
*Incident assessment:

<table>
<thead>
<tr>
<th>Deteriorating</th>
<th>No Change</th>
<th>Improving</th>
<th>Undetermined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incident is deteriorating with increased implications for public health</td>
<td>Update does not alter current assessment of public health implications</td>
<td>Incident is improving with decreasing implications for public health</td>
<td>Insufficient information available to determine potential public health implications</td>
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Notable incidents of public health significance

<table>
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<tr>
<th>Incident assessment*</th>
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<td>COVID-19, Global summary</td>
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During June, 4.13 million COVID-19 cases and approximately 133,000 related deaths were reported globally. The majority of these cases (2.32 million) were reported from the Americas, but cumulative case numbers more than doubled in the WHO South-East Asia and Eastern Mediterranean Regions. Although progress is being made in some countries to suppress and maintain low levels of infections, during this month it became increasingly obvious that even once sufficient control was attained, constant risk of resurgence and outbreaks exist as lockdown measures are eased and social mixing restarts.

**Milestone events:**

- **1 June**: >274,000 cases and >38,000 deaths in the UK. Global totals: 6.06 million cases and >371,000 deaths. Nearly 123,000 cases & 4,000 deaths reported in 24hrs with the Americas responsible for 60% of new cases and 70% of new deaths
- **9 June**: 7 million cases and >400,000 deaths reported globally. More than 1 million cases have been reported in 9 days. New Zealand haven’t reported a new case in more than 2 weeks and relaxed all COVID-19 specific restrictions with the exception of measures associated with overseas travel
- **11 June**: the pace of the outbreak in Africa is increasing, taking 98 days to reach the first 100,000 cases and only 19 days to rise to 200,000 cases.
- **13 June**: Beijing report a cluster of local cases associated with a market, 56 days since the last local case. Swift re-implementation of control measures halted this cluster within the month with a total of 330 cases recorded
- **16 June**: UK RECOVERY trial release preliminary results showing dexamethasone (steroidal drug) can reduce deaths by up to a third in hospitalised patients with severe respiratory complications of COVID-19. No significant effect seen in milder cases. WHO praised the research adding it is the first treatment to have a notable impact on severe COVID-19 cases. This research was subsequently published as a pre-print in June and in NEJM in July.
- **17 June**: WHO announce the halting of the hydroxychloroquine arm of the Solidarity Trial to find an effective COVID-19 treatment based on emerging evidence from UK and French trials which showed that it did not result in the reduction of mortality of hospitalised COVID-19 patients, when compared with standard of care.
- **18 June**: 8 million cases and >440,000 deaths reported globally. The latest 1 million cases have been reported in 8 days.
- **24 June**: 9 million cases and ~474,000 deaths reported globally. The latest 1 million cases have been reported in 6 days. In the previous week, daily case incidence was between 130,000 and 185,000 cases daily, with 50-60% of cases reported in the Americas.
- **29 June**: 10 million cases and ~500,000 deaths reported globally. The latest 1 million cases have been reported in 6 days.

**Other information and publications of note:**

- following the report of a retrospectively diagnosed COVID-19 case in France in December 2019, detection of SARS-CoV-2 RNA in sewage/wastewater samples collected in northern Italy in December 2019 and in Barcelona, Spain in January 2020 (not peer reviewed) suggests the presence of this virus in Europe prior to February 2020 when autochthonous transmission started to be reported.
- **phylogenetic analysis** of >20,000 SARS-CoV-2 genome sequences from infections in the UK as of mid-May 2020 determined there to have been at least 1,356 independently introduced transmission lineages. The majority of introductions occurred by March, ahead of wider travel restrictions being imposed. This analysis showed that ~34% of UK lineages arrived via inbound travel from Spain, 29% from France, 14% from Italy, and 23% from other countries. China and other Asian countries contributed very little to the number of detected transmission lineages.
- new studies furthered our understanding of the neurological manifestations of SARS-CoV-2 infection:
  - a small study from Germany showed how in addition to viral pneumonia, pronounced CNS involvement with pan-encephalitis, meningitis, and brainstem neuronal cell damage were key events in six fatal cases. In two of the three patients younger than 65 years, CNS haemorrhage was attributed to the cause of death.
  - neuropathological findings of autopsies from 18 confirmed cases in a Boston hospital found evidence of hypoxic changes but not for encephalitis or virus associated brain changes. Immunohistochemistry and RT-qPCR revealed minimal evidence of SARS-CoV-2 infection in brain tissue
  - a rapid review of knowledge to date of neurological associations of SARS-CoV-2 infected showed that although neurological complications may remain rare, the global burden of infections mean the impact of neurological patients, and their associated health, social and economic costs might be large
- a modelling study estimated that one in five individuals worldwide (~1.7 billion people) could be at increased risk of severe COVID-19 presentation, should they become infected, due to underlying health conditions. The risk varied considerably by age group and the proportion of the population at increased risk was highest in countries with an older population, African countries with high AIDS/HIV prevalence, and small island nations with high diabetes prevalence. Not considered as part of this study was other, now widely recognised, risk factors such as ethnicity and socioeconomic deprivation

**Further sources of information**

- WHO’s dashboard and situation reports
- UK dashboard of cases
- PHE guidance for health professionals, weekly UK surveillance reports and regular COVID-19 Literature Digest
- ECDC COVID-19 collection
Emerging Infections Summary – June 2020

Ebola virus disease (EVD), Democratic Republic of Congo (DRC)

North Kivu province: The EVD outbreak in eastern DRC was declared over on the 25th of June. Nearly two years in duration, this protracted and complex outbreak, the 10th in DRC’s history and the second largest EVD outbreak on record (3470 cases and 2287 deaths), was particularly challenging due to difficulties mounting an effective response in an active conflict zone.

