

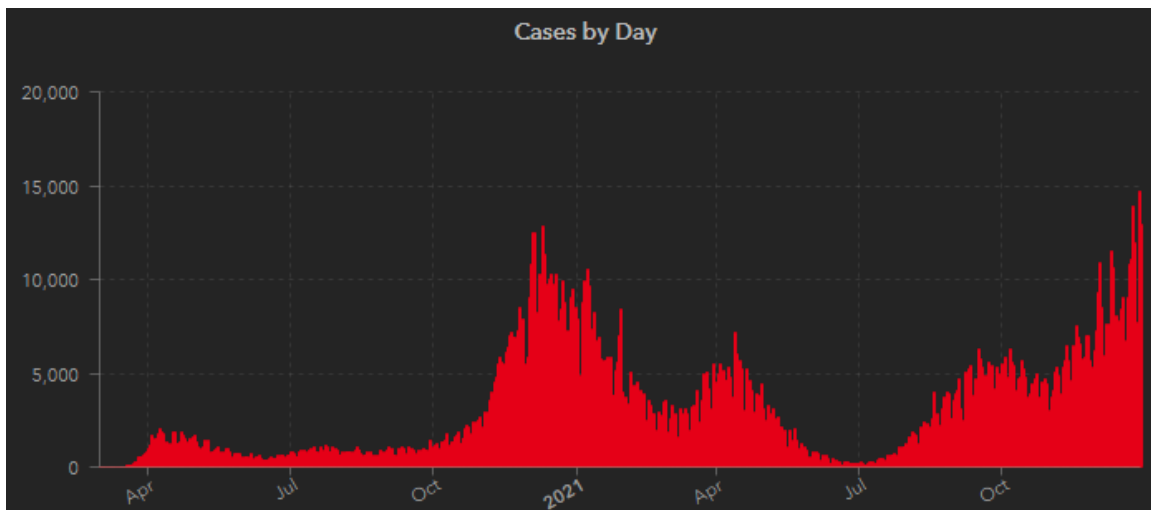
## COVID-19 Pandemic Update

**To: UPMC Medical Command Services**  
**From: UPMC Prehospital Care**  
**Date: December 30, 2021**

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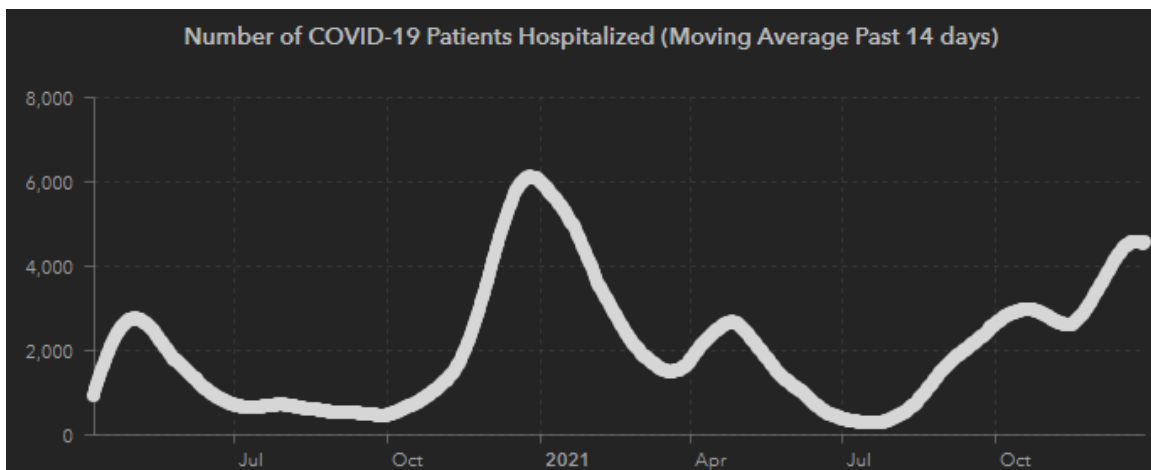
### Current Incidence of COVID-19 cases

A combination of the Delta and Omicron variants is currently fueling a surge in COVID-19 cases that are quickly becoming the highest daily reported case counts encountered throughout the pandemic. This is likely to continue increasing over the coming weeks.



Source: [Pennsylvania COVID-19 Dashboard](#)

Numbers of hospitalized patients with COVID-19 are also steadily increasing. Coupled with high numbers of patients with other serious conditions (e.g., heart attacks, strokes, other infections, etc.) presenting to hospitals, most hospitals in our region are close to or at capacity.



Source: [Pennsylvania COVID-19 Dashboard](#)

## Change in CDC Return to Work Guidance

The CDC recently changed its guidance on when individuals may return to work following COVID-19 illness or after an exposure. Refer to our latest schematic describing this latest guidance issued on December 30, 2021.

## Responses to Frequently Asked Questions

### *What is the Omicron variant and what is the current concern about it?*

A new variant of the SARS-CoV-2 virus (named Omicron) was first detected in South Africa in November 2021 and has quickly spread to the rest of the world, including to Western Pennsylvania. In updated estimates for the week of Dec 18-25, the CDC estimated that 59% of U.S. COVID-19 cases are caused by the Omicron variant. This is anticipated to increasingly be the predominant variant worldwide in the coming weeks, replacing the most prevalent prior variant named Delta.

