Introduction

This course reviews key features of seasonal respiratory viruses, with a focus on preventing spread within the healthcare setting. It aims to help you make more informed decisions about vaccinations.

The *Post Test* is scored, and a final score will be given.

- 90% is needed to pass the *Seasonal Respiratory Virus Illnesses in the Healthcare Setting* course.

Learning Objectives

When you complete this online course, you will:

- Understand the impact of seasonal respiratory viruses and how respiratory viruses are spread

- Understand the value of vaccines and their importance for healthcare personnel

- Be familiar with our infection control procedures and why they are important

- Understand the relevant regulations that apply within healthcare settings

- Be familiar with our Stanford Medicine Healthcare Personnel (HCP) Fall Vaccine Program

The Basics of Seasonal Respiratory Viruses

Most seasonal respiratory infections are caused by "common cold" viruses that rarely result in serious illness. However, 3 viruses can cause severe illness. They are responsible for a large number of hospital stays and deaths each year.

The three most dangerous viruses are **influenza, COVID-19 and the respiratory syncytial virus (RSV).** This course focuses on these "Big 3" viruses.

FLU COVID-19 RSV
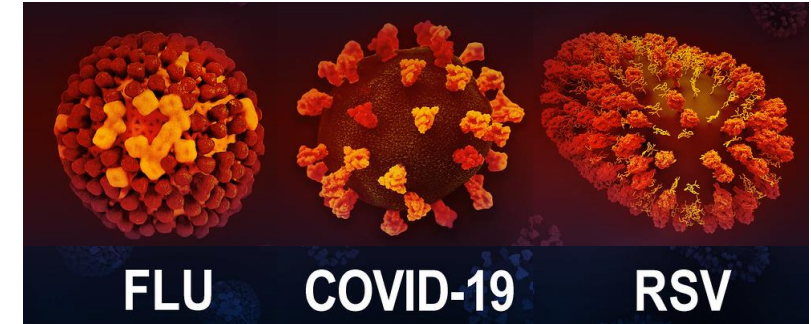
Respiratory illnesses are more common during cold weather months in the late fall and winter. However, respiratory viruses may circulate all year. The seasonal pattern of COVID-19 is still evolving.
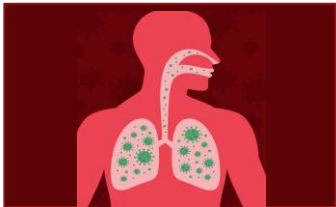
The "Big 3" viruses can infect the entire respiratory tract (nose, throat, and lungs). Common cold viruses are much less likely to directly affect lung function. Most people recover from respiratory infections within 7 to 10 days. A cough can often persist for weeks.

Common symptoms of influenza, COVID-19, and RSV
- Cough
- Headache
- Sneezing
- Runny nose
- Congestion
- Fever of over 100°F (37.8°C)

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Source: Preparing Patients for Fall and Winter Virus Season (CDC)

Impact of the "Big 3" Seasonal Respiratory Viruses

Influenza has affected humans for hundreds of years. It is always rapidly changing. Different "variants" of the influenza virus cause the "flu season" to change in severity each year.

COVID-19 has affected the vast majority of the population since 2020.

RSV was discovered in 1956 and is a particular threat to infants and older adults. It also threatens those with underlying risk factors.

Flu infects between 3% to 11% of the U.S. population annually. Each year between 14,000 and 710,000 people are hospitalized from the flu. Deaths from the flu vary from 12,000 to 52,000 people each year.

Adults over 60 years and children younger than 5 years are at highest risk for severe illness.

During the early years of the COVID-19 pandemic, it is estimated that 7.5 million people were hospitalized and 921,000 people died in the U.S. between Feb 2020 and Sept 2021.

The frequency of serious illnesses from COVID-19 has decreased as the population develops improved immunity through repeated vaccinations and infections. However, COVID-19 still causes many more deaths in the U.S. than flu and RSV.

RSV infects about 3% - 10% of adults annually.

RSV is the most common respiratory cause for an infant to be hospitalized.

