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# Hand Hygiene



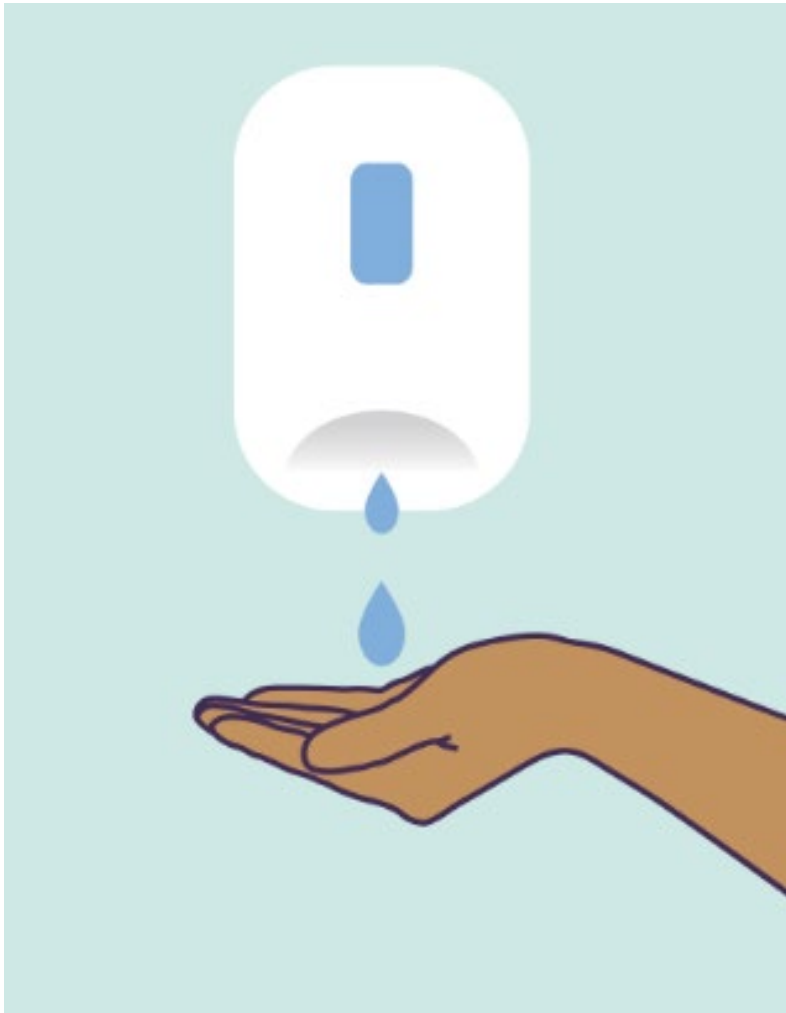
# Infection Prevention Strategies: Basics

Many healthcare-associated infections (HAI) may be prevented by implementing simple actions that require minimal resources, such as hand hygiene, environmental and equipment cleaning, and isolation precautions.

The objectives of this presentation are to:

- Describe the importance of hand hygiene,
- Describe the five steps of hand contamination,
- Discuss hand washing vs alcohol-based hand rub (ABHR),
- List indications for hand hygiene,
- Describe the correct hand hygiene technique, and
- Discuss glove use and hand hygiene.

# Infection Prevention Strategies: Basics

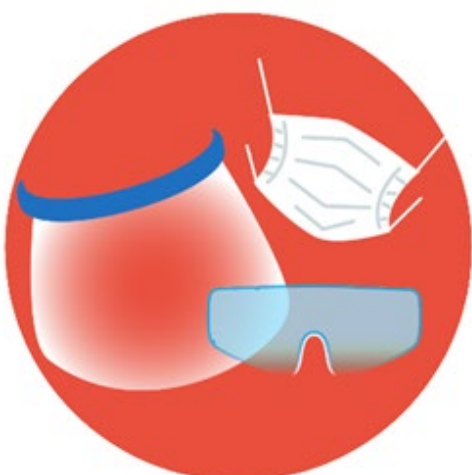


**Hand Hygiene**

**Cleaning and Disinfection**



**Personal Protective Equipment and Precautions**



# Hand Hygiene

There are a few ways to perform hand hygiene.

- One way is **handwashing using plain soap and water.**
- Another way is **handwashing using an antiseptic soap and water.** This is called an antiseptic hand wash.
- The third way is **rubbing hands with an alcohol-based hand rub or ABHR.**

