Public health surveillance and management of persons with potential Ebola virus exposure

This enhanced surveillance plan has been developed in the context of the 2014 Ebola Virus Disease (EVD) outbreak in west Africa, which was declared by the World Health Organization to be a Public Health Emergency of International Concern in August 2014.

The purpose of this document is to provide state-wide consistent guidance to public health units (PHU) in NSW for the identification, risk assessment and management of persons with potential Ebola virus exposure in New South Wales (NSW) in the preceding 21 days.

Objectives

- To identify persons with potential Ebola virus exposure in the preceding 21 days
- To assess level of risk of EVD in persons with potential Ebola virus exposure in the preceding 21 days
- To develop and implement a management plan for persons with potential Ebola virus exposure in the past 21 days, commensurate to the level of risk; the plan would enable rapid identification of illness, appropriate access to health care and minimise risk of ongoing spread of the virus. The management plan may include:
  - Monitoring of health and temperature
  - Restricting social mixing and travel
- To conduct these activities with consideration of the dignity and privacy of individuals consistent with ethical principles

Definitions

Persons with potential Ebola virus exposure

Persons with potential Ebola virus exposure refers to asymptomatic persons who have travelled to countries with widespread EVD spread, or those who have been in the near vicinity of an EVD case in any country.

Active monitoring

Active monitoring means that state or local public health authorities assume responsibility for establishing regular communication with potentially exposed individuals and assess them for the presence of fever and other symptoms. People under active monitoring are required to measure their temperature regularly, report as directed to their local public health unit and immediately notify their local public health unit if they develop fever or other symptoms.

Restricted social mixing

Restricted social mixing refers to avoiding crowded situations such as shopping centres, movie theatres, churches/mosques, school, public transport, parties, and busy times at takeaway food places. Activities at parks, beaches or other open areas are acceptable.

Isolation

Isolation means the strict separation of individuals or groups with suspected, probable or confirmed cases of Ebola from those who are not infected.
**Quarantine**

Quarantine means the separation of an individual or group exposed to Ebola virus, but without any symptoms to indicate disease, to prevent the possible spread of EVD. This is not routinely recommended.\(^1\)

**Implementation of the guidelines**

**Identification of potentially exposed persons**

The Communicable Diseases Branch (CDB) will collect information about arrivals who have visited countries with widespread EVD transmission in the past 21 days from border control, aid organisations (MSF and Red Cross) and immigration authorities.

International arrivals into Australia will be required to complete a second arrivals card and provide details about travel to Africa in the past 21 days. A list of the arrivals that have been to countries with widespread EVD transmission will be provided to CDB on a daily basis.

CDB and PHUs may also receive direct calls from the public (via HealthDirect or otherwise).

**Risk assessment**

Public health units will contact individuals to conduct an initial risk assessment. Initial risk assessment should be performed over the phone to minimise risk to PHU staff.

1. Is the person febrile or unwell? If febrile and unwell, treat as person under investigation (see Ebola risk assessment algorithm on the NSW health website)
2. If the person is well, collect relevant information and assess level of risk using the EVD contact reporting form

**Public health management**

The framework in Table 1 below provides guidance to public health units for determining appropriate public health actions based on risk factors for the 21 day monitoring period. The management plan should take into account an assessment of personal circumstances of the person including location, occupation, dependents. Please see appendix 9 of Communicable Diseases Network Australia (CDNA) Series of National Guidelines (SONG) for detailed advice on the recommendations for returning aid workers.

Table 1: Framework for risk assessment and public health management of exposed persons

<table>
<thead>
<tr>
<th>Risk classification* (taken directly from the CDNA SoNG on Ebola Virus Disease)</th>
<th>Casual contacts</th>
<th>Lower risk exposures</th>
<th>Higher risk exposures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk classification* (taken directly from the CDNA SoNG on Ebola Virus Disease)</td>
<td>In the near vicinity of an EVD patient</td>
<td>Household member of EVD case (in some circumstances this might be classified as higher risk)</td>
<td>Percutaneous (e.g. needle stick) or mucous membrane exposure to blood or body fluids of EVD patient</td>
</tr>
<tr>
<td></td>
<td>Having been to a country with widespread EVD transmission in the past 21 days with no known exposures</td>
<td>Inadequate PPE plus close contact (being within 1 metre of a EVD case or within same room for a prolonged period of time)</td>
<td>Inadequate PPE and direct skin contact exposure to blood or body fluids of EVD patient</td>
</tr>
<tr>
<td></td>
<td>Adequate PPE when in direct contact with EVD case in Australia</td>
<td>Inadequate PPE and brief direct contact with EVD case (e.g. shaking hands)</td>
<td>Inadequate PPE and lab processing of body fluids of an EVD patient</td>
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</tbody>
</table>
### Management

<table>
<thead>
<tr>
<th>Management Level</th>
<th>Casual contacts</th>
<th>Lower risk exposures</th>
<th>Higher risk exposures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Monitoring*</td>
<td>Daily self-monitoring of health and temperature</td>
<td>Twice daily self-monitoring of health and temperature</td>
<td>Twice daily self-monitoring of health and temperature</td>
</tr>
<tr>
<td></td>
<td>Weekly contact by PHU - more frequent contact is recommended for refugee/migrant groups to build rapport and provide support</td>
<td>Daily contact with PHU</td>
<td>Daily contact by PHU</td>
</tr>
</tbody>
</table>

