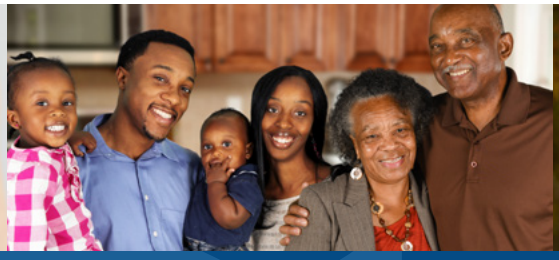
Call to Action

The Dangers of Influenza and COVID-19 in Adults with Chronic Health Conditions



October 2020

National Foundation for Infectious Diseases®

Experts urge all healthcare professionals to prioritize influenza vaccination to help protect adults with chronic health conditions during the COVID-19 pandemic

The recommendations in this Call to Action are based on discussions from an August 2020 Roundtable convened by the National Foundation for Infectious Diseases (NFID). The multidisciplinary group of subject matter experts explored the risks of co-circulation and co-infection with influenza and SARS-CoV-2 viruses in adults with chronic health conditions from the perspective of their specialized areas of medicine and discussed strategies to protect these vulnerable populations.

Experts agreed that higher levels of influenza vaccination coverage during the 2020-2021 influenza season could reduce the number of influenza-related hospitalizations, helping to avoid unnecessary strain on the US healthcare system during the COVID-19 pandemic, so that healthcare facilities have the capacity to provide care to patients with COVID-19.

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The Dangers of Influenza and COVID-19 in Adults with Chronic Health Conditions

Overview

While every influenza (flu) season is unpredictable, the 2020-2021 season is characterized by an unprecedented dual threat: co-circulation of influenza and the novel coronavirus (SARS-CoV-2) that causes COVID-19. Moreover, there is concern that co-circulation and co-infection with influenza and COVID-19 viruses could be especially harmful, particularly among adults at increased risk of influenza-related complications.

Influenza poses serious health risks to adults with certain chronic health conditions including heart disease, lung disease, and diabetes. The increased risk of influenza-related complications includes the potential exacerbation of underlying health condition(s), as a result of influenza-related inflammation that may persist long after the acute infection. Of particular concern, adults with chronic health conditions have an increased risk

of long term complications, such as heart attacks and strokes, after experiencing acute influenza or COVID-19.

Annual influenza vaccination is essential to help prevent infection, mitigate severe disease and related complications, and alleviate additional strain on an overburdened US healthcare system. While recommended in the US for all individuals age six months and older, annual vaccination is especially important for adults with chronic health conditions, older adults, and underserved minority populations to avoid exacerbation of chronic health conditions, permanent physical decline, or death. Even in cases when influenza vaccination does not prevent infection, it can reduce the severity of disease and prevent serious influenza-related complications, such as heart attacks or strokes. During the 2018-2019 influenza season, it is estimated that influenza vaccination prevented 4.4 million illnesses, 58,000 hospitalizations, and 3,500 deaths (Figure 1).[1]

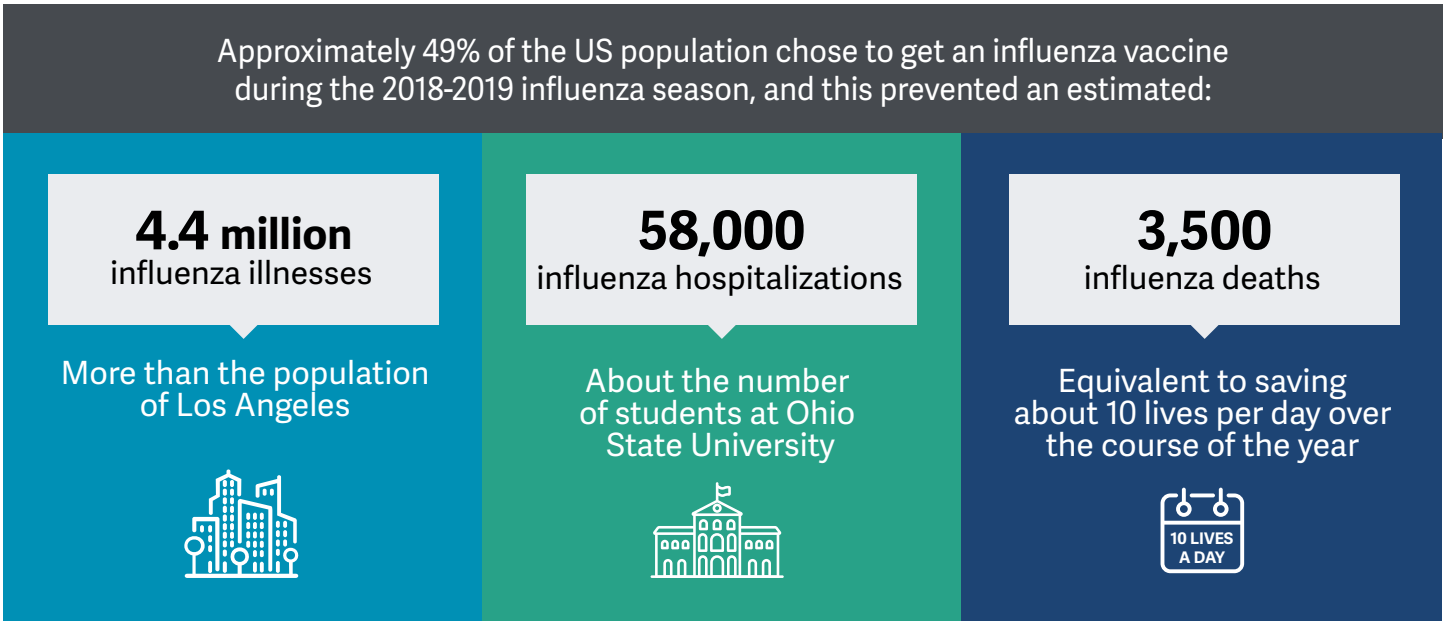
Annual influenza vaccination during the 2020-2021 influenza season is more important than ever due to the simultaneous threat posed by the COVID-19 pandemic. Vaccination against influenza will have added benefits—not only will it help to prevent influenza, reduce disease severity, and prevent serious influenza-related complications, but it will also help to reduce strain on the US healthcare system, due to the COVID-19 pandemic.

