Continuing Education (CEU) course for healthcare professionals. View the course online at wildirismedicaleducation.com for accreditation/approval information, course availability and other details, and to take the test for CE credit. The information provided in this course is to be used for educational purposes only. It is not intended as a substitute for professional healthcare.

Contact Hours: **1**

COVID-19 and Seasonal Flu 2020–2021
What Healthcare Professionals Need to Know

BY Adrianne E. Avillion, DEd, MSN, RN

LEARNING OUTCOME AND OBJECTIVES: Upon completion of this course you will be prepared to differentiate between seasonal flu and COVID-19 and discuss both treatment and vaccines. Specific learning objectives include:

- Differentiate between the clinical presentation of COVID-19 and seasonal flu.
- Explain the incubation, period of contagion, and transmission for SARS-CoV-2 and influenza viruses.
- Discuss infection prevention measures.
- Describe patient education considerations for influenza and COVID-19.
- Explain concerns surrounding seasonal flu vaccine and routine immunizations during the COVID-19 pandemic.

DIFFERENTIATING BETWEEN INFLUENZA AND COVID-19

Countries throughout the world are grappling with the effects of COVID-19, which is the worst pandemic since the Spanish Flu Pandemic in 1918–1919. While there is still a great deal not known about COVID-19 and the virus that causes it, some valuable information is available to guide healthcare professionals.

Concerns about COVID-19 in the context of the annual influenza (flu) season also raise new questions for healthcare professionals, such as:

- How is the flu related to COVID-19?
- How can I tell the difference between the flu and COVID-19?

- What are the symptoms of COVID-19, and how long does it take for them to appear?
- How long is someone contagious after developing COVID-19 or flu?
- How are COVID-19 and flu transmitted?
- What steps can be taken to prevent infection?
- What do I need to teach patients and families about COVID-19 and flu?
- Should people get a flu shot during the pandemic?
- How can vaccines be safely administered during the pandemic?

Signs and Symptoms

Some symptoms overlap between COVID-19 and influenza. It is important to know the clinical manifestations of each condition and how to differentiate between them.

Both the flu and COVID-19 are contagious respiratory illnesses, but they are caused by different viruses. COVID-19 is caused by a new coronavirus (SARS-CoV-2), and the flu is caused by infection with a variety of influenza viruses.

Since influenza and COVID-19 share a number of symptoms, differentiation between the two can be problematic. Both the flu and COVID-19 can cause mild to severe illness, including these **common signs/symptoms**:

- Fever
- Chills
- Cough
- Fatigue
- Sore throat
- Runny or stuffy nose
- Muscle pain
- Body aches
- Headache
- Vomiting and diarrhea (more common in children than adults)

According to the CDC, a **significant difference** between the flu and COVID-19 is that COVID-19 may cause a change in or loss of taste or smell (CDC, 2020a).

COVID-19 SYMPTOM SEVERITY

Symptoms of COVID-19 can be mild at the beginning but become more intense over five to seven days, with cough and shortness of breath becoming worse if pneumonia develops. The severity of illness can vary significantly from person to person. A person may have a cough or other symptoms but no fever (or a low-grade fever), particularly in the first few days of illness. It is also possible for a person infected by the SARS-CoV-2 virus to have minor or even no symptoms at all. Children generally have a milder form of the illness and seldom require hospitalization. However, there have been reported cases of babies and children becoming seriously ill and even dying from the infection (Maragakis, 2020).

Incubation Period

One or more days can pass between becoming infected and when symptoms start to appear in both flu and COVID-19. With flu, patients typically develop symptoms within one to four days. The typical time frame for symptom development with COVID-19 is five days after becoming infected. The incubation time range can vary, however, with symptoms of COVID-19 appearing as early as two days after infection or as late as 14 days after infection (CDC, 2018, 2020a).

Severe symptoms of flu may develop and end quite swiftly. COVID-19 symptoms may develop more gradually, and severe symptoms may not appear for several days after exposure (Maragakis, 2020).

RESPIRATORY ILLNESSES AND CANCER

COVID-19 and influenza symptoms may lead to severe complications for patients with cancer, especially for those with malignancies of the lung, head, neck, or sinuses. Particularly confusing for some patients is that respiratory illnesses have symptoms that are common to flu and, to some extent, COVID-19. Fever, coughing, and respiratory distress may be early signs of lung cancer, some forms of lymphoma, and other types of malignancies. Weakened immune systems that accompany some respiratory illnesses and malignancies increase the risk for severe illness in those infected by SARS-CoV-2. It is recommended that patients with cancer who develop fevers, body aches, cough, sore throat, and/or a loss of taste immediately consult their healthcare providers (CDC, 2020b; Maragakis, 2020).

Degree of Communicability

It is possible to spread flu and COVID-19 for at least one day prior to experiencing any symptoms.

