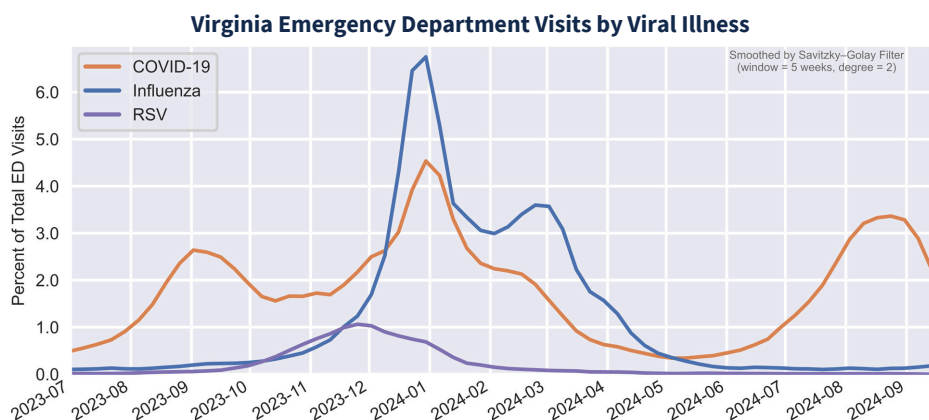


September 20, 2024

Key Takeaways

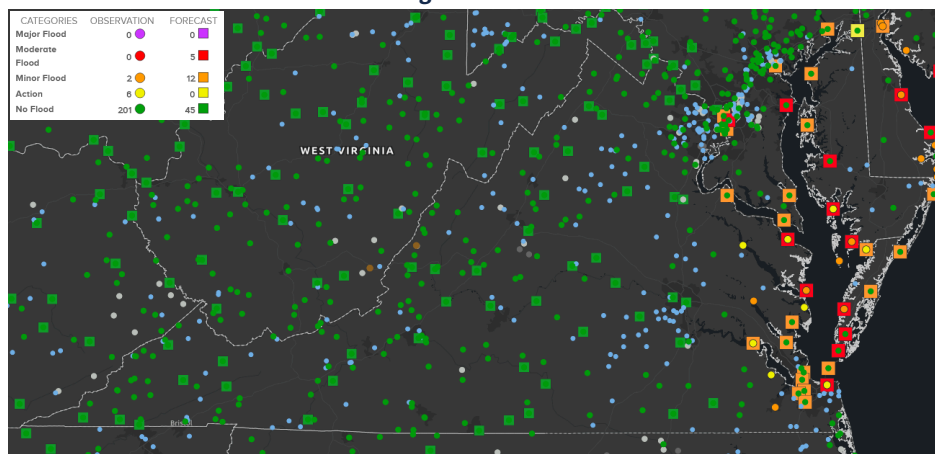
- CDC notes that two contacts of a Missouri HPAI A(H5N1) case were also symptomatic. Timing suggests a common exposure rather than person-to-person transmission of the virus.
- Mpox cases continue to rise in DR Congo and Burundi. No new cases of clade Ib mpox have been reported outside of Africa.
- Enterovirus D68 activity is on the rise nationally.
- COVID-19 activity continues to decrease in Virginia. Wastewater levels remain elevated in some parts of the Commonwealth.
- A longshoreman strike appears likely to begin on Oct 1. A strike could impact ports handling about half of U.S. cargo.
- Researchers identified 39 ‘high risk’ viruses in animals sold in China’s animal markets.

Key Figures



Though still elevated, emergency department diagnoses of COVID-19 have decreased over the last few weeks. Flu and RSV diagnosis rates remain low. Data Source: [CDC](#).

Coastal Flooding Forecasts and Advisories



Coastal regions of Virginia may experience moderate flooding in the coming days. A small craft advisory is also in effect. Image source: [NWS](#) on 2024-09-20 at 2:45 PM.

Mpox

27,975 / 738

The number of suspected mpox cases / deaths reported in the 15 African Union Member States from Jan 1 to Sept 13, 2024.

2

The number of clade Ib mpox cases reported outside of Africa as of Sept. 19, 2024.

COVID-19

<1%

The likelihood that COVID-19 activity is growing in Virginia, according to CDC models as of Sept. 17, 2024.

HPAI A(H5N1)

213

HPAI A(H5N1) detections in dairy cattle herds in the United States as of Sept. 20.