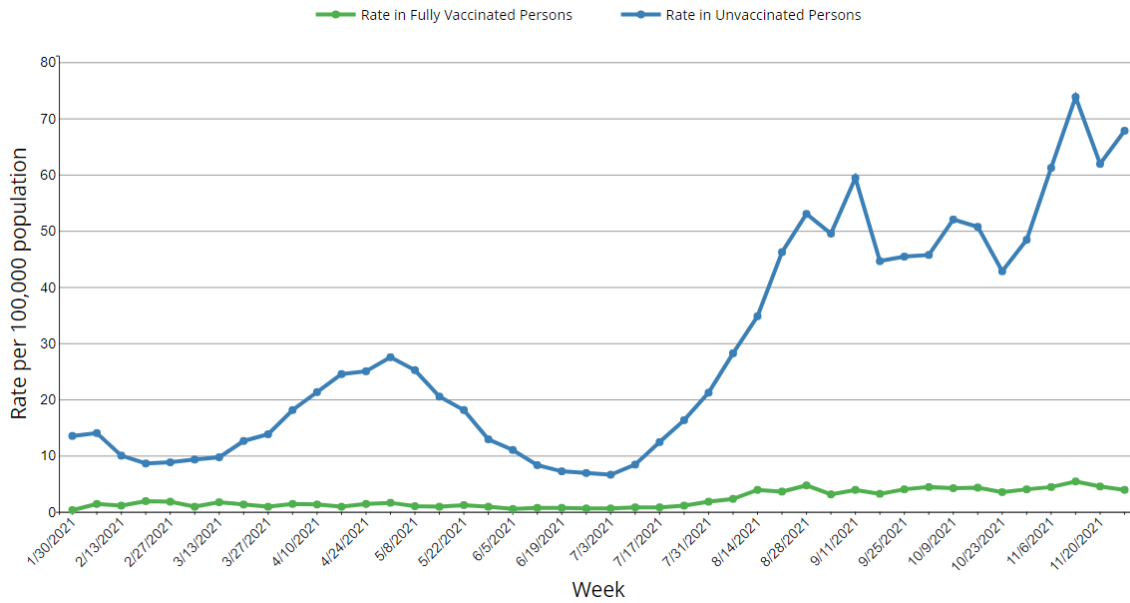
Of concern with the Omicron variant is that it has several mutations that seem to have affected its transmissibility and potential for severity of illness. The key aspects being considered, and latest updates are:

- **On Transmissibility:** It appears that the Omicron variant has increased transmissibility (how easily it is passed on between individuals), leading to a spike in COVID-19 cases throughout the world.
- **On Vaccine Effectiveness:** It appears that the vaccines remain largely effective against the Omicron variant, especially if individuals receive a booster of an mRNA vaccine. Further details provided below.
- **On Severity:** Preliminary data from South Africa and Europe suggest that a lower proportion of individuals infected with the Omicron variant are being hospitalized. However, these data may be confounded by higher rates of vaccination compared to the United States and that increases in rates of hospitalization and deaths lag initial spikes in cases by 2-3 weeks. More information on severity is needed to draw firm conclusions. Additionally, the increased number of cases (due to increased transmissibility) may lead to a higher total number of hospitalizations than with prior variants despite a lower per-case hospitalization rate.
- **On Testing:** Currently available tests for the SARS-CoV-2 virus appear to be similarly effective for detecting the Omicron variant.

### *Are the currently available vaccines effective against the Omicron variant?*

**Overall, vaccination remains the single most effective way to prevent serious illness from COVID-19.** Vaccination has continued to be shown to be effective in reducing the likelihood of hospitalization or death from COVID-19, as evidenced by hospitalization or death rates for unvaccinated versus fully vaccinated individuals:

**Age-Adjusted Rates of COVID-19 Hospitalizations by Vaccine Status in Adults Aged ≥18 Years (Jan-Nov 2021)**

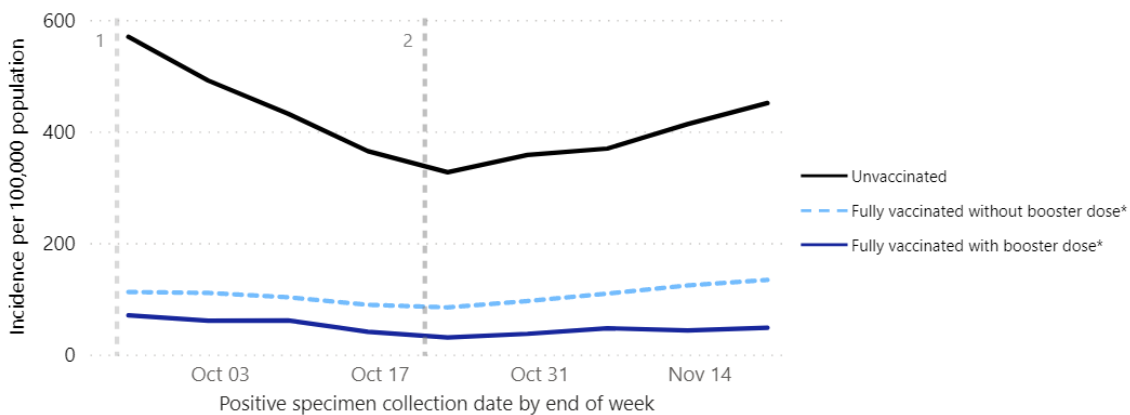


Source: [CDC COVID Data Tracker](#)

The currently available mRNA vaccines (Pfizer and Moderna) appear to be effective against the Omicron variant if the 2-dose series was recently administered (<6 months) and especially if a booster (3<sup>rd</sup>) dose of vaccine has been received.

