Food and Agriculture Organization of the United Nations

European Commission for the Control of Foot-and-Mouth disease

TOM competency framework
Disease Control Competency Framework

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Definitions

- **Competencies** are defined as a combination of knowledge, skills and abilities (KSAs) that produce 'a measurable human capability that is required for effective performance' (Marrelli, 2005).
- **Country Manager**: is the person all learners for a specific country in a specific pilot, has overview and can access specific learners' info;

Introduction

The European commission for the control of Foot-and-Mouth disease (EuFMD) is developing the TOM -Training Management System, a tool which will allow veterinary authorities to manage individual development of their veterinarians and identify the training opportunities to improve veterinary capacity. TOM will leverage on a web application, which will support the management of training data, and a competency-based education (CBE) framework, that will provide relevant information to individuals and competent authorities on veterinary capacity gaps. TOM is currently focused on competencies in the domain of prevention, response and control of **FAST** diseases, which remains the objective of the EuFMD.

The *Disease Control and Emergency Management Framework* is the first competency framework developed in TOM and has been developed to provide animal health workers a reference for developing the capacity in emergency preparedness against FMD and similar transboundary animal diseases.

Key info:

- The *Disease Control and Emergency Management Framework* contains 13 competencies:
    - Application of Epidemiological Principles;
    - Transboundary Diseases;
    - Disease prevention and control programmes;
    - Biosecurity;
    - Sampling;
    - Animal Identification, and Movement Control;
    - Emergency and Disaster Management;
    - Emergency Preparedness;
    - Emergency Response;
    - Veterinary products;
    - Animal Welfare;
    - Application of Risk Analysis;
    - Safety, Health and Wellbeing;
- Countries can use all or part of them as a reference for planning the development of animal health workers;
- Each competency has 5 proficiency levels: Awareness, Beginner, Competent, Proficient and Expert
- Each proficiency level has number of behavioural indicators to describe what someone working at that level can do such as *Collect samples for diagnostic testing*

- Each proficiency level is linked to the corresponding items in the Get Prepared, PCP and PVS tools, OIE Day 1 competencies and to EuFMD courses (and others) which would help develop the competency;

Purpose of competency frameworks

The TOM competency framework provides a mapping of what are the crucial behaviours that animal health workers should develop to be proficient at a certain level.

The overall purpose of providing countries and veterinary services a competency framework is to support them in:

- Helping identification of capacity gaps and training needs within the veterinary service;
- Supporting the creation of structured and guided learning pathways through competency frameworks;
- Providing a summary of completed courses and current competency levels for each leaner to the veterinary service;
- Creating basis for impactful and sustainable capacity development.

Countries will be using the competency frameworks in TOM to prioritise the development of capacity by identifying key behaviours they need to develop.

The focus of the framework is on behaviours rather than training: the purpose is to allow countries to focus on how to develop the capacity to perform specific tasks through learning, rather than focusing on solely providing what knowledge and skills people should taught of.

Development process

The framework has been built through the following process:

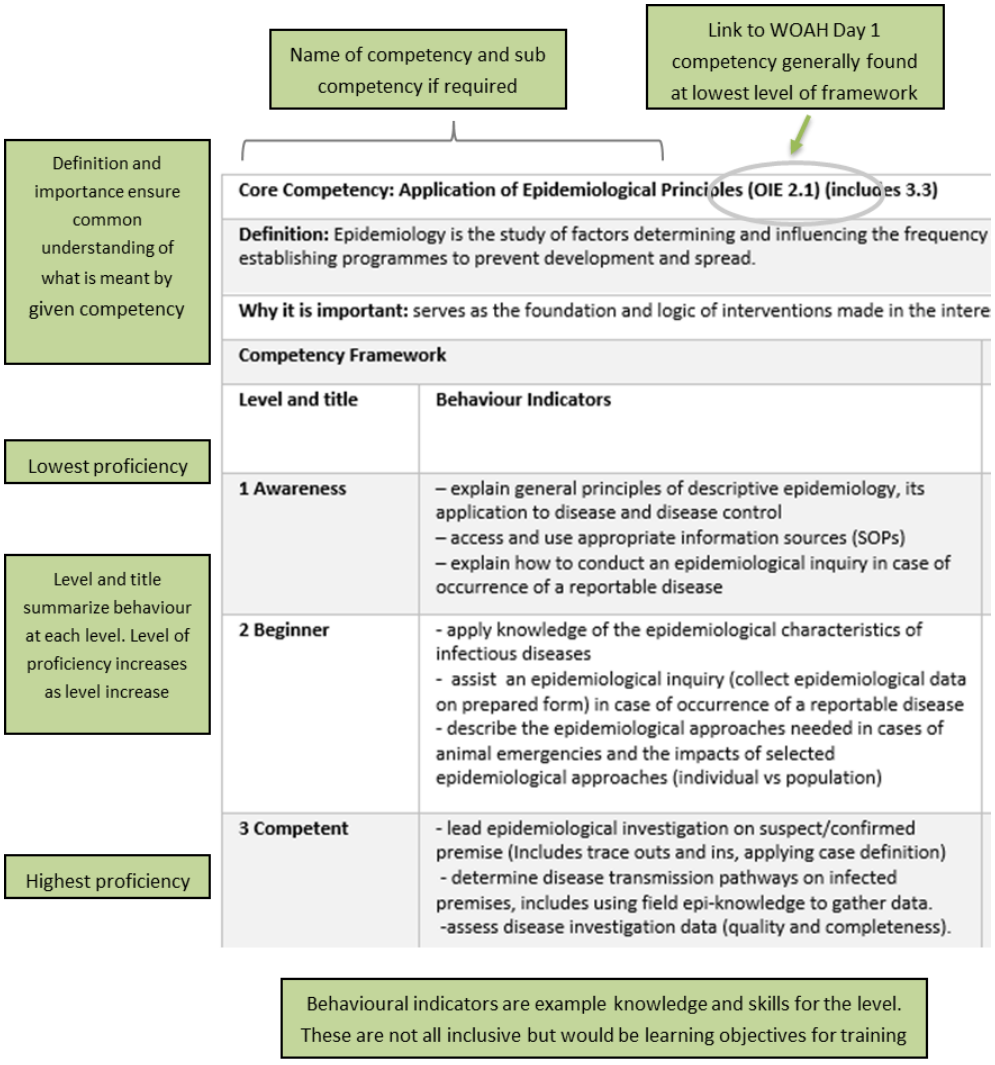
1. The *Disease Control and Emergency Management Framework* domain has been identified, based on the needs identified by the EuFMD Member Nations and the capacity development programmes developed by EuFMD;
2. A framework of the competency framework's structure has been drafted, to identify:
    a. Purpose and need for developing the competency frameworks;
    b. Quality criteria for the development of the framework;
    c. Structure of the framework –see below *How to use this competency framework*;
    d. Revision and validation process;
3. The development of the framework was conducted through the following stages:
    a. **Identification of competencies**: EuFMD Get Prepared and PCP tools have supported an initial identification of the core competencies that would have been part of the framework. The list has been validated against the
    b. **First draft**: an integration of documental resources has been made using EuFMD's Get Prepared, PCP and PVS tools, WOAH Day 1 competencies, CFIA competency frameworks and EuFMD course learning objectives.
    c. **Revision and validation**: the draft was validated by review of EuFMD experts in 2021 and is currently piloted for feedback from veterinarians.

How to use this competency framework

TOM is currently available only for piloting countries. At the start of each pilot, country representatives are asked to identify the most relevant competencies to test and include in the pilot. Countries might indicate specific adjustments for competencies and suggest adaptation.

Each competency is provided with:

- Name of core competency, description and purpose of use: those fields are meant as references to identify the domain which it applies to;
- A description of the levels of increasing proficiency; each level is described with
    - the basic tasks the person should be able to perform to attain that specific level;
    - what is the suggested role for that level;
    - the reference documents for description of that specific level;



Recommended mapping

When starting a pilot in a specific country, the Country Manager is proposed the mapping below to help them identify what are the expected levels for each role. Though, the recommendations below are purely indicative and should be adapted by each country according their specific needs.

Available levels are indicated at the end of each competency i.e. *Epidemiology 1-5* means competency Epidemiology has five levels available.

