

Covid-19, RSV, and Influenza in Connecticut

Introduction

Approximately 2% of the people hospitalized in Connecticut are from viral respiratory diseases, such as Covid-19, RSV, and Influenza. Understanding the combined impact of these diseases, particularly during fall and winter, can help public health officials quickly detect and monitor outbreaks, limiting the spread of the viruses.

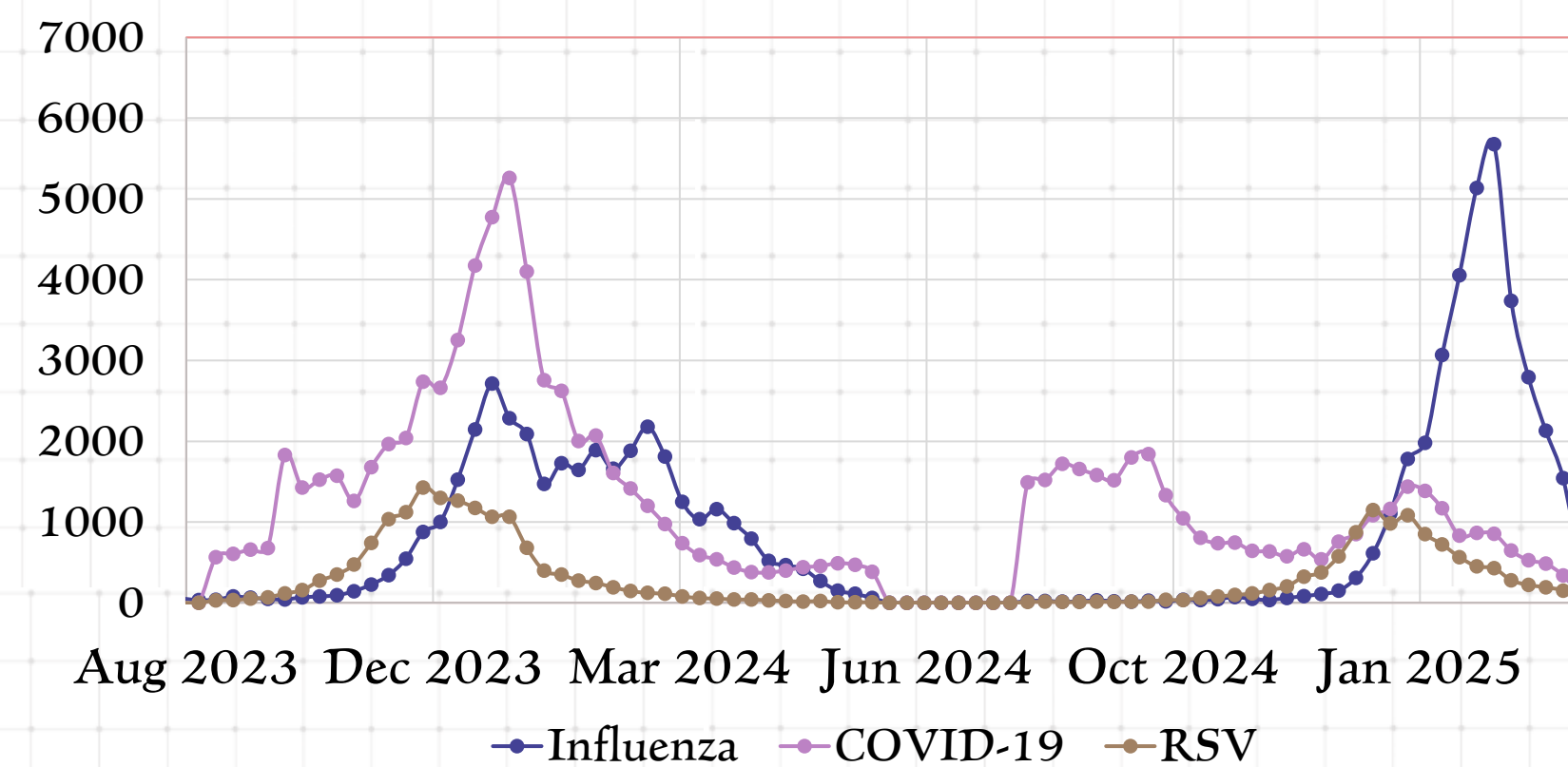
Objectives

- Which month does each disease peak at? Does it stay the same every year?
- Which disease lasts the longest?
- Does the most prevalent disease change every year?
- What alternative method could be used for monitoring diseases?