Équateur province: On 1 June, a new outbreak (DRC’s 11th) was declared in Équateur province, western DRC, initially centred around the city of Mbandaka. This latest outbreak is unrelated to the 10th outbreak as determined by genetic sequencing. Équateur was previously affected by EVD in the summer of 2018. By the end of June 2020, a total of 33 cases (30 confirmed and 3 probable) with 13 deaths had been reported, distributed over five health zones: Bikoro, Bolomba, Iboko, Mbandaka and Wangata. This outbreak is ongoing and further details will be provided in the July summary.

Other incidents of interest

- **Tick-borne encephalitis, France:** French authorities reported their first tick-borne encephalitis (TBE) outbreak associated with the consumption of a raw milk product. The outbreak was initially identified as a cluster of viral-like lymphocytic meningitis of unknown aetiology centred around two hospitals in Ain department, Auvergne-Rhône-Alpes region. Active case findings identified 42 individuals with similar symptomology within a 30km radius with onset of symptoms between mid April and mid May 2020. On 27 May the French National Arbovirus Reference Centre confirmed TBE virus (TBEV) in 33 cases, with investigations ongoing into the remaining cases as of 22 June. Epidemiological investigations identified consumption of raw goat milk cheese from the same local producer as the source of the outbreak. TBEV was also detected in the implicated batch. Consumption of unpasteurised dairy products from infected animals is a recognised risk for TBEV exposure and it is advised that unpasteurised milk and dairy products should not be consumed in TBE risk areas. TBE infections are sporadically reported in Auvergne-Rhône-Alpes region.

- **Crimean-Congo haemorrhagic fever (CCHF), Spain:** Spanish authorities reported a locally acquired case of CCHF in a male patient who reported a tick bite in late May after walking in a pine forest in Salamanca province in the Castille-León region, western Spain. He developed compatible symptoms in subsequent days and CCHF virus (CCHFv) infection was confirmed by PCR. This is the fourth Spanish CCHF case reported; the three previous cases were reported also in the Castille-León region in 2016 (2 cases – 1 nosocomial) and 2018 (1 fatal case, likely exposure in Extremadura region). Previous surveys have identified CCHFv in ticks obtained from wild animals and vegetation in Castille- León, Extremadura, Castilla-La Mancha, Madrid and Andalusia.

- **Polio update:** Since early in the COVID-19 pandemic, disruption of polio eradication efforts has been raised as a significant threat, especially with the halting of mass vaccination campaigns in March 2019. It is of concern to note that so far in 2020, increases in both wild (WPV) and circulating vaccine derived (cVDPV) polio have been observed in many countries, and with it an increased risk of international spread of polio. Most worrying is the situation in Afghanistan and Pakistan which have dual circulation of WPV1 and cVDPV2, and at elevated rates to this period last year. Increased rates of cVDPV2 have also been reported in other countries such as Chad, Cameroon, Guinea, Cote d’Ivoire, Burkina Faso, Mali and Niger. It should...
be noted that data for 2020 are likely under representative of the situation given the disruption to surveillance activities due to COVID-19. In late June/early July a resumption of polio eradication efforts was recommended, especially in high-risk countries (latest update).

**Publications of interest**

- **seven years of influenza virus surveillance** in Chinese pigs determined genotype 4 (G4) reassortant Eurasian avian-like H1N1 virus as the dominant circulating strain since 2016. Serological surveillance among pig workers showed that 10% (35/338) had evidence of previous G4 exposure, with the rate increasing to 21% in the 18-35 years age cohort. Amongst a control population (general public), 4% had antibodies to G4 viruses. While only three confirmed cases of G4 human infection have been reported, G4 was characterised by the researchers as a potential pandemic virus although there is no evidence to date of human-to-human transmission. The researchers suggest that controlling G4 in pigs and monitoring of occupationally exposed individuals should be promptly implemented to monitor for further emergence.

- in the last year, the first detection of severe fever with thrombocytopenia syndrome virus in tick (*Rhipicephalus microplus*) and animal (cattle and sheep) samples, and the first human case of SFTS have been reported in Taiwan. Two distinct molecular genotypes were reported from the animal and human samples indicating multiple lineages of SFTS virus in Taiwan.

**Novel agents, rare pathogens and disorders**

- clinicians in France identified sequences from two distinct strains of Umbre virus, via metatranscriptomics in brain tissue from two severely immunocompromised patients with clinical and pathological signs of encephalitis. Umbre virus (genus Orthobunyavirus) was first identified in *Culex* sp. mosquitoes in India in the 1950s and prior to these cases infection in humans had not been observed. A serological survey of 300 control patients and 34 sera from encephalitis cases from the South of France failed to detect further cases.

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