Measles: guidance for HPA staff on international travel and travel by air

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What’s new?

- Information should be sent to HPS Colindale if a likely case of measles travelled by air/internationally.
- Use of HPZone to share information about measles on flights between HPUs.
- Guidance for contacting fellow passengers on a flight or other mode of transport, including specimen letters.

How to use this guidance

This guidance is designed to be used alongside the existing HPA measles guidance and Post Exposure Prophylaxis guidance. The HPA’s own case management system, HP Zone, is used to share information between local Health Protection Units about flights which have been affected, so it is important to enter flight details as a context as suggested.

Related documents

HPA measles guidance:  
http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1274088429847

HPA post exposure prophylaxis guidance:  
http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1238565307587

IATA position statement on passenger contact tracing,  

ECDC Risk Assessment Guidelines for Diseases Transmitted on Aircraft,  
**Why is this guidance needed?**

This guidance is for health protection agency or public health staff responding to a **likely measles case** who has recently travelled by air or internationally.

The objectives of the public health response to a likely case of measles on a flight or travelling internationally are:

- To provide timely post exposure prophylaxis to vulnerable individuals
- Early identification of linked cases of measles to limit ongoing transmission
- To identify linked cases as part of high quality surveillance
- To cooperate with requests from other countries to supply information on measles cases within their territory.

**Background**

Measles transmission on flights has been documented (1,2,3,4). The ECDC produced guidance for risk assessment of contact with measles during air travel in 2011(5). Contact tracing may prevent further cases but needs to be performed within the time period when effective interventions can be given i.e. MMR within 72 hours or immunoglobulin with 6 days. For practical purposes therefore contact tracing is not initiated if more than 5 days have elapsed since the flight. The ECDC guidance acknowledges that contact tracing needs to take place within the available resources.

Aviation guidelines support reporting of infectious disease. International Civil Aviation Regulations (6) and the WHO International Health Regulations require the captain to report a suspected case of infectious disease to air traffic control.

Obtaining passenger contact details may be difficult. A public health passenger locator card (PLC) has been developed by an informal transportation working group convened by the World Health Organization (7). The information is intended to be held by the arrival country’s public health authorities and used only for authorised public health purposes (8). If PLCs are not available, passengers are often asked to write their details on unused sick bags and these are passed to the ground handling agent then on to the local authority or health control unit, which in turn is given to the local health protection unit.

Countries with low measles prevalence request detailed information from the UK in order to manage measles occurring within their jurisdiction. This information should be given to HPA Colindale who can pass it to the other country. For practical purposes, measles prevalence is taken to be low in all countries other than those in Africa or the Indian Subcontinent.

This guidance acknowledges ECDC protocols and should be used in conjunction with the HPA National Measles Guidelines for Local and Regional Services (9) and Post-exposure prophylaxis for Measles revised guidance(10).
Measles international/air travel: cases

- Follow the HPA measles guidance to **assess a report of measles**.
- Cases of measles should be advised not to travel by air while infectious.
- If the case is assessed as **likely** measles then **report the travel to HPA Colindale** (see Appendix A for form/report) **if any of the following apply**:
  a. The case travelled by air (domestic or international) during the infectious period
  b. The case travelled internationally by any means of transport during the infectious period
  c. The case was overseas during the period when they are likely to have become infected with measles
- Take further action as follows for cases.

Report of a case of measles on an aircraft

Action is needed only if **likely** measles AND **infectious** while on the aircraft.

- Report the travel to HPS Colindale (see Appendix A for form/report)
- Obtain details of airline and flight number. Add the flight as a context in HP zone (linked to the record of the case) so that colleagues across the HPA can look it up if contacts on the flight come forward. (see appendix E)
- If the flight was more than 5 days ago, no benefit in contacting airline.
- If the flight was in the last 5 days, contact the airline. Ask them to provide passenger details for the flight. Use these to contact the passengers. For any contact details, only contact them if it is likely that information will reach the patient by the fifth day after exposure to allow a day to arrange post exposure prophylaxis. If mobile telephone numbers are available, send a text message linking to the advice on the HPA website www.hpa.org.uk/measlesaircraft (appendix F). If emails, email the letter in appendix B. If a UK postal address if supplied, post a copy of the letter to them first class. For any other contact details, only attempt contact if you are likely to reach the recipient less than 5 days after the contact with measles. Sample letter to the airline is in Appendix B. Sample letter to passengers is in Appendix C.
- Contact tracing should prioritise vulnerable individuals (children under 1, pregnant women and the immunocompromised) if this information is available. (11)
- Contact tracing should then prioritise those sitting in the same row as the index case, and work outwards from the case, if that information is available. (11)
- If time (within 5 days) and resources permit, all passengers and cabin crew should be contacted. It is recognised that this may not be possible. (11)
- If the infection was identified during a flight, IATA Guidance indicates the public health authority should be contacted prior to landing and passenger locator cards distributed to passengers two rows fore & aft of the index case (12). The CCDC or
Port Health Officer is likely to be informed shortly after the plane lands. The passenger locator cards will be supplied to the local public health authority, and are often in hard copy. They are intended to allow public health authorities to contact the passengers, but the contact details supplied may vary. If the index case’s details are too incomplete to add as a case to HPZ, add the flight as a context in HP zone (see appendix E) linked to an exposure or enquiry containing the available information, so that colleagues across the HPA can look it up if contacts on the flight come forward. and link the exposure to it.

