FINAL VISITATION REPORT AS ISSUED BY ECOVE 20.5.2014

European Association
of Establishments for Veterinary Education

Association Européenne
des Etablissements d'Enseignement Vétérinaire

REPORT ON THE VISITATION TO

THE DEPARTMENT OF VETERINARY MEDICINE

OF

THE UNIVERSITY OF BARI

20 – 24 January 2014

by the EXPERT GROUP:

Visitor on Training in Basic Sciences

Prof. Patricia Fdz. de Trocóniz Revuelta, Lugo, Spain

Visitor on Training in Clinical Sciences (Academic)

Prof. Lars Moe, Oslo, Norway

Visitor on Training in Clinical Sciences (Practitioner)

Dr. Bertil Douw, Macroom, Ireland

Visitor on Training in Animal Production

Prof. Petr Horin, Brno, Czech Republic

Visitor on Training in Food Safety

Prof. Maria Gabriela Veloso, Lisbon, Portugal

Student Member

Dr. Veronika Simerdova, Brno, Czech Republic

EAEVE Programme Coordinator

Dr. John Williams, Leeds, United Kingdom.

FINAL VISITATION REPORT AS ISSUED BY ECOVE 20.5.2014

CONTENTS

FINAL VISITATION REPORT AS ISSUED BY ECOVE 20.5.2014

INTRODUCTION

A Team of experts assembled by the European Committee for Veterinary Education (ECOVE) visited the campus of the Department of Veterinary Medicine of the University of Bari between 20 and 24 January 2014 to carry out an evaluation of the veterinary training provided by the Department in accordance with the current standard operating procedures.

The last full visitation to the (then) Faculty of Veterinary Medicine was carried out in 2001 and, following a revisitation, the Faculty was given full approval in 2004 to the standards in operation at the time.

On this occasion, the Team were provided with a comprehensive Self Evaluation Report (SER) in advance of their visitation, were made very welcome by the Director of the Department, its staff and students and were accorded the full cooperation of the Department during the course of their visitation.

The Team would like to acknowledge the effort involved in the preparation of the SER and express their appreciation for the cooperation and hospitality accorded to them during their visitation.

1. OBJECTIVES & STRATEGY

1.1 Findings

The list of the official objectives of the Veterinary Medicine Course has been set-up by the Degree Course Board, the Committee for Teaching Affairs and the Department of Veterinary Medicine Board, where students are well represented.

The general and specific objectives are considered to be long-term objectives not needing revision unless significant changes in the legislation occur. Short-term educational objectives can undergo some adjustment as a consequence of inputs on low performance of teaching and support service.

A permanent assessment system for the achievement of the general objectives is not in operation.

The Department claims that it is still waiting for the approval of the new Teaching Regulation, in which the mission of the Veterinary education at the University of Bari is clearly stated.

The general educational objectives of veterinary education in Bari can be summarized as follows: to provide adequate, ethical, research-based veterinary training by offering high-quality education to students of Veterinary Medicine and further professional and scientific postgraduate education, as well as continuing education; to produce basic and applied research and innovation in the various subjects of the veterinary science; to provide services to members of the veterinary profession and the community as a whole.

More specific objectives of the undergraduate education are established in accordance with the European Directive 2005/36/UE, the current national legislation (Ministerial Decrees n. 509/1999 and n. 270/2004) and the EAEVE recommendations.

A further long-term objective, not yet established but aiming to explore innovative teaching methods, is to design courses centred on individual animal species and to exploit territorial potential and expertise.

1.2 Comments

It seems that the definition of the objectives is either very general (first part) or rather specific (second part) and as such, in the current transition period, the Department and the course do not have clear goals.

The Department does not have a clearly defined vision or mission statement independent of legislation and current problems, addressing general issues related to the profession in all its aspects related specifically to the Bari veterinary course. In this regard, the first part is only a very

general statement that does not define the School's specificity and exclusivity in the national and European context. The second part is more a technical view of teaching rather than an idea how to develop this concept.

Nevertheless, the objectives identified in this part of SER are in good agreement with general objectives of European veterinary education institutions and the lack of a more ample vision does not hamper the school to perform well in all areas of activities.

The specific objectives do cover all areas that must be considered for its adequate development in the future. It is quite clear that the objectives are primarily related to teaching and the Department of Veterinary Medicine with its veterinary course is in these terms a "traditional" European veterinary teaching establishment.

1.3 Suggestions

1.3.1 A definitive strategic plan should be prepared and implemented as soon as possible, to assist in directing and carrying forward some of the other suggestions made in the Evaluation report. A long-term vision aiming to better define the school's specificity and exclusivity in the national and European context should be formulated in this plan.

2. ORGANISATION

2.1 Findings

The University of Bari "Aldo Moro" is one of 58 State Universities in Italy. It was founded in 1925 and is attended by ~60,000 students. As a public institution, the University comes under the authority of the Ministry of Education, Universities and Research (MIUR), which lays down general guidelines for certified degrees and determines general policy for higher education. Within these national parameters, the University has some autonomy in its organisation, teaching and the structure of its research. The main University governing bodies are the Rector, the Academic Senate and the Board of Governors. At present, one professor from the Department of Veterinary Medicine sits on the Academic Senate, representing veterinary, biological and agronomic disciplines. Veterinary students are relatively well represented in the governance of the University, because they tend to be active in student affairs,

A Ministerial Decree of 2004 - which came into force 3 years ago - required radical changes to the organisational structure of all the Italian State Universities, by which power was transferred to Departments from the Faculties, which were effectively abolished. So studies in Veterinary Medicine at the University of Bari are now the responsibility of the Department of Veterinary Medicine (DVM), one of 24 Departments that constitute the University. The DVM is administered by a Departmental Council, which is chaired by the Director of the Department and meets each month. The Council is elected from among the full time professors and associated professors of the Department. The Director is also supported by a vice-Director and an Executive, which is elected from among members of the Department and comprises representatives of the Professors, Associate Professors, researchers, technicians and administrators. The Executive has no fixed pattern of meeting.

The Departmental Council appoints 3 Committees: a Teaching Affairs Committee; a Practical Training Committee; and a Research Committee. There are, in addition, Councils for each of the 3 degree courses taught in the Department; these Councils plan, organise and coordinate teaching activities for each degree course.

The Department of Emergencies and Organ Transplantation which, before the abolition of Faculties, was part of the Faculty of Medicine, is now considered an Associate Department of the University, but the SER indicates that the University authorities have not yet defined the rules governing the functions of the 2 Departments (DVM and DETO) in the management of the veterinary degree course. Professors of the old Faculty are now distributed between these 2

Departments; the DVM includes 49 teachers and DETO includes 24. In addition, some Animal Production subjects are taught from a third Department.

2.2 Comments

As it is described in the SER, the administration of the Department of Veterinary Medicine (DVM) seems rather top-heavy and bureaucratic. The DVM is responsible for teaching less than 1.5% of the students of the University and must, therefore, be one of the smaller Departments. But members of the various Departmental Councils and Committees presumably need to invest considerable time in attending meetings – time which might be better spent in teaching (or learning, as there are student members on most of the bodies) and research.

It seems possible that the rather complicated administrative structure and the apparent fragmentation of laboratory provision in certain disciplines is partly a consequence of the recent disabling of the Faculty and reliance on a number of funding streams. Furthermore, the position regarding the DVM and DETO is unsatisfactory and requires resolution; the Team found it confusing, but much more importantly, it causes significant difficulty for veterinary teachers and students, and in the financing of the veterinary course as a whole.

2.3 Suggestions

2.3.1 The Departmental Council should seek clarification from the University administration of the situation regarding DETO, so that the funding and management of DVM – both its facilities and its teaching – can be rationalised under its direction.

2.3.2 Consideration could then be given to reorganisation of the Department, within the limitations imposed by University Statutes, with the intention of reducing the commitment of individual staff members to administrative duties and accelerating the decision-making process. Discussions and comparison with other small Departments in the University might be helpful in this respect. In particular, the VMD should consider rationalising its committee structure, since there seems to be significant overlap in the responsibilities of the Teaching Affairs Committee, the Practical Training Committee and the 3 Councils of Degree Courses.

3. FINANCES

3.1 Findings

The University of Bari is a state-funded institution and the vast majority of its budget derives from the MIUR. The budget allocation is differentiated at source into 3 separate funds: the Ordinary Financing Fund which is used for running costs – including salaries of all University staff; the Fund for University Building and Capital; and the University Development Fund, for new projects. A small proportion (10%) of the Ordinary Fund is passed down to Departments for their specific needs.

The University charges tuition fees, which it retains centrally. The fee is the same, regardless of the course of study pursued by the student but, since staff salaries and the running costs of VMD are largely covered from the central University budget, this does not have a direct impact on the finances of VMD. Student tuition fees are adjusted according to the academic merit of students and their family income, so the fees paid by individual veterinary students may vary from €0 to over €1400.

The Department obtains some funding from various public authorities, European Research Agencies, the Zoo-Prophylactic Institutes, from Regional funds and from several private enterprises. It also charges fees for clinical and diagnostic services and for food and feed analysis; about 20% of this income is retained by the University; some of the remaining 80% can be distributed to the staff that have provided the services.

The Veterinary Teaching Hospital was completed in 2001; the building was funded by the EU and MIUR and the University of Bari furnished and equipped it.

3.2 Comments

After the last EAEVE Visitation in 2001, the Veterinary Faculty experienced a positive period in which there was considerable investment in new staff, new buildings and new equipment. So, although legislation passed in 2008 introduced major reductions in the income of State-funded Universities, the VMD of the University of Bari was, to some extent, insulated from the effects of the cuts by the reorganisation of University structure, previous development of the undergraduate course, the recent investment and the fact that the majority of its buildings and equipment were relatively new and did not need expensive maintenance or replacement. This advantage will, of course, progressively reduce.

The SER states that it is unrealistic to expect any increase in public funding, but anticipates that no further cuts will be imposed after 2014. It acknowledges that the financial future of the VMD is not completely satisfactory and suggests a number of measures which could be implemented by the central administration of the University to increase the per capita funding for undergraduate training and increase the "take" by the VMD for its external services. These measures seem very sensible, but depend entirely on the commitment of the University governance to the support and development of a relatively small Department of the University.

