



Infectious Disease Surveillance and Monitoring for Animal and Human Health: summary of notable incidents of public health significance: August 2021

*Incident assessment:

| Deteriorating | No Change | Improving | Undetermined |
|---|--|--|--|
| Incident is deteriorating with increased implications for public health | Update does not alter current assessment of public health implications | Incident is improving with decreasing implications for public health | Insufficient information available to determine potential public health implications |

| Notable incidents of public health significance | Incident assessment* |
|---|---|
| COVID-19, Global summary | <div> <div></div> <div></div> <div></div> <div></div> </div> <p>▲</p> |

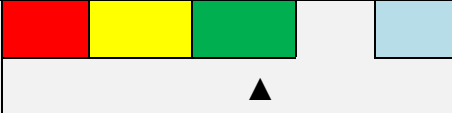
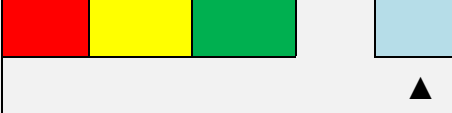
By the end of August 2021, the World Health Organization (WHO) had reported over [217 million](#) COVID-19 cases and over 4.5 million deaths globally. The number of new cases reported in August plateaued after increasing for nearly two months (since mid-June). A total of [5.02 billion vaccine doses](#) had been administered globally as of 30 August 2021.

For further insight, please refer to the following reports:

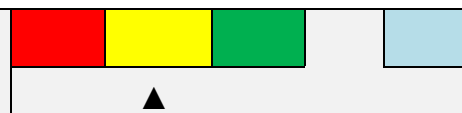
- WHO's global [weekly epidemiological updates](#)
- ECDC's [weekly surveillance summary](#) for European countries
- [National COVID-19 surveillance reports](#) (now includes flu surveillance)

Updates to note

- Public Health England (PHE) published a [risk assessment](#) for the Mu variant (B.1.621), which was designated a [Variant of Interest](#) (VOI) by the WHO on 30 August.
- Ronapreve became the [first monoclonal antibody treatment](#) for COVID-19 to be approved for use in the UK.
- A new [database](#) has been launched by the International Monetary Fund, World Bank Group, WHO and World Trade Organization to track and monitor COVID-19 vaccinations and accelerate access. The aim is to vaccinate at least 40% of people in every country by the end of 2021.
- The UK Health Security Agency (UKHSA) has [announced](#) it will lead a consortium of academic partners in research to understand why some individuals may become infected with COVID-19 after vaccination or prior infection. £1.5 million in funding has been received from UK Research and Innovation.

| | |
|---|--|
| Marburg virus disease (MVD), Guinea |  |
| <p>On 6 August 2021, Guinea's Ministry of Health informed the WHO of a confirmed fatal case of MVD in Guéckédou Prefecture, N'zérékoré Region, south-western Guinea. The case resided in a village close to the border with Sierra Leone and Liberia. This is the first known case of MVD in both Guinea and in West Africa.</p> <p>The male case reported onset of symptoms on 25 July 2021, including fever, headache, abdominal pain and gingival haemorrhage. He presented to a health facility on 1 August where he had a negative malaria test and received supportive care. On 2 August, the case died in the community and was given a safe burial on 4 August with the support of the national Red Cross.</p> <p>A post-mortem oral swab tested positive for MVD by PCR on 3 August and negative for Ebola virus disease (EVD). Re-confirmatory testing was performed in reference laboratories in Conakry, Guinea, on 5 August and Dakar, Senegal on 9 August. Phylogenetic analysis revealed that the 2021 Guinean Marburg virus was related to strains from the 2004 to 2005 Marburg virus outbreak in Angola, and together, they are related to Marburg virus sequences obtained from bats in Sierra Leone (2017 to 2018).</p> <p>193 contacts were identified, none of whom developed symptoms during their 21-day follow-up period which ended on 25 August 2021. No new cases have been reported since the virus was confirmed and a 42-day countdown to declaring the end of the outbreak began on 4 August.</p> | |
| Negated case of Ebola Virus Disease (EVD), Côte d'Ivoire |  |
| <p>On 14 August 2021, Côte d'Ivoire's Ministry of Health informed WHO of the country's first case of EVD since 1994. This came after the Institut Pasteur in Côte d'Ivoire confirmed EVD in samples collected from a patient, who was hospitalised in the largest city Abidjan, after arriving from Guinea.</p> <p>After Côte d'Ivoire announced the EVD case, immediate actions were implemented in both Côte d'Ivoire and Guinea, in line with WHO's no regrets policy. WHO experts were mobilised, and 5,000 Ebola vaccine doses were sent from Guinea to Côte d'Ivoire. More than 140 contacts had been listed for follow-up, none of whom developed symptoms for the disease or tested positive for EVD.</p> <p>On 31 August 2021, the government of Côte d'Ivoire informed WHO that re-confirmatory testing performed by the French National Reference Centre for Viral Haemorrhagic Fevers had found no evidence of the virus, and so both Guinea and Côte d'Ivoire stepped down their public health responses.</p> | |