With **influenza**, the majority of people are contagious for about one day prior to showing symptoms. It appears that older children and adults are most contagious during the initial three to four days of their illness, but many remain contagious for about seven days. Infants and people with weakened immune systems may be contagious for an even longer period of time (CDC, 2018a).

How long someone can spread **SARS-CoV-2** is still under investigation. It is possible for people to spread the virus for approximately two days before experiencing signs or symptoms and remain contagious for at least 10 days after signs or symptoms first appear. If someone is asymptomatic or their symptoms abate, it is possible to remain contagious for at least 10 days after testing positive for COVID-19 (CDC, 2020a).

Modes of Transmission

Both influenza viruses and SARS-CoV-2 can spread from person to person between people who are in close contact with each other (within about six feet). Both are spread primarily by droplets made when people who are infected cough, sneeze, or talk. It may also be possible to acquire infection by physical contact with infected people (e.g., shaking hands) or by touching contaminated surfaces and then touching the mouth, nose, or, possibly, the eyes (CDC, 2020a).

The mode of transmission of **SARS-CoV-2** and the severity of COVID-19 are still under investigation. The virus is thought to spread mainly from person-to-person:

- Between people who are in close contact (within about six feet)
- Through respiratory droplets when an infected person coughs, sneezes, or talks
- When droplets are deposited in the mouth or nose of nearby people or possibly when inhaled into the lungs

The COVID-19 virus is spreading very easily and sustainably between people, including those who are not showing symptoms. Findings suggest that SARS-CoV-2 spreads more efficiently than influenza but not, for example, as efficiently as measles, which is highly contagious. Typically, the more closely a person interacts with others and the longer the interaction, the higher the risk of SARS-CoV-2 spread (CDC, 2020b).

COVID-19 TRANSMISSION AND PETS

There have been questions and concerns about the spread of COVID-19 between animals and people. At this time, the risk of transmission from animals to people is considered to be low. However, it appears that the virus can spread from people to animals in certain circumstances. A small number of pets worldwide have been reported to be infected with SARS-CoV-2 after close contact with infected people.

To protect pets, the CDC recommends:

- Limiting pet interactions with people outside of the household
- Keeping cats indoors when possible and not allowing them to roam outside
- Walking dogs on a leash at least six feet away from others

- Avoiding public places where a large number of people gather
- Avoiding putting masks on pets (since this could harm the pet)

There is no evidence that the virus can spread to people from the skin, fur, or hair of pets. Pets should **not** be wiped or bathed with chemical disinfectants, alcohol, hydrogen peroxide, or any other product not approved for animal use. If someone in the household has COVID-19, that person should avoid contact with the pet (CDC, 2020c).

Complications

Although most people with **COVID-19** have mild to moderate symptoms, the disease can cause the following complications:

- Pneumonia
- Respiratory distress
- Organ failure
- Acute respiratory distress syndrome
- Blood clots
- Acute kidney injury
- Additional viral and bacterial infections
  (CDC, 2020i; Mayo Clinic, 2020a)

Most people who get the **flu** recover in a few days to less than two weeks. However, some people develop severe complications (some of which overlap with COVID-19), such as:

- Pneumonia
- Bronchitis
- Asthma exacerbations
- Ear infections
- Acute respiratory distress syndrome
- Myocarditis
- Encephalitis
- Muscle inflammation
- Multi-organ failure
  (CDC, 2020r; Mayo Clinic, 2020c)

Mortality

Influenza viruses and SARS-CoV-2 can both cause serious illness leading to hospitalization or death.

Deaths are attributed to COVID-19 when the disease is reported as a cause or contributing cause of death on the death certificate. The ways such deaths are confirmed is still being refined. Through September 2020, the number of U.S. fatalities was over 200,000, and the fatality ratio was approximately 3%, meaning that for every 100 people with COVID-19, about three persons died (Craig, 2020).

By comparison, influenza fatalities were estimated as 24,000–62,000 during the 2019–20 flu season; 34,200 during 2018–19; and 61,000 during 2017–18 (CDC, 2020s, 2020t). It appears that COVID-19 is more deadly than seasonal flu, but it is too early to draw any conclusions from current data (CDC, 2020j).

High-Risk Populations

AGE FACTORS

Among adults, the risk for severe illness from COVID-19 increases with age. The greatest risk for severe illness from COVID-19 is among those aged 85 and older. Eight out of 10 deaths reported in the United States have been in adults 65 years old and older (CDC, 2020g). Similarly, the risk for developing flu complications increases in adults 65 years of age and older (Mayo Clinic, 2020c). In recent years, an estimated 70%–85% of seasonal flu-related deaths have occurred in people 65 years and older, and 50%–70% of seasonal flu-related hospitalizations have occurred among people in this age group (CDC, 2020u).

