRSB, FRSC, these staff possess other qualifications (e.g. Bachelors and PhD).

Clinical Associate staff include veterinary nurses, farriers, and army staff and are not differentiated into categories.

Promotion policies

245. The University's promotion process for academic staff recognises a high level of achievement in 3 broad areas of activity:

- Research and scholarship: research activity (including research income and publications), and standing within the UK and international research community
- Teaching and learning activity: teaching quality, teaching leadership, educational research, teaching innovation and good citizenship, including PhD supervision, outreach etc. For clinical staff, clinical activity is also considered within teaching.
- Academic service: e.g. leadership, management, administration, collegiality, knowledge transfer or pastoral care within the University, or by engaging with the wider community on behalf of the University.

246. There are no promotion opportunities for support staff. They can apply for a higher-grade role or roles may be regraded.

Comments

247. Total academic and support staff numbers are sufficient for the School's programmes. Qualifications of the academic and support staff address the breadth of veterinary disciplines, however some disciplines are less well represented in number and seniority amongst the School's academic staff (for example small animal surgery, equine surgery and diagnostic imaging). Close to half of all veterinary surgeons involved in teaching are specialists, and approximately two-thirds hold a PhD.
248. The recent restructuring of administrative support for student services has led to some concern from staff that there may be an impact on the availability of support but student and recent staff experience did not confirm this has translated into any noticeable drop in service.
249. Staff in academic, clinical, administrative and technical roles are dedicated to teaching of veterinary students, and students recognise their teaching skills and commitment.
250. A comprehensive programme of staff development was in evidence, including mandatory programmes for teaching, inclusivity and wellbeing support. Mentoring in research and teaching peer support programmes put in place by the School are considered effective.
251. Academic and clinical staff veterinary surgeons contribute to the wider profession through service to specialist groups and associations.
252. Explicit promotion policies have supported career progression, and have rewarded achievement to professorial level in teaching. Staff, including clinical

Table 8.3: Veterinary qualified FTE staff employed

Status	Title	Vet degree only (and unassigned for Clinical Associates)	Vet degree + Masters	Vet degree + PhD	Vet degree + Masters + PhD	Vet degree + RCVS Cert	Vet degree + Masters + RCVS Cert	Vet degree + PhD + RCVS Cert	Vet degree + EU/RCVS/ American Diploma	Vet degree + Masters EU/RCVS/ American Diploma	Vet degree + PhD + EU/RCVS/ American Diploma	Higher degrees and Fellows
Full time (>75%)	Dean											1.0
	Professor								1.0		3.8	4.0
	Associate Professor			1.0	1.0	1.0		1.0	2.0		6.0	2.0
	Assistant Professor	3.0		3.0					2.0		6.0	3.0
	Teaching Fellow	4.7	2.0									
Part time (<75%)	Administrator											
	Professor											
	Associate Professor							0.2	0.7			
	Assistant Professor					0.5				0.4		
	Teaching Fellow	0.4	0.4			0.1	0.3		0.2			
	Research Fellow										0.6	
	Postgraduates	1.0	1.0									
	Clinical Associate Staff	14.1										
Total		**23.2**	**3.4**	**4.0**	**1.0**	**1.6**	**0.3**	**1.2**	**5.9**	**0.4**	**16.4**	**10.0**
Total veterinarians		**67.4**				**Total School specialist veterinarians**					**27.7**	

Diploma holders may also possess Certificates

Fellows include FRCVS and FRCPath. These staff possess other qualifications (e.g. Bachelors, PhD, Certificates and Diplomas).

Clinical Associate staff include many staff with Certificates and Diplomas however it is overly complicated to assign the FTE per Clinical Associate to qualification categories

Postgraduates include 2 farm residents and 2 zoo DVetMed students

No external teaching deliverers, apart from Clinical Associate effort, is included.

teachers, are supported to pursue further teaching qualifications.

253. The School has yet to achieve fully its ambitionss for a diverse workforce (for example ethnicity, non-English speaking background), however it has demonstrated success in career advancement.
254. Staff have been recognised by a broad range of teaching and professional awards.

Suggestions

255. The School should progress recruitment of academic staff to ensure core disciplines have expert academic leadership and expertise.
256. Processes to enable the development and progression of technician and administrative staff will enable the School to retain them and advance their careers.
257. It is positive to note that all staff have had training in unconscious bias and the School is encouraged to ensure lessons learnt from this training are implemented.

Recommendations

None

Standard 9 – Curriculum

9.1 The curriculum must be designed, resourced and managed to ensure all graduates have achieved the graduate attributes expected of a degree programme at level 7 in the European Qualifications Framework, the minimum training requirements in the European Directive 2013/55/EU on the mutual recognition of professional qualifications, and the RCVS Day One Competences.

9.2 The learning outcomes for the programme must be explicitly articulated to form a cohesive framework.

9.3 Programme learning outcomes must be communicated to staff and students and:

- **underpin and ensure the effective alignment of all content, teaching, learning and assessment activities of the degree programme;**
- **form the basis for explicit statements of the objectives and learning outcomes of individual units of study; and be reviewed, managed and updated to ensure they remain relevant, adequate and are effectively achieved.**

Management

9.4 The school must have a formally-constituted committee structure (which includes effective student representation), with clear and empowered reporting lines, to oversee and manage the curriculum and its delivery. The committee(s) must:

- **determine the pedagogical basis, design, delivery methods and assessment methods of the curriculum,**
- **oversee quality assurance of the curriculum, particularly gathering, evaluating, making change and responding to feedback from stakeholders, peer reviewers and moderators, and data from examination/assessment outcomes,**
- **review the curriculum at least every seven years and**
- **identify and meet teacher training needs for staff, maintaining currency of their skills and competence for future curriculum development.**

Content

9.5 The curriculum should include the following:

- **understanding of biological principles and processes of veterinary significance**
- **expertise in recognising and advising on normal animal structure and function, husbandry, behaviour, nutrition and feeding, reproduction and breeding, homeostasis, pathophysiology, agents of disease and the natural history and clinical manifestations of important animal diseases**
- **expertise in medicine, surgery, and anaesthesia applicable to a broad range of common species. Students must develop entry-level skills in physical examination and laboratory diagnostic techniques and interpretation (including clinical pathology, diagnostic imaging and necropsy), disease prevention, biosecurity, therapy (including surgery and pharmacotherapeutics), patient management and care (including primary care, intensive care, emergency medicine, surveillance and isolation procedures) for individual animals, herds, flocks and other populations**
- **knowledge, skills, values, attitudes and behaviours necessary to contribute, as a veterinarian, to promoting animal health and well being, within changing societal expectations**
- **clinical, epidemiological, pathophysiological and regulatory skills in management of animal diseases which are:**
  - **endemic to the UK and the EU**
  - **endemic to and of special consideration in the country in which the school is located;**
  - **exotic to the UK and the EU and which are currently regarded as being of concern as potential emergency animal diseases or diseases of global veterinary significance**
  - **significant emerging diseases**
- **entry level capability (to OIE standards) in preventative medicine/epidemiology, zoonoses, food safety and hygiene, regulation of animals and animal products, and management of the interrelationship of animals and the environment. This training must include experience in abattoirs.**
- **professional level problem solving skills in evidence-based diagnosis and clinical management, and data and information management skills**
- **capacity for professional communication; the ability to acquire information from the owners of animals by direct interaction as well as retrieval of archival data from medical records, communication with colleagues, regulatory bodies and clients**

- **skills in application of professional ethics, delivery of professional services to the public, personal and business finances and management. An appreciation of the breadth of veterinary science, career opportunities and relevant information about the veterinary profession**
- **self-management skills in identifying and meeting personal learning needs, maintaining well being and professional relationships.**

Extra Mural Studies (EMS)

9.6 EMS must be an integral and structured part of the education and training of veterinary students. Veterinary schools must demonstrate how it is incorporated in the curriculum.

9.7 Evidence must be provided that extramural farm animal husbandry practical work is used within the curriculum to complement intramural studies to support students' attainment of comprehensive understanding of livestock and farm systems.

9.8 Intra-mural core teaching must be supported by extramural clinical studies.

9.9 There must be a system in place to enable EMS providers to provide feedback to the school on the performance of students during EMS and on the EMS programme.

9.10 There must be a member of the academic staff responsible for the overall supervision of all types of EMS, including liaison with EMS providers and ensuring all students secure required placements.

9.11 The school must have mechanisms in place to support students to take responsibility for their own learning during EMS, including preparing before each placement, setting learning objectives in consultation with tutors, being familiar with guidance provided by their university and RCVS for EMS, communicating effectively with placement providers before, during and after placements, and maintaining a reflective log of their EMS experience.

Please note particular differences in ESEVT SOP as follows:

3.6. External Practical Training (EPT) are training activities organised outside the Establishment, the student being under the direct supervision of a non-academic person (e.g. a practitioner). EPT cannot replace the core intramural training nor the extramural training under the close supervision of academic staff (e.g. ambulatory clinics, herds visits, practical training in FSQ).

3.7. Since the veterinary degree is a professional qualification with Day One Competences, EPT must complement and strengthen the academic education by enhancing for the student the handling of all common domestic animals, the understanding of the economics and management of animal units and veterinary practices, the communication skills for all aspects of veterinary work, the hands-on practical and clinical training, the real-life experience, and the employability of the prospective graduate.

3.8. The EPT providers must have an agreement with the Establishment and the student (in order to fix their respective rights and duties, including insurance matters), provide a standardised evaluation of the performance of the student during their EPT and be allowed to provide feedback to the Establishment on the EPT programme.

3.9. There must be a member of the academic staff responsible for the overall supervision of the EPT, including liaison with EPT providers. 3.10. Students must take responsibility for their own learning during EPT. This includes preparing properly before each placement, keeping a proper record of their experience during EPT by using a logbook provided by the Establishment and evaluating the EPT. Students must be allowed to complain officially or anonymously about issues occurring during EPT.

Background

258. The curriculum has been designed to meet the RCVS Day One Competences, QAA Subject Benchmark and EAEVE Subject Areas, with additional key underpinning themes of providing a grounding in basic science, research literacy and ensuring development as professionals. The programme has been mapped to RCVS Day One Competences and EAEVE clinical competences.

