

September 06, 2024

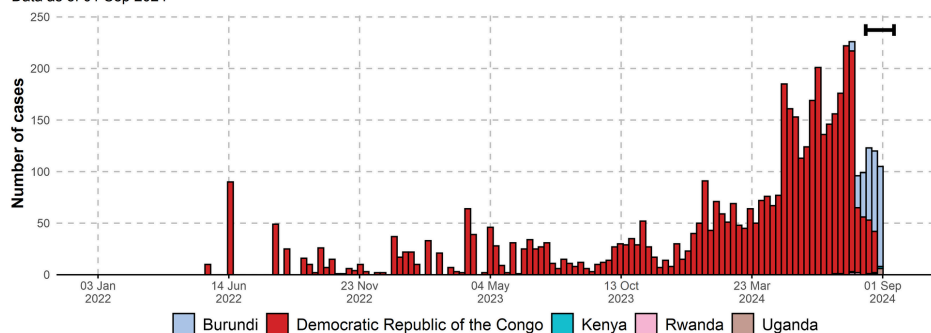
Key Takeaways

- The outbreak of clade Ib mpox in DR Congo and Burundi is ongoing. No new cases of the virus have been detected outside of Africa.
- The first shipment of 100,000 mpox vaccines has arrived in DR Congo. More are expected in the coming weeks. But the Africa CDC estimates they will need three million doses to end the epidemic.
- The CDC reports that nine of the 109 tested workers were infected with HPAI A(H5N1) after the July outbreak at a Colorado poultry plant.
- HPAI A(H5N1) was found in dairy herds in California and New Mexico.
- COVID-19 rates have stabilized nationally, but at an elevated level.
- Climate change may account for 50% of disaster expenses in the U.S. Some firms are declining to insure homes in climate risk areas.
- September may bring an increase in Atlantic hurricane activity.
- Surveys find increasing public acceptance of vaccine-misinformation.

Key Figures

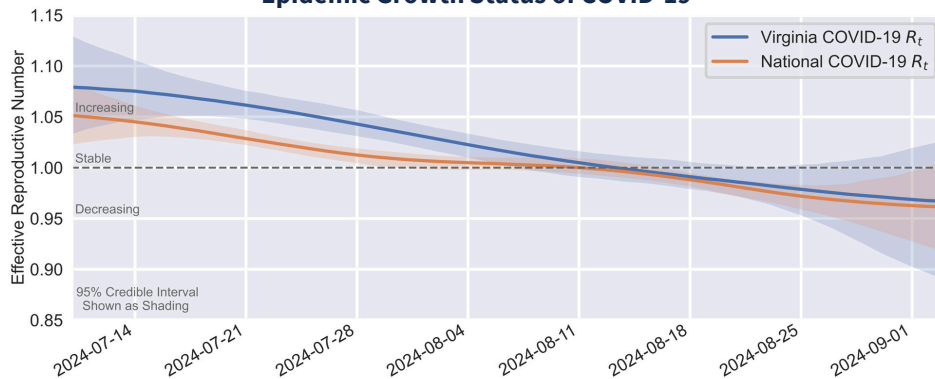
Epidemic Curve of Clade Ib Mpox in Africa

Bracket at end of curve indicates potential reporting delays in recent weeks of data.
 Data as of 01 Sep 2024



Though Kenya, Rwanda, and Uganda have reported cases of clade Ib mpox, the majority of new cases are found in Burundi and DR Congo. No new cases of clade Ib mpox have been reported outside of Africa in the last two weeks. Image Source: [WHO](#).

Epidemic Growth Status of COVID-19



CDC Epidemic modeling efforts suggest that COVID-19 activity has been in decline since roughly mid-August in Virginia and across the United States. Data Source: [CDC](#).

Mpox

22,172 / 610

The number of mpox cases / deaths reported in the 15 African Union Member States from Jan 1 to Aug 31, 2024.

2

The number of clade Ib mpox cases reported outside of Africa as of Sept. 6, 2024.

COVID-19

12%

The likelihood that COVID-19 activity is growing in Virginia, according to CDC models as of Sept. 3, 2024.

High

The current COVID-19 wastewater activity level in Virginia as of Sept. 5, 2024.

HPAI A(H5N1)

196

HPAI A(H5N1) detections in dairy cattle herds in the United States as of Sept. 6.