3.3 Suggestions

3.3.1 To seek and obtain public funding for research more energetically – is (the SER notes) a two-edged sword, because both seeking funding and conducting the research requires a commitment of time by academic staff which can conflict with their teaching duties. But the Team believes that this is necessary to maintain and improve the research-based aspects of the undergraduate course. And it might be that adopting the suggestion in 2.3.2 (reducing the level of bureaucracy) would help to minimise the impact of this on undergraduate teaching.

3.3.2 Persuading the University administration to increase tuition fees for veterinary students – to reflect the high cost of training - should be considered; but this would only be useful if the whole of the differential were passed on to DVM without deduction and in addition to its normal budgetary provision.

3.3.3. Better organization and centralization of veterinary and laboratory activities within the VTH and between teams (e.g. central laboratories) as suggested in the following chapters offer another possibility to rationalize the budget.

4 CURRICULUM

4.1 GENERAL ASPECTS

4.1.1 Findings

In accordance with Ministerial Degree 509, the curriculum of the Degree Course of Veterinary Medicine has a general framework valid at national level that is established by MIUR. It lasts 5 years and comprises a total number of 300 credits i.e., about 60 per year, distributed in a maximum of 30 exams.

Implementation of the new curriculum of the Veterinary Medicine course at Bari started in 2008; in its present form, it has been in operation since 2009. Therefore, at present (2014), it hasn't completed its first 5-year cycle yet; only the first four years have been completed.

The new curriculum complies with the objectives of the "Bologna Declaration" and with the European standard required by Directive 2005/36/EC. In particular, three main innovative aspects have been introduced 1) the reduction of CFU numbers assigned to the basic and characterizing disciplines, in order to increase the number of hours in practical training; 2) the teaching activity organized in 20 short condensed 6-week periods (4 per year) and 3) the introduction of a 5th year, informally named "Trident", which includes three optional tracks, composed of non-overlapping electives. The percentage of electives represents 21% of the total curriculum workload.

The 25 hours/credit balance among lectures, practical and individual work may be defined by the Teaching Regulation of each University course and may vary depending on the area of study, the disciplines and the typology of the teaching. At the Veterinary Medicine Course of Bari, the amount of time to be dedicated to individual learning for each CFU ranges between 0 hours (practical trainings) to 17 hours (basic subjects). Diploma thesis is a compulsory part of the curriculum and a pre-requisite for obtaining the degree.

The graduates are awarded the degree of Master in Veterinary Medicine. New graduates may apply immediately for a State Board examination organized by the Ministry twice a year. Academics and representatives of the profession are members of the State Boards. Based on their successful State Board examination, graduates are licensed to practice the veterinary profession as private veterinarians.

4.1.2 Comments

The curriculum covers all 27 EU-listed subjects either explicitly under their names or under other names but having a corresponding content. Therefore, it fulfils the EU directive 36/2005 in terms of length (5 years) and contents (EU listed subjects). It reflects the Bologna process to the extent usual in most other veterinary teaching institutions in Europe.

All types of teaching, including lectures, practicals and self-learning are planned and used. The law defines the general frame of the curriculum and leaves some flexibility to the institution to set up the ratio between different disciplines and types of teaching, provided that the total numbers of CFU are respected. The DVM preferred clinical to non-clinical subjects, which is in line with the current trends. However, in some of the latter, very little time has been assigned to practicals, which is not a big problem for basic subjects, but it is in others, like some basic sciences and animal production disciplines.

More emphasis is put on teaching, especially in the form of lecturers, than on learning. Practical examinations have been reduced with the new curriculum in some important subjects (e.g. Animal Husbandry). The definition of day one skill (DOS) is lacking both at the level of the programme as a whole and at the level of different groups of disciplines and/or individual disciplines.

In general, practicals offer good numbers of small animal patients, while there is limited access to large animals within the school. Before the financial crisis and budget cuts, the Department used to buy additional material. For financial reasons, this practice has reduced over the last three years and consequently, the numbers of large animal carcasses and patients dropped during this period. The DVM has tried to address this situation by making agreements with private farms in the surrounding area. The farms allow access of students to farm animals, including handling, basic examinations and herd health management. Students are taught either under direct supervision of university teachers or under the supervision of external collaborators – veterinarians acting as tutors. They do not have any contract with the DVM. They are instructed what they should do, but there is no formal way how to check their work with students. Informally, the DVM teachers have a feedback from students based on personal communication. Based on this informal feedback, at least one collaboration of this kind was stopped by DVM.

The “Tirocinio” *[English: internship, apprenticeship, traineeship]* practicals are basically a useful way to enhance “hands-on” practice; all students must pass it, and it thus belongs to the core curriculum in general terms. However, the contents of the practicals differ in the elective fifth year and it seems that for some subjects, like for evaluation and handling animals in the animal production area, it is too late, taking into account teaching in clinical disciplines.

The relatively high number of electives is one of the major innovations found in the current curriculum. In many subjects, like in animal production, there is no overlap in the subjects taught by the same department and person. The differences are due to different species coverage and/or to different topic contents taught according to the track. In general, the tracks are well defined and reasonably shaped for their specific purpose.

In terms of quality assurance (QA), no mechanism has been defined for obtaining a feedback on the curriculum implementation from students, from teachers or from professional organizations, although the Veterinary Chamber was asked to contribute to its design.

The curriculum as a whole seems to be a standard modern-type curriculum respecting the Directive and other professional standards.

4.1.3 Suggestions

4.1.3.1 The new curriculum must be considered as a raw product requiring continuous evaluation and development. Consideration should be given to a greater emphasis on practical teaching and self-learning, rather than lectures, throughout the entire curriculum.

4.1.3.2. A QA mechanism aiming to evaluate the effects of the implementation of the new curriculum based on feedbacks from teachers, students and the profession should be defined and used when the first 5-year cycle is completed.

4.1.3.3. Based on this and based on this report, the curriculum should be modified in order to eliminate the weaknesses identified. Specifically, the numbers of lectures could easily be reduced and students should be referred to self-learning, and especially e-learning. For this purpose, the teachers should put more effort on preparing teaching materials, and the University as a whole and its DVM should implement a coherent e-learning system.

4.1.3.4. More attention should be paid to the examination system, especially to practical examinations based also on the definition of DOS. The major part of the time gained by the reduction of lecture hours should be used for extending practicals, especially in some basic science and animal production subjects, and a smaller part could be used for (re-)introducing practical examinations in pre-clinical and paraclinical subjects, if they are not performed.

4.1.3.5. Practical work with hands-on experience (approaching, handling, evaluating animals and basic clinical propaedeutics) should start earlier in the curriculum, preceding clinical disciplines. Practical teaching in anatomy should reflect its role in further development of specific hands-on skills in pathology and surgery. The practical hours should be therefore better used for this purpose and instead, complementary methods of self-learning, like anatomical models and specific teaching software should be introduced.

4.1.3.6. A QA-based system of evaluating veterinarians used as tutors for the “Tirocinio” practical extramural training should be designed and implemented as soon as possible. A more formal status (“accreditation”) based on clearly defined inclusion/exclusion criteria should be introduced and used for the tutors to make sure that the university supervision is efficient.

4.2 BASIC SUBJECTS & BASIC SCIENCES.

4.2.1 Findings

The Basic Subjects taught in the DVM form part of the regular curriculum of veterinary students; they are situated in the first two bimesters of the first year as shown in the SER Figure 4.1., Tables 4.b and 4.d, and in Annex 4.1., mostly structured as individual disciplines with the same or similar denomination as in EC 2005/36.

Specimens used in Anatomy and Pathology are carcasses - coming either from private practitioners or from the Veterinary Teaching Hospital - and organs of livestock collected from the local slaughterhouse; transportation is made in special containers and specimens are properly stored, refrigerated or chilled, to be used without any preservation. For anatomy, plastic models of certain organs or body parts can be used as well.

All waste materials used in the Dissection and Necropsy halls are stored in large refrigerators until their periodical removal on demand by an authorized private company to be destroyed by incineration. Each department pays the cost of its own waste disposal.

In the necropsy room there is a hoist for handling carcasses up to 500 kg, located over the entrance door and used only for this purpose. No rails connect the hoist with the storage facilities.

Teaching of bio-safety and bio-security measures is taught in Pathology as an introductory part of the course for every student. There also notices with the security protocols in both rooms.

As stated in p. 194 of the SER, the admission test is designed in a way that even students with a poor scientific background may pass the exam because it includes a 50% of multiple choice questions related to logic and general knowledge, and does not adequately cover scientific skills. Academic staff in general - with the exception of some Microbiology and Parasitology staff, think that the students' education level is quite low as the national educational system does not prepare them in terms of either knowledge or ability to study. Their view is that the Veterinary course is a very vocational one, something that is not always well understood when the students apply to entry.

Some of the Basic Sciences offer a number of practical hours as elective subjects in the 5th year course (Professionalizing Didactic Path - PDP) under the adjective "applied", as can be seen in Table 4h. This should account for a good projection into later subjects as it would give the students the opportunity to put them into practice having the specific view of a given subject when considered under the scope of a defined professional orientation.

Some teachers of the basic subjects and sciences are not veterinarians, with a preponderance of biologists especially in Anatomy (hence also in Embryology and Histology), whereas practically all academic staff in Physiology, Microbiology and Pharmacology have a degree in veterinary science.

From the curriculum hours for the EU-subjects taken by each student shown in Table 4.2, it is clear that for Basic Subjects and Sciences there is a low proportion of practical hours, the highest being 26.5% for Anatomy (average) and the lowest Toxicology with 10.3%. Thus the two first academic years are overloaded with lectures and private study, until clinical and animal production subjects are introduced in the mid second year and onwards.

This seems an unbalanced learning path at the beginning of the degree, considering that the Basic Sciences represent approximately 21% of the veterinary curriculum but include less than 18% of practical learning, whereas Animal Production subjects - with less impact over the total (16%) or Food Hygiene (10.36% – both have a higher content of practical sessions - up to 45.5% and 58.4 respectively (data obtained from table 4m and from 4.2 for estimation of percentages).

When academic staff were asked about how they felt about this situation, some of them are comfortable with the hours allocated to their subjects, although they admit that more hours dedicated to practical sessions would be advisable. As for Anatomy and Pathology, the official practical hours are really insufficient and staff are forced to do longer sessions than scheduled. This working time is not recorded - for students or teaching staff.

