Global high consequence infectious disease events

Monthly update

March 2019
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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 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 (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.
### Section 1. Incidents of significance of primary HCIDs

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

<table>
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<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>
| **Crimean-Congo haemorrhagic fever** | 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 (23 cases in world literature) |
| **Recent cases/outbreaks:**         |                                                                                        |                                                                                                  |                                                           |                                              |
|                                      | - Oman reported two cases in Samail governorate. Sporadic cases are reported every year |                                                                                                  |                                                           |                                              |
|                                      | - a case was reported in Kimberely, South Africa. This is the second case diagnosed in South Africa in 2019; the first was in Free state |                                                                                                  |                                                           |                                              |
|                                      | - Pakistan is reporting sporadic cases, consistent with seasonal transmission           |                                                                                                  |                                                           |                                              |
|                                      |                                                                                        |                                                                                                  |                                                           |                                              |
| **Ebola virus disease**              | Sporadic outbreaks in Western, Central and Eastern Africa                               | - Contact/consumption of infected animal tissue (eg bushmeat)                                 | 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 |

### Contact HCIDs
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### Recent cases/outbreaks:

After many weeks of overall decline, the Ebola outbreak in DRC significantly increased towards the end of March. This increase was expected following the disruption to response activities at the end of February, but weekly case numbers were higher than previously seen. As of 31 March, a total of 1,089 confirmed and probable cases have been reported across 21 health zones in North Kivu and Ituri provinces. This is an increase of 199 confirmed cases in the past month, compared to 110 in February. Two new health zones, Lubero and Bunia, reported confirmed cases linked to chains of transmission in previously affected areas. The Katwa Ebola Treatment Centre (ETC) officially reopened on 30 March to increase capacity to respond in that area. The newly rebuilt ETC in Butembo was attacked again at the beginning of the month and a Transit Centre for suspected cases in Biena health zone was also attacked by a mob. In response, WHO requested further support from UN and local police forces for protection.

The risk for the UK population has not changed and is currently assessed as negligible-very low.

### Lassa fever

<table>
<thead>
<tr>
<th>Endemic in sub-Saharan West Africa</th>
<th>- Contact with excreta, or materials contaminated with excreta of infected rodent</th>
<th>14 cases since 1971, all ex-West Africa</th>
<th>LOW - Overall it is the most common imported VHF but still rare (global total 35 reported since 1969)</th>
</tr>
</thead>
</table>

### Recent cases/outbreaks:

- following a decline in cases in Nigeria in February, weekly case numbers increased again at the beginning of March. As of 24 March, a total of 1,924 suspected cases, including 510 confirmed, have been reported across 21 states
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<table>
<thead>
<tr>
<th>Marburg virus disease</th>
<th>Sporadic outbreaks in Central and Eastern Africa</th>
<th>- Contact with infected blood or body fluids</th>
<th>No known cases in UK</th>
<th>VERY LOW - 5 travel related cases in the world literature</th>
</tr>
</thead>
</table>

- a confirmed fatal case was reported in Kenema District, *Sierra Leone*, in a child who developed symptom onset in February
- Liberia has reported 44 suspected cases, including 6 deaths, since the beginning of the year. Of these, 17 have been confirmed

**Recent cases/outbreaks:**
- no cases reported since November 2017
<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 or suspected human cases of H7N9 were reported in China in March  
• an avian outbreak was reported in Liaoning Province, China with no associated human cases | |
| **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 March  
• avian outbreaks were reported in India and Nepal with no associated human cases | |
| **Middle East respiratory syndrome (MERS)** | The Arabian Peninsula - Yemen, Qatar, Oman, Bahrain, Kuwait, Saudi | - Airborne particles  
- Direct contact with contaminated environment | 5 cases in total; 3 imported cases (2012, 2013 and 2018), two secondary cases in | VERY LOW (PHE Risk Assessment) |
### Global high consequence infectious disease events: March 2019 update