259. The aims of the programme are that students should have, on graduation:

- Broad knowledge of the basic sciences on which the activities of veterinary surgeons are based
- Broad knowledge of the structure and functions of healthy animals in relation to husbandry, health, welfare, housing, reproduction, behaviour, nutrition and hygiene
- Knowledge of animal health and its promotion and of disease and its causes, diagnosis, management,

treatment and prevention
- Practical competences allowing accurate, safe and practical handling, examination, diagnosis and sample collection and analysis
- Knowledge of clinical pharmacology, medical and surgical skills and techniques
- Knowledge of veterinary public and animal health standards, processes and issues including animal foodstuffs, transmittable and notifiable zoonotic diseases and animal welfare
- Problem solving ability, and knowledge, understanding and skills in contemporary research
- Professional skills and attributes ensuring effective communication, liaison and team working with clients, colleagues and other stakeholders; understanding of the professional, legal and ethical responsibilities of the veterinary surgeon with regard to RCVS guidelines and in the wider society, including the obligation for a commitment to continuing professional development, coupled with due recognition of their own personal limitations
- Skills and attributes for further professional development and continual lifelong learning as a veterinary surgeon

260. The curriculum is a vertically (clinically) and horizontally (subject) integrated programme and uses a range of teaching methods. In Years 1 and 2, systems-based clinical science modules cover structure and function in the normal animal. Each systems-based module is then repeated in Year 4, when the clinical aspects of disease, diagnostics and treatment are delivered. The first (clinical science) and second (clinical) modules for each body system are scheduled contemporaneously during the academic year, enabling the clinical students to revisit any relevant clinical science teaching during the clinical module. Year 4 students are also involved in peer-led teaching to earlier years thereby ensuring they review the relevant basic science relating to that module.
261. Learning is reinforced by the introduction of clinical case scenarios from the beginning of the course with the aim of developing problem-solving and clinical reasoning attributes. Lifelong learning skills are developed through the inclusion of self-directed and group work.
262. In addition to 'block' system-based modules, there are also 'long' modules running throughout the year cover areas such as Animal Health and Welfare, and Personal and Professional Skills.
263. Year 3 is a transition year between clinical science and clinical modules. A twelve-week free choice research project at the start of year 3 allows students to develop research skills including literature searching, experimental design, analysis of data and scientific writing techniques.
264. Year 5 is lecture free and students undertake a series of Clinical Practice Rotations that comprise small-group clinical teaching in a workplace situation. The year is competency-based, and allows students to further develop clinical skills, reasoning, knowledge and professionalism in the context of the workplace. Teaching and learning is based upon practical experience, observation and discussion but may also include seminars, case rounds, practical classes and self-directed learning; students are normally under the supervision of University academic staff working from the School campus or placed at, and working within, the Clinical Associate. The 26 weeks of rotations are delivered over a period of 50 weeks. During year 5, students also undertake a 4 week elective in Specialist Practice. A 1 week compulsory Emergency and Critical Care/Out of Hours EMS placement is currently required, but it is planned that it may become a core rotation. A further 21 weeks comprises study /vacation time and time for required Clinical Extramural Studies.
265. Students meet RCVS requirements for EMS, undertaking it during vacation periods. They cannot progress to Clinical Extra-Mural Studies until completion of Animal Husbandry EMS.

Basic subjects

266. A systems-based approach covers each major body system as a separate module in which all basic subjects are included. In Years 1 and 2, these clinical science modules cover structure and function in the normal animal.
267. There is incremental development of understanding in a range of basic science subjects including anatomy, physiology, biochemistry, embryology, immunology, genetics, molecular biology and microbiology within the systems based modules undertaken in Years 1 and 2. Subjects which traditionally have been considered as 'paraclinical' such as pathology, microbiology, parasitology and immunology are also taught within the system based modules in Years 1 and 2 and are complemented and reinforced by additional teaching in a Year 3 Principles of Clinical Veterinary Science Module. Basic subjects and sciences are considered as embedded modules within the curriculum and tracked to avoid any omissions or duplications across the modules. It is expected that when students progress to the clinical modules in Year 4 they are conversant with all the material taught in the clinical science system-based modules and the long modules delivered in Years 1 and 2.

Animal production

268. Animal production is primarily covered within Animal Health and Welfare modules which are "long modules" running through years 1 and 2. Teaching is integrated with concurrent systems based teaching where

appropriate. Three of the guiding aims of these modules are to provide:

- An introduction to the health and husbandry of the common species on which to build throughout the remainder of the course.
- A basic understanding of animal industries and the role of the different species in society
- The key animal handling and practical skills to enable students to effectively and efficiently learn during Animal Husbandry EMS and clinical EMS.
- Animal production is consolidated during clinical teaching in year 4 and Year 5 rotations.

Clinical subjects

269. Delivery of clinical sciences exploits the vertical integration of the course to allow embedding of clinical concepts and skills alongside basic sciences from Year 1. In Years 1 to 3 clinical material is used to reinforce and contextualise the basic subjects and sciences, and practical skills which are core to later development of clinical competence are taught, practised and assessed. In Year 4 of the course emphasis is primarily clinical, utilising and building upon earlier concepts and knowledge. Year 4 students are also involved in peer led teaching to earlier years thereby ensuring they are cognisant of all the relevant basic science relating to that module. The development of clinical knowledge is also supported by EMS.
270. The lecture-free Year 5 is based at the School and Clinical Associates in which clinical teaching is delivered in the context of a large, varied caseload relevant to the 'Day One' veterinary graduate. Total Clinical Rotations are 26 weeks. There are plans that the current 1 week compulsory Out of Hours / Emergency and Critical Care CEMS may become a core rotation.

Food hygiene

271. The principles of the food chain of a variety of species, epidemiology, milk production and microbiology are delivered in body systems based modules where appropriate. In Year 3 the Veterinary Public Health (VPH) module integrates the principles and concepts of food hygiene, population medicine and veterinary epidemiology. Furthermore, the management and surveillance of zoonotic and notifiable diseases is developed and its context with regard to legislation and enforcement defined. The students are expected to develop an understanding of the public health issues relating to other food sources and to exhibit a working knowledge of the basic food sciences including food technology, processing and preservation as well as the relevant environmental and economic issues associated with food production. Food hygiene knowledge is applied in context during the year 5 VPH rotation.

Preventative medicine

272. Preventative medicine topics are integrated into the systems-based modules as appropriate. Preventative medicine teaching is consolidated during final year, where students commonly lead vaccination/wellness consultations during some small animal rotations, and design farm animal health preventative strategies during relevant rotations.

Professional skills

273. Personal and professional skill teaching is delivered in each year of the curriculum. This material is taught in two ways; firstly, the stand-alone module Personal and Professional Skills (PPS), and secondly, learning outcomes from PPS are integrated at multiple relevant points within other system based modules. Within the PPS module, teaching is often experiential or discussion based and uses techniques such as the use of medical actors for communication skills sessions. Years 1,2 and 4 contain standalone PPS modules. In year three professional skills are included in the Clinical and Professional Skills module, which prepares the students for Clinical EMS placements.

Curricular changes

274. There have been no major changes to the content of the curriculum since the last visitation, but there have been some organisational changes.
275. Veterinary Public Health, was formerly taught as a long module in Year 4 but it was recognised that this was not helpful to student learning. It is now largely delivered in a block module in year 3, adjacent to the Principles of Veterinary Science module but, after review, some content was re-integrated back into the year-4 systems modules. These changes in VPH delivery also resulted in the merging of Year 3 PPS into Practical Techniques to form a new Clinical and Professional Skills module. The length of the research projects has been slightly reduced to accommodate the movement of VPH to year 3, but the intended learning outcomes are unchanged.
276. There have been some changes associated with year 5:

- A compulsory introductory week prior to rotations starting has been restructured to offer all the information on health and safety and pastoral support, surgical and anaesthesia refresher practicals, advice about DOPS and assessment, CV and financial planning sessions, and a visit from an RCVS representative.
- Students no longer attend Dogs Trust Loughborough during their small animal PDSA rotation, instead they attend a newly established small animal practice (Pinfold Vets) as part of the PDSA Nottingham rotation
- Students are now able to choose to either spend 2 weeks at Dick White Referrals, or 2 weeks at first opinion small animal department at Oakham Veterinary Hospital

Table 9.1: Current compulsory Clinical rotations and planned changes

Core Rotation	2017/18 weeks		2018/19 weeks	
Small Animal	Primary care	2 weeks Pride / Shelton Lock	Primary care	2 weeks Pride / Shelton Lock
	Referral medicine, anaesthesia and imaging	2 weeks Pride	Referral medicine, anaesthesia and imaging	2 weeks Pride
	Charity/shelter	2 weeks PDSA/Pinfold	Charity/shelter	2 weeks PDSA
	Specialist / referral care or Primary care	2 weeks (DWR or OVH)	Specialist / referral care or Primary care	-
Equine	Equine skills	2 weeks School / DAC / Scarsdale / Bransby	Equine skills	2 weeks School/DAC/ Scarsdale
	Equine hospital practice	2 weeks Oakham	Equine practice	2 weeks Oakham
	Equine ambulatory	2 weeks Oakham		
Farm	Farm skills	2 weeks School	Farm skills	2 weeks School
	Farm practice	2 weeks Scarsdale	Farm practice	2 weeks Scarsdale / New CA
	Herd Health	2 weeks School		-
Veterinary Public Health		2 weeks School	Veterinary Public Health, ethics and biosecurity	2 weeks School
Anatomic pathology		1 week School 1 week Minster	Anatomic pathology	1 week School 1 week Minster
Exotics		1 week Twycross Zoo		-
Introduction		1 week School	Introduction	1 week School
Compulsory track	-	-	Flexible	6 weeks
Compulsory CEMS	Out of hours / Emergency and Critical Care	1 Week Pride	Out of hours/Emergency and Critical Care	1 week Pride 1 week VetsNow

- Students spend 2 weeks on a primary care rotation which is split between the Pride Hospital (1 week) and a branch practice (Shelton Lock), where the case load is a mix of private and Blue Cross clients. The Pride Hospital is also the site for the 2-week small animal referral rotation, which now consists of medicine, anaesthesia (and pain clinics) and diagnostic imaging. Students may also spend time with other referral disciplines.
- Students now undertake a 2-week equine skills rotation based at the School instead of at Scarsdale Vets. Within this rotation students spend 2 days undertaking ambulatory work at Scarsdale equine practice, 1 day performing dentistry at the Defence Animal Centre (DAC), and clinical pathology teaching at Pride laboratory
- Students with a particular interest in equine work can opt to spend some of their 4-week Oakham-based equine practice rotation at the DAC
- The Farm skills rotation has evolved since the last visit to include more teaching around the non-dairy species (sheep and pigs)
- The Zoo/exotics rotation has been reduced from 8 days to 5 days. Additional staffing at the zoo and the

Table 9.2: Animal Husbandry EMS requirements		
Nature of work	**Minimum period**	**Minimum number of animals on farm/ unit**
Lambing	2 weeks	200
Pig	2 weeks	60
Equine	2 weeks	Commercial establishment
Dairy	2 weeks	75
Free choice (e.g. vet nursing, cattery, zoo)	4 weeks	

Table 9.3: Clinical EMS requirements		
Nature of work	**Type**	**Minimum period**
Elective Specialist EMS	Formalised compulsory– the type of experience (farm, small animal or equine) is chosen by student but organised by the School at Specialist practices and attended by all students	4 weeks
Emergency and Critical Care/Out of hours	Formalised compulsory– organised by School at Pride Veterinary Centre and attended by all students	1 week
Other	Free choice - student selected based on learning needs, likely career choice and discussion with Personal Tutor, e.g. practice, research, veterinary business, veterinary education. An optional Specialist Elective Rotation is offered by the School, which covers various Small Animal related topics (e.g. dermatology, clinical pathology)	21 weeks

construction of a new purpose built veterinary facility has further improved this rotation. Students no longer spend a day at the Chine House practice

- All students currently undertake a compulsory week of out of hours/emergency CEMS at Pride in groups of 2 or 3 under close supervision of the out of hours' clinicians. It is planned that this may become a core rotation.