	Policy developer	Veterinary advisor	Fully functional gov't field veterinarian
Epidemiology	5	4	3
Transboundary Diseases	4	4	3
Disease Prevention and Control Programs General	5	4	3
Biosecurity	5	4	3
Sampling	4	4	3
ID and Movement Control	5	4	3
Emergency and Disaster Management	5	4	2/3
Emergency Preparedness	5	4	3
Emergency response	5	4	3
Veterinary Products	5	4	3
Animal Welfare	5	4	3
Risk Analysis	5	4	3
Safety, Health and Well being	5	4	3

	Private practitioner hire into VS	Day 1 hire into VS	Veterinary Paraprofessional
Epidemiology	2	1	2
Transboundary Diseases	2	2	2
Disease Prevention and Control Programs General	2	1	2
Biosecurity	2	2	2
Sampling	2	2	2
ID and Movement Control	2	1	2
Emergency and Disaster Management	1	1	2
Emergency Preparedness	1	1	3
Emergency response	2	2	2
Veterinary Products	2	2	1
Animal Welfare	2	1	2
Risk Analysis	1	1	3
Safety, Health and Well being	1	1	3

Levels

Levels are meant to provide a mapping of what typical activities should someone be able to complete to be proficient at that level. The description below is meant to drive

1- Awareness Level: the behavioural indicators at this level mostly reflect knowledge components required to be able to demonstrate skills and behaviours at a higher level. This knowledge may have been acquired through post secondary education or early during a worker's career.
2- Beginner Level: worker can demonstrate an elementary or entry level of performance. They have sufficient subject matter knowledge but have limited experiential knowledge. They apply principles in usual/simple situations or participate in more complex situations. They require frequent guidance or oversight.
3- Competent Level: At this level the worker has developed knowledge and experience in the same of similar job. This person has confidence for independent performance and is able apply principles in more complex situations.
4- Proficiency Level: The proficient worker can modify plans in response to events. They provide advice and training to lower level staff and support design and implementation of new task, behavior, or function.
5- Expert Level: The expert has substantial experience and knowledge. The expert operates from a deep understanding of the total situation to plan and design new strategies, policies, tasks, behaviors at an organizational or national level

Disease Control Competency Framework

Application of Epidemiological Principles

Core Competency: Transboundary Diseases (TADs) (OIE 2.3) Disease profiling
Definition: TADS are epidemic diseases which are highly contagious or transmissible and have the potential for very rapid spread, irrespective of national borders. Disease profiling refers to the Clinical signs, etiology, pathogenesis, clinical course, transmission potential, epidemiology of the disease. Control and prevention are found within the competency of disease control and prevention. TADs include African swine fever, highly pathogenic avian influenza, contagious bovine pleuropneumonia, haemorrhagic septicaemia, influenza A, rinderpest, rift valley fever , middle east respiratory syndrome coronavirus and foot and mouth disease.
Why it is important: TADs agents may or may not be zoonotic, but regardless of zoonotic potential, the highly contagious nature of these diseases constitute a constant threat to the livelihood of livestock farmers. their occurrence may also have a significant detrimental effect on national economies and can impacts global economy, global trade and global public health.

Level and title	**Behaviour Indicators**
1 Awareness	– explain general principles of descriptive epidemiology, its application to disease and disease control – access and use appropriate information sources (SOPs) – explain how to conduct an epidemiological inquiry in case of occurrence of a reportable disease
2 Beginner	- apply knowledge of the epidemiological characteristics of infectious diseases - assist an epidemiological inquiry (collect epidemiological data on prepared form) in case of occurrence of a reportable disease - describe the epidemiological approaches needed in cases of animal emergencies and the impacts of selected epidemiological approaches (individual vs population)
3 Competent	- lead epidemiological investigation on suspect/confirmed premise (Includes trace outs and ins, applying case definition) - determine disease transmission pathways on infected premises, includes using field epi-knowledge to gather data. -assess disease investigation data (quality and completeness).
4 Proficient	- apply advanced epidemiology principles to determine source of outbreak - validate and analyse field level data - use epidemiological models - conduct risk analysis make recommendations on actions to implement - foresees impacts (benefits, liabilities, stakeholder impacts) -develops epidemiological questionnaires - designs tools to collect data and makes decisions based on data gathered (i.e. surveillance strategy)
5 Expert	- guide development of strategic response plans including animal, human and environmental sectors (one health) - predict likelihood of achieving goals foresees impacts (benefits, liabilities, stakeholders) - responsible for advanced planning during an outbreak, recovery strategy

Transboundary Diseases

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Why it is important: TADs agents may or may not be zoonotic, but regardless of zoonotic potential, the highly contagious nature of these diseases constitute a constant threat to the livelihood of livestock farmers. their occurrence may also have a significant detrimental effect on national economies and can impacts global economy, global trade and global public health.

