



Public Health
England

Protecting and improving the nation's health

Global high consequence infectious disease events Monthly update

December 2019

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Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000

www.gov.uk/phe

Twitter: [@PHE_uk](https://twitter.com/PHE_uk)

Facebook: www.facebook.com/PublicHealthEngland

Prepared by: Emerging Infections and Zoonoses Section, PHE

For queries relating to this document, please contact: epiintel@phe.gov.uk

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Introduction

This monthly report provides detailed updates on known high consequence infectious disease (HCID) events around the world.

This report details all the HCID pathogens that are covered during epidemic intelligence activities. The report is divided into 2 sections. The first contains contact and airborne HCIDs that have been specified for the HCID Programme by NHS England. The second section contains additional HCIDs that are important for situational awareness.

Each section consists of 2 tables of known pathogens and includes descriptions of recent events. A third table will be included in the second section when undiagnosed disease events occur that could be interpreted as potential HCIDs.

Likelihood assessment

Included for each disease is a 'likelihood assessment'; the likelihood of a case occurring in the UK, based on past UK experience and the global occurrence of travel-associated cases. There are 3 categories currently – LOW, VERY LOW and EXCEPTIONALLY LOW. This assessment is as of January 2019.

When considering clinical history, it is important to remember that cases can and do occur outside of the usual distribution area. It is not possible to assess accurately the risk of cases presenting to healthcare providers in England, but taken together it is inevitable that occasional imported cases will be seen.

Events found during routine scanning activities that occur in endemic areas will briefly be noted in the report. Active surveillance, other than daily epidemic intelligence activities, of events in endemic areas will not be conducted (for example, actively searching government websites or other sources for data on case numbers).

The target audience for this report is any healthcare professional who may be involved in HCID identification.

Section 1. Incidents of significance of primary HCIDs

Ebola virus disease – outbreak in North Kivu and Ituri provinces, Democratic Republic of the Congo (DRC)

Contact HCIDs				
Infectious disease	Geographical risk areas	Source(s) and route of infection:	UK experience to date	Likelihood assessment
Crimean-Congo haemorrhagic fever (CCHF)	<p>Endemic in Central and Eastern Europe, Central Asia, the Middle East, East and West Africa. First locally acquired case in Spain 2016 (Risk Assessment).</p>	<ul style="list-style-type: none"> bite from or crushing of an infected tick contact with blood or tissues from infected livestock contact with infected patients, their blood or body fluids 	Two confirmed cases (ex-Afghanistan 2012; ex-Bulgaria 2014).	LOW – Rarely reported in travellers (23 cases in world literature).
	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> India – retrospectively reported 5 cases for September (2), October (1) and November (2). 			
Ebola virus disease	<p>Sporadic outbreaks in Western, Central and Eastern Africa.</p>	<ul style="list-style-type: none"> contact/consumption of infected animal tissue (such as, bushmeat) contact with infected human blood or body fluids 	Four confirmed cases (1 lab-acquired in UK in 1976; 3 HCWs associated with West African epidemic 2014 to 2015).	VERY LOW – Other than during the West Africa outbreak, exported cases are extremely rare.
	<p>Ongoing outbreak</p> <p>The decline in case incidence seen in November was not sustained. During December 2019, there were 67 newly confirmed cases compared with 39 the previous month. The upsurge in violence at the end of November severely disrupted contact tracing and follow up, and consequently lead to increased</p>			

	<p>transmission in the first 2 weeks of December. As of 31 December 2019, there had been 3,262 confirmed and 118 probable cases across 8 health zones (of the 29 ever affected) in North Kivu, Ituri and South Kivu provinces. In addition to the newly confirmed EVD cases, one individual relapsed 6 months after their primary infection. This relapse was the source of an extended single chain of transmission that had by 24 December included 29 cases. Progress towards zero cases is slow and likely to remain challenging.</p> <p>The risk for the UK population has not changed and is currently assessed as negligible to very low.</p>			
<p>Lassa fever</p>	<p>Endemic in sub-Saharan West Africa</p>	<ul style="list-style-type: none"> • contact with excreta, or materials contaminated with excreta of infected rodent • inhalation of aerosols of excreta of infected rodent • contact with infected human blood or body fluids 	<p>Fourteen cases since 1971, all ex-West Africa.</p>	<p>LOW – Overall it is the most common imported VHF but still rare (global total 35 reported since 1969).</p>
	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> • Nigeria – 40 confirmed cases in the 4 weeks to 31 December 2019, mostly from Edo and Ondo states – as of 31 December, 793 cases had been confirmed in 2019. Weekly case numbers have been at low level since week 15 (April) • Liberia – reported 2 new confirmed cases during December • Sierra Leone – reported 3 confirmed cases between 30 October and 6 December 			
<p>Marburg virus disease</p>	<p>Sporadic outbreaks in Central and Eastern Africa</p>	<ul style="list-style-type: none"> • contact with infected blood or body fluids 	<p>No known cases in UK.</p>	<p>VERY LOW – 5 travel-related cases in the world literature.</p>
	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> • no cases reported since November 2017 			

