FINAL REPORT AS ISSUED BY ECOVE ON 29 MAY 2024

European Association
of Establishments for Veterinary Education

RE-VISITATION REPORT

To the School of Biosciences and Veterinary Medicine, University of Camerino, Italy

On 16 – 18 April 2024

By the Re-visitation Team

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Contents of the Re-visitation Report

Introduction

The School of Biosciences and Veterinary Medicine, University of Camerino, was assessed by ESEVT on May 24-28, 2021, according to the 2019 SOP which was completed in agreement with the "Exceptional Rules for ESEVT Visitations linked to the COVID-19 outbreak".

In the report that was sent to ECOVE, the previous visitation team pointed to several areas in the veterinary teaching programme worthy of praise. In addition, the visitation team identified eight areas of concern.

These findings led to the identification of the following Major Deficiency under ESEVT Area 4:

- Non-compliance with Substandard 4.4 because of the absence of emergency services for ruminants in the VTH, which is not compensated by an alternative on-call service.

Additionally, eight areas of concern (minor deficiencies) were identified by the team:

1. Partial compliance with Substandard 3.1.2 because of suboptimal practical training in physiology and pharmacology
2. Partial compliance with Substandard 3.1.4 because of suboptimal clinical training in food-producing animals and integration of herd health management teaching
3. Partial compliance with Substandard 3.6 and 3.7 because of suboptimal EPT organisation
4. Partial compliance with Substandard 4.1 because of no formal recording of the use of teaching animals
5. Partial compliance with Substandard 4.9 because of suboptimal use of personal protective equipment for necropsy and some farm work
6. Partial compliance with Substandard 6.3 because of suboptimal skills lab
7. Partial compliance with Substandard 9.2 because of suboptimal academic staffing in food-producing animals teaching and support staffing in nursing care
8. Partial compliance with Substandard 10.3 because of suboptimal numbers of students involved in postgraduate programmes

On September 29, 2021, ECOVE made the decision that the status of the VEE was Conditional Accreditation.

The Re-visitation Self Evaluation Report and the Annexes were provided to the Re-visitation Team on time and contained relevant information. The RSER was informative.

The Re-visitation was well prepared and well organised by the VEE. It was performed in a cordial working atmosphere, in agreement with the ESEVT 2019 SOP.

1. Correction of the Major Deficiencies

- **1.1. Major Deficiency 1:** Non-compliance with Substandard 4.4 because of absence of emergency services for ruminants in the VTH, which is not compensated by an alternative on-call service.

1.1.1. Findings

In the SER completed by UNICAM in 2021, there was no reference to the existence of a ruminant emergency service at the VTH. During the FV, it became evident that the Large Animals Clinical Department (LACD) did not provide an intramural clinical service for ruminants, nor was there an on-call service for emergencies in the ruminant service. The submitted RSER confirmed the start of an on-call ruminant service at the VTH, with Prof. Nicola Pilati in charge of the service. The R-SER also indicated that herd health management teaching activities had been included in that service.

During the visit, the team verified that the ruminant clinic service is offered on-call 24/7. For this purpose, telephone calls are answered on a single telephone for the VTH and, in the case of ruminants, one of the veterinarians of the service can be reached. A weekly rotating system is in place for the on-call handling of these calls to the service, with one person as the first option and a second one in case the first one does not answer. All veterinary practitioners in the area have been informed about this new service and a new website for the VTH will soon be launched where this information is highlighted. There are always two veterinary students on night duty who are involved in emergency cases.

A project is underway to build a facility to hospitalise ruminants. This work has just started at the time of the Re-visition.

1.1.2. Comments

Prof. Nicola Pilati, in charge of the ruminant service, has a temporary contract with UNICAM. The responsibility for a key service for students' learning such as ruminants should not fall exclusively on one person, let alone one person on a temporary contract.

