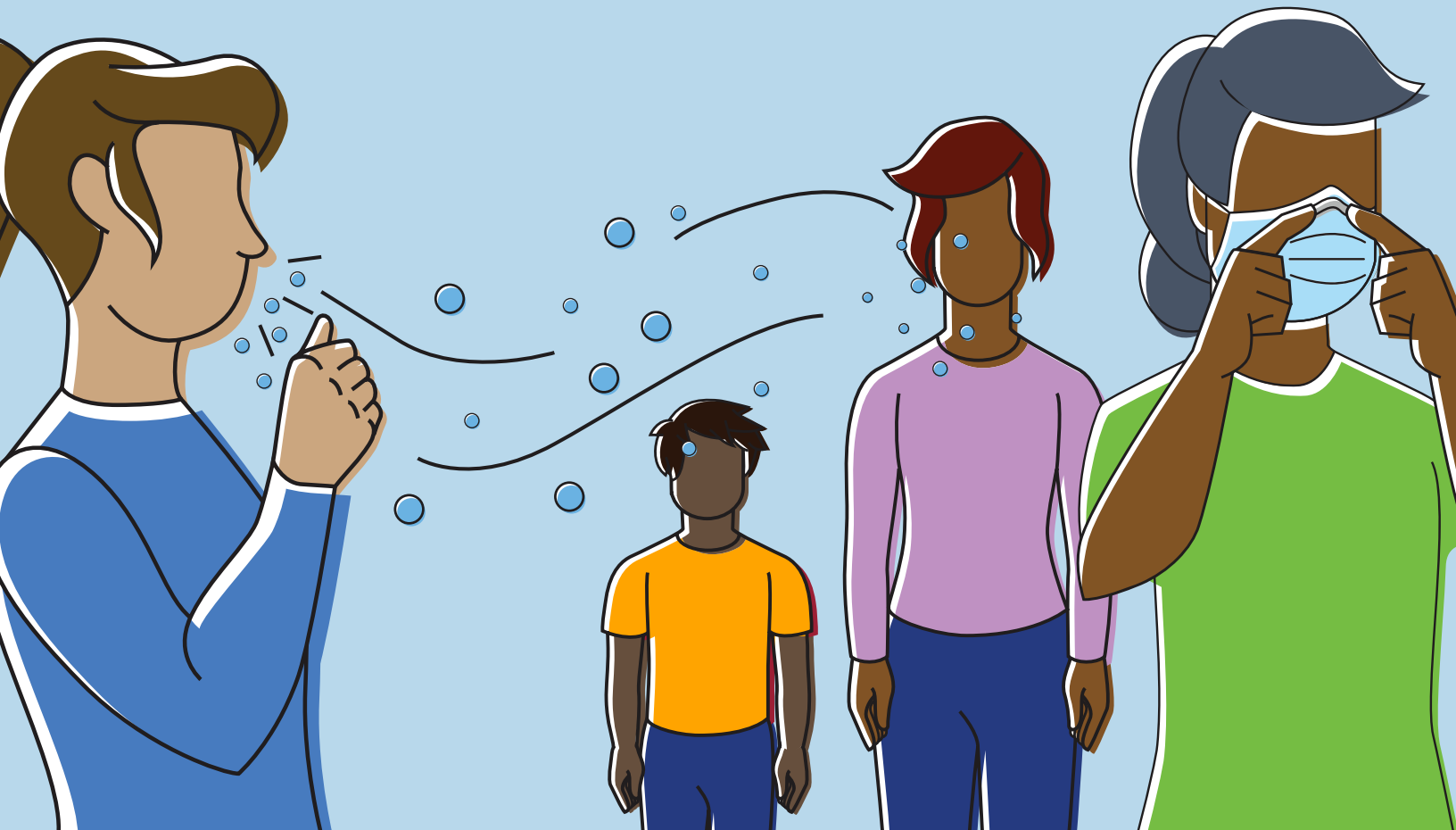


**PROJECT FIRSTLINE:**  
**ESSENTIALS** for **Teaching**  
**Infection Control™**

# Instructor's Manual



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## Introduction

Welcome to Project Firstline, the U.S. Centers for Disease Control and Prevention's (CDC) collaborative of diverse healthcare and public health partners that aims to provide engaging, innovative, and effective infection control training for millions of frontline U.S. healthcare workers as well as members of the public health workforce.

