



Australian Government

DEFPH004A Undertake a vector borne diseases surveillance program

Release: 2

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Modification History

Release	TP Version	Comments
2	DEF12V2	Layout adjusted. No changes to content.
1	DEF12V1	Primary release.

Unit Descriptor

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

Application of the Unit

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

This unit contains employability skills.

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.
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

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

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

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.

<i>Historical data</i> may include:	• Health intelligence reports • Government reports on health statistics • Scientific reports on health statistics
<i>Vectors</i> may include:	• Cockroaches • Fleas • House flies • Lice • Mites • Mosquitoes • Phlebotomines (sandflies) • Ticks
<i>Vector borne diseases</i> 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
<i>Vector collection techniques</i> may include:	• Human landing biting collection • Larval collection • Light trap carbon dioxide collection • Sticky trap collection • Truck catch collection
<i>Surveillance equipment</i> may include:	• Ladle • Light trap • Microscope • Mounting set adult • Mounting set larvae

	• Pipette • Sticky trap
<i>Preserving collected vectors</i> may include:	• Alcohol • Pinned adults • Refrigeration • Slide mounted larvae
<i>Surveillance data</i> may include:	• Breeding habits • Disease and health implications • Distribution • Life cycle • Location • Resting habits • Vector types
<i>Relevant persons</i> may include:	• Activity commander • Environmental health officer • Team leader • Technical supervisor
<i>Counter measures</i> may include:	• Avoiding known areas where vectors occur • Education • Impregnating clothing and bed nets with chemical protective barrier (Permethrin impregnation) • Selecting appropriate camp site • Sleeping under bed nets • Using protective clothing • Using repellents, insecticides • Wearing long sleeves, trousers, head nets, covered footwear

Unit Sector(s)

Not applicable.