



Public Health
England

Protecting and improving the nation's health

Measles: guidance on international travel and travel by air

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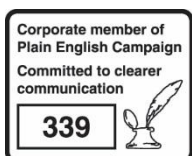


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About this guidance

Purpose

This guidance provide recommendations for health protection staff responding to a case of likely or confirmed measles who has recently travelled by air and/or internationally.

How to use this guidance

This guidance should be used alongside the PHE national measles guidelines; measles post exposure prophylaxis guidance and the IHR National Focal Point guidance on international communications for contact tracing and other public health responses. Links to these documents are presented below:

Related documents

- PHE International Health Regulations National Focal Point guidance on international communications for contact tracing and other public health responses:
<https://www.gov.uk/government/publications/international-health-regulations-2005-uk-national-focal-point-communications-protocol>
- PHE national measles guidelines:
<https://www.gov.uk/government/publications/national-measles-guidelines>
- PHE guidance for measles post exposure prophylaxis:
<https://www.gov.uk/government/publications/measles-post-exposure-prophylaxis>
- IATA position statement on passenger contact tracing:
<http://www.iata.org/whatwedo/safety/health/Documents/health-passenger-contact-tracing.pdf>
- ECDC Risk Assessment Guidelines for Diseases Transmitted on Aircraft:
http://ecdc.europa.eu/en/publications/Publications/1012_GUI_RAGIDA_2.pdf

Document information

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25/10/2019	Added contact details for the public health departments of the devolved administrations	V2

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Rationale, principles and background

Background

Measles is highly infectious - the most infectious of all diseases transmitted through the respiratory route. It is caused by a morbillivirus of the paramyxovirus family and spreads through airborne droplets or direct contact with nasal or throat secretions. Symptoms usually include fever, conjunctivitis, rhinitis, cough and a characteristic red blotchy rash. Measles can be severe, particularly in immunosuppressed individuals and young infants. It is also more severe in pregnancy, and increases the risk of miscarriage, stillbirth or preterm delivery ⁽¹⁾.

The most effective way to control measles is by achieving high uptake of two doses of measles, mumps, rubella (MMR) vaccine. High sustained coverage is key to achieving measles elimination - defined by the World Health Organisation (WHO) as the absence of endemic measles circulation for at least 12 months in a country with a high-quality surveillance system⁽²⁾. While recent uptake of MMR in England has been >90% for the first dose and >85% for the preschool booster, overall coverage remains below the ≥95% World Health Organisation (WHO) target.

The UK achieved WHO measles elimination status in 2017, however, we will continue to see importations leading to some limited onward spread in communities with low MMR coverage and in age groups with very close mixing.

This document provides public health guidance on the risk assessment of cases of likely or confirmed measles who recently travelled by air and/or internationally. This is set in the context of a national surveillance system which is required to support and monitor progress towards WHO elimination targets.

Rationale for public health action in response to a measles case linked to international travel

Measles is a notifiable disease in the UK and in line with WHO elimination targets, there is intensive case-based surveillance to detect, investigate and confirm every suspected case. A risk assessment is undertaken for every reported case, as outlined in the national measles guidelines, and the need for urgent public health action is assessed. The aim is to ensure early identification of chains of transmission to ensure effective interventions can be targeted appropriately and initiated promptly to limit further spread.

Reporting of cases linked to international travel is an essential part of international surveillance and reporting should not be limited to cases where immediate post-exposure interventions can be conducted. Classification of imported cases and identifying international links between cases is an important component of the plans for regional and global elimination.

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

- to identify and exclude secondary cases of measles early and therefore limit ongoing transmission (secondary waves)
- to provide timely post exposure prophylaxis to vulnerable individuals who may have been exposed
- to identify linked cases as part of high quality surveillance to support elimination
- to cooperate with requests from other countries to supply information on measles cases within their territory or on individuals exposed to a measles case in the UK.

Principles of public health action in response to a measles case linked to international travel

Restrictions on flying while infectious

Passengers are advised not to seek to travel by air while infectious (the infectious period for measles starts four days before the onset of rash, to four days after rash appearance) and must report their condition to their airline in advance of travelling by air⁽³⁾.

