

VETBIONET

Veterinary Biocontained facility Network for excellence in animal infectiology research and experimentation

Deliverable D3.4

Guidelines of minimum requirements and criteria for training provision and competency assessment

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1. Summary

Objectives: Work package 3 (WP3, “Best practices for biosafety, biosecurity and quality management in high containment farmed animal facilities”) centres on the elements and principles of the CWA 15793 workshop agreement drafted by the CEN (European Committee for Standardization) in September 2011 (CWA 15793:2011). The CWA 15793:2011 relates to “Laboratory biorisk management”, and WP3 aims to inspect and highlight the specific requirements for the management of high containment farmed animal facilities (HCFAFs).

The objective of D3.4 is to define requirements and criteria for the provision of training and competency assessment specific for operating HCFAFs.

A draft document and a questionnaire were produced and circulated among the WP3 participants; next a workshop was organised to discuss and analyse the document and the questionnaire results between representatives from 12 VetBioNet partner organisations (IRTA, APHA, TPI, INRAE, FLI, PIWET, EMC, WBVR, ANSES, MRI, INIA, Noldus) and 2 associated partner organisations (AGES, SCIENSANO). The present D3.4 report includes the finalised document (ANNEX 2 “Guidelines of minimum requirements and criteria for training provision and competency assessment for operating high containment farmed animal facilities”) and delineates the operational procedure to achieve the Deliverable.

2. Introduction

VetBioNet’s overall objective is to enhance the preparedness of the European Research Area to respond to and to control highly pathogenic (re-)emerging epizootic and zoonotic diseases through the rapid development of diagnostic tests, the generation of experimental data feeding European regulations, and the conception of preventive solutions. One key aspect for this preparedness is to connect a network of veterinary infectious disease research infrastructures being able to undertake experiments with farm or wildlife animals in high containment facilities. For this to be effective, there is a clear need for competent and well-trained staff to run and maintain HCFAFs.

As part of the VetBioNet Networking Activities, and to help with the (advanced) training of highly qualified staff, this Deliverable seeks to stipulate the minimum requirements and criteria for training provision and competency assessment to run and maintain these facilities.

The only standard available for the management of high containment facilities is the CEN CWA 15793:2011 agreement relating to “Laboratory biorisk management”. Filling the gaps of the CWA 15793:2011, VetBioNet/WP3 strives to advise the project partners and other HCFAFs operators on how to meet the CWA 15793: 2011 standard.

The CWA 15793:2011 standard states that “The organization shall ensure that personnel that have responsibilities and /or perform tasks that may impact biorisk management in the workplace are competent to do so. Competence levels shall be judged on appropriate education, training and experience. The organization shall define required competency levels and shall maintain records verifying that staff members have attained and demonstrated those levels of competency” (item 4.4.2.). This statement implies that all personnel working in a high or maximum containment facility must be properly trained, from animal caretakers to biosafety officers or technical personnel, as all of them “have responsibilities and/or perform tasks that may impact in biorisk management”.

Through a questionnaire and discussions at the “Competence & Training” workshop including a document review process, the “Guidelines of minimum requirements and criteria for training provision and competency assessment for operating high containment farmed animal facilities” were set out in writing and published on the VetBioNet website (www.vetbionet.eu/best-practice-guidelines/). Gaps identified in available training materials were fed into D3.5 “Training material for specific critical positions in animal high containment facilities”.

3. Results

An Excel questionnaire was sent to all partners (n=17) involved in Task 3.5 “Competence, training and health monitoring of staff”. This questionnaire looked at the staff roles indicated in the CWA 15793:2011 and the training and competence requirements that were considered critical by the VetBioNet partners for running HCFAFs.

Thirteen replies were obtained; 12 out of these came from partner organisations running HCFAFs for terrestrial animals; one reply came from a partner organisation (MS) working on aquatic animal diseases, and it became evident that additional work must be dedicated to define specific competence and training requirements for running aquatic animal facilities.

