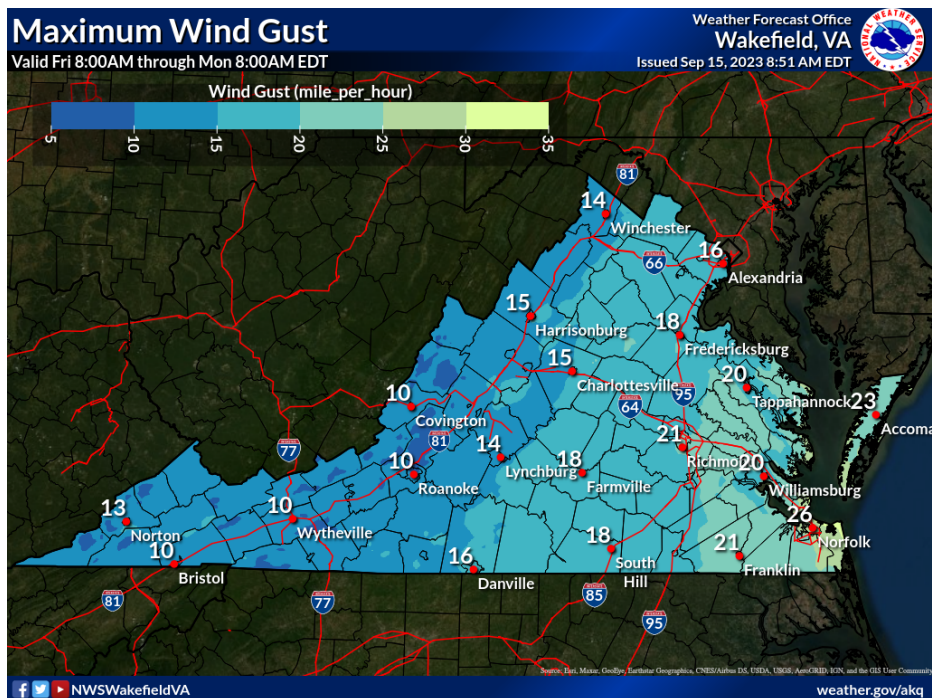


September 15, 2023

## Key Takeaways

- COVID-19 growth may be slowing and entering a plateau phase. COVID-like illness metrics show stagnation. Only two wastewater sites are showing growth this week. The statewide reproductive number suggests that case rates are likely stable.
- Growth of COVID-19 hospitalization rates has slowed. Models forecast a few more weeks of mild growth before a plateau. This is consistent with trends seen in countries like Ireland and England.
- Influenza and RSV rates remain low in Virginia. CDC data suggests that this year's flu vaccine will be effective at reducing flu severity.
- Data suggests that the strain of H5N1 avian influenza affecting Peru is more capable of infecting mammals than most. Yet, no human-to-human transmission has been observed.
- The Netherlands reports a human case of H1N1 swine flu. Again, no human-to-human transmission has been observed.
- The NWS expects Hurricane Lee to continue north away from Virginia. It may cause minor coastal flooding, and dangerous offshore conditions. Coastal wind gusts are also a possibility.

## Key Figures



## Crowd Forecasts

**3.5%**

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

**8%**

Chance that there will be a tropical weather related mandatory evacuation order for any part of Virginia in 2023. (*Metaculus forecast*)

**11.06**

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

## Wildfires

**529 of 913**

The number of uncontrolled wildfires in Canada, out of the total number of active fires.