6) Hands-on work in Anatomy as explained in page 157 of the SER is insufficient as most of classes are either demonstrations made by the instructors on prepared specimens, or dissections performed by the academic staff in front of the students.

Regarding Pathology, necropsies are described as a really participative hands-on practice for students: from collecting the case history to sampling for additional examinations when a diagnosis is required. Necropsies are usually performed in histology and immunohistochemical labs and in 2 Necropsy rooms; field necropsies of large animals are also carried out upon request on farms.

Pathology practical groups are adequate at 6 to 8 people. The practical groups for Anatomy are large (25-30 students) split in 3 subgroups under the supervision of 1 professor assisted by technicians and/or researchers or PhD students.

In some units, especially in Pathology, support/technical staff seems not to be sufficient.

4.2.2 Comments

Basic Subjects and Sciences are generally taught with an emphasis on lectures and private study; there are insufficient - if any - self learning facilities available, based (for example) on an e-learning platform.

Academic staff are committed to their teaching tasks, being available for student consultation at any time (in addition to the official timetable) and dedicating more hours to didactic tasks than allocated.

Usually the only study materials employed by students are their own class notes and the presentations that teachers leave on the teaching room computer. Nevertheless, some teachers also use *Facebook* groups for academic purposes in order to communicate with students, or share *Dropbox* folders as a repository for presentations. This clearly points to the benefit of the University of Bari establishing an e-learning platform, which could also be used by other Departments.

In Anatomy, little - if any - hands-on work is performed by the students themselves, and mainly the practical work relies on demonstrations - except for osteology, in which students handle bones and joint preparations.

Practical groups in the Basic Sciences are in general adequate, being limited by the small size of some labs - especially those located in Building 6. The biggest groups - in Anatomy - are supervised by more than one instructor, resulting in a good ratio student-professor.

Generally, there is an adequate number of technical staff, with the exception of Physiology, Parasitology and - particularly - Pathology. In these cases academic staff must do the additional technical tasks as well, to the detriment of their teaching and research activities.

4.2.3 Suggestions

4.2.3.1. Consider increasing practical classes and a proportional decrease of lectures, together with the implementation of e-learning resources.

4.2.3.2. Introduce more supervised hands-on work in Anatomy - wholly done by students as recommended by EAEVE; some demonstrations could be replaced by computerized tutorials; more hours should be allocated or at least reorganized to achieve a most suitable 50/50 dedication for such a visual subject instead of the actual 66/33. It should be taught by veterinarians, with a better concept of its potential projection into clinical work. The lack of practical, hands-on learning in Anatomy may constitute a major deficiency

4.2.3.3. The number of the support staff in some units teaching Basic Subjects and Basic Sciences should be increased (i.e. Pathology, Anatomy, Physiology, Parasitology).

4.3 ANIMAL PRODUCTION

4.3.1 Findings

The subjects and their numbers of hours are in the Table:

Subject	Theoretical training			Supervised practical training			Other*	Total
	Lectures (A)	*Seminars* (B)	*Self directed learning* (C)	*Laboratory and desk based work* (D)	*Non-clinical animal work* (E)	*Clinical training* (F)	(G)	
4. Animal Production			-					
a) Animal production	78	-	-	19	70	-	-	167
b) Animal nutrition	50	-	-	20	10	-	-	80
c) Agronomy	15	-	-	5	-	-	-	20
d) Rural economics	30	-	-	10	-	-	-	40
e) Animal husbandry	44	-	-	-	65	-	-	109
f) Veterinary hygiene**	20	-	-	6	8	-	-	34
g) Animal ethology and protection	30	-	-	-	10		-	40
4. Total	267	0	0	60	163	0	0	490

There is no University teaching farm but the students have access to a number of private farms. Based on formal or informal agreements with owners, students are allowed to train in evaluation and handling of large animals and to perform basic practical clinical interventions - like clinical examination and collection of blood samples - under the direct supervision of teaching staff and/or external tutors. A list of the most frequently visited farms is given in Table 6.1a and a more detailed list is shown in Annex 4.3 and Annex 4.4.

Students can choose to perform non-clinical or clinical extra-mural activities as part of their "Tirocinio" and/or to complete their educational pathways during the 5th year of training (Professional Didactic Pathway - PDP). If students do have access to a farm having an agreement with the DVM in their domicile, their extramural practical teaching under the supervision of local tutors takes 3 weeks. If a student is unable to find such a farm, his/her extramural practicals are organized by the DVM on the campus or in surrounding farms. In this case, due to a lower workload, the practicals take 4 weeks.

4.3.2 Comments

Animal Production teaching is traditional, comprehensive and veterinary-orientated. Out of 9 permanent teachers, 5 are veterinarians. In some subjects, like animal nutrition, the veterinary aspect is well accented. There is good coordination with clinical teaching. Teachers from this area actively contribute to the 5th year elective programme.

The subjects and their hours correspond to a standard veterinary curriculum. Due to the reduction of hours in basic sciences, these subjects appear early in the curriculum (2nd year). However, practical animal handling should be introduced earlier in the curriculum.

According to Annex 4.1., the contents of courses are rather traditional. Subjects like Rural Economy and Agronomy are taught in their basic form. Despite the confusing organization of the establishment as a whole (people from three different departments of the University contribute to teaching in Animal Production), teachers in the Animal Production area form clearly a collaborating, interacting and coordinated group. They meet and are aware of what others teach in

related areas of Animal Production. The integrative concepts of herd health management are presented to students although it is not clear how familiar the students are with specific tools (like software) used in general practice.

Due to small numbers of pigs in the area (one farm with 1500 pigs is available for student visits), students' experience with this species is limited. In some subjects, like Animal Husbandry, low numbers of practicals do not allow students' practical knowledge to be assessed.

According to the teaching staff, the lack of a Teaching Farm is a serious limitation for practical teaching. It is difficult to teach animal production in an integrated way in different farms.

4.3.3 Suggestions

4.3.3.1 More practical hours should be dedicated to some subjects, especially to Animal Husbandry. Practical examinations should be introduced in Animal Husbandry.

4.3.3.2 Practical handling of animals should be introduced earlier in the curriculum than in the 4th year. Students should be prepared to develop these skills in the clinics.

4.3.3.3 The external tutors should be regularly evaluated and a feedback from students should be used for ascertaining the university supervision and quality of extramural teaching.

4.3.3.4 The Department should seek ways to allow students to get an integrated concept of Animal Production, Veterinary Medicine and herd health management to educate them as competitive consultants in this area. Having a model farm available for this purpose is an ideal solution. If it is impossible to use/share and/or run a university farm, a farm complying with standards of a modern farm management should be identified and contracted.

4.4 CLINICAL SCIENCES

4.4.1 Findings

By tradition, for didactic purposes, students are divided by disciplines rather than species-specific (cross-disciplinary); three different disciplines provide clinical training: Internal Medicine; Veterinary Surgery; and Veterinary Obstetrics.

The VTH clinical activities are divided into small animals and large animals; students can express their preference for either: companion animals; farm animals; or equines and are encouraged to do extra clinical training in their field of interest.

The clinical activities at the VTH are carried out on daily basis from 08.00-18.00. There are a sufficient number of clinicians on the floor daily in the regular small animal, equine and production animal clinics. For large animals, there is an ambulatory service that visits farms using university vehicles.

An emergency veterinary service is available for most of the year. All cases get full attention, where the clinician performs a triage to assess to which of the clinical disciplines the patient should be referred. The emergency department has out-of-hours cover (18:00-8:00), with a junior clinician and students available at the VTH for both first line and referral services. For complicated cases the clinician on call can request help from senior and/or specialised clinical staff who are on stand-by out of hours. Participation in the clinical services is mandatory for students and is recorded in their logbooks. Students are covered by the normal liability insurance of the university.

There are also two types of agreements (formal and informal) with private veterinary hospitals and clinics where students take part in extramural clinical services, some are which are out of hours duties as well.

The different disciplines work reasonably well together, but are not integrated. The lack of a comprehensive computerised patient and teaching system handicaps further integration

4.4.2 Comments

There is no rota for out-of-hours support staff and for radiology etc. And there is poor availability of cross-disciplinary information due to the lack of an integrated computer system. This also prevents further integration of clinical disciplines, diagnostic services, supporting laboratories and pathological follow-up.

The poor integration between disciplines, e.g. infectious diseases, pathology and clinical disciplines results in sub-optimal care for patients.

Differentiation within the veterinary curriculum seems to prevent all students from getting proper hands-on experience in clinical expertise in all species, but this seems not to be recognised as a problem by either students or academic staff.

4.4.3 Suggestions

4.4.3.1. Develop an out-of-hours rota for support and specialist staff

4.4.3.2 Introduce a better computer system for patient and case-files to facilitate follow-up of cases, promote integration of information and force better cooperation between disciplines. The system should also be available to students for e-learning.

4.4.3.3. The Department should consider financing a program for the purchase of equines, bovines and ovines, or to subsidise clinical procedures on these animals, in order to ensure the availability of sufficient clinical material to provide adequate hands-on experience for students.

4.4.4.4. An agreement between the clinical disciplines and the pathological discipline should be established in order to increase the number of necropsies done, to improve student teaching and to give feedback to clinicians.

4.4.4.5 Consideration should be given to introducing species-oriented learning in the clinical area.

4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH

4.5.1. Findings

The SER indicates that each student should attend a total of 340 hours of lectures and practicals in Food Hygiene & Technology and Veterinary Public Health. Included in this are 125 hours of obligatory extra-mural practical training (“Tirocinio”). A theoretical and supervised practical training of 24 hours is also offered during the second period of the three professionalizing tracks, scheduled at the 5th year “Food Safety and Public Health” in which is also taught the following subjects: Infectious Diseases, Parasitology and Mycology, Pharmacology, Toxicology, Anatomy and Anatomical Pathology. Food Safety 1, which is taught in the third year, Food Safety 2 in the fourth year and the “Tirocinio” in the fifth year are the core subjects of the new curriculum of the Veterinary Medicine Course of Bari.