# Hand Hygiene

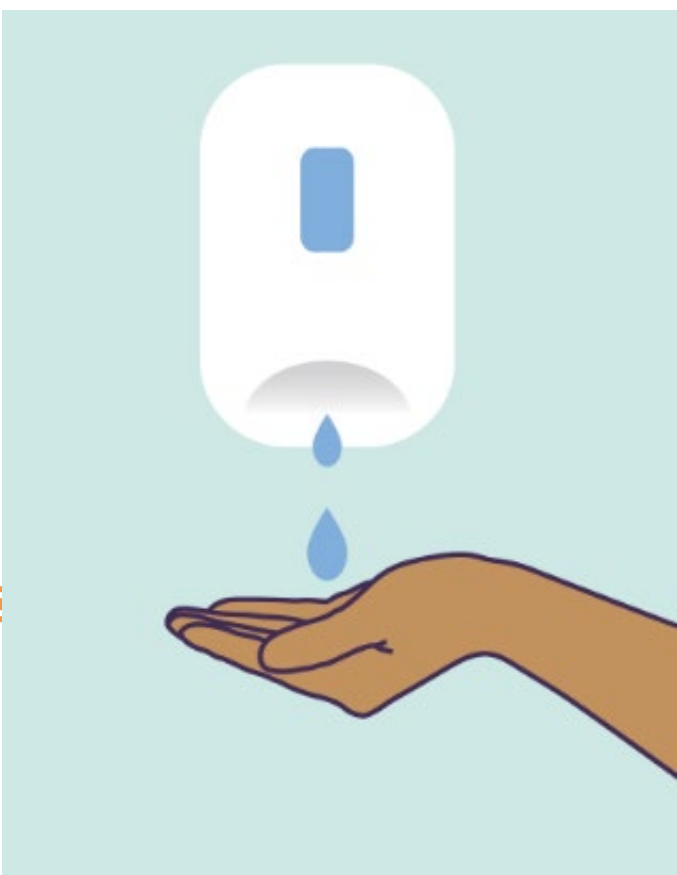
## **Handwashing:**

Washing hands with plain soap and water



## **Antiseptic hand wash:**

Washing hands with water and soap containing an antiseptic agent



## **Alcohol Based Hand Rub (ABHR):**

Rubbing hands with an alcohol-containing agent

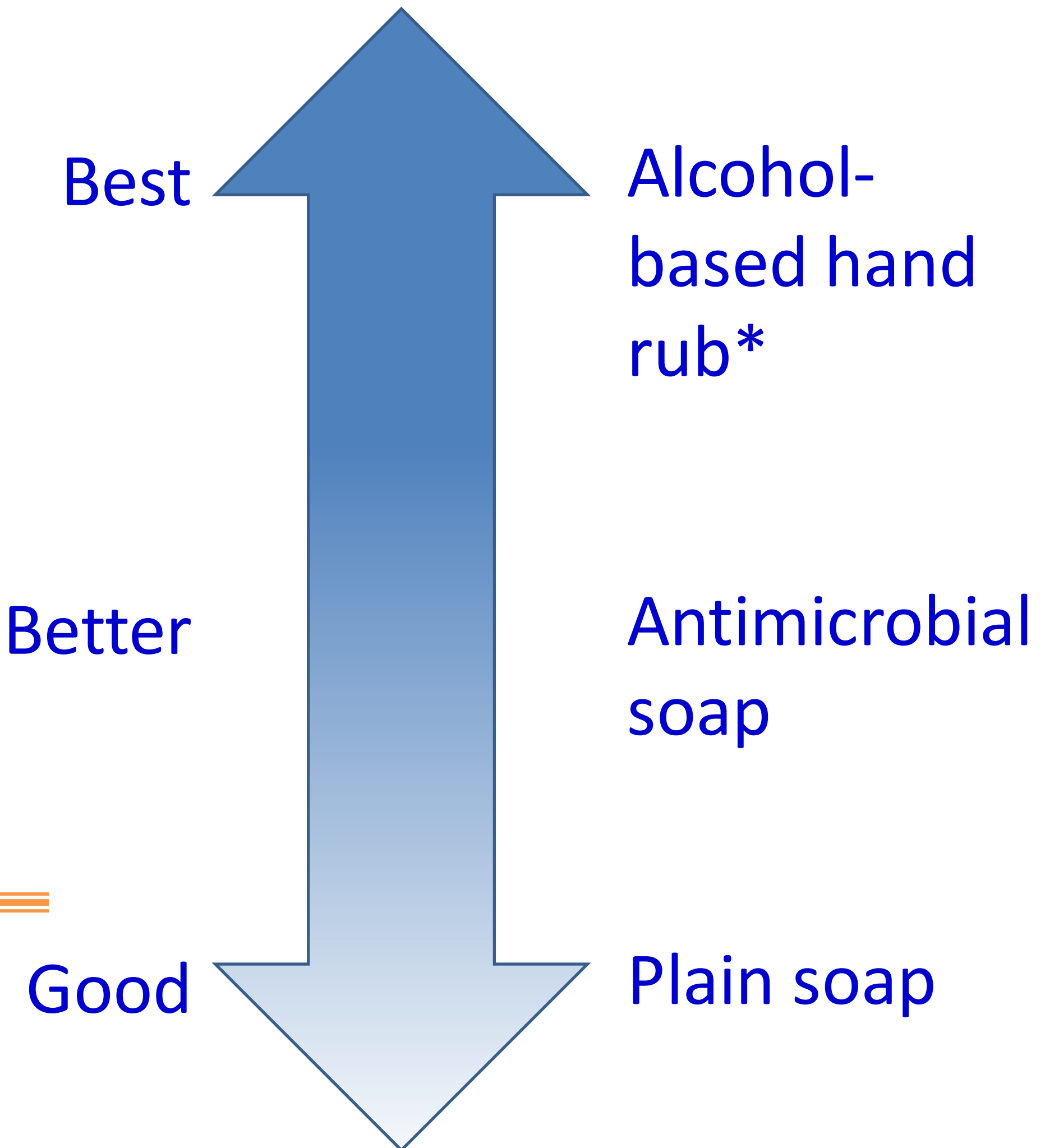
# Hand Hygiene Product Efficacy

- As this picture shows, **the best method of hand hygiene is to use an ABHR.**
- Use ABHR every time there is an indication for hand hygiene, unless your hands are visibly soiled.
- **According to the Centers for Disease Control and Prevention (CDC), alcohol-based solutions are more effective** than washing hands with plain soap and water. Alcohol-based solutions reduce bacterial counts on the hands more than antimicrobial soaps or detergents.
- **When you take care of a patient with spore-forming organisms, such as *C. difficile*, wash your hands with plain or antimicrobial soap and water.**

# Hand Hygiene Product Efficacy

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\*less effective in presence of organic material

# Transmission Can Occur via Healthcare Worker Hands

Transmission is a way germs (such as viruses, bacteria, or other microbes) are moved from a person or object to another person.

Germs don't move themselves.

Germs depend on people and the environment, including medical equipment, to move in healthcare settings.

**Healthcare worker hands are the most common way that germs are spread.**

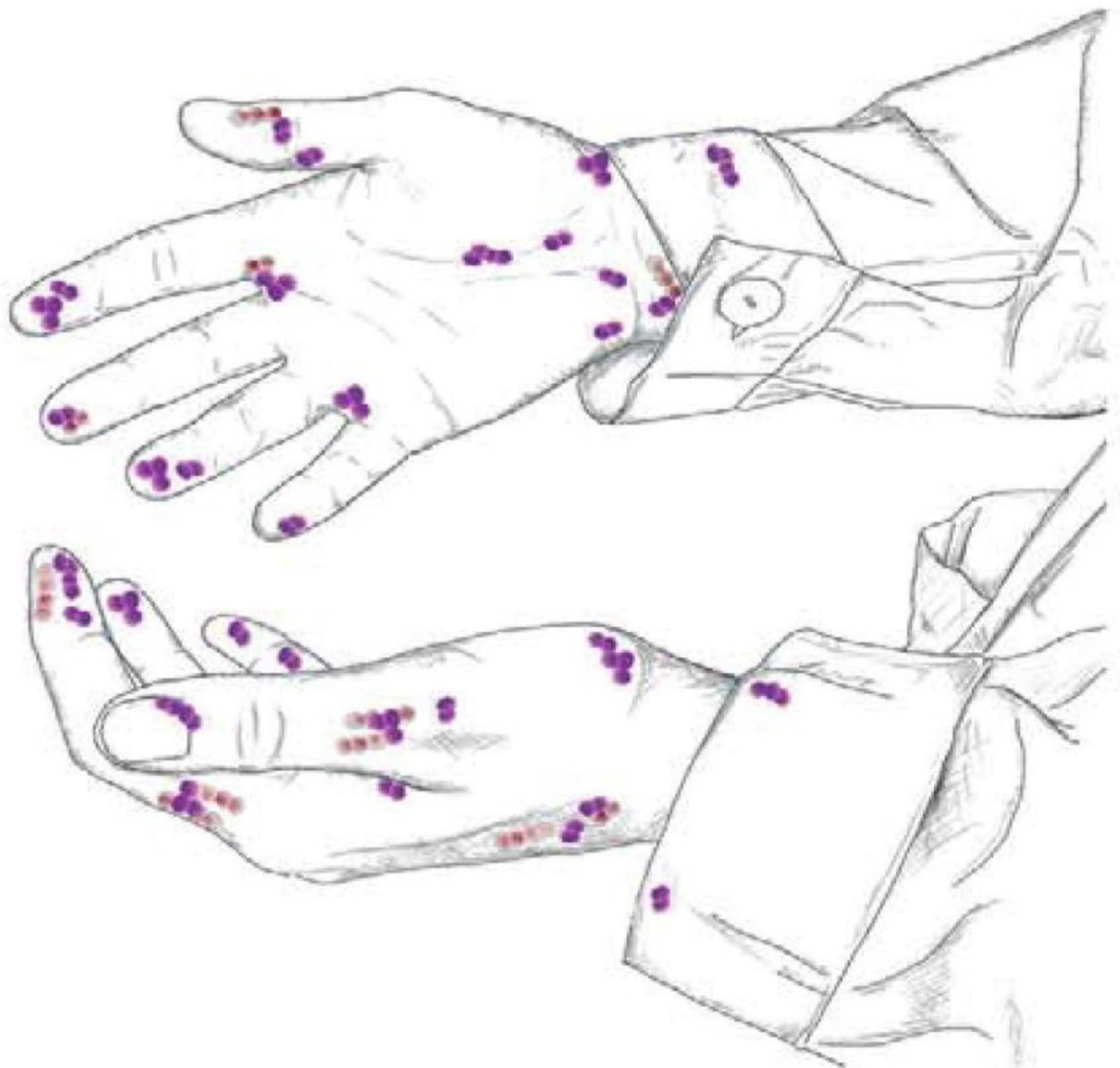
Hand transmission from one patient to another requires the following five steps.



# Transmission Can Occur via Healthcare Worker Hands

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# Step 1: Germs on Patient Skin and Environment

- Germs are present on patients' skin. Nearly 1 million dead skin flakes containing viable germs are shed daily from normal skin to a patient's immediate surroundings, such as the bed linen and furniture. These and other objects in the environment become contaminated by patient germs.
- Surrounding patient surfaces may be contaminated by a patient's own germs or by other people's germs and by inanimate objects.

# Step 1: Germs on Patient Skin and Environment

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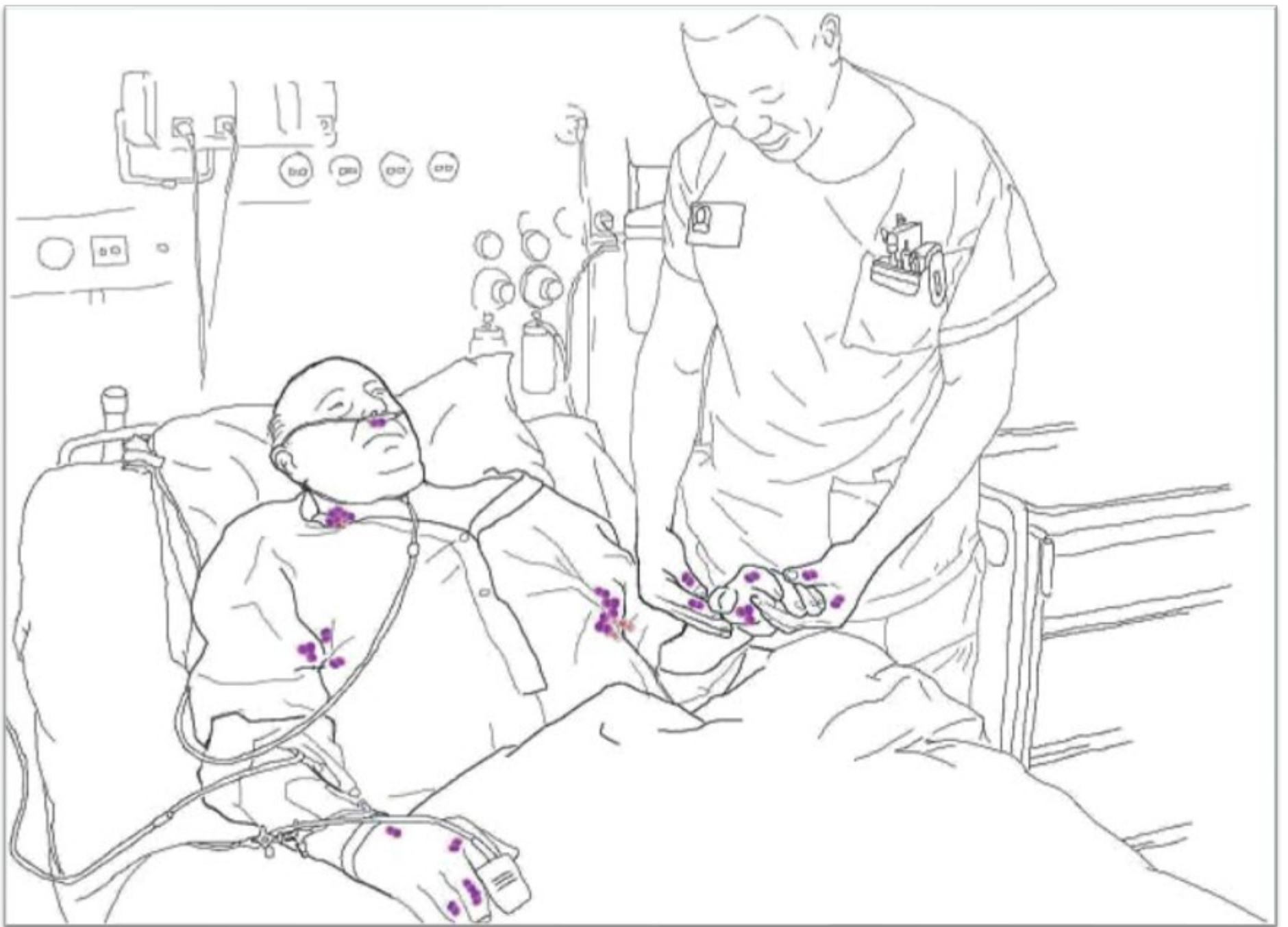
## Step 2: Healthcare Worker Hand Contamination

- By direct and indirect contact, patient germs contaminate healthcare worker hands.
- Healthcare worker hands become contaminated by touching germs present on patients, medical equipment, and high touch surfaces. Healthcare workers carry the germs on their hands and can spread germs when proper hand hygiene is not performed.

