Global high consequence infectious disease events

Monthly update: December 2018
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Published January 2019
PHE Publications
gateway number: GW-86

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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 2018.

When considering clinical history, it is important to remember that cases can and do occur outside 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.
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Section 1. Incidents of significance of primary HCIDs

- Ebola virus disease – outbreak in North Kivu and Ituri provinces, DRC

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<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>
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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 | Two 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 (for example 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 |

Recent cases/outbreaks:
- Pakistan continued reporting sporadic cases in December
- Uganda reported 1 confirmed case among a healthcare worker in Masindi district in December
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Recent cases/outbreaks:
The outbreak in eastern DRC continued with increased incidence in December. As of 01 January, a total of 560 confirmed (+168 in the past month) and 48 probable cases have been reported across 16 health zones in North Kivu and Ituri provinces [map]. Fifty-five cases have been reported among health workers. Ten of the 16 affected health zones reported confirmed cases over the past 21 days, with most of cases centered around major urban centres and towns. Two new health zones reported cases in December: Nyankunde (in Ituri province) and Biena (in North Kivu province, north-west of Butembo). A large proportion of cases continue to be reported among those who were not previously registered as contacts. The response was again disrupted by community resistance, protests and attacks by armed groups. The risk for the UK population has not changed and is currently assessed as negligible-very low.

| Lassa fever | Endemic in sub-Saharan West Africa | - 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 | 14 cases since 1971, all ex-West Africa | LOW - Overall, it's the most common imported VHF but still rare (global total 33 reported since 1969) |
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<tr>
<th>Marburg virus disease</th>
<th>Recent cases/outbreaks:</th>
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<tr>
<td></td>
<td><strong>Sporadic outbreaks in Central and Eastern Africa</strong></td>
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<tr>
<td></td>
<td>- Contact with infected blood or body fluids</td>
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<tr>
<td></td>
<td>No known cases in UK</td>
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<tr>
<td></td>
<td>VERY LOW - 5 travel related cases in the world literature</td>
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**Recent cases/outbreaks:**
- Nigeria continues to report cases, with 41 confirmed in December (compared to 19 in November). Nine states remain active. Incidence is likely to continue to increase over the next few months in line with usual seasonality. In 2018, 633 confirmed cases were reported, out of 3,498 suspected cases in 23 states.
- Liberia reported 9 lassa fever cases in December, bringing the total reported in 2018 to 181 suspected cases, including 21 confirmed from 5 counties.
- Benin reported 3 confirmed cases in December. The index case lived in Taberou, Nigeria, but was a Benin national and treated in Benin. Two secondary cases were reported among family members.

**Recent cases/outbreaks:**
- No cases reported since November 2017.
<table>
<thead>
<tr>
<th>Airborne HCIDs</th>
<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 or suspected human cases of H7N9 were reported in China 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 | - 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 December  
• avian outbreaks were reported in India and Vietnam with no associated human cases | | | | |
| Middle East respiratory syndrome (MERS) | 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 | 5 cases in total; 3 imported cases (2012, 2013 and 2018), 2 secondary cases in close family members of second case; 3 deaths | VERY LOW (PHE Risk Assessment) |
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<tr>
<td>• 5 cases were reported by Saudi Arabia in December. Four cases reported contact with camels, including 1 who was also a household contact</td>
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| Monkey pox | West and Central Africa | - Close contact with infected animal or human  
- Indirect contact with contaminated material, for example bed linen | Three cases in total; 2 imported (September 2018) and 1 nosocomial transmission | VERY LOW |
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| • Central African Republic (CAR) continued to report sporadic cases. As of 23 December, CAR has reported 45 cases (an increase of 4 in December), including 25 confirmed, and 2 deaths since the beginning of the year  
• as of 13 December, Nigeria has reported a total of 311 cases, including 132 confirmed, from 26 states since the outbreak began in September 2017; 114 of which were reported in 19 states in 2018 | | | | |
<table>
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<tr>
<th>Infection</th>
<th>Location/Transmission</th>
<th>Recent cases/outbreaks</th>
<th>UK Status</th>
<th>Global Status</th>
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<tbody>
<tr>
<td>Nipah virus</td>
<td>Outbreaks in Bangladesh and India; SE Asia at risk</td>
<td>- Direct or indirect exposure to infected bats; consumption of contaminated raw date palm sap - Close contact with infected pigs or humans</td>
<td>No known cases in UK</td>
<td>EXCEPTIONALLY LOW - No travel related infections in the literature</td>
</tr>
<tr>
<td>Pneumonic plague (Yersinia pestis)</td>
<td>Predominantly sub-Saharan Africa but also Asia, North Africa, South America, Western USA</td>
<td>- Flea bites - Close contact with infected animals - Contact with human cases of pneumonic plague</td>
<td>Last outbreak in UK 1918</td>
<td>VERY LOW - Rarely reported in travellers</td>
</tr>
<tr>
<td>Severe acute respiratory syndrome (SARS)</td>
<td>Currently none; 2 outbreaks originating from China 2002 and 2004</td>
<td>- Airborne particles - Direct contact with contaminated environment</td>
<td>4 cases related to 2002 outbreak</td>
<td>VERY LOW - Global spread but not reported since 2004</td>
</tr>
</tbody>
</table>