Theoretical teaching is given during the morning period (8:30 a.m. to 12:30 p.m. or 13.30 p.m.). Practical training is taken in the afternoon at a lecture hall, at the laboratories of the Food Safety Unit of the DVM, at local slaughterhouses and at a variety of outside plants. There are a number of agreements with private and public institutions (slaughterhouses and food industries) where students can do extra-mural work under the supervision of an external tutor.

Under the guidance of university teachers, practical sessions are performed in small groups of students (8-10) except for visits to outside plants, which are organized in groups of 20-25 students. During practical sessions in Food Hygiene, students in groups of 10 - 15 have access to slaughterhouses for different animal species where they are assisted by official veterinarians and by teachers.

A requirement for all students is to attend at least 60% of hours of in-class training, with the exception for the attendance of “Tirocinio” practical training, for which 100% attendance is compulsory.

The students have regular access to several types of outside plants and visit approximately one plant in each type here below listed (about 6-8 visits):

Milk and dairy products
Meat products
Collective catering services
Wholesale markets (including fish market)
Frozen products storage plants
Slaughterhouse and cutting plant
Egg and egg products plant
Large-scale retail food establishment.

The course includes 131 hours of theoretical training on the hygiene and safety of milk, honey and eggs, on meat processing technology, in the hygiene and sanitary control of meat and meat products, on the hygiene and sanitary control of fish and fish products and on the hygiene and sanitary control of bivalve molluscs. The teaching of legislation and HACCP is also included in this course. Laboratory and desk based work is 35 hours.

Non-clinical animal work includes 25 hours of practical work with organs containing lesions from cattle, small ruminants, pigs and horses slaughtered at local abattoirs; with fresh fish and fish products, shellfish, poultry carcasses, meat products, milk and dairy products, honey and eggs.

Food Hygiene and Public Health offers to the students, during the last year of their training, 30 hours of practical sessions dedicated to bee health. This topic, developed in lectures and practical works, is mainly performed at the “experimental apiary” and at the "honey processing plant” that are present at Campus. Some practical session are also organized in private outside apiaries and honey processing units, according to the seasonal possibility.

4.5.2 Comments

Teaching that takes place in the Faculty comprises lectures and practical exercises in year 3 and year 4. Viscera with lesions are brought from the slaughterhouses and they are examined at the faculty. The extramural teaching gives a competence at basic level in food hygiene and inspection. Those students who chose the public health/food safety track will have a higher level of competence in this area but none will be considered to have achieved Official Veterinarian status. There is however a requirement for additional training should they wish to join the State Veterinary Service as an Official Veterinary Surgeon. This training is offered by Specialization Schools.

The training at the abattoir visited, where 5 students were attending, was of a very high standard and appears to be the norm at all meat plants. At slaughterhouses the students can check the animal welfare conditions during transport, unloading, the rest period and during stunning.

The teaching of bee and honey technology is considered very important as it is a product of animal origin with a high rate of consumption within the EU.

The teachers make the best use of the available facilities, which are appropriate for the purpose.

Overall, teaching in these subjects is quite good.

4.5.3. Suggestions

Students are not allowed to touch rejected material (carcasses and viscera) at slaughterhouses. The Team were told that this prohibition is imposed by Official Veterinarians, but for students to properly understand the reasons for rejection, it is essential that they should be able to handle the materials. This policy should be challenged and, if possible, changed.

4.6 ELECTIVES, OPTIONAL DISCIPLINES & OTHER SUBJECTS

4.6.1 Findings

According to the national law, at least 8 out of 300 CFU must be assigned to electives. The tracking system in Bari is based on a fully elective 5th year (, so called Professional Didactic Pathway , "PDP") where 15 CFU, corresponding to 375 teaching hours represent electives.

The students can select among three different educational pathways offered by the curriculum at the last year course:

- Clinical Medicine of Companion Animals
- Food Producing Animals
- Public Health an Food Safety

A maximum of 50% of the total number of applicants are allocated to the Clinical Medicine of Companion Animals Path, whereas 30% and 20% are assigned to the Public Health a Food Safety Path and to the Food Producing Animals Path, respectively.

The PDPs are organised in two 2-month learning periods as shown in table 4h. During the 1st period, the courses follow a traditional schedule with practicals and lectures. The 2nd period is professional-oriented and includes only practical teaching. To complete the educational pathways chosen, during this second period, student can spend part of the scheduled CFU (till to 10 CFU) in outside public or private establishments.

The core curriculum compulsory for all students covers 3051 hours. Electives represent 21% of the total number of EU-listed hours. The distribution of core and electives among different subjects of the curriculum is in the table:

MAIN GROUPS OF EU-LISTED SUBJECTS	Total	%*
1. Basic subjects	116	3
2. Basic sciences	732	19
3.Clinical science	1862	47
4. Animal Production	713	18
5. Food Hygiene Public Health	485	12
6. Professional knowledge	32	1
6. Total	**3940**	**100**

4.6.2 Comments

The general philosophy of tracking is in agreement with the current trend in teaching veterinary medicine.

Students are mainly interested about the companion animal clinical track, as in other European veterinary schools.

Practical work represents an important part of the elective teaching.

Although the idea of tracking is based on the current trend, the proportion of electives is rather high. This in principle could be acceptable, taking into consideration the total number of hours dedicated to the compulsory curriculum. However, the contents of the practicals seem sometimes

to cover basic skills and clinical knowledge than to provide students with deeper differentiation in the area of their interest.

4.6.3 Suggestions

The school should re-consider the contents of electives and compulsory subjects, especially in the clinics in order to make sure that students coming to electives have already acquire basic skills. Based on this reconsideration, the proportion between electives and compulsory subjects should be adjusted to make sure that omnicompetence of the graduates is not compromised.

As for the entire curriculum, the system of electives ("trident") should be carefully evaluated from year to year and the feedback should be used for tuning the system as a whole.

5 TEACHING QUALITY & EVALUATION

5.1 TEACHING METHODOLOGY
5.1.1 Findings

General learning objectives of the Veterinary Curriculum are updated annually, are accessible through the Department website and summarized in page 89 of the SER. Specific objectives are settled in the description of the subjects available to students through the web page: http://www.uniba.it/ricerca/dipartimenti/dipmedveterinaria/didattica-1/offerta-formativa/corso-di-laurea-magistrale-in-medicina-veterinaria-classe-lm-42/programmi-corso-lm42/programmi-di-lezione)

Of the so called "Core" subjects (all except electives of the PDP and obligatory extramural practical work) carried out during the first 4 years and representing the 81% of the total amount of teaching hours, there are 27 mono- or multi-disciplinary teaching courses (2,317 hours) in which the fundamental pedagogical tool is the lecture aided by PowerPoint presentations; electronic copies of such ppts are available for students as guides to prepare for the exams that usually take place at the end of the teaching period.

All learning activities included in tables 4.2 and 4.3 must be attended, with a minimum of 60%, except for the "Tirocinio" practical training, where 100% attendance is compulsory. Attendance is checked by the teacher and every student must have an attendance certification to be allowed to sit the exam. There is also an obligation to attend all courses scheduled in a given year before enrolling for the next year.

The educational week is divided into mornings (8:30-13:30) for theoretical teaching and afternoons (14:30-18.30) for practical works. From study of the timetables for the different bimesters (Annex 4.2), especially in the first 3 years, ALL mornings are occupied with lectures, whereas not all afternoons are occupied with practical work. This confirms the apparent imbalance between practical and theoretical teaching.

Although teachers warn the students not to use their course notes as a substitute for specialised books and journals, in fact these and the ppts of lectures are the most common material that students use to study and prepare for exams. The high cost of textbooks and the lack of translations into Italian is seen as the main reason to discourage their everyday use by students, though specialized literature is said to be available at the Central Library.

Specific topics are also discussed in seminars with additional material from current clinical cases, e.g. in microbiology, toxicology or physiology and, of course, in different clinical subjects.

Some teachers involve students in self-directed learning activities to investigate more in depth topics discussed in lectures, but these appear to be in a minority because as stated in page 87 of the SER, problem based learning (PBL) is not yet a common pedagogical tool.

Parasitology includes English lectures and seminars, and lectures offered by specialists can be also be in English as a way to acquire not only the knowledge but also scientific terminology in the other language of common use.

Computer-assisted learning is only used in Statistics, Epidemiology and Animal Production, though multimedia resources for autonomous work are accessible through the Central Library, where students can access a large database using their email address.

Involvement in preliminary clinical exercises starts in the 3rd year and continues during the 4th year, preparing students for real clinical rotations. Groups for this kind of practical vary in size (8 to 20 students per group depending on the topic) and are assisted by 1 professor with the help of technicians, post-docs and PhD students. They assist at consultations and all procedures involved in practice, to be familiarized with basic techniques and instrumentation. Such activities take place at the veterinary hospital but also at the farms, kennels and slaughterhouses quoted in Annexes 4.3 and 4.4.

A mobile clinic is also available for the 3rd and 4th year students attending field activities scheduled in specific disciplines (Reproduction, Surgery, Infectious Diseases and Internal Medicine) in which they actively participate in the examination of large animals and discuss diagnosis and therapy with the teacher. They also perform supervised surgical interventions and gynaecological management.

During clinical rotations, students are fully involved in all current procedures of Emergency and Hospitalization services, participating in every step of the triage.

Clinical Staff also have the doors open to students who in their spare time want to deal with specific activities as supplementary education on a volunteer basis (“intern” students). These are fully involved in the regular activity of the clinics under the supervision of the clinicians and can also participate in clinical studies, case discussion rounds, seminars and so on.

Until 2013 students have been the only evaluators of teaching and teachers on a volunteer and anonymous basis, by means of two different questionnaires. One is managed by the University of Bari (Annex 5.3) and deals with aspects concerning the individual course, the teacher and the lectures; its results are public only regarding the general data. The other, managed by the Department of Veterinary Medicine (Annex 5.4) is designed to evaluate theoretical and practical training, and gives the chance to submit suggestions. Its results are communicated to the Director of the Department, and can only be used by him to advise teachers that average low scores.

5.1.2 Comments

The DVM has a dedicated and motivated academic staff which is available for students’ consultations almost at any time. Nevertheless in general, there are some aspects that could be improved in terms of efficiency of the hours dedicated to teaching.