This instructor's manual offers suggestions for using the Essentials for Teaching Infection Control Video Series in your health professions program. The video series includes three videos varying in length from 8 to 16 minutes. Each video focuses on a specific principle of infection control. Designed by and for community college instructors, this manual includes a brief overview of CDC's Project Firstline (PFL), ways to integrate the video series into your courses and programs, suggested activities and learning tools, and links to CDC resources.

## Background

Project Firstline's innovative content is designed to help healthcare workers, regardless of previous training or educational background, understand and confidently apply the infection control principles and protocols necessary to protect themselves, their facility and patients, their family, and their community from infectious disease threats, such as COVID-19 (CDC, 2022).

In 2021, the CDC partnered with the American Hospital Association and the League for Innovation in the Community College for a project focused on enhancing infection control in community college nursing and allied health curricula. Faculty teams from 16 community colleges across the U.S., representing multiple healthcare education disciplines, worked with project coaches and subject-matter experts to refine existing curricula. During the project, they developed and/or integrated resources that can be replicated or adapted for use in community college nursing and allied health programs.

**Specialized and professional accreditations were considered in the development of this content. Review state regulations regarding scope of practice when introducing specific techniques or protocols.**



# How to use this Instructor's Manual

You can use the **Essentials for Teaching Infection Control** Video Series to enhance existing curricula and help improve your students' knowledge of why infection control practices are important in keeping people safe. This instructor's manual offers suggestions for integrating the **Essentials for Teaching Infection Control** Video Series into your program's infection control curriculum. These materials are intended to enhance and supplement your curriculum, not replace it.

Throughout this **instructor's manual**, the following icons provide prompts for when to pause the video and allow for discussion. The **'Pause Video Now'** icon will coincide with its use in the video to give consistency and flow in your classroom discussion. The **'Instructor Notes'** and **'Timestamp'** icons are used solely in this manual as additional tips and prompting questions for your use during this series.



## Pause Video Now

**Pause Video** – The pause icon appears at certain points to allow time for engagement or reflection. Pause the video for as long as needed to provide quality interaction and reflection among students. If the pause feature is not used, the video will continue.