Spotlight:
Climate Change
Resilience

Ongoing Monitored Situations

Mpox

- **Mpox outbreak still growing rapidly in DR Congo.** The nation reported 1,838 new confirmed and 1,095 suspected cases in the last week of August, a 137% increase over the prior week. Burundi also reported an 8% increase over the prior week's cases. The Central African Republic, Nigeria, and Uganda also reported new cases. All 610 mpox deaths of the week were limited to DR Congo.
- **FDA approves new mpox vaccine.** Emergent Bio's ACAM2000 smallpox vaccine has been authorized for use in those with high risk of mpox infection. The live vaccine cannot be given to the immunocompromised.
- **DR Congo receives first vaccine shipment.** The first batch of 100,000 doses will be followed by another on Saturday. Spain has donated another 500,000 doses, but officials note that it would take approximately three million doses to end the outbreak. WHO officials believe that with continued support the outbreak could be stopped within six months.
- **Moderna mpox vaccine begins trials in UK.** When tested in macaques, the mRNA-based vaccine offered greater protection against severe illness than current vaccines did. The company has enrolled 350 Britons in phase 1/2 safety trials.
- **Singapore to vaccinate healthcare workers.** The nation will offer free JYNNEOS vaccines to high-risk health providers and contacts of known mpox cases.
- **Clade IIb mpox cases continue globally.** There have been 246 national cases of mpox since the start of the year, including 23 in Virginia. Australia reports an ongoing surge centered on the city of Sydney. The nation has reported 400 new cases this year, with 179 detected in August alone.

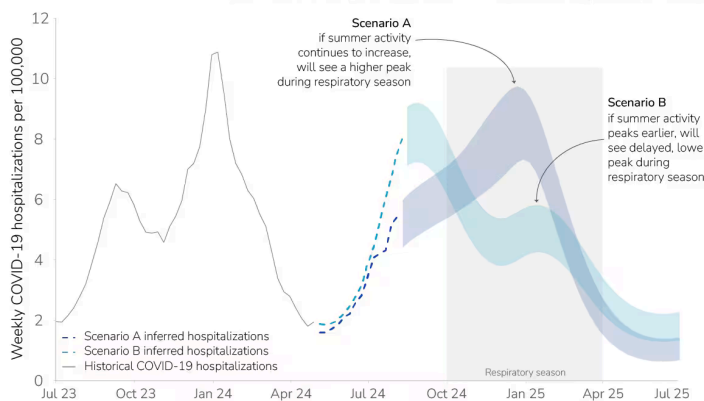
Avian Influenza A(H5N1)

- **CDC releases report on HPAI A(H5N1) outbreak in Colorado.** The report notes that 109 (16.4%) of the 663 workers reported symptoms and were tested. Of those tested, nine (8.3%) were infected with HPAI A(H5N1). All of the patients reported mild illness.
- **HPAI A(H5N1) outbreak continues in dairy cattle.** The USDA detected the virus in three cattle herds in central California, as well as herds in Michigan and New Mexico. The total number of human cases in 2024 stands at 13.

Seasonal Respiratory Illness

- **CDC releases 2024-25 respiratory disease season outlook.** Officials expect a similar or lower number of peak hospitalizations attributed to COVID-19, flu, and RSV, when compared to last season (2023-24).

Possible scenarios for weekly COVID-19 hospitalizations for 2024-2025 respiratory season



CDC modeling suggests two likely trajectories for COVID-19 activity in the coming months. An earlier peak of summer activity may lead to fewer cases and hospitalizations during the fall and winter. Image source: CDC.

- **COVID-19 remains elevated but stable.** Emergency Department (ED) diagnoses are down 1.2% in Virginia and 10.2% nationally. ED activity remains 'moderate' in the Commonwealth. Wastewater viral activity level in Virginia has fallen for two weeks, but levels remain 'high'. National wastewater activity is still 'very high'.
- **FDA approves 2024-25 Novavax COVID-19 vaccine.** The protein-subunit vaccine is based on the JN.1 variant. The mRNA-based alternatives offered by Moderna and Pfizer are based on the more recent KP.2 variant, which descended from the JN.1 variant. The CDC recommends updated COVID-19 vaccines for everyone older than six-months of age.
- **KP.3.1.1 continues to out-compete its peers.** The subvariant now accounts for approximately 47% of new cases in HHS Region 3 which includes Virginia. German researchers have detected a new variant called XEC. The variant is a recombination of KS.1.1 and KP.3.3 and appears to have a growth advantage over "FLIRT" variants including KP.3.

