Global high consequence infectious disease events
Monthly update

May 2018
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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 two 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 two 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 three categories currently – LOW, VERY LOW and EXCEPTIONALLY LOW. This assessment is as of January 2018.

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 (eg, 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.
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Section 1. Incidents of significance of primary HCIDs

- Ebola virus disease – outbreak in DRC
- Nipah virus – outbreak in India

<table>
<thead>
<tr>
<th>Contact HCIDs</th>
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<tbody>
<tr>
<td><strong>Infectious disease</strong></td>
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</table>
| Crimean-Congo haemorrhagic fever (CCHF) | Endemic in Central and Eastern Europe, Central Asia, the Middle East, East and West Africa. First locally acquired case in Spain 2016. (Risk Assessment) | - 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 | 2 confirmed cases (ex-Afghanistan 2012; ex-Bulgaria 2014) | LOW - Rarely reported in travellers (22 cases in world literature) |
| Ebola virus disease | Sporadic outbreaks in Western, Central and Eastern Africa | - Contact/consumption of infected animal tissue (eg bushmeat)  
- Contact with infected human blood or body fluids | 4 confirmed cases (one lab-acquired in UK in 1976; 3 HCWs associated with West African epidemic 2014-15) | VERY LOW - Other than during the West Africa outbreak, exported cases are extremely rare |

Recent cases/outbreaks:
- Afghanistan has reported 51 cases, including 6 deaths, since the beginning of the year as part of seasonal transmission
- Pakistan and Russian media reported new cases in May as part of seasonal transmission
- Iran media reported 80 cases, including 5 deaths, since the beginning of the year
- Iraq and Uganda reported 1 new case in May. Both countries have previously reported cases
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<table>
<thead>
<tr>
<th>Recent cases/outbreaks:</th>
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<tbody>
<tr>
<td>On 08 May, the Democratic Republic of Congo declared an Ebola outbreak after 2 cases were confirmed in Bikoro, Equateur Province [map]. As of 31 May, a total of 55 cases have been reported (37 confirmed, 13 probable and 5 suspected) from three health zones in Equateur Province: Bikoro, Iboko and Wangata. A vaccination campaign using the rVSV-ZEBOV vaccine began on 21 May and over 800 people have been vaccinated in the three affected areas. This is the ninth Ebola outbreak in the DRC; the last in 2017 was small with only 4 confirmed cases. In contrast to previous outbreaks, one of the currently affected health zones, Wangata, is in Mbandaka, a Congo River city of &gt;1 million people with established transportation links. WHO therefore assessed the risk of further spread as very high at the national level. An IHR Emergency Committee convened on 18 May to consider whether current outbreak constitutes a public health event of international concern (PHEIC); their view was that conditions for a PHEIC have not currently been met.</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Lassa fever Endemic in sub-Saharan West Africa</th>
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<tbody>
<tr>
<td>- Contact with excreta, or materials contaminated with excreta of infected rodent</td>
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<tr>
<td>- Inhalation of aerosols of excreta of infected rodent</td>
</tr>
<tr>
<td>- Contact with infected human blood or body fluids</td>
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<tr>
<td>14 cases since 1971, all ex-West Africa</td>
</tr>
<tr>
<td>LOW - Overall it's the most common imported VHF but still rare (global total 33 reported since 1969)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Recent cases/outbreaks:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Nigeria continues to report sporadic Lassa fever cases with 12 confirmed cases in May (compared to 18 in April). 4 states (Edo, Ebonyi, Taraba and Adamawa) remain active</td>
</tr>
<tr>
<td>• Liberia reported 33 new suspected cases in May, of which 7 were confirmed. Bong, Grand Bassa and Nimba counties are considered active</td>
</tr>
<tr>
<td>Marburg virus disease</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td><strong>Recent cases/outbreaks:</strong></td>
</tr>
<tr>
<td>• no cases reported since November 2017</td>
</tr>
</tbody>
</table>
### Airborne HCIDs

<table>
<thead>
<tr>
<th>Infectious disease</th>
<th>Geographical risk areas</th>
<th>Source(s) and route of infection</th>
<th>UK experience to date</th>
<th>Likelihood assessment</th>
</tr>
</thead>
</table>
| **Influenza A(H7N9) virus (Asian lineage)** | All human infections acquired in China | - Close contact with infected birds or their environments  
- Close contact with infected humans (no sustained human-human transmission) | No known cases in UK | VERY LOW (PHE Risk Assessment) |