Although all children younger than 5 years old are considered at high risk for serious flu complications, the highest risk is for those younger than 2 years old, with the highest hospitalization and death rates among infants younger than 6 months old (CDC, 2020).

HEALTH FACTORS

According to the CDC, many health conditions are known to increase a person's risk of serious complications from both flu and COVID-19 (see table below).

HEALTH FACTORS INCREASING RISK OF . . .	
COVID-19	**INFLUENZA**
Increased risk: • Cancer • Chronic renal disease • COPD • Serious heart conditions (e.g., heart failure, coronary artery disease, cardiomyopathies) • Immunocompromised state due to solid organ transplant • Obesity (BMI 30 or higher) • Sickle cell disease • Type 2 diabetes **Possible increased risk:** • Asthma (moderate to severe) • Cerebrovascular disease • Cystic fibrosis • Hypertension • Immunocompromised state due to blood or bone marrow transplant, immune deficiencies, HIV, use of corticosteroids, or use of other immune-weakening medicines • Neurologic conditions (e.g., dementia) • Liver disease • Pregnancy • Pulmonary fibrosis • Smoking • Thalassemia • Type 1 diabetes	**Increased risk:** • Asthma • Neurologic and neurodevelopment conditions • Blood disorders (e.g., sickle cell disease) • Chronic lung disease (e.g., COPD, cystic fibrosis) • Endocrine disorders (e.g., diabetes mellitus) • Heart disease (e.g., congenital heart disease, congestive heart failure, coronary artery disease) • Kidney disease • Liver disorders • Metabolic disorders (e.g., inherited metabolic disorders, mitochondrial disorders) • Obesity (BMI 40 or higher) • People under 19 years on long-term aspirin- or salicylate-containing medications • Immunocompromised state due to disease (e.g., HIV/AIDS, some cancers such as leukemia) or medications (e.g., chemotherapy/radiation treatment for cancer, chronic corticosteroids, other drugs that suppress the immune system) • Stroke
(CDC, 2020h, 2020v)	

INFECTION PREVENTION MEASURES IN HEALTHCARE SETTINGS

Both the annual influenza season and the COVID-19 pandemic create additional challenges in preventing infection, how healthcare is delivered, and the operations of healthcare facilities. The way both diseases spread (droplets, close contact, etc.) may put healthcare professionals at higher risk since they work not only with patients who are known to be infected but with patients who may be asymptomatic as well.

Prevention Strategies for Seasonal Influenza in Healthcare Settings

A summary of CDC recommendations for prevention of flu transmission in healthcare settings is provided below, and more details can be found on the CDC website:

- Provide opportunities for all employees to receive the flu vaccine at work.
- Before patients and visitors arrive at a healthcare setting, instruct them to inform healthcare personnel if they have symptoms of any respiratory infection and to take appropriate prevention actions (e.g., wear a mask).
- During periods of influenza activity, limit elective visits by patients with suspected or confirmed influenza.
- Take steps to ensure all persons with symptoms of a respiratory infection adhere to respiratory hygiene, cough etiquette, hand hygiene, and triage procedures throughout the visit.
- Post visual alerts about the previous steps in strategic locations throughout the healthcare facility.
- Provide facemasks.
- Provide supplies to perform hand hygiene.
- Provide social distancing in common areas (e.g., waiting rooms).
- Instruct staff members not to report to work, or if at work, to stop patient-care activities, don a facemask, and notify their supervisor and infection control personnel before leaving work. (Staff members should not return to work until at least 24 hours after they no longer have a fever without the use of fever-reducing medicines.)
- Develop sick-leave policies for staff members that are nonpunitive.
- Develop employee procedures for tracking absences.
- Adhere to Standard Precautions.
- Adhere to Droplet Precautions.

- Use caution when performing aerosol-generating procedures.
- Manage visitor access and movement within the facility.
- Train and educate healthcare personnel on the prevention of infectious agents, including influenza.

(CDC, 2018b)

Adjusting Healthcare Service Delivery during the COVID-19 Pandemic

To avoid the spread of SARS-CoV-2 in the healthcare setting, the CDC recommends that facilities adjust their standard approaches to service delivery to minimize risk to patients and healthcare professionals:

- Optimize telehealth services when available and appropriate.
- Instruct patients suspected or confirmed with COVID-19 to call and speak to their healthcare providers rather than coming to the office or clinics in person.
- Implement a triage system to determine the level of care the patient needs and/or if testing is needed.
- Establish algorithms to identify which patients can be managed virtually and which patients need to be sent for emergency care, in-person visits, or follow up for testing.
- When possible, manage patients who are mildly ill with COVID-19 at home.
- Instruct visitors and patients to wear a mask (a cloth face covering may also be appropriate).
- Maintain physical distancing whenever possible.
- Limit and monitor points of entry to the facility.
- Screen everyone who enters the healthcare facility by taking their temperature and asking about any symptoms, exposure to someone who has the disease, and travel to areas that may be considered “hot spots.”