Spotlight:
One Health

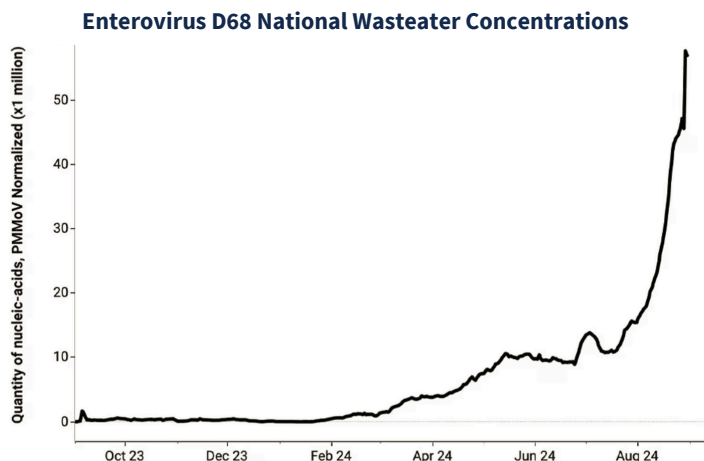
Ongoing Monitored Situations

Avian Influenza A(H5N1)

- **Missouri case strain similar to dairy cattle strains.** Although the genomic sample is incomplete, the Missouri H5 case appears similar to the strain circulating in cattle. Two contacts of the case also reported symptoms, but one tested negative for influenza, and the timing of the other suggests common exposure rather than transmission.
- **Dairy herd outbreak ongoing.** The USDA reports new cases in California this week. Massachusetts reports 100% negative results across 95 farms this week.

Seasonal Respiratory Illness

- **CDC reports pediatric flu deaths for prior season.** The 199 reported fatalities in the 2022-23 season matched the previous record set in 2019-20. The agency notes that 83% of deaths occurred in children who were not fully vaccinated.
- **COVID-19 activity declines but remains elevated.** Emergency Department (ED) diagnoses of COVID-19 in Virginia are down by 26%, having fallen for a second week in the row. Nationally, diagnoses are down by about 20%. Epidemic models suggest that COVID-19 activity is 'declining' in the Commonwealth.
- **Enterovirus D68 activity increasing nationally.** A seasonal respiratory disease that often mimics the common cold, the virus is also capable of causing a paralytic acute myelitis in children. WastewaterSCAN data suggest that viral activity has been rising for months and is now 'moderate' nationally.

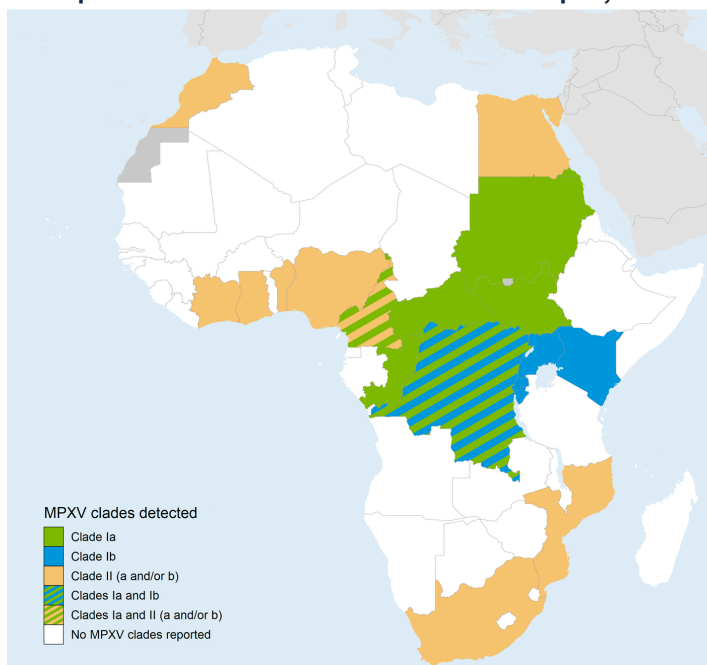


Wastewater surveillance suggests that enterovirus D68 activity has been growing nationally for months. Image source: WastewaterSCAN via NBC.

Mpox

- **WHO releases situation report on mpox.** The report notes that the Democratic Republic of the Congo continues to represent the majority of total cases in 2024, but Burundi is experiencing a rapid increase in cases as well. Clade Ib remains primarily contained in the North and South Kivu provinces of DR Congo, as well as neighboring Burundi, Kenya, Rwanda and Uganda.
- **WHO prequalifies JYNNEOS vaccine for mpox.** The prequalification of the vaccine will speed up procurement by local governments, as well as by agencies like Gavi and UNICEF. So far, the vaccine is recommended for those over 18 but can be used off-label for children.