## Tropical Weather

**2**

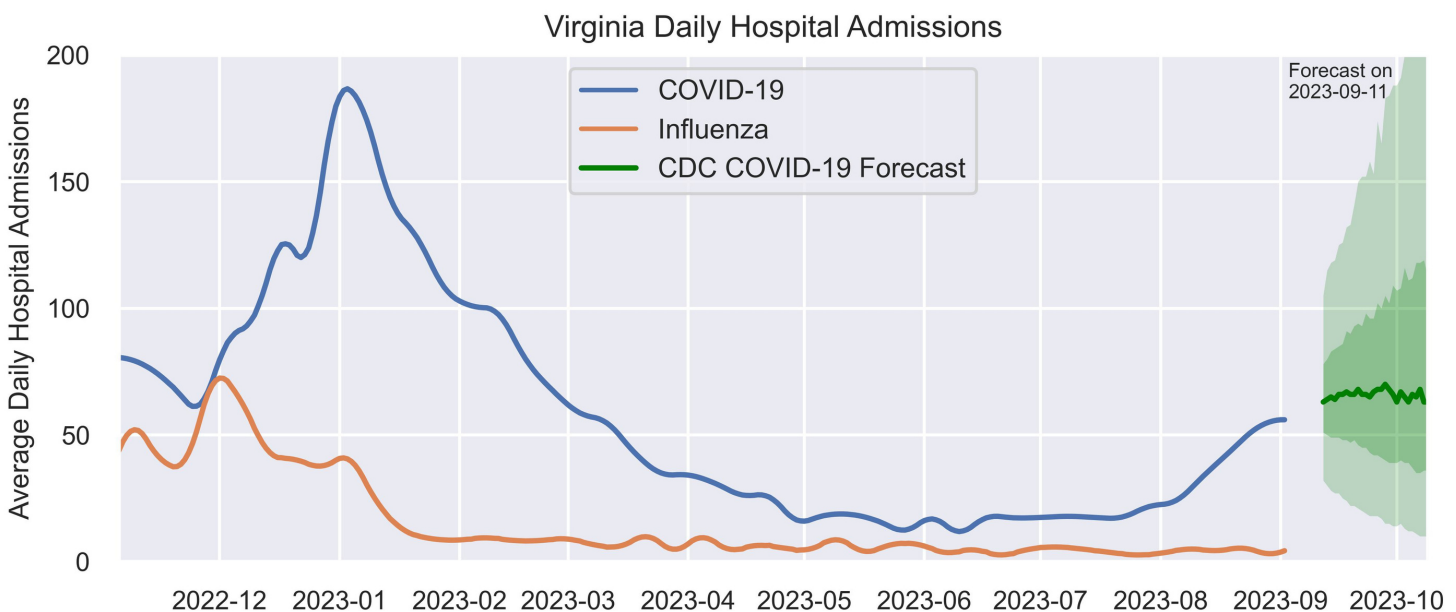
The number of active storms currently being tracked in the Atlantic Ocean.

