



WORLD ORGANISATION FOR ANIMAL HEALTH
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OIE Competency Guidelines for Veterinary Paraprofessionals



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World Organisation for Animal Health
12, rue de Prony
75017 Paris, France
Tel.: 33-(0)1 44 15 18 88
Fax: 33-(0)1 42 67 09 87
www.oie.int

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Foreword

As described in the OIE's International Standards, National Veterinary Services provide the fundamental management system for animal health and welfare and veterinary public health in Member Countries. National Veterinary Services must have the capacity and the sustainability to ensure the delivery of their outputs including inspection and certification of animals and animal products, management of the animal health and welfare situation and the control of diseases at the animal-human-environment interface including trans-boundary diseases. This capacity and sustainability is linked to the availability of resources and the integrity of the management system including policies, procedures, staff, and documentation; the processes for auditing and evaluation of performance; and preparedness for response to emergencies and other critical situations.

The OIE recognises the important role that veterinary paraprofessionals can play in support of strong National Veterinary Services and the OIE's Sixth Strategic Plan for the period 2016-2020 commits to a better definition of the role of paraprofessionals and non-veterinary specialists, including their education and training. The development of this competency document for veterinary paraprofessionals is a demonstration of that commitment.

Based on the results of multiple PVS Pathway missions, discussions held at the various OIE Global Conferences on Veterinary Education and the outcomes of two specific regional conferences on Veterinary Paraprofessionals in Africa and Asia, a clearer picture has emerged regarding the situation of veterinary paraprofessionals in both the public and private sectors. It is clear that in many Member Countries, particularly those without sufficient numbers of veterinarians, veterinary paraprofessionals are called upon to provide a wide range of activities and services in the areas of animal health, veterinary public health and laboratory diagnosis and that their participation can be essential to the performance of the National Veterinary Services.

At the same time, it also has become clear that considerable challenges exist. The education of veterinary paraprofessionals varies greatly around the world both in duration and quality. Recognised categories of veterinary paraprofessionals may not be well defined and the standards of performance for existing categories of veterinary paraprofessionals may also not be clear. This occurs because many Member Countries do not have a veterinary statutory body whose mandate includes establishing recognised categories of veterinary paraprofessionals, identifying their prerogatives and activities and defining their training requirements for licensure or registration. The situation is further complicated by the fact that different Member Countries may use the same term or category, for example, 'animal health technician', to define a position that varies markedly between Member Countries in terms of the scope of the person's responsibilities and the duration and content of their training.

In an effort to address these challenges, the OIE convened an *ad hoc* group on veterinary paraprofessionals consisting of educators, regulators, experts and representatives of veterinary paraprofessional associations to identify desired competencies for veterinary paraprofessionals working in animal health, veterinary public health and laboratory diagnostic tracks and to prepare model curricula designed to deliver these competencies for each of the tracks. Given the scope of the work involved, the group restricted its focus to developing competencies associated with approved curricula delivered by accredited institutions offering programmes at the certificate, diploma or degree level and did not address the issue of veterinary paraprofessionals trained for shorter periods in informal settings using unapproved curricula.

This work is an additional OIE contribution to the completion of some United Nations Sustainable Development Goals in particular Goal 4 'Ensure inclusive and equitable quality education and promote lifelong, learning opportunities for all,' 'Goal 5 Achieve gender equality and empower all women and girls' and Goal 8 'Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.'

The OIE encourages National Delegates to familiarise themselves with these competency guidelines and to highlight them in discussions with relevant partners and stakeholders, including senior representatives of veterinary paraprofessional training establishments, veterinary and veterinary paraprofessional associations and the National Veterinary Statutory Body.

Monique Éloit
Director General

Acronyms

AH	Animal Health
CAHW	Community Animal Health Worker
FAO	Food and Agriculture Organisation of the United Nations [UN]
OIE	World Organisation for Animal Health
PPR	Peste des petits ruminants
SOA	Sphere of activity
SOP	Standard Operating Procedures
VPH	Veterinary Public Health
VPP	Veterinary Paraprofessional
VSB	Veterinary Statutory Body
WHO	World Health Organization [UN]

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Dr Johan Oosthuizen (University of South Africa)

Dr Samuel Niyi Adediran (GALVmed)

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Dr Markus Avong (Veterinary Council of Nigeria)

Dr Miftahul Islam Barbaruah (Vet Helpline India)

Dr Susan Catherine Cork (University of Calgary, Canada)

Dr Gerardus Johannes Duives (HAS University of Applied Sciences, The Netherlands)

Mrs Barbara M. Martin (World Association of Association of Veterinary Laboratory Diagnosticians)

Dr Hervé Petit (Agronomes et Vétérinaires Sans Frontières, France)

Dr Vutha Pheng (Royal University of Agriculture, Cambodia)

Mr Willy Schauwers (Consultant, Belgium)

Dr Heather Simmons (Texas A&M University System, United States)

Dr Karoon Chanachai (Department of Livestock Development, Thailand)

Dr Rowland Cobbold (University of Queensland, Australia)

Dr Juvénal Karagira (Direction provinciale de l'agriculture et de l'élevage de Kirundo, Burundi)

Dr Peter Kirkland (Elizabeth Macarthur Agriculture Institute, Australia)

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INTRODUCTION

1. Background

The effective delivery of national veterinary services for the protection of animal and public health requires a well-trained cadre of veterinarians and, in many situations, veterinary paraprofessionals (VPPs) working in both the public and private sectors.

The OIE supports the participation of VPPs in the delivery of national veterinary services and recognises the variety of roles that VPPs can play, including: participation in animal health field activities related to disease prevention and control; participation in veterinary public health activities such as rabies control and food safety; and participation in veterinary laboratories, such as conducting diagnostic tests.

Chapter 3.4 of the OIE *Terrestrial Animal Health Code* indicates that a Member Country's veterinary legislation should provide a basis for the regulation of veterinarians and VPPs in the public interest and suggests the creation of a regulatory entity, the veterinary statutory body (VSB), to carry out that regulation. Article 3.4.6 indicates that the relevant veterinary legislation should:

- a) define the prerogatives of veterinarians and of the various categories of VPPs that are recognised by the Member Country;
- b) define the minimum initial and continuous educational requirements and competencies for veterinarians and VPPs;
- c) prescribe the conditions for recognition of the qualifications for veterinarians and VPPs;
- d) define the conditions to perform the activities of veterinary medicine/science; and
- e) identify the exceptional situations, such as epizootics, under which persons other than veterinarians can undertake activities that are normally carried out by veterinarians.