Data Source:

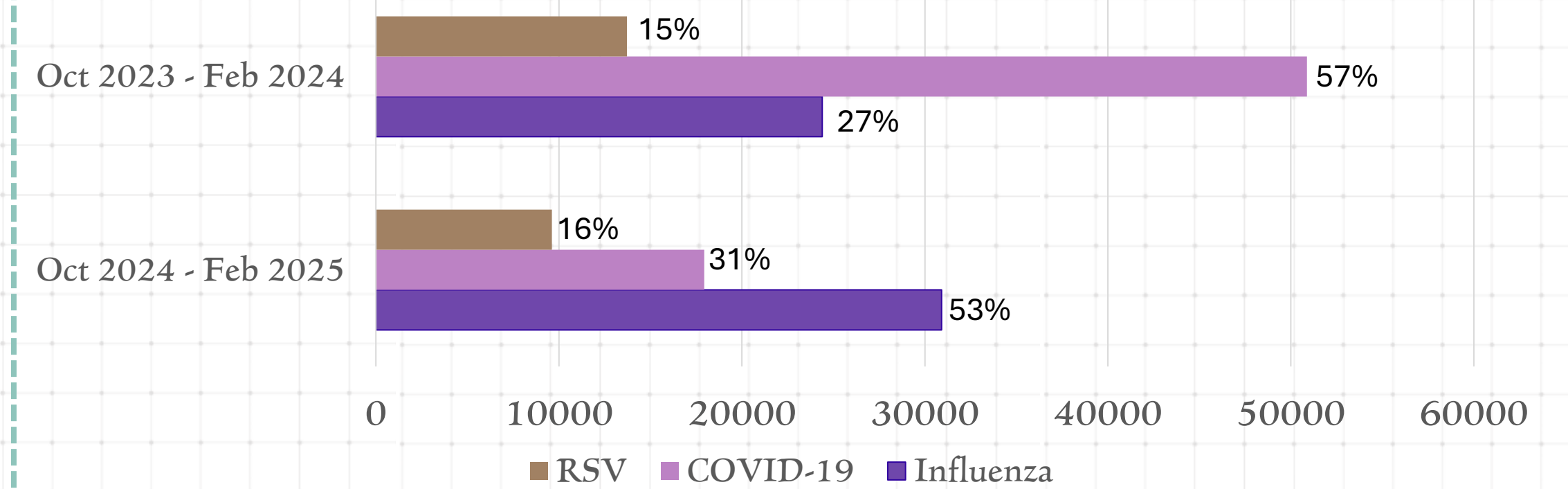
- [Connecticut Reportable Disease Case List, Connecticut Open Data](#) (Retrieved 03/16/2025)
- [Yale Covid Wastewater, Jordan Peccia lab at Yale University and New Haven's Water Pollution Control Authority](#) (Retrieved 03/21/2025)

Viral Respiratory Diseases in Connecticut



- Diseases may not peak during the same month each year.
 - Although RSV and Influenza peaked around the same month during the two flu seasons, COVID-19 peaked at different months.
 - RSV peaked around December in both 2023 and 2024 while Influenza peaked in February both years. However, COVID-19 peaked in January during the flu season of 2023, and in the next year, peaked around September.
- COVID-19 has a longer transmission period compared to Influenza and RSV.
 - During the flu season of 2023, RSV's transmission period lasted 6 months with Influenza's lasting 8 months, while COVID-19's transmission period lasted 10 months.

Reported Number of Diseases During Flu Season

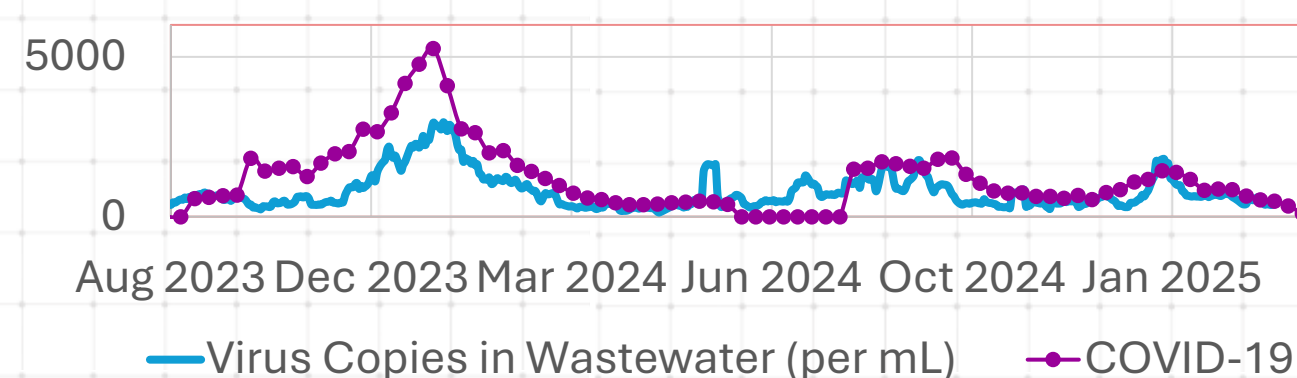


- The most prevalent disease does not stay the same each year.
 - During the 2023 flu season, COVID-19 was the most prevalent disease, having 57% of the reported cases.
 - However, the next year, Influenza was the most prevalent with 53% of the reported cases and COVID-19 dropping to 31%.

