McKesson **UPrevent™ Infection Prevention** Program Resource Guide

You have the power to prevent infections

UPrevent™

McKESSON

Introduction

The COVID-19 pandemic has forced providers to take quick action to protect patients, residents and staff from infection exposure within facilities. It's also bringing a new focus on ways to strengthen infection control processes and better train staff to prepare for the future.

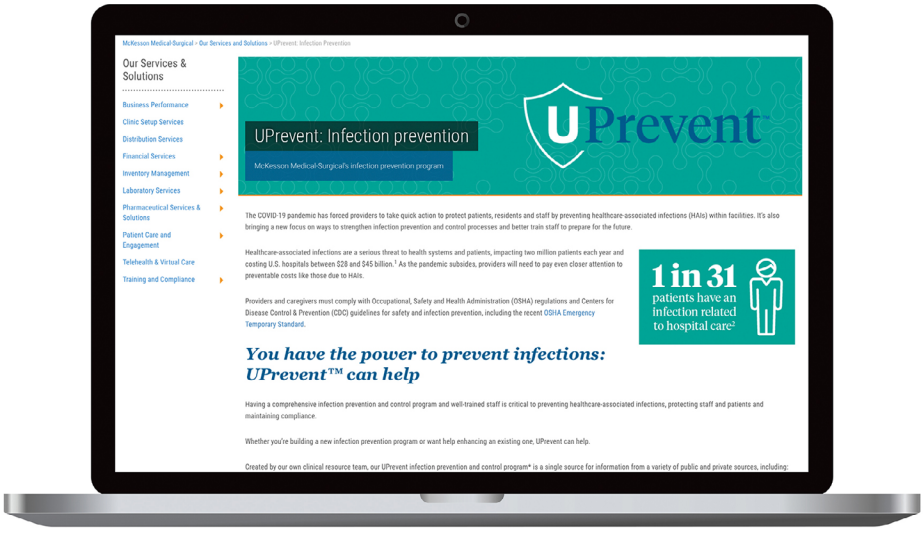
Infection prevention challenges will remain long beyond COVID-19. Healthcare associated infections (HAIs) are a serious threat to healthcare providers and patients, impacting two million patients each year and costing U.S. hospitals between $28 and $45 billion.[1] As the pandemic subsides, providers will need to pay even closer attention to preventable costs like those due to HAIs.

Providers and caregivers must comply with Occupational, Safety and Health Administration (OSHA) regulations and Centers for Disease Control & Prevention (CDC) guidelines for safety and infection prevention, including the recent **OSHA Emergency Temporary Standard**.

At McKesson Medical-Surgical, we understand that protecting patients, residents and employees from exposure to disease is a concern for all healthcare facilities. It takes a community of healthcare workers, as well as patients, to help prevent the spread. That's why we've developed this comprehensive guide to bring you the resources and products you need to help your facility and staff take infection prevention into their own hands.*

Additional resources available online

Visit **mms.mckesson.com/uprevent**, our dedicated infection prevention site, for resources to help you remain up-to-date on the latest recommendations from leading authorities.



*This guide is based primarily upon elements from OSHA's regulations and CDC guidelines and represents the minimum infection prevention expectations for safe care in patient care settings.

Guide reference

Healthcare associated infections (HAIs)

1 in 31
patients have an infection related to hospital care.[2]

HAIs are a growing problem for the healthcare industry and are a significant cause of illness and death in the U.S.[2] Having a comprehensive infection prevention program and well-trained staff is critical for your facility to protect staff and patients as well as maintain appropriate compliance.

You have the power to be an infection prevention steward and we are here to help. Call your McKesson Medical-Surgical Account Manager or visit **mms.mckesson.com/uprevent** for more details.

UPrevent is a single source for information from a variety of public and private sources, including:

- Centers for Disease Control and Prevention
- World Health Organization
- Association for Professionals in Infection Control and Epidemiology
- Occupational Safety and Health Administration
- Centers for Medicare and Medicaid Services
- Society of Gastroenterology Nurses and Associates
- U.S. Food and Drug Administration
- The Joint Commission
- Association of peri Operative Registered Nurses
- Manufacturers

Universal/standard precautions

Standard precautions are a set of infection control practices used to prevent transmission of diseases that can be acquired by contact with blood, body fluids, non-intact skin (including rashes) and mucous membranes.

What is the chain of infection?