277. There are no elective subjects within the curriculum, however there are inherently elements of choice:

- Students are able to select the topic of their year 3 research project
- Flexibility in Extra Mural Studies allows students to focus their activities in species of interest
- Year 5 EMS includes Elective Specialist Practice rotations organised by the School
- Year 5 rotations provide choice in the ability to choose 2 weeks referral or 2 weeks Primary Care Small Animal rotation

278. Currently students have to choose Specialist EMS in one of small animal practice, equine practice or farm animal practice. From 2018, the School will operate core and track rotations which will give students more exposure to specialist level practice in the area of their choice.

Teaching in abattoirs and premises for food production

279. Students undertake a 2-week module on Veterinary Public Health in Year 3. Additionally learning objectives of veterinary public health relevance are embedded in body system modules in Year 4. The VPH module is delivered by School staff and external specialists. During Year 5 students undertake a 2-week VPH rotation. In this rotation visits are undertaken to a variety of abattoirs and food production units; in the most part these visits are undertaken with no payment to the host.

External Practical Training (EPT)

280. The School does not provide EPT, rather it utilises a community-based teaching model as part of Intra Mural Rotations and also facilitates Extra Mura Studies as required by the RCVS.

Extra Mural Studies

281. Students are obliged to undertake a total of 12 weeks Animal Husbandry EMS and a total of 26 weeks Clinical EMS. The School organises EMS according to guidelines provided by the RCVS. EMS is supported by a 2FTE administrative team, with academic and strategic input from the Student Placement Sub-Dean. This team aids students in selecting suitable EMS placements if required, and provides administrative support around booking of placements, guidance for hosts, insurance and safety information and assessment of and feedback from, and about, students.
282. Twelve weeks of animal husbandry EMS are required to be undertaken in Years 1 and 2 in order to meet the requirements of the BVMedSci degree. Relevant topics in the wider curriculum prepare students for AHEMS (e.g. a lambing practical is held before Easter vacation in Year 1) and also encourage students to maximise their opportunities on placement.
283. Students are required by the RCVS to undertake 26 weeks of Clinical EMS (CEMS) in order to graduate with the BVM and BVS degrees. They can only undertake CEMS once AHEMS is completed, and are only allowed to complete a maximum of 6 weeks before the end of Easter vacation of Year 3 of the course.
284. The School organises 4 weeks of rotations in Elective Specialist Practice in Year 5 as shown in Table 9.4. Students are required to choose one of these options.
285. All Placement providers are provided with a Host pack covering logistical details of the placement, a commitment statement by the School, and a Health and Safety disclosure. Each placement provider will also receive details of the aims and objectives for the EMS. CEMS hosts also receive a pack that contains an overview of the course, a copy of an extract from the RCVS 'Clinical Extra Mural Studies: A manual for participating practices', and details of skills and techniques appropriate to the year of study of the student.
286. Students are required to complete an Action Plan ahead of each placement, in consultation with their Personal Tutor. Whilst on EMS placement students are required to complete a Health and Safety Questionnaire, and are encouraged to complete pieces for the Portfolio and entries in their Skills Diary. Students are expected to discuss their action plans, experience and learning objectives for the placement with the host on arrival. After the placement students are required to complete a Placement Feedback Form to provide general feedback about their placement. Hosts are requested to complete feedback on the student's skills, attitudes and behaviours and areas for improvement. Feedback is discussed at Personal Tutorials (or earlier if specific immediate concerns have been raised). Placement Hosts will be contacted for more details if they have raised any specific issues or areas of concern. Experiences on Placement are thus assessed by:

- Host feedback on the student
- Review of outcomes of the Action Plan with the Personal Tutor
- Portfolio pieces reviewed by the Personal Tutor
- Review of Skills Diary by the Personal Tutor

Comments

287. The curriculum is integrated both vertically and horizontally yet has been mapped to the RCVS and EAEVE Day One Competences through curriculum mapping software.
288. The use of Clinical Associate practices to deliver clinical teaching exposes students to relevant case material

Table 9.4: Elective Specialist Practice EMS requirements

Rotation	Location	Weeks	Practical work
Small Animal	VetsNow	2	Emergency Small Animal Medicine and Surgery
	Dovecote Veterinary Hospital	2	Advanced small animal practice
Farm Animal	XL Vets	4	Advanced Farm Animal practice
Equine	Chine House	4	Emergency equine medicine and surgery
	Bell Equine		Advanced equine medicine and surgery
	Rainbow Equine		Advanced equine medicine and surgery

Table 9.5: Digest of units of study (hours)

Module	Credits	Hours						
		Lectures	Tutorials, seminars & PBL	Online and Other	Labs and supervised practical's	Clinical	EMS	Total
Year 1								
D11MSK Veterinary Musculoskeletal System 1	30	43	49	0	35	17	0	**144**
D11LCB Lymphoreticular Cell Biology	10	18	15	1	16	0	0	**50**
D11CRS Veterinary Cardiorespiratory System 1	30	51	49	2	23	11	0	**135**
D11NEU Veterinary Neuroscience 1	30	52	47	2	28	14	0	**143**
D11AHW Animal Health and Welfare 1	15	32	2	2	25	0	0	**61**
D11PPS Veterinary Personal and Professional Skills 1	5	9	29	1	4	2	0	**44**
Extra Mural Studies	0	0	0	0	0	0	210	**210**
Total	**120**	**205**	**191**	**8**	**131**	**44**	**210**	**787**
Year 2								
D12GIL Veterinary Gastrointestinal System 1	40	78	68	0	37	19	0	**202**
D12URI Veterinary Urinary System 1	15	32	16	2	12	6	0	**67**
D12REP Veterinary Reproduction 1	20	35	29	0	22	11	0	**97**
D12ENI Veterinary Endocrine & Integument Systems 1	25	42	26	2	20	10	0	**100**
D12AHW Animal Health and Welfare 2	15	31	19	0	13	0	0	**62**
D12PPS Veterinary Personal and Professional Skills 2	5	25	23	0	5	3	0	**55**
Extra Mural Studies	0	0	0	0	0	0	210	**210**
Total	**120**	**243**	**181**	**4**	**109**	**49**	**210**	**793**
Year 3								
D13PRO Veterinary Research Project	40	0	0	384	0	0	0	**384**
D13PVS Principles of Clinical Veterinary Science	30	59	41	1	20	10	0	**131**
D13VPH Veterinary Public Health	20	15	13	2	5	5	0	**40**
D13CPS Clinical and Professional Skills	30	20	15	0	0	35	0	**70**
Extra Mural Studies	0	0	0	0	0	0	210	210
Total	**120**	**94**	**69**	**387**	**25**	**50**	**210**	**835**
Year 4								
D14ENI Veterinary Endocrine & Integument Systems 2	20	36	23	2	6	17	0	**83**
D14NEU Veterinary Neuroscience 2	10	30	21	1	1	2	0	**54**
D14LCB Veterinary Lymphoreticular Cell Biology 2	10	14	12	2	3	0	0	**31**
D14PPS Veterinary Personal and Professional Skills 4	10	13	4	0	14	0	0	**32**
D14MSK Veterinary Musculoskeletal System 2	30	40	37	2	6	18	0	**102**
D14GIL Veterinary Gastrointestinal System 2	30	54	34	0	8	24	0	**120**
D14CRS Veterinary Cardiorespiratory System 2	30	36	36	2	5	14	0	**92**
D14REP Veterinary Reproduction 2	30	41	21	12	6	19	0	**100**
D14URI Veterinary Urinary System 2	10	17	14	2	2	5	0	**38**
Extra Mural Studies	0	0	0	0	0	0	350	**350**
Total	**180**	**281**	**202**	**23**	**51**	**99**	**350**	**1002**
Year 5								
D15EQI Veterinary Clinical Practice: Equine	40	0	0	0	0	230	0	**230**
D15LAV Veterinary Clinical Practice: Farm and Veterinary Public Health	50	0	0	0	0	335	0	**335**
D15SMA Veterinary Clinical Practice: Small Animal	55	0	0	0	0	335	0	**335**
D15PPS Veterinary Personal and Professional Skills	35	0	3	0	0	9	0	**12**
Extra Mural Studies	0	0	0	0	0	0	350	**350**
Total	**180**	**0**	**3**	**0**	**0**	**909**	**350**	**1262**
Total	**720**	**823**	**646**	**422**	**316**	**1151**	**1330**	**4679**

- Data is completed for all teaching delivered for years 1 to 4 and for rotations in year 5 in the academic year 2016/17, and rounded to the nearest hour
- Practical classes in years 1 to 4 include clinical work, based on a proportion of classes a valid assumption has been made that 1/3 of the time of any practical class (except Animal Health and Welfare 1, Lymphoreticular Cell Biology, Clinical and Professional Skills, Veterinary Public Health and Personal and Professional Skills 4) is spent on clinical work in years 1 to 3, and 3/4 of the time of any practical class is spent on clinical work in year 4. Veterinary Public Health is assumed to be 50% clinical work. Year 3 Clinical and Professional Skills and all of year 5 rotations is assumed to be 100% clinical work
- The 'Other' category of delivery type includes timetabled formative assessments and Research Project
- The 'Tutorials, Seminars/Problem based learning' category of delivery type includes Clinical Relevance sessions, Self and Directed Group Learning
- EMS profiles are individual to the student however the data assumes 6 weeks in years 1 -3 and 10 weeks in years 4 and 5
- Curriculum hours have been assigned as accurately as possible using a bespoke database. Average hours per week are assumed to be 32 hours for the Research Project and 35 hours for year 5 and EMS.

