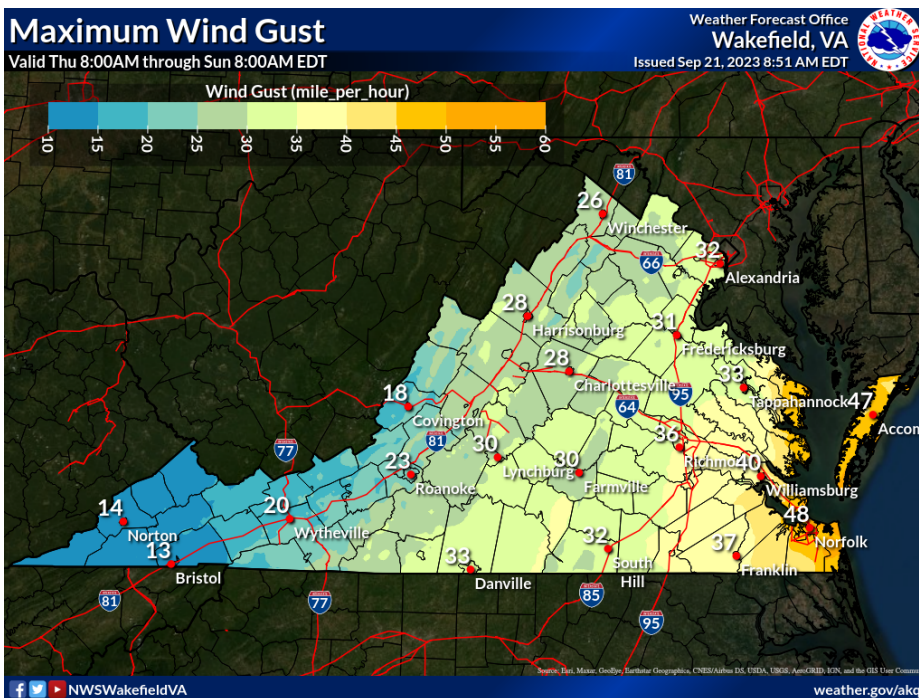


September 22, 2023

## Key Takeaways

- The Governor’s office has declared a state of emergency due to the potential for severe flooding and tropical storm impacts across the Commonwealth from Tropical Storm Ophelia.
- Ophelia is expected to impact much of the state over the weekend, including the potential for life-threatening storm surge in coastal areas. Flood risk is expected to peak with high-tides on Saturday morning and afternoon, with major flooding expected in some areas. Dangerous maritime conditions are also expected.
- Wind gusts are expected to approach 50 mph on land, including 30 mph or higher winds as far west as Danville, Lynchburg and Loudoun. Flash flooding may occur as far west as Roanoke.
- Most COVID-19 indicators have plateaued and likely begun a slow decline. It is possible that another wave will arrive in late fall or early winter, but the current outlook seems favorable.

## Key Figures



## Crowd Forecasts

4%

Chance that the WHO will identify a new COVID-19 Variant of Concern in 2023. (*Metaculus forecast*)

11

Estimated total number of days any region in Virginia experiences coastal flooding, high wind, or tropical storms in 2023. (*Metaculus forecast*)

## Tropical Weather

6

The number of river gauges expected to enter major flood stage over the weekend in Virginia.

5.5 ft

Peak tide height expected at the Washington Channel at SW Water Front, DC, this weekend, categorized as moderate flooding