Except for Tirocinio, teaching during the first years is too focused on lectures instead of practicals. To ensure enough hands-on training of students to acquire basic day one skills, practicals should be increased from the very beginning of the course. The introduction of an e-learning platform to help autonomous work - as it implies an important amount of job to be done - would be a valuable tool to introduce other pedagogical strategies such as continuous evaluation and collaborative working, and an effective way of communication between academic staff and students.

The specific learning objectives for the different subjects could be reformulated as the abilities, skills or competencies to be covered and evaluated in the subjects; all of them should afterwards

appear in the different parts of the Student Logbook. In this way students would know in advance what would be the exact contents and the requirements to pass the different exams.

Despite teachers' warnings, course notes and presentations facilitated by the professors continue to be the most common information source used by the students.

It is valuable that lectures and seminars in English language are included within mandatory degree courses, but the proportion of such lessons is very low.

Providing students with a list of pre-agreed local practitioners should be appreciated, but the quality of extramural activities must be standardized.

5.1.3 Suggestions

5.1.3.1. Practicals should be increased to a minimum of 30% of all teaching hours in the first 3 years and to 40-50% in the last two years.

5.1.3.2. Specific learning objectives for each subject should be defined as competencies with special emphasis on day one skills.

5.1.3.3. Problem oriented teaching could be used to decrease theoretical training and to promote the use of important resources such as books, journals and web-site available materials.

5.1.3.4. It would be advisable to inform the students better about the importance of teaching quality assessment. It is a valuable tool for feed-back on all aspects of the teaching-learning procedure; but students may need to be reassured that it has no negative consequences for them as it is an anonymous procedure.

5.1.3.5. There is an interesting dedication of 30 hours of English course during the 4th year. It would be much more useful if located in the very first year.

5.2 EXAMINATIONS

5.2.1 Findings

Students have to pass two types of exams: progress exams during the course for the compulsory subjects included in the curriculum, and the final exam consisting of the thesis dissertation.

Regarding the progress exams, teachers can organize them at their own discretion, though the Teaching Regulation of the University of Bari fixes some rules that must be observed and they do have to inform students about the modality and calendar of exams (Annex 5.2) at the beginning of the academic year. As attendance to classes is compulsory, exams take place in the "inter-bimestral" periods dedicated to this activity (Table 5.1).

Oral examination is the most common form, but there can also be a number of written exams (problems to solve, questions to develop or multiple choice tests) and of course practical exams to assess clinical competence and practical skills. Oral exams are carried out by a Commission that includes the teacher of the subject and are open to the public. No external examiners are used.

Some teachers perform a continuing evaluation during the course, with tests that are optional to complete but, once passed, ensure a lighter workload for the final exam.

Exam marks are graded form 0 to 30, it being necessary to have at least 18 points to pass. Exam failures are not officially recorded in the Student Log Book.

To sit the exam, students must sign up on a list the week before the date, so that the teacher will have this information in advance. Nevertheless they can withdraw for the examination freely and can sit an exam as many times as they want provided that they have the attendance certificate of the course.

Students have to take the minimum exams scheduled for a given year (Table 9.7) to enrol in the next. They also have to respect the order of certain exams that are considered propaedeutic (Table 4.e).

All information about progressing exams -modality, calendars, commissions- is published though the webpage of the Department of Veterinary Medicine.

Rules governing the final graduation thesis are discussed in chapter 3.

5.2.2 Comments

The system of oral examinations is classical in the Italian University.

The fact that students can sit the exams as many times as they want is an obvious benefit for them as well as not to make official the marks below the pass level.

Obligation to take a minimum of the exams in a given course to be able to enrol the next can help students to adequately follow the curriculum and not leaving difficult or not so attractive disciplines behind.

Reserving periods for exams free of other didactic obligations is a good practice to help students to focus in preparation.

5.2.3 Suggestions

5.2.3.1 Though the short academic periods –bimesters- in principle do not need such a practice, it would be advisable to implement more continuing evaluation in a number of disciplines in which this procedure is of particular value - such as Anatomy, Histology, Pathology or Radiology for example. This method encourages students to be “updated” with knowledge and practical sessions are much more fruitful.

6 PHYSICAL FACILITIES & EQUIPMENT

6.1 GENERAL ASPECTS

6.1.1 Findings

All activities of the VMD are performed in the Veterinary Campus at Valenzano, 12 Km from Bari City centre to which it is connected through a well-run bus service. The campus comprises 6 buildings constructed in 1986 and the Veterinary Teaching Hospital, opened in 2001. All these premises are described in detail on pages 101– 147 of the SER.

The complex of 6 buildings houses administrative offices, lecture halls, reading rooms, offices, research and educational laboratories, anatomy dissection and necropsy rooms. The Aula Magna (main auditorium), the cafeteria, the canteen and the Central Library are located in the same building. There are rest rooms for staff and one for students - the “Catarina Carelli” which is equipped with television and leisure equipment.

All premises exclusively dedicated to the didactic activities are managed by the Department of Veterinary Medicine, whereas the remaining ones are allocated among the three Departments holding the teaching staff working at the Vet- Campus: the Department of Veterinary Medicine (DVM), the Department of Emergency and Organ Transplantation (DEOT) and the Department of Biosciences, Biotechnology and Biopharmaceutical (DBBB).

The Vet-Campus is close to the Centro di Addestramento e Ricerca Scientifica in Oncologia (CARSO), an important centre for training and scientific research in oncology, which collaborates with some members of the DVM teaching staff.

As there are no facilities for rearing animals inside the Vet-Campus, agreements have been made with a number of livestock farms, aquaculture plants, kennels or shelters and a recovery centre for wild fauna, where students carry out practical training in animal production (Table 6.1a); agreements also cover several slaughterhouses for the teaching of Food Safety, Infectious Diseases, Parasitology and Animal Production, in all the major food animal species (Table 6.10). Access is available to a number of food processing companies for meat, dairy and fish products. A complete list of facilities officially agreed and informally engaged can be consulted in Annexes 4.3 and 4.4 respectively.

All buildings are in fairly good condition, with adequate equipment devoted to undergraduate teaching. Premises used for theoretical, practical and supervised teaching other than clinical are listed in Tables 6.3, 6.4 and 6.5.

Lecture halls are equipped with computers and video-projectors. These rooms - as well as some labs and reading rooms in the departments - are used for supervised group work in the afternoons

For research purposes, the laboratories are generally well equipped. Some equipment acquired for research purposes is also used for teaching.

The microscopes located in the Anatomy/dissecting room are used for practical work in different disciplines such as parasitology, infectious diseases or pathology (new multifunctional educational laboratories are expected to be in use in 2015).

Students are transported to farms in the mobile clinic vehicle (9 seats minibus); if a large number of students are expected to be involved in a particular activity, buses are hired from a local company.

Basic safety measures established by EU and Italian laws are in place in all premises: automatic fire extinguishers in the main corridors, evacuation maps and escape routes well indicated in strategic points. There are emergency kits and showers in labs. Biological/chemical hoods installed wherever hazardous biological samples and chemicals are handled. Biohazard warning signs are adequately placed wherever they are needed, as well as appropriate containers for the different wastes.

Students are provided with the necessary protective equipment when needed (disposable gloves, masks, boot covers, etc.) and trained by teachers in the basic safety procedures they have to follow to comply with good practices. There are notices with the safety rules for good practice fixed at the entrance or inside the labs.

In the event of an accident, injured people will be transferred to the First Aid Unit of a close hospital.

6.1.2 Comments

In general, premises are adequate and in good condition, and comply with the essential biosafety and biosecurity measures. Nevertheless, some eye washes should be of a better standard and better placed for emergency use.

Research laboratories located in building nº6 are too small to be used for teaching purposes in groups bigger than 5-6 students.

Regarding Anatomy and Pathology facilities in the Vinci pavilion, there are features that do not match the standards: there is only one hoist – located in the necropsy room – which offers no possibility of carcasses being moved either to the tables or to the refrigerators. The Team had serious doubts whether a thorough cleaning of the dissection room could be done – even after a normal routine dissection on fresh non-embalmed cadavers. There are no sinks other than one connected to the principal dissection table.

There is a common passage for students and specimens in the necropsy area, due to the location of the storage refrigerators. There are no proper changing rooms for students.

The location of microscopes that are used in “non wet” labs of other disciplines are at close distance from the dissection area in the dissection room, which is not the best option either for health and safety maintenance or for the fact that it is not possible to have both activities running simultaneously.

Anatomy and Necropsy tools appear to be insufficient to process large specimens. There is only one small electric saw in the necropsy hall.

6.1.3 Suggestions

6.1.3.1. The Anatomy dissection room and the Necropsy room should be totally separated in terms of carcass movement and storage. A common corridor with signs to avoid circulation, and the fact of refrigerators and freezers located in between the 2 rooms does not allow for their independent use.

6.1.3.2. Carcasses should not be transported by the same route that people – students and instructors - must use.

6.1.3.3. Bigger and better equipped changing rooms should be provided for students with hangers and or cabinets to store their properties during the practical sessions.

6.1.3.4. A footbath at the entrance of the necropsy room would be advisable to assure biosecurity in such a compromised area.

6.1.3.5. Hoists are clearly insufficient to handle big carcasses as there is only one and it is located at the entrance of the necropsy room but does not have rails in the roof to allow a complete transport of big materials to the refrigerators/freezers. There is no hoist at all in the anatomy room.

6.1.3.6. Microscopes used for practicals in histology, parasitology and infectious diseases should be in a separate room away from wet and dirty areas, maybe in the proposed building 7.

6.1.3.7. More varied necropsy and also anatomy instruments would be of great benefit for the sake of an adequate working standard, considering that large specimens cannot be processed with conventional dissection material.

6.2 CLINICAL FACILITIES & ORGANISATION

6.2.1 Findings

The clinical facilities comprise the Veterinary Teaching Hospital, together with its isolation facilities and associated diagnostic and research laboratories.

The VTH is modern (completed in 2001) and includes everything which would be expected of a modern veterinary facility. It offers a 24 hour service most of the time, for both small and large animals. Specialists are on call out of hours on an informal basis.