In this context, it is essential that the desired competencies of VPPs working in the areas of animal health, veterinary public health and laboratory diagnosis in both the public and private sectors are established and that guidelines for core curricula are developed to ensure that graduating VPPs possess the desired competencies for each of these areas. The competencies presented in this document correspond to three tracks of VPPs– animal health¹, veterinary public health² and laboratory diagnosis³. The curricula required to instill these competencies will be presented in a separate document.

Member Countries may use different terms to characterise VPPs that are trained to a similar level. Likewise, Member Countries may use similar terms for VPPs trained to different levels. Therefore, the OIE has avoided naming categories of VPPs and instead has assumed that VPPs will receive formal training at either the certificate, diploma or degree level from training institutions accredited by the appropriate government agency or the veterinary statutory body and the activities that they are permitted to conduct will reflect their level of formal training.

This document has been developed as applicable to VPPs involved with terrestrial animals as defined in the *Terrestrial Animal Health Code* and *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*, although the OIE recognises that many of the competencies identified here may be applicable to aquatic paraprofessionals as well.

1- Training track to acquire the specific competencies recommended for VPPs working in animal health.
2- Training track to acquire the specific competencies recommended for VPPs working in veterinary public health.
3- Training track to acquire the specific competencies recommended for VPPs working in the diagnostic laboratory.

2. Structure of the document

This document identifies 16 key spheres of activity (SOA) in which VPPs may be involved when conducting work within the veterinary domain. For each sphere of activity, between two and five relevant competencies are also identified. For each competency, the tracks to which it is applicable are also identified i.e. animal health, veterinary public health and/or laboratory diagnostics.

In identifying the spheres of activity and their related competencies for the various VPP tracks, a number of important factors were considered:

1. It was recognised that overlaps occur among the required competencies for the three different tracks of VPP activity. Some core knowledge is relevant to all three tracks.
2. It was noted that while most competencies can be considered as foundational for a given track, the same competency may be considered as advanced for another track or tracks, in which case it would be introduced later in the VPPs' professional development.
3. It was acknowledged that the prerogatives and activities allowed for various categories of VPPs will vary between Member Countries depending on a variety of local considerations.
4. The OIE, as indicated in the *Terrestrial Code* definition of veterinary paraprofessional, expects VPPs to be under the responsibility and direction of veterinarians when conducting their work.

These factors were addressed as follows.

For each of the sixteen spheres of activity, its relevance to the three VPP tracks (laboratory diagnosis, animal health and veterinary public health) is identified by abbreviations in parentheses on the heading line that introduces that sphere of activity. Each sphere of activity may be relevant for one, two or three of the tracks.

An attempt was made to present the spheres of activity in a sequence beginning with spheres of activity that cover basic knowledge requirements followed by those that involve the application of skills. However, this sequential approach could not be stringently observed because many of the spheres of activity apply to all three tracks and the sequencing order varies somewhat between the tracks. Similarly, the competencies under each sphere of activity are presented in a sequence moving from basic knowledge requirement towards the application of basic skills.

In Table 1, all spheres of activity are presented and cross-listed by VPP track. Eleven out of 16 spheres of activity are relevant for all three tracks.

The reader will note that under some spheres of activity, a specific competency may be identified as advanced for a given track or tracks. This means that the competency is not considered as a core requirement for beginning work in that track but would be useful later as the VPP assumed broader work responsibilities. For example, a given competency might be considered as core for the animal health and veterinary public health tracks, but identified at an advanced level for the laboratory diagnosis track. The advanced designation, when relevant to a particular track or tracks, is provided in indented bullets after the description of each competency.

With regard to the responsibilities or prerogatives of VPPs in different Member Countries, the needs of the Member Country's Veterinary Services and the decisions of its VSB should converge to determine what activities VPPs are allowed to undertake. Consider, for example, Member Countries with a limited number of veterinarians and large livestock populations, some of which are in remote places. For

livestock owners to obtain any clinical veterinary services at all, it may be necessary for the VSB to sanction VPPs to provide those services in remote areas. Similarly, this document identifies expected competencies for VPPs that are approved to carry out *ante*- and *post-mortem* meat inspection under the overall supervision and responsibility of veterinarians, but whether or not they are allowed to do so remains a policy decision of the specific Member Country.

Table 1: Spheres of Activity by VPP track

Sphere of Activity	Tracks of Veterinary Paraprofessionals		
	Lab	Animal Health	Public Health
1. Animal and Veterinary Science		●	●
2. Laboratory Science	●		
3. Biosafety, Biosecurity and Occupational Health & Safety	●	●	●
4. Communication	●	●	●
5. Veterinary Legislation, Policies, Ethics and Professionalism	●	●	●
6. Use and Management of Equipment and Facilities	●	●	●
7. Animal Handling and Animal Welfare	●	●	●
8. Animal Production and Agricultural Economics		●	●
9. Specimen Collection and Sampling	●	●	●
10. Laboratory and Field Testing	●	●	●
11. Laboratory Quality Management	●		
12. Workflow Management	●	●	●
13. Record Keeping, Data Collection and Management	●	●	●
14. Disease Prevention and Control Programmes	●	●	●
15. Veterinary Products		●	●
16. Food Hygiene	●	●	●

The present document is designed to identify the likely range of activities that VPPs might be involved in and then to establish the required competencies necessary to ensure that the activities would be carried out properly. In that context, it should be understood that the inclusion of diagnosis and treatment of livestock disease as a competency for VPPs in this document does not imply an endorsement of their right to do so, but only their competency to do so where permitted. Granting that prerogative will be the decision of each Member Country.

With regard to VPPs working under the responsibility and direction of veterinarians, OIE confirms and supports this expectation but also recognises that it is the prerogative of the VSB in each Member Country to determine the extent and nature of that responsibility and direction relative to the various activities that are sanctioned for VPPs to perform.

The present document may have a unique function in the context of the laboratory track, where many—or perhaps most—paraprofessionals working in the veterinary laboratory setting are, in fact, trained in biomedical laboratory training programmes. While these paraprofessionals may be competent to exercise in the biomedical laboratory, it is important to note that in the veterinary domain, additional veterinary-specific knowledge, skills and abilities may be needed.

3. Relevant definitions

Competencies⁴ means knowledge (e.g., cognitive abilities), skills (e.g., ability to perform specific tasks), attitudes (e.g., affective abilities, feelings and emotions), and aptitude (e.g., natural ability, talent, or capacity for learning).

Sphere of Activity⁵ means skill areas in which a VPP should demonstrate competency.