Burden of Influenza in US Adults with Chronic Health Conditions

Influenza is a contagious viral infection associated with a significant disease burden. Each year in the US, influenza is responsible for millions of illnesses, hundreds of thousands of hospitalizations, and tens of thousands of deaths.[2]

Although all individuals can be impacted by influenza, the burden is greatest in adults with certain chronic health conditions including heart

Figure 1: Benefits of Influenza Vaccination[1]



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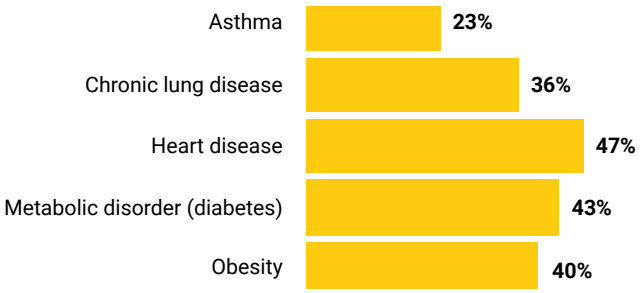
disease, lung disease, and diabetes, as well as adults age 65 years and older and underrepresented minority populations, who often have underlying health conditions. It is important to note that adults with chronic health conditions are at increased risk of influenza-related complications, hospitalization, exacerbation of underlying disease, and death, even when health conditions are well-controlled, due to the effects of influenza-related inflammation that may occur long after acute influenza infection.

As the dual threat of influenza and COVID-19 converge, experts urge all healthcare professionals to prioritize influenza vaccination for adults with chronic health conditions and other vulnerable patients.

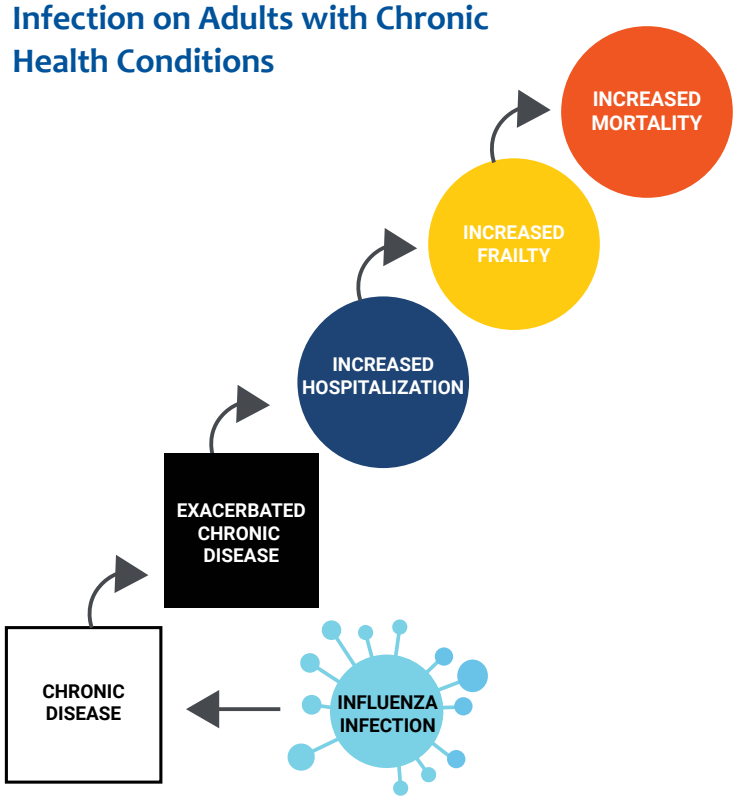
During the 2019-2020 influenza season, 92.6 percent of adults hospitalized with influenza-related complications had at least one underlying medical condition.[3] The most commonly reported underlying medical conditions in patients hospitalized for influenza include heart disease, diabetes, obesity, and chronic lung disease (Figure 2).