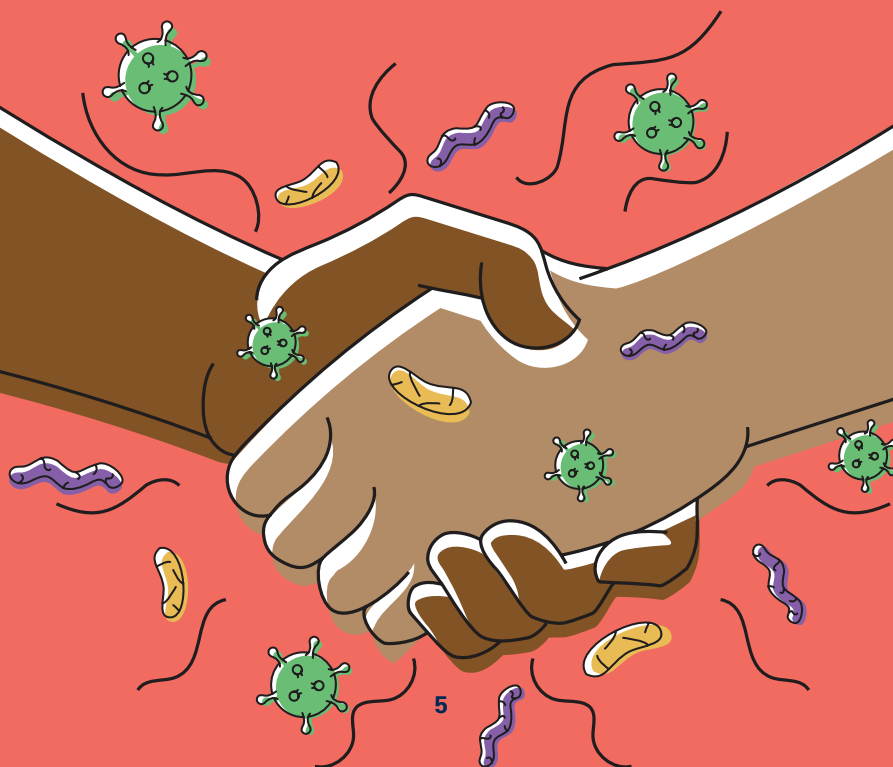
## Instructor Notes

**Instructor Notes.** These sections offer guiding questions or other suggestions for engaging students in reflection, discussion, and real-world scenarios.



**Timestamp** – The timestamp icon appears as a prompt to the instructor to inform when an event will occur in the video. This allows for preparation when planning classroom interaction.

# Hand Hygiene in Healthcare



## Hand Hygiene

This video has been prepared to help summarize the foundational principles of hand hygiene, related tools, and concepts for effective application. The video reinforces that effective, timely hand hygiene is a foundation of infection prevention and control. It helps students see how healthcare workers play a critical role in keeping patients safe by cleaning their hands at the right moments and using the proper methods to prevent their hands from spreading germs to patients and to themselves.

**Intended Learning Outcomes.** This session has four intended learning outcomes for students:

- Explain why hand hygiene is an important practice in a healthcare setting.
- Describe how germs spread in healthcare settings by hands through touch.
- Describe how to keep your hands clean.
- Demonstrate how to recognize risk and communicate about hand hygiene.



**Before students watch the video**, you may want to ask some initial questions to gauge their current understanding of hand hygiene, such as:

- Is soap and water the only correct way to clean your hands?
- What other products might be used in effective hand washing?
- How does effective hand hygiene play a role in infection control?



Several activities in the video provide opportunities for your students to answer guided questions, which can be used to elicit more in-depth conversation around hand hygiene.



When the video identifies discussion topics, you may want to pause the video and ask your students the following reflection questions:

- Why do you think this module is included in infection control training?
- Thinking about proper hand hygiene, what do you believe a healthcare worker's responsibilities are regarding their patients' safety? Emphasize "Choose the right hand hygiene method every day, every situation, every patient, and every encounter."
- How do you define hand hygiene?
- How does your definition compare to the information provided in the video?



Pause Video Now

The narrator discussed the use of soap and water or alcohol-based hand sanitizer in different scenarios. Ask students why it is important for them to know the settings in which use of each of these products is preferred.




Pause Video Now

The narrator presents a scene where the healthcare worker has just checked the vitals of one patient and is moving on to check another. The narrator poses the question, do you need to clean your hands again, even though you haven't touched anything that's likely to pose an infection risk?





Pause Video Now

The narrator describes another situation and asks, do you still need to clean your hands, even though you were wearing gloves throughout your last task?  **7:28**



Pause Video Now

The narrator describes a situation with an upset pediatric patient and poses the question, what should you use to clean your hands?  **8:02**



Pause Video Now

The video has just shown the correct steps and order for the two common hand hygiene cleaning methods: 1) soap and water; and  **8:32** 2) alcohol-based hand sanitizers.  **9:16**

If students have access to a working sink, provide them with soap and paper towels. Ask the students to demonstrate proper hand hygiene using soap and water. In a separate activity or if a working sink is not available, provide students with alcohol-based hand sanitizer and allow them to demonstrate the proper steps.



Instructor Notes

Be sure to debrief the activities by inviting students to share their experiences and ask any questions they may have.



Instructor Notes

Closing Discussion. You may want to ask the prompting questions from the beginning of this session again and have students share whether their responses have changed.

- Is soap and water the only correct way to clean your hands?
- What other products might be used in effective hand washing?
- How does effective hand hygiene play a role in infection control?