Veterinarian⁶ means a person with appropriate education, registered or licensed by the relevant veterinary statutory body of a country to practice veterinary medicine/science in that country.

Veterinary Authority⁷ means the Governmental Authority of a Member Country, comprising veterinarians, other professionals and paraprofessionals, having the responsibility and competence for ensuring or supervising the implementation of animal health and welfare measures, international veterinary certification and other standards and recommendations in the *Terrestrial Code* in the whole territory.

Veterinary domain⁸ means all the activities that are directly or indirectly related to animals, their products and by-products, which help to protect, maintain and improve the health and welfare of humans, including by means of the protection of animal health and welfare, and food safety.

Veterinary paraprofessional⁹ means a person who, for the purposes of the *Terrestrial Code*, is authorised by the veterinary statutory body to carry out certain designated tasks (dependent upon the category of veterinary para-professional) in a territory, and delegated to them under the responsibility and direction of a veterinarian. The tasks for each category of veterinary para-professional should be defined by the veterinary statutory body depending on qualifications and training, and in accordance with need.

Veterinary Services¹⁰ means the governmental and non-governmental organisations that implement animal health and welfare measures and other standards and recommendations in the *Terrestrial Code* and the *OIE Aquatic Animal Health Code* in the territory. The Veterinary Services are under the overall control and direction of the Veterinary Authority. Private sector organisations, veterinarians, veterinary paraprofessionals or aquatic animal health professionals are normally accredited or approved by the Veterinary Authority to deliver the delegated functions.

Veterinary statutory body¹¹ means an autonomous regulatory body for veterinarians and veterinary para-professionals.

4. How to use this document

The purpose of this document is to provide guidelines for the identification of desired competencies expected of VPPs working in animal health, veterinary public health or laboratory diagnosis. These guidelines can be used to help veterinary statutory bodies, national veterinary services, private sector employers and other stakeholders to define the competencies that they expect in the VPPs they register,

4- From 'OIE recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality'

5- Definition formulated by the ad hoc Group on Veterinary Paraprofessionals

6- From glossary of *Terrestrial Animal Health Code*

7- From glossary of *Terrestrial Animal Health Code*

8- From Article 3.4.2 of *Terrestrial Animal Health Code*

9- From glossary of *Terrestrial Animal Health Code*

10- From glossary of *Terrestrial Animal Health Code*

11- From glossary of *Terrestrial Animal Health Code*

license or hire. They can also be used by educational institutions to develop the curricula necessary to deliver the desired competencies over the course of the formal training.

As it concerns the laboratory diagnosis track, veterinary statutory bodies could consider consultation with medical regulatory agencies registering biomedical laboratory paraprofessionals and regulating their training standards when determining the needs for competencies of laboratory VPPs. This consultation in a 'One Health' spirit could be beneficial in order to avoid duplication and the development of parallel infrastructure when most needs may already be met by existing programmes, even when outside of the veterinary domain.

One helpful approach to using the document would be to develop a job description for VPPs who are to be recruited for a specific position or for a specific category of licensure to be defined by a VSB. This description should include the activities that the VPPs are expected to competently perform. Based on this description, the relevant sphere of activity can be identified and listed. This selection is aided by the inclusion, at the beginning of each sphere of activity, of the track or tracks for which the sphere of activity is relevant. Once the relevant spheres of activity are identified, each can be reviewed again to determine which competencies listed under each sphere of activity are applicable to the position described.

In order to illustrate how this procedure can work, the annex of this document includes six sample job descriptions, two each for the animal health track, the veterinary public health track and the laboratory diagnosis track. In each track, one job description pertains to an entry or mid-level position, while the second refers to an advanced level position to illustrate how the selection of competencies would vary. These job descriptions are:

Animal Health

- 1. Scenario 1:** VPPs to work in a National PPR Control and Eradication Campaign
- 2. Scenario 2:** VPPs authorised to provide both clinical services to livestock owners and government regulatory services in a designated area

Veterinary Public Health

- 1. Scenario 1:** VPPs to work in a meat quality assessment programme
- 2. Scenario 2:** VPPs to work in a porcine cysticercosis control programme

Laboratory Diagnosis

- 1. Scenario 1:** VPPs to work in the district or provincial laboratories to support the efforts of a National PPR Control and Eradication Campaign
- 2. Scenario 2:** Laboratory VPPs to support enhanced disease surveillance and diagnostic capacity in screening program for Brucellosis

For educators, following the identification of the desired competencies, existing curricula would need to be assessed to determine if those desired competencies are addressed or if modifications in the existing curricula would need to be considered. Efforts to develop new curricula will be assisted by the companion curricula guidelines for VPP to be produced by OIE.

VPP Spheres of Activity and Related Competencies

1. Animal and Veterinary Science

[Tracks: AH, VPH]

Animal science means the study of the biology, growth, husbandry, and production of animals under human control¹². Veterinary science is the art and science concerned with the health of animals and the treatment of injuries and diseases that affect them¹³.

For this sphere of activity, animal and veterinary science, veterinary paraprofessionals (VPPs) are expected to have the following competencies:

- **Competency 1:** VPPs know the fundamentals of animal science including the care, nutrition and reproduction of animal species relevant to the country and region.
 - AH, VPH
- **Competency 2:** VPPs know the fundamentals of veterinary science and are able to examine animals, assess their environment and interview animal keepers, recognise signs of health and disease, identify common non-infectious and infectious diseases, including zoonoses, differentiate among similar diseases, evaluate injuries and *support reproduction and herd health management*.
 - AH, VPH (for VPH excluding the section in italics)
- **Competency 3:** VPPs are able to administer first aid to animals and follow established guidelines to select, properly utilise and advise on the use of the appropriate veterinary products and procedures necessary to successfully treat, manage and/or prevent common infectious and non-infectious diseases, basic reproductive conditions, trauma and other emergencies of domesticated animal species.
 - AH

2. Laboratory Science

[Track: Lab]

Laboratory science means the study of methods to analyse biological materials, feed, food and environmental samples that provide information needed for the diagnosis and treatment of disease as well as detection of drug residues, monitoring the quality and safety of feed, detecting environmental contaminants, and other aspects of animal, human, and environmental health¹⁴.