The "chain of infection" is a common phrase used to describe the six main sources, or links, of infection:

1. ***Infectious agent:*** pathogens/germs

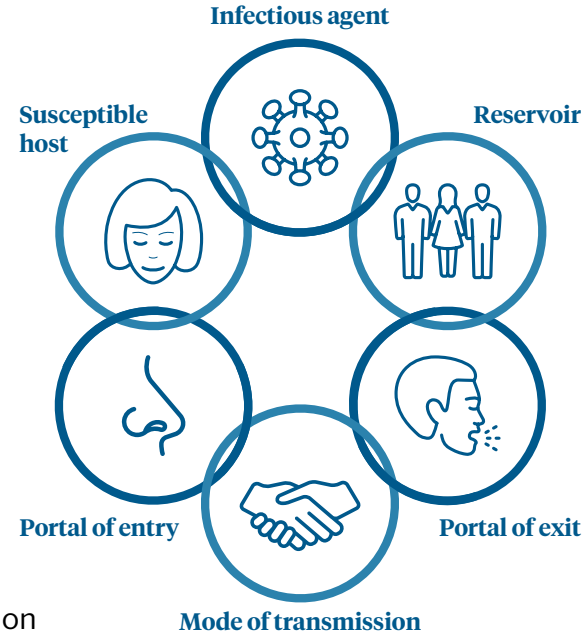
2. ***Reservoir:*** where the germs live & multiply

3. ***Portal of exit*:** how germs get out

4. ***Mode of transmission*:** how germs get around

5. ***Portal of entry:*** how germs get in

6. ***Susceptible host:*** the vulnerable recipient of germ transmission



Breaking just one of these links can help reduce the risk of infection. Covering a cough, disinfecting surfaces and social distancing are simple ways to do this, but hand hygiene is one of the most important steps in preventing infection.

Hand hygiene

Hand hygiene is key in reducing the transmission of infectious agents in the healthcare setting and is an essential element of standard precautions.

- Soap and water should be used when hands are visibly soiled with blood or bodily fluids, but in all other clinical situations, alcohol-based hand rub is preferred
- The CDC recommends washing hands with non-antimicrobial soap between the majority of patient contacts and washing with antimicrobial soap before and after performing invasive procedures or caring for patients at high risk.

Shop soaps and sanitizers

Hand washing can reduce the risk of respiratory infections by **16%**[3]

The CDC recommends **60-95% alcohol concentration** in hand rubs[4]

When washing hands, lathering should last for **at least 20 seconds**[5]

The CDC recommends hand rubs that contains at least **60% alcohol** to prevent the spread of germs.[6]

Personal protective equipment

COVID-19 changed the way providers think about personal protective equipment (PPE) estimation, usage and preparedness. Tools such as the **CDC's PPE calculator** have helped providers plan ahead for their inventory needs.

Gloves

Gloves reduce hand contamination by 70-80%, preventing cross-contamination and protecting patients and healthcare personnel from infection.[7]

- Exam gloves - Generally less tight-fitting for easy donning and removal, come in fewer sizes and can be worn on either hand
- Surgical gloves - Typically, surgical gloves are sterile, packaged in pairs and "handed" with left and right gloves in each pair

Shop gloves

Glove demand continues to climb YOY as a result of COVID-19 and grew **250%** from November 2020 to March 2021[8]

Apparel

Surgical and isolation, or procedure, gowns are used to protect the healthcare workers' arms and exposed body areas and prevent contamination of clothing with blood, body fluids and other potentially infectious material. If fluid penetration is likely, a fluid resistant gown should be used.

- Personal protective gowns - Gowns are rated according to their AAMI level, which indicates how a gown performs against a series of barrier performance criteria and ranges from 1 to 4, with level 4 providing the highest barrier to fluids and microorganisms.

AAMI level 2 isolation or procedure gowns may be appropriate for minimally-invasive or in-office procedures where fluid impact is expected to be low. Level 3 gowns are used for a wide range of surgeries where the risk is moderate and level 4 gowns are best for high-fluid and lengthy procedures when the risk is higher. Most isolation gowns used in post-acute care fall into AAMI 1 or 2.

Shop gowns

Headwear

Medical face coverings fall into three groups: surgical masks, procedure masks (also known as isolation masks) and respirators.

Types of masks

- Procedure masks - Used for performing patient procedures or when patients are in isolation, to protect them from potential contaminants
- Surgical masks - Used inside the operating room or during other sterile procedure areas, these types of masks help protect the patient environment from contamination
- Respirators - Worn on the face or head and covering at least the nose and mouth, a respirator is used to reduce the wearer's risk of inhaling hazardous airborne particles including infectious agents, gases or vapors. The N95 respirator is most commonly used in healthcare settings.