Level and title	**Behaviour Indicators**
1 Awareness	– list and describe the common TADs (affected species, clinical signs, differential diagnosis, clinical course, basic routes of transmission, potential routes of entry into country) – list therapeutic tools used to prevent and combat (including vaccination) – find up-to-date distribution information;
2 Beginner	- list notifable TADs - identify national reporting system - describe the pathogen, lesions, pathophysiology, transmission potential (including vectors) and sampling - describe any need for PPE for health and safety - list diagnostic tools used to prevent and combat - be able to examine live animals
3 Competent	– perform clinical examination of herd and individual animal with suspected TAD (includes post-mortem and species specific characteristics) – age lesions (If applicable) – determine animals to samples – be able to explain the rationale for the diagnostic and therapeutic tools – be able to determine likelihood that disease is a TAD (reliably diagnose suspicion) -report as required
4 Proficient	– provide guidance and training to lower levels – adapt diagnostic and therapeutic tools based on new science – make recommendations/decisions when clinical signs are confusing or ambiguous – be able to is able to reach out to networks outside of home organization – be able to provide most up to date information on disease profile including results of recent research - describe burden of TADs at national Level (morbidity, mortality, abortions, decreased production etc) -describe socioeconomic impact of TAD at national level
* as TADs relates to veterinary knowledge	

Disease prevention and control programmes

Core Competency: Disease prevention and control programmes General (OIE 2.2) (also parts of 2.3, 3.3)
Definition: Disease prevention and control programmes, include surveillance, movement controls, vaccination, treatment, containment zones, biosecurity, isolation, culling and stamping out. These may be joint programs (public-private partnerships). Some control programs are the result of application of other competencies ie a surveillance program is the result of sampling, clinical signs and epidemiology. Others are their own competency.
Why it is important: prevention and control programs are key to managing TADs, emerging re-emerging diseases protecting animal welfare, trade, industry and individual producer viability, food security

Level and title	**Behaviour Indicators**
1 Awareness	- explain principles of disease control (role/characteristic of surveillance) – describe established programs and their role in them for the prevention and control of TADs – explain the concept of "early detection system" – list which diseases of animals require compulsory notification – find up-to-date and reliable information regarding specific disease, prevention and control measures, including rapid response mechanisms – describe the One Health approach
2 Beginner	- participates in established disease control plans such as surveillance, vaccination campaigns, post vaccine monitoring, test-and-cull/treat programmes
3 Competent	– leads (on site or virtually) implementation of disease control plans -Summarize and report surveillance data, act if incident exceed thresholds –oversees local level public-private partnerships (Which could include leading a team, accreditation and/or audit) - explain policies and outcomes to affected parties - Coordinate with other parties and stakeholders for efficient implementation of the program -recommend basic outbreak prevention and control measures
4 Proficient	- provide guidance to field staff on implementation and interpretation of programs in unusual/complex situations - describe why the policy was designed the way it was - predict the impact of changes in implementation of program and make recommendations -improve programs based on experience and applies lessons learned more broadly across stakeholders -develop public private partnerships at local level
5 Expert	- write/ modify programs based on epidemiology, risk analysis, monitoring of results, global strategies for control of a disease including animal, human and environmental sectors (one health) - evaluate cost effectiveness of program -access latest science - access and apply governing body (ie OIE) best practices/recommendations - predict the likelihood of program achieving goals -develop public private partnerships at national level

Biosecurity

Core Competency: Disease prevention and control programmes General (OIE 2.2) (also parts of 2.3, 3.3)
Sub Competency: Biosecurity (includes OIE 2.1, 2.6) * as biosecurity relates to veterinary knowledge
Definition: a set of management and physical measures designed to reduce the risk of introduction, establishment and spread of animal diseases, infections, or infestations to, from and within an animal population. Includes the concepts of bio exclusion, bio containment and bio management, in reference to a farm and personal biosecurity. Relates to the ability to move and work between premises without being a vector for disease, during day to work and outbreak situations
Why it is important: Producers place significant trust in the VS especially during outbreaks situations. Biosecurity is critical to the protection of uninfected farms and enabling permitted movement.

