

Background

Standard precautions aim to protect both health workers and patients by reducing the risk of transmission of microorganisms from both recognized and unrecognized sources.

They are the minimum standard of infection prevention and control (IPC) practices that should be used by **all** health-care workers, during the care of **all** patients, at **all** times, in **all** settings. When applied consistently, **standard precautions** can prevent the transmission of microorganisms between patients, health workers and the environment.

Key elements of standard precautions include:

- risk assessment
- hand hygiene
- respiratory hygiene and cough etiquette
- patient placement
- personal protective equipment
- aseptic technique
- safe injections and sharps injury prevention
- environmental cleaning
- handling of laundry and linen
- waste management
- decontamination and reprocessing of reusable patient care items and equipment.

For additional information, refer to WHO's [Minimum requirements for infection prevention and control programmes \(1\)](#).

Important advice for implementation

Health policy

- Promote a safety climate.
- Develop policies which facilitate the implementation of IPC practice.
- Provide resources for IPC programmes and implementation of *standard precautions*.

Risk assessment

- Train health workers on early recognition and assessment of risk of exposure to blood and body fluids – including secretions/excretions, splashes and/or sprays and contaminated surfaces.
- Train health workers on actions to reduce the risk of exposure to infectious agents.
- Perform a risk assessment within health care facilities related to the population they serve, level of care they provide (including common procedures) and available control measures and implement prevention measures and training based on this assessment.

Hand hygiene

- Provide alcohol-based handrub at the point of care.
- Provide handwashing facilities with clean running water and products (including soap and single-use paper or cloth towels).

Personal protective equipment (PPE)

- Train health workers on the rationale for and correct use of PPE, based on risk assessment.
- Provide adequate supplies of high-quality PPE that are continuously accessible at the point of care.

Respiratory hygiene and cough etiquette

- Post visual alerts at the entrance to health care facilities instructing people with respiratory symptoms to practise respiratory hygiene/cough etiquette.
- Place hand hygiene supplies, tissues, masks and no-touch waste bins in waiting areas.

Environment and environmental cleaning

- Provide a clean and hygienic environment, including water, sanitation and hygiene infrastructure and adequate ventilation (natural or mechanical).
- Provide efficient environmental cleaning and disinfectant products.
- Train cleaning staff on the principles and practices of environmental cleaning, including how to prepare and use cleaning and disinfection products.

Injection safety

- Follow safe injection practices according to policy that reflects the 7 steps for safe injections.
- Provide a policy and measures for the surveillance, prevention and management of sharps injuries.

Waste management

- Ensure that the health care facility follows a policy for minimizing, segregating, collecting, transporting, storing, treating and disposing of waste.

Decontamination and reprocessing of reusable medical equipment/devices

- Make a dedicated space available for performing decontamination and reprocessing of reusable medical devices.

Key elements at a glance

Risk assessment

Health workers should:

- assess the risk of exposure to blood and body fluids, secretions/excretions, splashes and/or sprays or contaminated surfaces before any health care activity (2), and make this a routine;
- select the appropriate actions to reduce the risk of exposure to infectious agents (3);
- ask themselves prior to any patient interaction:
 - Do I need protection for what I am about to do because there is a risk of exposure to blood and body fluids, secretions, excretions, splashes and/or sprays (3,6)?
 - Do I need protection for what I am about to do because the patient has symptoms of undiagnosed infection (e.g. fever, cough, diarrhoea)?
 - Do I need protection for what I am about to do because the patient has symptoms of an undiagnosed infection (e.g. fever, cough, diarrhoea), requiring Transmission-based Precautions?
 - Do I need protection for what I am about to do because the patient has a known infection, requiring **transmission-based precautions**?