1.1.3. Suggestions

Permanent positions should be guaranteed for a team of teaching staff performing clinical activities in ruminants, otherwise, the clinical activity in these species would be compromised and thus the learning of the students as well as the correction of this major deficiency.

1.1.4. Decision

Major Deficiency 1 has been fully corrected.

2. Correction of the Minor Deficiencies

2.1. Minor Deficiency 1: Partial compliance with Substandard 3.1.2 because of suboptimal practical training in physiology and pharmacology

2.1.1. Findings

The 2021 VR showed suboptimal performance in the physiology and pharmacology practicals. Two permanent lecturers and a contract lecturer in physiology and pharmacology have been added. The VEE has incorporated new practices in pharmacology activities related to drug use, dosage, dose calculations, and pharmacovigilance, among others. In relation to physiology, laboratory practices have been incorporated such as the use of clicker training teaching, management and determination of physiological parameters in various species, and several autonomous works by students on animal behaviour.

Among the changes made in the basic subjects, the following should be highlighted. In the subject of physiology, there has been a significant change in the content taught. Not only has the content been improved, but also the teaching methodology has been completely revised. In the practical contents included in the physiology subject, we highlight the incorporation of practices on handling, the determination of physiological parameters and on behavioural studies. As a result, learning in this subject has improved ostensibly.

The use of non-traditional learning methodologies, such as the incorporation of Kahoot in pharmacology, demonstrates the VEE's interest in improving teaching and student learning.
In relation to microbiology, a larger laboratory which will enable more laboratory practicals is under construction, and is planned to be taken into use from AY 2024/2025. The incorporation of a new laboratory in the near future could increase the quality of the practical teaching provided, which is currently limited by the characteristics of the laboratories and their biosafety deficiencies as described in the VR.

In relation to immunology, whose teaching was limited according to the previous report, the visiting team was able to verify that the syllabus and timetable (first semester, AY 2023-2024) have been modified to increase the hours dedicated to this subject. The number of hours devoted to immunology has been increased. This change has led to a reduction in the teaching hours of microbiology and has resulted in the following: 13 hours of theoretical teaching (4 more hours) + 5 hours of practical teaching (2 more hours) in immunology (total = 18 hours per student, then 7 more hours); while microbiology has reduced its teaching to 23 hours of theory and 9 hours of practical teaching (total of 32 hours per student).

2.1.2. Comments

It is worth mentioning the efforts to improve teaching in physiology with the incorporation of teaching tools such as gaming, which have even led to the publication of the results from these teaching experiences in peer-reviewed journals indexed in JCR (Todini, L., and Mechetti, L. Interactive classroom: from motoneuron activity to skeletal muscle contraction and relaxation. *Advances in Physiology Education*, 2023, 47:652-656).

2.1.3. Suggestions

The hours devoted to immunology have been increased at the expense of reduced teaching in microbiology. However, no hours have been used for subjects that can contribute to the

knowledge of immunology, such as physiology and parasitology, which currently have 64 and 54 lecture hours, respectively, as already reported in Table 3.1.2 of the 2021 SER. Perhaps in the next revision of the syllabus, a balance should be struck in the content of all these basic subjects so as not to excessively reduce the content of microbiology.

2.2. Minor Deficiency 2: Partial compliance with Substandard 3.1.4 because of suboptimal clinical training in food-producing animals and integration of herd health management teaching

2.2.1. Findings

A new position as a member of the academic staff in food-producing animals and herd health management has been established. This clinician is now in charge of professional practical training in bovine and small ruminant clinics and herd health management, both at the VTH and extramurally.

A change in Italian law has changed the Tirocinio (intensive clinical training) to a national syllabus containing mandatory activities for companion/exotics/wild/food-producing animals and herd health management for a total of 10 weeks and one additional week of elective EPT.