Among adults 65 years and older, it is estimated that 60,000 to 160,000 people are hospitalized each year with this disease in the U.S.

Sources:
Frequently Asked Questions about Estimated Flu Burden | CDC
Estimated Disease Burden of COVID 19 | CDC
Epidemiology and Outcomes of RSV | NIH NLM
RSV Surveillance and Research | CDC

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Impact on Healthcare Organizations

Hospital capacity: It is common for the surge of patients with respiratory illnesses to cause hospital bed shortages each winter. COVID-19 has added to the challenge of hospital bed shortages.

Staffing: Healthcare personnel are susceptible to these viruses, like everyone else. We see increased absences due to respiratory illness each winter. This often happens when healthcare facilities are most overcrowded and in need of more staffing.

Risk of healthcare-associated ("nosocomial") spread: With many infectious patients under our care, we must take special precautions to minimize the risk of these viruses spreading to patients and staff.

High-risk patients: We must remember that we care for a large population of high-risk patients. Transmission of virus to these vulnerable patients is a very serious threat to their health.

Spread of Respiratory Viruses

Respiratory viruses can be spread in 4 major ways:
- Through large droplets produced when an infected person coughs or sneezes
- Through small respiratory aerosols which can float and travel in air flows
- Through contact with contaminated surfaces followed by touching around one's mouth or nose
- Through direct physical contact

- The largest risk of transmission is when an infected individual has symptoms. They are likely to spread virus into the air or onto surfaces. Even those with mild symptoms can spread large amounts of virus.

- Even during the incubation period (the time between exposure to a virus and the development of symptoms), it is possible for people to pass the virus to others.

- There is a much lower chance of continued spread once one's symptoms have fully resolved.

    - However some people, especially young children and people with weakened immune systems, can infect others for a prolonged period after becoming infected.

Reducing the Impact of Seasonal Respiratory Viruses

In the United States, we are fortunate to have more tools than ever before to help people protect themselves, their families, and communities from the threats of seasonal respiratory illnesses.

- **Safe and effective vaccinations** – Vaccines are now available for flu, COVID-19, and RSV. Although they can't prevent infections entirely, they are very effective in reducing the risks of hospital stays, long-term health issues, and death. More on vaccines later.

- **Common sense actions** – Wearing masks, social distancing, washing hands often, not touching eyes, nose, and mouth, putting tissues in wastebaskets, and improving airflow where people gather are other ways to provide protection.

- **Testing** – Tests, some of which can be done at home, can quickly detect these respiratory viruses. This means affected individuals can get treatment sooner and take actions that can reduce viral transmission.

- **Widely available treatments** – Effective treatments that reduce severe illness, hospital stays, and death are available for both COVID and Flu.

Source: Preparing Patients for Fall and Winter Virus Season | CDC

More Measures for Health Care Personnel

Testing for COVID-19 is still required whenever symptoms develop. Positive tests must be reported to Workforce Health and Wellness (WHW) or SHC Tri-Valley Occupational Health Services (OHS).

➤ Please bookmark the [Seasonal Respiratory Virus website](#) so that testing and isolation guidelines are easy to find if develop symptoms.

➤ Keep at least one COVID-19 test kit at home for ready availability. Free test kits are available at [WHW](#).

Do not come to work with a fever 100ºF (37.8ºC)

➤ You can usually go back to work if your symptoms are mostly resolved, and you haven't had a fever for at least 24 hours. If you have COVID-19, only return to work after a negative test. There may be other requirements at SMCH (LPCH) and in pediatric settings.

➤ It is important to rigorously follow all prevention strategies discussed on the previous page *until your symptoms have fully resolved*

Follow all standard infection control precautions for all patient care, especially aerosol-generating procedures.

Infection Prevention Precautions Across Stanford Medicine

Each respiratory virus may require a different set of preventive precautions depending on the location where patients are receiving care. The grid below lists the infection prevention policies for different work settings. It is important to know what precautions and personal protective equipment (PPE) are necessary to protect yourself and patients.