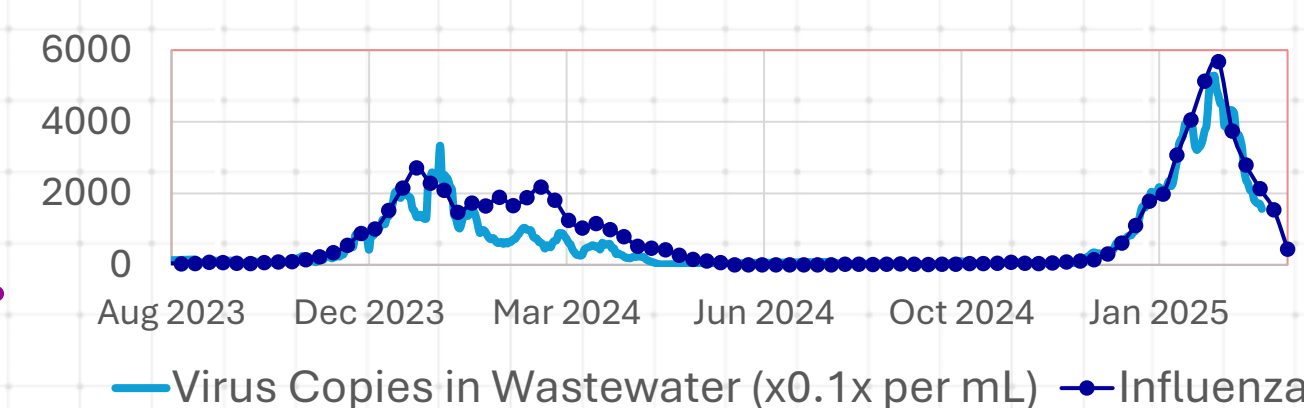
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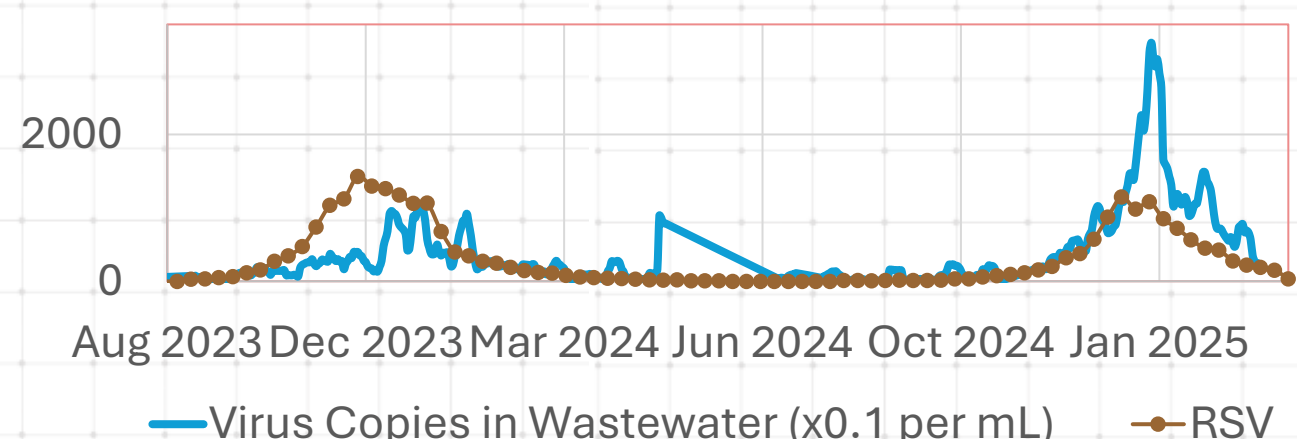
Wastewater Monitoring of COVID-19 in Connecticut



Wastewater Monitoring of Influenza in Connecticut



Wastewater Monitoring of RSV in Connecticut



- Monitoring viral copies in wastewater generally correlates with the reported cases of the same virus, suggesting that this is an effective alternative to track diseases.
- The wastewater data and reported cases may not exactly match. This is because while the wastewater data is only collected from the New Haven area, the reported cases are found from the entire state of Connecticut.

Conclusions:

The most common disease is different each year. They also generally do not peak in the same month. This shows that the historical trend would not predict the diseases. Meanwhile, just reports from hospitals may not reflect all infections. This can cause incorrect estimations of disease transmission, possibly undermining the severity of the situation. This, in turn, can cause hospitals to underprepare for any viruses that suddenly peak. Monitoring wastewater is a good alternative to help track diseases. It can reveal cases when the symptoms had not been shown, or the afflicted person had not gone to the hospital.