Hand hygiene

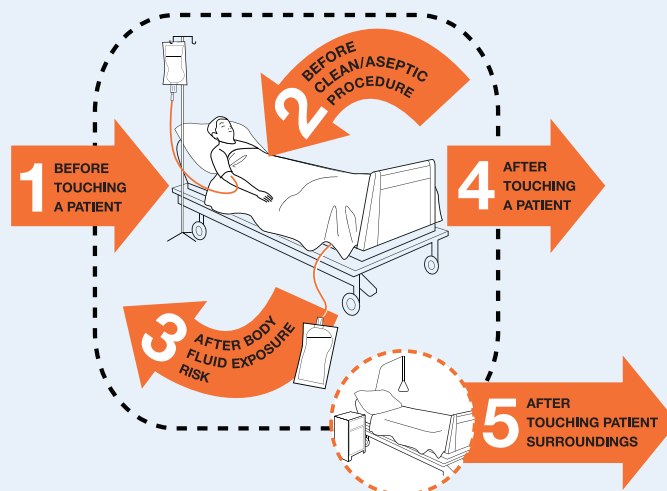
Health workers should perform hand hygiene the right way and at the right time, as described below. It is also important to take care of the hands by regularly using a protective hand cream or lotion, at least daily.



Summary technique

- If available, perform handrubbing with an alcohol-based handrub product as the preferred method for hand hygiene in health care, if hands are not visibly soiled (2,4,5). Apply enough alcohol-based handrub product to cover **all areas** of the hands; rub hands until dry (20–30 seconds).
- Perform handwashing with soap and water if hands are visibly soiled. Wet hands and apply soap; rub all surfaces (40–60 seconds); rinse hands and dry thoroughly with a single-use towel; use the towel to turn off the faucet/tap (2,4,5).

Summary indications (5 Moments for hand hygiene)



Source: WHO (4).

Respiratory hygiene and cough etiquette

- Health workers should apply source-control measures to individuals with respiratory symptoms (6), including:
 - asking patients to wear a mask or use a tissue to cover their cough;
 - placing acute respiratory symptomatic patients at least 1 metre (3 feet) away from others in common waiting areas.



Patient placement

- A single room should be used for a patient who poses a risk of transmission to others (for example, if they contaminate the environment or have symptoms of a transmissible infection).



PPE

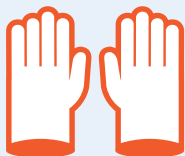
Health workers should:

- select PPE, based on risk assessment (3,6,7);
- remove and discard PPE when leaving the patient's room and perform hand hygiene;
- discard and replace PPE if it becomes damaged, soiled or wet.

Gloves

Health workers should:

- wear gloves during activities that may involve exposure to blood and other body fluids, for contact precautions and in outbreak situations (3,6);
- remove gloves after caring for a patient – the same pair of gloves should not be worn for the care of more than one patient (8);
- change gloves between tasks and procedures if moving from a contaminated body site to another body site on the same patient;
- remember that wearing gloves is **not** a substitute for hand hygiene (5,8);
- wear sterile gloves for aseptic procedures, such as surgery or catheter insertion;
- not reuse gloves after reprocessing or decontamination, as this is not recommended.



Gown

Health workers should:

- wear a gown to protect skin and prevent soiling of clothing during activities that are likely to generate splashes or sprays of blood, body fluids, secretions or excretions – note: if the gown is not fluid-resistant, and if splashing or spraying is anticipated, a waterproof apron should be worn over the gown (3);
- remove the soiled gown as soon as possible and perform hand hygiene.



Medical masks

Health workers should:

- wear a medical mask (also known as a surgical or procedure mask) to protect mucous membranes of the nose and mouth against splashes or sprays of body fluids, respiratory secretions and chemicals (3);
- wear a medical mask to protect the patient during aseptic procedures (e.g. during surgery or lumbar punctures).



Respirators

Health workers should:

- wear a respirator (e.g. N95, FFP2, etc.) for protection from inhalation of airborne particles (tiny particles that float in the air) and/or when performing aerosol-generating procedures¹(3);
- do a fit test before using a respirator for the first time, and perform a seal check every time a respirator is used (3,6);
- replace the mask or respirator if it is damaged, soiled or wet, or if breathing becomes difficult.