(CDC, 2020d, 2020e)

Recommended Practices When Caring for a Patient with Suspected or Confirmed SARS-Cov-2 Infection

In addition to routine Standard Precautions, the CDC identifies the following additional practices as necessary to protect healthcare professionals, patients, and visitors when caring for patients with suspected or confirmed SARS-CoV-2 infection.

- Place infected patients in a single-person room, with the door closed, and with a dedicated bathroom. Reserve airborne infection isolation rooms (AIIRs) for patients who will be undergoing aerosol-generating procedures.
- Practice hand hygiene (with soap and water or alcohol-based hand sanitizer with 60%–95% alcohol).
- Instruct all staff (and others as appropriate) on how to don, use, and doff PPE.
- Instruct all staff to wear an N95 respirator or facemask if a respirator is unavailable. (A cloth face covering is **not** PPE and should not be worn for the care of patients with suspected or confirmed COVID-19 or in other situations where use of a respirator or facemask is recommended.)
- Wear eye protection (e.g., goggles or a face shield that covers the front and sides of the face) when entering patient areas.
- Wear clean, nonsterile gloves upon entry to patient care areas.
- Wear a clean isolation gown entry into patient care areas.
  (CDC, 2020e)

EDUCATION REGARDING PREVENTION, TESTING, AND TREATMENT

It is important that patients receive accurate education regarding prevention, testing, and treatment of flu and COVID-19. The application of knowledge should help to reduce the number of infections, increase testing, and implement treatment initiatives.

Influenza Education

There are steps that individuals can take to **prevent** contracting the flu. The most important step is to receive an annual flu vaccine (see also "2020–2021 Influenza Vaccine" later in this course). Additional actions includ avoiding close contact with people who are sick; staying at home if sick; covering mouth and nose when sneezing or coughing; avoiding touching eyes, nose, or mouth; and performing frequent hand hygiene (CDC, 2020k).

Individuals at high risk of flu complications (young children; adults 65 years of age and older; people with asthma, diabetes, and heart disease) should promptly contact their healthcare providers if they suspect they have the flu. The most **common tests** to detect influenza viruses are rapid influenza diagnostic tests (RIDTs), which detect the virus antigens that cause an immune response. Results are available within about 10–15 minutes. RIDTs are not considered as accurate as other flu tests. Rapid molecular assays are more accurate than RIDTs and provide results in 15–20 minutes. Other more accurate and sensitive tests must be performed in specialized laboratories. These tests require a nose or back-of-throat swab, and obtaining results takes several hours (CDC, 2020f).

In a patient infected with influenza, antiviral drugs may be a **treatment** option. Antiviral drugs can lessen symptoms and shorten the time of illness by one or two days. Such drugs can also prevent serious flu complications such as pneumonia. Antiviral drugs work best when taken within 48 hours of the onset of symptoms, but they may still have some benefit even if taken later. Other treatment measures are largely supportive in nature. These include taking acetaminophen for fever, staying hydrated, and getting plenty of rest (CDC, 2020l).

COVID-19 Education

There are a number **prevention** measures that individuals can take to avoid contracting COVID-19. These include:

- Wash hands frequently for at least 20 seconds with soap and water. If soap and water are not available, a hand sanitizer that contains at least 60% alcohol should be used.
- Avoid close contact with people who are sick in the same household.
- Outside the home, maintain at least six feet between oneself and others who do not live in the same household.
- Wear a mask in public settings and when around others who do not live in the same household.
- Cover the mouth and nose with a tissue when sneezing or coughing, and throw used tissues in the trash. Wash hands immediately.
- Be alert for symptoms of COVID-19.
  (CDC, 2020n)

Two kinds of **tests** are available: viral and antibody. The viral test is used to detect current infection and requires an anterior nasal swab or a deep nasal self-swab. Patients may consult with their state or local health department's websites to find testing locations. If symptoms are present, healthcare providers should be consulted prior to going for a test (CDC, 2020g).

Most people with the infection have mild illness and can recover without medical care. If someone is infected with SARS-CoV-2 but does not show signs of serious illness, then no immediate **treatment** measures are recommended. Supportive care such as acetaminophen, staying hydrated, and resting may mitigate symptoms until recovery.

To prevent further disease spread, patients with COVID-19 are advised to stay home and avoid public places. They should separate themselves from other people, including those in the same household. They should stay in a separate room and, if possible, use a separate bathroom. Household items should not be shared, and all high-touch surfaces should be cleaned and disinfected frequently. If the patient must be around others or around pets, a mask should be worn.