Wild polio and circulating vaccine derived polio virus: Global update 2021 to date



Wild polio virus

No cases of type 1 wild polio virus were reported by the Global Polio Eradication Initiative (GPEI) in August 2021.

Circulating vaccine derived polio virus (cVDPV)

No cases of cVDPV1 were reported by GPEI in August 2021.

As of 31 August 2021, 267 acute flaccid paralysis (AFP) cases of cVDPV2 have been reported this year across 14 countries. In 2020, a total of 1,072 cases were reported across 24 countries.

Notably in August, polio was declared to be a public health emergency in **Uganda** following confirmation of cVDPV2 positive laboratory tests from environmental samples in Kampala. Uganda was certified as wild polio virus free in August 2020 by the WHO.

Other polio updates

Roll-out continues for the novel oral polio vaccine type 2 (nOPV2), a more genetically stable vaccine which is less likely to revert to a form that can cause paralysis. Seven countries have now implemented vaccination response rounds and four additional countries are verified and ready to use the vaccine.

Other incidents of interest

Anthrax

- On 5 August, media reported a case of cutaneous anthrax in Karabudakhkent Region, **Russia**. The patient worked in slaughter and butchering of cattle meat.
- Nine suspected cases of anthrax were reported by media on 15 August in Wenshui county, Shanxi Province, **China**. The cases were involved in the breeding, trading and slaughtering of cattle.

Avian influenza A(H5N6), China

- As of 28 August 2021, 15 cases of avian influenza A(H5N6) have been reported in mainland China.
- On 6 August, the Centre for Health Protection (CHP) of the Department of Health reported two cases of avian influenza A(H5N6). The first was in a resident of Guilin in Guangxi Province, who had prior exposure to a live poultry market. The second case was a resident of Yibin City in Sichuan Province, who had contact with dead poultry before onset of symptoms.
- Two cases of avian influenza A(H5N6) were reported in residents of Chenzhou City, Hunan Province. One case, who had prior exposure to a live poultry market, became symptomatic on 26 July and was hospitalised on 1 August in a critical condition. The

case's husband was reported to have avian influenza A(H5N6) after developing symptoms on 2 August and was hospitalised on the same day in a stable condition. He had cooked and eaten a duck purchased from a live poultry market together with his wife before the onset of symptoms. Exposure to poultry, as opposed to human-to-human transmission, was considered the most plausible route of infection.

- On [20 August](#), a case was reported in a person living in Huizhou, Guangdong Province. No further details were reported.
- On [23 August](#), a case was reported in 55 year old male farmer who had contact with live poultry in Liuzhou, Guangxi. The case developed symptoms on 17 August and was hospitalised the same day in a critical condition.

Chikungunya

- Globally, [111,633 cases](#) of chikungunya have been reported so far in 2021, as of 27 August. The highest number of cases have been reported from **Brazil** (87,595), **India** (25,166), and **Guatemala** (1,091).
- As of 24 August 2021, [no autochthonous cases](#) of chikungunya have been reported in Europe in 2021.