Figure 2: Selected Underlying Medical Conditions of Laboratory Confirmed Influenza Hospitalizations for the 2019-2020 Influenza Season[4]



An often-overlooked effect of influenza infection is the inflammatory reaction that can last for several weeks past the acute infection stage. This inflammation often worsens an individual's underlying disease and can lead to heart attack or stroke, even after the acute illness has been resolved—adding to the risk of mortality (Figure 3).

Figure 3: Potential Effects of Influenza Infection on Adults with Chronic Health Conditions



While adults with chronic health conditions are at increased risk of severe illness and influenza-related complications every year, the COVID-19 pandemic may further increase the risk of adverse outcomes. Many of the underlying health conditions that make adults vulnerable to influenza are also linked to increased vulnerability to SARS-CoV-2 infection, severe disease outcomes, increased hospitalization, and mortality. During the 2020-2021 influenza season, the possibility of co-infection with influenza and SARS-CoV-2 is an even greater cause for concern particularly for adults with chronic health conditions, despite the limited data currently available on interactions between the two viruses and the potential consequences.[5]

Annual influenza vaccination is a key prevention strategy to protect all adults, and especially those with chronic health conditions. Although influenza vaccination has been shown to prevent hospitalization and influenza-related mortality, vaccination rates remain suboptimal and have stagnated around 50 percent among US adults.[6] Less than half of adults age 50 to 64 years receive an annual influenza vaccine, and this pattern has been consistent for the past decade.[7] While influenza vaccination rates are higher among adults age 65 years and older, approximately one-third still remain unvaccinated each year—well below US public health goals.[8] According to a recent NFID survey, nearly one-quarter of individuals at high risk for influenza-related complications said they did not intend to get vaccinated against influenza.[9]

Key Challenges for the 2020–2021 Influenza Season

- Increasing vaccine coverage among adults with chronic health conditions in the presence of a dual threat of influenza and COVID-19
- Reducing strain on the US healthcare system that adults with chronic health conditions often rely upon
- Addressing logistical concerns, including limited emergency room/hospital capacity, issues with access to traditional vaccination sites, and limited opportunities to vaccinate adults with chronic health conditions against influenza due to fewer healthcare visits overall
- Potential issues related to co-infection with influenza and SARS-CoV-2 that can complicate underlying chronic health conditions

While every year presents a challenge to increase influenza vaccination coverage, the 2020-2021 season will have additional unprecedented obstacles due to the COVID-19 pandemic. Innovative strategies are necessary to ensure influenza vaccines are safely administered during the COVID-19 pandemic.

Preparing for an Influenza Season During the COVID-19 Pandemic

Anticipated Burden of Influenza and COVID-19 During the 2020-2021 Season

COVID-19 has had an adverse impact on routine vaccinations. Due to COVID-19-related stay-at-home orders, adult vaccination rates in the US as of May 2020 had declined by 12 to 63 percent (varying by state) in comparison to the previous year, with nearly half of adults age 50 years and older not receiving recommended vaccinations.[10] Influenza vaccination rates may also suffer during the 2020-2021 season.

As of September 2020, more than 200,000 individuals in the US died from COVID-19, with new cases being reported daily.[11,12] The trajectory of the COVID-19 pandemic is uncertain and partly depends on personal protection, infection control, and social distancing measures. The pattern bears resemblance to the novel H1N1 influenza A virus that emerged in the spring of 2009, where cases increased until summer, decreased somewhat during the summer, and spiked before the start of the traditional influenza season. Although this may also happen with COVID-19, predictions are far from certain. As of early September, the rate of new COVID-19 cases per day was increasing in some midwestern and southern states.[13]

While social distancing, wearing masks or other face coverings, and other measures to control the spread of COVID-19 could also help control the spread of influenza, loosening these measures could allow both COVID-19 and influenza to circulate. In the US, influenza viruses usually begin circulating in October/November and peak in February. Influenza vaccination campaigns may need to be extended depending on the timing of the US influenza season.

COVID-19 mimics influenza in its clinical presentation, its mechanism of transmission, and its time of onset.[14] Like influenza, COVID-19 can result in prolonged inflammation and complications, but is more severe as COVID-19 is completely novel to patient immune systems.

The Impact of Influenza and COVID-19 on Emergency Department Response and Healthcare Utilization

Due to COVID-19 surges, US emergency rooms (ERs) are already operating in a state of overload, without the additional strain caused by influenza. ERs have become acute-care sites, with 90 percent of ERs routinely reporting crowded conditions.[15] In a normal year, ER visits peak during the winter months, especially for visits related to respiratory illnesses.[16] Experts warn of the daunting prospect of treating both influenza and COVID-19 patients competing for the same resources, such as intensive care unit (ICU) beds or personal protective equipment.[17] As the winter months approach and the dual threat of influenza and COVID-19 looms, managing ICU strain will become even more challenging.