Medical clearance is required by any airline if the passenger suffers from any disease which is believed to be actively contagious and communicable. The IATA medical manual suggests that any person with infectious measles should not be given clearance to fly⁽³⁾.

Health Protection Teams should advise likely/confirmed measles cases not to travel while infectious and their unimmunised contacts that they should not travel for the duration of the incubation period.

Reporting of suspected cases of infectious disease

Identification of suspected measles cases is vital to facilitate appropriate public health action. Aviation guidelines support the reporting of infectious disease if symptoms develop during flight. International Civil Aviation Organization Regulations and the WHO International Health Regulations (2005) require the captain to report a suspected case of infectious disease to air traffic control.

WHO have worked with International Air Transport Association (IATA), to draft a template for a Passenger Locator Form (PLF) to collect passenger details should a case of communicable disease be suspected on board a flight ⁽⁴⁾. The PLF should be distributed to all passengers and crew, completed and returned to airline staff before passengers disembark the aircraft.

Symptoms may also develop following travel. These cases should be identified using established surveillance systems. Measles is a notifiable disease under the Health Protection Legislation (England) Guidance 2010. Clinicians are required to notify all suspected measles cases as soon as possible to their local Health Protection Team (HPT). For any likely or confirmed case of measles any travel whilst infectious should be identified and reported to the UK International Health Regulations (IHR) National Focal Point at PHE Colindale.

Informing passengers of potential exposure / contact tracing following exposure

Individuals with primary measles infection are infectious from about 4 days before rash onset until 4 full days after the rash appears. Generally, secondary transmission of measles is higher among close contacts, such as members of a household or individuals who have close contact with each other over a long period of time. However, whilst most transmission events require face-to-face and/or prolonged contact, transmission through more casual contact, including on flights, has also been documented. An evidence review first undertaken in 2011 (see appendix A) and recently updated found that:

- secondary measles cases can occur both during flights and from contact in departure lounges and airports
- secondary measles cases have been identified from contact tracing of confirmed cases in adjacent seating and other rows quite a distance away within the same aircraft
- secondary cases are reported during a variety of international and domestic flights indicating that the duration of contact required is variable
- there has been a confirmed case identified in an air stewardess highlighting the potential of occupational exposure.

The European Centre for Disease Prevention and Control (ECDC) produced Risk Assessment Guidance for Infectious Diseases transmitted on Aircraft (RAGIDA) in 2009⁽⁵⁾, which acknowledges the limited evidence base in this area for the majority of diseases, including measles, and that contact tracing needs to take place within available resources. The resources required to implement contact tracing has been described as extensive and at high cost to public health agencies, often with little evidence of additional case prevention.

For these reasons, where a large group of people have been exposed, but the level of contact cannot be defined on an individual basis, such as during air travel, it is appropriate and preferable to initiate a prompt mass communication, for example using approaches such as e-mail or text messaging to 'warn and inform' all passengers and crew who may have been exposed.

The aim of the 'warn and inform' approach is to:

- ensure that all those at risk are aware of the potential exposure and the signs and symptoms of measles
- encourage rapid self-identification of those who may be vulnerable individuals at high risk (immunocompromised, pregnant women and unvaccinated infants)
- ensures that any linked cases are identified, diagnosed and excluded promptly
- provide reassurance to those who are likely to already be protected.

In order for this approach to have the biggest impact prompt action should be taken. The time period when effective interventions can be given in line with current PHE guidance is as follows:

- MMR in immunocompetent individuals within 72 hours, or
- human normal immunoglobulin (HNIG) to vulnerable contacts within 6 days of exposure

Warning and informing beyond this 6 day period is however still beneficial in terms of early case identification and exclusion, it therefore is warranted for the full 21 day incubation period.

Notification to national authorities when a suspected measles case departs from or arrives in the UK from / to a non-endemic country

WHO member states are required to report events of public health concern in accordance with IHR (2005). These are an international, legally binding instrument whose purpose is to prevent, protect against, control, and provide a public health response to the international spread of disease. This international cooperation aims to assist other national authorities to manage and control measles within their jurisdiction.