The results of the questionnaire and a draft document were discussed during a “Competence & Training” workshop attended by the VetBioNet partners and associated partners listed in ANNEX 1. This discussion led to the final version of the “Guidelines of minimum requirements and criteria for training provision and competency assessment for operating high containment farmed animal facilities” (ANNEX 2, publicly available on the VetBioNet website www.vetbionet.eu/best-practice-guidelines/). Deliberations about the specific training and competence requirements for running aquatic animals/fish facilities prompted the draft of an addendum to the Guidelines (“Addendum Fish facilities”, ANNEX 3, www.vetbionet.eu/best-practice-guidelines/).

From the questionnaire and the workshop discussion, the following conclusions could be drawn:

Trained and competent staff are considered crucial for maintaining biosafety in high containment facilities that undertake research with exotic or zoonotic pathogens. The questionnaire pointed to two main instruments for acquiring the required qualification:

- Teaching using several tools such as e-learning, videos, (virtual) lectures and printed materials or manuals
- Hands-on training (on-site) with instructions or demonstrations

Being complementary, both training instruments were considered vital to warrant sufficient staff qualification and biosafety.

Standard Operation Procedures (SOPs) are a standard element in biosafety training and Quality Assurance management, and all VetBioNet partner organisations use SOPs as training tools.

Preparatory classes prior to specialised training courses are put in place in 7 to 10 out of 12 partner sites depending on the activities concerned.

The specific content of the training programme varies between facilities and also between containment areas within the same facility. Hence, a case-by-case

assessment is needed to identify specific training and competence requirements (considering the pathogen risk group and a biosecurity risk analysis).

A clear conclusion from the questionnaire was that some specialised activities such as “Commissioning/decommissioning”, “Maintenance”, “Calibration”, “Validation of devices” and “Security” are not sufficiently covered by the standard training programmes. This is somewhat surprising, given the increased availability of e-learning tools and recorded or live-streamed videos as useful tools for training programmes. Only 1 or 2 of the queried partner organisations have training videos available, and only for some specific activities such as “Safe entry/exit”, “Use of critical barrier equipment”, “Donning and doffing PPE”, “Lab disinfection & decontamination” and “Emergency/Contingency Plan”. A similar trend was observed when considering the use of institutional/own or external on-line platforms; strikingly, the latter has received no affirmative replies at all. The use of institutional/own on-line platforms was confirmed by 1 to 4 out of 12 partner organisations, but mainly centred on specific activities such as “Safe entry/exit”, “Donning and doffing PPE”, “Lab waste management”, “Facility waste management”, “Emergency/Contingency Plan” and “Security”.

4. Conclusions

“Guidelines of minimum requirements and criteria for training provision and competency assessment for operating high containment farmed animal facilities” were devised using a participatory consultation and development approach. The Guidelines (ANNEX 2) are publicly available on the VetBioNet website (www.vetbionet.eu/best-practice-guidelines/). The document matches the requirements stipulated in the CWA 15793:2011 “Laboratory biorisk management” but also highlights the differences between conventional high containment laboratories and HCFAFs for terrestrial animals. An addendum to the Guidelines (“Addendum Fish facilities”, ANNEX 4) addresses the specific training and competency requirements for running aquatic animals/fish facilities. This document can also be accessed on the VetBioNet website. Partner feedback queried in an Excel questionnaire revealed that certain HCFAF staff activities (i.e. “Commissioning/Decommissioning”, “Maintenance”, “Calibration”, “Validation of devices” and “Security”) are not sufficiently treated in the standard

training programmes at the VetBioNet partner sites. Feeding this information into D3.5 “Training material for specific critical positions in animal high containment facilities”, PowerPoint presentations addressing these staff activities were produced and uploaded as publicly available training material on the VetBioNet website (www.vetbionet.eu/best-practice-guidelines/).

5. ANNEX

ANNEX 1 – Competence & Training” workshop attendees

Xavier Abad, IRTA, ES (Task Leader)
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