Hospital patients with documented or suspected illness with any of the "Big 3" seasonal respiratory viruses are placed on infection prevention precautions.

In the outpatient setting, patients and employees with symptoms should wear masks and socially distance to help prevent spread.

Stanford Medicine Health Care (SHC)	Stanford Medicine Children's Health (SMCH)	Stanford Health Care Tri-Valley	Packard Children's Health Alliance (PCHA)	Stanford Medicine Partners (SMP)
SHC Contact Precautions	SMCH Isolation: Transmission-Based Precautions	SHC Tri-Valley: Types and Duration of Isolation Precautions		
SHC Droplet Precautions				
SHC Airborne Precautions				

Note: Images are illustrative only. Please reference the policy URL for complete and updated details

Vaccination Basics

How Vaccines Work: Vaccines help the body learn how to defend itself from disease without the dangers of a full infection. Vaccines cause the immune system to produce immune cells to fight off what it thinks is an infection. The body is left with a supply of these cells and will remember how to fight a real infection.

Vaccines are safe: Flu, COVID-19, and RSV vaccines are monitored for safety. Like any medicine, vaccines can cause side effects. These tend to be mild and temporary. Serious adverse events are rare.

Vaccine benefits: Following the Centers for Disease Control and Prevention (CDC) recommendations and getting the flu, COVID-19, or RSV vaccine is a much safer and reliable way for your body to build protection. It is better than taking the risk of getting very sick. You can still get sick after getting vaccinated. But your symptoms will likely be less severe than if you didn't receive the vaccine. It can make the illness mild, not wild.

Importance of Vaccination for Healthcare Personnel

When healthcare personnel (HCP) are immunized:

- Workforce health and safety is enhanced
- Patient deaths are reduced
- Vulnerable patients are protected
- Patient safety is improved

CDC Centers for Disease Control and Prevention

Vaccine Guidelines and Vaccine Information Statement (VIS)

Flu
- People 6 months and older should get a flu vaccine each year.
- Influenza (Flu) Vaccine: What You Need to Know | CDC

COVID-19
- People 6 months and older should stay up to date with CDC recommendations for COVID-19 vaccines.
- COVID-19 Vaccine: What You Need to Know | CDC

RSV
- People 60 years and older, those with other risk factors, and pregnant women should talk to their doctor to see if the RSV vaccine (or another RSV-preventative treatment) is right for them.
- Respiratory Syncytial Virus (RSV) Vaccine: What You Need to Know | CDC

Sources:
Preparing Patients for Fall and Winter Virus Season | CDC
Prevention Strategies for Seasonal Influenza in Healthcare Settings | CDC
Vaccine Information Statements (VIS) | CDC

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Stanford Medicine Fall Vaccine Program

- **All Stanford Medicine HCPs are required to participate in the annual flu vaccine program.**
  - Participation by getting vaccinated is highly recommended.
  - All Stanford Medicine HCPs can receive a free flu vaccine with Workforce Health and Wellness (WHW) or SHC Tri-Valley Occupational Health Services (OHS).
  - Alternative participation methods (e.g. informed declination, medical or religious accommodations) may vary. They are based on the county requirements where Stanford Medicine facilities are located.
  - **The ways you can participate are communicated each year through enterprise-wide, entity-wide, and department communication methods.**
- **COVID-19 vaccination is highly recommended to all HCP**
  - All Stanford Medicine HCP can get free COVID-19 vaccines from Workforce Health and Wellness (WHW) or SHC Tri-Valley Occupational Health Services (OHS).
- **RSV vaccination requires shared clinical decision making**
  - RSV is not yet offered by WHW/OHS
  - HCPs interested in receiving the RSV vaccine should discuss vaccination with their personal primary treatment provider.

**The above measures are aligned with existing public health requirements and recommendations.
Stanford Medicine also conducts internal risk assessments and may add more protective measures
to strengthen the health and safety of the workforce and patients.**

Regulations for Respiratory Viruses

Stanford Medicine aligns its actions to all federal, state, and county requirements. These requirements are modified from time to time based on evolving public health assessments.

