



Australian Government

Department of Education, Employment and Workplace Relations

PUADEFPH004A Undertake a vector borne diseases surveillance program

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

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This unit covers the competency required to undertake a vector borne diseases surveillance program within the Australian Defence Force (ADF).

Application of the Unit

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The application of this unit in the workplace includes applying knowledge of vector biology to identify vector types, location and life cycle; drawing conclusions on the risk of vector borne disease; and identifying counter measures to minimise the risk of disease to organisational participants.

This unit of competency is applicable to preventive medicine personnel. This function is limited to the performance of tasks in accordance with organisational policies and procedures.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability Skills This unit contains employability skills.

Pre-requisite Unit/s Nil

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. **Collect and review data in preparation for surveillance activities**

- 1.1 ***Historical data*** is analysed to develop an understanding of known facts about the surveillance area and ***vectors***
- 1.2 Climate and topography of surveillance area is reviewed to identify key locations of interest and optimal time to perform surveillance
- 1.3 Blood and/or mosquito samples are analysed using rapid test kits to identify the potential prevalence of ***vector borne diseases*** in surveillance area

2. **Perform surveillance of vectors**

- 2.1 ***Vector collection techniques*** are used to gather surveillance data
- 2.2 ***Surveillance equipment*** is used in accordance with operating instructions
- 2.3 Collected vectors are sorted and identified to enable further classification
- 2.4 Collected vectors are ***preserved*** for storage and transport

ELEMENT**PERFORMANCE CRITERIA****3. Interpret and report data gathered from vector borne disease surveillance**

- 3.1 **Surveillance data** is interpreted to classify vectors to consider the risk of vector borne disease to personnel
- 3.2 Risk of vector borne disease occurrence is determined to aid environmental health planning and health promotion
- 3.3 Surveillance report is drafted and presented to **relevant persons** including recommendations on **counter measures**, to reduce the risk of vector borne disease to personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- gather research material from available sources
- interpret surveillance data to draw conclusions
- manipulate vectors with high level of dexterity and hand/eye coordination
- prioritise tasking
- set up, operate and disassemble surveillance equipment
- work safely

Required Knowledge

- aetiology of disease relevant to vector borne diseases
- best use of available resources
- causes of manpower wastage
- documentation processes relevant to own workplace
- health surveillance system
- operating procedures for surveillance equipment
- organisational policies and procedures
- preservation techniques for vectors
- time management strategies to set priorities
- vector biology
- vector borne diseases of interest to the ADF

Evidence Guide

EVIDENCE GUIDE

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EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- collect vectors
- accurately identify vectors
- demonstrate a knowledge of vector biology.

Consistency in performance

Competency should be demonstrated over a minimum of two assessment occasions.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in an actual workplace situation. This may be in an urban or a field setting.

Specific resources for assessment

Access is required to:

- surveillance equipment
- suitable environment/setting to collect vectors.

Range Statement

RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Historical data may include

Health intelligence reports
Government reports on health statistics
Scientific reports on health statistics

Vectors may include

Cockroaches
Fleas
House flies
Lice
Mites
Mosquitoes
Phlebotomines (sandflies)
Ticks

Vector borne diseases may include

Barmah Forest Fever
Epidemic typhus
Filariasis
Japanese encephalitis
Leishmaniasis
Leptospirosis
Malaria
Murray Valley Encephalitis
Plague
Relapsing fever
Ross River Fever
Sandfly fever
Schistosomiasis
Typhus
Yellow fever

Vector collection techniques

Human landing biting collection

RANGE STATEMENT**may include**

Larval collection
Light trap carbon dioxide collection
Sticky trap collection
Truck catch collection

Surveillance equipment may include

Ladle
Light trap
Microscope
Mounting set adult
Mounting set larvae
Pipette
Sticky trap

Preserving collected vectors may include

Alcohol
Pinned adults
Refrigeration
Slide mounted larvae

Surveillance data may include

Breeding habits
Disease and health implications
Distribution
Life cycle
Location
Resting habits
Vector types

Relevant persons may include

Activity commander
Environmental health officer
Team leader
Technical supervisor

Counter measures may include

Avoiding known areas where vectors occur
Education
Impregnating clothing and bed nets with chemical protective barrier (Permethrin impregnation)
Selecting appropriate camp site

RANGE STATEMENT

Sleeping under bed nets
Using protective clothing
Using repellents, insecticides
Wearing long sleeves, trousers, head nets, covered footwear

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s	Nil
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