# Step 2: Healthcare Worker Hand Contamination

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By direct and indirect contact, patient germs contaminate healthcare worker hands.



## Step 3: Germs Survive and Multiply on Healthcare Worker Hands

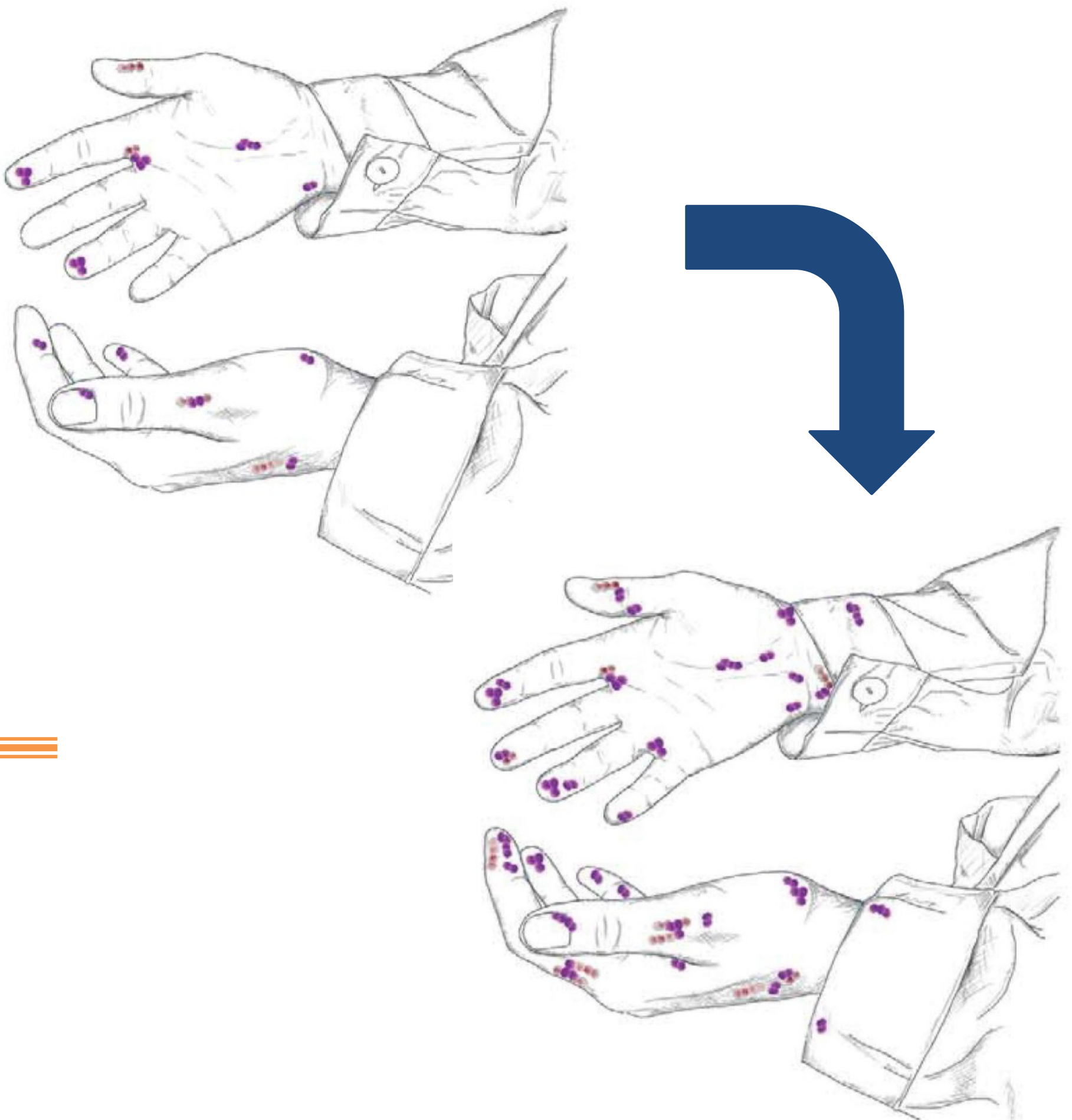


- When proper hand hygiene is not performed after contact with patients or their environment, germs can survive and increase in number on healthcare worker hands.
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# Step 3: Germs Survive and Multiply on Healthcare Worker Hands

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# Step 4: Hands Remain Contaminated if Hand Hygiene is Missed or Poorly Performed

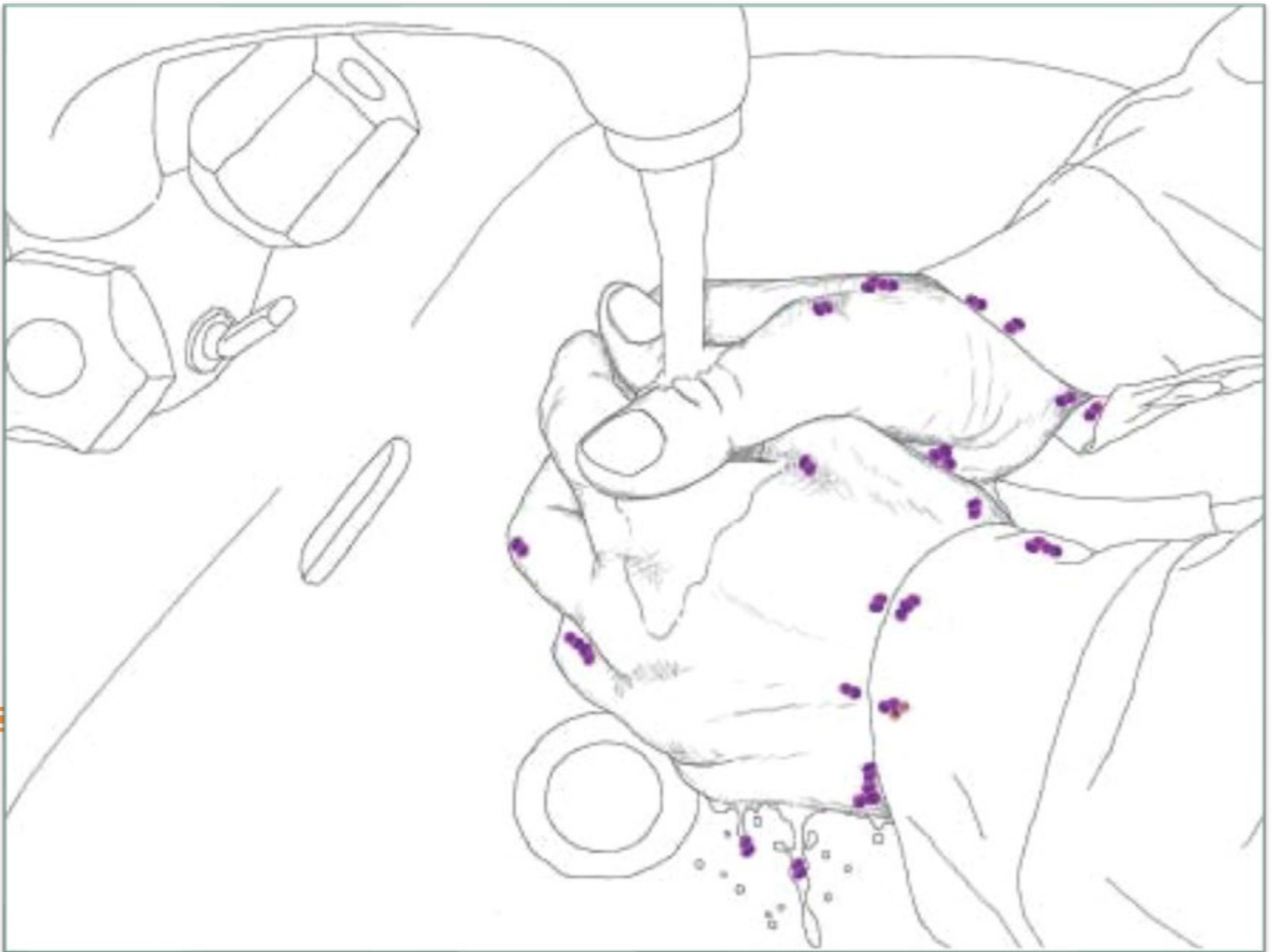
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- When hand hygiene opportunities are missed or when hand hygiene is performed poorly, hands remain contaminated with germs.
  - **Poor hand hygiene** occurs when an insufficient amount of product is used or when there is an insufficient duration of hand hygiene action.
  - Transient microorganisms are still recovered on hands following handwashing with soap and water, whereas **handrubbing with an alcohol-based solution has been proven to be significantly more effective.**
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# Step 4: Hands Remain Contaminated if Hand Hygiene is Missed or Poorly Performed