Any resulting strains on the US healthcare system could have detrimental consequences for adults with chronic health conditions in terms of disrupting routine care. While healthcare professionals continue to see critically ill patients, other adults have postponed or cancelled healthcare visits due to COVID-19, potentially neglecting the care of their chronic health conditions and risking worsened healthcare outcomes. Influenza vaccination is crucial not only to avoid ER and ICU strain, but also to help protect adults from influenza and related complications.

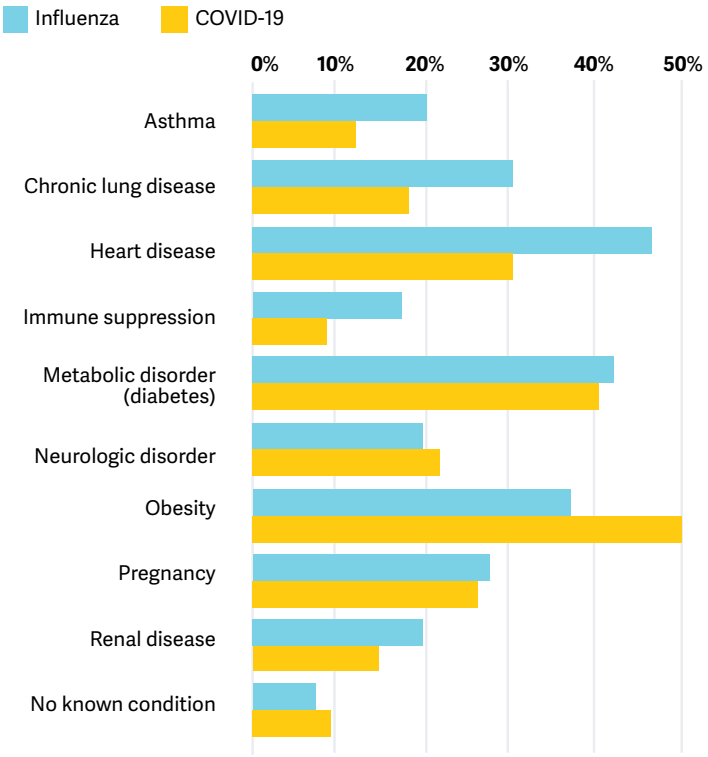
> ***"It won't take a 'bad' flu season—just 'a' flu season to make things more difficult in the ER and elsewhere in the US healthcare system."***
>
> **– Nicholas F. Vasquez, MD**
> **Vice Chair, Diversity, Inclusion, & Health Equity, American College of Emergency Physicians**

Influenza Virus Interactions with Chronic Health Conditions During the COVID-19 Pandemic

Millions of US adults live with one or more common chronic health conditions, such as heart disease, lung disease, or diabetes, which significantly increases their vulnerability to influenza-related complications.

Many of the same chronic health conditions associated with increased risk from serious influenza-related complications are also linked to poor outcomes and mortality associated with COVID-19 (Figure 4).

Figure 4: Selected Underlying Conditions Among Hospitalized Patients with Laboratory-Confirmed Influenza Compared with COVID-19 [18,19]



> *"Flu vaccination goals should include universal coverage of individuals at high risk for COVID-19, as there is essentially complete overlap between COVID-19 and flu risk groups."*
>
> **– William Schaffner, MD**
> **NFID Medical Director**

Both influenza and COVID-19 can trigger inflammation that may worsen outcomes for vulnerable individuals. Infection with SARS-CoV-2 virus can result in serious consequences due to increased inflammation in the absence of an effective innate immune response and naïve immune system in older adults. Both influenza and COVID-19 each have been shown to cause significant illness in adults with chronic health conditions, and co-infection may represent a potential added danger to these patients.

Impact on Adults with Heart Disease

Over the past eight US influenza seasons, nearly 47 percent of patients hospitalized for laboratory-confirmed influenza have had heart disease, which is the most common underlying health condition associated with influenza-related complications.[18] Similar to influenza, heart disease is also seasonal, with hospitalizations and deaths usually peaking in the winter.[20] In addition to heart disease being a risk factor for more severe illness associated with influenza infection, influenza can also precipitate heart disease. In one recent study, investigators reported that patients were six times more likely to have a heart attack within the first week of having a laboratory-confirmed influenza infection compared with one year before or after the infection.[21] In another recent study of adults hospitalized with influenza, nearly 12 percent of patients experienced an acute cardiovascular event, suggesting that clinicians need to ensure that their patients with underlying chronic conditions are vaccinated against influenza each year to help protect against these events.[22]

The relationship between influenza and heart disease is of particular concern during the current pandemic, as severe COVID-19 outcomes have also been associated with pre-existing cardiovascular conditions and post-infection injury to heart tissue. Similar to influenza, patients with heart disease are especially vulnerable to the adverse effects of COVID-19. A high prevalence of heart disease has been documented among patients experiencing severe COVID-19 cases and death. From February to May 2020, cardiovascular disease was present in 32 percent of US patients hospitalized for COVID-19 and in 61 percent of patients who died from COVID-19.[23,24] In the original outbreak in China, more than 7 percent of COVID-19 patients and 22 percent of critically ill patients experienced myocardial injury from the infection.[25]