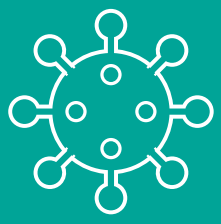
Industry-standard "ASTM" test methods are used to measure mask performance. To carry an "ASTM Rating," the National Institute for Occupational Safety and Health (NIOSH) requires that masks be tested for:

- Fluid resistance
- Flame resistance
- Particulate filtration
- Bacterial filtration
- Breathability

Shop masks

Protective eyewear should be selected in the context of other PPE use and regulatory requirements, and is used by healthcare workers to protect eyes from exposure of splashes, sprays, splatter and respiratory secretions. Safety glasses or goggles should be appropriately fitted to protect the side of the eye.

Shop eye protection



The CDC currently recommends **N95 respirators** for protection against COVID-19 in healthcare settings with patients that have suspected **SARS-CoV-2 infection.** Respirators are also recommended to be worn during **aerosol generating procedures** (e.g. intubation, bronchoscopy and suctioning).

Environmental cleaning and disinfection

Cleaning and disinfecting non-critical surfaces in patient care areas is an important component of infection prevention in healthcare facilities. Most disinfectants used in healthcare settings are EPA-registered as Hospital Grade.

- Cleaning: Removal of visible soil and other organic matter from objects and surfaces by scrubbing with a surfactant or detergent and water
- Disinfection: Process that eliminates many or all pathogenic microorganisms, except bacterial spores, on inanimate objects by liquid chemicals or wet pasteurization

Contact time – also called dwell or kill time – is the length of time a surface needs to remain wet with a disinfectant to achieve the claimed disinfection activity. Pay close attention to the instructions on the product label for correct usage.

Shop surface disinfectants

Reference **"List N,"** a tool from the Environmental Protection Agency (EPA), to understand which products meet the EPA's criteria for use against COVID-19.

Needles, syringes and sharps safety

The CDC estimates that each year 385,000 needlesticks and other sharps-related injuries are sustained by hospital-based healthcare personnel.[9] Healthcare professionals must carefully follow the manufacturer's instructions for use for single-use and disposable injection devices to prevent the potential transmission of bloodborne pathogens.

What are your chances of infections from a contaminated sharps injury?[10]

- Hepatitis B: 1 in 5 (if you're not vaccinated)
- Hepatitis C: 1 in 50
- HIV: 1 in 300

Principles of safe injection practices

Unsafe injection practices can happen in a number of different settings, including home care and infusion settings. Principles of safe injection practices include:

- Use proper hand hygiene immediately before preparing and administering medications
- Use aseptic technique in a clean area for injection preparation
- Use a new needle for each patient
- Disinfect the vial top before each use
- Use a new needle and a new syringe each time you enter a medication vial, even if the patient receives multiple doses
- Dedicate single-use medication vial, ampules and bags/bottles of IV solutions
- Provide each patient with their own administration tubing and connectors
- Dispose contaminated sharps in a marked sharps container in accordance with federal regulations

Shop needles and syringes

Cleaning, decontamination and sterilization

Procedures involving contact by a medical device or surgical instrument with a patient's sterile tissue or mucous membranes pose a risk for the introduction of pathogens that can lead to infection. Decontamination and sterilization are essential to avoid transmission of infection to patients from equipment and medical and surgical instruments.

- Low level disinfection - Kills most vegetative bacteria, some viruses and some fungi, but cannot be relied on to kill mycobacteria or bacterial spores. This is appropriate for stethoscopes, blood pressure and tourniquet cuffs, EKG leads, bedside equipment and environmental surfaces.
- Intermediate level disinfection - This procedure kills vegetative bacteria, most viruses and most fungi, but does not reliably kill bacterial spores. Appropriate for items such as stethoscopes, x-ray machines and bed side rails. Intermediate disinfection is the most commonly used disinfection method in the healthcare environment where employees and patients are at a greater risk for HAIs.
- High level disinfection - Completely eliminates all microorganisms except for small numbers of bacterial spores. Important for items such as surgical instruments.
- Instrument cleaning - Point of care cleaning that describes the process that eliminates many or all pathogenic microorganisms, except bacterial spores, on inanimate objects.
- Sterilization - A process that destroys or eliminates all forms of microbial life and is carried out in healthcare facilities by physical or chemical methods.

Shop decontamination products

You may want to clean more frequently or choose to **disinfect** (in addition to cleaning) in shared spaces if the space is a **high traffic area** or if certain conditions apply that can **increase the risk of COVID-19 infection.**

Surgical site infection prevention

Many factors contribute to increased patient risk in acquiring a surgical site infection (SSI), including improper skin/surgical site preparation, improper intraoperative temperature regulation, lack of blood glucose monitoring and pre-existing microorganism colonization.

