Fall and winter have become peak times for a tripledemic of COVID-19, flu and respiratory syncytial virus (RSV). Increased infection rates for three different infectious pathogens at the same time can put a major strain on healthcare resources, including the most important resource, healthcare staff. Although all three of these viruses have significant respiratory components, they also differ in several ways.

Healthcare facilities must be ready for patient surges, and healthcare professionals must be aware of the latest information regarding currently circulating viruses, infection rates, infection transmission controls, vaccinations and healthcare facility surge capacity. This resource is meant to assist RNs and other healthcare professionals in keeping themselves and their patients safe.

For additional assistance, NYSNA members can contact their NYSNA facility representative or the NYSNA occupational health and safety representatives at healthandsafety@nysna.org.
COVID-19

COVID-19 has become a regular part of our infectious disease landscape with patterns emerging regarding likely surges. Temperatures that force more people inside due to cold or heat, school reopenings, major holidays that bring people together, and new virus strains are all factors that can cause surges.

The most common strains of COVID-19 currently in circulation in the northeastern U.S. are, as of the time of this writing, EG.5 and FL.1.5.1. Strains are monitored through random genetic testing of positive COVID-19 specimens and wastewater testing. Wastewater is a highly effective way of measuring circulating strains and increasing infection rates before higher rates show up in tests and hospitalizations. Because circulating strains can change quickly, the most up to date information can be found at https://covid.cdc.gov/covid-data-tracker/#variant-proportions.

Currently COVID-19 rates are not monitored as closely as in the past. However, information on test positivity, hospitalization, ED visits and death rates by geographic region can be found at https://covid.cdc.gov/covid-data-tracker/#maps-new-admissions-rate-county.

Updated booster vaccines are currently recommended for everyone over the age of 6 months (unless contraindicated). Moderna, Pfizer and Novavax boosters are available. These current boosters are monovalent, designed to protect against one of the more recent dominant COVID-19 variants – XBB.1.5 – but not the original COVID-19 strain which is no longer in circulation. While XBB.1.5 has been supplanted by newer variants, the booster does appear to be effective against currently circulating strains. COVID-19 vaccines continue to be far more effective at preventing severe symptoms, hospitalization and death than they are at preventing infection altogether. Immune response from COVID-19 vaccines does wain over time making booster shots an important part of protection from severe disease. Research shows that protection from COVID-19 vaccines starts to decrease after about 4 months, so for maximum protection, consider getting a booster shot 4 months or more after a previous shot or COVID-19 infection. At this time COVID-19 vaccination is no longer mandated for healthcare workers by the NYS Department of Health. However, individual health-care facilities may continue to mandate COVID-19 vaccination. More information on COVID-19 vaccinations can be found at https://www.cdc.gov/coronavirus/2019-ncov/vaccines/stay-up-to-date.html.

Antiviral treatments for COVID-19 include ritonavir-boosted nirmatrelvir (Paxlovid), molnupiravir (Lagevrio) and remdesivir (Veklury). These are typically prescribed for patients experiencing mild to moderate symptoms. Oral medications Paxlovid and Lagevrio are most effective when taken within 5 days of symptom onset (or positive test). Veklury is administered via infusion and is most effective when administered within 7 days of symptom onset. Veklury is typically prescribed for patients who are at high risk of progressing to severe disease. There are currently no approved monoclonal antibody treatments for COVID-19 in the U.S. as they do not appear to be effective against currently circulating strains of COVID-19. More treatment information for healthcare providers can be found at https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/outpatient-treatment-overview.html.

Some healthcare systems have mandated mask wearing for healthcare staff based on local COVID-19 rates. This is a decision left to facilities. At the time of this writing, there are no statewide or national requirements for masking. However, the CDC does recommend use of an N95 or higher-level respirator when coming into close contact with COVID-positive patients under certain circumstances.
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circumstances, such as during aerosol-generating procedures. Information on the CDC’s infection control guidance for COVID-19 can be found at https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html.

Unfortunately, the CDC’s infection control guidance has not adequately protected healthcare staff and patients from COVID-19 infection. While the CDC now accepts that COVID-19 is transmitted via airborne particulates, guidance on ventilation and respiratory PPE continues to be weak. Therefore, NYSNA recommends the following measures be followed to protect healthcare staff from workplace exposure to COVID-19:

- **PPE**
  - Fit-tested N95 or elastomeric respirator, PAPR or CAPR when in areas where COVID-positive patients and patients suspected of having COVID-19 are present. When rates of COVID-19 are high, this should be extended to areas where patients’ COVID-19 status is unknown.
  - Gown
  - Gloves
  - Face shield or goggles when in close contact with a COVID-positive patient or a patient suspected of having COVID-19

- **Increased ventilation**
- **Patient testing prior to admission**
- **Exposure notification to staff**
- **Tracking of in-hospital COVID-19 transmission**

Approximately 6% of the U.S. population suffers from long COVID. There is some evidence that repeat COVID-19 infections increase the risk of long COVID. There is also some evidence that vaccination decreases symptoms of those experiencing long COVID. More information about long COVID as well as resources for long COVID care can be found at https://cf-simple-s3-origin-cloudfrontfors3-146697677730.s3.amazonaws.com/healthAndSafety/2023-04-20longCOVIDGuide.pdf.

