

# Measles

## Chief Health Officer Alert

<b>Status:</b>	Active
<b>Date issued:</b>	19 September 2017 (update to 18 September 2017)
<b>Issued by:</b>	Dr Brett Sutton, Deputy Chief Health Officer (Communicable Diseases), Victoria
<b>Issued to:</b>	General Practitioners and Hospital Emergency Departments

## Key messages

- **Three cases of measles have been confirmed in Melbourne.**
- **Two (2) confirmed cases** were infectious whilst at a number of places across Melbourne between September 6 and September 13. One case acquired their illness in Victoria from an unknown source; one case may have acquired illness in Victoria or overseas.
- These cases may have acquired their infection in the following locations: Metro Trains (Armadale to Southern Cross), Collins Street CBD, St Kilda Road Armadale, St Kilda Library. People who attended these locations between August 20 and September 1 may already be unwell with measles.
- These cases also attended numerous locations around Melbourne and in Ballarat, where they may have exposed others: Metro Trains and stations (Armadale to Southern Cross), Collins Street, Chadstone Shopping Centre, Ikea Richmond, Ballarat. People who attended these locations between September 6 and September 13 may be at risk of developing measles. See below for exact dates.
- **The third case** acquired measles in Romania and was infectious while on flight QR222 departing Romania (Bucharest) on 12 September via Doha Qatar, arriving Melbourne on 13 September on flight QR904.
- **Be alert** for measles in patients presenting with a fever at rash onset, particularly if they attended any of the places listed below or flew on the Romanian flight. Symptoms may have started anytime from September 5. New cases may show symptoms up until October 4, 2017.
- **Isolate suspected cases** to minimise the risk of transmission within your department/practice.
- **Notify** the Communicable Disease Prevention and Control Section at the Department of Health and Human Services on 1300 651 160 of suspected cases immediately.
- **Take blood for measles serology** in all suspected cases.
- **Discuss whether to take nose and throat swabs** for PCR with the Department if your suspicion for measles is high. Approval is required prior to PCR testing at the reference laboratory. PCR testing for measles does not attract a Medicare rebate.

## What is the issue?

There have been three confirmed cases of measles notified in Victoria in the last week. One case acquired their illness locally, the second case may have acquired their illness locally or overseas and the third case was infected in Romania.

The source of the infection is unknown at this point. This means there may already be secondary cases in the community which have not been diagnosed.

As measles is highly infectious through airborne transmission, other secondary cases (either related to the unknown source or the two diagnosed cases) could occur in susceptible people. Measles has an incubation period of between 7 and 18 days (average 14 days from exposure to rash) so should be considered in any susceptible person who presents with a compatible illness, with an onset date between September 5 2017 and October 4 2017.

#### **Places where these two locally acquired cases may have been infected include:**

Between the dates of August 20 and September 1

- Metro trains (Frankston line) between Armadale and Southern Cross
- Southern Cross Station & Armadale Station
- St Kilda Library (specifically August 25 and August 30)
- Collins Street, Docklands

Susceptible people who have attended these places may be at risk of measles, and may have symptom onset anytime from September 5. Please note this list is not exhaustive, it contains known sites only. It is likely there are other sites around Melbourne where the cases were exposed.

#### **These two cases spent time whilst infectious at the following locations:**

- September 6 - IKEA Richmond (11am – 1pm)
- September 7 - Spotlight Carnegie (11.30am – 12.30pm), Chadstone Shopping Centre - specifically Kmart (12pm - 3.30pm)
- September 8 - Federation University, Ballarat (Mt Helen campus)
- September 9 - Chadstone Shopping Centre (10am – 1 pm)
- September 11 & 12 - Frankston Train line (peak hour travel time) – Armadale Station and Southern Cross Station, Collins St, Docklands
- September 13 - Ikea Richmond (11am – 1.30pm)

Susceptible people who have attended these places are at risk of measles and may have symptom onset anytime from September 13 until October 4.