The UK IHR National Focal Point (NFP), based at PHE Colindale in the Travel and Migrant Health section: ihrnfp@phe.gov.uk, and the Immunisation and Countermeasures Department: immunisation.lead@phe.gov.uk should be notified by email of all likely or confirmed measles cases:

- who have travelled on an aircraft (including domestic travel) or other international travel during their infectious period
- who are infectious whilst abroad in a low incidence country
- who are likely to have acquired their infection in a low incidence country¹ ,

Further information can be found in the [International Health Regulations 2005: UK National Focal Point](#).

¹ For practical purposes, measles incidence is taken to be low (non-endemic) in Western Europe, Australia and New Zealand, North America and South America, and high in Africa, Asia and the Middle East. However, as global outbreaks frequently occur and the measles status of a country can change rapidly if you are in doubt, contact the Immunisation Department and/or the National Focal Point at PHE Colindale, or refer to the updated WHO country data available from

http://www.who.int/immunization/monitoring_surveillance/burden/vpd/surveillance_type/active/measles_monthlydata/en

Public Health Management

Responsibilities for Public Health actions

- The convention is for the country of arrival to be responsible for contact tracing e.g. PHE will be responsible for international transport arriving at ports in England.
- The management of the case including contact tracing is the responsibility of the HPT where the case is resident. Where the case is not a UK resident, for example, the case is a foreign national, then contact tracing is the responsibility of the HPT where the case presents for treatment. If the case is neither resident nor seeking treatment in the UK (e.g. the case only transited via a UK airport) responsibility for contact tracing falls on the HPT that covers that airport/port.
- Communication with other countries is carried out through the UK IHR NFP.

Management of CASE(S) of measles who travelled by air while infectious (domestic or international flights)

- Follow the PHE National Measles Guidelines to conduct a risk assessment: <https://www.gov.uk/government/publications/national-measles-guidelines>
- All reported cases of measles should have an oral fluid sample taken for confirmation by the Virus Reference Department, Colindale. Travel information should be included in the laboratory request form for the Oral Fluid test. This will ensure that the case is classified as imported in our reporting to WHO for elimination purposes.

If the case is assessed as **likely** measles:

- Advise the case to not conduct any onward travel while infectious. Medical clearance is required by any airline if the passenger suffers from any disease which is believed to be actively contagious and communicable. The IATA medical manual suggests that any person with infectious measles should not be given clearance to fly ⁽³⁾.
- Obtain details of dates of travel, airline and flight number from the suspected case/or the person reporting the exposure.
- If the infection was identified during a flight the Health Protection Team or Port Health Officer is likely to be informed shortly after the plane lands. Completed Passenger Locator Forms (PLF) will be supplied to the HPT local to the airport. However responsibility for the management of cases remains as stated above.
- Add the flight as a specific context (under congregation) in HPZone to allow linking of cases. When naming the context, use the following format to allow consistent recording:

- Flight number, airline name, departing, landing, date of flight [dd.mm.yyyy], for example: *Flight AA123 Example Airways New York to Manchester 01.01.2018* (see appendix C for full details).
- If the Airport of arrival is in a different geographical area / managed by a different HPT you should notify the HPT with responsibility for the port in case they receive enquiries. This may be carried
- If your assessment suggests that the case is most likely to have acquired their infection overseas add the following in HPZone:
 - recent travel to another country in key details
 - record the principal Contextual Setting as “foreign travel”
 - add the country as a specific context
- The countries in which the case had resided or travelled through while infectious will require information about the case e.g. addresses stayed and any institutions or gatherings attended. This information sharing is particularly important for countries with low measles prevalence. Contact with other countries’ responsible authorities will be made by the UK IHR NFP.
- Report the case (see Appendix B for details to include in your email) to the UK IHR NFP at PHE Colindale: ihrnfp@phe.gov.uk, and the Immunisation and Countermeasures Department: immunisation.lead@phe.gov.uk by email promptly. These inboxes are only manned Monday to Friday 9am to 5:30pm. The Colindale Duty Director is the contact point for urgent International Health Regulations (IHR) outside of these hours.
- For flights from other UK devolved administrations the respective national public health departments should also be notified:
 - Wales: aware@wales.nhs.uk (out of hours: 0300 00 300 32)
 - Scotland: NSS.HPSImmunisation@nhs.net (out of hours: 0141 300 1100, option 7)
 - Northern Ireland: pha.immunisation@hscni.net
- If within 21 days of the flight: the HPT should contact the airline, and ask them to cascade a ‘warn and inform’ message to all passengers and crew on the flight via text, email or letter. An exemplar text follows:
- We have been notified by Public Health England that you may have been exposed to a case of suspected/confirmed measles on Flight xxx on date xxx. For more information please follow this link:
<https://www.gov.uk/government/publications/measles-public-health-response-to-infectious-cases-travelling-by-air/information-for-passengers-and-crew-on-a-flight-with-a-case-of-infectious-measles> (See Appendix D).

