

# Barmah Forest Virus

Last updated: 1 January 2016

## Public Health Priority:

High for cases acquired in a low/no risk area, routine for other cases

## PHU response time:

Respond to confirmed cases within three days

Enter confirmed cases on NCIMS within five working days

## Case management:

Determine possible exposures for cases acquired in a low/no risk area

## Contact management:

Nil

## Revision History

Version	Date	Revised by	Changes	Approval
1.1	1/1/2016	CDWG	Case definition	CDNA

## 1. Reason for surveillance

- To identify and control cases of disease
- To monitor the epidemiology and so inform the development of better prevention and control strategies.

## 2. Case definition

Both confirmed cases and probable cases should be notified.

### Confirmed case

A confirmed case requires laboratory definitive evidence only.

### Probable case

A probable case requires laboratory suggestive evidence only.

### Laboratory definitive evidence

- Isolation of Barmah Forest virus, **or**
- Detection of Barmah Forest virus by nucleic acid testing, **or**
- IgG seroconversion or a significant increase in IgG antibody level (egg. fourfold or greater rise in titre) to Barmah Forest virus

### Laboratory suggestive evidence

- Detection of Barmah Forest virus IgM **and** Barmah Forest virus IgG **except** if Barmah Forest IgG is known to have been detected in a specimen collected greater than 3 months earlier.

### 3. Notification criteria and procedure

Barmah Forest cases are to be notified by laboratories on diagnosis by routine mail. Probable and confirmed cases should be entered onto NCIMS.

### 4. The disease

#### **Infectious agents**

Barmah Forest virus is one of the arboviruses (arthropod borne viruses) known to be pathogenic for humans. The Barmah Forest virus is a member of the genus *Alphavirus*, in the family *Togaviridae* (Ross River virus, Sindbis and chikungunya are also *alphaviruses*).

#### **Mode of transmission**

The Barmah Forest virus is transmitted by the bite of an infected mosquito. There is no evidence of direct person-to-person spread. Humans are infectious to mosquitoes for the first few days after the onset of illness. Infected individuals can introduce the virus into receptive areas.

#### **Timeline**

The incubation period is not clear but is likely to be 7 to 10 days.

#### **Clinical manifestations**

The severity of Barmah Forest infections is variable and most are asymptomatic. Typical symptoms include rash (particularly on palms), polyarthritis/arthralgia, myalgia, lethargy and low-grade fever. Symptoms such as arthralgia, myalgia and lethargy may occasionally persist for many months.

Ross River and Barmah Forest infections are by far the most commonly observed arboviruses in NSW.

### 5. Managing single notifications

#### **Response times**

#### **Investigation**

Within three working days of notification of a Barmah Forest case acquired in a low/no risk area (including the Sydney metropolitan area) begin follow-up investigation. Investigation of notifications outside of this is at the discretion of the PHU Director.

#### **Data entry**

Within five working days of notification enter probable and confirmed cases on NCIMS.

#### **Response procedure**

The response to a notification will normally be carried out in collaboration with the case's health carers. But regardless of who does the follow-up for Barmah Forest cases acquired in low/no risk areas, PHU staff should ensure that action has been taken to:

- Confirm the onset date and symptoms of the illness
- Confirm results of relevant pathology tests, or recommend the tests be done (encourage the managing doctor to take convalescent sera to confirm the diagnosis)
- Ensure confirmation by a second test if the case has been acquired in a previously unaffected area
- Find out if the case or relevant care-giver has been told what the diagnosis is before interviewing them
- Seek the doctor's permission to contact the case or relevant care-giver
- Review case management
- Identify likely source of infection.

#### **Case management**

#### **Investigation and treatment**

Supportive treatment only.

**Education**

The case or relevant care-giver should be informed about the nature of the infection and the mode of transmission.

**Exposure investigation**

The case should be asked to recall if, in the incubation period, he or she had:

- Been bitten by mosquitoes, **or**
- Visited regions where the Barmah Forest virus is endemic, **or**
- Participated in recreational or other activities involving exposure to bushland or other mosquito habitat (as in, for example, gardening, bushwalking and picnicking).

**Isolation and restriction**

None.

**Environmental evaluation**

Clusters of Barmah Forest disease occurring in an atypical geographical area may indicate the need for extraordinary mosquito investigation and control measures and other environmental management strategies and/or health information for the community. This should be discussed with NSW Health Department's Centre for Health Protection.

**Contact management****Identification of contacts**

Potentially exposed people are those who may have been exposed to the same source as the case. However, active searching for these people is not usually indicated.

**Treatment**

*Passive immunisation*

None

*Active immunisation*

None

*Antibiotic prophylaxis*

None

**Education**

Educate the public living in or travelling to endemic areas to minimise exposure to mosquito bites. Information should indicate geographical location of habitats, and periods of maximum mosquito activity and also refer to protective clothing, appropriate repellents and methods of reducing mosquitoes in the home. Fact sheets are available on the NSW Health web site.

## 6. Managing special situations

**Case clustering**

Where the case is part of an unusual cluster and where a discrete exposure can be identified, consider an epidemiological investigation and issuing an alert to local residents and visitors.