***Spotlight:***  
**Hurricane Lee**

*Forecasts are italicized*

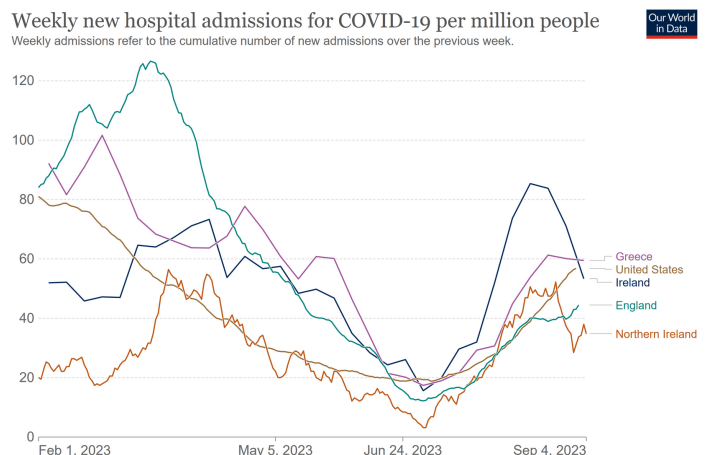
## Respiratory Illness

- **COVID-19 activity has slowed and may be starting to plateau.** This week 2.36% of emergency department patients were diagnosed with COVID-19. This is up just a hair from last week’s 2.35% and the 2.24% recorded the week prior. By comparison the rate was below 0.75% until August. COVID-like illness metrics show similar stagnation, as rates ticked up to 9.0% from last week’s 8.9%. Wastewater data from both VDH and Biobot corroborate this trend, as many testing sites show plateauing viral loads or slowed growth. The effective reproduction number ( $R_e$ ) in Virginia is now almost exactly 1.0 (see slide 13), further suggesting the end of rapid growth and a transition to “treading water”.
- **Minor growth expected in COVID-19 hospitalizations.** Rates are up to 5.22 admissions per 100,000 this week, but growth seems to be slowing. As hospitalizations typically lag behind cases, the Commonwealth could still see a few more weeks of growth. But the effective reproduction number ( $R_e$ ) for hospitalizations is now down to 1.1, and most models suggest only minor growth in the future. October rates should not exceed those seen in mid-February.



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).

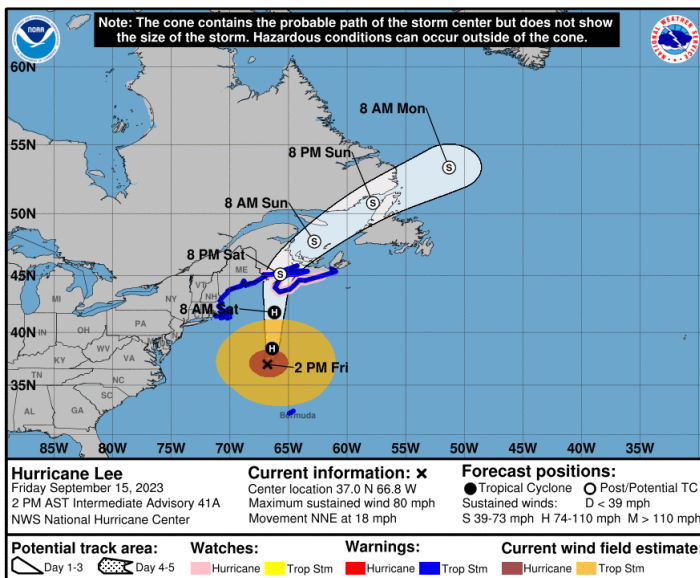
- **Flu vaccine reduced hospitalizations by 52%.** Data from the 2023 southern hemisphere flu season is in. It suggests that vaccination prevented “more than half of influenza-associated hospitalizations among young children, persons with preexisting conditions, and older adults.” The vaccine authorized for use in the U.S. this fall is antigenically similar to the one used in this study. It is expected to perform comparably.
- **COVID-19 hospitalization rates plateaued in peer nations.** Rates in Ireland have peaked and are in decline (right). Other countries like England and Greece are showing a stagnation pattern like the one that’s emerging in Virginia. This suggests that the currently circulating variants are unlikely to cause a major surge as seen with Omicron in early 2021.