### Information and home monitoring kit

<table>
<thead>
<tr>
<th></th>
<th>Thermometers, alcohol swabs and hand sanitizer</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Temperature log</td>
<td>Temperature log</td>
<td>Temperature log</td>
</tr>
<tr>
<td></td>
<td>Fact sheet (casual risk)</td>
<td>Fact sheet (low risk)</td>
<td>Fact sheet (high risk)</td>
</tr>
</tbody>
</table>

### Symptoms requiring further assessment

If person under monitoring develops any of the following:
- Fever ≥ 37.5°C
- Severe headache
- Vomiting or diarrhoea
- Muscle pain
- Stomach pain
- Unexplained bruising or bleeding

Take the following steps:
1. Repeat temperature
2. Implement home isolation, advise avoiding contact with household members
3. Escalate to PHU director and CDB on call to discuss whether further clinical assessment is required

### Restrictions on social mixing*

<table>
<thead>
<tr>
<th></th>
<th>No restrictions on social mixing</th>
<th>Consider implementing the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Manage children as lower risk on the principle that they may not have the self-awareness to withdraw if unwell</td>
<td>Assess school and consider home-schooling</td>
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<tr>
<td></td>
<td></td>
<td>Assess work commitments and consider working from home</td>
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<tr>
<td></td>
<td></td>
<td>Limit social mixing</td>
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<tr>
<td></td>
<td></td>
<td>Maintain hand hygiene and minimise intimate bodily contact</td>
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<tr>
<td></td>
<td></td>
<td>Discuss any travel with Chief Health Quarantine Officer (CHQO) on call (cdoncall)</td>
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<td></td>
<td></td>
<td>Timely access to appropriate healthcare</td>
</tr>
</tbody>
</table>

### Restrictions on travelling*

<table>
<thead>
<tr>
<th></th>
<th>Ensure ready access to health care</th>
<th>Ensure ready access to designated quarantine hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Discuss travel with CHQO - in general air travel is not recommended</td>
<td>Discuss travel with CHQO - in general air travel is not allowed</td>
</tr>
</tbody>
</table>

### Reporting

<table>
<thead>
<tr>
<th>Reporting Type</th>
<th>Casual contacts</th>
<th>Lower risk exposures</th>
<th>Higher risk exposures</th>
</tr>
</thead>
<tbody>
<tr>
<td>On detection of person with possible exposure</td>
<td>Report to CHQO</td>
<td>Report to CHQO</td>
<td>Report to CHQO</td>
</tr>
<tr>
<td></td>
<td>Enter patient and upload management plan into NCIMS within 24h</td>
<td>In consultation with CHQO, advise local &amp; Westmead/CHW ID physician on call.</td>
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</tr>
</tbody>
</table>
Enter patient and upload management plan into NCIMS within 24h

<table>
<thead>
<tr>
<th>Follow-up</th>
<th>Weekly follow-up on NCIMS</th>
<th>Enter patient and upload management plan into NCIMS within 24h</th>
<th>Daily follow-up on NCIMS</th>
</tr>
</thead>
</table>

*Please refer to appendix 9 of the SoNG for detailed advice on the recommendations for returning aid workers*

**Legal powers**

There are provisions in Part 2 Section 7 of the Public Health Act 2010 (NSW) for the Minister to respond to risks to public health however this section of the Act has yet to be tested for the quarantine of people exposed to Ebola.

In practical terms, follow-up persons with potential Ebola virus exposure will rely on gaining voluntary cooperation through building rapport. Ensure all actions are consistent with ethical principles to protect the dignity and privacy of the individual when implementing any monitoring or restriction of movement.

**References**


Flow diagram of plan for public health surveillance and management of potentially exposed persons

**Summary guidelines for monitoring**

<table>
<thead>
<tr>
<th>Casual contact*</th>
<th>Lower risk</th>
<th>Higher risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily temp monitoring</td>
<td>Twice daily Temp monitoring</td>
<td>PHU follow-up daily</td>
</tr>
<tr>
<td>Weekly PHU contact – more frequent contact with refugee or migrant groups recommended</td>
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</tr>
</tbody>
</table>

**Border control, aid organisations and the general public**

Notify CDB or PHU about persons with potential exposure to EVD in the past 21 days

**PHU performs initial risk assessment (over the phone)**

- **Fever ≥ 37.5°C or unwell**
  - **Yes**
  - Manage as per EVD risk assessment algorithm
  - **No**

- **PHU develops management plan, including requirements for surveillance and restrictions over the 21 day incubation period, based on guidelines and an assessment of personal circumstances**

**21 day monitoring period**

- If person under surveillance develops the following:
  - Fever ≥ 37.5°C
  - Severe headache
  - Vomiting or diarrhoea
  - Muscle pain
  - Stomach pain
  - Unexplained bruising or bleeding

  - **Implement isolation**
  - **Urgent discussion with PHU direct and CDB**

**Notify CDB**

Upload patient details and management plan on NCIMS

**Record follow-up on NCIMS**

*Managing children as low risk on the principle that children do not have the self-awareness to withdraw if they are feeling unwell*

**Please see appendix 9 of Series of National Guidelines (SONG) for detailed advice on the recommendations for returning aid workers**