Impact on Adults with Diabetes

Diabetes is second only to heart disease as the most common underlying health condition for influenza-related hospitalization in the US.[26] Chronic hyperglycemia caused by diabetes can negatively affect immune function and increase the risk of morbidity and mortality due to infection and associated complications. During the influenza A H1N1 pandemic in 2009, individuals with diabetes had three times the risk of hospitalization from H1N1 infection and four times the risk of ICU admission once hospitalized.[27]

Individuals with diabetes are at a high risk of suffering complications from influenza and COVID-19, especially if they have other comorbidities. Of confirmed COVID-19 hospitalization cases in the US, nearly 40 percent had diabetes.[28] Patients with diabetes or uncontrolled hyperglycemia had a mortality rate that was more than four times greater than patients without these conditions.[29]

Impact on Adults with Lung Disease

Adults with lung diseases such as chronic pulmonary obstructive disease (COPD) or asthma are more likely to develop serious influenza-related complications and require hospitalization. For laboratory-confirmed influenza-related hospitalizations during the past eight US influenza seasons, 30 percent had chronic lung disease (including pulmonary fibrosis and COPD) and 20 percent had asthma.[26] Underlying pulmonological conditions can be exacerbated by influenza or subsequent secondary infections (e.g., viral or bacterial pneumonia). COPD increases susceptibility to influenza, and COPD patients experience higher mortality and critical illness as a result of influenza infection.[30]

Among confirmed COVID-19 hospitalization cases in the US, nearly 12 percent had asthma and 19 percent had chronic lung disease, indicating a potential relationship between pulmonological conditions and severe COVID-19 illness.[28] Emerging studies indicate that COVID-19 patients with preexisting pulmonological conditions had a higher risk of developing severe respiratory illness.[31] Multiple studies also report lasting pulmonological effects after COVID-19 infection, which can be especially dangerous for those with existing pulmonological conditions.[26-28] Influenza and COVID-19 can result in similar pulmonological complications—a particular risk for those with existing lung disease.

Impact on Older Adults

Older adults have an increased risk of developing severe outcomes from influenza. During the 2018-2019 influenza season, 75 percent of influenza-associated deaths and 57 percent of hospitalizations occurred in adults age 65 years and older.[32] In 2017-2018, the percentage of influenza-associated deaths and hospitalizations in this age group was even greater at 83 percent and 67 percent, respectively.[33]

In addition to increased severe illness and mortality, 15 to 19 percent of older adults hospitalized with influenza experience catastrophic disability—a significant decline in functional independence and activities of daily living. The risk of experiencing this decline persists throughout the month following hospital discharge.[34]

The higher prevalence of comorbid chronic health conditions in older adults, even those younger than age 65, contributes to an increased risk of infection. During the 2017-2018 influenza season, adults age 50 to 64 years had hospitalization rates higher than those for young children, second in incidence only to adults age 65 years and older.[35] Recent studies show that adults younger than age 65 years with chronic health conditions also have high frailty scores, and that the frailty scores can predict survival, independent of age.[36]

Impact on Underserved Adult Populations

Underserved adult populations, which include communities of color and rural populations, are disproportionately affected by chronic health conditions.[37] Black patients face higher rates of heart disease and related risk factors (e.g., obesity, hypertension), and Hispanic patients are 1.6 times more likely to have diabetes.[28,38] Racial and ethnic disparities in hospitalization among minority populations were apparent during the 2009 H1N1 epidemic, with American Indians/Alaskan Natives, Hispanics, and Blacks more likely to be hospitalized, compared to Whites and Asians.[40]

Certain racial and ethnic groups have a higher risk of COVID-19—Blacks and Hispanics have a 2.6 times greater risk for COVID-19 than Whites (Figure 5).[41]

Other factors that impact health outcomes include socioeconomic status, healthcare access, and occupational exposure. A report of healthcare workers who tested positive for COVID-19 antibodies showed a significantly greater incidence in non-white workers compared to white workers.[42]

A recent study found that while almost half (49 percent) of the lowest-income communities did not have ICU beds available in their healthcare facilities, this was true for only 3 percent of the highest-income communities in the US.[43] While influenza vaccination can help protect underserved adults from disease exacerbation and influenza-related complications, urgent action is needed to improve vaccination rates in these populations, as they typically have high-risk health conditions, high exposure risks, and low influenza vaccination coverage (Figure 6).