Eye protection

Health workers should:

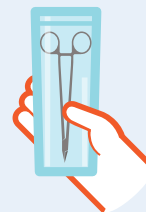
- wear either eye protection (eye visor, goggles) or a face shield to protect mucous membranes of the eyes during activities that are likely to generate splashes or sprays of blood, body fluids, secretions and excretions (3,6);
- ensure that goggles fit over and around the eyes or personal prescription lenses;
- ensure that a face shield covers the forehead, extends below the chin, and wraps around the side of the face – note that face shields are more comfortable to wear with eyeglasses.



Aseptic technique

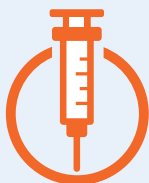
Health workers should:

- use sterile items and equipment for all aseptic procedures;
- use aseptic technique for insertion and maintenance of all invasive devices and aseptic/clean clinical procedures for surgical procedures, wound dressing and similar, to prevent infections.



1. Current WHO list of aerosol-generating procedures: tracheal intubation, non-invasive ventilation (e.g., BiLevel positive airway pressure, continuous positive airway pressure), tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation, bronchoscopy, sputum induction by using nebulized hypertonic saline, dentistry and autopsy procedures.

Safe injections and sharps injury prevention



Health workers should:

- prepare injections in a clean workspace, where there is low risk of contamination from blood, body fluid, splashes or sprays (9-12);
- perform hand hygiene prior to preparing the medication and touching the patient;
- use a sterile, safety-engineered syringe;²
- use a sterile medication vial and diluent;
- always use a sterile syringe and needle to withdraw and reconstitute medications, and never leave a needle in the septum of a vial;
- avoid use of multi-dose vials or, if used, dedicate the vial for single-patient use;
- label the multi-dose vial with the date opened, and discard according to the manufacturer's instructions, when sterility is compromised or after 28 days (12,13);
- clean the patient's skin with soap and water or disinfect with 60–70% alcohol prior to the procedure;
- provide a puncture-resistant sharps container for sharps disposal at the point of care;
- not re-cap, bend, break, manipulate or manually remove the needle from the syringe;
- discard the sharps container when it is three quarters full, seal it and store it in a secure area.

Environmental cleaning

Health workers should:

- clean **and** disinfect patient care areas at least once a day, paying particular attention to frequently touched surfaces (14,15);
- deal with spills of blood and body fluid/ substance as soon as possible, in accordance with local protocols.



Appropriate handling and transport of linen



Health workers should:

- handle soiled linen and waste carefully (with minimal manipulation or agitation) to prevent personal contamination and transfer to other patients (5,14,15);
- remove heavily soiled material (e.g. faeces) from linen, while wearing appropriate PPE, before placing it in the laundry bag;
- store clean linen in a manner that protects it from environmental contaminants.

Waste management

Health workers should:

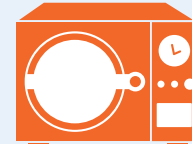
- treat waste contaminated with blood, body fluids, secretions and excretions as hazardous infectious waste, in accordance with local regulations (16);
- treat human tissue and laboratory waste that is directly associated with specimen processing as hazardous infectious waste;
- minimize the amount of waste produced by the health-care facility.



Decontamination and reprocessing of reusable patient care items and equipment

Health workers should:

- handle equipment soiled with blood, body fluids, secretions and excretions in a manner that prevents skin and mucous membrane exposure, contamination of clothing and transfer of pathogens to other patients, or the environment (17,18);
- clean and disinfect (or sterilize, depending on the type and use of patient care equipment) reusable equipment before use with another patients (4,17,18);
- discard single-use devices after each use (17,18);
- clean and disinfect or sterilize reusable equipment/ devices according to the manufacturer's instructions, national or international standards, using efficient methods and based on intended use.



2. Safety-engineered devices include syringes with reuse prevention (RUP) features and syringes with sharps injury protection (SIP) features. WHO recommends RUP syringes for all injections. RUP syringes with SIP features are highly recommended wherever possible (13).