Or, you may want to revisit the following learning outcomes with students:

- Explain why hand hygiene is an important practice in a healthcare setting.
- Describe how germs spread in healthcare settings by hands through touch.
- Describe how to keep your hands clean.
- Demonstrate how to recognize risk and communicate about hand hygiene.

# Personal Protective Equipment (PPE)





## Personal Protective Equipment (PPE)

In other sessions in this video series, we have briefly introduced students to PPE. In this session, students take a deeper look at PPE and its role in infection control in every setting where healthcare is delivered. The video starts with a discussion of what PPE is and why we wear it, and then looks at some examples.

**Intended Learning Outcomes.** This session has four intended learning outcomes for students:

- Describe how PPE in healthcare settings protects you, your patients, and others and keeps germs from spreading.
- Identify appropriate types and uses of PPE in specific settings.
- Recognize the risks of misusing PPE.
- Demonstrate your role in communicating safety risks.



Instructor  
Notes

**Before students watch the video**, you may want to ask some initial questions to gauge their current understanding of personal protective equipment, such as:

- The use of PPE is everyone's responsibility. What is your role in using PPE?
- What equipment do you think is included in PPE? Anything other than gloves?
- Does all PPE work in all situations when it comes to infection control?

Several touchpoint activities are built into the video to provide opportunities for your students to answer guided questions. These questions can help elicit more in-depth conversation around the use of PPE.




Instructor  
Notes

When the video identifies discussion topics above, you may want to pause the video and ask your students the following reflection questions:


- What is the importance of PPE in healthcare?
- What is the function of PPE?
- What happens when you do not use PPE correctly?
- Who has the responsibility to protect patients and others from the spread of disease?



Pause Video Now

The video has just covered donning and doffing PPE. You may want to pause the video here to allow your students to look up and review the donning and doffing practices for their facilities. You may also want to allow time for your students to practice donning and doffing PPE correctly. You may want to have a variety of PPE available for students to use in practice. One option is to have students work in pairs or small groups to observe and provide feedback to each other.  **9:15**






The video provides three scenarios where PPE may be compromised, along with communication prompts for students to practice interacting with their teammates. If students are not able to recognize the risk during the built-in video pause, you may want to pause the video and reteach before moving forward.  **11:44**



Pause Video Now

At the completion of the scenarios, have students practice communicating risks to their classmates.

### Use the following prompting phrases.

- Prompt Scenario 1: "I noticed you forgot to clean your hands before putting  **12:26** on your PPE."
- Prompt Scenario 2: "The trash can for the used gloves and masks is located  **13:27** under the sink."
- Prompt Scenario 3: "It looks like you forgot to pull your respirator back up over  **14:36** your nose and mouth."



Be sure to debrief the activities by inviting students to share their experiences and ask any questions they may have.



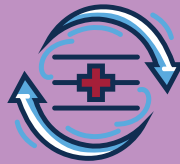
**Closing Discussion.** You may want to ask the prompting questions from the beginning of this session again and have students share whether their responses have changed.

- The use of PPE is everyone's responsibility. What is your role in using PPE?
- What equipment do you believe is included in PPE? Anything other than gloves?
- Does all PPE work in all situations when it comes to infection control?

Or, you may want to revisit the following learning outcomes with students:

- Describe how PPE in healthcare settings protects you, your patients, and others and keeps germs from spreading.
- Identify appropriate types and uses of PPE in specific settings.
- Recognize the risks of misusing PPE.
- Demonstrate your role in communicating safety risks.

# Ventilation in Healthcare



## Ventilation in Healthcare

This video reinforces how germs spread and explains the role of ventilation in reducing the risk of further spread. It helps students understand that good ventilation is essential to ensure that staff, patients, and others are not exposed to hazards in the air including germs that can cause infections.

**Intended Learning Outcomes.** This session has three intended learning outcomes for students:

- Explain why good ventilation is important for infection control in healthcare.
- Describe how ventilation works to reduce germs in the air.
- Demonstrate how to recognize infection risks associated with ventilation in healthcare.



