



Coronavirus Disease 2019 (COVID-19)



Assessing Risk Factors for Severe COVID-19 Illness

Updated Aug. 10, 2020

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COVID-19 can affect anyone, and the disease can cause symptoms ranging from mild to very severe. For some other illnesses caused by respiratory viruses (such as influenza), some people may be more likely to have severe illness than others because they have characteristics or medical conditions that increase their risk. These are commonly called “risk factors.” Examples include [older age](#) or having [certain underlying medical conditions](#).

CDC is conducting disease surveillance and field investigations to better understand why some people are more likely to develop severe COVID-19 illness. This is one of the top priorities in CDC’s strategy to combat COVID-19. What we learn from these efforts will provide vital information to help CDC scientists and other public health officials make decisions to protect our most vulnerable populations.

CDC carries out these activities in collaboration with state, local, and territorial health departments; public health, commercial, and clinical laboratories; vital statistics offices; health care providers; emergency departments; and academic and private sector partners.

Why Risk Factors Matter

People with risk factors may be more likely to need hospitalization or intensive care if they have COVID-19, or they may be more likely to die of the infection.

It is important to learn about risk factors for severe COVID-19 illness because it can help you:

- Take precautions as you go about your [daily life](#) and [attend events](#).
- Better understand how a medical condition could affect your own health if you get sick with COVID-19.
- Anticipate medical treatment that you might need if you get sick.
- Reduce your risk for severe COVID-19 illness by managing any conditions you have that are risk factors.

How We Learn about Risk Factors for Severe Disease

Because COVID-19 is a new disease, more work is needed to better understand the risk factors for severe illness or complications. [Potential risk factors](#) that have been identified to date include:

- Age
- Race/ethnicity
- Gender
- Some medical conditions
- Use of certain medications
- Poverty and crowding
- Certain occupations
- Pregnancy

Additional research will help us confirm if these are risk factors for severe COVID-19 illness and determine if there are other factors that increase a person's risk.

Investigations

CDC is working to identify risk factors for severe COVID-19 illness through a variety of investigations, some of which are described below. These investigations include adults and children and examine severe illness resulting in hospitalizations and intensive care unit (ICU) admissions. As we continue to investigate risk factors for severe illness, we will update this webpage with new findings and new investigations.

Investigation of People with COVID-19 Who Have Symptoms (Symptomatic) vs. People with COVID-19 Who Do Not Have Symptoms (Asymptomatic or Pre-symptomatic)*



Assessment

Compare characteristics of people with COVID-19 who have symptoms with characteristics of people with COVID-19 who do not have symptoms.



What We Will Learn

How people with COVID-19 who have symptoms are different from those with COVID-19 who do not have symptoms.

How people with COVID-19 who feel more sick (for example, sick enough to need to stay in bed or to seek medical care) are different from those with COVID-19 who feel less sick.

*Investigations used include: Ongoing household investigations

Investigation of People Hospitalized with COVID-19 vs. Other Groups*



Assessment

Compare characteristics of people with COVID-19 who are hospitalized with characteristics of:

- People who have COVID-19 but do not need hospitalization, and
- People who seek medical care for respiratory illness but are COVID-19-negative, and
- The general U.S. population.



What We Will Learn

Characteristics associated with illness that is severe enough to require hospitalization among people with COVID-19.

*Surveillance networks and investigations used include: [COVID-NET](#); [The U.S. Flu Vaccine Effectiveness \(VE\) network](#), [New Vaccine Surveillance Network \(NVSN\)](#); [Hospitalized Adult Influenza Vaccine Effectiveness Network \(HAIVEN\)](#); and ongoing field investigations

Investigation of People with COVID-19 Requiring ICU Care vs. Other Groups*



Assessment

Compare characteristics of people with COVID-19 who are hospitalized in ICUs with characteristics of:

- People hospitalized with COVID-19 who do not require ICU care, and
- People with COVID-19 who are not hospitalized, and
- The general U.S. population.



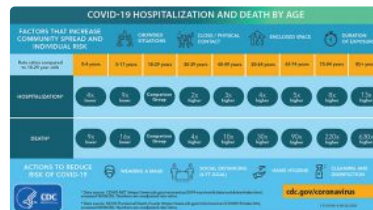
What We Will Learn

How people with COVID-19 who are sick enough to need ICU care are different from less sick people with COVID-19 who are hospitalized, people with COVID-19 who are not hospitalized, and the U.S. general population.

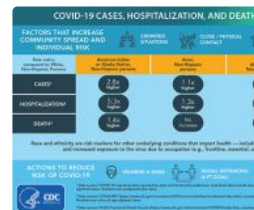
*Networks used include: Influenza Vaccine effectiveness in critically ill patients (IVY)



COVID-19 Associated Hospitalization Related to Underlying Medical Conditions



COVID-19 Hospitalization and Death by Age



COVID-19 Hospitalization and Death by Race/Ethnicity

Resources

[People Who Are at Higher Risk for Severe Illness](#)

[Frequently Asked Questions for People at Higher Risk](#)

[Clinical Questions about COVID-19: Questions and Answers](#)

[Hospitalization Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease 2019 — COVID-NET, 14 States, March 1–30, 2020](#)

[Severe Outcomes Among Patients with Coronavirus Disease 2019 \(COVID-19\) — United States, February 12–March 16, 2020](#)

[COVID-19 Cases, Data, and Surveillance](#)

Last Updated Aug. 10, 2020

Content source: National Center for Immunization and Respiratory Diseases (NCIRD), Division of Viral Diseases