Symptoms should be monitored and medical help immediately obtained if the patient develops trouble breathing, pain or pressure in the chest, new confusion, inability to wake or stay awake, and/or develops bluish lips or face (CDC, 2020m).

COMBINATION TEST

There is a specialized test that can detect both flu and COVID-19. The use of this test is focused on public health surveillance efforts and does not currently replace any COVID-19 tests used in commercial laboratories, hospitals, clinics, and other healthcare settings (CDC, 2020f).

COMPARING INFLUENZA AND COVID-19

Characteristics	INFLUENZA (FLU)	COVID-19
Signs and symptoms	• Fever • Chills • Cough • Fatigue • Sore throat • Runny or stuffy nose • Muscle pain • Body aches • Headache • Vomiting and diarrhea (more common in children than adults)	• Fever • Chills • Cough • Fatigue • Sore throat • Runny or stuffy nose • Muscle pain • Body aches • Headache • Vomiting and diarrhea (more common in children than adults) • Change in or loss of taste or smell
Incubation period	Symptoms typically develop within 1 to 4 days.	Symptoms typically develop 5 days after being infected, but symptoms may appear as early as 2 days or as late as 14 days after infection.
Transmission	• Droplet transmission	• Droplet transmission Note: transmission is still under investigation.

Complications	• Pneumonia • Bronchitis • Asthma exacerbations • Ear infections • Acute respiratory distress syndrome • Myocarditis • Encephalitis • Muscle inflammation • Multi-organ failure	• Pneumonia • Respiratory distress • Multi-organ failure • Acute respiratory distress syndrome • Blood clots • Acute kidney injury • Additional viral and bacterial infections
Prevention	• Handwashing • Distancing • Flu vaccine	• Mask wearing • Social distancing • Handwashing
Treatment	• Antiviral drugs • Supportive measures	• Supportive measures

WHO ADVICE FOR THE PUBLIC

The World Health Organization has identified a number of myths regarding COVID-19. Therefore, it has released the following facts aimed at countering any misinformation:

- Studies show that hydroxychloroquine does **not** have clinical benefits in treating COVID-19.
- People should not wear masks while exercising when it reduces the ability to breathe comfortably.
- The likelihood of shoes spreading COVID-19 is very low.
- COVID-19 is caused by a virus, not bacteria. Since antibiotics do not combat viruses, antibiotics **cannot** prevent or treat COVID-19.
- As of September 2020, there are **no** drugs approved for use by the FDA for the treatment or prevention of COVID-19.
- The prolonged use of properly worn masks does **not** cause CO_2 intoxication or oxygen deficiency.

- Most people who get COVID-19 recover from it.
- Drinking alcohol does **not** protect against COVID-19.
- Thermal scanners **cannot** detect COVID-19.
- Adding pepper to food does **not** prevent or cure COVID-19.
- COVID-19 is **not** transmitted through houseflies and cannot be spread through mosquito bites.
- Spraying and introducing bleach or other disinfectants into the body will **not** protect against COVID-19 and is dangerous.
- Drinking methanol, ethanol, or bleach does **not** prevent or cure COVID-19 and is dangerous.
- 5G mobile networks do **not** spread COVID-19.
- Exposure to the sun or high temperatures does **not** protect against COVID-19.
- Contracting COVID-19 does **not** mean you will have it for life.
- Being able to hold one's breath for 10 seconds or more without coughing or having discomfort does **not** mean that a person does not have COVID-19.
- COVID-19 can spread in hot and humid climates. Cold weather and snow **cannot** kill COVID-19.
- Ultraviolet lamps should **not** be used to disinfect the skin.
- Pneumonia vaccines do **not** protect against COVID-19.
- Rinsing the nose with saline does **not** prevent COVID-19.
- Eating garlic does **not** prevent COVID-19.
  (WHO, 2020)

INFLUENZA VACCINES DURING THE CORONAVIRUS PANDEMIC

2020–2021 Influenza Vaccine

The CDC recommends that everyone 6 months of age and older get a flu vaccine for the 2020–2021 season, with rare exceptions. Children younger than 6 months of age and people with severe, life-threatening allergies to flu vaccine (or its ingredients) should not receive the flu vaccine. Flu shots are also recommended for use in pregnant women (CDC, 2020o, 2020p).