<table>
<thead>
<tr>
<th>Monkey pox</th>
<th>Arabia and United Arab Emirates</th>
<th>- Direct contact with camels</th>
<th>close family members of second case; 3 deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recent cases/outbreaks:</strong></td>
<td>the outbreak in Wadi Al-dwasir, Saudi Arabia, initially reported in February has significantly improved. As of 01 April, 57 cases have been reported. This is an increase of only 6 cases in the past month. In total, Saudi Arabia has reported 114 cases across the country since January 2019</td>
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<p>| West and Central Africa | - Close contact with infected animal or human - Indirect contact with contaminated material eg bed linen | 3 cases in total; 2 imported (Sept 2018) and 1 nosocomial transmission | VERY LOW - Reported outside Africa for the first time in 2018 (2 in UK and 1 in Israel) |
| <strong>Recent cases/outbreaks:</strong> | Republic of Congo has reported 9 suspected cases since February, including 2 confirmed from Gambona district | As of 3 March, 824 suspected cases have been reported from Ecuador, North Ubangi and South Ubangi, DRC |</p>
<table>
<thead>
<tr>
<th>Disease</th>
<th>Outbreaks in Bangladesh and India; SE Asia at risk</th>
<th>- Direct or indirect exposure to infected bats; consumption of contaminated raw date palm sap - Close contact with infected pigs or humans</th>
<th>No known cases in UK</th>
<th>EXCEPTIONALLY LOW - No travel related infections in the literature</th>
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<tbody>
<tr>
<td>Nipah virus</td>
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<td><strong>Recent cases/outbreaks:</strong></td>
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<td>• following the confirmed outbreak reported in Thakurgaon district, Bangladesh in February, an unrelated suspected outbreak was reported from the same district involving 3 members of a family who became ill after eating jujube (red dates). Confirmatory testing is ongoing</td>
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<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>
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<tr>
<td><strong>Recent cases/outbreaks:</strong></td>
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<tr>
<td>• Madagascar continued to report cases as part of seasonal transmission, but case numbers remain much lower than in 2018. As of 22 March, a total of 107 confirmed cases, including 14 pneumonic and 31 deaths, have been reported from 16 districts across the country. This represents an increase of only 2 confirmed cases in the past month</td>
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<td>Severe acute respiratory syndrome (SARS)</td>
<td>Currently none; two 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>EXCEPTIONALLY LOW - Not reported since 2004</td>
</tr>
<tr>
<td><strong>Recent cases/outbreaks:</strong></td>
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<tr>
<td>• no confirmed or suspected human cases reported since 2004</td>
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Section 2. Incidents of significance of additional HCIDs

- nothing of significance

<table>
<thead>
<tr>
<th>Contact HCIDs</th>
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<tbody>
<tr>
<td><strong>Infectious disease</strong></td>
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</tbody>
</table>
| Argentine 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 a monthly update since the end of March 2018
- no confirmed or suspected human cases were reported in March
### Lujo virus disease

- **Acquisition**:
  - Single case acquired in Zambia lead to a cluster in South Africa in 2008

- **Transmission**:
  - Presumed rodent contact (excreta, or materials contaminated with excreta of infected rodent)
  - Person to person via body fluids

- **Known Cases**:
  - No known cases in UK

- **Risk**:
  - EXCEPTIONALLY LOW - Single travel related case; not reported anywhere since 2008

### Severe fever with thrombocytopenia syndrome (SFTS)

- **Reported Countries**:
  - Only reported from China (southeastern), Japan and Korea

- **Transmission**:
  - Presumed to be tick exposure
  - Person to person transmission described in household and hospital contacts, via contact with blood/bloodstained body fluids

- **Known Cases**:
  - No known cases in UK

- **Risk**:
  - EXCEPTIONALLY LOW - Not known to have occurred in travellers

### Recent cases/outbreaks:

- **Lujo virus disease**:
  - No confirmed or suspected human cases reported since 2008

- **Severe fever with thrombocytopenia syndrome (SFTS)**:
  - South Korea reported no cases in March, consistent with previous years
  - Japan did not provide an update for March
  - For the first time, evidence of SFTS was retrospectively identified in Vietnam, in two human cases from 2017

  (China does not provide publically available data on cases of SFTS)
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<th>Likelihood assessment</th>
</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                                  |
| **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                                                             | No known cases                                             | VERY LOW - Not known to have occurred in travellers (PHE risk assessment)               |
| **Influenza A(H7N7) virus** | Sporadic occurrence including Europe and UK                  | - Close contact with infected birds or their environments                                                             | No known cases                                             | VERY LOW - Human cases are rare, and severe disease even rarer                          |

Recent cases/outbreaks:

- the outbreak of hantavirus reported in Epuyen, Chubut region of Argentina was declared over on 28 March. In total, 34 confirmed cases, including 11 deaths, were reported.
- Chile reported 17 cases of hantavirus in March, bringing the total for 2019 to 38 cases and 9 deaths (Chile has stopped reporting Hantaviruses separately).

- no confirmed or suspected human cases of H5N6 were reported in March
- avian outbreaks were reported in Vietnam with no associated human cases
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<table>
<thead>
<tr>
<th>Recent cases/outbreaks:</th>
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<tbody>
<tr>
<td>- Close contact with infected humans (no sustained human-human transmission)</td>
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</table>

- No confirmed or suspected human cases of H7N7 were reported in March

<table>
<thead>
<tr>
<th>Undiagnosed Disease Events</th>
</tr>
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<tbody>
<tr>
<td>None reported</td>
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