It is organised on the basis that out-patients are first seen in one of 2 consulting rooms - one for small and one for large animals - which are used, in effect for triage. From there, patients enter one of 3 pathways, coinciding with the 3 disciplines represented in the hospital: Surgery, Internal Medicine and Obstetrics. There is no dedicated intensive care unit for small animals and kennelling is not species-specific. The isolation facilities are separate from the clinical facilities. The Team saw little evidence of genuine clinical integration – between the clinicians, pathology and necropsy, although integration on the large animal side between herd health and pathology/parasitology seemed more effective. Case recording is not fully computerised and, although some records can

be made available to students *via* computer terminals in the VTH, they are not available on line, so students cannot easily follow cases that they see in the clinics.

6.2.2 Comments

There appears to be no provision in the VTH for an intensive care unit (ICU) with 24 hr care available and the isolation facilities are separate from the clinical department. Kennelling facilities are not species-specific. The training and employment of veterinary nurses in the VTH would assist in providing 24 cover.

The organisation of clinical facilities is by discipline at present; better integration of clinical care could be achieved if the facilities were better integrated and species oriented.

Kennelling of patients in a consulting room is not acceptable.

6.2.3 Suggestions

6.2.3.1 Consideration should be given to Investing in a separate, well-equipped ICU with 24-hr nursing care.

6.2.3.2 Separate kennel facilities should be provided for hospitalised dogs and cats with adequate nursing care.

6.2.3.3 The introduction of a comprehensive computer-based patient and case recording system should be considered. This would promote better integration of information, facilitate a change to species-based organisation of the hospital and provide the opportunity for students to have access to the case-files.

6.2.3.4 Amalgamation of the large number of small clinical/research laboratories into a central laboratory should be considered. This would combine resources and expertise distributed throughout the individual laboratories, leading to better use of specialist skills, helping to promote integration between disciplines and achieving economies of scale.

7 ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN

7.1 CLINICAL

7.1.1 Findings

A Dog Lab is available for students for behaviour learning in smaller groups in Physiology (SER 155). In Parasitology and Microbiology students (in groups of approx. 10 -15) experience and perform standard diagnostic laboratory techniques (including PCR techniques) on animal samples from clinical cases. In Parasitology, field activity is offered to students on a voluntary basis.

For Anatomy (SER1 page 157) fresh organs of large animals are obtained from slaughterhouses and stored as frozen cadavers (Table 7.1, e.g: 10 ruminants and 15 dogs per year). The organs and cadavers are thawed 1-3 days before they are used for dissection. The students either observe while the dissection is performed by the teacher, or the instructor prepares the organs before the class. Sometimes students themselves perform the dissection, but this is not routine. A horse skeleton and bones and joints from other species are also available. Wet models of muscle preparations are available three times a year. Some plastic preparations of organs are in use. Sometimes small animal cadavers euthanized for necropsy, are used for anatomy teaching. No formalin fixed, or ethanol-washed material of animals is used for preparation of material for demonstration.

In teaching of macroscopic patho-anatomy, the situation for teaching material is variable depending on the species. There is a high and sufficient number of poultry and rabbits available for necropsy. The students are split into small groups of 3 per carcass, and they themselves perform patho-anatomical dissection on the egg-laying hens, broilers and other birds and small mammals.

There is a sufficient number of small animal necropsies if evaluated from the ratio of “graduating students annually” and “number of small animal necropsies” (Table 7.2, page 159, and page 176 R20: 1/2.107).

Most of the dogs and cats euthanized and sent to necropsy are not examined as fresh carcasses the next day, but are usually frozen and stored in the same freezer together with the organs for anatomy. The carcasses are then thawed weeks later when the necropsy course is given. The clinicians seem to accept that it may take weeks or months before a diagnostic necropsy report is presented. Necropsy does not seem to be a natural part of the diagnostic work of a euthanized case, and owners rarely request such a procedure. Only few owners will have their animal cremated.

Necropsies performed on large animals (production animals and equines) are rather low (SER page 159), and R18: 1/0.812 is below the established denominator. The number of hospitalized large animals is low.

The cost to transport dead large animals from farm is high, and in addition, the cost for disposal of the biologic waste material is also high. The Establishment is aware of the problem and has from 2013 started to do necropsies of large farm animals with students. The number of necropsied food producing animals in 2013 is then better (Table 7.7 page 178), but the number of students on each large animal case seems to be high (groups of 8-10).

The students are also exposed to a number of isolated fresh organs for pathological examination from large animals collected from local slaughterhouses. Students (groups of 10-15) are taking part in the histopathology diagnostics on surgical biopsies in the 3th year.

The practical training in animal production has recently changed from a small flock of farm animals kept on the Establishment in Bari campus as the farm was closed 2012, to a training in private farms outside the campus. The animal production training is either for one part of the whole class in large groups (40-50 students) (core training) or as a core training in “Tirocinio”.

The clinical large animal training is performed at the private farms surrounding Bari. These farms have either a formal agreement with the Establishment in Bari or there is an informal list of farms, kennels, shelters and slaughterhouses etc. (Table 7.2b, page SER page 162) where all the students are trained (core training - “Tirocinio”). The students go to the farms etc. by a rented bus or a mini-bus, or by their own car.

In addition an elective clinical and food safety training (in small groups 3-5 students) in the PDP 5th tracking year were launched in 2013, and will substitute the elective training as “internals” in the area of the student’s interest. Thus, each student will have more clinical training in large animals when the activity in the 5th year is taken into account, and more than the denominator tells, since the majority of the students did select companion animal internals.

The students also take part in necropsies on animals with infectious disease on a limited number of cases.

7.1.2 Comments

The number of animals or teaching material of animal origin to which the students are exposed can be considered satisfactory in animal production, the small animal clinical area, and in necropsy of poultry and other birds. The number of bovine and swine clinical cases is limited. But with newly introduced extramural training, the reduction of the number of veterinary students that are accepted each year (reduced to 85 from 2013/14) and new tracking system introduced in the 5th year, it may be regarded as sufficient material for the training of each student. The Establishment must increase the number of equine and large animal for clinical training at external farms and collaborate even more closely with the extra-mural tutors. The external tutors should be given a better and documented supervision by the responsible teacher.

With the introduction of the new PDP in the 5th year, and the new student Logbook for recording every student's practical activity, more attention should be given to make sure that all students acquire necessary first day skills in all areas and species regardless of which track they choose.

A better integration of teaching in the clinical disciplines with the basic and para-clinic disciplines such as physiology, pharmacology, pathology should be improved. The Team did not find any teaching given in a discipline which could be called patho-physiology, and we encourage the Establishment to seriously consider different ways to improve this integration.

The Team noted that necropsy of all animals seemed not to be an integrated part of the clinical diagnostics except in poultry. It is well known that the precision of clinical diagnosis is not accurate, and that necropsy is a great learning possibility in seeing pathologic changes as important tool for understanding clinical signs. The pathologic examination is crucial tool for clinicians to learn from their cases, and it is essential in the training of good veterinarians.

It is, however, not so effective to perform necropsy on frozen animals, because freezing changes the pathological findings. The Team encourages the Establishment to implement necropsy of fresh carcasses by students under supervision as a routine in all animal species that die with a clinical disease, to improve quality of diagnosis and teaching.

The lack of a computerised patient and teaching system handicaps further integration of disciplines, diagnostic services, supporting laboratories and pathological follow-up. We should like to see much better emphasis on learning and less on teaching, particularly in the acquisition of first-day skills.

Not all students are themselves performing dissections of carcasses (such as dogs and ruminants) and organs. They are not taught how to use the basic instruments such as scalpel, forceps and scissors to prepare themselves for the use of such instruments in the clinic and for autopsy. The Team are of the opinion that such dissection training is a central part of veterinary education; e.g. to learn to recognize different tissue structures, their relative positioning, and the location of organs in physical proportions.

Carcasses and organs for anatomy training are presently being brought to the anatomy dissection room or the freezer storage rooms through a "clean corridor" that the personnel are using to get to offices and other uncontaminated rooms along the corridor. Moreover, to get normal organs for the anatomy teaching freezer they have to cross the pathway (from necropsy room to the freezer storage rooms) of carcasses that are brought to necropsy, but frozen first. The handling of carcases may be a biosafety issue for students and staff and has to be corrected. The unsatisfactory hands-on teaching in anatomy may represent a potential major deficiency.

7.1.3 Suggestions

7.1.3.1 Encourage small animal owners or dog shelters to donate euthanized dogs for anatomy dissection teaching to avoid using dogs that are send to necropsy.

7.1.3.2 Acquire a small truck to transport large farm animal cadavers for necropsy teaching at the campus rather than taking the students to the farm to perform necropsy. The possibility of giving good learning possibilities in necropsy would be better at the campus than under field conditions.

7.1.3.3 Establish a routine practice that all animals that die or are euthanized due to disease should be necropsied.

7.1.3.4 Establish a better integration of disciplines.

7.1.3.5 Introduce a small honorarium for the extra-mural tutors.

7.2 OTHER

7.2.1 Findings

Information on animals and teaching material of animal origin is presented in Tables 7.1 (anatomical training), 7.2 (necropsies), 7.2b (organs and carcasses used in Food Hygiene and Public Health), 7.3 (animals for consultation and hospitalised at the Veterinary Teaching Hospital), 7.4a (cases seen in the mobile clinic or herds visited on call). Surgical biopsies coming from the veterinary clinics and private practitioners are also used as part of the students training in histopathology.

There is no working farm on the campus belonging to – or available to – the DVM. As stated elsewhere, a number of agreements are made with different establishments to cover all food producing species, as can be seen in annexes 4.3 and 4.4.

7.2.2 Comments

For dissection, small ruminants and parts of horses are the materials used for demonstrations; only non-pathological organs from the slaughterhouse are used for the study of viscera. All the material is used directly fresh or defrosted; there are also some plastic models and a collection of bones and joints. Some carcasses of dogs and cats sometimes come from those supplied for necropsy and considered to be safe non infectious specimens.

Necropsies are performed in Pathology but also in Avian Pathology and Infectious Diseases. The number of diagnostic procedures is low for pigs as food producing species and also in equine. This is due to the high costs of transportation of large animals and carcass disposal. For the rest, necropsy materials appear to be adequate; whenever requested, donated specimens are diagnosed as an external service available either for the private clinicians or for the Veterinary Teaching Hospital.