Current requirements include:

- Mandatory participation in the fall influenza vaccine program for healthcare personnel
- Testing and isolation guidelines for aerosol transmissible diseases
- Specified return to work criteria for healthcare personnel with infection or exposure to COVID-19
- Masking and vaccination requirements during "Designated Winter Respiratory Virus Period"

County Public Health Orders

Summary and Next Steps

- ✓ Seasonal respiratory viruses (flu, COVID-19, and RSV) can cause serious and deadly diseases.

- ✓ Healthcare personnel with mild or no symptoms may still transmit the virus to patients and others.

- ✓ Hospital patients who might have a "Big 3" infection should be placed on infection prevention precautions.

- ✓ Behaviors like not touching your nose, eyes or mouth and hand hygiene play a major role in reducing the transmission of respiratory viruses.

- ✓ The best way to reduce risks of serious illness from seasonal respiratory viruses is to get vaccinated.

- ✓ High vaccine rates in healthcare personnel are linked to lower virus transmission to patients.

- ✓ Stanford Medicine complies with all federal, state, and county requirements for flu vaccination and Designated Winter Respiratory Virus Period requirements.

Next Steps: Participate in the annual Flu Vaccine Program for healthcare personnel and follow all recommended infection control practices.

Post Test

1. **Please select respiratory illnesses that tend to be more common during colder months:**
   a) Influenza
   b) COVID-19
   c) Respiratory Syncytial Virus (RSV)
   d) Varicella-Zoster Virus (VZV)

2. **Please select the peak seasons for respiratory illnesses:**
   a) Late fall and winter (November – March)
   b) Spring and summer (March – September)
   c) Flu seasonality is different each year
   d) Risks of respiratory illnesses are the same year-round

3. **Please select all common symptoms of the "Big 3" seasonal respiratory illnesses:**
   a) Cough
   b) Chest pain
   c) Runny Nose
   d) Fever over 100°F (37.8°C)

4. **Please select all methods for preventing the spread of respiratory viruses within healthcare settings:**
   a) Administration of vaccines
   b) Respiratory hygiene and masking protocols
   c) Skin assessment
   d) Testing and isolation
   e) Hand hygiene

5. **Please select all important behaviors to help protect against virus transmission. :**
   a) Performing frequent hand hygiene
   b) Avoid touching eyes, nose, or mouth
   c) Use hands to cover coughs and sneezes
   d) Wearing a mask when indicated
   e) Discard used tissues in waste receptacles

6. **Please select all the steps to take if you have a fever over 100°F (37.8°C)**
   a) Test for COVID-19
   b) Wear a mask if symptoms include coughing and sneezing
   c) Continue daily activities such as going to work
   d) Wash hands often

7. **How do vaccines work in the body?**
   a) Vaccines help the body produce immune cells to defend against real infection in the future.
   b) Vaccines stop the growth of bacteria in the body
   c) Vaccines help the body to develop immunity without getting an actual infection.
   d) Vaccines contain toxins that destroy harmful cells in the body

8. **Please select benefits of vaccination against respiratory viruses for healthcare personnel:**
   a) Reduce healthcare personnel illness and days away from work
   b) Reduce risks of hospitalization and long-term health impacts for healthcare personnel
   c) Reduce transmission of respiratory viruses to patients, colleagues, and the community
   d) Life-long immunity from one dose of flu or COVID-19 vaccine

9. **Please select the organizations that require or recommend vaccine programs to protect workers in the healthcare setting:**
   a) The Centers for Disease Control and Prevention (CDC)
   b) Stanford Medicine
   c) California Division of Occupational Safety and Health (Cal/OSHA)
   d) State and County Public Health Officers
   e) Federal Environmental Protection Agency (EPA)

10. **The risk of transmitting a respiratory illness is largest when _____.**
    a) The infected individual has symptoms. Even those with mild symptoms can pass the virus to others.
    b) The infected individual has recovered from illness
    c) The infected individual no longer has a runny nose
    d) The infected individual touches their eyes, nose, or mouth

FALL VACCINE PROGRAM

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