The CDC did a poor job of protecting healthcare workers (and patients) during previous COVID-19 surges. HICPAC, the CDC’s advisory committee on healthcare infection control practices, is currently in the process of reviewing past guidance and is trying to recommend even weaker infection control guidance. NYSNA and NNU, along with other unions, safety professionals, and patient advocacy groups have been fighting hard to reverse this trajectory by demanding better transparency, more input and closer adherence to scientific evidence regarding infection transmission.

**COVID-19, flu and RSV are all transmitted through the air; therefore, improved ventilation is key to protecting healthcare staff, patients and visitors.**

Improved ventilation can be obtained through air filtration, increased fresh air circulation, and, where risk is highest, negative pressure rooms and spaces. For more information on ventilation contact the NYSNA occupational health and safety representatives at healthandsafety@nysna.org.

Strong data clearly point to decreased COVID-19 transmission where masks are consistently used. Data also shows that the better the mask, the more it protects the wearer from COVID-19 infection. A fit-tested N95, elastomeric respirator, PAPR or CAPR provides the best protection for healthcare staff.
Influenza

This year dominant flu strains in the U.S. are Influenza A (H3N2) and B (Yamagata and Victoria lineages). Current flu vaccines contain components to provide immunity to these strains. Like COVID-19 vaccines, flu vaccines are highly effective at preventing severe illness and hospitalization, though vaccinated persons may still experience an infection with mild symptoms. Information on flu vaccine efficacy can be found at https://www.cdc.gov/mmwr/volumes/72/wr/mm7237e1.htm. Vaccine information specifically for healthcare professionals can be found at https://www.cdc.gov/flu/professionals/index.htm. Up to date information on flu rates both nationally and by state can be found at https://www.cdc.gov/flu/weekly/index.htm. NYS Department of Health (DOH) flu surveillance information can be found at https://nyshc.health.ny.gov/web/nyapd/new-york-state-flu-tracker. NYS DOH information for healthcare providers can be found at https://www.health.ny.gov/diseases/communicable/influenza/seasonal/providers/.

Antiviral treatments for the flu include:
- oseltamivir phosphate (generic version or Tamiflu)
- zanamivir (Relenz)
- peramivir (Rapivab)
- baloxavir marboxil (Xofluza)

Flu antiviral medication is most effective when taken within 2 days after flu illness begins. More information on flu treatment can be found at https://www.cdc.gov/flu/treatment/whatyoushould.htm. Information specifically for clinicians can be found at https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm.

Under the New York State Health Code, healthcare staff must either be seasonally vaccinated against the flu or wear a mask when flu is prevalent in the state. To find out if flu is prevalent, go to https://www.health.ny.gov/diseases/communicable/influenza/seasonal/providers/prevention_of_influenza_transmission/.

RSV

RSV typically only causes severe illness in infants and the elderly. It is the leading cause of hospitalization for children under the age of one year. However, new RSV vaccines are now available for both at-risk populations. Nirsevimab (Beyfortus)* is recommended for children under the age of 8 months (and up to 19 months for children at high risk of severe disease).

Palivizumab (Synagis) may also be recommended for infants and young children who are at risk for severe RSV disease. New RSV vaccines for adults over the age of 60 are RSVPreF3 (Arexvy) and RSVpreF (Abrysvo). Although predominantly for adults, Abrysvo can also be administered to infants up to 6 months old and pregnant persons (vaccination during pregnancy imparts some protection to the newborn). Arexvy and Abrysvo are over 80% effective in preventing lung infection and 90% effective in preventing ICU hospitalization in infants.

Although most people with RSV have mild symptoms, hospitalization may be required for those experiencing symptoms such as dehydration and difficulty breathing. This risk is highest for infants and elderly populations. A small percentage of patients with severe disease may require intubation. It is possible that, with high levels of vaccination, there will be a significant decline in hospitalization for high-risk populations.


*Nirsevimab is a long-lasting monoclonal antibody that provides passive immunity. This is a type of prophylactic treatment that allows the body to be primed to fight the virus as soon as it enters the body.
Healthcare Worker Protections

All of these viruses can be transmitted via airborne droplets and particulates. Surgical masks can provide some protection to others by capturing droplets emitted by the wearer, who may be infected with an airborne transmissible virus. This is called “source control.” However, surgical masks do little to protect the wearer from exposure to viral particulates from others. A fit-tested respirator (N95 or elastomeric, PAPR or CAPR) is necessary to protect healthcare staff from transmission. There is no longer a shortage of N95s; therefore, healthcare facilities should provide an adequate supply so that N95s can be removed and discarded after every patient care session.