For this sphere of activity, laboratory science, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs know the fundamentals of laboratory science.
 - Lab
- **Competency 2:** VPPs have fundamental knowledge of pathology and pathogenesis of relevant key diseases.
 - Lab
- **Competency 3:** VPPs have knowledge of the appropriate assays and the available range of equipment within the various laboratory disciplines in support of animal health and production, food safety and the diagnosis of animal and zoonotic diseases in the country and region.
 - Lab
- **Competency 4:** VPPs have the basic knowledge of animal production, veterinary science, and veterinary public health.
 - Advanced: Lab

12- Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

13- Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

14- Adapted from <https://www.med.unc.edu/ahs/clinical/about/glance> and <http://www.reference.md/files/D013/mD013677.html>

3. Biosafety, Biosecurity and Occupational Health and Safety

[Tracks: Lab, AH, VPH]

Biosafety means the principles and practices for the prevention of unintentional exposure to biological materials or their accidental release¹⁵.

Biosecurity means a set of management and physical measures designed to reduce the risk of the introduction, establishment and spread of animal diseases, infections or infestations to, from and within an animal population¹⁶.

In the laboratory setting, biosecurity describes the controls on biological materials within laboratories, in order to prevent their loss, theft, misuse, unauthorised access, or intentional unauthorised release¹⁷.

Occupational health and safety means all aspects of health and safety in the workplace, with a strong focus on primary prevention of hazards¹⁸.

For this sphere of activity, biosafety, biosecurity and occupational health and safety, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs know the principles of biosafety and biosecurity and are able to advise on preventing human or animal exposure and spread from accidental or intentional release of biological agents and materials in laboratory, farm, processing plant, market and other settings where such risks might occur. VPPs conduct their duties in accordance with these principles and in compliance with relevant laws, regulations and policies.
 - Lab, AH, VPH
- **Competency 2:** VPPs know the principles and practices relating to occupational health and safety and are able to carry out their required workplace activities without endangering the health and safety of themselves or others present.
 - Lab, AH, VPH
- **Competency 3:** VPPs know the terminology and principles of risk analysis, which includes hazard identification, risk assessment, risk management and risk communication, and are able to observe and apply these principles in relation to minimising the risk of spreading animal and zoonotic disease and protecting food safety.
 - Advanced: Lab, AH, VPH

15- *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* definition: http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/0.04_GLOSSARY.pdf

16- *Terrestrial Animal Health Code* definition: <http://www.oie.int/index.php?id=169&L=0&htmfile=glossaire.htm>

17- *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* definition: http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/0.04_GLOSSARY.pdf

18- Adapted from the WHO definition: http://www.who.int/topics/occupational_health/en/

4. Communication

[Tracks: Lab, AH, VPH]

Communication means the knowledge, skills and practices necessary for conducting the effective exchange of information between various individual, institutional and public audiences for purposes of informing, guiding and motivating action in relation to animal health, production and welfare as well as diagnostic laboratory matters¹⁹.

For this sphere of activity, communication, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs know the principles of effective communication and possess the communication skills necessary to carefully listen to and be clearly understood by clients, colleagues and other stakeholders and to deliver extension services.
 - Lab, AH, VPH
- **Competency 2:** VPPs are able to use appropriate platforms to prepare reports, develop extension messages, and make public presentations.
 - Advanced : Lab, AH, VPH

5. Veterinary Legislation, Policies, Ethics and Professionalism

[Tracks: Lab, AH, VPH]

Veterinary legislation means the laws, regulations and all associated legal instruments that pertain to the veterinary domain, while policies refer to the official actions taken to implement the veterinary legislation²⁰.

Veterinary ethics means a code of conduct followed to ensure impartial, independent and objective judgement, honest behaviour and integrity consistent with relevant veterinary legislation and policies²¹.

Professionalism means the desired qualities and competencies that characterise the expected performance of veterinary paraprofessionals²².

For this sphere of activity, veterinary legislation, policies, ethics and professionalism, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs are able to conduct their work in keeping with the rights, responsibilities, prerogatives and obligations that pertain to VPPs under the laws regulations and policies of the country in which they work.
 - Lab, AH, VPH
- **Competency 2:** VPPs are able to cite the relevant laws, regulations and policies that provide the legal justification for any actions they are taking which may affect the rights and property of interested parties.
 - Advanced: AH, VPH, Lab
- **Competency 3:** VPPs act in a manner consistent with the professional and ethical standards to which VPPs are expected to adhere and understand the penalties and procedures associated with violation of those standards.
 - Lab, AH, VPH

19- Definition adapted by the ad hoc Group on Veterinary Paraprofessionals from multiple sources.

20- From glossary of *Terrestrial Animal Health Code*

21- Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals

22- Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals

6. Use and Management of Equipment and Facilities

[Tracks: Lab, AH, VPH]

Use and management of equipment and facilities means the knowledge, skills and procedures necessary for the proper and safe use, care and maintenance of equipment and facilities used in the course of professional activity²³.

For this sphere of activity, use and management of equipment and facilities, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs know the function, operational procedures, proper and safe use of all equipment utilised during the course of their routine work.
 - Lab, AH, VPH
- **Competency 2:** VPPs are able to properly maintain, clean, disinfect and store all equipment used.
 - Lab, AH, VPH
- **Competency 3:** VPPs are able to detect and report routine operational malfunctions on equipment and conduct, routine repairs when necessary to keep equipment operational.
 - Lab, AH, VPH
- **Competency 4:** VPPs are able to monitor facilities, including environmental conditions and utilities, perform routine maintenance, note anomalies, and conduct simple interventions.
 - Lab, AH, VPH

7. Animal Handling and Animal Welfare

[Tracks: Lab, AH, VPH]

Animal handling means the knowledge and skills to understand the behaviour and needs of animals in order to manage their movement and effectively restrain them in a manner consistent with their behaviour and needs while ensuring the safety and well-being of both the animal and the handler²⁴.

Animal welfare means how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear and distress²⁵.

For this sphere of activity, animal handling and animal welfare, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs understand the behaviour of relevant animal species under natural and controlled environments and are competent in the use of techniques and equipment for animal handling to minimise stress and risk during management of animals and delivery of veterinary care.
 - Lab, AH, VPH
- **Competency 2:** VPPs are able to recognise signs of fear, pain, stress and discomfort in relevant animal species in situations involving housing, lairage, restraint, movement, transport and slaughter, and to make suitable recommendations or interventions for alleviating those adverse effects.
 - AH, VPH
 - Advanced: Lab

23- Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals

24- Adapted from definitions of 'animal handler' and 'animal welfare' in the glossary of the *Terrestrial Animal Health Code*

25- From glossary of *Terrestrial Animal Health Code*

8. Animal Production and Agricultural Economics

[Track: AH, VPH]

Animal production means the technology and management practices applied to the keeping of animals for profit. Amongst others, it includes feeding, breeding, housing and marketing. Of great importance is the making of the financial arrangements necessary to the successful carrying out of each enterprise in the light of the market conditions for the sale of the end products.²⁶ For this reason, animal production is closely linked to agriculture economics.

