Global high consequence infectious disease events
Monthly update

August 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.
Section 1. Incidents of significance of primary HCIDs

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

<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>
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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) |

Recent cases/outbreaks:
- Afghanistan reported 129 cases in August as part of seasonal transmission. This is a continuation of an upward trend. The total since January 2018 is now 359 suspected cases, of which 77 are confirmed, and 42 deaths
- Pakistan, Russia and Uganda continued reporting sporadic cases in August
- Kazakhstan reported one confirmed case in August. Kazakhstan reports sporadic cases every year
- Mauritania reported two unrelated confirmed cases at the end of July/beginning of August. All contacts have completed their follow-up and no further cases have been reported
- Spain reported one fatal case in Ávila in August. Over 100 contacts were monitored, with no further cases reported. Spain last reported a case in August 2016
- Greece reported one imported case from Bulgaria in June [peer-review publication in August], a known at-risk country
### 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:

The outbreak in eastern DRC continues, with more health zones within North Kivu becoming affected. **As of 8 September**, a total of 100 confirmed and 31 probable cases have been reported across eight health zones in North Kivu and Ituri provinces [map]. Seventeen cases (16 confirmed) have been reported among health workers. All these exposures likely occurred in health facilities outside of dedicated Ebola treatment centres.

During late August, most new cases were epidemiologically linked with the city of Béni. Community resistance/unrest and militia activity continue to compromise the response. In early August the epidemic curve was looking encouraging, but cases with symptom onset during the first week of September have since been diagnosed. 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)
Recent cases/outbreaks:
- **Nigeria** continues to report cases, with 17 confirmed in August (compared to 23 in July). 5 states (Edo, Ondo, Ebonyi, Bauchi and Gombe) remain active
- **Liberia** continues to report sporadic cases as part of seasonal transmission

<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>
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Recent cases/outbreaks:
- no cases reported since November 2017
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<tr>
<td><strong>Influenza A(H7N9) virus (Asian lineage)</strong></td>
<td>All human infections acquired in China</td>
<td>- Close contact with infected birds or their environments</td>
<td>No known cases in UK</td>
<td>VERY LOW (PHE Risk Assessment)</td>
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<tr>
<td></td>
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<td>- Close contact with infected humans (no sustained human-human transmission)</td>
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<td></td>
<td></td>
<td>• no confirmed or suspected human cases of H7N9 were reported in China in August</td>
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<td><strong>Influenza A(H5N1) virus</strong></td>
<td>Human cases predominantly in SE Asia, but also Egypt, Iraq, Pakistan, Turkey, Nigeria. Highly pathogenic H5N1 in birds much more widespread, including UK</td>
<td>- Close contact with infected birds or their environments</td>
<td>No known cases in UK</td>
<td>VERY LOW (PHE Risk Assessment)</td>
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<td>• no confirmed or suspected human cases of H5N1 were reported in August</td>
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<td></td>
<td></td>
<td>• avian outbreaks were reported in Malaysia and Cambodia, with no associated human cases</td>
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### 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

  - 4 cases in total; 2 imported cases (2012 and 2013), two secondary cases in close family members of second case; 3 deaths

  **Risk Assessment:** VERY LOW (PHE Risk Assessment)

**Recent cases/outbreaks:**

- in August, 7 confirmed cases of MERS were reported in Saudi Arabia, including 3 deaths
- an imported case of MERS was reported in England in a person with recent travel to the Middle East. No further cases were reported. This is the fifth case of MERS diagnosed in England

### Monkey pox

- **West and Central Africa**

  - Close contact with infected animal or human; indirect contact with contaminated material eg bed linen

  - 2 cases in total (September 2018)

  **Risk Assessment:** VERY LOW - under review (UK ex Nigeria, Sept 2018)

**Recent cases/outbreaks:**

- during 2018, DRC has reported 3,585 suspected cases. 386 cases were reported in August, slightly higher than the number reported in July (354). Cases have been reported in 14 provinces, with Sankuru province continuing to report an exceptionally high number of suspected cases
- the outbreak reported in Central African Republic in March is ongoing. As of 22 August, a total of 40 cases, including 13 confirmed, and 1 death have been reported from Bambari, Bangassou and Mbaiki districts
### 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

No known cases in UK

EXCEPTIONALLY LOW
- No travel related infections in the literature

**Recent cases/outbreaks:**
- no confirmed or suspected human cases reported in August

### Pneumonic plague

(P*ersinia 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

Last outbreak in UK 1918

VERY LOW - Rarely reported in travellers (PHE risk assessment for this outbreak)

**Recent cases/outbreaks:**
- no confirmed or suspected human cases reported in August

### Severe acute respiratory syndrome (SARS)

Currently none; two outbreaks originating from China 2002 and 2004

- Airborne particles
- Direct contact with contaminated environment

4 cases related to 2002 outbreak

VERY LOW - Global spread but not reported since 2004

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

- Nothing of significance

<p>| Contact HCIDs |
|----------------|----------------|
| <strong>Infectious disease</strong> | <strong>Geographical risk areas</strong> |
| Argentine haemorrhagic fever (Junin virus) | Argentina (central). Limited to the provinces of Buenos Aires, Cordoba, Santa Fe, Entre Rios and La Pampa |
| Bolivia 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) |
| <strong>Source(s) and route of infection</strong> | <strong>UK experience to date</strong> | <strong>Likelihood assessment</strong> |
| - 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 |
| <strong>Recent cases/outbreaks:</strong> |
| - nothing of significance. Argentina has not provided an update since the end of March 2018 |
| <strong>Recent cases/outbreaks:</strong> |
| - no confirmed or suspected human cases reported in 2018 |</p>
<table>
<thead>
<tr>
<th><strong>Lujo virus disease</strong></th>
<th>Single case acquired in Zambia lead to a cluster in South Africa in 2008</th>
<th>- Presumed rodent contact (excreta, or materials contaminated with excreta of infected rodent)</th>
<th>No known cases in UK</th>
<th>VERY LOW - Single travel related case; not reported anywhere since 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recent cases/outbreaks:</strong></td>
<td></td>
<td></td>
<td></td>
<td>no confirmed or suspected human cases reported since 2008</td>
</tr>
</tbody>
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<tr>
<th><strong>Severe fever with thrombocytopenia syndrome (SFTS)</strong></th>
<th>Only reported from China (southeastern), Japan and Korea</th>
<th>- Presumed to be tick exposure</th>
<th>No known cases in UK</th>
<th>EXCEPTIONALLY LOW - Not known to have occurred in travellers</th>
</tr>
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<tr>
<td><strong>Recent cases/outbreak:</strong></td>
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<td>Japan reported 3 cases in August as part of seasonal transmission, consistent with previous years</td>
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<td>South Korea reported 30 cases in August, higher than previous years</td>
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<td></td>
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<td>(China does not provide publically available data on cases of SFTS)</td>
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### Airborne HCIDs

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| 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 update was provided for Chile in August                                                   |                                        |                                                                                       |
|                      |                          | (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 confirmed or suspected human cases were reported in August                               |                                        |                                                                                       |
### 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 confirmed or suspected human cases of H7N7 were reported in August

### Undiagnosed Disease Events

**Undiagnosed morbidity – susp haemorrhagic fever – Uganda UPDATE**

Five deaths from an undiagnosed disease were reported in Mubende district, Uganda in July. Seven laboratory samples were sent to UVRI and the US CDC for testing. Three of the 7 tested positive for *plasmodium falciparum*. There will be no further testing of samples from these cases.