**Rates of COVID-19 Cases by Vaccination Status and Booster Dose \***

September 19 - November 20, 2021 (17 U.S. jurisdictions)



Source: [CDC COVID Data Tracker](#)

Vaccination with the Johnson & Johnson vaccine has been demonstrated to be less effective than either of the mRNA vaccines. Individuals who received a J&J vaccine >2 months ago are encouraged to receive a booster dose of either the Pfizer or Moderna vaccines.

### *Are monoclonal antibodies effective against the Omicron variant and who is eligible?*

The two previously use monoclonal preparations (casirivimab-imdevimab and bamlanivimab-etesevimab) do not appear to be effective against the Omicron variant. However, a new monoclonal (sotrovimab) is currently available and is effective against the Omicron variant. UPMC has recently changed to primarily using the new monoclonal sotrovimab for all eligible cases of COVID-19 due to the increasing prevalence of the Omicron variant. This treatment is available to individuals at highest risk of COVID-19 complications, including:

- Pregnancy
- Immunosuppressive disease or immunosuppressive treatment
- Neurodevelopmental disorders (e.g., cerebral palsy)
- Having a medical-related technological dependence (e.g., tracheostomy, gastrostomy)
- Sickle cell disease
- Age ≥ 65 years
- Age > 55 years with another EUA-eligible comorbidity (e.g., COPD, DM, CKD)

### *What are the new medications for COVID-19, are they effective, and who is eligible?*

Two medications in pill form were recently provided emergency use authorization by the FDA for use in the U.S. Both medications are indicated for patients that test positive for COVID-19 when used within 5 days of onset of symptoms, when symptoms are mild to moderate and not requiring hospitalization. Both medications decrease the replication of virus and decrease the incidence of hospitalization or death. Both medications are indicated only for patients at risk for progression to severe disease based on underlying conditions.

- **Paxlovid (Pfizer)**
  - Indicated for ages 12 and over that weight 40 kg or more.
  - Taken as 3 pills twice a day for five days.
  - Trials demonstrated an 88% reduction in risk for hospitalization or death.
- **Molnupiravir (Merck)**
  - Indicated for ages 18 and over that weight 40 kg or more.
  - Indicated for patients for whom alternative COVID-19 treatment options are not accessible or clinically appropriate.
  - Not indicated during pregnancy.
  - Trials demonstrated a 30% reduction in risk for hospitalization or death.

### *Are there any updates on masking or other PPE use?*

For daily EMS operations when engaged in patient encounters, guidance regarding PPE use is unchanged. Using at least a surgical mask and gloves for yourself and a 2-layer mask on the patient is necessary for all patient encounters. In those cases where there is a suspected COVID-19 patient, the patient cannot maintain a mask on, or there is performance of an aerosolizing procedure, a higher level of PPE should be used (respirator, eye protection, gloves, and gown).

For encounters outside of the workplace setting, we continue to encourage masking outside your individual home when around others, including at the station. This recommendation is independent of vaccination status, as the current Omicron variant is transmissible among vaccinated individuals. Viral spread among asymptomatic individuals may

contribute to lost days of work and putting others at risk even if someone is asymptomatic or with only minor symptoms.

Due to the high transmissibility of the Omicron variant, there have been media reports with recommendations of using at least a surgical mask instead of a cloth mask. While this recommendation is reasonable considering the transmissibility of the Omicron variant, ensuring a well-fitting 2 or 3-ply mask is used is more important than what type of mask is used. However, where the option exists, a well-fitting surgical mask may be preferable. Additionally, for environments where individuals will be in close proximity to unvaccinated and/or unmasked individuals, use of an N95 or KN95 mask should be considered.

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### Additional Resources

University of Pittsburgh faculty have been working with the Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health on additional resources for EMS and fire personnel to mitigate risk of exposure during the COVID-19 pandemic.

A link to additional resources is here:

<https://www.emergencymedicine.pitt.edu/research/covid-19-resources-ems-fire-first-responders-and-clinicians>

Additionally, we recommend EMS personnel view this video on COVID-19 vaccination and seek out any of our medical directors with questions or concerns related to vaccination. It is the single most important way for us collectively to move beyond this pandemic. In this video, one of our colleagues shares his experience through COVID-19 and the importance that vaccination meant to him and his family: [https://youtu.be/X\\_qKQMVjoEM](https://youtu.be/X_qKQMVjoEM).