**Before students watch the video**, you may want to ask some initial questions to gauge their current understanding of ventilation in healthcare settings, such as:

- When you hear the word ventilation, what comes to mind?
- What do you think the phrase “negative pressure room” means regarding ventilation?
- What role do you think ventilation plays in infection control?



Several activities are built into the video to provide your students with the opportunity to answer guided questions. These questions can help elicit more in-depth conversation around ventilation.




When the video identifies discussion topics, you may want to pause the video and ask your students the following reflection questions:

- Whose responsibility is it to ensure good ventilation in the healthcare setting?
- What are some types of ventilation?
- Who should you notify if you recognize a risk associated with ventilation?



Pause Video Now


The narrator has just discussed three different types of ventilation systems. The video will show these different types of systems. Pause the video after each scene to discuss the ventilation systems illustrated in that scene.  **4:01**



The video provides two scenarios where ventilation may be compromised, along with communication prompts for students to practice interacting with their teammates.



Pause Video Now

The narrator describes two separate scenarios where there is a risk to infection control due to ventilation. Pause the video and allow your students time to practice sharing this information with a classmate who plays the role of floor manager.  **7:00**

- Prompts Scenario 1: “I noticed the window in room 219 is jammed and will not close,”  
OR “The patient in room 219 is concerned that their window will not close,”  
OR “I wanted to be sure you are aware that the window in 219 will not close.”



Pause Video Now

Encourage students to practice communicating risks to their classmates using the following prompting phrases.  **7:27**

- Prompts Scenario 2: “The report for room 219 states that this is a positive pressure room, but when I arrived on the floor I noticed a fan in the room,” OR “When observing my patients, I saw that the door to room 219 was open and there was a fan on the floor,” OR “The door is open in room 219, which is a positive pressure room, and there is a fan on the floor. Did something change with the patient’s situation?”

Be sure to debrief the activities by inviting students to share their experiences and ask any questions they may have.

Instructor  
Notes

**Closing Discussion.** You may want to ask the prompting questions from the beginning of this session again and have students share whether their responses have changed.

- When you hear the word ventilation, what comes to mind?
- What do you think the phrase “negative pressure room” means regarding ventilation?
- What role do you think ventilation plays in infection control?

Instructor  
Notes

Or, you may want to revisit the following learning outcomes with students:

- Explain why good ventilation is important for infection control in healthcare.
- Describe how ventilation works to reduce germs in the air.
- Demonstrate how to recognize infection risks associated with ventilation in healthcare.

The following infection control resources are not included in the **Essentials for Teaching Infection Control** video series but are provided here as other options for engaging students with video content. These additional resources were current at the time of publication of this Instructor’s Manual. To ensure you are using the most up-to-date version, please go the **Project Firstline homepage found at Project Firstline Infection Control Training | CDC**.

## Hand Hygiene

### **CDC: Hand Hygiene in Healthcare Settings**

<https://www.cdc.gov/handhygiene/index.html>

This web page includes links to information on hand hygiene related to healthcare providers, patients, clean hand campaigns, handwashing in a non-healthcare setting, the science behind handwashing, and fire safety with alcohol-based hand sanitizers.

### **Inside Infection Control Series: Episode 21, Do We Really Have to Talk About Hand Hygiene? Again? Yes!**

<https://www.cdc.gov/infectioncontrol/projectfirstline/videos/EP21-Hands-LowRes.mp4>

<https://youtu.be/n1oqVM-N3j8>

In this episode of Inside Infection Control, Dr. Abby discusses why keeping hands clean helps stop the spread of germs, including some factors you may not have considered.

### **CDC COVID-19 Prevention Messages for Frontline Long-term Care Staff: Clean Hands – Combat COVID-19**

<https://www.cdc.gov/video/socialmedia/CleanHands.mp4>

<https://www.youtube.com/watch?v=xmYMUly7qiE>

Keep long-term care and nursing home residents healthy by knowing how and when to perform hand hygiene as part of preventing the spread of COVID-19.

