



Public Health  
England



# **Mycobacterium chimaera Infections Associated with Cardiopulmonary Bypass Information for general practice**

Version 1

## About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health, and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner.

Produced by PHE in association with NHS England.

Public Health England  
Wellington House  
133-155 Waterloo Road  
London SE1 8UG  
Tel: 020 7654 8000  
[www.gov.uk/phe](http://www.gov.uk/phe)  
Twitter: [@PHE\\_uk](https://twitter.com/PHE_uk)  
Facebook: [www.facebook.com/PublicHealthEngland](https://www.facebook.com/PublicHealthEngland)

Crown copyright 2017

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit [OGL](https://www.nationalarchives.gov.uk/ogp/) or email [psi@nationalarchives.gsi.gov.uk](mailto:psi@nationalarchives.gsi.gov.uk). Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Published February 2017

PHE publications gateway number: 2016541



## Contents

About Public Health England	2
<i>Mycobacterium chimaera</i> : Assessing patients who have had cardiothoracic surgery or ECMO	4
Patients who may have been exposed but are currently well	5
Further information	5

## **Mycobacterium chimaera: Assessing patients who have had cardiothoracic surgery or ECMO**

It is now recognised that patients who have been on cardiopulmonary bypass for surgery or ECMO may have been exposed to the organism *Mycobacterium chimaera*, a non-tuberculous environmental mycobacterium which has been found to contaminate heater cooler units used for cardiopulmonary bypass. This organism has caused endocarditis, vascular graft infections, disseminated infections, or chronic sternal wound infections in patients in the UK and internationally.

The risk remains very low. Almost all cases in the UK have been associated with valve replacement or repair; in this group the risk is estimated at 1 in 5000. For other procedures, the risk is likely to be much lower. Although such infections are rare, there have been some associated deaths. The presentation can be very non-specific. The incubation period of these infections has been up to five years in the UK, but the upper limit is unknown.

A notification letter has been issued to the patients at maximum risk (those who had prosthetic valve repair or replacement), and patients undergoing cardiothoracic surgery on bypass are informed as part of the consent procedure. Some other patient groups may be informed as part of their routine follow up, such as heart/lung transplant patients and some congenital heart disease patients.

Please use the following screening questions if you are assessing a patient in whom you think this infection is a possibility:

### **1. Has the patient undergone cardiothoracic surgery on cardiopulmonary bypass or been placed on extracorporeal membrane oxygenation (ECMO)?**

Examples of surgery conducted on bypass or in which bypass may have been used are heart valve repair/replacement, aortic graft procedures, coronary artery bypass graft, heart/lung transplant and some congenital heart disease repairs. The interval between surgery and symptoms can be several years (up to five years so far in the UK, but the upper limit is unknown).

### **2. Does the patient have any of:**

- symptoms of a chronic systemic illness eg fever, malaise, weight loss, joint pain, cough or shortness of breath, without a known or clinically apparent explanation?
- symptoms and/or signs of endocarditis?
- a persistently infected surgical wound following cardiothoracic surgery?
- another symptom or sign for which no cause has been found despite usual investigation?

If the answer is **yes** to both questions, the patient should be discussed with the local cardiology or infectious diseases services urgently, as they may require further clinical assessment and investigation for *Mycobacterium chimaera* (as well as other causes of their presentation).

### Patients who may have been exposed but are currently well

Media reports and/or notification letters may mean that some patients present who have been exposed to heater cooler units but are not unwell. If the answer is **yes** to question 1, but the patient is **currently well**, reassure the patient and note in their record that they have been exposed to heater cooler units.

Provide them with the NHS Choices information available at [www.nhs.uk/Conditions/mycobacterium-chimaera-infection/Pages/Introduction.aspx](http://www.nhs.uk/Conditions/mycobacterium-chimaera-infection/Pages/Introduction.aspx) and advise them to return if they develop symptoms.

### Further information

NHS Choices: [www.nhs.uk/Conditions/mycobacterium-chimaera-infection/Pages/Introduction.aspx](http://www.nhs.uk/Conditions/mycobacterium-chimaera-infection/Pages/Introduction.aspx)

PHE: [www.gov.uk/government/collections/mycobacterial-infections-associated-with-heater-cooler-units](http://www.gov.uk/government/collections/mycobacterial-infections-associated-with-heater-cooler-units)

The PHE webpage includes clinical guidance for secondary care as well as updates on the UK situation.