Management of CASE(S) of measles who travelled internationally while infectious by other transport (NOT AIR)

- Follow the PHE National Measles Guidelines to conduct a risk assessment: <https://www.gov.uk/government/publications/national-measles-guidelines>
- All reported cases of measles should have an oral fluid sample taken for confirmation by the Virus Reference Department, Colindale. Travel information should be included in the laboratory request form for the Oral Fluid test. This will ensure that the case is classified as imported in our reporting to WHO for elimination purposes.

If the case is assessed as **likely** measles:

- Advise the case to not conduct any onward travel while infectious. Medical clearance is required by any airline if the passenger suffers from any disease which is believed to be actively contagious and communicable. The IATA medical manual suggests that any person with infectious measles should not be given clearance to fly (3).
- If your assessment suggests that the case is most likely to have acquired their infection overseas add the following in HPZone:
 - recent travel to another country in key details
 - record the principal Contextual Setting as “foreign travel”
 - add the country as a specific context
- The countries in which the case had resided or travelled through while infectious will require information about the case e.g. addresses stayed and any institutions or gatherings attended. This information sharing is particularly important for countries with low measles prevalence. Contact with other countries’ responsible authorities will be made by the UK IHR NFP.
- Report the case (see Appendix B for details to include in your email) to the UK IHR NFP at PHE Colindale: ihrnfp@phe.gov.uk, and the Immunisation and Countermeasures Department: immunisation.lead@phe.gov.uk by email promptly. These inboxes are only manned Monday to Friday 9am to 5:30pm. The Colindale Duty Director is the contact point for urgent International Health Regulations (IHR) outside of these hours. Contact with other countries’ responsible authorities will be made by the UK IHR NFP.
- If the travel was in the last 21 days, and a defined group are likely to have been exposed (e.g. on a coach), contact the transport provider to find out whether they are able to contact passengers as for air travel. If so, ask the transport provider the cascade a warn and inform text or email to passengers and staff (Appendix E). Other forms of transport should be considered on a case by case basis. If travel was more than 21 days ago no further action is required.
- Add the travel as a specific context (under congregation) in HPZone to allow linking of cases. When naming the context, use the following format to allow consistent recording:

- Type of travel, Operator, departing, arriving, date of travel [dd.mm.yyyy], for example, *Train Eurostar Paris to London 21.05.2018* (see appendix C for full details).
- If the port of arrival is in a different geographical area / managed by a different HPT you should notify the HPT with responsibility for the port in case they receive enquiries.
- If transport provider unable to contact passengers, no further action, unless there are special circumstances (e.g. early notification and vulnerable group who are contactable).

Management of CONTACTS of measles who were exposed during travel

A person who receives a 'warn and inform' message may contact their local HPT for advice. This may be a different HPT to that of the index case. If an individual contacts PHE believing they have travelled with a person with infectious measles:

- ask why they believe they were exposed and whether they have received an email or text message and from whom
- log the contact on HPZone and check whether a context has been entered for their flight/travel. If the only information you have is a flight number, check whether this has been entered as a context. (*for example, Flight AA123 Example Airways New York to Manchester 01.01.2018*)
- If a flight/travel context is listed on HPZone: check HPZone to ascertain whether the index had likely or confirmed measles as assessed by PHE
- If a flight/travel context is NOT listed on HPZone: further investigation may be needed to ascertain whether the reported index case has been notified and had likely or confirmed measles as assessed by PHE.
- In either circumstances follow the PHE National Measles Guidelines to risk assess the contact's exposure to the index case (<https://www.gov.uk/government/publications/national-measles-guidelines>).
- Follow the PHE measles post exposure prophylaxis guidance for contacts of likely or confirmed measles cases in the UK as appropriate. (<https://www.gov.uk/government/publications/measles-post-exposure-prophylaxis>)

The UK International Health Regulations (IHR) National Focal Point are regularly contacted by foreign authorities with information regarding the following:

- UK-based travellers who have been diagnosed with measles while travelling abroad but were infectious prior to their departure
- UK-based travellers who may have been exposed to cases of measles (and other infectious diseases) while travelling abroad
- Confirmed cases of measles from other countries who travelled within the UK whilst infectious prior to returning to their country.

In these circumstances the information will be passed on to the HPT and HPTs will be requested by the UK IHR NFP to send a warn and inform message to contacts resident in their area or to follow up with contacts as per their usual protocol.

Appendix A – Contact tracing evidence review

Background

During the refresh of these airline guidance which were first published by the Health Protection Agency in 2012 an evidence review was undertaken. International guidance on infectious disease in aircrafts and the published literature were reviewed to ensure that the guidance on contract tracing were both feasible and evidence based.

International guidance on infectious disease in aircraft

Risk Assessment Guidance for Infectious Diseases transmitted on Aircraft
ECDC initiated the Risk Assessment Guidance for Infectious Diseases transmitted on Aircraft (RAGIDA) project in 2007. The resulting disease specific guidance was published in Jan 2011, following a systematic review of published evidence, consultation with expert panels and a review of risk assessment guidance in current existence

The ECDC guidance advises that contact tracing for measles cases is strongly recommended if post exposure prophylaxis can still protect susceptible persons, prevent complications and limit further transmission – provided that risk assessment, available resources, and the feasibility of measles control allow that effort.

An algorithm for contact tracing recommends that this should be considered if the index case is a probable or laboratory confirmed measles (according to EU definition), or likely to have measles based on epidemiological links AND the case has travelled whilst infectious (4 days prior to 4 days post onset of rash) AND the flight has occurred within the previous 5 days. 5 days is identified as the limit to implement appropriate public health action (i.e. 6 days for administration of human immunoglobulin minus day of organisation).

Contact tracing after 5 days is recommended as an option if the following criteria are met:

- infectious case
- incubation period not elapsed
- information of passengers available
- evidence of transmission in the country of origin
- measles elimination achieved or within reach of country of arrival
- resources available.

ECDC recommend that contact tracing should be considered for all passengers and crew, but that priority should be given to children below 2 years of age, pregnant women and immunocompromised patients.

Further practicalities of action are discussed in brief, recommending that contact tracing should commence with children below the age of 2, then passengers in the same row as the index case and then row by row in each direction, as long as it remains possible to carry out PEP and effective containment.

ECDC acknowledge that the RAGIDA guidelines have inherent limitations, in particular, the limited evidence base for the majority of diseases. The majority of the studies identified for measles are observational and include limited information on the effectiveness or cost effectiveness of public health action/contact tracing.

Guidance has been developed from discussions of the expert panel taking into account the evidence available. They stress that the template is indicative only and should be adapted according to the specific situation.

International Air Transport Association (IATA) passenger contact tracing guidance

IATA published a position statement on passenger contact tracing in February 2018⁽⁶⁾. IATA regards passenger contact tracing as a controversial issue due to a lack of standardization and harmonization. WHO asked IATA, to draft the template for a Passenger Locator Form (PLF) that has been accepted by WHO and the International Civil Aviation Organisation (ICAO).

IATA does not advocate contact tracing, but state that if a public health authority decides to implement contact tracing the process should be generated and led by the public health authority. The data collection should be in electronic format and the request / requirement for data collection should be directly between the country requesting the data and the passenger ⁽⁶⁾.