Agricultural economics is the applied field of economics concerned with the application of economic theory in optimising the production and distribution of animals, animal feed and animal products²⁷.

For this sphere of activity, animal production and agricultural economics, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs know the basic technical characteristics of the commercial and non-commercial livestock production systems present in their country and region for the relevant animal species.
 - AH, VPH
- **Competency 2:** VPPs know the basic agriculture economic trends, value chain and market dynamics for the various livestock production systems with which they work in order to effectively communicate with stakeholders.
 - Advanced: AH, VPH

9. Specimen Collection and Sampling

[Tracks: Lab, AH, VPH]

Specimen collection and sampling means the act of collecting, identifying, properly handling and transporting tissues or materials from animals, feed, food, or the environment for the purpose of conducting analysis on them²⁸.

For this sphere of activity, specimen collection and sampling, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs are able to properly collect, or provide advice on the collection of, necessary environmental, food, feed, water and animal samples for diagnostic or testing purpose according to established protocols and techniques utilising appropriate materials and equipment.
 - Lab, AH, VPH
- **Competency 2:** VPPs are able to carry out the necessary record keeping associated with sample identification, submission and tracking.
 - Lab, AH, VPH
- **Competency 3:** VPPs are able to select and utilise proper packaging and shipping supplies and procedures to ensure that the safety and quality of samples is maintained and assured during transit to testing sites.
 - Lab, AH, VPH

26- Animal Production, in Saunders Comprehensive Veterinary Dictionary, 3 ed. © 2007 Elsevier, Inc.

27- Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

28- Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals

10. Laboratory and Field Testing

[Tracks: Lab, AH, VPH]

Laboratory and field testing means the performance of accepted, standardised tests on specimens, or live animals to determine the presence of chemical, physical or biological agents, or pathological changes associated with disease²⁹. Field testing is the act of conducting an assay in the field and making a determination of the test result³⁰.

For this sphere of activity, laboratory and field testing, VPPs are expected to have the following competencies:

- **Competency 1a:** VPPs are able to perform required laboratory and field assays according to the related SOPs throughout the range of laboratory disciplines and assays expected of them.
 - Lab “(standard operating procedures)”
- **Competency 1b:** VPPs are able to perform basic assays expected of them according to the related SOPs.
 - AH, VPH
- **Competency 2a:** VPPs are able to interpret laboratory and field test results, as permitted, as well as identify and when possible, correct non-conforming tests.
 - Lab
- **Competency 2b:** VPPs are able to interpret basic test results as permitted, as well as identify and when possible, correct non-conforming tests.
 - Advanced: AH, VPH

11. Laboratory Quality Management

[Track: Lab]

Laboratory quality management means the coordinated activities including good management practices, valid test and calibration methods, proper techniques, quality control and quality assurance required to manage a laboratory. It includes the quality system essentials: personnel, equipment, purchasing & inventory, facilities & safety, process control, documents & records, information management, assessments, corrective and preventive actions, customer service, organisation, and process improvement necessary to achieve objectives and improve consistency in all activities and tasks³¹.

For this sphere of activity, laboratory quality management, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs understand quality management principles and concepts to ensure the efficient operation and quality of outputs from the laboratories where they work.
 - Lab
- **Competency 2:** VPPs are able to implement and maintain quality management system processes and procedures to ensure the efficient operation and quality of outputs from the laboratories where they work.
 - Lab

29- Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals

30- Definition formulated by the *ad hoc* Group on Veterinary Paraprofessionals

31- Adapted from Chapter 1.1.1. & 1.1.5 of the *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*: http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/1.01.01_MANAGING_VET_LABS.pdf; http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/1.01.05_QUALITY_MANAGEMENT.pdf

12. Workflow Management

[Track: Lab, AH, VPH]

Workflow management means managing and monitoring the activities in human, physical, and financial resources to maximise efficiency of performance³².

For this sphere of activity, workflow management, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs are able to organise and coordinate work activities.
 - Lab, AH, VPH
- **Competency 2:** VPPs are able to manage relevant supplies, reagents, veterinary products, equipment, vehicles, cold chain, consumables, financial and/or other necessary resources to ensure an efficient workflow for which the VPP is responsible.
 - Lab, AH, VPH

13. Record Keeping, Data Collection and Management

[Track: Lab, AH, VPH]

Record keeping, data collection and management means the systematic collection and recording of information related to professional activities and the storage of such recorded information in a manner that makes it readily available for retrieval and analysis³³.

For this sphere of activity, record keeping, data collection, and management, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs know the principles of data collection and record keeping and data management.
 - Lab, AH, VPH
- **Competency 2:** VPPs are able to use appropriate paper-based and/or electronic means for the proper and systematic collection, recording, storage, retrieval, management, and reporting of relevant information in the veterinary domain.
 - Lab, AH, VPH

14. Disease Prevention and Control Programmes

[Track: Lab, AH, VPH]

Disease prevention and control programmes, whether or not approved, managed or supervised by the veterinary authority, include movement controls, vaccination, and treatment. Disease prevention and control programmes will be specific to each country or region and should comply with applicable OIE standards, as appropriate³⁴.

For this sphere of activity, disease prevention and control programmes, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs understand and are able to apply disease control measures, including animal identification, sampling for laboratory testing, vaccination and other preventive services, treatment

32- Definition adapted by the *ad hoc* Group on Veterinary Paraprofessionals from multiple sources.

33- Definition formulated by the *ad hoc* Group on Veterinary Paraprofessional

34- From 'OIE recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality'

when appropriate, vector control, quarantine, movement control, disinfection, humane killing of animals and the proper disposal of carcasses in a manner consistent with public and environmental health.

- AH, VPH
- **Competency 2:** VPPs understand and are able to apply their knowledge of the clinical and epidemiological characteristics of those infectious diseases for which programmes exist.
 - AH, VPH
- **Competency 3:** VPPs are able to participate in national disease prevention and control programmes, including the reporting of notifiable diseases, collection of basic epidemiologic field data, disease surveillance activities and support of disease investigation and control efforts, including communication with stakeholders.
 - Lab, AH, VPH
- **Competency 4:** VPPs understand the One Health approach and are able to work effectively within integrated teams.
 - Lab, AH, VPH

15. Veterinary Products

[Tracks: AH, VPH]

Veterinary products means drugs, insecticides/acaricides, vaccines, and biological products used or presented as suitable for use to prevent, treat, control, or eradicate animal pests or diseases; to be used to establish a veterinary diagnosis; or to restore, correct or modify organic functions in an animal or group of animals³⁵.