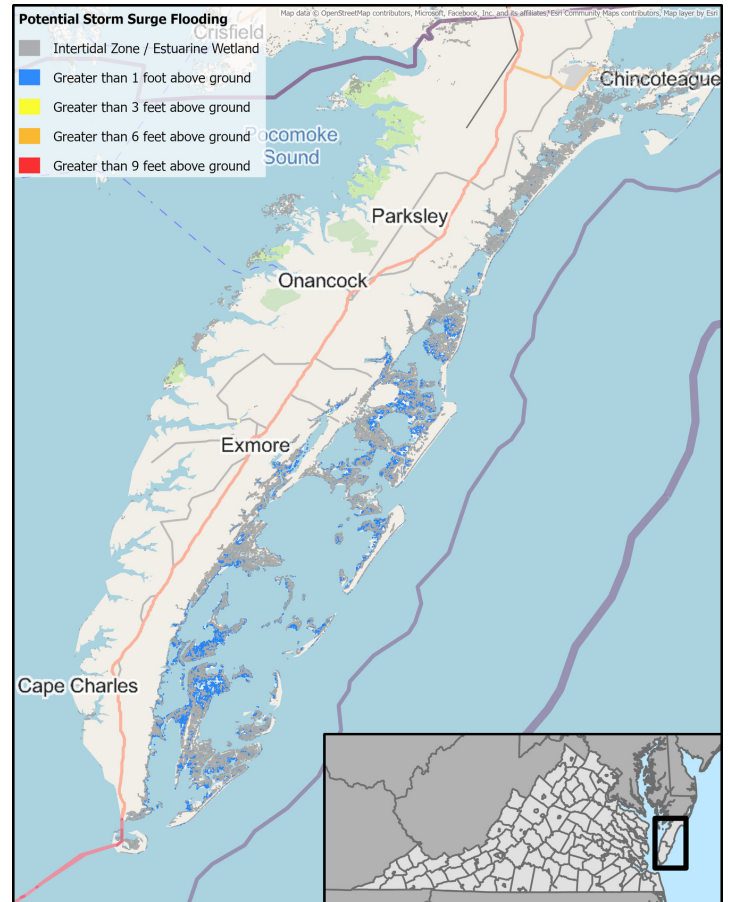
Source: Official data collated by Our World in Data. **Recent COVID-19 hospitalization rates per million residents for peer nations.** Several of these countries have peaked and begun a decline, while others show signs of plateau. Source: [OurWorldInData.org](https://ourworldindata.org).

## Spotlight

- **Hurricane Lee to have minimal impact on Virginia.** Models project that the hurricane will continue north until Saturday. Despite remaining far offshore, the storm will likely cause unsafe maritime conditions. A small craft advisory is in effect for all coastal waters of Virginia, and a high surf advisory is also in effect for the Hampton Roads area and the Eastern shore.
- **Lee to cause minor storm surge on Eastern Shore.** Flooding is possible along waterfront and shoreline areas. This is most evident along the eastern banks of the Eastern Shore, where some areas could see more than a foot of flooding above ground by Saturday.



## Hurricane Lee



Hurricane Lee is expected to continue on a course parallel to the coast (left) and pose no direct threat to Virginia. It may however cause dangerous offshore conditions. Minor coastal flooding is also possible for some areas on the Eastern Shore (above).  
 Inundation forecast dated 2023-09-14 3:48 PM.  
 Trajectory image source (left): [National Hurricane Center](#).  
 Flood GIS data source (above): [National Storm Surge Risk Map](#).

## Other News

- **JYNNEOS vaccine for mpox shown to be effective.** A new report from the CDC shows that a single dose of the vaccine reduced the odds of hospitalization by more than 70%. Two doses reduced odds by 80%.
- **Avian influenza ravages marine mammals in Peru.** Peru has suffered an outbreak of highly pathogenic avian influenza (H5N1). The virus has a mutation that allows it to more easily infect mammals such as sea lions. There is no evidence of sustained human-to-human transmission, despite a recent human case.
- **Naegleria fowleri death in Arkansas.** A fatal case of amebic meningoencephalitis was reported this week. Cases typically peak between July and early October.
- **Human case of swine flu seen in the Netherlands.** Officials from the Ministry of Health identified a lab-confirmed case of swine-origin H1N1 flu. Though the patient had no reported contact with pigs, there was also no evidence of human-to-human transmission.
- **Measles continues to fester globally.** Over 120,000 cases were reported around the world in the first half of 2023. Outbreaks are ongoing in Afghanistan, DR Congo, and in Romania. Travel-associated measles is also an ongoing problem for western nations.
- **Rhode Island closes park due to threat from EEE.** Campers, hikers, and boaters were ordered to leave the area after EEE positive mosquitoes were found.