# Step 5: Transmission from One Patient to Another via Healthcare Worker Hands

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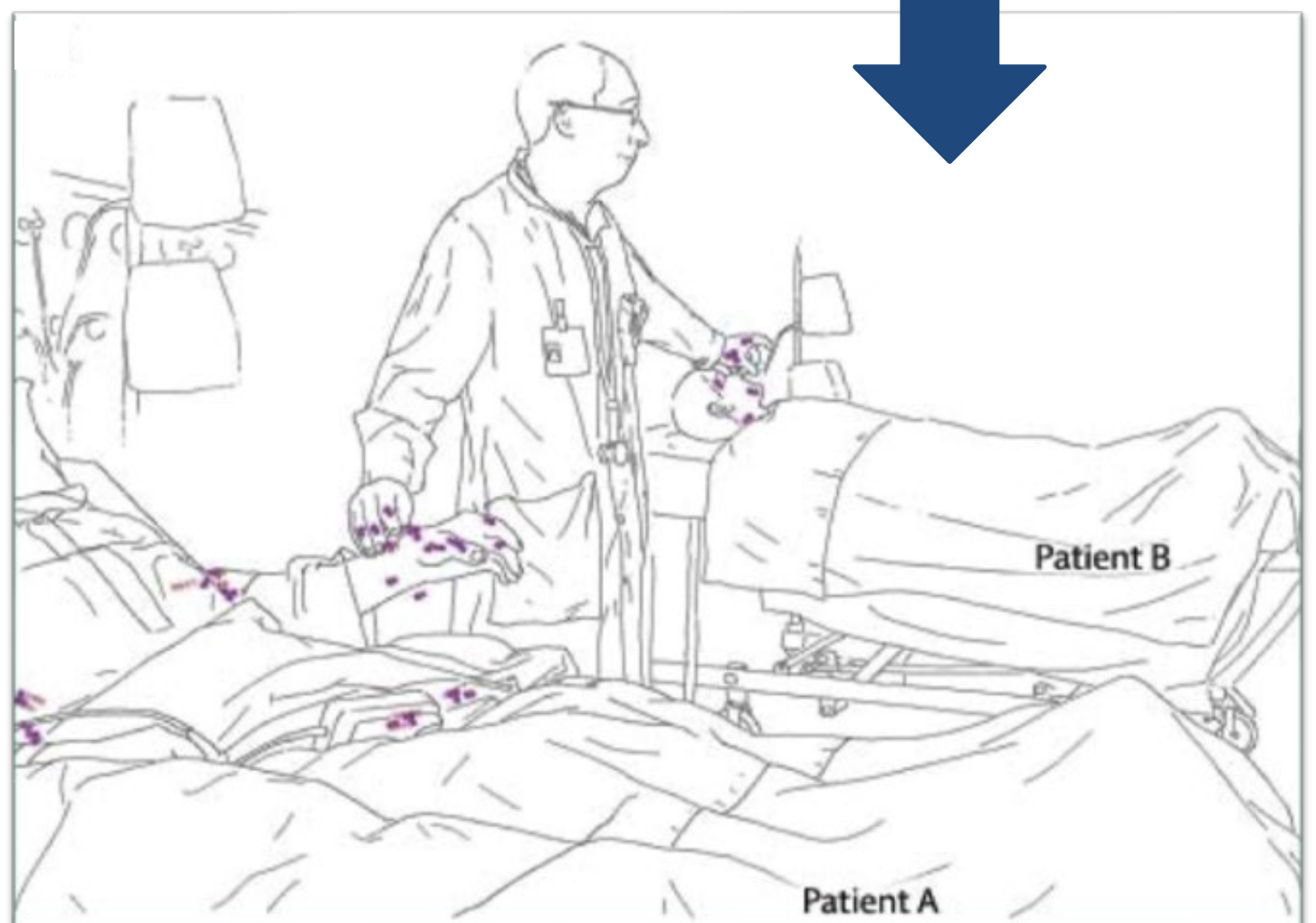
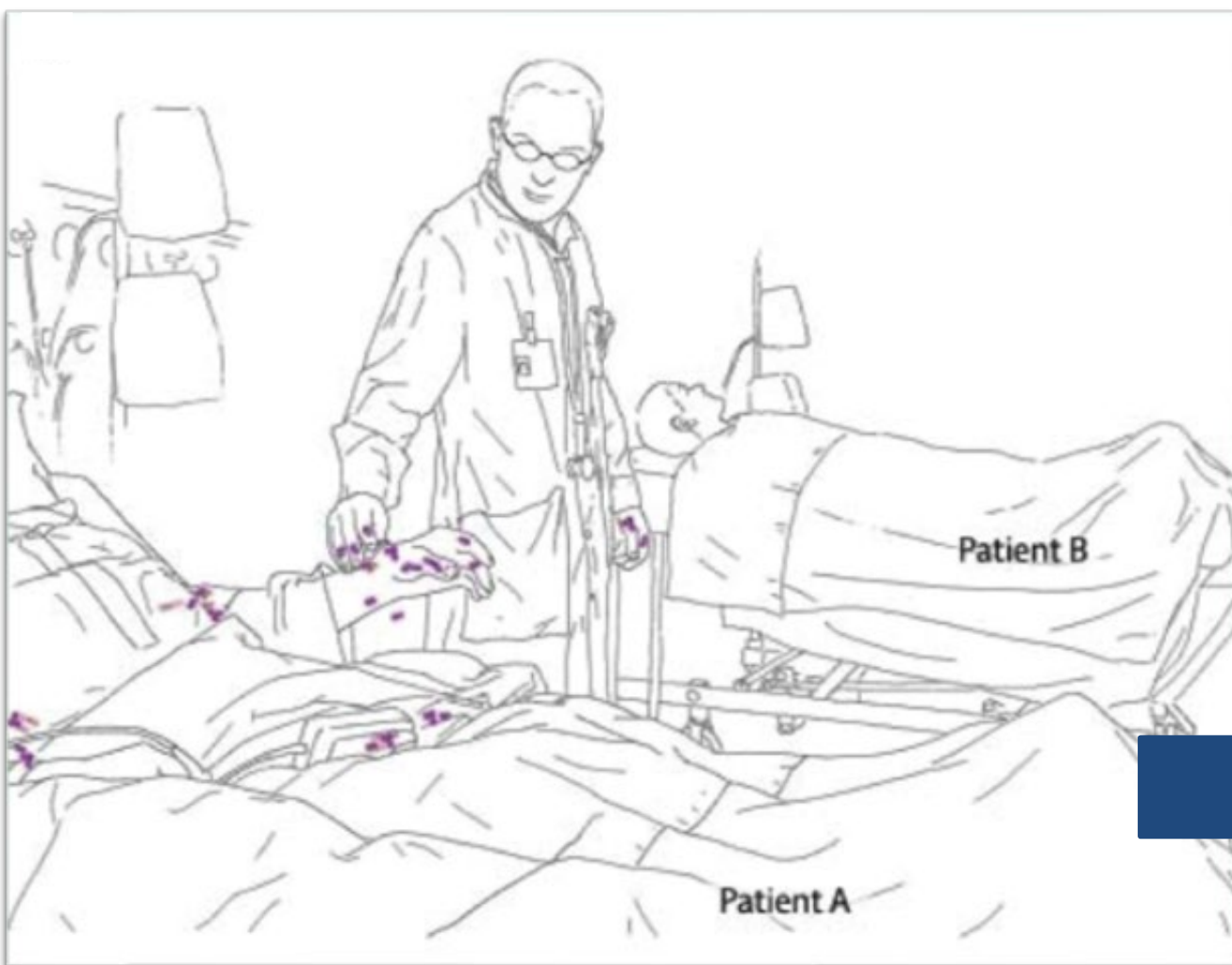
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- Transmission occurs when healthcare workers with contaminated hands come in direct contact with another patient or with an object that may come into direct contact with a patient.
  - Touching invasive devices (for example, urinary catheters, IV lines, or respiratory tubes) with contaminated hands may cause infections.
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# Step 5: Transmission from One Patient to Another

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# My 5 Moments for Hand Hygiene

- **Indications for performing hand hygiene:**

- BEFORE patient contact

- BEFORE performing clean or aseptic tasks; BETWEEN moving from a dirty to a clean site

- AFTER contact with blood, body fluids, mucous membranes, or non-intact skin/wounds