Cholera:

- In **Nigeria**, a total of [2,127 suspected cholera cases](#) were reported in August 2021. Between January and August 2021, Nigeria reported 65,145 suspected cases including 2,141 deaths (case fatality rate: 3.3%) across 24 states; disproportionately affecting the 5 to 14 year old age category.
- As of [28 August](#), 2,336 cholera cases including 83 deaths (case fatality rate: 3.6%) have been reported in **Niger** in an outbreak linked to the epidemic in neighbouring regions of **Nigeria**. Heavy rainfall and significant mixing of cross-border populations is thought to be contributing to the situation. On 15 August, the WHO were informed that an imported case of cholera had been detected in **Burkina Faso** in a lorry driver who had travelled from Niger. Sampling confirmed the same serotype and serogroup as identified in the ongoing outbreak in Niger.

Extensively drug-resistant (XDR) typhoid fever, Pakistan

- In the week ending 14 August 2021, [52 cases of XDR typhoid fever](#) were reported in Karachi, Pakistan. This brought the total number of cases reported in 2021 so far to 1,739.
- In Karachi, a total of 15,224 cases of XDR typhoid fever were reported from 1 January 2017 to 14 August 2021, with more than 7,000 cases reported in 2019 alone.

Hepatitis E, South Sudan

- The [hepatitis E outbreak](#) continues in Bentiu internally displaced persons camp, **South Sudan**. An upsurge in cases in 2021 is thought to be driven by declines in health water and sanitation services. 1,001 cases and 9 deaths were reported in the camp from January 2019 to August 2021 (case fatality rate: 0.9%). [Two deaths](#) were reported by Médecins Sans Frontières (MSF) between the end of July and 25 August 2021.

Lassa fever

- So far in 2021, and as of 17 August, [five confirmed cases of Lassa fever](#) including 4 deaths have been reported in **Guinea** (case fatality rate: 80%). Lassa fever is endemic in Guinea and surrounding countries, so cases are not unexpected. Bheeta Prefecture is regarded as having an active outbreak, while the prefectures of Yomou-Centre, Péla, Yomou and Bignamou are on alert.
- [91 suspected cases](#) of Lassa fever have been reported in **Liberia** between 1 January and 18 August 2021. Of these cases, 15 were confirmed and originated from Bong (4), Grand Bassa (5), Montserrado (2) and Nimba (4). There were 11 deaths among the confirmed cases equating to a case fatality rate of 73%.

Measles, Mali

- As of [15 August](#), 1,185 suspected cases of measles and 2 deaths have been reported in **Mali** in 2021. This is a substantial increase from the [previous year](#) when 682 suspected cases were reported between 1 January and 9 August 2020.

Middle East Respiratory Syndrome (MERS)

- Cases of MERS continue to be reported sporadically in the Middle East. On [26 August](#), a case of MERS was reported in **Saudi Arabia**. The case was a resident of Riyadh city who had contact with camels. This brings the total number of MERS cases reported in Saudi Arabia in 2021 to 12.

Plague

- Cases of plague continue to be identified in Ituri Province, **Democratic Republic of the Congo (DRC)**. From 1 January to 8 August 2021, [118 suspected cases](#) of plague and 13 deaths have been reported across 8 health zones of the province. [Areas that were previously free from the disease](#) near the border with **South Sudan** and **Uganda** are now being affected. The frequent population displacement and insecurity in the area increases the risk of cross-border transmission.
- A [case of bubonic plague](#) was reported on 24 August in Ordos, Inner Mongolia Autonomous Region, **China**. The case was a livestock farmer. [137 contacts](#) of the case tested negative.
- In the **United States of America (USA)**, a [case of bubonic plague](#) was reported in a resident of Torrance County, New Mexico, on 20 August. The case is currently hospitalised and is expected to make a full recovery. An environmental investigation will take place to assess risk to others in the surrounding area.

Severe fever with thrombocytopenia syndrome (SFTS), Japan

- A [fatal case](#) of SFTS has been reported by the media in Fukuoka Prefecture, Japan. The case was hospitalised on 16 August and died on 21 August. The case was reported to have a tick bite mark on his ankle.