To solve the transportation problem as well as the high cost of waste disposal of this kind of materials, a service of on-call necropsies has been instituted, performed directly on the farms, cost free for the owner. It is sometimes used for academic purposes whenever the service is required during the students' regular timetable (i.e. not during the night).

Due to shortage of funds and lack of dedicated staff to manage live animals during the whole year, few animals are available on campus for practical teaching. There is an experimental apiary managed by the Food Safety Unit.

Consultations on food producing animals are very low for bovine and swine. However, cattle cases are the most frequently seen by the mobile clinic, as seems reasonable to happen.

Regarding Meat Inspection, organs and carcasses with lesions are received from the slaughterhouses (243 kg/year of ruminants, equine and swine, 63 kg/year of poultry and 42 kg/year of rabbits) and from seafood markets (102 kg/year of fish and molluscs). Access to specimens for training in food hygiene is satisfactory since meat and dairy factories are visited.

Two ratios – R12 (individual food animal consultations) and R18 (necropsies on food producing animals and equines) - are out of range.

7.2.3 Suggestions

7.2.3.1 The low caseload of large animals for necropsies must be resolved in a centralised way by allocating the necessary funding for large animal transportation and its waste disposal.

7.2.3.2. The same applies for food producing animals' consultations: transportation must be provided.

7.2.3.3. It should be normal practice to submit cases from the teaching hospital for diagnosis by other disciplines in the Department - necropsy, histopathology, microbiology, etc. whenever

possible, in order to provide a sufficient caseload for complete training of the students in these subjects; this would also help to highlight the value of these earlier/paraclinical disciplines for later clinical studies.

8 LIBRARY & EDUCATIONAL RESOURCES

8.1 Findings

The Library of the DVM is situated conveniently, in the main building of the campus, close to the main auditorium, the administrative offices of the Department and the catering facilities for staff and students. It is part of the Library system of the University of Bari, which is connected to the National Library.

8.2 Comments

There are study spaces for 70 students in the library, which seems a small number, taking into account that it serves more than 700 students enrolled in courses offered by the Department. The Team felt that the library was not very “user-friendly” - it is open only 5 days a week and is closed at lunch time and in the evenings - and users do not have free access to the book stacks for standard texts and journals, for study in the library. During our visitation, the library was busy only during the late afternoons. The students’ view was that the library is sufficiently well equipped and used extensively by them. However, it seems more orientated towards research than for students.

The Team would like to have seen more up-to-date standard text books on the shelves and not all fields of veterinary medicine fields are covered by the available books. We noticed that there are small specialist libraries in a number of seminar/teaching rooms throughout the Department but, in some cases, the bookcases were locked – and so not freely available to students.

8.3 Suggestions

8.3.1 Consideration should be given to extending the opening hours of the library, so that students have access between and after classes - especially at lunch time.

8.3.2 Although it might be difficult in the present building, it would be helpful to give students open access to current editions of standard veterinary textbooks and journals for individual study in the library. (It has been noted elsewhere in this report that students tend to confine their studies to course notes and PowerPoint presentations of lectures rather than reading more widely.)

9 STUDENT ADMISSION & ENROLMENT

9.1. Findings

In order to be admitted to any Degree course in Veterinary Medicine in Italy, students must have completed all the compulsory educational courses established by the Italian Laws and must be in possession of a 5-year High School Diploma, with which they can be admitted.

The number of students admitted is proposed by the VMD but must be approved by MIUR. The decision is made by a working group composed of members of the MIUR, the Ministry of Public Health, Italian professional board and by the Deans of the Veterinary Schools. For the academic year 2014 the Departments involved in the Veterinary Medicine course proposed admission of 95 students from EU and 5 from non-EU countries included 2 students from China. The MIUR also takes into account the demand for veterinarians in different regions of Italy; for the academic year 2014 decided a further 15% reduction (from 95 to 80) in the number of students.

The average duration of the student career is very long (about 9 years).These values are strongly affected by the number of students that require twice as long or more to graduate than in-course students. For the highly motivated students the average duration of the course is about 7 years.

Repeaters are rare in the first year, but their number increases progressively from 2nd to the 5th year. The minimum length of study is established by the Department, but there is no upper limit.

9.2. Comments

Like on other Italian schools (now departments), the average duration of study is very high. Therefore, it would be useful to have an upper limit of years for graduation. This well recognised problem however is not in the competencies of individual schools. At present, 28% of all undergraduate students are “repeaters”, which is high. From the 135 students enrolled in 2007, only 9.62 % graduated in time (5 years after enrolment). In the last four years the total percentage of the withdrawals is approximately 20% of the total enrolled students and the main reason is transfer to other degree courses. The reason for this may be the admission of students with a heterogeneous level of knowledge in sciences and a lack of motivation to follow a career in veterinary medicine.

9.3. Suggestions

9.3.1 Although the very high average duration of undergraduate study in Italy is a well-recognised phenomenon, the Department should consider measures (within its competence) to reduce the number of serial repeaters, as their presence reduces the opportunities for small group teaching and must be demotivating for teachers.

9.3.2 The Department should consider encouraging applications from international students.

Increase the number of international students. The student flow is not clear (“in course”, “repeaters”, “reappearing in course students” etc.) at the department and should be clarified.

10 ACADEMIC TEACHING & SUPPORT STAFF

10.1. Findings

After the new law (204/2010) all the faculties of Bari were changed into Departments and the Faculty of Veterinary Medicine became the Department of Veterinary Medicine (DVM). The 73 teaching staff of the Veterinary School are now divided between two Departments - DVM (49 teachers) and Department of Emergencies and Organ Transplantation - DEOT (24 teachers). The Bari Uni DVM campus (completed in 2001 with the construction of the Veterinary Teaching Hospital) also houses the Department of Biosciences, Biotechnology and Biopharmaceuticals – DBBB and the regional Oncological research centre – CARSO. The teaching and other staff of the Bari Uni DVM is allocated to the DVM directly from the central university administration. They pay all salaries to all personnel. The only exception is personal paid only for research purposes, as they are paid by the research fund directly, but through the University of Bari, not from the Bari Uni DVM.

Therefore reallocation of staff cannot be done by the Bari Uni DVM, but need to be agreed upon by the University administration. Change can be made after annual negotiations with the University management

It is uncertain whether other staff members (technical and administrative staff) can be financed directly by the Bari Uni DVM and whether they can be reallocated between section and department within Bari Uni DVM.

Each department receives a budget and the budget – director is responsible – but the salary is not part of it.

Each department receives a set of funds every year on January 1st to cover all expenses (except salaries, investments, equipment).

The academic staff of veterinary training comprises 75.2 full-time academic staff (FTE), of which 68.1 percentage are veterinary surgeons. The total support staff is 89.3 FTE. In total 164 FTE is

working with veterinary students training. The teaching staff also takes part in teaching other courses than veterinary training.

10.2. Comments

The ratio of total academic FTE to number of undergraduate students is satisfactory.

The number of academic staff is sufficient for both theoretical and practical activities.

The ratio of teaching staff to support staff is borderline and some teaching staff complain that this puts an extra burden on them and handicaps them in the time they can devote to research.

The increase in hands-on clinical training (in small groups) has led to a substantial increase in the teaching obligation of clinical staff which, in turn, puts them at a disadvantage compared to staff in basic research units.

.

10.3. Suggestions

10.3.1 The practice of distributing revenue from clinical/diagnostic work to those who have provided the service is unusual, in the Team's view and should be reconsidered

10.3.2 Consideration should be given to promoting the Department's external diagnostic services more widely, but using the revenue to employ technicians/support staff rather than paying "bonuses" to a limited number of staff.

10.3.3 The establishment of a central laboratory to replace the large number of small research/ teaching labs would enable greater flexibility in the deployment of support staff.

11 CONTINUING EDUCATION

11.1 Findings

CPE is covered in the Objectives for the DVM and is provided by means of seminars, workshops, conferences and clinical meetings. The subjects seem to cover diseases of both conventional animal species and some exotic animals. Also, specific CPE courses are provided for consultants and state veterinarians. Some conferences are organised for specialists.

The CPE program has many different aspects (see SER) and has subjects of interest for every kind of veterinarian. The CPE courses are accredited and a minimum number of credits must be obtained by veterinarians each year.

Professors and specialists are frequently guest speakers on continuing education for various professional organisations. These courses are not recorded and materials / slideshows from all CPE should be made available for e-learning for both students and professionals. Income generated by CPE is allocated to the discipline of the provider in the DVM.

11.2 Comments

Some CPE is given on subjects where the DVM has specific expertise (e.g. sea turtles) and on subjects derived from the unique collaboration within the human organ transplant department DETO, like the use of stem cells in injured animals.

11.3 Suggestions

11.3.1 The Department should try to develop other points of excellence and experience in order to offer CPE courses in more (specific) subjects.

11.3.2 Teaching staff should be encouraged to become European Diplomates in their specific fields; this will attract more knowledge and the possibility for more CPE and funding.

11.3.3 CPE courses are not recorded at present. Teaching materials/slideshows from all CPE should be made available for e-learning both for students and professionals.

11.2.4 Students should be encouraged to attend CPE courses in other regions as well to diversify the choices of subjects available to them.

11.2.5 Training and qualification of registered Veterinary Nurses is desirable, which would include specific CPE training for these nurses as well.

12 POSTGRADUATE EDUCATION

12.1 Findings

The Faculty offers postgraduate education on the academic and professional track.

There is one residency program which is recognized by the European Veterinary Parasitology College (3 year full time program).Grants or salaries for residents are not available. The objective of residency programs is to prepare the candidates for the exams to obtain the diploma of the respective college. There are 6 residents enrolled.

The Unit of Parasitology organizes every year together with the European Veterinary Parasitology College a Parasitological Summer School course for one week.

There are five national postgraduate specialization schools offered to graduates in Veterinary Medicine by the Infectious Diseases and Food Hygiene Units of DVM and by the Section of Veterinary Clinics and Animal Production Section of the DETO. These 3 year courses are mandatory for veterinarians wishing to be admitted as official veterinarians in the National Sanitary System. The Italian public sanitary institutions are organized in three functional disciplines: Animal Health; Food Hygiene/Public Health; and Farm and Animal Production Hygiene. They are regulated by a numerus clausus system and the applicants must apply for an admission test. Attendance to the courses is compulsory.