For this sphere of activity, veterinary products, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs know the characteristics and use of the various categories of veterinary medicines and biologicals used in the country and region, the available products approved for use within each category and know the conditions for the appropriate selection of each for therapeutic purposes. They also know the permitted drugs, conditions, and circumstances in the country, if any, under which VPPs can prescribe and/or administer medicines.
 - AH
- **Competency 2:** VPPs know the species of animals for which each drug is approved and its proper route of administration. They are able to reliably calculate the correct dosage of drug, determine period, condition of administration, and properly administer it for the prescribed period and communicate adverse effects, including the development of antimicrobial resistance.
 - AH
- **Competency 3:** VPPs know the conditions for the proper storage, display and handling of approved veterinary medicines and biologicals to ensure the maintenance of their quality and efficacy, taking note especially of cold chain requirements, expiry dates, and proper disposal.
 - AH
- **Competency 4:** They are able to communicate to animal owners how the improper use of drugs can have adverse effects on public health, such as the importance of respecting drug withdrawal times and how the improper administration of antimicrobials may contribute to the development of antimicrobial resistance.
 - AH, VPH

35- From 'OIE recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality'

16. Food Hygiene

[Tracks: Lab, AH, VPH]

Food hygiene means all conditions and measures necessary to ensure the safety and suitability of food of animal origin from production to consumption³⁶.

For this sphere of activity, food hygiene, VPPs are expected to have the following competencies:

- **Competency 1:** VPPs know the principles of food hygiene.
 - AH, VPH
 - Advanced: Lab
- **Competency 2:** VPPs are able to recognise and monitor or advise if animal slaughter, processing, storage, and transport facilities are properly designed and operating according to food hygiene principles, including the application of quality management systems.
 - Advanced: AH, VPH
- **Competency 3:** VPPs are able to participate in foodborne disease surveillance and investigations, including conducting interviews, accurately recording information and properly selecting and handling samples for testing.
 - Lab, AH, VPH
- **Competency 4:** VPPs working in abattoirs or other slaughter facilities understand the procedures and are able to monitor humane stunning and killing of slaughter animals including animal welfare issues that affect product quality. They are also able to conduct ante- and post-mortem meat inspections and reporting abnormal findings to proper authorities where so permitted.
 - VPH
 - Advanced: AH
- **Competency 5:** VPPs are able to properly inspect facilities and means of transport related to production, processing, storage and distribution of products of animal origin and to advise on improvements, to ensure compliance with regulatory requirements for food hygiene throughout the processing chain.
 - Advanced: VPH

36- WHO definition: http://www.who.int/foodsafety/areas_work/food-hygiene/en/

The purpose of this Competency Document for Veterinary Paraprofessionals is to provide guidelines for the identification of necessary competencies for veterinary paraprofessionals to properly carry out the responsibilities which are expected of them depending on the nature of their work, the extent of their training, and the prerogatives defined for them by the veterinary statutory body.

This document is organised according to various spheres of activity, which are defined as skill areas in which VPPs should demonstrate competency depending on the scope and nature of their work. For each sphere of activity, two to five relevant competencies are identified. Overall, there are 16 spheres of activity and 47 competencies identified. Various combinations of these competencies will define what is expected of VPPs assuming particular roles in the animal health, veterinary public health and laboratory diagnosis tracks.

The document will be useful to VSBs seeking to define different categories of veterinary paraprofessional, the activities they are allowed to perform and the level of formal training they are expected to have. The document will also be of value to educators who need to develop curricula that ensure the expected competencies are addressed during the training of VPPs. It will also be helpful to potential employers, both in the public and private sector, to determine what competencies are required to fulfil the job for which they are seeking qualified VPPs.

To illustrate how the document may be useful in these contexts, six sample job descriptions, two each for the animal health track, the veterinary public health track and two for the laboratory diagnosis track. In each track, one job description pertains to an entry -level position or limited/specific activities, while the second refers to higher level positions or more comprehensive activities to illustrate how the selection of competencies would vary.

Based on the tasks expected for the VPPs in each scenario, the appropriate spheres of activity are identified and then the relevant competencies within each chosen sphere of activity are selected. The examples are designed to suggest the variability that exists across the range of the three VPP tracks as well as the adaptability of the spheres of activity and competencies to help define the necessary skills, knowledge and abilities required for the VPPs to do their jobs properly.

Again, these scenarios serve as examples of the use of this document, not as compulsory models. Readers are encouraged to develop their own scenarios and build the appropriate sets of spheres of activity and competencies to further test the usefulness of this document.

Animal Health Track

Scenario 1: VPPs to work in a National PPR Control and Eradication Programme

Peste des petits ruminants (PPR) is endemic in Country A and the government has decided to embark on a National PPR Control and Eradication Programme in the context of the OIE/FAO Global PPR Eradication Programme. There are areas of the country where there are large numbers of small ruminants but few or no veterinarians to carry out disease control programmes.

The decision is made to develop a cadre of veterinary paraprofessionals (VPP), under the supervision of a designated government veterinarian, who can implement the national PPR control and eradication programme in defined areas (e.g., sub-districts) for which they are responsible. The Veterinary Services wants to be sure that the VPPs are properly trained to carry out high-quality work and successfully eradicate PPR following the key elements of the Global Control and Eradication Strategy, namely outreach and extension, epidemiologic surveillance including interviews and sero-surveillance, disease investigation and vaccination.

Expected tasks	Sphere of Activity	Competencies
PPR extension and awareness	SOA 1: Animal and Veterinary Science	1.1
	SOA 4: Communication	4.1
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.1, 5.3
Epidemiological and serological surveillance	SOA 1: Animal and Veterinary Science	1.2
	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 4: Communication	4.1
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.3
	SOA 7: Animal Handling and Animal Welfare	7.1, 7.2
	SOA 9: Specimen Collection and Sampling	9.1, 9.2, 9.3
	SOA 13: Record Keeping, Data Collection, and Management	13.1
	SOA 14: Disease Prevention and Control Programmes	14.1, 14.2, 14.3
Disease investigation and sampling	SOA 1: Animal and Veterinary Science	1.1, 1.2
	SOA 3: Biosafety, Biosecurity and Occupational Health & Safety	3.1, 3.2
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.1
	SOA 9: Specimen Collection and Sampling	9.1, 9.2
	SOA 10: Laboratory and Field Testing	10.1b
	SOA 12: Workflow Management	12.1, 12.2
	SOA 13: Record Keeping, Data Collection, and Management	13.1
	SOA 14: Disease Prevention and Control Programmes	14.1
PPR Vaccination	SOA 1: Animal and Veterinary Science	1.2
	SOA3: Biosafety, Biosecurity and Occupational Health & Safety	3.1, 3.2
	SOA 4: Communication	4.1
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.3
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2, 6.3
	SOA 7: Animal Handling and Animal Welfare	7.1, 7.2
	SOA 12: Workflow Management	12.1, 12.2
	SOA 13: Record Keeping, Data Collection, and Management	13.1
	SOA 14: Disease Prevention and Control Programmes	14.3
	SOA 15: Veterinary Products	15.1, 15.3