Report of measles case with international travel by other transport (not air)

Action is needed only if likely measles AND infectious while on the transport.

- Report the travel to HPS Colindale (see Appendix A for form/report), indicating travel company and mode of travel in the space for airline and flight number
- If the travel was in the last 5 days, and a defined group are likely to have been exposed (eg on a coach), contact the transport provider to find out whether they are able to contact passengers as for air travel.
- If transport provider unable to contact fellow passengers, no further action, unless there are special circumstances (e.g. early notification and vulnerable group who are contactable).
- If travel more than 5 days ago, no benefit in contacting transport provider.

Measles acquired overseas and infectious measles overseas

- Report the travel to HPA Colindale (see Appendix A for form/report) if the case was abroad while infectious OR your assessment suggests that the case is most likely to have acquired the infection overseas
- The other country is likely to want detailed information about the case’s address abroad and any institutions or gatherings attended. This contact will be made by Health Protection Services Colindale, using the information in appendix A. This is particularly important for countries with low measles prevalence. Please give all available addresses, using extra sheets of paper/electronic communication if needed.
- The other country is responsible for managing a case of measles while on their soil.
Measles and international/air travel – cases

Case of measles notified to HPA

Is measles likely?

Saliva Kit

Did they travel overseas OR by air in the infectious period?

UK guidance

Travel by air or other enclosed transport within a defined group e.g. coach party

Report to Colindale, including overseas locations unless travel confined to Africa/Indian subcontinent.

Add index and context to HPZone

Was travel in last 5 days?

NFA

Contact tracing up to 5 days post exposure. Report to Colindale, including detailed overseas locations. (If travel confined to Africa/Indian subcontinent, overseas locations not needed)
Measles international/air travel: contacts

- Follow the HPA measles post exposure prophylaxis guidance for contacts of likely or confirmed measles cases while they are in the UK
- Check HPZone to find out whether the reported index has been notified and whether the index had likely or confirmed measles as assessed by the HPA. If the only information you have is a flight number, check whether this has been entered as a context.

Action for a single contact

If an individual contacts the HPA believing they have been on a flight with a person with infectious measles.

- Ask whether they have received a letter, email or text message and from whom
- Ask which flight and date of travel.
- Put contact on HPZ – check whether the flight has been entered as a context. If so, link the contact’s record to it.
- If you are already aware of an index case with likely infectious measles on the flight, note this information on the context and follow the post exposure prophylaxis guidance for the contact.
- If no previous information about the exposure, check that a likely infectious case is reported to have travelled on this flight (by looking at cases linked to the context). Then follow the post exposure prophylaxis guidance for the contact.
- If index not shown but the individual’s exposure seems plausible, further investigation may be needed. If not plausible/no further info available, no further action.
- For international transport by other means the same principles apply if the definition of contact is met (see measles guidelines).

Action for a list of contacts

- Obtain information on index if available (as in measles guidance)
- Assess whether there is enough information to justify public health action (ie case was likely and infectious at the time of contact and still within 5 days of travel).
- If there is, make a record on HPZ. Add the flight as a context to the case or exposure (see Appendix E).
- Obtain as much detail about contacts as possible – ie names, contact details and any information available which would suggest whether they are likely to be vulnerable.
• Usually the information will be merely their name and mobile phone number, sometimes an email address.
• Get in touch with the contacts where possible - If email address is available, email the letter in appendix C. If a mobile number is available, text a link to a letter on the HPA website www.hpa.org.uk/measlesaircraft (instructions in Appendix F). If a UK address is available, send a copy of the letter first class.
Measles and international/air travel - contacts

Call about a contact of measles on a plane/other enclosed transport

Check HPZone for index

Check HPZone for context

Is there a relevant HPZone record or other credible information re-index?

NO

NFA

YES

Was the index likely and infectious at time of flight/travel?

NO or insufficient information

NFA

YES

- Manage as a measles contact
  - Ensure index has been reported to Colindale
APPENDIX A: Reporting measles international/air travel

The information on the form below needs to be reported to HPA Colindale.