**Recent cases/outbreaks:**
- no confirmed human cases of H7N9 were reported in China in May, despite the occurrence of avian outbreaks. For comparison, in the same time period last year there were 72, and 5 in 2016

<table>
<thead>
<tr>
<th>Infectious disease</th>
<th>Geographical risk areas</th>
<th>Source(s) and route of infection</th>
<th>UK experience to date</th>
<th>Likelihood assessment</th>
</tr>
</thead>
</table>
| **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 | - Close contact with infected birds or their environments  
- Close contact with infected humans (no sustained human-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 May  
- Nepal reported avian outbreaks of HPAI H5N1 in May, without any associated human cases
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### Middle East respiratory syndrome (MERS)

<table>
<thead>
<tr>
<th>Location</th>
<th>Transmission Routes</th>
<th>Cases</th>
<th>Deaths</th>
<th>Risk Assessment</th>
</tr>
</thead>
</table>
| The Arabian Peninsula - Yemen, Qatar, Oman, Bahrain, Kuwait, Saudi Arabia and United Arab Emirates | - Airborne particles  
- Direct contact with contaminated environment  
- Direct contact with camels | 4 cases in total; 2 imported cases (2012 and 2013), two secondary cases in close family members of second case; 3 deaths | VERY LOW (PHE Risk Assessment) |

**Recent cases/outbreaks:**
- **Saudi Arabia** reported a household cluster of MERS in Narjan, the capital city of the Najran region in the southwest. 11 cases were reported and 81 people identified as contacts
- the first confirmed case in the **United Arab Emirates** (UAE) in 2018 was reported on 16 May. The case owns a camel farm and reported frequent travel to Saudi Arabia. The UAE last reported a case of MERS in December 2017

### Monkey pox

<table>
<thead>
<tr>
<th>Location</th>
<th>Transmission Routes</th>
<th>Cases</th>
<th>Deaths</th>
<th>Risk Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>West and Central Africa</td>
<td>- Close contact with infected animal or human; indirect contact with contaminated material eg bed linen</td>
<td>No known cases in UK</td>
<td>VERY LOW - Not reported outside Africa since 2003</td>
<td></td>
</tr>
</tbody>
</table>

**Recent cases/outbreaks:**
- in May, **DRC** reported 269 cases of monkeypox, significantly less than the number reported in April (over 600). Since 1 January 2018, a total of 1,210 suspected cases including 28 deaths have been reported from 14 provinces. 34 cases have been confirmed
- an outbreak was declared in the **North-west Region of Cameroon** on 18 May. As of 30 May, a total of 16 cases have been reported in 5 of 10 regions, but only one case confirmed. Cameroon last reported a human case in 1989, though cases among captive chimpanzees were reported last year.
### Nipah virus

**Outbreaks in Bangladesh and India; SE Asia at risk.**
- Direct or indirect exposure to infected bats; consumption of contaminated raw date palm sap.
- Close contact with infected pigs or humans.

**Recent cases/outbreaks:**
In early May, authorities in Kerala, India were notified of an unexpected cluster of deaths among three family members in Perambra town, Kozhikode district; all had displayed signs of viral encephalitis. Nipah virus was subsequently confirmed by PCR. As of 31 May, a total of 25 clinically compatible cases (17 confirmed and 8 suspected), including 16 deaths, have been reported from 2 districts within Kerala [map]; Kozhikode (13 confirmed) and Malappuram (4 confirmed). Both acute respiratory distress syndrome and encephalitis have been observed, and most cases were acquired via person to person transmission. The last confirmed case was reported on 17 May. This is the third known outbreak in India, the first from southern India and the first in the country for 11 years. The current outbreak appears to be small and appropriate public health measures have been rapidly implemented to prevent further spread. WHO assessed the risk of further spread at national and regional level to be low.