Table 9.6: Digest of disciplines and subjects (hours)

Subject	Hours						
	Lectures	Tutorials, seminars & PBL	Online and Other	Labs and supervised practical's	Clinical	EMS	Total
Basic subjects and sciences							
Anatomy, histology, embryology	69	60	0	68	44	0	242
Biochemistry	16	14	0	2	1	0	33
Biology, cell biology	23	19	0	8	4	0	55
Chemistry	4	2	0	1	0	0	7
Physiology	85	53	0	10	7	0	155
Molecular biology	6	5	0	2	1	0	13
Scientific Method	1	1	384	0	0	0	386
Biostatistics	3	2	0	3	2	0	11
Genetics	6	6	0	3	1	0	16
Epidemiology	7	7	0	0	0	0	14
Immunology	18	9	0	1	0	0	29
Microbiology	26	17	0	12	5	0	60
Pathology, pathophysiology	55	49	0	14	14	0	132
Pharmacology	16	15	0	3	3	0	36
Pharmacy	8	8	0	1	2	0	19
Toxicology	4	3	0	0	1	0	7
Environmental protection and conservation	1	0	0	0	0	0	1
Parasitology*	23	17	0	9	5	0	54
Total	**371**	**286**	**384**	**138**	**90**	**0**	**1269**
Animal Production							
Agronomy	2	0	0	0	0	0	2
Animal nutrition	9	10	0	5	4	0	29
Animal husbandry & production, incl. aquaculture	29	20	2	22	6	0	79
Livestock production economics	16	7	0	2	1	0	25
Animal behaviour & behavioural disorders	14	13	0	5	2	0	34
Animal protection & welfare	6	5	0	1	0	0	12
Preventative vet medicine, health monitoring**	6	5	0	1	34	0	45
Reproduction & obstetrics**	24	21	1	12	22	0	80
Total	**105**	**81**	**3**	**49**	**68**	**0**	**306**
Clinical subjects							
Anaesthesia	16	9	0	6	36	0	67
Clinical examination & diagnosis	21	30	0	25	161	0	237
Clinical pathology	22	25	0	16	51	0	114
Diagnostic imaging	15	20	0	14	76	0	125
Clinical medicine	49	25	0	19	176	0	269
Surgery	33	17	0	12	68	0	129
Therapeutics	35	32	0	8	82	0	157
Emergency & critical care	9	6	0	2	34	0	51
Exotic & epizootic disease	1	1	0	0	9	0	11
Zoonoses & public health	1	1	0	0	30	0	31
Government veterinary services	13	6	0	3	23	0	45
Anatomic pathology*	0	0	0	0	67	0	67
Total	**215**	**170**	**1**	**104**	**812**	**0**	**1303**
Food hygiene							
Veterinary certification	2	1	0	0	15	0	18
Regulation & certification of animal & animal products	5	3	0	3	5	0	17
Food hygiene & quality	2	1	0	0	22	0	25
Total	**9**	**5**	**0**	**3**	**42**	**0**	**60**
Professional knowledge							
Professional Ethics & behaviour	10	12	0	0	53	0	75
Veterinary legislation	7	4	0	2	4	0	17
Communication skills	22	36	8	5	48	0	119
Practice management & business	7	3	0	7	17	0	33
Information literacy & data management	3	2	0	2	12	0	18
Total	**48**	**55**	**8**	**16**	**133**	**0**	**262**
Other							
Learning, group working and interpersonal development	66	26	26	6	6	0	130
Tutorial	1	23	0	0	0	0	24
Career planning and opportunities	7	0	0	0	0	0	7
EMS	0	0	0	0	0	1330	1330
Total	**75**	**49**	**26**	**6**	**6**	**1330**	**1493**

Notes to table 9.6

- Alignment of the curriculum has been calculated by mapping individual learning objectives for each delivery session; any differences in the totals between tables reflect rounding
- * Parasitology and anatomic pathology have been added as subject areas as we feel these do not map clearly to other areas
- ** Preventative vet medicine, health monitoring and Reproduction & obstetrics whilst listed under 'Animal Production' include significant clinical time
- 'Learning, Group Working and Interpersonal Development' represents generic objectives associated with the majority of delivery sessions (e.g. 'work as a group to solve a problem'
- It is not possible to map EMS to subject areas as the content varies on an individual student basis

applicable to the Day One Competences.

289. Compulsory Clinical EMS in Specialist practices ensures that students experience an important aspect of practice largely missing from core rotations. Similarly, EMS in Emergency/Out of Hours Clinics is a worthwhile activity.
290. The curriculum is strongly focussed towards a career in clinical work, however an increasing proportion of future graduates may find work in (international) non-clinical jobs. The curriculum currently offers limited opportunities for electives in non-clinical work.

Commendations

291. The School has an ethos where student learning and personal and professional development are of prime importance, with clear evidence of staff engagement with the School's teaching and learning philosophy.
292. The opportunity to review the basic sciences taught in Years 1 and 2 during the teaching of clinical disciplines in Year 4 reinforces student learning.
293. The Self-Directed learning activities in small groups promote co-operative working and embed Life long Learning skills in students.
294. The curriculum mapping software is a powerful tool, and its integration with the students' Virtual Learning Environment (Moodle) allows them to see how the intended learning outcomes map to the Day One Competences.
295. The organisation of EMS and the support and feedback offered to students is excellent.

Suggestions

296. The School should implement the planned conversion of compulsory Emergency/Out of Hours EMS to an assessed rotation
297. The School should encourage students to consider a broad range of career options as opposed to having a focus on a career in clinical practice. The School should consider introducing non-clinical rotations and/or tracking or elective rotations for students interested in these fields.

Recommendations

None

Standard 10 – Assessment

Management

10.1 The institution must ensure that there is a clearly identified structure within the school showing lines of responsibility for the assessment strategy to ensure coherence of the overall assessment regime and to allow the demonstration of progressive development across the programme towards entry level competence. The strategy must be underpinned by robust quality assurance mechanisms.

Policy and Regulation

10.2 The assessment tasks and grading criteria for each unit of study in the programme must be clearly identified, and available to students in a timely manner well in advance of the assessment.

10.3 Requirements to pass including the effect of barrier assessments must be explicit.

10.4 Mechanisms for students to appeal against assessment outcomes must be explicit.

10.5 The school must have a process in place to review assessment outcomes and to change assessment strategies when required.

Assessment methods and design

10.6 Programme learning outcomes covering the full range of professional skills and attributes must form the basis for assessment design and underpin decisions on progression.

10.7 Assessment must inform student learning and students must receive timely feedback.

10.8 Assessment load must be planned and managed to achieve appropriate workloads for students and staff.

10.9 Assessment strategies must allow the school to certify student achievement of learning objectives at the level of the programme and individual units of study.

10.10 Methods of formative and summative assessment must be valid and reliable and comprise a variety of approaches. Direct assessment of clinical skills (some of which may be on simulated patients), must form a significant component of the overall process of assessment in the clinical disciplines.

Assessment standards and quality assurance

10.11 There must be procedures in place to maximise the fairness, validity and reliability of assessment outcomes, including but not limited to academic peer review of assessment content, proofing of scripts, supervision and invigilation, maintenance of records and moderation processes.

10.12 Schools must have appropriate moderation processes in place to ensure parity within and between individual units of study, across the programme, with other institutions; and to ensure that each student is fairly treated.

10.13 The school must be able to demonstrate that there are appropriate measures in place to ensure that grades awarded reflect an appropriate standard of performance by students against the relevant learning objectives.

Background

298. The School assessment strategy is a coordinated program of assessment designed to align the progress of the student towards overall clinical competency in order to meet RCVS and EAEVE Day 1 competencies. The strategy is designed to assess day 1 competences and skills and underpinning professionalism and knowledge across all 5 years of the course by employing educationally valid assessment methods, applicable to the learning outcomes being assessed.

299. All members of staff teaching on a module or rotation are required to submit questions for a module's formative and summative online assessments and other examinations. The assessment for each module is blueprinted to the module learning objectives. All staff are trained in the relevant assessment technique prior to acting as an assessor for a summative assessment. All questions and examination papers are reviewed before sign-off by External Examiners.

300. In Years 1 to 4, skills, behaviours and knowledge are assessed through a variety of summative examinations. In Year 5 students undertake a range of work place based assessments examining practical and clinical skills and professionalism. End of year online examinations assess clinical reasoning ability and knowledge, and professionalism.

Years 1 to 4

301. Knowledge is principally assessed in the examinations which are held online in formats including single best answer, Extended Matching Questions (EMQs), drag and drop, "fill in the blanks", and unidirectional clinical reasoning. Other knowledge based assessment

includes short answer clinical reasoning examinations, short answer exams, and spot tests.

302. The School ensures a blueprinted range of skills and behaviours are demonstrated via examination, and uses assessment types such as coursework, presentations, Objective Structured Practical Examinations (OSPEs), Objective Structured Clinical Examinations (OSCEs), Animal Handling Directly Observed Procedural Skills (AHDOPS), individual research projects, reflective Portfolios, a structured Portfolio viva assessments and completion of a Skills Diary. Students are required to demonstrate that they are competent in handling small animals (cat or dog, small mammal or exotics), horse, cattle, sheep or pig before progressing into year 4 of the course, and there is no limit to the number of resits available for these assessments.

303. An ePortfolio (PebblePad) is developed by all students throughout the course, and the content is submitted for a "must pass" assessment at the end of each year. The portfolio is discussed with personal tutors and regular formative feedback is given. Annual qualitative feedback is provided to ensure the development of reflective writing skills.

Year 5

304. End of Year 5 examinations (Finals) evaluate knowledge through an on-line MCQ examination. This is a higher level multiple choice examination around a series of cases scenarios or clinical vignettes. These abilities are further examined via an online, uni directional clinical reasoning (written) exam.

305. Core clinical skills are assessed through Directly Observed Procedural Skills (DOPS) using case material and assessed by an appropriate clinician. There are 52 skills each representing core skills defined by the RCVS/EAEVE Day One Competences. If a student fails a DOPS examination they must undertake and pass an additional resit in that skill area, as well as a resit and pass of the failed skill.

306. To qualify to sit the Finals examination, students must have certified themselves as competent in all 52 skills, and ten DOPS must have been examined and passed, with one from each of ten skill areas, but carry no marks towards Finals.

307. At each clinical rotation a Rotational Professionalism Assessment is undertaken by all staff working with the student with reference to the professional skills and behaviours of each student related to the RCVS Code of Professional Conduct. Failure results in an action plan which may or may not entail repeating that rotation. The professionalism of students is also assessed through their Portfolio viva on five portfolio pieces, and assessment of the written content which consists of case studies, action plans and reflective pieces.

Assessment strategy

308. The assessment strategy was devised by an Assessment Working Group of the Teaching, Learning and Assessment (TLA) Committee, and is kept under constant review by the Deputy TLA Sub-Dean. It is a coordinated program of assessment designed to align the progress of the student towards overall clinical competency in order to meet RCVS Day One Competences.

309. All assessments are implemented, coordinated and delivered by the TLA Team and Examinations Officer, in conjunction with academic and other staff as required, for example, for OSPEs. Various contingency plans are in place to deal with any problems if they arise.

310. MCQ questions are standard set, using Ebel's method. The assessment marks are normalised to the required 50% pass mark.

311. Other assessments, for example OSPEs, OSCEs, spot tests are trialled against marking criteria, ahead of the assessment being delivered.

312. The end-of-year MCQ based exams are delivered online using bespoke eAssessment software (Rogo). This allows staff access pre- and post-examination and review of questions by External Examiners, and tracking of question modification and performance over time. The University has developed a system to track assessment of learning objectives which is integrated with Rogo, and provides relevant feedback to students

313. Examination guidelines are provided in the Student Handbook and are supplemented by information available online in the University's Quality Manual. The assessment type and progression requirements for the programme overall and each module are published on SATURN (the University's student administration system), and reinforced at the start of each module. The Student Handbook details clear criteria and expectations across the range of available marks (i.e. 0 - 100%).

Procedures to ensure fairness, validity and reliability of assessment, including moderation processes

314. A standardisation process has been put in place to ensure consistent use of mark schemes and to improve inter rater reliability; this process is applied to all written assessments, including spot tests, clinical reasoning exams, short answer questions and coursework.

315. There is an effective internal quality assurance and control process associated with the marks for

modules and rotations.