Mpox Clades Detected in Africa from Jan 1 to Sep 15, 2024



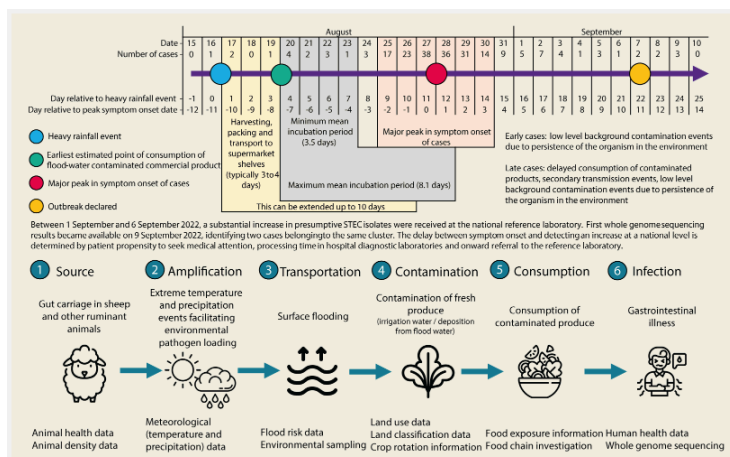
Clade Ia mpox has recently spread to Sudan, while Egypt and Morocco report new cases of clade II mpox. Clade Ib cases remain confined to the Congo Basin, primarily DR Congo and Burundi. Data Source: WHO.

Measles

- **Measles case detected in South Carolina.** The CDC reported 14 new cases since Sept 1, bringing the 2024 total to 262 cases. The outbreak in Minnesota is ongoing as authorities report at least one new case. South Carolina has reported a case in the upstate region, possibly related to last week's case in NC.

Spotlight

Climate-linked GI Outbreak



A gastrointestinal illness outbreak was declared 22 days after a heavy rainfall event in the United Kingdom in September 2022. Symptom onset peaked about 11 days after the event. In addition to spreading the pathogen through flooding and irrigation, heavy rain and extreme heat also contributed to a bacterial bloom in the environment. Image Source: [Eurosurveillance](#).

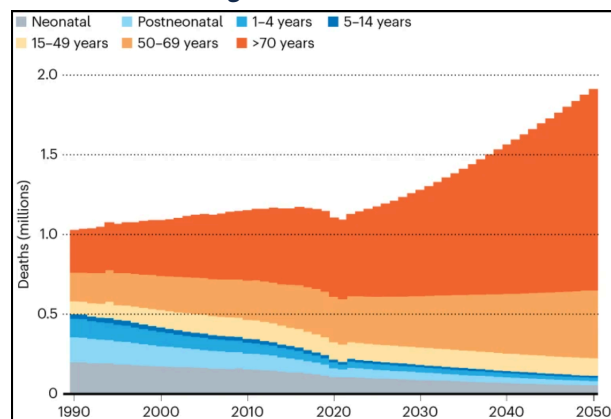
Other News

- **Several beaches across Maryland and Virginia were closed to swimming on Sunday due to reports of medical waste, including needles, washing up on shore.** Although there has been a significant reduction in the amount of debris over the last few days, the beaches remain closed out of an abundance of caution. Officials hope to reopen the beaches before the weekend.
- **Virginia is experiencing a spike in whooping cough (pertussis) cases, with case numbers increasing from 66 in 2023 to almost 400 in 2024.** The significant increase is thought to be driven by outbreaks in group settings.
- **A recent study forecasts that antibiotic-resistant infections will cause over 39 million deaths by 2050.** The report found that over one million people died annually from drug-resistant infections over the past 30 years. Gram-negative bacteria are primarily responsible for the increasing death toll, with deaths from Carbapenem-resistant gram-negative bacteria rising by 149.51% between 1990 and 2021.
- **A US east and Gulf coast port strike appears likely to begin on October 1st due to stalled negotiations** between the International Longshoremen's Association (ILA) and employers. The strike could impact 36 ports handling about half of US cargo.

One Health

- **Researchers found 39 'high risk' viruses in animals sold in animal markets in China.** 461 animals from 28 species were examined across China. Of particular note were minks with a bat coronavirus similar to the one that causes Middle East Respiratory Syndrome (MERS).
- **A study linked a 2022 Shiga-toxin outbreak in the United Kingdom to climate-related flooding.** Although inconclusive, the researchers identified lettuce contaminated by *Escherichia coli* from sheep feces during a heavy rainfall event as the most plausible source. The authors note the risk of similar events is increasing.
- **Climate-related drought intensifies Valley fever outbreaks.** Valley fever cases, concentrated in the San Joaquin Valley, have tripled since 2014. Though droughts suppress seasonal peaks while occurring, rainfall after a drought drives stronger seasons 1-2 years later. Researchers believe the fungus that causes Valley fever is resistant to drought, allowing it to outcompete other fungi species, resulting in a bloom.

Global Drug-resistant Death Forecasts



Antimicrobial resistance is estimated to cause almost 2 million deaths annually by 2050. Over 65% of deaths attributed to AMR will be among those 70 and older.

Image Source: [Nature](#).

- **Devastating flooding conditions have impacted communities across the globe.** Storm Boris has brought extreme rainfall to central Europe. Typhoon Yagi has brought detrimental flooding to Southeast Asia. Flooding throughout West and Central Africa has caused over 1,000 deaths.