There is one second level Master course in Management, Control, Qualification and Enhancement Systems for Mediterranean products (Med & Food). It is a coordinated by the Food Hygiene/Public Health Unit of the Department of Veterinary Medicine. It is open to post-graduate students with a Master's degree. Its aim is to produce highly qualified professionals with a multidisciplinary competence.

Starting in 2014, 3 Veterinary PhD courses will be offered: Animal Health and Zoonoses; Tissue and organ Transplantation; and Neuroscience and Translational Medicine. Candidates will be selected by an examination and will then be enrolled as students for a period of three years. Public and privately-funded positions will be available each year. PhD students may perform no more than 50 hours of teaching activity. At the end of the three years a thesis must be submitted for discussion in front of an official commission.

12.2 Comments and suggestions

There is a very low number of European diplomates, especially in the clinics. Consequently, residencies and internships could not develop properly in crucial clinical areas. The non-recognition of Diplomates of European or American Colleges in the admission or progression in the academic career may turn out to become a severe drawback to the Faculty and veterinary education. Specific attention should be paid to this problem. The Departments should stimulate clinicians to become European diplomates in their specific fields, which will attract more knowledge, CPE and funding. International exchange programmes for students should also be strongly supported.

Traditionally specialization has been obtained through the National Specialization Schools. The Faculty is involved in this program and maintains good relations with former graduates, working in the various fields of professional activity, obtaining the necessary feedback.

13 RESEARCH

13.1 Findings

Research evaluation is fundamental for the universities, as funding by the government relies partially on it. About 8% of the €6,7 billion budget of the Universities is distributed on the basis of research evaluations. In the most recent evaluation, DVM has achieved excellent rankings in the area of agricultural and veterinary research within the University of Bari.

Over the last years, research activities in Veterinary Medicine have been restricted by the limited number of human resources and, above all, by the Italian economical situation which has decreased the economic resources of the Universities.

Research activities in the Departments supporting the course of Veterinary Medicine are focussed on four areas: Diseases of Animals and Zoonoses; Food Hygiene; Animal Production; Surgical and Clinical medicine.

Undergraduate students are mostly involved when working on their theses. They have the option to prepare either an experimental thesis or a compilation thesis. The research areas offer a broad range of choice for the students for preparing their thesis work, and for stimulating their scientific interests. Specific research projects for undergraduate students are not part of the veterinary curriculum. However during their undergraduate studies, when starting their internship for preparation of the final dissertation, the students join a laboratory and are involved to some extent in specific research projects. The students may apply for internship with one of the member of the teaching board and are required to spend at least 225 hours spread over 2 years to go through their thesis work, in laboratory and practice activities.

Although the majority of students start preparing the thesis in the 4th year of the course, they are free to start their internship earlier. The internship period represents for students an introduction to research work and offers insights into the research areas of Veterinary Medicine. A student can select his tutor for the final thesis, thus selecting the research area of his thesis; the tutor is free to accept or reject the student's request.

There is one PhD programme in veterinary sciences, but students also can join programmes in other departments.

13.2 Comments

Due to the impact of research outputs on the budget and on personal career promotion in Italian universities, research is usually a strong point in veterinary schools. Research in Bari is at a high level and is much appreciated. Excellent research groups are working in the field of veterinary sciences, like in parasitology, but also in clinical research, especially in DETO.

Research activities cover a range of topics. The structure of research in Italian universities is determined by the resources available rather than by a concept set-up by the establishment. There is no central concept of research and no Departmental priorities have been defined. This results in a certain fragmentation of research and departmental resources.

All students are informed about basic scientific concepts, and interested persons can get more engaged in research activities and/or follow-up by entering a PhD programme. The proportion of interested students corresponds to the character of veterinary profession and its strong orientation to clinics and practical applications.

Although most of the young staff are formally classified as "researchers", they do teach and informally introduce students to the field of veterinary sciences.

International interactions (contacts and projects) are personally-based rather than initiated and promoted at the institutional level.

The quality of the PhD programme corresponds to the quality of research in the respective area and it is usually high.

13.3 Suggestions

13.3.1 A central concept of research priorities supported by the institution as a whole should be envisaged as a useful tool for efficient use and sharing of resources. International activities (projects) in the prioritized areas of research could be supported by the establishment to increase the chance of getting funding from these important resources.

13.3.2 After careful analysis, the establishment of more centralised laboratory provision should be introduced to allow more efficient use of resources and equipment. Funding could then be more effectively utilised.

EXECUTIVE SUMMARY

The Department does not have a clearly defined vision, mission statement or main goal and the Team urges the School to prepare and implement a definitive strategic plan as soon as possible, to assist in directing and carrying forward some of the other suggestions we shall make in our report.

We found the organisation of the Department of Veterinary Medicine – and particularly its relationship with the Department for Emergencies and Organ Transplantation – confusing; this is shared by some of the staff and students and leads to a lack of cohesion in the management of the Department.

No veterinary Faculty ever has enough money. In the case of Bari, we did not feel that problems here are as severe as in some other Faculties, partly because of significant investment in buildings, facilities and staff made before the world financial crisis introduced a period of austerity. But that advantage will gradually reduce with time and we shall comment in our report on the suggestions the Department itself has made in the SER to reduce the impact of budget cuts.

The new curriculum as a whole is standard and reflects the European Directive 2005/36. However, it must be considered as a raw product requiring a further continuous process of evaluation and development. At this stage the Team's view is that consideration should be given to a greater emphasis on practical teaching and self-learning, rather than lectures, throughout the entire curriculum.

Teaching in the Basic Sciences should be coordinated closely with the para-clinical and clinical studies. While this is already the case in some subjects, a significant improvement is needed in others. Especially in Anatomy, the teaching concept must be radically revised.

Animal Production teaching is traditional, comprehensive and veterinary-orientated, and in this case there is good coordination with clinical teaching. But we feel that Animal Handling should be introduced earlier in the curriculum. The lack of a Teaching Farm may be an issue.

In the clinical sciences area, all topics seem to be adequately covered; there is good balance between intra- and extra-mural training, though the Team would like to see better evidence of the supervision of extra-mural tutors. While the case load for small animals is good, that for large animals is out of range and must be improved. The Team have concerns that all students graduate with adequate first day skills in all areas. Poor integration between the disciplines - e.g. infectious diseases, pathology, parasitology - and the clinics results in sub-optimal care of patients and learning opportunities. The lack of a computerised patient and teaching system handicaps further integration of disciplines, diagnostic services, supporting laboratories and pathological follow-up. We should like to see much better emphasis on learning and less on teaching, particularly in the acquisition of first-day skills.

Food hygiene is well covered in the curriculum, since all the relevant subjects which a veterinarian has to deal with are well taught. In practical teaching, hands-on work is well implemented. There is a good professional relationship between the Department and local food producers.

Teaching is, in general, by traditional methods and its quality is good. Specific learning objectives for each subject should be defined as competencies with special emphasis on day-one skills. As regards examinations, continuous assessment is slowly being introduced, but its evolution needs to be refined. Unsatisfactory hands-on teaching in anatomy may represent a potential major deficiency.

In general, the physical facilities of the veterinary campus are of a good standard. However, the Team had some concerns about commitment to bio-security and bio-safety in some premises. The Da Vinci building was a particular focus of this concern.

In the clinical area, it would be good to see attention given to patient flow, welfare of patients and bio-security; in particular, separate care of post-operative and seriously sick animals and separate kennelling facilities for each species should be seriously envisaged for the immediate future. The species-oriented concept of the clinics should also be considered.

FINAL VISITATION REPORT AS ISSUED BY ECOVE 20.5.2014

The SER indicated that the case-load for food animal and equine necropsies is out of range. To correct this, submission of clinical cases for necropsy should become routine as soon as possible.

The average length of veterinary studies at Italian schools is a well-recognised problem.

We note that there are very few European diplomates amongst the staff. The Departments should stimulate clinicians to become European diplomates in their specific fields, which will attract more knowledge, CPE and funding. International exchange programmes for students should also be strongly supported.

As in all Italian schools, research is at a high level and much appreciated in this school and students are involved when working on their theses.

The Team were pleased to see an enthusiastic, dedicated and competent teaching staff who have the interests and progress of their students very much at heart and whose relationship with their students is close and supportive. There is a need for better provision of support staff in the Veterinary Teaching Hospital.

Our recommendation to ECOVE will be that the establishment has one major deficiency. If this recommendation is ratified by ECOVE, this would lead to conditional approval.

ECOVE DECISION:

The following major deficiency has been found:

1) **Lack of Strategie objective.**

The status of the establishment is: conditional approval.

.

ANNEX 1: RATIOS

DEPARTMENT OF VETERINARY MEDICINE, UNIVERSITY OF BARI

RATIO	DESCRIPTION	ECOVE	DVM BARI	COMMENT
R1	Staff/veterinary student	↓ 8.8	7.8	
R2	Staff/student	↓9.6	10.4	
R3	Veterinary staff/veterinary student	↓11.4	11.4	Borderline
R4	Veterinary staff/students graduating			
R5	Academic staff/support staff	0.47-1.9	1.1	
R6	Theoretical/supervised practical training	↑ 0.6	1.0	
R7	Clinical/lab,desk and non clinical animal work	↓ 1.9	1.3	
R8	Self directed learning/teaching load	2.6-103	46.0	
R9	Hours food hygiene/total curriculum hours	0.7-98.4	10.7	
R10	Hours food hygiene/extramural vet inspection	0.1-0.9	0.3	
R11	Students graduating/food animals on campus	↑ 1.0	1.0	Borderline
R12	Students graduating/food animals off campus	↑ 7.3	5.7	out of range
R13	Students graduating/herd health visits	↑ 0.3	0.4	
R14	Students graduating/equine cases	↑ 2.6	5.7	
R15	Students graduating/poultry, rabbit cases	↑ 0.5	3.1	
R16	Students graduating/companion animals on campus	↑ 43.5	70.6	
R17	Students graduating/poultry, rabbit flocks	↑ 0.04	0.1	
R18	Students graduating/food animal necropsies	↑ 1.0	0.8	Out of range
R19	Graduating students/poultry, rabbit necropsies	↑ 0.5	2.7	
R20	Graduating students/companion animal necropsies	↑ 1.5	2.1	