**No known cases in UK**
- EXCEPTIONALLY LOW
  - No travel related infections in the literature

### Pneumonic plague (Yersinia pestis)

**Predominantly sub-Saharan Africa but also Asia, North Africa, South America, Western USA**
- Flea bites
- Close contact with infected animals
- Contact with human cases of pneumonic plague

**Recent cases/outbreaks:**
- nothing of significance

**Last outbreak in UK 1918**
- VERY LOW
  - Rarely reported in travellers (PHE risk assessment for this outbreak)
### Severe acute respiratory syndrome (SARS)

<table>
<thead>
<tr>
<th></th>
<th>Currently none; two outbreaks originating from China 2002 and 2004</th>
<th>- Airborne particles</th>
<th>- Direct contact with contaminated environment</th>
<th>4 cases related to 2002 outbreak</th>
<th>VERY LOW - Global spread but not reported since 2004</th>
</tr>
</thead>
</table>

**Recent cases/outbreaks:**
- no suspected or confirmed human cases reported since 2004
Section 2. Incidents of significance of additional HCIDs

- Nothing of significance

<table>
<thead>
<tr>
<th>Contact HCIDs</th>
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</thead>
<tbody>
<tr>
<td><strong>Infectious disease</strong></td>
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<tr>
<td>Argentine haemorrhagic fever (Junin virus)</td>
</tr>
</tbody>
</table>

**Recent cases/outbreaks:**
- Nothing of significance. Argentina has not provided an update since the end of February 2018

| 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) | - 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 |

**Recent cases/outbreaks:**
- No suspected or confirmed human cases reported in 2018
<table>
<thead>
<tr>
<th>Disease</th>
<th>Events/Transmission Details</th>
<th>UK Cases/Transmission</th>
<th>Risk Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lujo virus disease</strong></td>
<td>Single case acquired in Zambia lead to a cluster in South Africa in 2008.</td>
<td>No known cases in UK</td>
<td>VERY LOW - Single travel related case; not reported anywhere since 2008</td>
</tr>
<tr>
<td></td>
<td>- Presumed rodent contact (excreta, or materials contaminated with excreta of infected rodent)</td>
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<tr>
<td></td>
<td>- Person to person via body fluids</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recent cases/outbreaks:</strong></td>
<td>No suspected or confirmed human cases reported since 2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Severe fever with thrombocytopenia syndrome (SFTS)</strong></td>
<td>Only reported from China (southeastern), Japan and Korea</td>
<td>No known cases in UK</td>
<td>EXCEPTIONALLY LOW - Not known to have occurred in travellers</td>
</tr>
<tr>
<td></td>
<td>- Presumed to be tick exposure.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>- Person to person transmission described in household and hospital contacts, via contact with blood/bloodstained body fluids</td>
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</tr>
<tr>
<td><strong>Recent cases/outbreak:</strong></td>
<td>Japan reported 14 cases in May as part of seasonal transmission</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>South Korea reported 13 cases in May as part of seasonal transmission</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(China does not provide publically available data on cases of SFTS)</td>
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<td></td>
</tr>
<tr>
<td>Infectious disease</td>
<td>Geographical risk areas</td>
<td>Source(s) and route of infection</td>
<td>UK experience to date</td>
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</tbody>
</table>
| Andes virus (Hantavirus) | Chile and southern Argentina | - 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:**
- no suspected or confirmed human cases reported in May

(Argentina reports hantavirus detections generically so it is not possible to determine specifically any Andes virus infections)

| Influenza A(H5N6) virus | Mostly China (March 2017 new strain in Greece, and subsequently found in Western Europe) | - Close contact with infected birds or their environments  
- Close contact with infected humans (no sustained human-human transmission) | No known cases | VERY LOW - Not known to have occurred in travellers (PHE risk assessment) |

**Recent cases/outbreaks:**
- no suspected or confirmed human cases were reported in May
- Sweden reported avian outbreaks of HPAI H5N6 in May: no associated human cases
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### Influenza A(H7N7) virus

| Sporadic occurrence including Europe and UK | - Close contact with infected birds or their environments  
- Close contact with infected humans (no sustained human-human transmission) | No known cases | VERY LOW - Human cases are rare, and severe disease even rarer |
|--------------------------------------------|---------------------------------------------------------------|----------------|-------------------------------------------------------------|

**Recent cases/outbreaks:**
- no suspected or confirmed human cases of H7N7 were reported in May

### Undiagnosed Disease Events

- None to report