## Gain of Function

7,000+

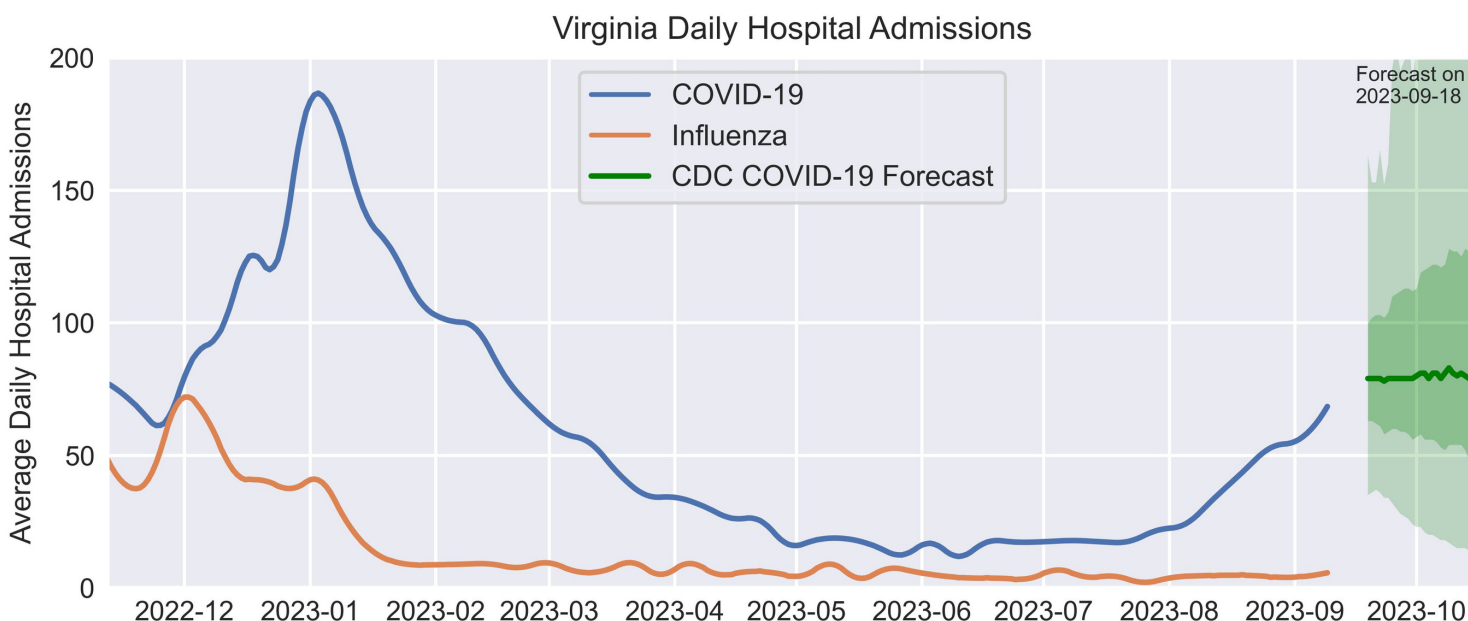
The number of English-language gain- or loss-of-function studies published since 2000.