Please either complete the form or extract the information from HP Zone and send to HPA Colindale (address, email address, fax no). If not completing the form below, please ensure all the information requested is clearly available and remove extraneous information.

For each likely infectious measles case with recent international travel

the following information is required:

<table>
<thead>
<tr>
<th></th>
<th>Name</th>
<th>HPZone number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Contact details (Address, telephone, email)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Usual contact details if different (Address, telephone, email)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Date of birth</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>---</td>
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</tr>
<tr>
<td><strong>5</strong></td>
<td><strong>Date of onset of rash</strong></td>
<td></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>Is the likely case microbiologically confirmed?</strong>&lt;br&gt;Please give test results and date where available.</td>
<td></td>
</tr>
<tr>
<td><strong>Travel details (Enter separately for each leg of travel i.e. flight)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>7</strong></td>
<td><strong>Did the case undertake international travel during the infectious period (i.e. 4 days before to 4 days after onset of rash)?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>8</strong></td>
<td><strong>Date of travel</strong></td>
<td></td>
</tr>
<tr>
<td><strong>9</strong></td>
<td><strong>Airline and flight number</strong></td>
<td></td>
</tr>
<tr>
<td><strong>11</strong></td>
<td><strong>Seat number of case if available</strong></td>
<td></td>
</tr>
<tr>
<td><strong>12</strong></td>
<td><strong>Start and end destinations</strong></td>
<td></td>
</tr>
</tbody>
</table>
Details of person completing the reporting form

Name
Position
Health Protection Unit
Telephone
Email
Date form completed

13 Was the travel confined to Africa and the Indian Subcontinent? Y/N

IF no, supply details of accommodation and places visited abroad (2 weeks prior to rash onset to 4 days after) – if obtainable. Continue on a separate sheet if needed. Please complete questions 15-17.

14 Name of country

15 Name and address of accommodation

16 Dates stayed at the accommodation

17 Known other contacts at accommodation i.e. relatives/travel companions

Please send completed forms to Immunisation department HPA Colindale
Email Immunisation.lead@hpa.org.uk Fax 0207 327 7404
APPENDIX B Sample letter/email to airline

Airline

Flight number

From

Arrival destination in the UK

Date of travel

Dear

Action needed by airline: measles in an airline passenger

A person travelling on the above flight has been diagnosed with suspected measles and is thought to have been infectious at the time of travel.

Measles is a highly infectious illness and can be transmitted to other people during a flight. Advice to all passengers and staff is required.

In accordance with ICAO International Standards and Recommended Practices, Annex 9 12th Ed. July 2005 we request that you supply us as soon as possible with names and any available contact details for passengers and staff on this flight, so that we can contact them to advise them about their exposure to measles, in the interests of public health.

Measles can be serious. This is more likely in babies, pregnant women, and those with weakened immunity (due to illness or medication). These groups need medical advice after contact with measles because prompt treatment can help prevent serious infection. Any public health action to prevent or reduce the severity of measles will need to take place within a few days of the flight.

Thank you for your assistance in this matter. If you require further information please contact (HPU name and phone no)

Yours sincerely

Name

Position in HPA (e.g. Consultant in Health Protection)
Health Protection Agency
Unit address

CC Civil aviation authority

CC The International Health Regulations UK National Focal Point Travel and Migrant Health Section
Health Protection Services – Colindale Tel:020 8327 7880 Fax: 020 8200 7868 Email: IHRNFP@hpa.org.uk
APPENDIX C Sample letter/email to passenger or staff

Dear

Passenger with measles on flight xxx

We have been informed that a person on (airline) flight (number) from (start) to (destination) on (date) has been diagnosed with measles. Our records show that you were a passenger/crew member on this flight.

Why are we contacting you?

The Health Protection Agency is informing passengers who may have been exposed to help reduce the risk of spreading infection.

What is measles?

Measles is a disease which spreads very easily. People with measles can get cough, runny nose, rash and fever. Measles can be serious, particularly for people whose immune system is not working normally.

What is the risk of catching measles?

Most older children and adults are immune to measles – either because they had measles as a child or because they have been vaccinated – and so are very unlikely to catch measles.

Who needs medical advice?

You should contact your doctor straight away if you have weakened immunity (due to illness or medication). If you are not immune and the exposure was within the past few days, your doctor may be able to organise treatment to prevent you becoming seriously ill.

If you are pregnant and not sure of your immunity or if you were travelling with a baby under six months of age, it may also be worth seeking your doctor’s advice.

If you become unwell and think it could be measles within two weeks of the flight, you should see a doctor. You should ring the doctor or clinic beforehand so they can make sure you do not pass the disease to others in the waiting room.