316. A Final Exam Board for each year of the programme, attended by External Examiners. confirms the marks and/or any extenuating circumstances and the progression decision for each individual student.

317. The role of External Examiners is to ensure that marking and classifications are of an appropriate standard, and that degrees and other awards are comparable in standard to those in similar subjects in Veterinary Schools in the UK.

Staff training in assessments

318. Assessment training is a core component of general teacher training. Generic and introductory courses are available through the University's Professional Development Unit, and staff undertake the compulsory PGCHE qualification. Specific school courses are delivered throughout the year, and ad hoc training as required. Scoring range (overall performance) and assessment data including failure rate per module is collected and analysed.

Comments

319. The School has developed a range of methods for delivering fair and effective assessments, directly aligned to programme and module outcomes, throughout the programme, particularly utilising online assessments with robust QA processes.

320. Students' achievement of learning outcomes, other than professionalism, are directly assessed by DOPS but not by other methods during intramural clinical rotations.

Commendation

321. In many areas the development and implementation of modern, innovative assessment methods can be considered best practice and exemplars for other veterinary educational establishments.

322. Bespoke eAssessment software (Rogo) provides a secure method of providing online assessments with appropriate statistical tools for analysis of student and question performance.

Suggestions

323. Sampling of key practical skills through DOPS, in general, provides an adequate means of assessing practical skills. However, assessing the physical examination of a single organ system cannot assess a students' ability to conduct a full clinical examination in all species. Whilst formative feedback on this skill is likely to be provided during clinical rotations, the School should consider methods of assessing the complete examination of both small and large animals.

324. Explicit indirect assessment of students' clinical competence, in addition to professionalism should occur in final year clinical settings.

Recommendations

None

Standard 11 – Research programmes, continuing and higher degree education

11.1 The veterinary school must demonstrate significant and broad research activities of staff that integrate with and strengthen the veterinary degree programme through research-led teaching.

11.2 All students must be trained in scientific method and research techniques relevant to evidence-based veterinary medicine. All students must have opportunities to participate in research programmes.

11.3 Veterinary schools must provide advanced postgraduate degree programmes, internships, residencies and continuing education programmes that complement and strengthen the veterinary degree programme and are relevant to the needs of the profession and community. Programmes and the numbers of students in them must be commensurate with the facilities, clinical and other resources and staff.

Background

325. Research is central to the activities of the School, both in terms of maintaining itself at the forefront of national and international efforts in the field of veterinary medicine but also as an integral part of the training and education for undergraduate and postgraduate students.

326. In the 2014 national Research Excellence Framework (REF) exercise, the School, in a joint submission with the School of Biosciences, was assessed as being second in the UK for research power; 37% of work was assessed as world-leading and 80% was of internationally excellent quality.

327. Four major Strategic Research Areas (SRAs) have recently been selected as foci for research excellence. All staff across all SRA's are encouraged to integrate latest research methods and results into teaching:

- Diagnostics and Therapeutics
- Functional Pathogen Genomics
- One Virology
- Ruminant Population Health

328. All staff are involved in research to varying extents (e.g. ranging from holding externally-funded competitive research grants, through educational research and supervision of year 3 students) with the exception of staff on 0.2 FTE facilitator contracts (Table 11.1). All staff are expected to teach on the curriculum with the exception of Research Associates/Fellows who are recruited on fixed term contracts to deliver on research grants, however these will normally be expected to contribute to the supervision of year 3 research project students in laboratory-based projects. The variance in research active staff is mostly related to fluctuations in the number of Postdoctoral Research Associates/ Fellows.

Postgraduate programmes

329. The School offers opportunities to study on an academic track for MRes and PhD degrees, in a wide range of veterinary, biomedical, biological and statistical research fields. Postgraduate studentships are established under the SRAs in the school. In addition the School offers a PG Certificate course in Veterinary Education. Studentships are available through University-funded and externally-funded sources. The School does not currently offer taught

Table 11.1: Summary of research programmes in the veterinary school and outputs

Year	Total academic staff FTE	Total FTE academic staff involved in research who teach on the veterinary degree	Total FTE research active staff	No. of original, peer-reviewed research publications	No. of original book chapters
2016	95.3	82.7	94.4	216	5
2015	107.8	88.2	106.7	225	3
2014	95.4	82.1	94.1	198	12

Table 11.2: Research award data

	UK Research councils		Charities		UK & EU government		Industry and commerce		Other		Patents
	No.	£k	No.	£k	No.	£k	No.	£k	No.	£k	No.
2016/17	5	73	14	641	12	1,778	10	296	1	54	1
2015/16	6	578	10	430	7	1,442	10	462	3	155	1
2014/15	12	1,756	4	281	6	643	3	118	1	35	0

MSc programmes. The School has developed a clinical track which comprises a PG Certificate course aimed at new or recent veterinary graduates to develop further clinical experience through an Internship, and clinical MVM / MVS and DVetMed / DVetSurg degrees which are commonly combined with a clinical Certificate or Diploma (awarded by a European Specialty College), with students normally based for the majority of their studies at one or more of the Schools' Clinical Associates.

330. Programme specifications have been detailed for each of the postgraduate programmes offered (academic and clinical track). The assessment type (and progression requirements) for each programme overall and any components is published in the Quality Manual. All postgraduate students are provided with a Student Handbook that specifies examination regulations and guidelines; this is available online and in hard copy.

331. Applications are accepted in response to advertised studentships or following speculative applications for all academic and clinical track postgraduate positions. All applications must be made online and applicants must complete a personal statement for their proposed area of research, and forward copies of qualifications to the School. Applicants for clinical postgraduate programmes are required to hold a veterinary degree, and be a Member or Fellow of the Royal College of Veterinary Surgeons with a legal ability to practise veterinary medicine in the UK. They are required to have attended an EAEVE approved Veterinary School and have undertaken a minimum of 26 weeks clinical practice.

332. All postgraduate students are integrated into the University of Nottingham's Graduate School. The Graduate School based at University Park has a satellite centre at the Sutton Bonington Campus. This centre offers facilities including social and study spaces, computer facilities and seminar rooms. All postgraduate students are encouraged to develop a portfolio of generic skills. The acquisition of these skills is supported by a range of training programmes run by the School, the Faculty of Medical and Health Science, the Graduate School and Professional Development.

333. The Postgraduate Committee, on which there is student representation, monitors student progress and also discusses student welfare, support and operational issues associated with postgraduates. The TLA Committee is the main quality assurance process route for all programme matters associated with taught postgraduate programmes (PG Certificates and taught component of DVetMed DVetSurg), after review by the Postgraduate Committee. Postgraduate students are also represented on the Learning Community Forum and Safety Committee, which are able to discuss any matters (academic, welfare or social). Postgraduates are also able to specifically raise any issues directly to the Sub-Dean for Clinical Postgraduates and Sub-Dean for non-Clinical Postgraduates and with a dedicated Senior Tutor for Postgraduates.

334. The Postgraduate Sub-Deans meet each postgraduate student individually on a needs basis; regular monthly coffee mornings are also held with the Postgraduate Administrator. The School requires all postgraduates to attend a quarterly meeting, at which students present work to their peer group and discuss progress and have an opportunity to meet each other academically and socially. In addition, postgraduates are assigned to a SRA and have the opportunity to present their work in a more informal setting amongst colleagues in their own discipline. All postgraduates are required to present their work at an annual postgraduate symposium held in conjunction with the School of Biosciences.

Integration of research activities with the veterinary programme

335. The School has incorporated a significant 40 credit Research Project module into Year 3 for all students. The aim of the Research Project is to provide students with:

- An appreciation of the value of research in modern veterinary medicine and science – particularly how research contributes to furthering veterinary knowledge and continuing professional development
- An understanding of the possibilities for a career in research whether this be pure research,

Table 11.5: Veterinary student's involvement in research projects and levels intercalating

Academic year	Total number of students on 5 year veterinary programme	No. of students in funded and unfunded research projects				No. of peer reviewed publications in which UGs are authors/ co-authorS	No. of students in joint postgraduate programme (intercalating)		
		Year 2	Year 3	Year 4	Year 5		PhD	Masters	PGCert
2016/17	663	10	131	5	0	79	0	3	3
2015/16	599	16	116	5	0	76	2	1	0
2014/15	579	21	121	7	1	88	2	0	0

governmental or commercial or other forms of applied research

- Skills in discovery and hypothesis-driven veterinary science that will be of value in practice and which forms the basis of understanding the practice of evidence based veterinary medicine
- Acquisition of new technical skills
- Transferable skills relating to planning, project management, analysis, evaluation and writing of a research project from the point of inception to publication and to illustrate to students that this is something that that could be achieved while in practice
- Development of critical thinking skills
- Development of lifelong learning skills, professional independence and resilience

336. All academic staff are expected to supervise undergraduate projects.

337. In addition to the research project there are several opportunities for undergraduate students to be formally involved in research both within and outside the School, including:

- Students are able to undertake 6 weeks of research as part of EMS
- Students are able to undertake summer research projects at the School, either unpaid or subsidised by a stipend by the supervisor. Competitive funding has been available from the University and commercial and charitable organisations for students to undertake vacation research projects
- Students are able to volunteer to assist with research projects.
- The School has funded 2 intercalated PhD students, and on an ongoing basis funds 2 MRes and 3 PGCertificate (Veterinary Education) positions for intercalating year 3 or 4 students
- The School won a substantial INspire grant from The Academy of Medical Sciences to give further opportunities for undergraduate students to attend evening research lectures and receptions, present their research at conferences, undertake paid studentships and participate in year-round research
- The School is able to help students achieve recognition for their extracurricular research activities. Staff developed and run a 10 credit (non-academic) module which contributes towards achieving the 'Nottingham Advantage Award', this is formally stated on their degree paperwork and awarded at the graduation ceremonies. Therefore, all students can get formal recognition for organising, volunteering at or attending research related activities
- Support for research activities does not cease once our students have graduated. The School runs a research programme for graduates who wish to be actively involved in further research even if they are not undertaking internships/further education/ research positions. For example, veterinarians in practice can write papers with staff, collect samples to contribute. This programme is being extended after consultation with alumni and will include mentoring opportunities and further research activities

Continuing Education

338. The School aims to provide the highest quality Continued Professional Development (CPD) for veterinary surgeons and allied professionals. The School offers courses at the basic, intermediate and advanced levels to suit the CPD requirements of the profession. The programme is strategically overseen by the CPD Sub-Dean and operationalised by the CPD Manager who undertakes all aspects of the programme administration (communication with deliverers and attendees, scheduling, organisation and evaluation analysis). The CPD Sub-Dean and Manager have undertaken a number of national surveys to determine the needs of the veterinary profession and within this context, individual courses are initiated by individual clinicians in discussion with the Sub-Dean.