## *Spotlight:* TS Ophelia

*Forecasts are italicized*

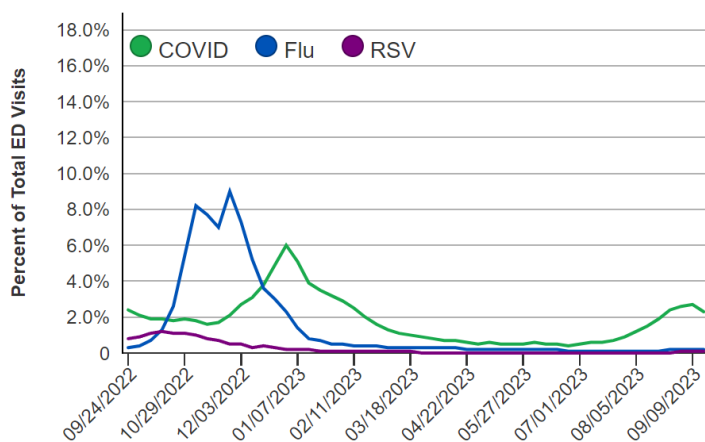
## Respiratory Illness

- **Evidence mounts that the September COVID-19 wave has crested.** The weekly percent of emergency department (ED) visits for diagnosed COVID-19 dipped down to 2.12% this week. This is more than a ten percent reduction from last week’s 2.36%. COVID-like illness visits to EDs and urgent care centers are also down. They dropped to 8.6% from last week’s 9.8%. In VDH wastewater surveillance, not a single facility is reporting an increase in viral loads this week, and many facilities are reporting viral loads below detection limits. The possibility of a second wave appearing later in the fall or early winter remains, but evidence suggests that current case rates have peaked and should continue to slowly decline in the coming weeks.
- **COVID-19 hospitalizations plateau.** This week’s CDC ensemble model forecast of hospital admissions in Virginia suggests that rates have nearly peaked and will remain static through early October. Typically, a delay is expected between a decline in new cases and a corresponding decline in hospitalizations. Nevertheless, the hospitalization rate in Virginia is already showing early signs of wilting, as new admissions dropped to 4.59 per 100,000 from last week’s 5.47 per 100,000. This decline is not seen below as the HHS data used by forecasters lags a week behind VDH data. As such, it is possible that the Commonwealth will see even fewer hospitalizations than current models expect.



This graph shows historical hospital admissions for COVID-19 and Influenza, as well as the CDC’s ensemble forecast for future COVID-19 admissions. The green shading represents 50% and 95% confidence intervals on future forecasts. Historical data source: [HealthData.gov](https://www.healthdata.gov), forecast data source: [CDC CFA](https://www.cdc.gov).

- **Influenza and RSV remain at low levels.** Despite the recent growth of COVID-19, Virginia has not yet seen any major growth of the other two viruses typically associated with “cold season.” Last week only 0.2% of ED visits ended in a flu diagnosis (right). This rate was 0.1% for RSV, but over 2.1% for COVID-19.
- **COVID-19 variant proportions remain as expected.** The CDC data suggests that the EG.5 (Eris) variant has continued to slowly out-compete its peers. It now accounts for about 25% of all newly diagnosed cases in HHS Region 3 which includes Virginia. FL.1.5.1 also shows some slow growth. Over a dozen other variants are still circulating, but BA.2.86 remains rare.

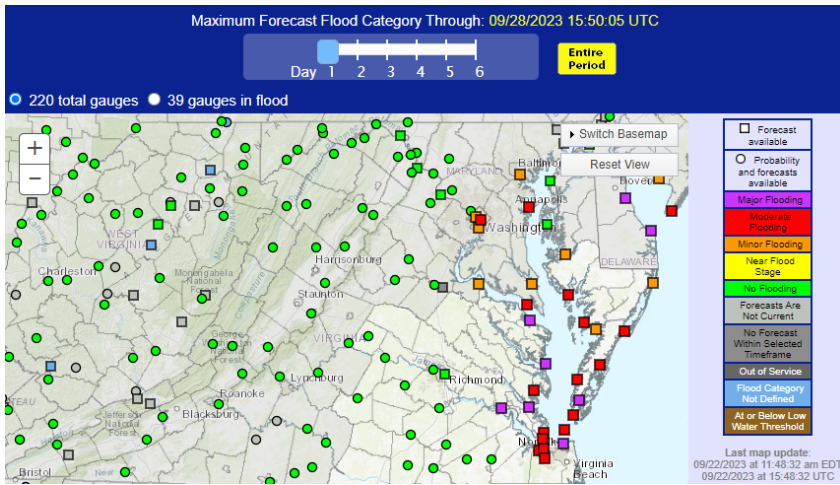
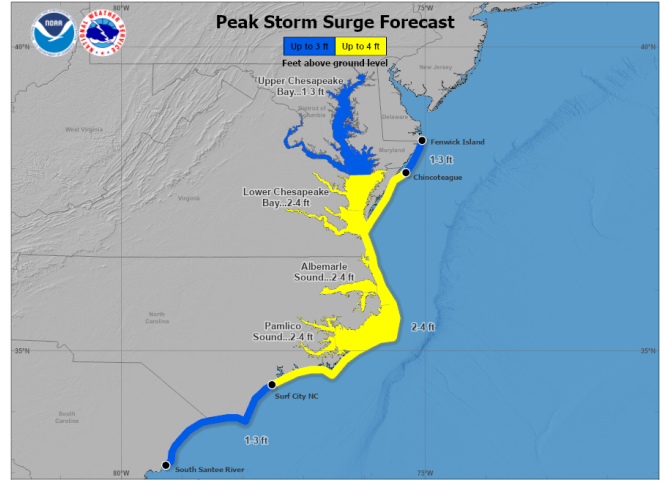