Level and title	Behaviour Indicators
1 Awareness	- define biosecurity - explain on farm biosecurity practices - recognize the principles of biosecurity -recognize environments needing biosecurity -describe the impacts of a breach in biosecurity -mitigation measures
2 Beginner	- apply biosecurity principles (where to park and keeping a clean zone in vehicle) , equipment (includes care and maintenance) and processes needed to move safely between premises during regular/low disease transfer - recognize a biosecurity breach - assess risk and insitute mitigating measures in low risk situations - explain how to enter and leave a premise suspected of FAST disease , safely don and doff PPE - member of a biosecurity team during an outbreak
3 Competent	- apply pathogenic specific biosecurity protocols in TAD or FAST disease suspicion (high disease transfer risk) : set up biocontainment zones, safely remove samples from infected premises, PPE - assess risk and insitute mitigating measures, in cases of biosecuirty breach in high disease transfer risk situations - lead biosecurity team during outbreak -use participatory approaches when explaining biosecurity recommendations to producer
4 Proficient	- design and administer biosecurity training, - adapt procedures based on response needs (requires judgement and risk assessment) - evaluate emerging technologies and makes recommendations based on sound veterinary information -developing and auditing industry biosecurity plans
5 Expert	- develop biosecurity policies - predict likelihood of achieving goals, Approve veterinary response decisions, - foresee impacts of veterinary decisions (e.g., benefits, liability, national, stakeholders).

Sampling

Core Competency: Disease prevention and control programmes (OIE 2.2, 3.3)
Sub Competency: Sampling (includes items from OIE 2.1, 2.3, 3.3)
Definition: Collection of specimens, conducting regulatory diagnostic tests, and interpreting results
Why it is important: Results of sampling are used to make critical decisions in regard to declaring that a disease is present or that free status can be regained. Trust in the results are based on quality of samples collected, maintaining quality during shipment.

Level and title	Behaviour Indicators
1 Awareness	- describe the purpose of sampling - identify the situations that require testing - recognize the implications of sampling - find up-to-date and reliable information regarding specific sampling plans/techniques
2 Beginner	- outline the regulatory obligations of sampling - recognize the program under which the sampling/testing falls - recognize the zoonotics potential of a sample - report results to OV - collect, samples for diagnostic or testing purpose (antemortem and post mortem) - package for shipping ensure the integrity of the samples. (includes safe collection, handling, and knowledge of transportation of dangerous goods)
3 Competent	- provide advice on the collection of samples for diagnostic or testing purpose (antemortem and post mortem) - interpret and explain results (onsite and lab.) - discuss factors affecting test outcomes - describe mechanism of diagnostic tests, - define diagnostic test performance terminology, - explain limitations of each test. -trains industry or other 3rd party samplers -coordinates self sampling plans
4 Proficient	- develops sampling plans given the characteristics of the disease and sampling situation (individual vs. herd, surveillance vs. suspicion, this involves review of scientific literature, international standards and new methodologies

Animal Identification, and Movement Control

Core Competency: Disease prevention and control programmes (OIE 2.2) (includes 3.3)
Sub Competency: Animal Identification, and Movement Control (Includes 3.3)
Definition: the combination of the identification and registration of an animal individually, with a unique identifier, or collectively by its epidemiological unit or group, with a unique group identifier. It includes the ability to regulate the identification of animals, and track and monitor domestic movements during all stages of life and linking of components such as identification of establishments or owners, the persons responsible for the animals, movements and other records with animal identification. This includes jointly managed programs (public-private partnerships) in normal disease status and emergency situations (control zones and movement from premises)
Why it is important: the ability to identify animals (individually, by batch, by premise) is the foundation for many disease control activities such as outbreak suspicion and confirmation management, vaccination and tracing movements, without a means of identification more animals/premises must be consider to be potential implicated in a outbreak slowing response time and increasing demand on resources

Level and title	Behaviour Indicators
1 Awareness	- describe methods to identify animals - define a control zone - describe the purpose of a control zone - describe methods used to control movement of animals, animal products, equipment, and people - describe industry movement patterns for animals, products and by products.
2 Beginner	- describe established programs for animal identification - describe the principles of control zones. - apply identification method (ear tag, chip etc.) - control animal movement off a suspect/infected premises (includes regulatory authority documentation) - member of a zone movement control team during an outbreak - use ID database (National and/or EU) to trace animal movement history, etc.
3 Competent	- educate producers on animal ID program benefits and requirements -certification of peace time animal movement (national or EU level) - oversees local level public-private partnerships (leading a team, accreditation and/or audit) in support of animal ID program - control animal movement within/in and out of a control zone (includes regulatory authority documentation) - lead a team to enforce control zones during an outbreak - determine if situations qualifies for as known exemption
4 Proficient	- determines limits of a control zone - modify control zones as required, recognizing factors that impact movement control decisions - allocate resources for enforcement - design and deliver movement control training -determine if situations qualifies for a unique or unusual exemption
5-Expert	-write and modify movement control polices and programs based on epidemiology, risk analysis/planning - monitor results, to support the continual improvement of policies and programmes over time. - work with partners to identify resources for enforcement - predict likelihood of achieving goals - foresee impacts of veterinary decisions (e.g., benefits, liability, national, stakeholders).