Table 11.6: CPD courses provided by the School in 2016/17

Course title	No. of participants	Course hours
Avian medicine and surgery	11	8
Engaging with your sheep farmer clients - providing a veterinary service they will value	11	8
Small animal geriatric medicine	11	8
Applied musculoskeletal anatomy of the dog	9	6
Practical exotic and avian day	12	8
Bovine mastitis	20	19
Intermediate small animal abdominal ultrasound	20	16
All you ever wanted to know about immune-mediated diseases	15	8
Sources of evidence for practitioners	6	8
A surgical tour of the abdomen	16	8
Masterclass in the surgical management of laryngeal disease in the dog	10	8
Just give it a wiggle and a push! - Getting the most out of small animal endoscopy	20	8
Back yard poultry	12	8
Introduction to small animal ultrasound	46	8
Polyuria and polydipsia	23	8
Practical farm animal surgery	10	8
Critical care for small animals	16	8
Ouch that hurts! - a practical approach to acute and chronic pain management in small animals	12	8
Best practice at lambing time	8	8
Using and evidence-based approach in your practice	9	65
Basic medical and surgical oncology	17	8
Bovine lameness	7	19
Endoscopy masterclass	10	16
Practical hip surgery	5	8
Practical stifle surgery	7	8
Raptors - emergency care and rehabilitation	7	8
Anaesthesia - the next steps: Practical ways to improve your anaesthetic practice	30	8
Canine fixation masterclass	6	16
Ruminant mineral nutrition investigation incorporating copper: deficiency and two toxicities	13	16
Husbandry, medicine and surgery of the pet rabbit	5	8
Bleeding small animals!	11	8
Focussing on frustrating felines	6	8
Practical small animal echocardiography	12	8
All you ever wanted to know about diseases of the liver and pancreas	19	8
Masterclass in the surgical management of ear disease	2	8

Involvement of interns, residents and research students in teaching

339. Residents, Interns and DVetMed students are integrally involved with year 5 clinical teaching; they may work closely with the students on an informal daily basis, and may be involved in scheduling activities, but ultimately feedback, with academic staff and other members of Clinical Associates about student performance to Rotation Leaders. Residents may undertake year 5 DOPS assessment but otherwise no students are involved in assessment. Other non-clinical postgraduates (e.g. PGCertificate, MRes, PhD) act as demonstrators in practical sessions in years 1-4. It is normally expected that students undertake university courses in teaching and demonstrating and school teaching induction courses. Some students, for example Residents may undertake the Associate Teacher Programme and gain HEA status.

340. Interns and Residents are involved in case management and teaching at several Clinical Associates. Interns and Residents in all cases work as part of a team managed by a senior clinician, typically a board-certified specialist, who will manage conflicts in relation to case management. All Residents have a supervisor who is a senior clinician, typically a board-

certified specialist, who will ensure any research elements required of the residency programme are completed.

Comments

341. It is encouraging to see that four major Strategic Research Areas have been selected as foci for research excellence; implementation is just starting and will support cross Faculty co-operation.
342. Undergraduate students are offered an excellent research experience through the third-year research project. Additionally, students are offered opportunities to participate in research meetings and an encouraging number choose to intercalate.
343. The new Centre for Dairy Science Innovation facility is an important opportunity for the School to innovate and partner with industry and other academic institutions.
344. Access to clinical records for clinical research relies on the goodwill of the Clinical Associates and is currently limited to individual small-scale projects.

Commendation

345. The School is commended for the financial support for the student third year projects and congratulated on the high proportion of these that progress to abstract presentation and publication.

Suggestions

346. Considering the Strategic Research Areas have only just been implemented, it is suggested that a structured programme of review with clear expectations and measures of success is put in place at the earliest possible opportunity.
One Virology is the clearest example of One Health research and the School is encouraged to explore other One Health opportunities
347. The School should formalise access to clinical case records for research purposes.

Recommendations

None.

Standard 12 – Outcomes assessment

12.1 In the interests of quality assurance and enhancement, the veterinary school must have mechanisms to gather data routinely to demonstrate that its institutional and educational objectives are being met.

12.2 Specifically, the school must provide evidence that:
- **its strategic goals are appropriate and that it is progressing towards achieving these goals**
- **it is complying successfully with its operating plan**
- **its veterinary programme is subject to internal and external evaluation and validation processes by long feedback loops (e.g. graduate destination surveys, employer surveys) in addition to the short loops (e.g. unit of study evaluations).**

12.3 The school must provide evidence that all its graduates have (or for a new school, will have) achieved the programme's stated learning outcomes, including the level of competence required of an entry-level veterinarian (RCVS Day One Competence).

12.4 There must a system for students to keep a record of, and reflect on, their developing practical and clinical skills over the duration of programme. There must be evidence that such experience logs inform the learning and assessment process for individual students, and evidence that the school uses consolidated data to monitor the achievement of competence and experience levels of students across the programme as a whole.

12.5 There must be procedures to review the evidence of student experience and student achievement of Day One Competence, and demonstrate implementation of change on the basis of such review. Outcomes of the review process must be communicated to relevant internal and external stakeholders.

12.6 The school must have a strategy for the continuous improvement of the quality of the veterinary programme.

12.7 In the case of a school that has yet to produce graduates, evidence must be presented that provides RCVS with reasonable assurance that the school's programme outcomes will be achieved. Evidence must be available to show progress to date in achieving the desired outcomes in the programme, and the measures to be taken in the remainder of the programme to ensure their achievement by the completion of the veterinary degree.

Evaluation of outcomes is the most important source of information to a school about its success and its drive for continued enhancement of quality. However, in contrast to inputs, which are relatively easy to measure, outcomes assessment is more complex. It is easy to become confused by the fact that the same raw data can be repurposed to assess outcomes at the level of the school or at the level of the individual student. This means that everyone involved needs to be clear about the use of data and the presentation of results.

All schools with an established quality assurance and enhancement culture will evaluate outcomes at school, programme, module and individual student levels. This will be achieved through results in assessments, feedback forms of various types, surveys, publication counts and a host of other measures. Different schools will place emphasis on different measures, but a report on outcomes should include a matrix that employs a variety of different measures providing information relevant to the foci of the other standards. Repetition of the measures over an extended period (at least five years) will then demonstrate progress in each area. Specifically, evaluation of outcomes related to the veterinary programme, individual students (throughout their studies as well as at graduation) and employability must be included, but RCVS will expect schools to include other outcomes evaluations of their choice. In addition, evidence of quality assurance, together with both reactive and proactive quality enhancement will be expected.

Please note particular difference in ESEVT SOP as follows:

11.10 The Establishment must undergo external quality assurance in line with the ESG on a cyclical basis.

Background

348. The School uses a number of quality-related outcome assessment measures:

- To assure the quality and standard required for a veterinary degree as determined by the RCVS and EAEVE
- To ensure standards and implementation of best practice across the School's operations
- To facilitate delivery and dissemination of education and research which addresses the needs of stakeholders

349. Outcome assessment at School level is an ongoing activity that results in a regular appraisal of data in order to monitor and inform curriculum development and graduate competency and associated School strategy and includes data collected from students, staff and external stakeholders. Data are collected at year, module and activity level (e.g. facilitated and practical sessions), methods are employed are:

- School/University managed undergraduate, graduate, employer surveys
- University all student survey (NSES). External: NSS)
- Data analysis (assessment results, admissions qualifications)
- Individual stakeholder feedback (e.g. student, staff, External Examiners, EMS host)
- School Committees
- Ad-hoc focus groups convened around particular topics
- Peer observation

350. Outcome findings are considered and responded to through ongoing operations or the appropriate Committee. Examples of outcome findings which have improved the educational programme include:

- Veterinary Public Health has been moved from year 4 to year 3 and delivered as a block module rather than a long module, a decision informed by lower assessment attainment compared to other courses, student SEM feedback, External Examiner feedback
- Accommodation provided by the School for one clinical rotation, a decision informed by student NSS and rotation feedback
- Compulsory out of hours emergency care rotation incorporated into year 5 rotations, a decision informed by graduate survey
- Students are able to gain online assessment feedback based on attainment against module learning objectives, a decision driven by student feedback in year survey, NSS and staff feedback

Employment rates of graduates

351. HESA collect information via the annual Destinations of Leavers from Higher Education survey and shows information for all UK domiciled graduates at 6 month's post-graduation. The average employment (and further study) rate is 98% over the last 5 years and ranges from 97% to 100%).

352. The School also collected destination data from 2017 graduates on Graduation Day. 78.9% of graduates had already secured employment in veterinary practice, 11.9% were due to undertake advanced further study (Internships/Residencies) and 0.9% in advanced academic training. Of the 109 respondents, 8.3% had not found jobs by Graduation and 4.8% were preparing to work outside the UK.

353. Alumni have been surveyed since the first graduating cohort in 2011. Year 1 graduates have been surveyed annually by the School on their achievement of learning outcomes (Appendix 24). Graduates reported being well prepared across a broad range of areas, with consistent trends of less effective preparation in emergency care, veterinary public health, practice management, and veterinary legislation. HESA data (Table 12.2) from 2011-2016 showed the large majority of graduates felt prepared for employment with 6-7% in the past two years not feeling well prepared.

354. The data from the graduate survey led to some changes to the curriculum

355. The School has commenced a survey of graduates 5 and 6 years' post-graduation.

356. The School has participated in the Veterinary Schools Council new survey of employers based on the 'Day One Competences' defined by the RCVS.

Table 12.1: Employment rates (HESA data)

Graduating class	Full time employ	Part time employ	Further study only	Work and study	Unemployed	Other	Total respondents
2011/12	56	1	0	1	2	0	60
2012/13	58	0	3	1	1	0	63
2013/14	60	1	3	0	1	1	66
2014/15	72	1	1	0	0	1	75
2015/16	60	0	2	0	2	1	65

Table 12.2: HESA data 'how well did the graduates overall experience in higher education prepare for employment'

Year of graduation	No. of respondents	Very well	Well	Not very well	Not at all	Can't tell
2011/12	32	59%	38%	3%	0%	0%
2012/13	42	60%	38%	0%	0%	2%
2013/14	39	79%	21%	0%	0%	0%
2014/15	46	80%	13%	7%	0%	0%
2015/16	54	67%	26%	2%	4%	2%

Institutional outcomes

357. The School undertakes activities to gain outcome information, benchmarking through 5 main mechanisms:

- National Student Survey (NSS) for the Higher Education Funding Council. The School has achieved high overall satisfaction relative to the University average and all UK veterinary schools (Appendix 25). In 2016/7 the School led in each of the 27 categories, with 100% overall satisfaction with the course and 100% completion rate. This survey showed high rates of student satisfaction with their course, learning resources, support, assessment and student voice.
- External Examiners provide benchmarking and quality assurance
- The University undertakes Educational Enhancement and Assurance Reviews (EEARs). These 3-yearly reviews of academic programs include external representation.

358. Less formal feedback is obtained from staff acting as External Examiners elsewhere, members of accrediting teams, membership of cross-University and Veterinary School Committees.

Comments

359. The School has robust, comprehensive quality assurance processes in place for its veterinary programme.

360. Academic staff, members of School committees and Module convenors respond to feedback and quantitative measures (for example exam performance) and address areas identified for improvement.

361. Staff understanding of the School's goals and mission and the alignment of these with School action and operating plans was variable.

