



Public Health
England

Protecting and improving the nation's health

Global high consequence infectious disease events Monthly update

January to March 2020

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Published May 2020

PHE Publications

gateway number: GW-1264

PHE supports the UN

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Introduction

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

NOTE: due to the COVID-19 pandemic, a report covering January, February and March 2020 has been produced, rather than the usual monthly reports.

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 2 cases for November 2019 in January 2020 Uganda reported 1 confirmed and 4 suspected cases in January 2020 Mali reported 18 suspected CCHF cases, including 9 deaths, between 5 January and 28 February South Africa reported 2 confirmed cases in February 2020 Pakistan reported 2 cases in March 2020 			
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) 	Four confirmed cases (1 lab-acquired in UK in 1976; 3 HCWs associated with West	VERY LOW – Other than during the West Africa outbreak, exported cases are extremely rare.

		<ul style="list-style-type: none"> • contact with infected human blood or body fluids 	African epidemic 2014 to 2015).	
	<p>Getting to zero: In January 2020, 42 newly confirmed cases of EVD were reported, a decrease on the previous month's total of 67. In February, a total of 6 confirmed cases were reported, the last one on 17 February. As per WHO criteria for declaring an EVD outbreak over, 42 days need to pass without any further identified cases; the 42-day count starts the day after the day on which the second negative PCR sample was collected. The earliest possible date for declaration was 13 April 2020 and no confirmed cases were reported in March. The risk for the UK population is currently assessed as negligible.</p>			
Lassa fever	Endemic in sub-Saharan West Africa	<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 	Fourteen cases since 1971, all ex-West Africa.	LOW – Overall it is the most common imported VHF but still rare (global total 35 reported since 1969).
	<p>Recent cases/outbreaks:</p> <ul style="list-style-type: none"> • Nigeria reported 365 confirmed cases in the 5 weeks to 31 January 2020. In February, there were 411 confirmed cases with 50 deaths, and in March, 179 confirmed cases with 22 deaths, mostly from Edo, Ondo and Ebonyi states – the number of suspected cases has almost doubled compared to that reported for the same period in 2019 • Liberia reported 39 confirmed cases and 17 deaths (43.6% CFR) from 1 January to the end of March – overall there has been a significant increase in number of new cases since the beginning of 2020 • Sierra Leone – reported a single confirmed case in January 2020 • Benin- reported 4 confirmed cases, with one death in February 2020 			

Marburg virus disease	Sporadic outbreaks in Central and Eastern Africa	<ul style="list-style-type: none"> contact with infected blood or body fluids 	No known cases in UK.	VERY LOW – 5 travel-related cases in the world literature.
	Recent cases/outbreaks: <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 January, February or March 			
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: <ul style="list-style-type: none"> no confirmed or suspected human cases of H5N1 were reported in January February or March 			
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"> • Saudi Arabia reported 15 cases, including 4 deaths in January, 6 were from a health-care related cluster – in February there were 18 cases (3 deaths) and 15 cases (5 deaths), were reported during March • United Arab Emirates reported 2 cases with onset in December, at the end of January • 1 case was reported from Qatar mid-February 			
<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 in January 204 suspected cases (2 deaths); in February 246 suspected cases (2 deaths);and in March, 272 suspected cases (8 deaths) – by week 12, a total of 954 suspected cases (20 deaths) had been reported in 2020 • Nigeria reported 6 suspected cases in January, 2 in February and 3 in March 			

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"> • during January, 6 cases including 4 deaths, were reported in Bangladesh • no confirmed or suspected cases reported in February or March 			
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 January or March • 6 suspected cases, including 5 deaths, were reported in the DRC in February 			
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"> • In January Belgium reported 1 case in a traveller from Argentina • Argentina reported 13 cases and 3 deaths for the year 2019 in January • no confirmed or suspected cases were reported in February or March 			
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"> • In January, Brazil confirmed the first case in 20 years, in a patient with no history of international travel • no confirmed or suspected cases were reported in February or March 			
<p>Lujo virus disease</p>	<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 			
<p>Severe fever with thrombocytopenia syndrome (SFTS)</p>	<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 January, February or March (consistent with previous years) (China does not provide publicly available data on cases of SFTS) 			

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.
	Recent cases/outbreaks: <ul style="list-style-type: none"> Argentina reported 1 hantavirus case in January Bolivia reported 1 case of hantavirus in January no confirmed or suspected cases were reported in February or March 			
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).
	Recent cases/outbreaks: <ul style="list-style-type: none"> no confirmed or suspected human cases of H5N6 were reported in January, February or March 			
Influenza A(H7N7) virus	Sporadic occurrence including Europe and UK.	<ul style="list-style-type: none"> close contact with infected birds or their environments 	No known cases.	VERY LOW – Human cases are rare, and severe disease even rarer.

	<ul style="list-style-type: none"> close contact with infected humans (no 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 January, February or March 		

Coronavirus disease COVID-19	
<p>Global spread</p> <p>Change in HCID designation</p>	<p>On 9 January, WHO announced that a novel coronavirus was responsible for the outbreak of viral pneumonia first reported on 31 December 2019 in Wuhan City, Hubei Province in central China. The first case outside of mainland China was reported on 13 January in Thailand, in an individual who had recently been in Wuhan. On 30 January, the International Health Regulations (2005) Emergency Committee agreed that the outbreak meet the criteria for a Public Health Emergency of International Concern. By 31 January 2020, 9,826 cases had been confirmed globally of which 99% were in China. By 29 February, there were 85,403 cases globally, the majority (79,394) still in China. During March however, there were dramatic and widespread increases with a global total of 750,890 cases and over 36,000 deaths by the end of the month.</p> <ul style="list-style-type: none"> guidance is available in the Health Professionals collection on GOV.UK see also UK Surveillance reports see features of 16,749 hospitalised UK patients with COVID-19 [pre-print article] <p>In January 2020, the 4 UK public health agencies made a precautionary interim recommendation, based on the limited data available at the time, that COVID-19 should be considered to be an HCID, adding that a review of HCID status would take place once further information had accumulated. That review took place in March 2020 and representatives from all 4 public health agencies were unanimous in their opinion that COVID-19 should no longer be on the list of (Airborne) HCIDs. This</p>

view was supported by the Advisory Committee on Dangerous Pathogens, and the new recommendation was accepted by DHSC and NHS England and NHS Improvement.

Key changes that led to this decision were:

- greater knowledge about fatality rates globally; based on international data available for cases where outcomes are known, the fatality rate is low overall, at around 1%
- greater clinical awareness and access to specific laboratory tests mean that it is much less difficult to recognise and detect cases rapidly

This change in status does not detract from the seriousness of the COVID-19 pandemic, which is reflected by the fact that COVID-19 has its own separate pandemic response programme.