The Large Animal Clinic, as part of the VTH, has an online system for recording clinical cases, which is accessible online to students (argo.unicam.it). This system gathers the clinical cases treated at the intramural facilities and on the farms (extramural clinical training). This electronic system has provided the visiting team with an insight into the activity in the large animal clinical service during 2023. A total of 270 cows, 16 goats, 101 sheep, 3 pigs, and 144 horses were treated last year. According to VEE, restrictions resulting from the outbreak of African swine fever have severely limited access to pig farms.

Furthermore, in order to address the shortage of clinical cases in ruminants, the VEE has hired an online platform called vetpro.it, which provides online learning resources for students. Clinical cases and videos are displayed to complement practical training.

2.2.2. Comments

With the new position and the change in the Tirocinio syllabus, the VEE has better control over the training in different aspects of food-producing animals. The number of animals treated is mainly extramural and limited by the number of enrolled students. While it is true that the indicators I9, I10, I15, and I16 in the RSER are above the minimum values, the VEE must take into account that, in case no measures are implemented to increase the number of clinical cases handled in ruminants, the caseload per student could be insufficient when the number of graduates increases, which is expected in the coming years as the number of enrollees has increased.

A new VTH building for ruminants is currently under construction. This new facility will contribute to an increased intramural caseload of ruminants. The VEE is allowed to send treated animals back to their original farms.

2.2.3. Suggestions

A computerised patient recording system that allows for the drafting of medical records with a more academic approach would allow students to learn the proper writing of clinical cases under the supervision of faculty.

Actions should be implemented to prevent a low number of patients in some activities, which could limit the teaching and learning process in some species, notably, in the case of large animals.

2.3. Minor Deficiency 3: Partial compliance with Substandard 3.6 and 3.7 because of suboptimal EPT organisation

2.3.1. Findings

EPT organisation has changed during the last two academic years due to the new Tirocinio requirements. Although now it is on a voluntary basis, next academic year EPT will be mandatory.

Two different logbooks are available to students, one for the preclinical activities and another for the clinical ones. These logbooks have not changed since the previous visitation. The students have also been tasked with being in charge of the entire process of EPT management themselves, including the agreements with EPT providers. In addition, the signature of the external veterinarian has been incorporated in the evaluation and monitoring of the student's logbook. Finally, the teacher must review this document and sign it as well. Therefore, the EPT evaluation process has been improved.

In order to improve the organisation of EPT and in line with the new law in Italy, the teaching in the Tirocinio has been reorganised. In this activity, students are divided into 6 groups and have to complete the scheduled training in 10 weeks. Specifically, the students have to attend two weeks of training in small animals, two weeks in large animals, one week in cattle, one week in sheep, one week in poultry, and one week in herd health management. It is precisely this week with Professor Pilati that has allowed to increase the clinical activity in this service. In addition, herd health management concepts and real on-farm practice have been included, such as common animal health activities like vaccinations, deworming or prophylactic plans like brucellosis detection.

In addition, activities have been included to follow up and monitor the productive and reproductive parameters on the farms using their own computer systems and applications to complete their tasks. This also includes learning the biosecurity classification of the farms, which is mandatory by law if the farm wants to receive government support for productivity improvement. The students use these computer systems.

2.3.2. Comments

At the moment, the VEE is in the process of changing the logbook because the whole of Italy has a system of revision of the competences and the logbook is going to be adapted to these new redactions. The VEE will take advantage of this moment to incorporate an electronic logbook to facilitate this process of recording evidence of student learning.

2.3.3. Suggestions

Due to the increase in the number of students, the VEE should review whether it has sufficient capacity to cater to all students and reduce, where possible, the number of students per group (currently 8-10 students per group). By implementing this measure, the quality of teaching provided to each student could be enhanced, as it would ensure a more individualised approach to this learning process. This is particularly important in activities that require hands-on experience with patients.

Although the VEE will have a new electronic logbook in which to manage the assessment of the students' Day 1 Competences according to the new wording agreed upon by the veterinary teaching establishments in Italy, it is recommended that students have a document in which they can easily access the list of competences, teaching activities, and learning outcomes.