362. Graduates and employers are highly satisfied with the veterinary programme and the professional and personal attributes, Day One skills and practical competence of the School's graduates.

363. Indirect assessment of achievement of clinical competence in the final year is limited to placement supervisor feedback on professionalism, a reflective portfolio and final year written and oral examinations.

364. The admission process has not achieved the School's goals of attracting a fully diverse student cohort to serve all sectors of UK society

365. Internationalisation of the curriculum content and student experiences is limited.

Suggestions

366. The School should engage staff with review and alignment of the School action plans, operating plans, mission and goals.

367. The School should implement increased explicit indirect measures to evaluate students' clinical competence.

Recommendations

None.

ESEVT Indicators

Data are shown in Table 13.1 with resultant ESEVT ratios in Table 13.2. Data is primarily compiled from information shown in relevant tables throughout the SER. No data from EMS is included. Companion animals seen on Intra Mural Rotations are also seen extra mural to the University and as such the same caseload data are shown in both intra and extra mural categories.

Table 13.1: Raw data for ESEVT Indicators

	Raw data from the last 3 full academic years	2016/17	2015/16	2014/15	Mean
1	FTE academic staff involved in veterinary training	99	105	99	101.03
2	Undergraduate students	687	623	605	638.33
3	FTE veterinarians involved in veterinary training	67	65	64	65.43
4	Students graduating annually	120	95	99	104.67
5	FTE support staff involved in veterinary training	70	66	67	68.03
6	Hours of practical (non-clinical) training	738	740	740	739.33
7	Hours of clinical training	1,151	1,170	1,170	1,163.67
8	Hours of FSQ & VPH training	179	182	182	181.00
9	Hours of extra-mural practical training in FSQ & VPH	30	30	30	30.00
10	Companion animal patients seen intra-murally	31,515	30,221	30,428	30,721.33
11	Ruminant and pig patients seen intra-murally	215	59	43	105.7
12	Equine patients seen intra-murally	7,527	7,494	6,797	7,272.67
13	Rabbit, rodent, bird and exotic patients seen intra-murally	2,147	2,015	2,542	2,234.67
14	Companion animal patients seen extra-murally	31,515	30,221	30,428	30,721.33
15	Individual ruminants and pig patients seen extra-murally	47,749	48,547	51,169	49,155.00
16	Equine patients seen extra-murally	5,662	5,952	5,550	5,721.33
17	Visits to ruminant and pig herds	4262	3387	3527	3725.3
18	Visits of poultry and farmed rabbit units	12	12	12	12.00
19	Companion animal necropsies	342	238	237	272.33
20	Ruminant and pig necropsies	107	111	108	108.67
21	Equine necropsies	36	50	49	45.00
22	Rabbit, rodent, bird and exotic pet necropsies	1,111	1,112	1,128	1,117.00
23	FTE specialised veterinarians involved in veterinary training	31	30	30	30.56
24	PhD graduating annually	12	12	9	11.00

Table 13.2: Calculated ESEVT Indicators					
Name of the Establishment:	**School of veterinary Medicine and Science Nottingam UK**				
Date of the form filling:	**October 24, 2017**				
	Calculated Indicators from raw data	**Establishment values**	**Median values[1]**	**Minimal values[2]**	**Balance[3]**
I1	n° of FTE academic staff involved in veterinary training / n° of undergraduate students	0.158	0.16	0.13	0.032
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	0.625	0.87	0.59	0.035
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually	0.650	0.94	0.57	0.083
I4	n° of hours of practical (non-clinical) training	739.333	905.67	595.00	144.333
I5	n° of hours of clinical training	1163.667	932.92	670.00	493.667
I6	n° of hours of FSQ & VPH training	181.000	287.00	174.40	6.600
I7	n° of hours of extra-mural practical training in FSQ & VPH	30.000	68.00	28.80	1.200
I8	n° of companion animal patients seen intra-murally / n° of students graduating annually	293.516	70.48	42.01	251.507
I9	n° of ruminant and pig patients seen intra-murally / n° of students graduating annually	1.010	2.69	0.46	0.546
I10	n° of equine patients seen intra-murally / n° of students graduating annually	69.484	5.05	1.30	68.186
I11	n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually	21.350	3.35	1.55	19.805
I12	n° of companion animal patients seen extra-murally / n° of students graduating annually	293.516	6.80	0.22	293.293
I13	n° of individual ruminants and pig patients seen extra-murally / n° of students graduating annually	469.634	15.95	6.29	463.339
I14	n° of equine patients seen extra-murally / n° of students graduating annually	54.662	2.11	0.60	54.067
I15	n° of visits to ruminant and pig herds / n° of students graduating annually	35.592	1.33	0.55	35.045
I16	n° of visits of poultry and farmed rabbit units / n° of students graduating annually	0.115	0.12	0.04	0.070
I17	n° of companion animal necropsies / n° of students graduating annually	2.602	2.07	1.40	1.202
I18	n° of ruminant and pig necropsies / n° of students graduating annually	1.038	2.32	0.97	0.068
I19	n° of equine necropsies / n° of students graduating annually	0.430	0.30	0.09	0.337
I20	n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually	10.672	2.05	0.69	9.979
I21*	n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually	0.292	0.20	0.06	0.229
I22*	n° of PhD graduating annually / n° of students graduating annually	0.105	0.15	0.09	0.017

STANDARDS		Compliant	Minor Deficiencies	Major Deficiencies	SER page reference
1.	**ORGANISATION**				
1.1	Mission statement	x	☐	☐	
1.2	Strategic & operating plan	x	☐	☐	
1.3	Part of an institution of higher learning	x	☐	☐	
1.4	National institutional accreditation	x	☐	☐	
1.5	Relationship between school and parent institution	x	☐	☐	
1.6	Qualifications and responsibilities of the dean incl. budgetary control	x	☐	☐	
1.7	Qualifications of those responsible for professional / ethical/academic matters in teaching hospital(s)/clinics	x	☐	☐	
1.8	Sufficient effective administrative staff to manage the school adequately	x	☐	☐	
1.9	Evidence of management of concerns or risks to the quality of the veterinary programme	☐	x	☐	
2.	**FINANCES**				
2.1	Adequacy of financial support for professional teaching programme and the mission	x	☐	☐	
2.2	Delineation of funding and impact of ancillary undergraduate programs	☐	☐	☐	
2.3	Regular review of finances	x	☐	☐	
2.4	Clinics/hospitals function as instructional resources	x	☐	☐	
2.5	Clinics/hospitals run efficiently with transparent business plans	x	☐	☐	
3.	**FACILITIES AND EQUIPMENT**				
3.1	Physical environment conducive to learning	x	☐	☐	
3.2	Programme for maintenance & upgrading	x	☐	☐	
3.3	Adequacy of teaching facilities	x	☐	☐	
3.4	Study & service areas for students	x	☐	☐	
3.5	Adequacy of offices, teaching prep. areas and research laboratories	x	☐	☐	
3.6	Facilities comply with H&S, biosecurity, welfare standards	x	☐	☐	
3.7	Adequacy of livestock facilities, & animal housing	x	☐	☐	
3.8	Adequacy of on-campus clinical teaching facilities	x	☐	☐	
3.9	Adequacy of off-campus/distributed core clinical teaching facilities	☐	x	☐	
3.10	Adequacy of diagnostic and therapeutic services	x	☐	☐	
3.11	Operational policies and procedures posted for staff, students and visitors	x	☐		
3.12	Adequacy of isolation facilities	☐	x	☐	
4.	**ANIMAL RESOURCES**				
4.1	Adequate range of animals available for teaching (normal vs. diseased, in- vs. out-patient, field service, ambulatory, herd health)	x	☐	☐	
4.2	Diverse and sufficient surgical/medical patients for student clinical teaching, incl. primary care cases	x	☐	☐	
4.3	Standard and quality assurance of education at external sites	x	☐	☐	
4.4	Nursing care & instruction provided; student involvement in ambulatory/field programmes	x	☐	☐	
4.5	Students' involvement in health- care management of patients (& involvement with clients)	x	☐	☐	
4.6	Adequacy of medical records system	x	☐	☐	
4.7	Students competent in animal handling relevant to their learning prior to placements	x	☐	☐	
5.	**INFORMATION RESOURCES**				
5.1	Adequacy of information retrieval resources	x	☐	☐	
5.2	Access to information resources on and off campus (including distributed sites)	x	☐	☐	
5.3	Librarian is qualified, support personnel are available	x	☐	☐	
5.4	Internet widely available, including in libraries	x	☐	☐	
5.5	Support for development of instructional materials	x	☐	☐	

5.6	Alignment of information resources to teaching programme	x	☐	☐
	and systems to evaluate effectiveness of innovations			
6.	**STUDENTS**			
6.1	Appropriate student body (size and representation)	x	☐	☐
	given mission and resources			
6.2	Adequate post-grad programs	x	☐	☐
6.3	Student support & welfare services, incl. careers advice	x	☐	☐
6.4	Mechanisms to resolve student grievances	x	☐	☐
6.5	Student input to school	x	☐	☐
6.6	Student Complaint policy and procedure	x	☐	☐
7.	**ADMISSION & PROGRESSION**			
7.1	Selection criteria & numbers admitted consistent with mission	x	☐	☐
7.2	Course adverts clear & comprehensive	x	☐	☐
7.3	Student selection & progression criteria are fair, transparent & appropriate	x	☐	☐
7.4	Selection criteria & processes clear & accessible; reviewed for	x	☐	☐
	relevance, & take account of RCVS D1Cs			
7.5	Training provided for those involved in selection	x	☐	☐
7.6	Potential students advised of demands & FtP requirements	x	☐	☐
7.7	Non-academic achievement admission criteria	x	☐	☐
7.8	Strategy for widening participation	x	☐	☐
7.9	Academic entry requirements	x	☐	☐
7.10	Policies for students with disabilities	x	☐	☐
7.11	Explicit progression policy, with remediation	x	☐	☐
7.12	Attrition/progression monitored	x	☐	☐
7.13	Explicit policies for exclusion	x	☐	☐
7.14	Transparent & accessible appeals policy	x	☐	☐
7.15	Explicit policies on misconduct & fitness to practise	x	☐	☐
8.	**ACADEMIC & SUPPORT STAFF**			
8.1	Staff appropriately qualified and prepared	x	☐	☐
8.2	Appropriate numbers of staff to deliver the programme and mission	x	☐	☐
8.3	All teaching staff display competence & teaching skills	x	☐	☐
8.4	Promotion and retention policies	x	☐	☐
8.5	Performance review procedures	x	☐	☐
8.6	Staff development in tertiary teaching available	x	☐	☐
8.7	Promotion criteria recognise teaching & other activities	x	☐	☐
9.	**CURRICULUM**			
9.1	Curriculum consistent with QAA level 7 descriptor, EU reqs and RCVS D1Cs	x	☐	☐
9.2	Explicit coherent learning outcomes	x	☐	☐
9.3	Learning outcomes communicated to staff/	x	☐	☐
	students, reviewed, managed & updated			
9.4	Regular (min 7 yrly) review and management (revision)	x	☐	☐
9.5	Management of the curriculum by committee with	x	☐	☐
	clear reporting lines and responsibility as set out in 9.4. Chapter 2.			
	Regular meetings incl. student representation			
9.6	Curriculum covers items listed in 9.5. Chapter 2.	x	☐	☐
9.7	EMS is integral and structured part of programme.	x	☐	☐
9.8	Farm animal husbandry EMS complements core training	x	☐	☐
9.9	Core clinical training is complemented by clinical EMS	x	☐	☐
9.10	Feedback systems for EMS providers	x	☐	☐
9.11	EMS coordinated by member of academic staff	x	☐	☐
9.12	Mechanisms to support students to take responsibility.	x	☐	☐
	for own learning, incl. reflective logs & objective setting			