Airborne HCIDs				
Infectious disease	Geographical risk areas	Source(s) and route of infection:	UK experience to date	Likelihood assessment
Influenza A(H7N9) virus (Asian lineage)	All human infections acquired in China .	<ul style="list-style-type: none"> close contact with infected birds or their environments close contact with infected humans (no sustained human-to-human transmission) 	No known cases in UK.	VERY LOW (PHE Risk Assessment).
	Recent cases/outbreaks: <ul style="list-style-type: none"> no confirmed or suspected human cases of H7N9 were reported in December 			
Influenza A(H5N1) virus	Human cases predominantly in SE Asia, but also Egypt, Iraq, Pakistan, Turkey, Nigeria. Highly pathogenic H5N1 in birds much more widespread, including UK.	<ul style="list-style-type: none"> close contact with infected birds or their environments close contact with infected humans (no sustained human-to-human transmission) 	No known cases in UK.	VERY LOW (PHE Risk Assessment).
	Recent cases/outbreaks: No confirmed or suspected human cases of H5N1 were reported in December.			
Middle East respiratory syndrome (MERS)	The Arabian Peninsula – Yemen, Qatar, Oman, Bahrain, Kuwait, Saudi Arabia and United Arab Emirates	<ul style="list-style-type: none"> airborne particles direct contact with contaminated environment direct contact with camels 	Five cases in total; 3 imported cases (2012, 2013 and 2018); 2 secondary cases in close family members of 2 nd case; 3 deaths	VERY LOW (PHE Risk Assessment).

	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> • 4 cases, including 3 deaths, were reported by Saudi Arabia during December, bringing the total reported here during 2019 to 205, and the global total to 2106 cases, including 783 related deaths. • 1 case was reported from United Arab Emirates at the end of December. • at the end of December, WHO confirmed 3 cases in Qatar with onsets in November 			
<p>Monkey pox</p>	<p>West and Central Africa</p>	<ul style="list-style-type: none"> • close contact with infected animal or human • indirect contact with contaminated material, such as bed linen 	<p>Three cases in total; 2 imported (Sept 2018) and 1 nosocomial transmission.</p>	<p>VERY LOW – Reported outside Africa for the first time in 2018 (2 in UK and 1 in Israel).</p>
	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> • DRC: 269 suspected cases were reported bringing the total to 5117 for 2019, including 104 deaths, across 19 provinces. • Nigeria reported 2 suspected cases in November, neither was confirmed. • Cameroon reported 2 cases at the end of December, of whom 1 died 			

Nipah virus	Outbreaks in Bangladesh and India; SE Asia at risk.	<ul style="list-style-type: none"> • direct or indirect exposure to infected bats; consumption of contaminated raw date palm sap • close contact with infected pigs or humans 	No known cases in UK.	EXCEPTIONALLY LOW – No travel-related infections in the literature.
	Recent cases/outbreaks: <ul style="list-style-type: none"> • no confirmed or suspected cases were reported in December 			
Pneumonic plague (<i>Yersinia pestis</i>)	Predominantly sub-Saharan Africa but also Asia, North Africa, South America, Western USA	<ul style="list-style-type: none"> • flea bites • close contact with infected animals • contact with human cases of pneumonic plague 	Last outbreak in UK was in 1918.	VERY LOW - Rarely reported in travellers.
	Recent cases/outbreaks: <ul style="list-style-type: none"> • no confirmed or suspected cases were reported in December 			
Severe acute respiratory syndrome (SARS)	Currently none; 2 outbreaks originating from China 2002 and 2004.	<ul style="list-style-type: none"> • airborne particles • direct contact with contaminated environment 	Four cases related to 2002 outbreak.	EXCEPTIONALLY LOW – Not reported since 2004.
	Recent cases/outbreaks: <ul style="list-style-type: none"> • no confirmed or suspected human cases reported since 2004 			