VACCINE OPTIONS

Vaccine options for the 2020–2021 season include:

- Standard-dose flu shots
- High-dose shots for people 65 years of age and older
- Shots made with adjuvant for people 65 years of age and older to promote a better immune response
- Shots made with virus grown in cell culture (i.e., no eggs are involved in its production)
- Shots made using a vaccine production testing technology (recombinant vaccine) that do not require having a candidate vaccine virus (CVV) sample to produce
- Live attenuated influenza vaccine (LAIV), which is made with attenuated (weakened) live virus and that is given by nasal spray
  (CDC, (2020j)

There are also two **new vaccines** licensed for use during the 2020–2021 flu season. These are:

- A quadrivalent high-dose vaccine licensed for use in adults 65 years of age and older and that replaces the previously licensed trivalent high-dose vaccine
- A quadrivalent adjuvanted vaccine for use in adults 65 years and older that is similar to the previously licensed trivalent vaccine containing MF59 adjuvant, but with one additional influenza B component
  (CDC, 2020j)

The **nasal spray flu vaccine** is approved for use in nonpregnant persons ages 2 through 49. Current research shows that the nasal spray is neither more nor less effective than the injection vaccine. Whether a person receives the nasal spray or the injection is up to the individual (CDC, 2020o, 2020p; WebMD, 2020).

VACCINATION TIMING

The CDC has not made changes to its recommendation on timing of vaccination during the 2020–2021 season. Getting vaccinated in July or August is too early, especially for older adults because of the likelihood of reduced protection against flu infection later in the flu season. September and October are generally recommended as the best time frame for getting the vaccine. However, as long as flu viruses are circulating, vaccination should continue, even in January or later (CDC, 2020j).

OTHER ROUTINE IMMUNIZATIONS

Healthcare providers should identify children and adolescents who have missed well-child visits and/or recommended vaccinations and contact parents to schedule in-person appointments, starting with newborns, infants, and children up to 24 months, young children, and extending through adolescence.

The CDC (2020q) recommends that pregnant women who have not received recommended maternal vaccines (tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis [Tdap]) be scheduled for follow-up and receive vaccination during their next in-person appointment. Healthcare providers should take steps to ensure that their adult patients receive vaccines according to the Standards for Adult Immunization practice (see "Resources" at the end of this course).

Vaccination of Persons with Suspected or Confirmed COVID-19

Routine influenza vaccination should be deferred for persons with suspected or confirmed COVID-19, regardless of symptoms, until criteria have been met for them to discontinue isolation. While mild illness with COVID-19 is not a contraindication to vaccination, vaccination visits for these individuals should be postponed to avoid exposing healthcare personnel and other patients to the virus that causes COVID-19. When scheduling or confirming appointments for vaccination, patients should be instructed to notify the provider's office in advance if they currently have or develop any symptoms of COVID-19 (CDC, 2020q).

Safe Administration of Vaccines during a Pandemic

The potential for asymptomatic transmission of the SARS-CoV-2 virus that causes COVID-19 requires meticulous attention to infection prevention practices during all patient encounters, including physical distancing, respiratory and hand hygiene, surface decontamination, and source control while in a healthcare facility (CDC, 2020q).

REDUCING EXPOSURE

To help ensure the safe delivery of care during influenza vaccination visits, providers should minimize chances for exposures, including:

- Screen for symptoms of COVID-19 in persons with possible COVID-19 prior to and upon arrival at the facility.
- Isolate symptomatic patients as soon as possible.
- Limit and monitor points of entry to the facility and install barriers, such as clear plastic sneeze guards, to limit physical contact with patients at triage.
- Implement policies for the use of a cloth face covering in persons over the age of 2 years (if tolerated).

- Ensure adherence to respiratory hygiene, cough etiquette, and hand hygiene.
  (CDC, 2020q)

INFECTION CONTROL

All healthcare facility staff should adhere to recommended infection prevention and control procedures, including:

- Follow Standard Precautions, which includes guidance for hand hygiene and cleaning the environment between patients.
- Wear a medical facemask at all times.
- Use eye protection based on level of community transmission.

VACCINE ADMINISTRATION

When administering **all types** of vaccines:

- Reduce crowding in waiting areas by asking patients to remain outside (e.g., stay in their vehicles, if applicable) until they are called into the facility for their appointment.
- Ensure that physical-distancing measures, with separation of at least 6 feet between patients and visitors, are maintained during all aspects of the visit, including check-in, checkout, screening procedures, and post-vaccination monitoring, using strategies such as physical barriers, signs, ropes, and floor markings.
- Utilize electronic communications as much as possible (e.g., filling out needed paperwork online in advance) to minimize time in the office as well as reuse of materials (e.g., clipboards, pens).

When administering **intranasal or oral vaccines:**

- Wear gloves when administering intranasal or oral vaccines.
- Change gloves between patients in addition to performing hand hygiene.
- Administration of vaccines is not considered an aerosol-generating procedure, and the use of an N95 or higher-level respirator is not recommended.

For **intramuscular or subcutaneous vaccines**:

- If gloves are worn during vaccine administration, change gloves between patients in addition to performing hand hygiene.

(CDC, 2020q)

COVID-19 VACCINE

There are dozens of COVID-19 vaccines in development around the world. Vaccine development is a process that is evolving daily. The latest information can be found on the CDC website.