Animal Health Track

Scenario 2:

VPPs authorised to provide both clinical services to livestock owners and government regulatory services in a designated area

Under the rules of the Veterinary Statutory Body in Country B, veterinary paraprofessionals can be registered to provide clinical services to farmers and regulatory services on behalf of the government within a specific geographical area. In order for a VPP to be registered to carry out these specific activities, the Veterinary Statutory Body requires demonstration of specific competencies acquired through formal training at an accredited training institution. The VPP, so registered, should be able to perform the following tasks:

Expected tasks	Spheres of Activity	Competencies
Routine veterinary extension services	SOA 1: Animal and Veterinary Science	1.1, 1.2, 1.3
	SOA 3: Biosafety, Biosecurity and Occupational Health & Safety	3.1, 3.2, 3.3
	SOA 4: Communication	4.1, 4.2
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.1, 5.2, 5.3
	SOA 8: Animal Production and Agricultural Economics	8.1, 8.2
	SOA 12: Workflow Management	12.1
	SOA 13: Record Keeping, Data Collection, and Management	13.1
	SOA 14: Disease Prevention and Control Programmes	14.1, 14.2, 14.4
	SOA 15: Veterinary Products	15.2, 15.4
	SOA 16: Food Hygiene	16.1

Expected tasks	Spheres of Activity	Competencies
Veterinary clinical services e.g., reproduction related activities, basic treatment, internal external parasite control, preventive vaccination, sampling, dehorning, castration and other production related interventions, and disease control	SOA 1 Animal and Veterinary Science	1.1, 1.2, 1.3
	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2, 3.3
	SOA 4: Communication	4.1
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.1, 5.2, 5.3
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2, 6.3, 6.4
	SOA 7: Animal Handling and Animal Welfare	7.1, 7.2
	SOA 8: Animal Production and Agricultural Economics	8.1, 8.2
	SOA 9: Specimen Collection and Sampling	9.1, 9.2, 9.3
	SOA 10: Laboratory and Field Testing	10.1b, 10.2b
	SOA 12: Workflow management	12.1, 12.2
	SOA 13: Record Keeping, Data Collection, and Management	13.1, 13.2
	SOA 14: Disease Prevention and Control Programmes	14.2, 14.3, 14.4
	SOA 15: Veterinary Products	15.1, 15.2, 15.3, 15.4
SOA 16: Food hygiene	16.3	
Regulatory services e.g., surveillance, reporting, vaccination, meat inspection, where applicable	SOA 1: Animal and Veterinary Science	1.2
	SOA 3: Biosafety, Biosecurity and Occupational Health & Safety	3.1, 3.2
	SOA 4: Communication	4.1
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.1, 5.3
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2, 6.3
	SOA 7: Animal Handling and Animal Welfare	7.1, 7.2
	SOA 9: Specimen Collection and Sampling	9.1, 9.2, 9.3
	SOA 12: Workflow Management	12.1, 12.2
	SOA 13: Record Keeping, Data Collection, and Management	13.1
	SOA 14: Disease Prevention and Control Programmes	14.1, 14.2, 14.3
	SOA 15: Veterinary Products	15.1, 15.3
	SOA 16: Food Hygiene	16.2, 16.4

Veterinary Public Health Track

Scenario 1:

VPPs to work in a meat quality assessment programme

The government of Country C has established that a programme for the assessment of meat quality as well as a framework for improved monitoring of abattoirs, community slaughter slabs and retail outlets of raw meat be established. There are areas of the country where there are few or no veterinarians to carry out this programme, and therefore government has decided that VPPs will be able to make a contribution to this objective. The government has decided to recruit veterinary public health paraprofessionals to enter into the programme. A government-employed veterinary epidemiologist will design a sampling strategy and VPPs will be expected to collect samples, gather data and administer a questionnaire among abattoirs, community slaughter slabs and retail outlets of raw meat in Country C. The government wants to be sure that the VPPs are properly trained to carry out high-quality work and successfully implement the programme and framework as envisioned.

Expected Tasks	Sphere of Activity	Competency
Organisation of workflow	SOA 12: Workflow Management	12.1, 12.2
Communication with stakeholders	SOA 3: Biosafety, Biosecurity, & Occupational Health & Safety	3.1, 3.2
	SOA 4: Communication	4.1
	SOA 5: Veterinary Legislation, Policies Ethics, and Professionalism	5.1
Meat inspection	SOA 1: Animal and Veterinary Science	1.2
	SOA 16: Food Hygiene	16.1, 16.3
Data collection and recording	SOA 13: Record Keeping, Data Collection, and Management	13.1, 13.2
Sample collection	SOA 3: Biosafety, Biosecurity, & Occupational Health & Safety	3.1, 3.2,
	SOA 6: Equipment and Facilities	6.1, 6.2
	SOA 9: Specimen Collection and Sampling	9.1, 9.2, 9.3
	SOA 16: Food Hygiene	16.1, 16.3

Veterinary Public Health Track

Scenario 2:

VPPs to work in a porcine cysticercosis control programme

There have been increased reported incidents of neurocysticercosis in humans. The government of Country D has decided to monitor practices in the pork sector in order to help prevent outbreaks. The government has requested that VPPs working in veterinary public health should work with veterinarians to implement a control programme in the affected communities to assess if porcine cysticercosis incidence has also increased in the region. Specifically, VPPs will help with an awareness campaign for consumers, farming system improvement, slaughterhouse inspection, and reporting.