- AFTER patient contact

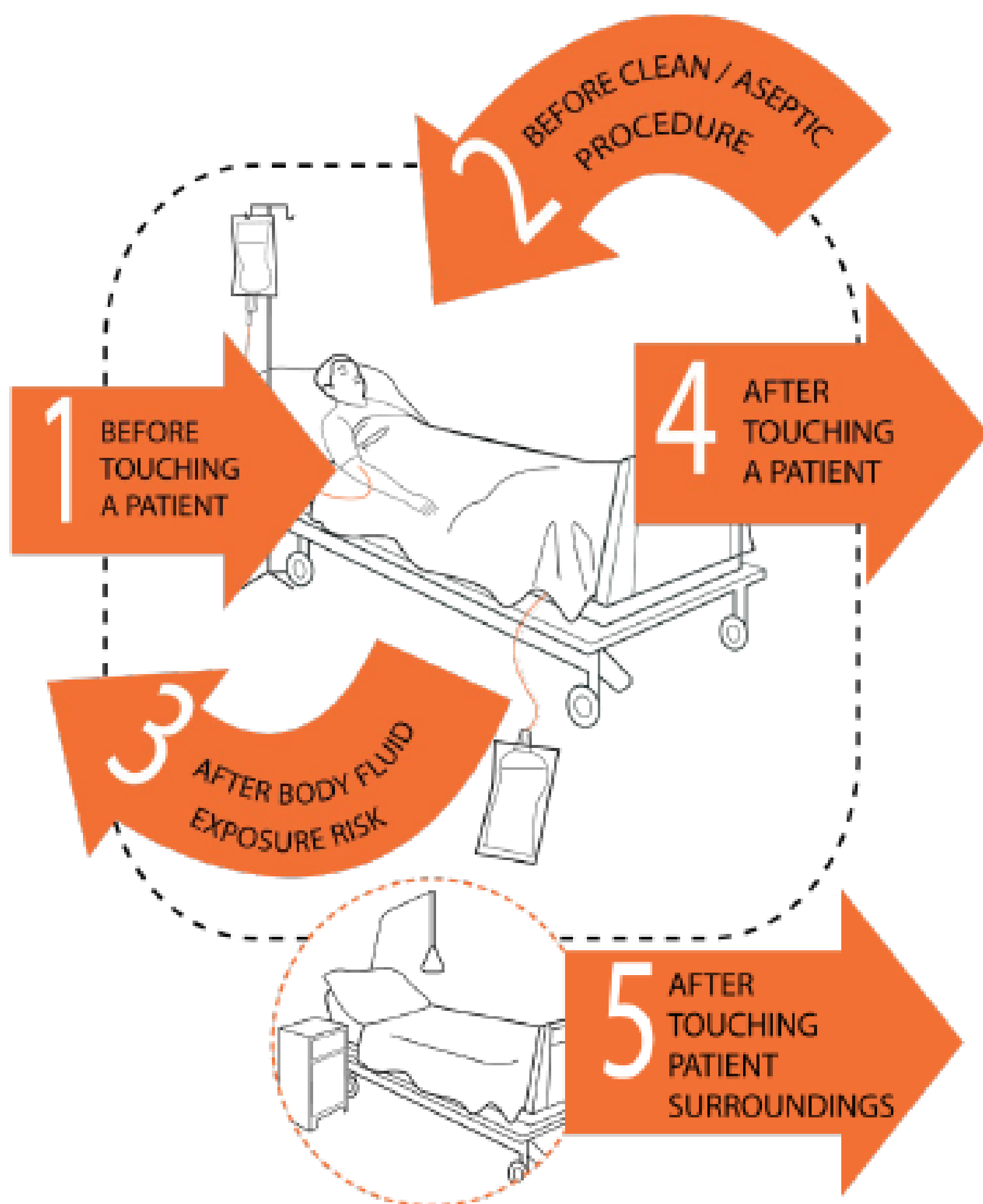
- AFTER touching the care environment

- **When using personal protective equipment (PPE), hand hygiene should be performed:**

- Before donning PPE and after removal of PPE

- Gloves are NOT a substitute for performing hand hygiene.

# My 5 Moments for Hand Hygiene



# Perform Hand Hygiene Before Touching a Patient

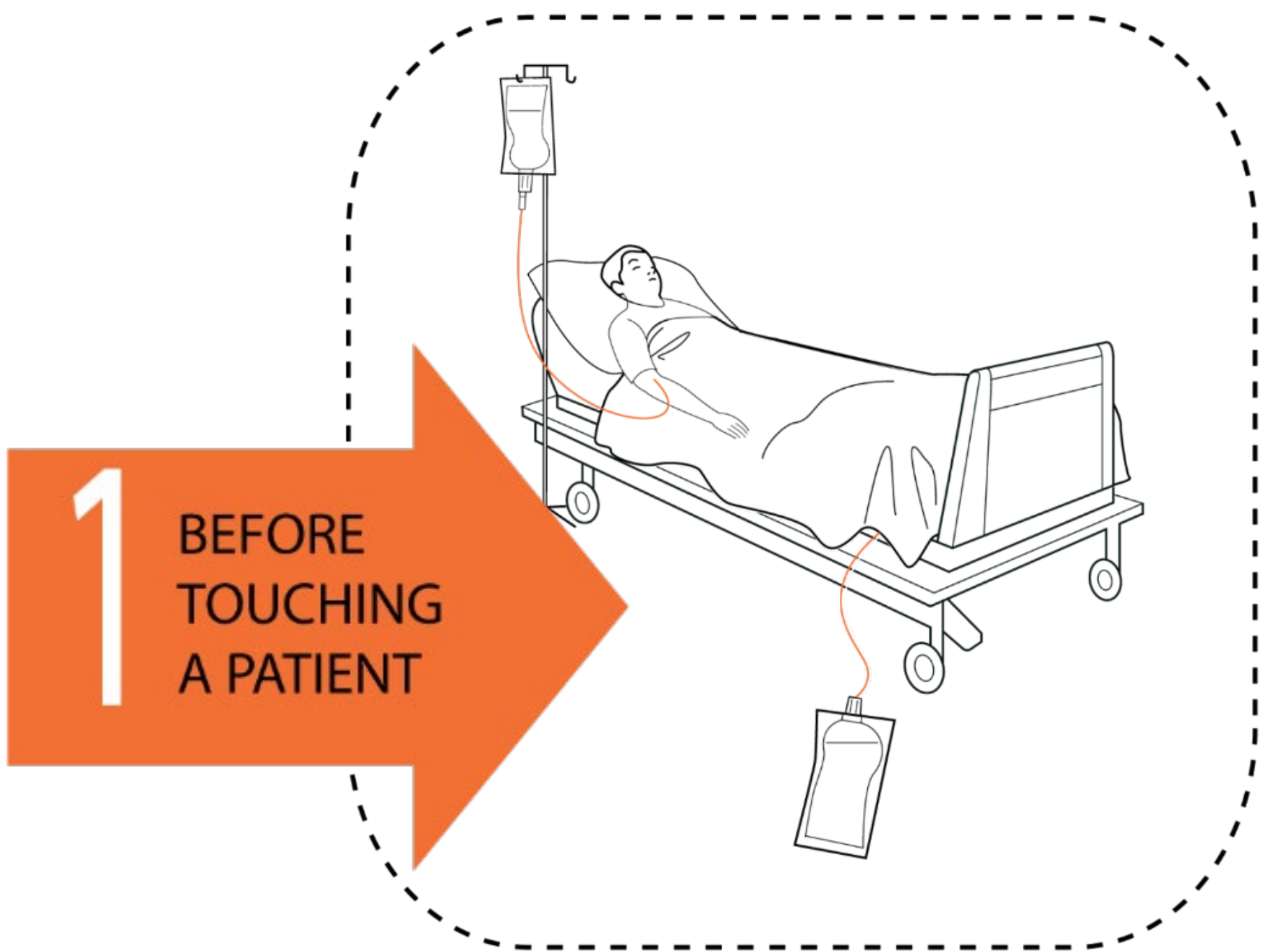
- Perform hand hygiene before touching a patient. Clean your hands before touching a patient to protect them against harmful germs carried on your hands.
- Examples of direct contact include:
  - shaking hands
  - stroking a child's forehead
  - helping a patient move around/get washed
  - applying an oxygen mask
  - giving physiotherapy
  - taking pulse, blood pressure, chest auscultation, or abdominal palpation
  - recording ECG



# Perform Hand Hygiene Before Touching a Patient

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Clean your hands before touching a patient to protect them against harmful germs carried on your hands.