RESOURCES

Information for healthcare professionals about coronavirus (COVID-19) (CDC)
https://www.cdc.gov/coronavirus/2019-nCoV/hcp/

Information for pediatric healthcare providers (CDC)
https://www.cdc.gov/coronavirus/2019-ncov/hcp/pediatric-hcp.html

Standards for adult immunization practice (National Vaccine Advisory Committee)
https://www.cdc.gov/vaccines/hcp/adults/for-practice/standards/

REFERENCES

Cancer Treatment Centers of America (CTCA). (2020). COVID-19, the flu, a cold, or allergies: what's the difference in symptoms? Retrieved from https://www.cancercenter.com/community/blog/2020/04/covid-flu-cold-symptoms

Centers for Disease Control and Prevention (CDC). (2020a). Similarities and differences between flu and COVID-19? Retrieved from https://www.cdc.gov/flu/symptoms/flu-vs-covid19.htm

Centers for Disease Control and Prevention (CDC). (2020b). How COVID-19 spreads. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html

Centers for Disease Control and Prevention (CDC). (2020c). Coronavirus disease 2019: if you have pets. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/pets.html

Centers for Disease Control and Prevention (CDC). (2020d). Healthcare facilities: managing operations during the COVID-19 pandemic. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-hcf.html

Centers for Disease Control and Prevention (CDC). (2020e). Interim infection prevention and control recommendations for healthcare personnel during the coronavirus disease 2019 (COVID-19) pandemic. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html#adhere

Centers for Disease Control and Prevention (CDC). (2020f). Influenza (flu) diagnosis questions and answers. Retrieved from https://www.cdc.gov/flu/symptoms/testing.htm#flu-tests

Centers for Disease Control and Prevention (CDC). (2020g). Coronavirus disease 2019: older adults. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html

Centers for Disease Control and Prevention (CDC). (2020h). Coronavirus disease 2019: people with certain medical conditions. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html

Centers for Disease Control and Prevention (CDC). (2020i). Coronavirus disease 2019 (COVID-19) FAQs. Retrieved from https://www.cdc.gov/nchs/covid19/faq.htm

Centers for Disease Control and Prevention (CDC). (2020j). Frequently asked influenza (flu) questions 2020–2021 season. Retrieved from https://www.cdc.gov/flu/season/faq-flu-season-2020-2021.htm

Centers for Disease Control and Development (CDC). (2020k). Prevent seasonal flu. Retrieved from https://www.cdc.gov/flu/prevent/index.html

Centers for Disease Control and Prevention (CDC). (2020l). Flu treatment. Retrieved from https://www.cdc.gov/flu/treatment/index.html

Centers for Disease Control and Prevention (CDC). (2020m). Coronavirus disease 2019: what to do if you are sick. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html

Centers for Disease Control and Prevention (CDC). (2020n). Coronavirus disease 2019: how to protect yourself and others. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html

Centers for Disease Control and Prevention (CDC). (2020o). Who needs a flu vaccine and when? Retrieved from https://www.cdc.gov/flu/prevent/vaccinations.htm

Centers for Disease Control and Prevention (CDC). (2020p). Who should and who should not get a flu vaccine? Retrieved from https://www.cdc.gov/flu/prevent/whoshouldvax.htm

Centers for Disease Control and Prevention (CDC). (2020q). Vaccination guidance during a pandemic. Retrieved from https://www.cdc.gov/vaccines/pandemic-guidance/index.htm

Centers for Disease Control and Prevention (CDC). (2020r). Flu symptoms & complications. Retrieved from https://www.cdc.gov/flu/symptoms/symptoms.htm

Centers for Disease Control and Prevention (CDC). (2020s). 2019–2020 U.S. flu season: preliminary burden estimates. Retrieved from https://www.cdc.gov/flu/about/burden/preliminary-in-season-estimates.htm

Centers for Disease Control and Prevention (CDC). (2020t). Past seasons estimated influenza disease burden. Retrieved from https://www.cdc.gov/flu/about/burden/past-seasons.html

Centers for Disease Control and Prevention (CDC). (2020u). Flu & people 65 years and older. Retrieved from https://www.cdc.gov/flu/highrisk/65over.htm

Centers for Disease Control and Prevention (CDC). (2020v). People at high risk for flu complications. Retrieved from https://www.cdc.gov/flu/highrisk/index.htm

Centers for Disease Control and Prevention (CDC). (2018a). How flu spreads. Retrieved from https://www.cdc.gov/flu/about/disease/spread.htm

Centers for Disease Control and Prevention (CDC). (2018b). Prevention strategies for seasonal influenza in healthcare settings. Retrieved from https://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm

Craig J. (2020). Charts: how the U.S. ranks on COVID-19 deaths per capita and by case count. Retrieved from https://www.npr.org/sections/goatsandsoda/2020/08/05/899365887/charts-how-the-u-s-ranks-on-covid-19-deaths-per-capita-and-by-case-count

Maragakis LL. (2020). Coronavirus symptoms: frequently asked questions. Retrieved from https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/coronavirus-symptoms-frequently-asked-questions

Mayo Clinic. (2020a). Coronavirus disease 2019 (COVID-19). Retrieved from https://www.mayoclinic.org/diseases-conditions/coronavirus/symptoms-causes/syc-20479963

Mayo Clinic. (2020b). COVID-19 (coronavirus): long-term effects. Retrieved from https://www.mayoclinic.org/diseases-conditions/coronavirus/in-depth/coronavirus-long-term-effects/art-20490351

Mayo Clinic. (2020c). Influenza (flu). Retrieved from https://www.mayoclinic.org/diseases-conditions/flu/symptoms-causes/syc-20351719

WebMD. (2020). The nasal flu spray: get the facts. Retrieved from https://www.webmd.com/children/vaccines/flu-shot-nasal-spray#1-5

World Health Organization (WHO). (2020). Coronavirus disease (COVID-19) advice for the public: myth busters. Retrieved from https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters

DISCLOSURE

Wild Iris Medical Education, Inc., provides educational activities that are free from bias. The information provided in this course is to be used for educational purposes only. It is not intended as a substitute for professional healthcare. Neither the planners of this course nor the author have conflicts of interest to disclose. (A conflict of interest exists when the planners and/or authors have financial relationship with providers of goods or services which could influence their objectivity in presenting educational content.) This course is not co-provided. Wild Iris Medical Education, Inc., has not received commercial support for this course. There is no "off-label" use of medications in this course. All doses and dose ranges are for adults, unless otherwise indicated. Trade names, when used, are intended as an example of a class of medication, not an endorsement of a specific medication or manufacturer by Wild Iris Medical Education, Inc., or ANCC. Product trade names or images, when used, are intended as an example of a class of product, not an endorsement of a specific product or manufacturer by Wild Iris Medical Education, Inc., or ANCC. Accreditation does not imply endorsement by Wild Iris Medical Education, Inc., or ANCC of any commercial products or services mentioned in conjunction with this activity.

ABOUT THIS COURSE

You must score 70% or better on the test and complete the course evaluation to earn a certificate of completion for this CE activity.

ABOUT WILD IRIS MEDICAL EDUCATION

Wild Iris Medical Education offers a simple CE process, relevant, evidence-based information, superior customer service, personal accounts, and group account services. We've been providing **online accredited and approved continuing education since 1998**.

ACCREDITATION/APPROVAL INFORMATION FOR WILD IRIS MEDICAL EDUCATION

TEST

[Take the test online at wildirismedicaleducation.com]

1. A symptom associated with COVID-19 but **not** with influenza is:

a. High fever and chills.

b. Complaints of loss of taste and smell.

c. Body aches.

d. Complaints of headache and fatigue.

2. Which is an **accurate** statement about SARS-CoV-2 and influenza virus transmission and incubation?

a. Both influenza and SARS-CoV-2 viruses are primarily spread by droplets.

b. SARS-CoV-2 does not spread as efficiently as influenza viruses.

c. Unlike SARS-CoV-2, influenza viruses cannot spread until symptoms have developed.

d. Symptoms of both flu and COVID-19 typically develop from one to four days after infection.

3. Which is a **correct** statement concerning infection prevention of COVID-19 in a healthcare setting?

a. Only those with symptoms must have their temperature taken when entering a healthcare facility.

b. If possible, patients with mild symptoms should be managed at home.

c. Goggles or face shields are recommended for use only when an aerosol-producing procedure is being performed.

d. Alcohol-based hand sanitizer with at least 50% alcohol is recommended for hand hygiene.

4. In a patient infected with COVID-19, it is recommended that they:

a. Avoid other members of the household except for pets.

b. Immediately begin aggressive treatment measures.

c. Stay at home, since most people with mild illness recover without medical care.

d. Continue to share physical spaces only with others in their same household.

5. Recommendations for the influenza vaccine for the 2020–2021 season include:

a. The nasal vaccine is approved for use in pregnant females.

b. The best time to receive the flu vaccine is January or February.

c. Children younger than 6 months of age should not receive flu vaccine.

d. During a pandemic, persons over the age of 65 should not receive the flu vaccine.

6. Recommended immunization procedures during the COVID-19 pandemic state that:

a. Routine vaccination should be deferred for persons with suspected or confirmed COVID-19 until isolation is discontinued.

b. Maternal vaccines for pregnant women should be deferred during the current pandemic.

c. Physical distancing measures can be reduced to 3 feet between patients during office visits.

d. Routine childhood immunizations should be deferred during the current pandemic.