Figure 5: COVID-19 Cases by Race and Ethnicity[41]

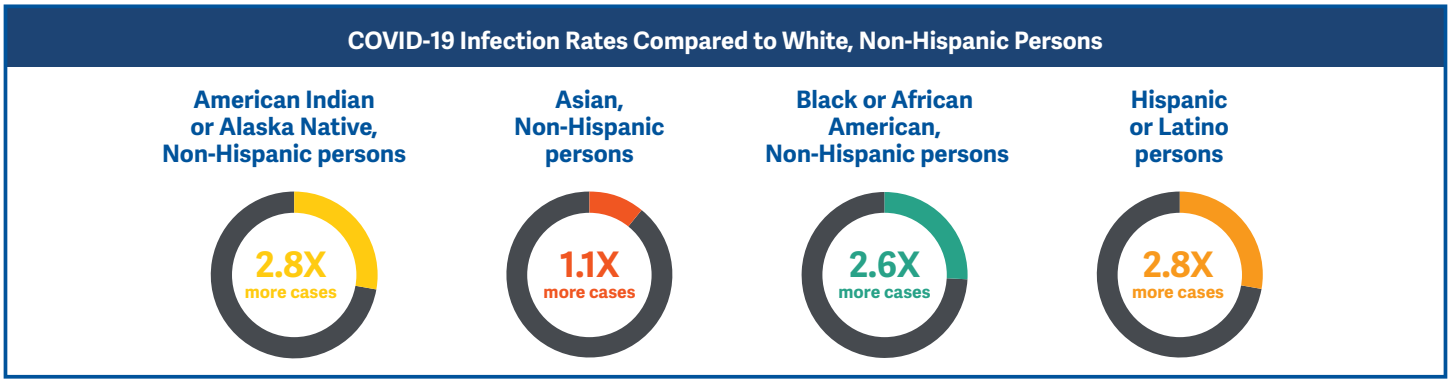


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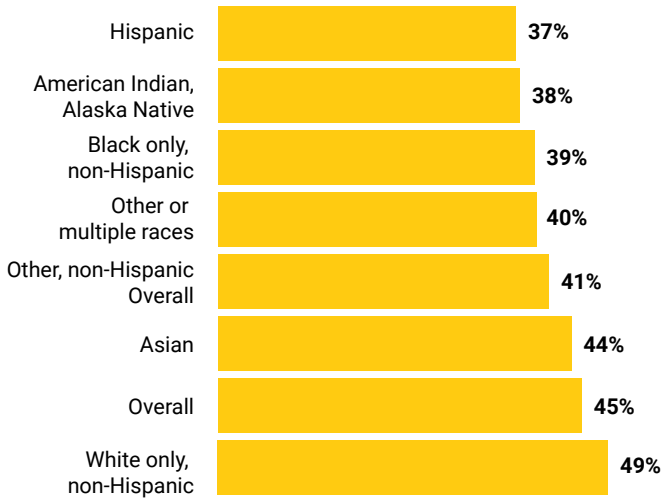
Figure 6: Disparity of Vaccination Coverage in Underrepresented and Underserved Adult Populations During the 2018–2019 Influenza Season[7]



Benefits of Influenza Vaccination in Adults with Chronic Health Conditions

Influenza vaccination prevents tens of thousands of deaths and hospitalizations every year. Influenza vaccination has many documented benefits for those with chronic health conditions. A large and increasing body of evidence supports the protective effect of influenza vaccination in patients with cardiovascular disease. For example, estimates of the efficacy of the influenza vaccine in preventing heart attacks and strokes range from 15 to 45 percent, meaning that influenza vaccination is equal to or more effective than smoking cessation, statins, and antihypertensive therapy.[44] The American Heart Association (AHA) and American College of Cardiology (ACC) have been recommending annual influenza vaccination for individuals with heart disease for more than a decade.[45] Influenza vaccination for COPD patients has been shown to result in reduced patient mortality, decreased development of severe illness, and fewer hospitalizations,[30] as well as reduced risk of ischemic heart disease for older COPD patients.[46]

For patients with asthma, getting vaccinated against influenza has been shown to reduce febrile illness and the use of asthma medication, as well as preventing asthma attacks that lead to ER visits or hospitalizations.[47] For patients with diabetes, influenza vaccination is associated with a reduced risk of all-cause death, cardiovascular death, and death from heart attack or stroke.[48,49] Influenza vaccination can potentially prevent dysregulated immune responses in older adults and/or those with chronic health conditions, thereby also decreasing the risk of catastrophic disability.

> *"While not perfect, flu vaccination prevents hospitalizations and helps save lives."*
>
> **– Patricia N. Whitley-Williams, MD**
> **NFID President**

The Benefits of Influenza Vaccination for Adults with Chronic Health Conditions Include:

- Less severe influenza illness
- Fewer hospitalizations
- Reduced occurrence of heart attacks and strokes
- Preventing exacerbation of chronic health conditions
- Reduced all-cause and influenza associated mortality

Influenza Vaccine Recommendations for the 2020–2021 Season: Advisory Committee on Immunization Practices (ACIP) Recommendations

- Routine annual vaccination with a licensed influenza vaccine appropriate for age and health status is recommended for all individuals age ≥6 months who do not have contraindications
- Emphasis should be placed on vaccination of high-risk groups (including adults with chronic health conditions) and their contacts/caregivers

Strategies for Increasing Influenza Vaccine Coverage for Adults with Chronic Health Conditions During the COVID-19 Pandemic

It is imperative that both healthcare professionals and patients are aware of the potential public health threat created by influenza and COVID-19 co-circulation and co-transmission, and the importance of annual influenza vaccination, particularly for vulnerable populations. Healthcare professionals must be prepared for the possibility of a COVID-19 surge during the 2020-2021 influenza season. Even after acute influenza infection, healthcare professionals must also be aware that there is often a sustained increase in inflammation in patients for weeks, typically leading to increased frailty.