# Perform Hand Hygiene Before Clean / Aseptic Procedures

- Clean your hands before accessing critical sites with infectious risk for the patient to protect the patient against harmful germs, including the patient's own, entering his/her body.
- Examples of clean/aseptic procedures include:
  - brushing the patient's teeth
  - instilling eye drops
  - skin lesion care
  - wound dressing
  - subcutaneous injection
  - catheter insertion
  - opening a vascular access system or a draining system
  - secretion aspiration
  - preparation of food, medication, pharmaceutical products, sterile material



# Perform Hand Hygiene Before Clean / Aseptic Procedures



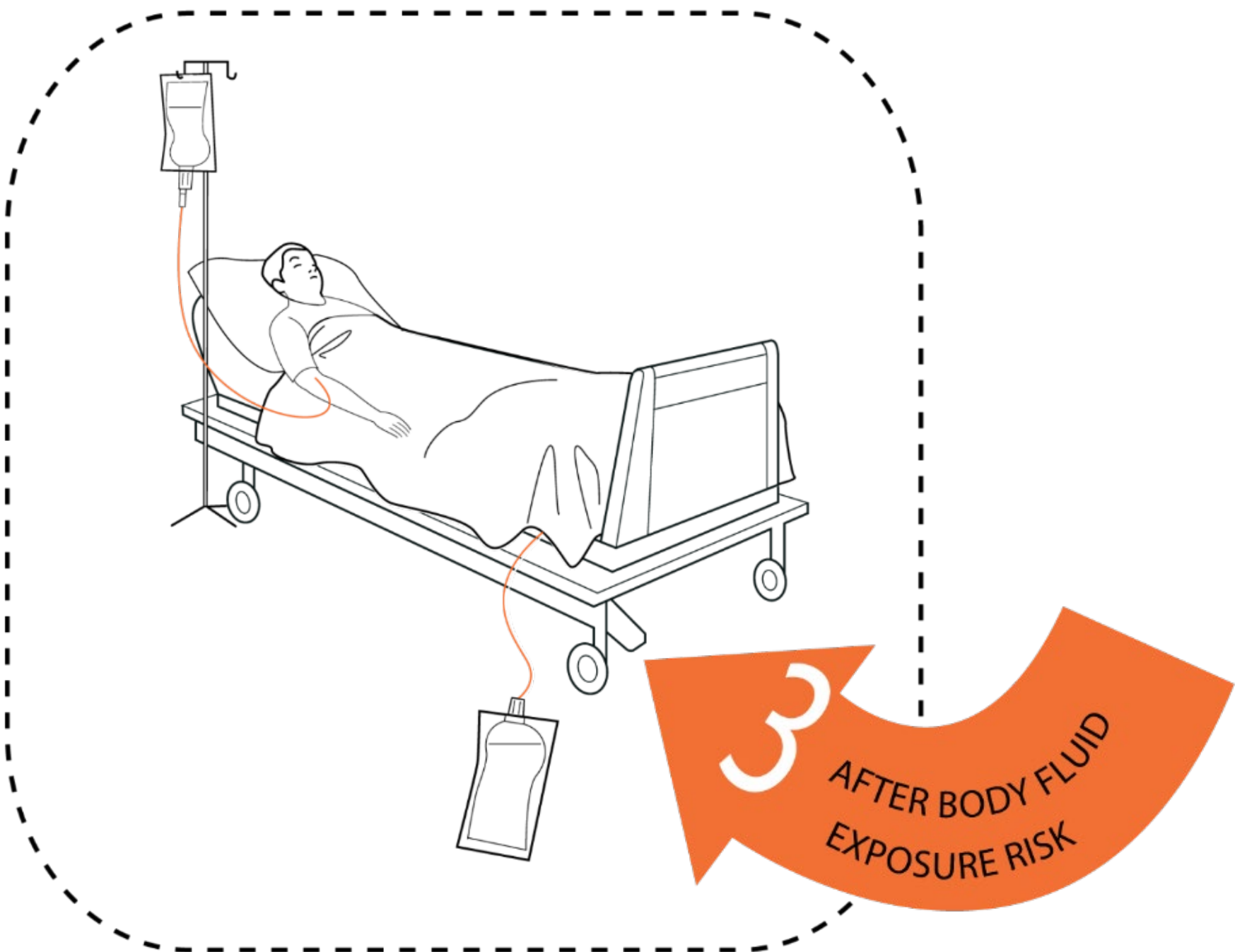
Clean your hands before accessing critical sites to protect the patient against harmful germs.

# Perform Hand Hygiene

## After Body Fluid Exposure Risk

- Clean your hands as soon as a task involving exposure risk to body fluids has ended and after glove removal, to protect yourself and the healthcare environment from harmful germs.
- Examples of body fluid exposure risk include:
  - brushing the patient's teeth
  - instilling eye drops
  - secretion aspiration
  - skin lesion care
  - wound dressing
  - subcutaneous injection
  - drawing and manipulating any fluid sample
  - opening a draining system
  - endotracheal tube insertion and removal
  - clearing up urine, feces, vomit
  - handling waste (including bandages, napkins, and incontinence pads)
  - cleaning of contaminated and visibly soiled material or areas (such as soiled bed linen, bathroom, urinal, bedpan, and medical instruments)

# Perform Hand Hygiene After Body Fluid Exposure Risk

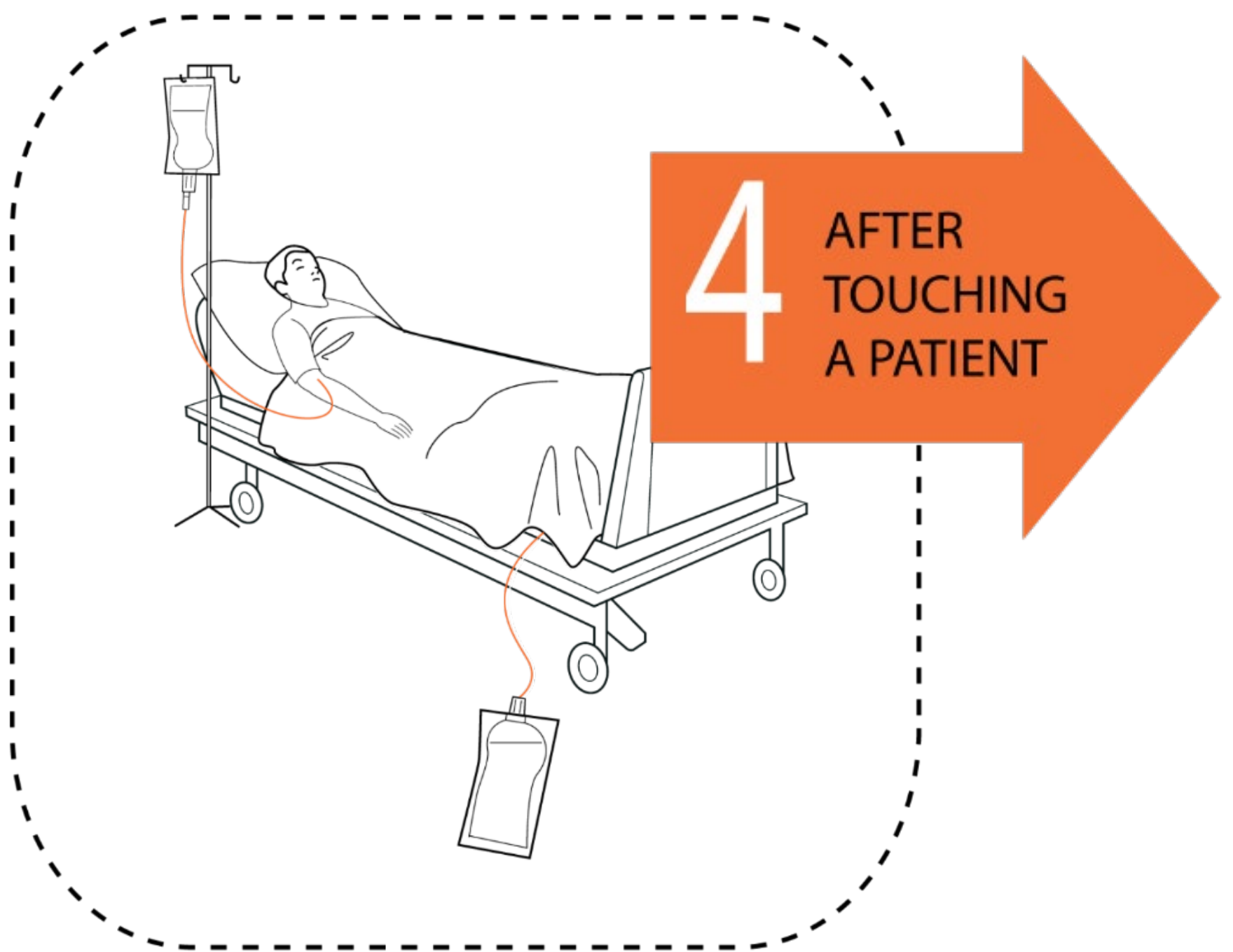


Clean your hands after body fluid exposure risk to protect yourself and the healthcare environment from harmful germs.

# Perform Hand Hygiene After Touching a Patient

- Clean your hands when leaving the patient's side, including after touching a patient and his/her immediate surroundings, to protect yourself and the healthcare environment from harmful germs.
- Examples of direct contact include:
  - shaking hands
  - stroking a child's forehead
  - helping a patient move around
  - washing a patient
  - Applying an oxygen mask
  - giving physiotherapy
  - taking pulse, blood pressure, chest auscultation, abdominal palpation
  - recording ECG