References and useful resources

1. Minimum requirements for infection prevention and control programmes. Geneva: World Health Organization; 2019 (<https://apps.who.int/iris/handle/10665/330080>).
2. WHO guidelines on hand hygiene in health care. Geneva: World Health Organization; 2009 (<https://apps.who.int/iris/handle/10665/44102>).
3. Standard precautions: the role of personal protective equipment. In: Infection Prevention and Control [online course series]. Geneva: World Health Organization; 2021 (<https://openwho.org/courses/IPC-SP-PPE-EN>).
4. Hand hygiene: why, how & when? Geneva: World Health Organization; 2009 (https://cdn.who.int/media/docs/default-source/documents/health-topics/hand-hygiene-why-how-and-when-brochure.pdf?sfvrsn=9b52e145_2&download=true).
5. Standard precautions: hand hygiene. In: Infection Prevention and Control [online course series]. Geneva: World Health Organization; 2021 (<https://openwho.org/courses/IPC-HH-en>).
6. Infection prevention and control of epidemic- and pandemic-prone acute respiratory infections in health care. Geneva: World Health Organization; 2014 (<https://apps.who.int/iris/handle/10665/112656>).
7. Introduction to infection prevention and control (IPC). In: Infection Prevention and Control [online course series]. Geneva: World Health Organization; 2021 (<https://openwho.org/courses/IPC-INTRO-EN>).
8. [Glove use information leaflet](https://www.who.int/publications/m/item/glove-use-information-leaflet-(revised-august-2009)). Geneva: World Health Organization; 2009 ([https://www.who.int/publications/m/item/glove-use-information-leaflet-\(revised-august-2009\)](https://www.who.int/publications/m/item/glove-use-information-leaflet-(revised-august-2009))).
9. Standard precautions: injection safety and needle-stick injury management. In: Infection Prevention and Control [online course series]. Geneva: World Health Organization; 2021 (<https://openwho.org/courses/IPC-IS-EN>).
10. Injection Safety. In: World Health Organization [website]. Geneva: World Health Organization; 2022 (<https://www.who.int/teams/integrated-health-services/infection-prevention-control/injection-safety>).
11. Injection providers' guide for safe injections. Geneva: World Health Organization; 2015 ([https://cdn.who.int/media/docs/default-source/integrated-health-services-\(ihs\)/injection-safety/is_providers-guide.pdf?sfvrsn=1eac2c29_5](https://cdn.who.int/media/docs/default-source/integrated-health-services-(ihs)/injection-safety/is_providers-guide.pdf?sfvrsn=1eac2c29_5)).
12. WHO Policy Statement: Multi-dose Vial Policy (MDVP). Handling of multi-dose vaccine vials after opening. Geneva: World Health Organization; 2014 (<https://apps.who.int/iris/handle/10665/135972>).
13. FAQs regarding safe practices for medical injections. In: Injection safety [website]. Atlanta, GA: Centers for Disease Control and Prevention; 2019 (https://www.cdc.gov/injectionsafety/providers/provider_faqs_multivials.html).
14. Standard precautions: environmental cleaning and disinfection. In: Infection Prevention and Control [online course series]. Geneva: World Health Organization; 2021 (<https://openwho.org/courses/IPC-EC-EN>).
15. CDC, ICAN. Best practices for environmental cleaning in healthcare facilities in resource-limited settings. Atlanta, GA: Centers for Disease Control and Prevention; 2019 (<https://www.cdc.gov/hai/pdfs/resource-limited/environmental-cleaning-RLS-H.pdf>).
16. Standard precautions: waste management. In: Infection Prevention and Control [online course series]. Geneva: World Health Organization; 2020 ([Infection Prevention and Control \(openwho.org\)](https://openwho.org/courses/IPC-DECON-EN)).
17. Decontamination and reprocessing of medical devices for health-care facilities. Geneva: World Health Organization; 2016 (<https://www.who.int/infection-prevention/publications/decontamination/en/>).
18. Decontamination and sterilization of medical devices. In: Infection Prevention and Control [online course series]. Geneva: World Health Organization; 2020 (<https://openwho.org/courses/IPC-DECON-EN>).