Emergency and Disaster Management

Core Competency: Disease prevention and control programmes (OIE 2.2) (includes 3.3)
Sub Competency: Emergency and Disaster Management (OIE 3.9)
Definition: refers to the organizational structure and processes/practices, of coordination of an emergency including activites such as response, control programmes and communication take place
Why it is important: Emergencies and disasters are emerging as a critical component of veterinary responsibility. Veterinarians must be prepared to meet societal expectations across the full spectrum of hazards for animal health welfare and veterinary public health. These include emerging , re-emerging, or high impact diseases (be they incidental or intentional) but also natural disasters, technological disasters and conflict/crime/terrorism.

Level and title	Behaviour Indicators
1 Awareness	- describe the phases of an emergency event and the veterinary roles in preparedness, response, recovery and prevention or mitigation - identify legislation governing emergency response - explain integration and coordination between governmental and non-governmental responders, authorities, and public and private entities -explain the concept of incident coordination mechanisms, their functional capacity and the role of veterinarians, including in indirect aspects such as business continuity, food and feed security and animal welfare - participate in a emergency response under direction
2 Beginner	- apply the concept of incident coordination mechanisms, their functional capacity and the role of veterinarians, during a single event or initial incident - direct the work of others in VS and contractors at field level during the response
3 Competent	- apply the concept of incident coordination mechanisms, their functional capacity and the role of veterinarians, in an expanding/complex incident '- take a specific functional position (task team leader) within the local emergency structure - direct the action of non VS staff (contractors, external stakeholders) at the local level -crisis communication at local level -Identify the sectors that may be involved in addressing a multifaceted health event.
4 Proficient	- apply the concept of incident coordination mechanisms, including multi agency coordination and indirect aspects such as business continuity, food and feed security and animal welfare during a complex and expanding incident - take a specific functional position ie epi lead within the emergency structure at the country region level - direct the actions of others at the local level - recognize political sensitivities -crisis communication at country region level
5 Expert	- apply the concept of incident coordination mechanisms, including international coordination and communication during national incidents - take a specific functional position within the emergency structure at the national level - direct the actions of others at the national level - recognize political sensitivities and find solutions -crisis communication at national level

Emergency Preparedness

Core Competency: Disease prevention and control programmes (OIE 2.2)
Sub Competency: Emergency Preparedness
Definition: The ability to be prepared to respond rapidly to a disease outbreak or food safety emergency. Includes key activities around planning and exercises
Why it is important: Rapid response will protect animal health and welfare, food supply chains, public health, industry and individual producer viability, trade

Level and title	Behaviour Indicators
1 Awareness	- describe the role of emergency preparedness planning (including training and exercises) in controlling priority diseases - find disease, site or other preparedness plans (site specific plans, disease prevention, control and rapid response) -describe the value of approaching preparedness from an all hazards-perspective
2 Beginner	- uses preparedness plans - participates in preparedness at local level (contact lists, participate in training) -recognizes common triggers for investigation (local situational awareness) -explain regs and SOPs relevant to position
3 Competent	- develop site specific emergency plan (slaughterhouse, market,) -develop sample collection logistics plan - exercise site specific emergency plans -recognize factors that impact ability to respond -recognize suspicious biological events (including clusters, case definition and triggers)
4 Proficient	- write operational manuals/SOP based on national plans - support design and delivery of training - design and monitor simulation exercises - Identify gaps in training or policy through after action reporting - support industry in development of their Business continuity and response plans -develop educational material for industry
5 Expert	- write or updates national plans based on after action reports, latest scientific knowledge, legislation, risk analysis develops auditing tools/SOPs for verification of activated plans

Emergency Response

Core Competency: Disease prevention and control programmes (OIE 2.2)
Sub Competency: Emergency Response
Definition: The ability to respond rapidly to a disease outbreak or food safety emergency, includes the ability to conduct an initial investigation and take a particular role (valuation, disposal, cleaning and disinfection, wildlife controls during an emergency)
Why it is important: Rapid response will protect animal health and welfare, food supply chains, public health, industry and individual producer viability, trade