The percentage of visits to an Emergency Department that result in a positive diagnosis for one of the major respiratory diseases. Source: [CDC](https://www.cdc.gov).

**Spotlight**

**Tropical Weather**

- **Tropical Storm Ophelia is expected to impact Virginia Friday and Saturday.** The National Weather Service at Wakefield expects elevated threats due to wind, storm surge, tornados and flash floods, along with significant marine threats, in much of the state.
- **The National Hurricane Center is warning about the potential for life-threatening storm surge,** including along Virginia’s Eastern Shore and the Lower Chesapeake Bay. Storm surge up to 4 ft is expected in Virginia’s coastal areas. Meanwhile, flash flooding could occur as far west as Roanoke.



*Tropical Storm Ophelia is expected to track along the Atlantic coast, moving over Eastern Virginia on Saturday. Tropical storm force winds could affect southern and coastal areas as early as Friday evening. Flooding due to rain and storm surge is expected to peak with high tides on Saturday morning and afternoon. Overall, coastal areas can expect moderate flooding, but some river gauges are expected to reach major flood stage. Additionally, potentially life-threatening storm surges, up to 4 ft, are expected. There is also an elevated risk of flash floods due to heavy rains during the storm.*

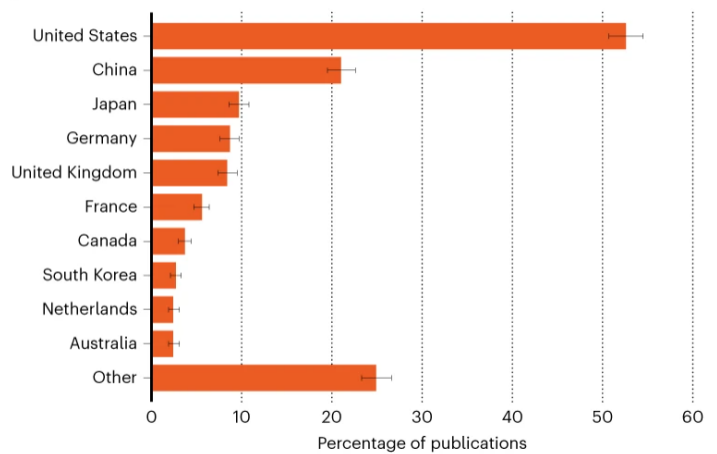
Image Sources:  
 Above: [National Hurricane Center](#)

Left: [NWS Advanced Hydrologic Prediction Service](#)

**Other News**

- **Flooding at Burning Man festival accompanied by false claims.** As muddy roads stranded thousands of attendees, rumors of an Ebola outbreak and a national emergency declaration spread on social media, along with other false claims.
- **DC-area Kaiser Permanente health workers authorize strike, following similar actions nationally.** The current contract expires Sept 30, and negotiations to get a new contract in place are continuing. Doctors and most nurses are not part of this strike authorization.

**Gain and Loss of Function Research**



*A recent landscape analysis of over 7,000 English language Gain-and Loss-of-Function studies published from 2000-2022 found wide geographical spread. Image Source: [Nature](#)*