2.4. Minor Deficiency 4: Partial compliance with Substandard 4.1 because of no formal recording of the use of teaching animals

2.4.1. Findings
According to RSER, control of the completed practical training on animals has been included in a registration platform and a paper at LACD. Every use of teaching animals has been recorded since June 2021.

During the visit, the visiting team verified that there is a record of the use of animals in teaching. The procedure used in each healthy animal, the number of students who have carried out the learning activity, and the animal used are all recorded. Additionally, there is a system of pre-booking for scheduled activities, ensuring that the animals are available for the activity.

Furthermore, the VEE has approval for these types of animal activities for teaching purposes according to European regulations, which have been transferred to Italian regulations. For these reasons, the authorities in charge of animal health and welfare have authorized the VEE's educational activities. Learning processes involving clinical activities that have a significant impact on the welfare of animals, such as rectal palpations or surgical procedures, are only carried out on real patients, primarily on livestock farms.

2.4.2. Comments
The recording of learning activities carried out in clinical procedures on healthy animals is mainly documented in students' logbooks, therefore, the VEE does not have a record of activities carried out by all students in a global manner but would have to check each logbook individually to know the total activities performed. This is particularly relevant in activities carried out in animal collectives (such as vaccination, deworming, etc.). Even the hospital's computer system does not allow this information to be collected.

2.4.3. Suggestions
The VEE is encouraged to provide the opportunity of having some centralised procedure for recording the activities carried out by the students in healthy animals. With this information, it would be possible to have more correct and reliable information on the teaching-learning process carried out in the study plan.

2.5. Minor Deficiency 5: Partial compliance with Substandard 4.9 because of suboptimal use of personal protective equipment for necropsy and some farm work

2.5.1. Findings
All operating rooms are equipped with first aid equipment and proper biosecurity signs. For example, an emergency shower has been incorporated in the necropsy room, but not all safety

measures for this facility have been completed. The Rector and the University Administration Council have approved structural changes to the dissection room and the food inspection room. The changes, which are based on the recommendations from the ESEVT team, are in progress.

For example, a specific pipeline and tank have been built for the effluents coming from the equine isolation pit, which allows for the separation of infectious effluents from this isolation area from the main pipeline leading to the public sewer.

Other measures, like self-protection and biosafety procedures in the necropsy room and the provision of personal protective equipment to students for farm visits, have not yet been fully completed. During the visit, we were able to verify that the first phase of a new modular structure has been built, which will allow independent access to the food inspection room. It is currently connected to the necropsy room through a common corridor. Therefore, the implementation of the biosecurity measures is in progress.

2.5.2. Comments

At present, deficiencies persist because of the incomplete implementation of biosecurity measures regarding the provision of personal protective equipment that should be exclusively for use in these facilities, and ensuring the containment of any microbiological risks that the necropsy room may present. For example, the VEE could provide boots with different colour codes for use in different scenarios such as the abattoir, the farms, and the necropsy room. Additionally, there is no evidence of a procedure for the disposal of contaminated waste in the facilities.

The improved waste management in the equine isolation area is to be commended.

2.5.3. Suggestions

It is advised for the VEE to visit examples of good practices in facilities and biosecurity procedures in necropsy rooms in other establishments to ensure well-designed and proper implementation of biosecurity measures for these types of facilities.

2.6. Minor Deficiency 6: Partial compliance with Substandard 6.3 because of suboptimal skills laboratory

2.6.1. Findings

A temporary skills laboratory has been set up in the previous student room on the ground floor of the San Sollecito building, and some equipment and standard clinical procedures have been provided. This skills lab has very recently been put into use by the students. It can be accessed two afternoons per week between 2 pm and 6 pm, and a booking system is in place. Academic staff is available for supervision upon request by the students.

Another location for the skills lab will be considered when the new building A in Teaching Block 3 is completed later this year.