Because both SARS-CoV-2 and influenza are anticipated to co-circulate in the 2020-2021 season, the timing of influenza vaccination programs may need to adjust accordingly, including starting vaccination campaigns earlier and extending them to accommodate stay-at-home orders and other COVID-19 mitigation and control measures.

Addressing Medical Needs and Improving Access to Influenza Vaccination

All healthcare professionals, including primary care providers and specialists, should ensure that patients receive an annual influenza vaccine, especially those at increased risk for influenza-related or COVID-19-related complications. As part of their efforts to appropriately manage chronic health conditions in adult patients, healthcare professionals must insist on annual influenza vaccination as a proactive step in preventing influenza-related hospitalization.

> *"As healthcare professionals, we have to be proactive about recommending the flu vaccine if we are going to be successful in immunization during the COVID-19 pandemic."*
>
> **– Michael D. Hogue, PharmD**
> **President, American Pharmacists Association**

Healthcare Professionals Who Treat Adults with Chronic Health Conditions Can Improve Influenza Vaccination Coverage by:

Communication with Patients

- Strongly recommend vaccination at every patient encounter throughout influenza season
- Inform adults with chronic health conditions, including heart disease, lung disease, and diabetes, that influenza can exacerbate their condition and trigger an adverse cardiovascular event or other serious complication
- Proactively reach out to patients with chronic health conditions who do not have a scheduled fall visit and request that they come in to get vaccinated against influenza
- Use community health workers, peer networks, social media influencers, and storytelling strategies to relay the importance of annual influenza vaccination and help dispel misconceptions and myths about vaccines

Communication with Staff

- Assign an influenza vaccine champion in the practice or health system
- Educate all clinicians and office staff on current influenza vaccine recommendations
- Initiate annual vaccine education updates as part of required employee clinical training

A strong, unified national message to seek influenza vaccination even while under shelter-in-place instructions can result in increased vaccinations.

Implementation

- Stock influenza vaccines and offer vaccination at every patient encounter throughout influenza season
  - If you are not able to provide influenza vaccinations onsite, refer to pharmacies or other alternative vaccination sites or clinics to broaden access to vaccination
  - Write "influenza prescriptions" and insist on annual vaccination
- Use standing influenza vaccine orders and include an automatic notification in the electronic health record to remind staff to discuss influenza vaccination with all patients
- Set a goal of at least 90 percent influenza vaccine coverage in the practice; assess on an ongoing basis and make adjustments as needed
- Assess whether adults are up-to-date on influenza and other recommended vaccines and remind patients at every encounter, even if the encounter is virtual or by telephone
- Incorporate influenza vaccination into routine chronic disease management
- Ensure adequate time during office visits to discuss any patient concerns about influenza vaccination

Influenza Vaccination Strategies During the COVID-19 Pandemic

To ensure high vaccination coverage during the COVID-19 pandemic, healthcare professionals must take the following steps:

- Develop a robust communications plan, engaging community organizations and influencers to deliver messages about the importance of annual influenza vaccines and locations offering vaccination
  - Messages need to include information about how patients can safely get vaccinated during the COVID-19 pandemic (e.g., wear a mask and stay six feet apart from others)
  - To engage at-risk and underserved communities, use targeted messages delivered by trusted sources through trusted communication channels
- Provide innovative vaccine access points (e.g., drive-thru vaccination clinics in local parking lots, pharmacies, use of strike teams and mobile vans)
- Vaccination season should be expanded to ensure that the influenza vaccine continues to be offered while influenza viruses are circulating, from fall, through the winter, and into the spring
- Facilitate coordination across many different types of stakeholders and communicators to ensure they are aware of the importance of influenza vaccination
- Document influenza vaccine administration in immunization information systems, especially as nontraditional vaccine-deployment strategies will be used more frequently this influenza season
- Formulate targeted plans to vaccinate residents and employees at long-term care facilities, as these individuals are especially vulnerable to influenza and SARS-CoV-2 infection

Talking Points for Patient Encounters

Vulnerable populations must be informed that influenza vaccination is important every year, and particularly so during the COVID-19 pandemic. They must also be made aware there are multiple, safe, familiar, and convenient healthcare delivery sites where they can receive influenza vaccines. Clear messaging regarding safe access to, and administration of, influenza vaccines is needed to ensure confidence, allay fears, and improve coverage rates. To support this, healthcare professionals can:

- Emphasize that while there is not a COVID-19 vaccine currently available, there are safe and effective influenza vaccines with decades of safety data to support them. Getting vaccinated against influenza can help protect individuals, their loved ones, and communities
- Talk openly to patients about the steps being taken to administer vaccines safely during the COVID-19 pandemic
- Remind patients with chronic health conditions that influenza vaccination can help prevent heart attacks, strokes, hospitalization, and a decline in quality of life
- Communicate clearly about the number of lives in the community saved by annual influenza vaccination and how many more could be saved if vaccination rates were higher