West Nile Virus

- In Europe, [49 human cases](#) of West Nile virus have been reported in 2021, as of 27 August. **Greece** (25), **Italy** (11) and **Serbia** (6) have reported the highest number of cases. In the same time period, 3 outbreaks among equids were reported in **Spain**.
- Cases of West Nile virus have continued to be reported in the **USA** during August. Up to date case numbers for each state can be found on the [CDC website](#).

Zika virus disease, India

- The [Zika virus outbreak](#) in Kerala State, **India**, originally reported on [9 July 2021](#), has been brought under control. In total, 66 cases were reported. None of those who tested positive remain under treatment and none developed serious disease.

Publications of interest

Borna disease virus 1 (BoDV-1) encephalitis

- A case report from Brandenburg, Germany describes a fatal case of BoDV-1 encephalitis in a farmer in 2017. Next-generation sequencing found that the virus belonged to a cluster that was not previously known to be endemic in the area.

Chikungunya

- Valneva have announced that their chikungunya vaccine candidate VLA1553 has yielded positive results in Phase 3 trials, meeting the primary end point of inducing protecting chikungunya virus neutralizing antibody titers in 98.5% of participants, 28 days after administration.

Cholera

- Bangladesh introduced a nationwide cholera surveillance system in 2014. A recent [study](#) sought to measure the sensitivity of this system, finding that 69% of the population live outside of the cholera surveillance zones and, of these, 23% live in areas with the highest infection rates.

Dengue

- In the USA, there was a [fatal case](#) of travel-associated dengue in which prior exposure to Zika virus may have played a role in triggering an antibody dependent enhancement phenomenon.
- In [Sri Lanka](#), a study reported that the incidence of dengue increased 20-fold from the year 2000 to 2012 and a further 3-fold from 2012 to 2019. There were also differences in annual seroconversion rates and annual age-stratified seropositivity rates.

Ebola virus disease (EVD)

- Five candidate mucosal [Ebola virus vaccines](#) with the same Ebola virus glycoprotein antigen showed complex, heterogenic immune responses in macaques. Fc-mediated

antibody effects, rather than neutralising antibody titers, were associated with protection.

Middle East Respiratory Syndrome (MERS)

- No vaccines for the prevention of MERS are currently approved. However, in August 2021, Inovio [announced](#) that their DNA vaccine candidate INO-4700 was entering Phase 2 trials.

Marburg virus disease (MVD)

- Treatment with a monoclonal antibody (MR186-YTE) and remdesivir was found to be protective against MVD in a non-human primate model in a [study](#) published in August.

Nipah virus (NiV)

- Currently, there are no approved vaccines against Nipah virus. A recent [pre-print](#) (not peer-reviewed) investigating the efficacy of ChAdOx1 NiV in African green monkeys found that vaccinated animals showed no signs of disease upon challenge.

Seoul virus

- A [case study](#) in Glasgow, UK has described an infection with Seoul virus (a type of hantavirus) in an individual who kept pet rats. The virus belonged to a lineage characterized by recent international expansion which is thought to be driven by the trade in pet rats.

Other publications of interest

- A study analysing blood samples in Tanzania found a seroprevalence of 28.0% for chikungunya, 16.1% for dengue and 6.8% for Zika virus. Visiting mines was associated with increased odds of Zika virus seropositivity.
- Preclinical testing has shown progress on developing vaccines based on recombinant filovirus glycoproteins (GP) from Zaire and Sudan ebolaviruses and Marburg marburgvirus. Candidate formulations were found to elicit immune responses in mice, guinea pigs and non-human primates.
- A mosquito surveillance study during different seasons in Guangzhou Province, China, has reported the presence of Hepatitis B virus and Human parechovirus in *Ae. albopictus* mosquitoes.
- An Australian study has detected *Culex tritaeniorhynchus*, an important vector of Japanese encephalitis virus, in the Northern Territory.

Novel agents, rare pathogens and disorders

Nothing to report.

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