10	**ASSESSMENT**			
10.1	Assessment strategy well managed	x	❐	❐
10.2	Assessment tasks & grading criteria explicit in advance of tasks	x	❐	❐
10.3	Requirements clear to students	x	❐	❐
10.4	Explicit appeals procedure	x	❐	❐
10.5	Review processes for assessment strategy	x	❐	❐
10.6	Full range of professional skills & attributes covered by assessment design	x	❐	❐
10.7	Assessment informs student learning	x	❐	❐
10.8	Assessment loads planned to achieve	x	❐	❐
	appropriate workloads for staff & students			
10.9	Assessment at programme and unit level	x	❐	❐
10.10	Valid & reliable assessments, with direct assessment	x	❐	❐
	of clinical skills a significant component			
10.11	Effective assessment management incl. record keeping	x	❐	❐
10.12	Quality control of assessment outcomes with peer review of the process etc.	x	❐	❐
10.13	Moderation processes in place	x	❐	❐
10.14	Grades awarded appropriately	x	❐	❐
11.	**RESEARCH PROGRAMMES, CONTINUING & HIGHER DEGREES**			
11.1	Adequate integration of research in the professional programme	x	❐	❐
11.2	Active student participation in research	x	❐	❐
11.3	Breadth & quality of school research programme	x	❐	❐
11.4	Provision of postgrad degrees, postgrad clinical training programmes & CPD	x	❐	❐
12.	**OUTCOMES ASSESSMENT**			
12.1	Mechanisms in place to gather data which show institutional and	x	❐	❐
	educational objectives are being met. Trends analysed			
12.2	Strategic goals are appropriate and progress towards these is being made	x	❐	❐
12.3	Veterinary programme subject to internal and external	x	❐	❐
	evaluation by long and short feedback loops			
12.4	New graduates have the scientific knowledge, skills and ability to provide	x	❐	❐
	entry level care upon graduation (RCVS D1Cs)			
12.5	Procedures to review the evidence of student experience	x	❐	❐
	and achievement of RCVS D1C			
12.6	Use made of student experience logs by students,	x	❐	❐
	and by school to monitor experience			
12.7	Direct and indirect measures of student learning outcomes	x	❐	❐
	are used to evaluate clinical competence			
12.8	School can demonstrate assessment of the	x	❐	❐
	quality of the veterinary programme			
	Students have mastered Clinical Competences at entry level (to OIE standards):			
12.9	1. Patient diagnosis, appropriate use of clinical resources, record management	x	❐	❐
12.10	2. Treatment planning and referral	x	❐	❐
12.11	3. Anaesthesia, pain management, patient welfare	x	❐	❐
12.12	4. Basic surgery skills, experience, case management	x	❐	❐
12.13	5. Basic medicine skills, experience, case management	x	❐	❐
12.14	6. Emergency and intensive care case management	x	❐	❐
12.15	7. Health promotion, disease prevention/biosecurity, zoonosis, food safety	x	❐	❐
12.16	8. Client communication, Professional & ethical conduct	x	❐	❐
12.17	9. Critical analysis of information and research	x	❐	❐
12.18	Evidence that monitoring of student achievement of	x	❐	❐
	RCVS D1C affects programme reviews			
12.19	Evidence of a continuous quality improvement strategy	x	❐	❐
12.20	Annual and cumulative NAVLE scores (where appropriate)	❐	❐	❐
12.21	Student attrition rates with reasons	x	❐	❐
12.22	Employment rates of graduates	x	❐	❐

Staff list

Veterinary surgeons are shown in bold
Staff are graded with the following designation:
P: Professor
R: Reader
AP: Associate Professor / Senior Lecturer
L: Lecturer / Assistant Professor
RA/RF: Research Assistant / Fellow
TA/TF: Teaching Associate / Fellow
APM: Administrator
T: Technician

Foundation Dean and Head of School		
P	**England, G C W**	BVetMed, PhD, DVetMed, CertVAm DVRm DipVRep, DipACT, PFHEA, FRCVS
Deputy Head of School		
P	**Cobb, M A**	MA, VetMB, PhD, DVC, MBA, FHEA, MRCVS
Executive Assistant to the Foundation Dean and Head of School		
APM	Holland, C J	
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TA	Curzon, A	CertEd

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RF	Swift, B	BSc, PhD
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L	**Zulch, H**	BVSc, DipECAWMB, MRCVS
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P	Haig, D M	BVSc, PhD, DipECBHM, DCHP, MRCVS
P	**Huxley, J N**	BSc, MSc, PhD
P	Leigh, J A	BVetMed, PhD, DipECBHM, DCHP, MRCVS
P	Mertens, P	BSc, PhD

AP	Blott, S C	BSc, PhD
AP	**Breen, J E**	BSc, MSc, PhD
AP	Daly, J M	BVSc, PhD, DCHP, MRCVS
AP	**Dean, R**	BSc, PhD, SFHEA
AP	Hobson-West, P	BVMS, PhD, CertSAM, DSAM (Feline), MRCVS
AP	**Hudson, C D**	MA, PhD, FHEA
AP	Jones, M A	BVSc, PhD, PGCHE, DCHP, FHEA, MRCVS
AP	**Kaler, J**	BSc, PhD MSc, PGCHE, MA, SFHEA
AP	**Lovatt, F**	BVSc & AH, MSc, PhD
AP	**Wapenaar, W**	BVSc, PhD, DSHP, DipECSRHM, MRCVS
L	Atterbury, R J	BSc, PhD, CBiol, MRSB, PGCHE FHEA
L	**Brennan, M L**	BSc(VB), BVMS, PhD, PGCHE, FHEA, DipECVPH(PM), MRCVS
L	**Davies, P**	MA, VetMB, MRCVS
L	**Down, P M**	BVSc, DipECBHM, PhD, MRCVS
L	Dottorini, T	BSc, MSc, PhD
L	Egan, S A	BSc PhD, AFHEA
L	Kendall, N R	BSc, PhD
L	Kydd, J H	BSc, MSc, PhD, PGCHE, SFHEA
L	**Nova Chavez, R J**	DVM, MSc, PhD, FHEA
L	**Remnant, J**	BVSc, PGCHE, CertAVP, FHEA, DipECBHM, FHEA, MRCVS
L	**Tarlinton, R E**	BVSc, PhD, FHEA, MRCVS
L	Tötemeyer S	DiplBiol, PhD, MA, SFHEA
L	**Yon, L**	BSc, PhD, DVM, FHEA,MRCVS
TA	**Garcia-Ara, A**	DVM, MSc, PGDipHACCP, AFHEA, MRCVS
TA	**Reed, H**	BVSc, AFHEA, MRCVS
TA	**Roots, L**	BVSc, BSc, MRCVS
RF	**Ashall, V**	BVSc, MA, PhD, CertWEL, DipECAWBM(AWSEL), MRCVS
RF	Baig, A	BSc, PhD
RF	Blanchard, A M	BSc, PhD, AFHEA
RF	Harvey, N D	BSc, PhD
RF	**Robinson, N**	BVetMed, BVetPath, PhD, MRCVS
RA	Vazquez Diosdado, J	BSc, PhD
RF	Nomikou, K	DVM, MSc, PhD
RA	Quinlan, P R	BSc, PhD
Honorary staff:		
P	Borriello, M	BSc, PhD, MRCPath/FRCPath, FFPH
P	Brown, I	BSc, PhD
P	Drew, T	BSc, PhD
P	Davies, S	BSc, MSc, PhD
P	**Green, L E**	BVSc, MScEpid, PhD, MRCVS
P	**Harris, P**	MA, VetMB, PhD, DipECVCN MRCVS
AP	Bell, N	MA, VetMB, PhD
AP	**Clarke, M**	MA, VetMB, MRCVS
AP	**Parker, C**	BVM&S MRCVS
AP	Perry, V E A	BAgSc, PhD, GCEd
AP	**Redrobe, S P**	BSc, BVetMed, CertLAS, MRCVS
L	**Chapman, S**	BVM&S, MSc DZooMed(Mammalian), MRCVS
L	**Dagleish, M P**	BVM&S, PhD, MRCVS
L	**Evans, K**	BVSc, CertVA, MSc, PhD, MRCVS
L	Hollands, T	BSc, PhD, R.Nutr

L	**Hunt, C**	BVetMed, CertSAM, CertZooMed, MRCVS
L	**Husband, J**	MA, VetMB, DCHP, MRCVS
L	Lewis, T	BSc, PhD
L	Millar, K	BSc, PhD
L	**Orpin, P**	BVSc, MRCVS
L	**Pizzi, R**	BVSc, MSc, FRES, MACVSc, DZooMed(Avian), MRCVS
L	**Wensley, S**	BVSc, MSc, MRCVS
DIVISION OF ACADEMIC SUPPORT AND ADMINISTRATION		
Head of Operations		
APM	Braithwaite, K	BSc, PhD, MBA
Admissions Team		
APM	Williamson, V	
Alumni and CPD		
APM	Readyhoof, R A	
Student Placement Team		
APM	Edwards, M	
APM	Hill, D	
Student Support Team		
APM	Dogget, V	
APM	Oldham, P	
APM	Wood, I	
Research and Business Support Team		
APM	Knaggs, S A	BSc, PhD
Teaching Learning and Assessment Team		
APM	Arnold, R	
APM	Millward, K A	
APM	Millward, S	BA
APM	Watson, C S	BA
Divisional Support		
APM	Humphreys, R J	
APM	Kenney, J A	
APM	Munro, L J	
APM	Palfreyman, E	
APM	Rothwell, J A	
Teaching Support Technicians		
TS	Axten, L G	
TS	Bowness, E F K	BSc
TS	Brind, P A	
TS	Brown, R M	BSc
TS	Clifford, S P	
TS	Cross, A	
TS	Gill, E J	
TS	Hammond, P K	RVN
TS	Jackson, J A	
TS	Newton, V	
TS	Sanders, J	
TS	Squire, J E	
TS	Wilkinson, D	

Research Support Technicians		
TS	Bollard, N J	
TS	Day, L	BSc
TS	Galloway, S E	
TS	Gurney, E	BSc
TS	Hulme, S	
TS	Shephard, F	BSc, PhD
TS	Simons, C	
TS	Staley, C	BSc
TS	Wang, B	
TS	Williams, C	BSc, PhD