How to Improve Patient Outcomes: Overcoming Barriers

- Ensure that healthcare professionals have up-to-date information about the benefits of influenza vaccination, including how influenza vaccines can prevent influenza-related complications among those with underlying chronic health conditions
- Communicate the importance of influenza vaccination for disease prevention and for protection against adverse outcomes from co-infection with influenza and SARS-CoV-2
- Encourage specialists to see each patient visit as an opportunity to discuss influenza vaccination
- Use healthcare facility staff, medical students, or other healthcare professional trainees to reach out and educate patients
- Remind healthcare professionals that they are a trusted source of information for patients
- Promote and establish safe and efficient vaccination clinics

> *"If you do get flu despite having received the vaccine, you are likely to have a milder infection. You won't have to go to the emergency room, you may not be hospitalized, and your risk of dying decreases."*
>
> **– William Schaffner, MD**
> **NFID Medical Director**

Summary and Conclusion

Experts anticipate that the co-circulation of influenza and SARS-CoV-2 will make the 2020-2021 influenza season particularly challenging. This dual public health threat underscores the critical need to optimize the use of influenza vaccines in helping to protect US adults—particularly among vulnerable populations including adults with chronic health conditions, older adults, and underserved minority populations.

Healthcare professionals must insist on influenza vaccination for adults with chronic health conditions throughout influenza season to reduce the severity of influenza and prevent related complications. Influenza vaccination can also help prevent related emergency room visits and hospitalizations, reducing strain on the healthcare system.

To learn more, visit www.nfid.org/flu and www.cdc.gov.

From primary care physicians to nurses to specialists, it is the responsibility of all healthcare professionals to educate, motivate, and insist that patients receive all recommended vaccines.

Participating Organizations

The following organizations participated in the 2020 virtual roundtable focused on increasing awareness of the dangers of influenza and COVID-19 among adults with chronic health conditions and the benefits of annual influenza vaccination, to improve public health outcomes:

AARP
Alliance for Aging Research
American Academy of Family Physicians
American Academy of Physician Assistants
American Association for Respiratory Care
American Association of Clinical Endocrinologists
American Association of Nurse Practitioners
American College of Cardiology
American College of Emergency Physicians
American College of Osteopathic Family Physicians
American College of Physicians
American Lung Association
American Nurses Association
American Pharmacists Association
American Society for Transplantation and Cellular Therapy
American Society for Preventive Cardiology
American Society of Transplant Surgeons
American Thoracic Society
Association of Black Cardiologists
Association of Diabetes Care & Education Specialists
Association of Immunization Managers
Biotechnology Innovation Organization (BIO)
Center for Sustainable Health Care Quality and Equity
Centers for Disease Control and Prevention
Immunization Action Coalition
Infectious Diseases Society of America
National Adult and Influenza Immunization Summit
National Association of Chain Drug Stores
National Black Nurses Association
National Lipid Association
National Medical Association
Preventive Cardiovascular Nurses Association
The Gerontological Society of America

Sanofi Pasteur has provided funding and other support for this activity. NFID policies restrict funders from controlling program content.

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THE DANGERS OF INFLUENZA (FLU) AND COVID-19 IN ADULTS WITH CHRONIC HEALTH CONDITIONS

93%
of adults
hospitalized for flu during the 2019-2020 season had at least one reported underlying medical condition

US adults with chronic health conditions are at high risk for COVID-19 and flu-related complications

- Exacerbation of chronic health conditions
- Permanent physical decline
- Risk of heart attack or stroke
- Death

34+
million adults
have diabetes and are **3x** more likely to be hospitalized from COVID-19 and die from flu-related complications

30+
million adults
have heart disease and are at **6x** increased risk of heart attack within **7 days** of flu infection

Adults with hypertension
are **3x** more likely to be hospitalized for COVID-19

39+
million adults
have asthma and/or COPD, putting them at greater risk of serious flu-related complications

Adults with asthma
are **1.5X** more likely to be hospitalized for COVID-19

Annual flu vaccination is the best way to protect yourself from flu and serious long-term complications
In the US, there are currently no approved vaccines for COVID-19

Learn more at www.nfid.org/loweryourflurisk

National Foundation for Infectious Diseases®

#LowerYourFluRisk
#FightFlu

THE DANGERS OF INFLUENZA (FLU) AND COVID-19 IN ADULTS WITH CHRONIC HEALTH CONDITIONS

What do they all have in common?

Susan, Age 75
HEART DISEASE

Janet, Age 50
HIV/AIDS

Jake, Age 62
OBESE (BMI≥40)

Darrell, Age 57
ASTHMA

Maria, Age 49
DIABETES

José, Age 64
CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

93% of adults
hospitalized for flu during the 2019-2020 season had at least one reported underlying medical condition

Because of their chronic health conditions, they are at high risk for serious COVID-19 and flu-related complications:

- Worsening of chronic health condition
- Disability
- Hospitalization
- Death

34+ million adults
have diabetes and are **3x** more likely to be hospitalized from COVID-19 and die from flu-related complications

30+ million adults
have heart disease and are at **6x** increased risk of heart attack within **7 days** of flu infection

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