Level and title	Behaviour Indicators
1 Awareness	- describe activities (and their purpose) of an incident response - locate guidance documents/SOPs
2 Beginner	- use disease specific plans to prepare for initial investigation - describe case definition - assist an initial or outbreak investigation (see epi, sampling, movement controls, biosecurity competencies) - perform specific technical skills (under supervision) depending on the individuals role in outbreak (implement disposal methods, perform valuation, cleaning and disinfection, wildlife controls) - is able to use required equipment -Use veterinary expertise to collaborate and support law enforcement interventions.
3 Competent	- independently perform specific technical skills depending on the individuals role in outbreak (implement disposal methods, perform valuation, cleaning and disinfection, wildlife controls) -search for new cases - maintain equipment - support and instruct responders in task related to role (lead team) -conduct an initial or outbreak investigation (see epi, sampling, movement controls, biosecurity competencies) -law enforcement related activities- scene preservation, chain of custody of samples/evidence, what information to allow for successful investigation/prosecution.
4 Proficient	- evaluate outcomes - assess consequences of procedural changes and modify function-specific procedures. - examine new technologies. - recommend response strategies. - provide training
5 Expert	- approve recommendations specific role protocols - design and selects response strategy - predict likelihood of achieving response goals. -define outcomes

Veterinary products

Core Competency: Veterinary products (OIE 2.7)
Definition: 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; having a prophylactic, therapeutic or diagnostic effect, alter physiological functions or to be given to animals to establish a veterinary diagnosis; or to restore, correct or modify organic functions in an animal or group of animals.
Why it is important: veterinary products are key tools in the control of disease that said indiscriminate use or poor quality, or safety can lead and to poor human and animal outcomes (minimal withdrawal times and antimicrobial resistance)

Level and title	**Behaviour Indicators**
1-Awareness	- advise on veterinary products to treat, manage and/or prevent common infectious and non-infectious diseases, basic reproductive conditions, trauma and other emergencies of domesticated animal species - describe the characteristics, categories and prudent use of veterinary products - determine species of animal, route of administration, dosage of drug, period of administration, - administer veterinary products/biologics - communicate adverse effects, including development of antimicrobial resistance. - store and handle products (including cold chain requirements) - explain and determine drug withdrawal time - apply regulatory and administrative controls over AMR, AMU -participates in AMR/AMU surveillance -Demonstrate awareness of when to seek professional support and advice
2- Beginner	- prescribe veterinary products - describe mechanisms leading to development of antimicrobial resistance - find and interpret information regarding the link between use of antimicrobials in food animals and development of antimicrobial resistance in pathogens of human importance -Demonstrate awareness of where to seek professional support and advice -Communicate this information to authorities and stakeholders
3-Competent	- describe regulatory and administrative controls for import, manufacture and registration of veterinary biologics - determine compliance with regulations (ie audit of manufacturers, import inspections etc.) - implement AMR surveillance
4- Proficient	- approve new products -support design of AMR surveillance programs
5 Expert	- design AMR surveillance programs (NAP) -write and update policies for regulating veterinary medicines and biologics (based on latest science, OIE best practices, current conditions) - recognise the implication of emergencies on supply chain interruptions and international restrictions on movement of biological products

Animal Welfare

Core Competency: Animal Welfare (OIE 2.8) (Includes OIE 2.2, 3.3)
Definition: means the physical and mental state of an animal (how it is coping) in relation to the conditions in which it lives and dies. 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 distress. Good animal welfare requires disease prevention and veterinary treatment, appropriate shelter (when relevant), management, nutrition, humane handling, and humane slaughter/killing. Animal welfare refers to the state of the animal
Why it is important: Veterinarians should be the leading advocates for the welfare of all animals, recognizing the key contribution that animals make to human society through food production, companionship, biomedical research and education.