Signs and symptoms of SSIs:

- Fever
- Redness, swelling and pain near the area
- Red streaks coming from the area
- Blood, fluid or pus draining from the area
- A foul odor coming from the surgery area

Preventing surgical site infections

- Screening - Research suggests the risk of SSIs increases up to nine times due to nasal colonization of Staphylococcus aureus, presenting a big challenge in surgical settings. More than 50% of healthy persons have Staphylococcus aureus living in or on their nasal passages, throats, hair or skin.[3] Screen patients for Staphylococcus aureus with nasal swab tests and decolonize carriers with an intranasal topical antimicrobial.

- Skin cleaning - About 80% of skin flora occurs on the outside layers of the skin.[11] Preparing patient's skin for surgical procedures helps prevent infection. Patients should clean skin with chlorhexidine gluconate (CHG) soap for at least three days before surgery.

- Antibiotic Prophylaxis – It is recommended that prophylactic antibiotics be administered at least 30 minutes, but no more than 60 minutes before the skin incision is made, and generally stopped within 24 hours after surgery.[12]

Shop SSI prevention

Prevent and manage respiratory illnesses

Infection prevention is even more critical during flu and respiratory seasons, and the 2020 respiratory season was unlike any other with COVID-19 impacting all areas of healthcare.

Prior to 2020, a typical respiratory season could see:

26 million diagnosed cases of flu[13]

2.1 million pediatric outpatient visits for RSV[14]

1.5 million visits to the ER to treat pneumonia[15]

According to the CDC, the U.S. flu season typically occurs in the fall and winter months and peaks between December and February. Other respiratory viruses circulating during flu season for both adults and children include rhinovirus (common cold) and respiratory syncytial virus (RSV) which is commonly found in young children producing severe respiratory illness. RSV is also a leading cause of death from respiratory illness in adult populations aged 65 or older.

- **Access resources and products** to help you build a comprehensive respiratory program
- **McKesson FluWise** offers products and solutions to help prevent, diagnose and treat influenza and influenza-related illnesses.

Shop vaccines and more

According to the CDC, **flu and COVID-19 vaccines** can be administered at the same time.[16]

Enhancing infection prevention

Programs that support your facilities' infection prevention goals and help educate staff

McKesson Readmissions Resource™

Clinical education paired with product recommendations to help your organization prevent, diagnose and treat conditions like sepsis, UTIs and CAUTIs.

Reduce readmissions

Antibiotic stewardship

A comprehensive solution that supports improved patient safety and helps conserve antibiotics in communities nationwide. Our experienced team will work with you to help make a positive impact in patient therapy.

See solutions

Educational webinars

Sign up for our monthly educational webinar series focused on key healthcare topics, many offering CE credits.

Sign up now

Infection prevention posters

Click to download

5 Critical Moments in IP - Physician Office

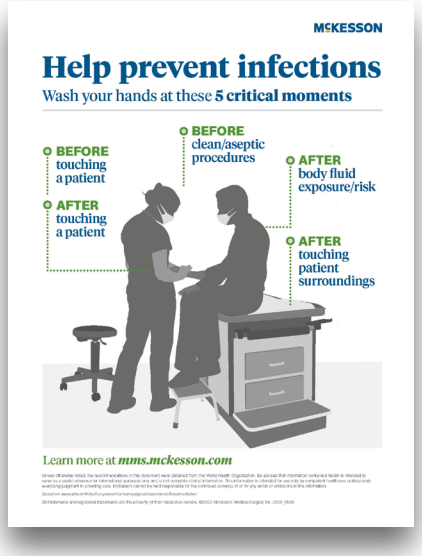
5 Critical Moments in IP - Extended Care

New Facility Protocols - Physician Office

New Facility Protocols - Extended Care

How to Hand Wash

Handwashing Steps



Resources used in the making of this guide:

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[4]https://www.cdc.gov/handwashing/show-me-the-science-hand-sanitizer.html

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[6]https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html

[7]https://www.cdc.gov/media/pressrel/fs021025.htm

[8]https://www.premierinc.com/newsroom/blog/premier-data-the-state-of-ppe-supply-one-year-in-to-covid-19

[9]https://www.cdc.gov/sharpssafety/index.html

[10]https://www.cdc.gov/sharpssafety/pdf/brochure.pdf

[11]Readmission rates, causes, and costs following total joint artroplasty in US medicare population. W. Murphy, P.Lane, B. Lin, T. Cheng, D. Terry, S. Murphy; Bozic KJ, Kurtz SM, Lau E, et al.

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[13]https://www.usnews.com/news/health-news/articles/2020-02-21/flu-season-thats-sickened-26-million-may-be-at-its-peak

[14]https://www.cdc.gov/rsv/research/us-surveillance.html

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Have additional questions?
Contact our Clinical Resource Team at
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2021-944911