AIRSAN – AIRSAN Project: Contact Tracing – Collaboration between the Public Health and the Aviation Sector

The AIRSAN project is an EU funded project that presents a joint perspective for public health authorities, airlines and airports and a joint mission statement of recommended common best practice in the area of contact tracing ⁽⁷⁾.

The document does not provide any specific suggestion on how and when to conduct contact tracing but acknowledges that, in certain circumstances, contact tracing measures are needed to be initiated to contain the spread of a communicable disease.

The main discussion point of the guidance is regarding the availability of contact details of passengers. Airline operators have access to contact information from their travel booking systems, the so-called Passenger Name Record (PNR) data.

PNRs are individual airline tools, so, while the basis of PNRs is similar, the information may vary significantly from one airline to the other. PNR data are used as reservation data for the operating airline and are likely to contain telephone numbers and email addresses. However these data may be variable between airlines and not necessarily validated.

Evidence review

Evidence of transmission during air travel

A recently updated literature review (first conducted in 2011) of published evidence of measles transmission during air travel identified eight case reviews. There is evidence to suggest that secondary cases can occur during ⁽⁸⁻¹³⁾ but also from contact in departure lounges and airports ^(8, 12, 14). Secondary cases have been identified from contact tracing of confirmed cases in adjacent seating and other rows within the same aircraft ^(8, 10, 12-14). Whilst it is presumed that those at most risk of illness are susceptible individuals without prior immunity, there are documented reports of illness in previously vaccinated passengers ^(9, 13) and airport staff ⁽¹²⁾. In the published literature secondary cases are reported during a variety of international and domestic flights indicating that the duration of contact required is variable, consistent with the highly infectious nature of measles.

A confirmed case identified in an air stewardess also highlights the potential of occupational exposure, although all secondary cases reported in this review were healthcare workers and no other secondary cases on flights were identified ⁽¹¹⁾.

Two published reports ^(15, 16) demonstrate a lack of secondary cases despite extensive contact tracing up to 21 days after the exposure ⁽¹⁵⁾. Both studies report high proportions of previously vaccinated passengers or passengers with natural immunity. In a survey described by Amornkul et al ⁽¹⁵⁾ only one passenger of 336 on board, received immunoglobulin despite extensive efforts to contact trace.

Evidence of cost/ resources required to contact trace

Two published studies detail the resources required to implement contact tracing ^(16, 17). Estimates include a mean time from exposure to contact of 8 days (range 58 hours to 316) with only two individuals contacted within 72 hours, the optimal time period for vaccine administration ⁽¹⁷⁾.

An estimated 2525 hours of personnel time were expended on public health actions, including reviewing flight manifests, contacting the exposed passengers, setting up vaccination clinics, a toll free information line in one contact tracing exercise ⁽¹⁶⁾. The total estimated cost for delivering such an intervention is \$142,452⁽¹⁶⁾. Two secondary cases were identified, an unvaccinated close contact and a person who had previously had two doses of vaccine but sat next to the index case for 2 hours on a small plane prior to the flight being investigated. The authors estimate that finding a single case of measles costs \$70-30,000 (2004 costs) ⁽¹⁶⁾.

Discussion

Risk of transmission

Review of the literature demonstrates that transmission of measles can occur through air travel with risk of severe disease if a vulnerable individual is exposed e.g. an immunocompromised patient, a pregnant woman, or an infant.

Secondary cases are likely to occur in susceptible individuals travelling on the same airplane or through contact in the airport prior to departure. The risk of transmission is not limited to those passengers in adjacent seats to the case - any passenger or crew member may be at risk of infection. Transmission to vaccinated individuals is unusual but not impossible.

Identifying and contacting passengers

The number of vulnerable passengers is difficult to estimate and such passengers are impossible to identify without an individual contact. Passenger Name Record (PNR) data are most likely to be useful in contacting passengers. These data are held by airlines and airlines are best placed to initiate contact with their passengers and crew.

The resources required to implement targeted contact tracing have been described as extensive and at high cost to public health agencies, often with little evidence of additional case ascertainment. Sending a mass email or text message to all potential exposed crew and passengers is a more feasible and resource efficient approach.