# Perform Hand Hygiene After Touching a Patient



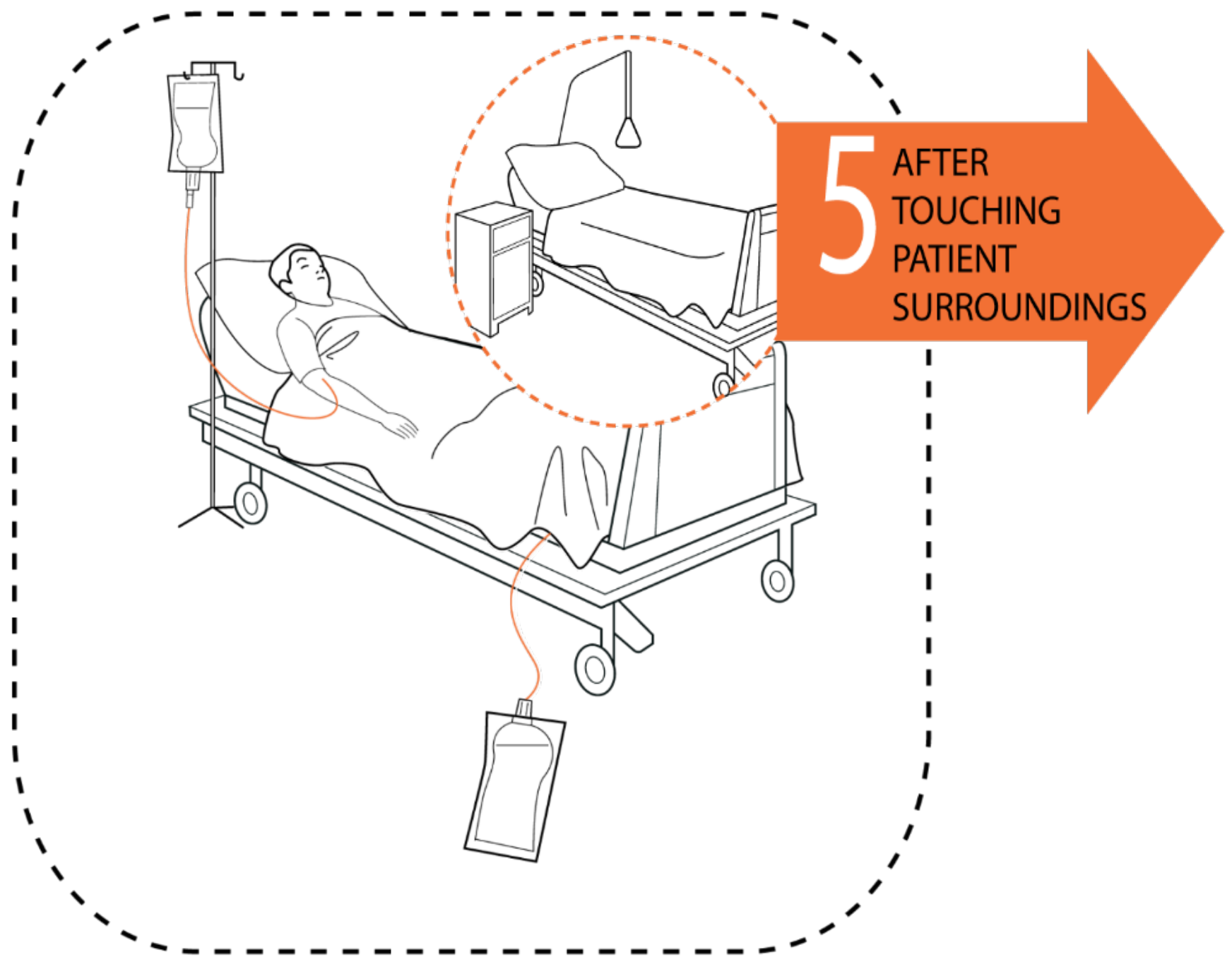
Clean your hands after touching a patient to protect yourself and the healthcare environment from harmful germs.

# Perform Hand Hygiene After Touching Patient Surroundings

- Clean your hands after touching any object or furniture in the patient's immediate surroundings, even if you haven't touched the patient, to protect yourself and the healthcare environment against germ spread.
- Examples of contact with patient surroundings include:
  - changing bed linen, with the patient out of the bed
  - IV perfusion adjustment
  - monitoring alarm
  - holding a bed rail, leaning against the bed
  - clearing the bedside table



# Perform Hand Hygiene After Touching Patient Surroundings



Clean your hands after touching any object or furniture in patient surroundings, even if you haven't touched the patient.

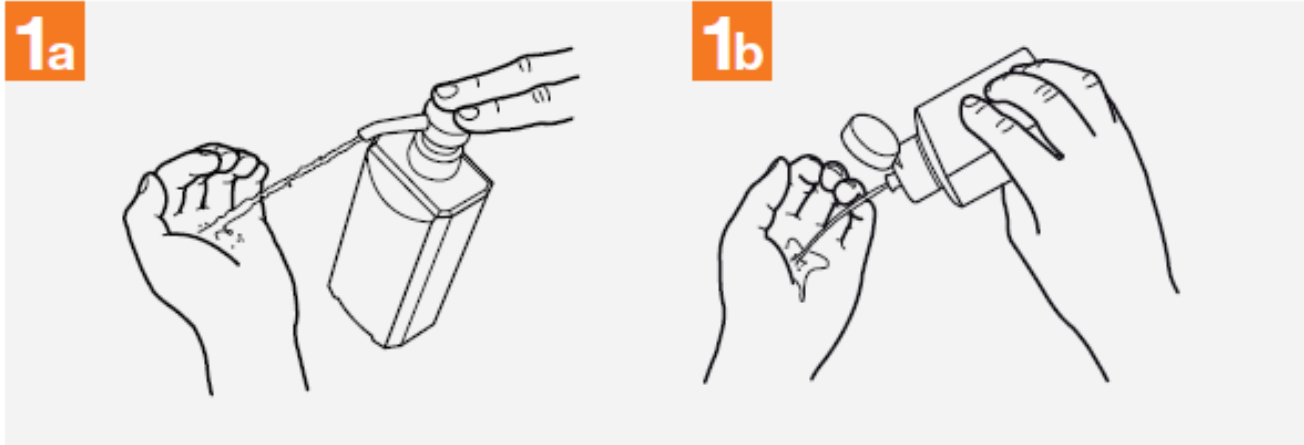
# Correct Hand Hygiene Technique: How to Handrub

To effectively reduce the growth of germs on hands, handrubbing must be performed following all of the illustrated steps.

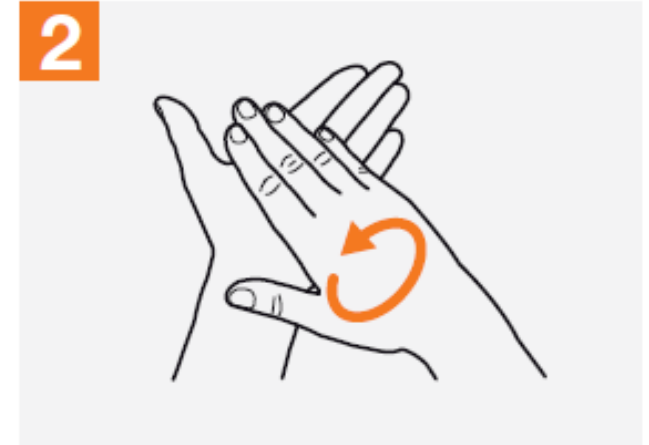
- 1a/b. Apply a palmful of the product in a cupped hand, covering all surfaces.
2. Rub hands palm to palm.
3. Right palm over left dorsum with interlaced fingers and vice versa.
4. Palm to palm with fingers interlaced.
5. Backs of fingers to opposing palms with fingers interlocked.
6. Rotational rubbing of left thumb clasped in right palm and vice versa.
7. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.
8. Once dry, your hands are safe.



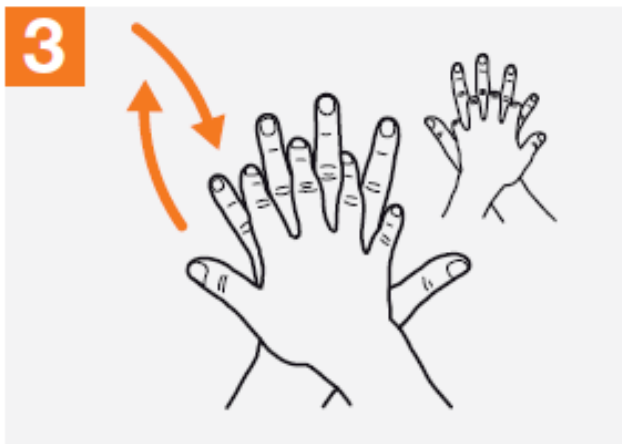
# How to Handrub



1a Apply a palmful of the product in a cupped hand, covering all surfaces;



2 Rub hands palm to palm;



3 Right palm over left dorsum with interlaced fingers and vice versa;



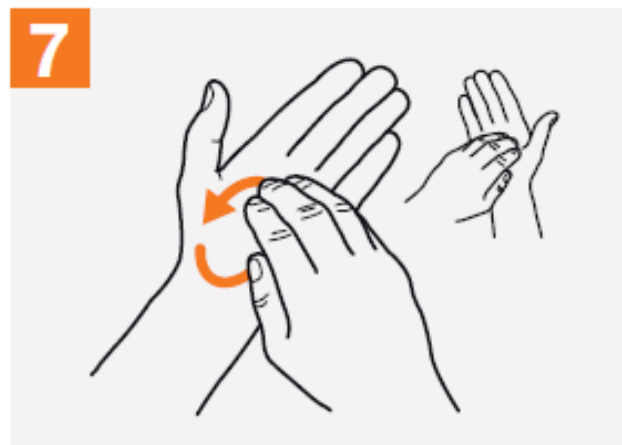
4 Palm to palm with fingers interlaced;



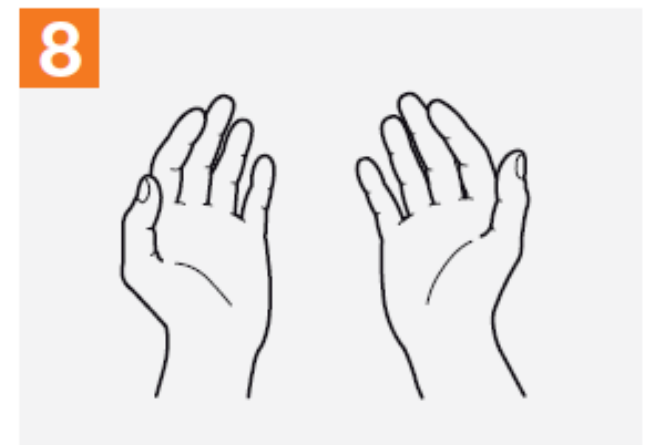
5 Backs of fingers to opposing palms with fingers interlocked;



6 Rotational rubbing of left thumb clasped in right palm and vice versa;



7 Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



8 Once dry, your hands are safe.

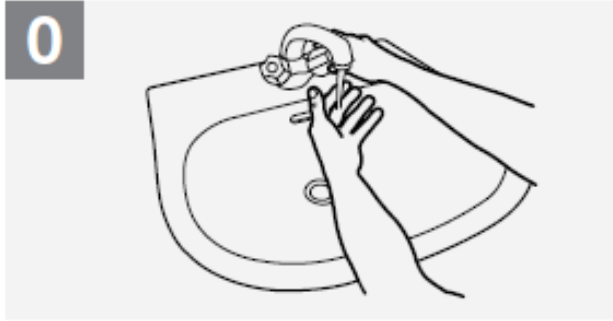
This takes 20–30 seconds.