### **Inside Infection Control Series, Episode 6: How Do Viruses Spread From Surfaces To People?**

<https://www.cdc.gov/infectioncontrol/projectfirstline/videos/Ep6-Spread-LowRes-New.mp4>

<https://www.youtube.com/watch?v=KmyxsnuREGs&list=PLv9p9iOILTQZQGtDnSDGViKdDrtlc13VX&index=7>

In this episode of Inside Infection Control, Dr. Abby discusses how respiratory droplets can make their way to surfaces and then to people.

## **Personal Protective Equipment**

### **Inside Infection Control Series, Episode 9: What is Personal Protective Equipment (PPE)?**

<https://www.cdc.gov/infectioncontrol/projectfirstline/videos/EP9-PPE-LowRes-New.mp4>

<https://www.youtube.com/watch?v=e-t2yZsEo70>

In this episode of Inside Infection Control, Dr. Abby discusses personal protective equipment (PPE).

### **Donning and Doffing PPE posters**

<https://www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf>

These easy to use and fully downloadable posters provide a visual of donning and doffing of PPE as recommended by the CDC.

### **One Size Doesn't Fit All**

[When One Size Doesn't Fit All: PPE Fit and Equity in Healthcare | Blogs | CDC](#)

This blog, facilitated by experts from the CDC, provides answers to commonly asked questions regarding PPE and its appropriate uses. It is updated regularly with current content.

### **Choosing the Right PPE throughout your Workday**

[Choosing the Right PPE Throughout Your Workday | Project Firstline | Infection Control | CDC](#)

This short PowerPoint slide deck provides the basics on selecting the appropriate PPE to be worn throughout the workday of a healthcare provider.

## Ventilation

### Inside Infection Control Series, Episode 17: What is Ventilation?

<https://www.cdc.gov/infectioncontrol/projectfirstline/videos/EP17-Vent-LowRes.mp4>

[https://www.youtube.com/watch?v=Tos-eccft\\_A&list=PLvrp9iOILTQZQGtDnSDGVikDdRtlc13VX&index=19](https://www.youtube.com/watch?v=Tos-eccft_A&list=PLvrp9iOILTQZQGtDnSDGVikDdRtlc13VX&index=19)

In this episode of Inside Infection Control, Dr. Abby explains what good ventilation is and why it is a key part of any healthcare infection control plan.

### Ventilation in Healthcare Settings

[Posters and Web Buttons from Project Firstline | Infection Control | CDC](#)

This site provides a series of Project Firstline posters and website links where educators can download resources for visual display or use in their classrooms.

### Project Firstline Session Plan 15: Ventilation

<https://www.cdc.gov/infectioncontrol/ppt/PFL-T15-20min-Slides.pptx>

Project Firstline provides this complete slide deck on the content to be covered on the topic of ventilation. The slide deck is available for download and printing of materials.

### Environmental Infection Control Guidelines

[Air | Background | Environmental Guidelines | Guidelines Library | Infection Control | CDC](#)

This resource located within the CDC website focuses on a complete set of tools for introducing and understanding the role ventilation and the environment play in reducing infections and the spread of germs.

### National Institute for Occupational Safety and Health (NIOSH)

[COVID-19 Information for the Workplace | NIOSH | CDC](#)

The CDC-hosted NIOSH guidelines for ventilation and safety in the workplace site provides extensive materials from safety and health in businesses to personal safety when working in an environmentally compromised area. Several additional links are embedded in this site.



# PROJECT FIRSTLINE: ESSENTIALS for Teaching Infection Control™



The Project Firstline program is a national training collaborative led by the Centers for Disease Control and Prevention (CDC) in partnership with the American Hospital Association and the Health Research & Educational Trust (HRET), an AHA 501(c)(3) nonprofit subsidiary. Project Firstline is a national collaborative led by the U.S. Centers for Disease Control and Prevention (CDC) to provide infection control training and education to frontline healthcare workers and public health personnel. AHA is proud to partner with Project Firstline, as supported through Cooperative Agreement CDC-RFA-CK20-2003. CDC is an agency within the Department of Health and Human Services (HHS). The contents of this document do not necessarily represent the policies of the CDC or HHS and should not be considered an endorsement by the Federal Government.