Take this letter with you and tell your doctor that you have been on the same flight as someone with infectious measles. Your doctor should seek advice from the local Health Protection Unit (http://www.hpa.org.uk/ProductsServices/LocalServices/).

If you are well and not in the groups listed above you do not need to take action.

If you would like more information on measles visit http://www.nhs.uk/conditions/measles/Pages/Introduction.aspx

Yours sincerely
Information for passengers and crew on a flight with a case of infectious measles

This information sheet is only intended for people who have been personally informed by the Health Protection Agency or their airline that they have flown on an aircraft (or other enclosed transport) with someone who had infectious measles in the last few days. If you have not been told this, then the contents of this document do not apply to you, and you should contact your doctor if you have any queries about measles.

What is measles?

Measles is a disease which spreads very easily. People with measles can get a cough, runny nose, rash and fever. Measles can be serious, particularly for people whose immune system is not working normally.

What is the risk of catching measles?

Most older children and adults are immune to measles – either because they had measles as a child or because they have been vaccinated – and so are very unlikely to catch measles.

Who needs medical advice?

You should contact your doctor straight away if you have weakened immunity (due to illness or medication) and have been exposed to infectious measles. If you are not immune and the exposure was within the past few days, your doctor may be able to organise treatment to prevent you becoming seriously ill.

If you are pregnant and not sure of your immunity or if you were travelling with a baby under six months of age, and you have been told by the HPA or airline that there was measles on your recent flight, it may also be worth seeking your doctor’s advice.

If you become unwell and think it could be measles (within two weeks of the flight), you should see a doctor. You should ring the doctor or clinic beforehand so they can make sure you do not pass the disease to others in the waiting room.

Take this information sheet with you and tell your doctor that you have been on the same flight as someone with infectious measles. Your doctor should seek advice from the local Health Protection Unit (postcode search for local unit and phone number at www.hpa.org.uk).

If you are well and not in the groups listed above (pregnant, baby under 6 months, weakened immunity) you do not need to take action.

If you would like more information on measles visit http://www.nhs.uk/conditions/measles/Pages/Introduction.aspx
Appendix E

Use of Congregation for Plane flights.

Plane flights are always going to be “ad hoc” contexts. The simplest way of handling them is to use the Ad hoc Context called Congregation.

If you want to add a specific context to a case as “Congregation” it will allow you to see all congregations added recently and all OPEN contexts in all HPUs, ie case or situation is still open.
When completing the details of the flight, give airline name, then flight number, then date.
Appendix F

Measles Messaging Service

Contact the immunisation department at HPA Colindale (Michael.Lattimore@hpa.org.uk). They will either organise the messaging or give you a username and password for the package Mymessagemedia. This package enables the sending of mass texts through an internet based portal.

You will then receive an e-mail message inviting you to go the website of MyMessageMedia.

Go to:  https://manager.message-media.com

Enter your login details:

Username:  (usually your e-mail address)
Password: will be assigned in your message

(you can change once you have logged on by going to “my profile”)

Choose: Create a new broadcast
1. Assign a name to the broadcast that you can use for future identification.
2. Choose whether you want to track the delivery of the messages.
3. Choose whether you wish to broadcast immediately or over a period of time.
4. In the recipients section you can choose who to broadcast by by either:
   o Add in individual recipients mobile phone numbers OR
   o Upload a file of recipients from a file (.csv, .xls or .xlsx files) OR
   o Choosing from the names in the existing address book
5. In the message box you can then type a message or paste in message text. You can embed text from your recipient list (such as name) by clicking on the fields in the field box.
6. Click preview and send.
7. Replies will then be returned into your mailbox (on the home page when you log in).

8. You can run a report to see how many of your message were sent and received (also from the home page)

To speed things we have saved a test broadcast on measles in the shared folder. You can pick this and amend as necessary.

- Important message from the Health Protection Agency. You may have been exposed to measles on a recent flight. Please see www.hpa.org.uk/measlesaircraft

Please note that the Immunisation Department will be charged for each message of 160 characters sent. Longer messages will be charged as multiple messages.
1. Amler RW, Bloch AB, Orenstein WA et al Imported measles in the United States JAMA 1982 248 2129-2133

2. Coleman KP, Markey PG Measles transmission in immunized and partly immunized air travellers Epidemiol Infect 2010 138 (7) 1012-5


4. van Binnendijk RS, Hahne S, Timen A et al Air travel as a risk factor for introduction of measles in a highly vaccinated population Vaccine 2008 (26) 5775-77


6. ICAO annex 9, chp 8, para 8.15 http://www.capsca.org/CAPSCARefs.html ;

7. The group consisted of representatives from national public health authorities and international transportation organizations.