2.6.2. Comments

The VEE should be commended for the establishment of the skills lab, which has been done in close collaboration between staff and students. The skills lab is an important asset for the VEE and

increases the realization of the “never first time on a live animal” approach. The VEE plans for a gradual build-up of the skills lab.

The VEE now has a new clinical skills laboratory, which it maintains with great enthusiasm. However, such laboratories require ongoing maintenance and a person who is responsible for all the equipment and the continuous monitoring of its use.

2.6.3. Suggestions
Because teaching clinical practices in large animals is limited by the number of patients compared to the number of graduated students, the VEE is encouraged to acquire large animal dummies, such as horses and cows. These simulators allow veterinary students to become proficient in practical and diagnostic skills without the need to endanger or cause unnecessary discomfort to live animals and ensure the learning of Day 1 Competences.

Commonly a technical staff, not necessarily a member of the veterinary or academic staff, is required to be present, therefore the academic design should be the responsibility of a teacher, but the daily maintenance and monitoring should be the responsibility of a technician. The VEE should provide support staff if it intends to maintain this clinical skill laboratory on a permanent basis.

The VEE should continue to secure resources for the development and maintenance of the skills lab, including both personnel and equipment.

2.7. Minor Deficiency 7: Partial compliance with Substandard 9.2 because of suboptimal academic staffing in food-producing animals’ teaching and support staff in nursing care

2.7.1. Findings
One new teaching staff member in food-producing animals and herd health management was appointed in 2022. Two new support staff members devoted to animal care have been contracted. One veterinary nurse technician has been hired at the Small Animal Clinical Department (SACD) and two positions have been established at LACD.

A three-year bachelor's degree course called “Technician of animal welfare and animal production” has been established since AY 2021/22. This course enrolls about 50 students annually but has not a fixed maximum number of students per year, and it will hopefully improve the recruitment of technicians to the VEE.

2.7.2. Comments
The VEE should be commended for taking the initiative to offer this degree.

2.7.3. Suggestions
None.

2.8. Minor Deficiency 8: Partial compliance with Substandard 10.3 because of suboptimal numbers of students involved in postgraduate programmes

2.8.1. Findings

The VEE has been recognised as the EBVS satellite training centre for Aquatic Animal Health and Veterinary Microbiology. One EBVS diplomate in Veterinary Microbiology has been employed by the VEE.

The VEE has substantially increased the number of active PhD students.

2.8.2. Comments

The VEE should be commended for the establishment of these two satellite centres, which will increase the future possibilities for training and recruiting more EBVS diplomats.

2.8.3. Suggestions

The VEE is encouraged to continue to investigate its options in order to attract more PhD students, despite the fact that they face both financial and legal obstacles.

3. ESEVT Indicators

3.1. Findings

Since 2022, the number of students enrolled in the first year has increased from 45 to 65, meaning that the number of undergraduate students will increase gradually for the next few years. Similarly, the number of graduating students will increase substantially from 2027 on. This will have an impact on the calculations of the indicators as the denominator increases. The VEE needs to have a strong focus on the development and trends of all indicators and should have a plan for parallel increases in the numerator numbers. The team emphasizes that some indicators are at particular risk, such as the number of ruminants and pigs (I9) and the number of necropsies (I14-16). There is also a negative trend in the companion animal patients seen intramurally, so the motivation for this decrease should be studied and a plan of action to counteract it should be put in place.

4. Conclusions

The major deficiency has been fully corrected.

Good progress has been made to correct the minor deficiencies. The VEE is showing commitment to continual improvement in all fields of their activity.

Decision of ECOVE

The Committee concluded that the Major Deficiency identified after the Full Visitation on 24-28 May 2021 had been corrected.

The Veterinary Education Establishment (VEE) of the School of Biosciences and Veterinary Medicine, University of Camerino, is therefore classified as holding the status of: **ACCREDITATION**.