Decreasing the airborne load of viruses through improved ventilation will also help prevent disease. Ventilation improvements can include increasing the amount of outside air circulating through the ventilation system, installing higher level MERV filters in HVAC systems, increasing HEPA filtration with portable air purifiers in areas where viral risk is higher, installing ventilated headboards or vented hoods at beds of infected patients, creating additional permanent or temporary negative pressure rooms (AIRs), and expanding overcrowded areas, such as EDs, with temporary triage structures.

Improving staffing so that workers who are not feeling well do not feel pressured to come to work will also help prevent the spread of disease. New York State “COVID time” is still in effect. More information can be found at https://actionnetwork.org/user_files/user_files/000/097/501/original/LeaveRightsCovid19-2023.pdf.

Universal patient testing prior to admission will assist in identifying infected patients, thus allowing proper transmission prevention measures to be put in place. This will protect both healthcare staff and other patients from exposure. Rapid PCR tests are available for COVID-19, flu and RSV. Healthcare facilities should be well stocked with these tests.

For further information on healthcare staff protections, contact the NYSNA occupational health and safety representatives at healthandsafety@nysna.org.

END NOTES


## IS YOUR FACILITY PREPARED?

### COVID, RSV, and the Flu: Healthcare Trifecta Poses Special Threat to Patients, Healthcare Staff and the Staffing Crisis

With a trio of respiratory pathogens on the rise, the coming months could pose major challenges for healthcare providers. A tough flu season can be difficult enough, but the confluence of these three diseases will call for even greater advanced preparation on the part of hospitals, clinics and skilled nursing facilities. While one size may not fit all, this checklist includes key measures that need to be in place to keep patients and staff safe during this time.

### Prevention and Ongoing Measures

- Is a system in place to quickly identify and isolate patients with confirmed or suspected airborne infectious diseases?
- Does the facility have sufficient stocks of vaccines, medicines, equipment and PPE in anticipation of surges in all three of these pathogens?
- Does the facility have ongoing vaccination programs, for staff as well as patients, for all three of these pathogens?
- Is the facility requiring staff who come in close contact with patients to wear N95s or other types of respirators (elastomerics, PAPRs or CAPRs) to protect them from airborne transmission of COVID, flu and/or RSV during periods of high transmission rates?
- Are healthcare staff fit-tested for N95s annually and when a new make/model/size of N95 is provided to staff?
- Are the respirators that healthcare staff have passed a fit test on available for use on the unit?
- Does the facility have the ability to quickly expand respirator fit-testing capacity if needed?
- Does the facility’s PPE inventory include reusable PPE, such as elastomeric respirators, in case there is a shortage of disposable PPE?
- Does the facility’s PPE inventory include adequate supplies of gloves, gowns, face shields and goggles?
- Does the facility have adequate space for an influx of patients in the ED, inpatient units and clinics?
- Have visitor restrictions been put in place to limit infection transmission in the facility?
- Is the facility prepared to deploy enhanced ventilation, such as portable HEPA units, more outside air in the ventilation system, more air changes per hour (ACH), and additional Airborne Infection Isolation (negative pressure) Rooms?
- Has the facility activated the Hospital Incident Command Systems (HICS)?
- Has the facility planned for or implemented alternative sites (from the ED proper) on or off campus to conduct medical screening exams and treatment for influenza like illnesses (ILIIs) as allowed under the CMS waiver program?
- Has the facility planned for or set up fast-track areas outside of or near the ED for the care of ambulatory patients with COVID/RSV/influenza?
Communication/Notification/Tracking

☐ Does the facility have an adequate system in place to communicate information to frontline staff including patient capacity, changes in protocols and procedures, infection rates, etc.?

☐ Is in-hospital transmission of infections to patients and staff recorded and tracked by the facility?

☐ Are employees quickly notified if they have been exposed to an infectious pathogen?

Staffing

☐ Does the facility have tracking and response mechanisms in place to quickly identify potential staff shortages?

☐ Is the facility complying with all contractual and NYS Department of Health requirements on staffing?

☐ Does the facility have protocols in place to ensure that staff are able to take adequate time off if they contract any of these pathogens?

☐ Has the facility contacted the NYS Department of Health or Health and Human Services regarding volunteer staff resources, the use of mobile units or other assistance?

Hazard Assessment

☐ Has the facility made improvements/adjustments based on an assessment of its prior COVID-19 response efforts?

☐ Did the assessment include improvements in these areas:
  ○ Ventilation
  ○ PPE supply
  ○ N95s
  ○ Elastomeric and other reusable respirators
  ○ Gowns
  ○ Gloves
  ○ Face shields and goggles

☐ Patient and staff testing

☐ Training

☐ Visitation

☐ Exposure notification

☐ Tracking of in-hospital infection transmission

☐ Are frontline staff included in hazard assessments and preparedness activities?