Enabling timely intervention

If the objective is to provide timely prophylaxis then interventions offered for contacts of cases of measles on planes should be in line with current PHE guidance. Human immunoglobulin is proven to be effective in high risk groups if administered within 6 days of exposure. However experience of contact tracing has found this timescale

sometimes difficult to achieve due to delays in identifying the index case and in the sharing of information.

If the objective is to detect secondary cases at an early stage then we require tracing to be conducted within the incubation period (7-21 days). Experience suggests that this timescale is achievable.

Both of these objectives may be met by sending an email or text message to all potential exposed crew and passengers as again this serves not only to rapidly identify vulnerable groups but also to remind those who are unvaccinated to receive their MMR vaccine. Additionally, by rapidly contacting potentially exposed cases, public health authorities could provide appropriate health messages or interventions to prevent tertiary spread in the wider community.

Conclusion

The airline should send a warn and inform text/email to all passengers crew with a link to the PHE webpage on [Information for passengers and crew on a flight with a case of infectious measles](#).

Appendix B: Reporting measles with international /air travel

Please send the following information for each likely infectious measles case to the UK International Health Regulations (IHR) National Focal Point (NFP) at PHE Colindale: ihrnfp@phe.gov.uk, and the Immunisation and Countermeasures Department: immunisation.lead@phe.gov.uk by email promptly. Please complete as far as practicable.

CASE DETAILS

- 1 Case name
- 2 Case contact information (address, telephone, email)
- 3 Date of birth
- 4 Onset of rash
- 5 Is the likely case microbiologically confirmed? (Please give test results and date where available)
- 6 Did the case undertake international travel during the infectious period (i.e. 4 days before to 4 days after onset of rash)?

TRAVEL DETAILS (Enter separately for each leg of travel i.e. each flight)

- 7 Date of travel
- 8 Airline
- 9 Flight number
- 10 Start and end destinations
- 11 Seat number of case if available

12 WAS TRAVEL CONFINED TO AN ENDEMIC COUNTRY? Y/N

If no, please complete questions 14- 17, supplying details of accommodation and places visited abroad (2 weeks prior to rash onset to 4 days after) – if obtainable. Continue on a separate sheet as necessary.

COUNTRY/ACCOMODATION DETAILS

- 13 Country
- 14 Name and address of accommodation
- 15 Date arrived
- 16 Date departed

Appendix C: Use of Congregation for Plane flights

Air flights and other travel should be added to HPZone as 'ad-hoc' contexts. For simplicity and to allow consistency they should be recorded on HPZone as a 'Congregation'.

Select the required type of Context ...	
	Foreign Country (Travel, Immigration)
	Foreign Location (Travel, Immigration; Province, City, Town or Resort)
	Pre-school Nursery
	School
	College/University
	Hospital (as a possible source of infection)
	Care Home
	Prison or Detention Centre
	Unlisted Managed Context
	Olympics
	Restaurant/Food Outlet
	Workplace (Factory, Plant, Institution, Business premises etc)
	Visitor Attraction
	Congregation (An ad hoc gathering i.e. at an event, in a public space or on a plane etc.)
	Environment Exposure (Rivers, Lakes, Farms, Animal Populations etc.)

When adding or searching for a travel related context please use format:

Flight number, airline name, departing, landing, date of flight [dd.mm.yyyy] to facilitate easy look up of the context, for example, *Flight AA123 Example Airways New York to Manchester 01.01.2018*.



Appendix D Sample 'warn and inform' letter/email to passengers or airline staff

Link to information: <https://www.gov.uk/government/publications/measles-public-health-response-to-infectious-cases-travelling-by-air/information-for-passengers-and-crew-on-a-flight-with-a-case-of-infectious-measles>

1. Information for passengers and crew on a flight with a case of infectious measles

This information is only intended for people who have been informed by Public Health England 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 page do not apply to you, and you should contact your doctor if you have any queries about measles.

2. About 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.

3. 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.

4. Those who need 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 6 months of age, and you have been told by PHE or the 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 3 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 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 Team.

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

Further information on measles is available at

<http://www.nhs.uk/conditions/measles/Pages/Introduction.aspx>

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