**Recent cases/outbreaks:**
- no confirmed or suspected human cases reported in December
- Madagascar continued to report cases of plague as part of seasonal transmission. As of 29 December, a total of 69 confirmed cases, including 11 pneumonic and 20 deaths, have been reported from 14 districts across the country
- no confirmed or suspected human cases reported since 2004
### Section 2. Incidents of significance of additional HCIDs

- Nothing of significance

<table>
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<td><strong>Infectious disease</strong></td>
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| **Argentina haemorrhagic fever (Junin virus)** | Argentina (central). Limited to the provinces of Buenos Aires, Cordoba, Santa Fe, Entre Rios and La Pampa | - 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 |
| **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:**
- Argentina has not provided an update since the end of March 2018
- No confirmed or suspected human cases were reported in December
| **Lujo virus disease** | Single case acquired in Zambia lead to a cluster in South Africa in 2008 | - Presumed rodent contact (excreta, or materials contaminated with excreta of infected rodent)  
- Person to person via body fluids | No known cases in UK | VERY LOW - Single travel related case; not reported anywhere since 2008 |
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<td>no confirmed or suspected human cases reported since 2008</td>
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| **Severe fever with thrombocytopenia syndrome (SFTS)** | Only reported from China (south-eastern), Japan and Korea | - Presumed to be tick exposure  
- Person to person transmission described in household and hospital contacts, via contact with blood/bloodstained body fluids | No known cases in UK | EXCEPTIONALLY LOW - Not known to have occurred in travellers |
| **Recent cases/outbreak:** |                                                                              |                                                                                                                                                                                            |                                                                                                                                                                                                 |                                                                                                                                                                                                 |
|                         |                                                                          | South Korea reported no cases in December, consistent with previous years. Since 01 January 2018, 259 cases were reported, relatively consistent with the previous year (270)  
Japan reported 1 case in December, consistent with previous years. Since 01 January, 77 cases were reported, less than the previous year (90) | (China does not provide publically available data on cases of SFTS)                                                                                                                                                                                    |                                                                                                                                                                                                 |

(China does not provide publically available data on cases of SFTS)
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</tr>
</thead>
</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:**              |                              |                                                                                                  |                       |                                                                                        |
|                                          |                              | • an outbreak of hantavirus was reported in *Epuyen, Chubut region of Argentina* at the beginning of December. By 31 December, 23 confirmed cases, including 6 deaths, were reported. While Andes virus hasn’t been specifically named, the virus is endemic in the region, and there are reports of person-to-person transmission. A case with an epidemiological link to the outbreak in Argentina was also reported in *Chile*  |                       |                                                                                        |
|                                          |                              | (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)*              |
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<table>
<thead>
<tr>
<th><strong>Influenza A(H7N7) virus</strong></th>
<th><strong>Recent cases/outbreaks:</strong>&lt;br&gt;• no confirmed or suspected human cases of H5N6 were reported in December</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sporadic occurrence including Europe and UK</td>
<td>- Close contact with infected birds or their environments  &lt;br&gt;- Close contact with infected humans (no sustained human-human transmission)  &lt;br&gt;No known cases  &lt;br&gt;VERY LOW - Human cases are rare, and severe disease even rarer  &lt;br&gt;Recent cases/outbreaks:&lt;br&gt;• no confirmed or suspected human cases of H7N7 were reported in December</td>
</tr>
</tbody>
</table>

**Undiagnosed Disease Events**

| None reported |