Level and title	**Behaviour Indicators**
1 Awareness	– explain the importance of the human animal bond -describe the expression of pain and distress of relevant animal species (consider age, breed, physiological or pathological changes) - use animal handling techniques and equipment - explain animal welfare and the related responsibilities of owners, handlers, veterinarians – find information regarding local, national and international animal welfare regulations/standards - describe humane methods for: animal production; transport; slaughter for human consumption and killing for disease control purposes. - Describe emergency and disaster management implications on animal welfare
2 Beginner	- implement animal welfare compliance program - identify animal welfare problems (may involve scoring systems assurance programmes) report and participate in corrective actions) - perform humane euthanasia on individual animals (captive bolt, cervical dislocation etc.)includes ability to care for and maintain equipment required - evaluate humane slaughter stunning/bleeding - determine method of restraint (chemical physical) considering welfare concerns - recognize the implications of emergencies and disasters on animal welfare
3 Competent	- implement humane destruction methods for mass depopulations, includes ability to care for and maintain equipment required - lead team - summarise the animal health and welfare implications of control measures (such as movement controls) - perform necropsy in welfare investigation
4 Proficient	- provide guidance to field staff on implementation and interpretation of welfare programs in complex situations - select humane destruction methods for mass depopulations (CO2, foaming, captive bolt, free bullet, pharmaceutical etc.) such as preventative culling, welfare slaughter or destruction during disease outbreaks - adapt procedures based on response needs -design training -evaluate emerging technologies and make recommendations
5 Expert	- write and update compliance programs using scientific articles, international policies and guidelines includes working with stakeholders - predict social acceptance for response actions - foresee impacts of veterinary decisions

Application of Risk Analysis

Core Competency: Application of Risk Analysis (OIE 3.5) (includes parts of OIE 2.12)
Definition: Risk means the likelihood of the occurrence and likely magnitude of the biological and economic consequences of an adverse event or effect to animal or human health. (Risk = likelihood X consequences) The process of risk analysis involves hazard identification, risk assessment, risk management, and risk communication.
Why it is important: Many activities have some degree of risk, risk analysis provides an objective and defensible method of assessing risk and to measure the success of risk management strategies. Once one better appreciates risk it can be mitigated.

Level and title	**Behaviour Indicators**
1 Awareness	– explain risk analysis concepts: hazard identification, risk assessment, rapid risk assessment, risk management, risk communication – explain how risk analysis can be used to ensure veterinary services adequately protect animal and human health, the environment in emergency, non emergencies and natural disasters
2 Beginner	- find information needed for risk analysis -explain how risk analysis can be applied to assessment of risk of animal disease emergency planning/mitigation/preparation response and recovery, residues of veterinary drugs, including importation of animals and animal products
3 Competent	- use basic/key concepts and principles of risk analysis in accordance with prescribed policy and procedures/guidelines (disease present is TAD or FAST) -convey disease transmission risks -map local value chains
4 Proficient	- apply risk analysis principles in unusual/complex situations -support field OV in decision making especially when deviations from prescribed policy are warranted or situation is complex (expanding outbreak) - determine risk communication measures (understanding of clear roles and responsibilities) - liaison between risk assessment, risk management and risk communication - review existing and new threats - identify disease transmission risks
5 Expert	- carry out organization level risk analysis (identify and analyse disease transmission pathways and associated value chains to identify risk hotspots for FAST entry and spread) - provide risk assessment results to support risk management and policy/program decisions (identify control options, appraisal of the expected impact and fesibility of identified control options) and support risk communication. - support development of risk communication strategy

Safety, Health and Wellbeing

Core Competency: Safety, Health and Wellbeing
Definition: describes the ability to protect physical and mental health of oneself and those who are working around them.
Why it is important: Veterinarians, their colleagues, and clients are exposed to a wide variety of situations and hazards that can impact their safety, health and mental and physical wellbeing. VS staff should understand the risks presented by these situations and hazards and the prevention processes to identify and mitigate risk and report events. Prolonged outbreak response can have a significant physical and emotional toll on responders, producers and small flock holders

Level and title	**Behaviour Indicators**
1 Awareness	-explain the concepts of situational awareness -describe the work space hazards including demanding work hours/conditions/tasks and traumatic, environmental, chemical, and radiological hazards and mitigating processes. -describe infectious and non-infectious health hazards and mitigating processes. -describe the behavioral/psychological health risks for veterinary professionals and processes to mitigate behavioral health issues and increase resilience. - Recognise principles of animal, human, and environment health and safety in emergencies and disasters to allow for recognition and strategic response to One Health impacts. - Describe emergency and disaster management implications on livelihoods.
2 Beginner	- recognize signs of deteriorating wellbeing in self - identify sources of support (personal and organizational) -recognize unsafe work environments
3 Competent	-recognize signs of deteriorating well being in others (mental first aid) -intervention to prevent further harm (referral to support, contact authorities) - participate in process to report events, identify root cause and make recommendations -recognize unsafe work environments and take action to correct
4 Proficient	- lead investigation into accidents or near misses -make recommendations to reduce the likelihood of mental or physical health hazards
5 Expert	- write/update policy and procedures to protect employee safety, health and wellbeing