Section 2. Incidents of significance of additional HCIDs

Contact HCIDs				
Infectious disease	Geographical risk areas	Source(s) and route of infection:	UK experience to date	Likelihood assessment
Argentine haemorrhagic fever (Junin virus)	Argentina (central). Limited to the provinces of Buenos Aires, Cordoba, Santa Fe, Entre Rios and La Pampa.	<ul style="list-style-type: none"> • direct contact with infected rodents • inhalation of infectious rodent fluids and excreta • person-to-person transmission has been documented 	No known cases in UK.	EXCEPTIONALLY LOW – Travel-related cases have never been reported.
	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> • no new Argentine haemorrhagic fever data were published in December – according to a media report quoting the Ministry of Health, in 2019 there were a total of 13 confirmed cases with 3 deaths in Argentina 			
Bolivian haemorrhagic fever (Machupo virus)	Bolivia – limited to the Department of Beni, municipalities of the provinces Iténez (Magdalena, Baures and Huacaraje) and Mamoré (Puerto Siles, San Joaquín and San Ramón)	<ul style="list-style-type: none"> • direct contact with infected rodents • inhalation of infectious rodent fluids and excreta • person-to-person transmission has been documented 	No known cases in UK.	EXCEPTIONALLY LOW – Travel-related cases have never been reported.
	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> • no new cases were reported in December 			

Lujo virus disease	<p>Single case acquired in Zambia lead to a cluster in South Africa in 2008.</p>	<ul style="list-style-type: none"> • presumed rodent contact (excreta, or materials contaminated with excreta of infected rodent) • person-to-person via body fluids 	<p>No known cases in UK.</p>	<p>EXCEPTIONALLY LOW – a single travel related case; not reported anywhere since 2008.</p>
	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> • no confirmed or suspected human cases reported since 2008 			
Severe fever with thrombocytopenia syndrome (SFTS)	<p>Mainly reported from China (southeastern), Japan and Korea; first ever cases reported in Vietnam and Taiwan in 2019.</p>	<ul style="list-style-type: none"> • presumed to be tick exposure • person-to-person transmission described in household and hospital contacts, via contact with blood/bloodstained body fluids 	<p>No known cases in UK.</p>	<p>EXCEPTIONALLY LOW – Not known to have occurred in travellers.</p>
	<p>Recent cases/outbreak:</p> <ul style="list-style-type: none"> • No cases were reported in December <p>(China does not provide publically available data on cases of SFTS.)</p>			

Airborne HCIDs				
Infectious disease	Geographical risk areas	Source(s) and route of infection:	UK experience to date	Likelihood assessment
Andes virus (Hantavirus)	Chile and southern Argentina.	<ul style="list-style-type: none"> rodent contact (excreta, or materials contaminated with excreta of infected rodent) person-to-person transmission described in household and hospital contacts 	No known cases in UK.	VERY LOW – Rare cases in travellers have been reported.
	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> Chile reported 2 hantavirus cases in December, bringing the total for 2019 to 69 cases – this total is higher than expected, given the median for the last 5 years (Chile no longer reports specific hantaviruses separately) 			
Influenza A(H5N6) virus	Mostly China (March 2017 new strain in Greece, and subsequently found in Western Europe).	<ul style="list-style-type: none"> close contact with infected birds or their environments 	No known cases.	VERY LOW – Not known to have occurred in travellers (PHE risk assessment).
	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> no confirmed or suspected human cases of H5N6 were reported in December 			
Influenza A(H7N7) virus	Sporadic occurrence including Europe and UK.	<ul style="list-style-type: none"> close contact with infected birds or their environments close contact with infected humans (no 	No known cases.	VERY LOW – Human cases are rare, and severe disease even rarer.

		sustained human-to-human transmission)		
	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> no confirmed or suspected human cases of H7N7 were reported in December 			

Undiagnosed Disease Events	
Wuhan, Hubei Province, China	<p>In late December, an outbreak of viral pneumonia of unknown aetiology was identified in Wuhan. Many, but not all cases were linked with a seafood and live animal market in the city (Huanan South China Seafood Market). The cause was subsequently identified as a novel coronavirus.</p> <p>A full update will be provided in the January 2020 summary.</p>