**The third case** acquired measles in Romania and was infectious while on flight QR222 departing Romania (Bucharest) on 12 September via Doha Qatar, arriving Melbourne on 13 September on flight QR904. Contacts from this flight or Melbourne airport may become unwell with measles symptoms any time from now until September 30.

Anyone who presents with signs and symptoms compatible with measles should be tested and notified to the Department. There should be an especially high index of suspicion if they have attended any of the areas stated above and are unvaccinated or partially vaccinated for measles.

## **Who is at risk?**

Children or adults born during or since 1966 who do not have documented evidence of receiving two doses of a measles-containing vaccine or do not have documented evidence of immunity are considered to be susceptible to measles. People who are immunocompromised are also at risk.

## **Symptoms and transmission**

Clinical features of measles include prodromal fever, a severe cough, conjunctivitis and coryza. Individuals, especially children, are typically unwell.

The most important clinical predictors are the following features:

- generalised, maculopapular rash, usually lasting three or more days, AND
- fever (at least 38°C, if measured) present at the time of rash onset, AND

- cough, coryza or conjunctivitis.

Measles is transmitted by airborne droplets and direct contact with discharges from respiratory mucous membranes of infected persons and less commonly, by articles freshly soiled with nose and throat secretions.

Measles is highly infectious and can persist in the environment for up to two hours.

The incubation period is variable and averages 10 days (range: 7-18 days) from exposure to the onset of fever, with an average of 14 days from exposure to the onset of rash. The infectious period of patients with measles is roughly five days before, to four days after, the appearance of the rash.

Use the most appropriate tests for diagnosis depending on timing of symptoms and presentation:

- Take blood for serological confirmation in all suspected cases. If a patient has measles, IgM is reliably positive if the rash has been present for three or more days. IgG in the absence of IgM indicates the patient is protected and means measles is unlikely.
- Nose and throat swabs for PCR diagnosis are best for early diagnosis (including prior to rash); you must contact the Department prior to taking swabs to gain approval for these to be tested at the Victorian Infectious Diseases Reference Laboratory. PCR testing for measles does not attract a Medicare rebate.

This picture is typical of rash on the face. This is a rash on day three in a young boy.



Picture courtesy of U.S. Centers for Disease Control and Prevention

## Recommendations

- Be alert for new measles cases – ensure all staff, especially triage nurses, have a high index of suspicion for patients presenting with a febrile rash.
- Notify suspected cases immediately to the Communicable Disease Prevention and Control Section via telephone on 1300 651 160 (24 hours).
- Take blood for serological confirmation.
- Call the department to discuss the need for PCR diagnosis.
- To minimise the risk of measles transmission within your department/practice:
  - avoid keeping patients with a febrile rash illness in shared waiting areas
  - give the suspected case a single use mask and isolate them, until a measles diagnosis can be excluded
  - leave vacant all consultation rooms used in the assessment of patients with suspected measles for at least 30 minutes after the consultation.
- Seek advice from the Department of Health and Human Services Communicable Disease Prevention and Control Section regarding:
  - the management of susceptible hospital or clinic contacts
  - prevention of measles in susceptible contacts.
- On advice, follow up all persons who attended the emergency department or clinic at the same time as a case and for 30 minutes after the visit. These people are considered to be exposed to the measles virus.
- Check your staff vaccination records.
- Earlier outbreaks have affected health care workers, including some who have not been involved in the direct care of measles cases and have only been in the same ward, clinic, or department as a case. All staff

born during or since 1966 should have documentation of two doses of measles-containing vaccine, or laboratory-confirmed evidence of past measles infection.

## More information

### Clinical information

The Australian Immunisation Handbook; 10th edition, 2013.

<http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10-home~handbook10part4~handbook10-4-9>

The Blue Book – Guidelines for the control of infectious diseases

<https://www2.health.vic.gov.au/public-health/infectious-diseases/disease-information-advice/measles>

### Consumer information

Better Health Channel - <http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Measles?open>

### Contacts

For further information please contact the Communicable Disease Prevention and Control section at the Department of Health and Human Services on 1300 651 160 (24 hours).



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