

APPLY KNOWLEDGE OF BASIC EPIDEMIOLOGY

UNIT CODE: 0912 541 14A

TVET CDACC UNIT CODE: HE/OS/AHP/CC/18/6/MA

UNIT DESCRIPTION:

This unit specifies the competencies required by animal health technologist in order to apply knowledge of basic principles of epidemiology. It involves applying principles epidemiology, knowledge of disease occurrence, carrying out disease surveillance, developing and applying disease prevention programme.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Apply principles of epidemiology	1.1 Distribution and determinants of disease knowledge is applied as per work requirement 1.1. Descriptive, analytic and clinical epidemiology knowledge is applied as per the principles of basic epidemiology 1.3 Measures of association are applied as per work procedure
2. Apply knowledge of disease occurrence	2.1 <i>Determinants of diseases</i> are managed as per work requirement 2.2 Measures of disease occurrence are applied as per work requirement. 2.3 Disease transmission and agent's factors in disease transmission are managed as per work procedure. 2.4 Factors of maintenance of infections are managed as per work procedure. 2.5 Factors influencing disease patterns are managed as per work requirement
3. Carry out disease surveillance	3.1 <i>Study designs</i> knowledge is applied as per work procedure 3.2 Disease monitoring and surveillance is conducted as per work procedure 3.3 Disease surveillance data is collected as per work

	procedure
4. Develop and apply disease prevention program	4.1 Disease prevention programs are developed as per work requirement 4.2 Notifiable diseases are identified as per work procedure 4.3 Notifiable diseases are reported as per work procedure

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range
1. Determinants of disease	• Primary determinants • Secondary determinants • Intrinsic determinants • Extrinsic determinants
2. Study designs	• Incidence studies • Incidence cases • Prevalence studies. • Prevalence cases
3. Sources of surveillance data	• Department of veterinary services in the Ministry of Livestock Development • Veterinary investigative Laboratories • Private veterinary practitioners/animal health service provides • Non-governmental organizations involved in livestock activities • Livestock research organizations such as the International Livestock Research Institute (ILRI)
4. Disease prevention programs	• Vaccinations • Quarantine • Tick control, vector control • Surveillance and reporting

	• Adequate nutrition • Good husbandry management practices
5. Notifiable diseases include but not limited to	• East Coast Fever • Rabies, anthrax • Rift Valley Fever • Rinderpest • Newcastle disease • Trypanasomiasis

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required skills

The individual needs to demonstrate the following skills:

- Communication skills
- Training skills
- Data handling
- Computer skills

Required knowledge

The individual needs to demonstrate knowledge of:

- Disease control
- Parasitology
- Animal diseases
- Waste management and disposal methods

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	1.1 Assessment requires evidence that the candidate: 2.1 Applied distribution and determinants of disease knowledge as per work require 3.1 Applied descriptive, analytic and clinical epidemiology knowledge as per the principles of basic epidemiology
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	4.1 Applied measures of association as per work procedure 5.1 Managed determinants of diseases as per work requirement 6.1 Applied measures of disease occurrence as per work requirement. 7.1 Managed factors of maintenance of infections as per work procedure. 8.1 Managed factors influencing disease patterns as per work requirement 9.1 Applied study designs knowledge as per work procedure 10.1 Conducted disease monitoring and surveillance as per work procedure 11.1 Identified notifiable diseases as per work procedure
2. Resource Implications	The following resources must be provided: 2.1 Appropriately simulated environment where assessment can take place 2.2 Access to relevant work environment 2.3 Resources relevant to the proposed activities or tasks
3. Methods of Assessment	This competency may be assessed through: 3.1 Oral questioning 3.2 Written test 3.3 Portfolio of Evidence 3.4 Interview 3.5 Third party report
4. Context of Assessment	Competency may be assessed in a: Workplace or simulated workplace
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.