Expected Tasks	Sphere of Activity	Competency
Assessment of risk areas / situations	SOA 1: Animal and Veterinary Science	1.2
	SOA 8: Animal Production and Ag Economics	8.1, 8.2*
	SOA 12: Workflow management	12.1, 12.2
	SOA 14: Disease Prevention and Control Programmes	14.1, 14.2, 14.3, 14.4
Communicate with stakeholders (i.e., affected community)	SOA 1: Animal and Veterinary Science	1.2
	SOA 4: Communication	4.1., 4.2*
	SOA 5: Veterinary Legislation, Policies Ethics, and Professionalism	5.1, 5.2*, 5.3
	SOA 12: Workflow management	12.1, 12.2
	SOA 14: Disease Prevention and Control Programmes	14.1, 14.2, 14.3, 14.4
Animal identification before slaughter	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.2
	SOA 7: Animal Handling and Welfare	7.1, 7.2
	SOA 13: Record Keeping, Data Collection, and Management	13.1, 13.2
Post-mortem inspection	SOA 1: Animal and Veterinary Science	1.2
	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2, 3.3*
	SOA 6: Equipment and Facilities	6.1, 6.2
	SOA 12: Workflow management	12.1, 12.2
	SOA 13: Record Keeping, Data Collection, and Management	13.1, 13.2
	SOA 16: Food Hygiene	16.1, 16.2, 16.3., 16.4*
Sample collection	SOA 9: Sample Collection	9.1, 9.2, 9.3
	SOA 12: Workflow management	12.1, 12.2
Data collection and recording	SOA 12: Workflow management	12.1, 12.2
	SOA 13: Record Keeping, Data Collection, and Management	13.1, 13.2
Data reporting to veterinarian for disease control programme	SOA 12: Workflow management	12.1, 12.2
	SOA 14: Disease Prevention and Control Programmes	14.1, 14.2, 14.3, 14.4

*Advanced competency for track

Based on this situation, *ante-mortem* inspection skills will not be required for this specific disease. It is understood that for other diseases, *ante-mortem* inspection would need to be included.

Laboratory Diagnosis Track

Scenario 1:

VPPs to work in the district or provincial laboratories to support the efforts of a National PPR Control and Eradication Campaign

The government of Country E has evaluated workforce needs in its national veterinary laboratory network and recognises the need for entry-level laboratory VPPs for engagement in the National PPR Control and Eradication Strategies in the context of the OIE/FAO Global PPR Eradication Programme. The government has decided that particular competencies at the entry level are required to develop capabilities at the provincial and district levels of the veterinary laboratory network, in order to assist with ramped-up activities in the field that will generate increased sample flow and work for the laboratories at those levels. The government wants to be sure that the laboratory VPPs are properly trained to carry out high-quality work and successfully implement the programme as envisioned.

The following tasks are determined for an entry-level Laboratory VPP:

Expected tasks	Sphere of Activity	Competencies
Performs laboratory testing according to Standard Operating Procedures, including pre- and post-analytic phases	SOA 2: Laboratory Science	2.1, 2.2, 2.3
	SOA 10: Laboratory and Field Testing	10.1a
	SOA 4: Communication	4.1
Understands the principles of biosafety, biosecurity, and OHS and uses appropriate PPE	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.2
Autoclaves and sterilises glassware, instruments and waste	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2
Cleans and maintains work area and all laboratory equipment and supplies	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2
Collects and prepares samples for testing using various types of laboratory equipment	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2
	SOA 9: Specimen Collection and Sampling	9.2
	SOA 10: Laboratory and Field Testing	10.1a
	SOA 12: Workflow Management	12.1
Prepares and maintains accurate and reliable laboratory records and interprets results	SOA 10: Laboratory and Field Testing	10.1a
	SOA 13: Record Keeping, Data Collection, and Management	13.1

Laboratory Diagnosis Track

Scenario 2:

Laboratory VPPs to support enhanced disease surveillance and diagnostic capacity in screening program for Brucellosis

There has been an increase in the reported instances of abortions in dairy cattle in Country F. The government is also concerned about a rise in the number of villagers in two communities demonstrating antibodies to *Brucella abortus* in a recent health study.

In a preliminary epidemiological investigation, conducted by the Department of Livestock, 8/100 cattle in the same communities have tested positive serologically to *Brucella abortus*. Due to the growing dairy sector in Country F, and the recent import of vaccinated cattle from a number of other countries, the government would like to establish a country wide screening program for Brucellosis. In order to assess the extent of the problem and to develop a disease control plan, the government recognises that the laboratory capability and competencies required to support this work will need to be expanded significantly.

The following tasks are determined for a mid-level Laboratory VPP:

Expected tasks	Sphere of Activity	Competencies
Performs laboratory testing according to Standard Operating Procedures, including pre- and post-analytic phases	SOA 2: Laboratory Science	2.1, 2.2, 2.3
	SOA 4: Communication	4.1
	SOA 10: Laboratory and Field Testing	10.1a, 10.2a
Contributes to a safe and secure environment for customers, visitors and co-workers by following established standards and procedures; complying with legal regulations	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 5: Veterinary Legislation, Policies, Ethics and Professionalism	5.2
Oversees and monitors quality management & biosafety systems	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2
	SOA 11: Laboratory Quality Management	11.1, 11.2
Keeps equipment operating by following operating instructions; troubleshooting breakdowns; maintaining supplies; performing preventive maintenance; calling for repairs.	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2, 6.3, 6.4
	SOA 11: Laboratory Quality Management	11.1, 11.2
Understands, troubleshoots, and recognises non-conforming work and selects corrective steps	SOA 10: Laboratory and Field Testing	10.1a, 10.2a
	SOA 11: Laboratory Quality Management	11.1, 11.2

Expected tasks	Sphere of Activity	Competencies
Keeps laboratory supplies ready by inventorying stock; placing orders; verifying receipt	SOA 12: Workflow Management	12.1, 12.2
Collects and prepares samples for testing using various types of laboratory equipment or delegates such task	SOA 3: Biosafety, Biosecurity & Occupational Health & Safety	3.1, 3.2
	SOA 6: Use and Management of Equipment and Facilities	6.1, 6.2
	SOA 9: Specimen Collection and Sampling	9.2
	SOA 10: Laboratory and Field Testing	10.1a
	SOA 12: Workflow Management	12.1
Uses databases and paper means to keep, retrieve, and analyse records and prepare reports	SOA 13: Record Keeping, Data Collection, and Management	13.1, 13.2
Participates in national disease control programmes	SOA 14: Disease Prevention and Control Programmes	14.3, 14.4
Understands the principles for food hygiene and participates in food borne surveillance activities	SOA 16: Food Hygiene	16.3

Notes

Notes

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Protecting animals, preserving our future

12, rue de Prony • 75017 Paris • France
tel. 33 (0)1 44 15 18 88 • fax 33 (0)1 42 67 09 87
www.oie.int • oie@oie.int