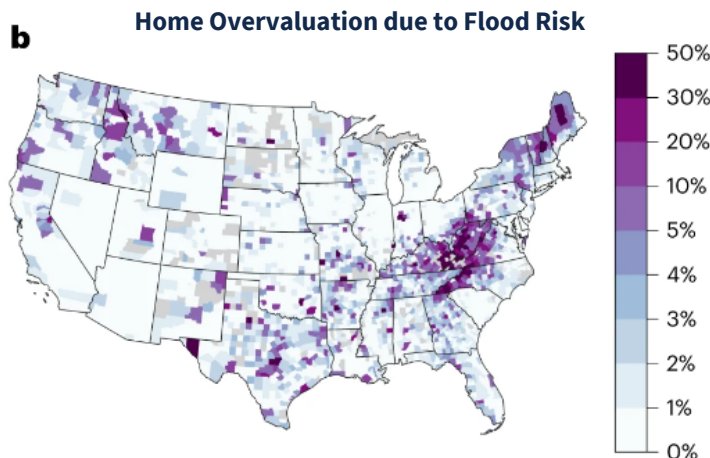
Measles

- **Health officials in Minnesota call for vaccination as outbreak continues.** The state now reports 40 cases in 2024. Nationally cases have reached 247 this year, including 34 since the start of August.

Spotlight

- Insurers are not offering or renewing policies, or are increasing prices, for homes in climate risk areas, sometimes leaving states entirely. Models estimate that non-renewals or rising rates could impact 4.4 million U.S. properties due to wildfire, 23.9 million due to wind, and 12 million due to flooding outside of current FEMA flood hazard areas.
- Climate change may already contribute up to half of the costs associated with disasters, and its share is expected to rise. Growing exposure including population growth, economic growth, and increased development have historically driven the increase of costs, but climate change's role is growing.
- Vermont is seeking to charge fossil fuel companies for climate change-related disasters. A new law would charge companies a share of disaster relief and mitigation costs based on their historic contribution to climate change. The effort is based on the emerging science of climate change attribution.

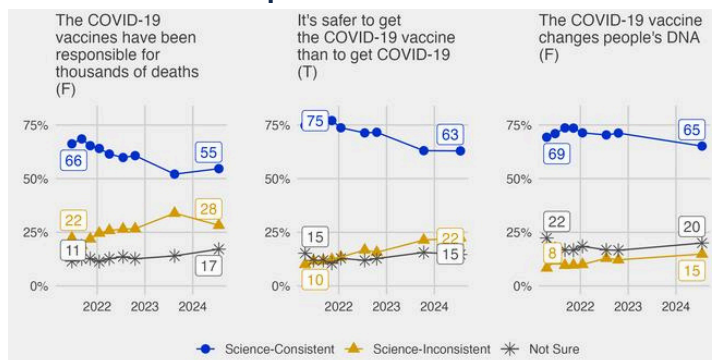
Climate Change Resilience



This map shows the estimated overvaluation of home prices, as a share of median home prices, taking increased flood risk due to climate change into account. Insurer risk is generally focused on urban coastal areas where property is concentrated, and values are high. However, individuals in many rural areas may face higher insurance costs or property devaluation, notably in Appalachia. These estimates do not account for other risks such as wildfire or severe weather. Image Source: Nature.

Other News

Increases in Acceptance of Vaccine Misinformation



The Annenberg Science and Public Health Knowledge survey has found a steady increase in acceptance of vaccine misinformation and a corresponding decrease in science-consistent beliefs. This has been accompanied by an increase in the belief that COVID-19 vaccines are less safe than other vaccines, decreased concern regarding COVID-19 infection, and a decreased willingness to be vaccinated against COVID-19. Image Source: Annenberg.

- **Pertussis rates remain elevated nationally.** The CDC reports 12,900 cases of the disease, also known as Whooping Cough, since the start of the year. This is a nearly four-fold increase over 2023. Canada also reports 12,000 cases this year, with the majority located in Quebec. Canada typically averages 500 to 4,500 cases per year.

- **A school shooting at has left four dead in Winder, Georgia.** The shooting occurred at Apalachee High School and was perpetrated by a 14-year-old student. The suspect and his father have both been arrested.
- **Manufacturing defect to blame for Mountain Valley Pipeline test failure.** A risk management firm's report found that the May 1 rupture in Roanoke County was caused by a defective elbow joint and not corrosion. The failure occurred during hydrostatic safety testing before the pipeline was in service.
- **September may see an increase in hurricane activity.** Due to a stable development region and high wind shear, August was milder than anticipated. But meteorologists expect conditions to return to normal, allowing for more Atlantic hurricane activity.
- **Study warns of carbapenem-resistance.** Analyzing the genomes of *Acinetobacter* species, researchers reported that a substantial proportion of samples (including 33.7% of samples taken in the U.S.) contained multiple carbapenemases and were highly resistant to the antibiotic.
- **West Nile virus cases continue to rise.** Cases have now been detected in 38 states, including Virginia which reports four cases in 2024. Historically, most cases occur in August or September.