# Correct Hand Hygiene Technique: How to Handwash

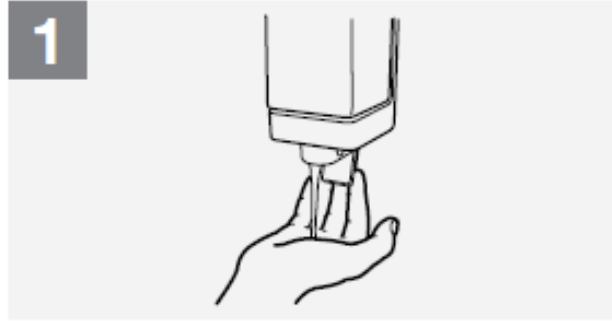
To effectively reduce the growth of germs on hands, **handwashing must last 40–60 seconds** and should be performed following all of the illustrated steps.

0. Wet hands with water.
1. Apply enough soap to cover all hand surfaces.
2. Rub hands palm to palm.
3. Right palm over left dorsum with interlaced fingers and vice versa.
4. Palm to palm with fingers interlaced.
5. Backs of fingers to opposing palms with fingers interlocked.
6. Rotational rubbing of left thumb clasped in right palm and vice versa.
7. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.
8. Rinse hands with water.
9. Dry hands thoroughly with a single use towel.
10. Use towel to turn off faucet.
11. Your hands are now safe.

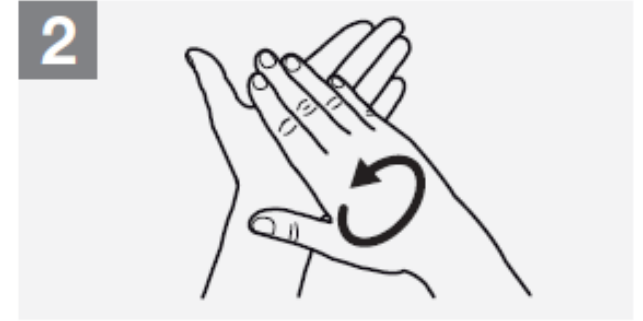
# How to Handwash



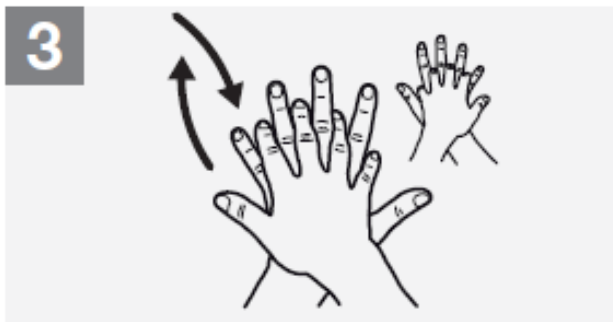
0 Wet hands with water;



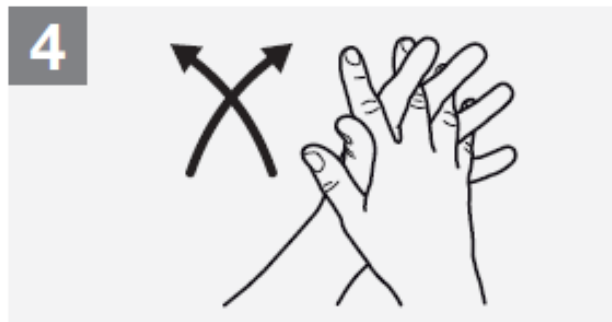
1 Apply enough soap to cover all hand surfaces;



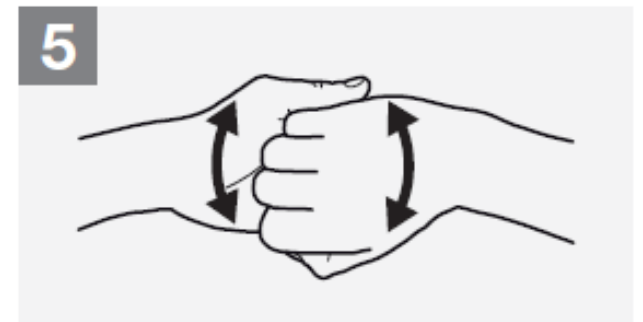
2 Rub hands palm to palm;



3 Right palm over left dorsum with interlaced fingers and vice versa;



4 Palm to palm with fingers interlaced;



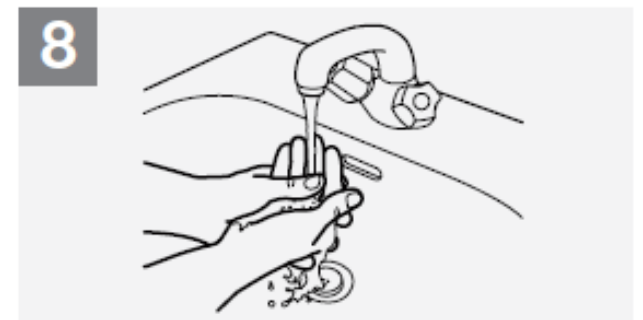
5 Backs of fingers to opposing palms with fingers interlocked;



6 Rotational rubbing of left thumb clasped in right palm and vice versa;



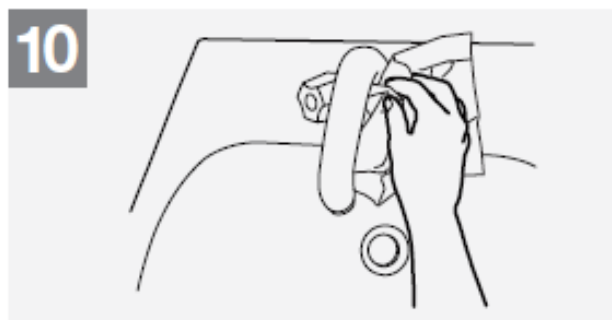
7 Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



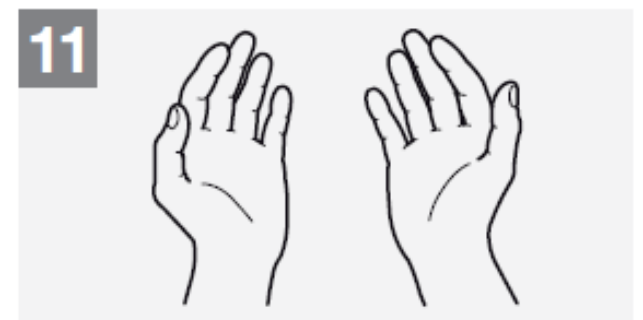
8 Rinse hands with water;



9 Dry hands thoroughly with a single use towel;



10 Use towel to turn off faucet;



11 Your hands are now safe.

This takes 40–60 seconds.

# Nails

- Artificial nails and gel polishes should not be worn by healthcare workers
- Polish may be worn but must be intact (not chipped)
- Nail tips should be kept to  $\frac{1}{4}$  inch in length

# Nails

- Artificial nails and gel polishes should **not** be worn by healthcare workers
- Polish may be worn but must be intact (not chipped)
- Nail tips should be kept to  $\frac{1}{4}$  inch in length





# Hand Hygiene and Glove Use

- Glove use does not replace hand hygiene.
- When an indication for hand hygiene applies while gloves are on, gloves must be removed to perform hand hygiene, and a new pair of gloves should be worn if needed.
- Always wear gloves when contact with blood or infectious material is possible.
- Wear gloves only when indicated.
- Remove gloves after caring for each patient.
- Remove gloves, perform hand hygiene, and re-glove when transitioning care from a soiled to a clean area on the same patient.
- Perform hand hygiene upon removing gloves.
- Do not wash gloves.
- Do not reuse gloves.
- Do not apply alcohol-based hand rub (ABHR) to gloves.

# Hand Hygiene and Glove Use

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- Glove use does not replace hand hygiene
- Always perform **hand hygiene before putting on and after taking off gloves**
- Gloves must be removed to perform hand hygiene as required, and changed as needed

# Summary

In summary:

- Hand hygiene reduces the incidence of healthcare-associated infections (HAI)
- Remember your “5 Moments” of hand hygiene
- Follow proper technique when performing hand hygiene
- ABHR is the preferred method for hand hygiene

## **To the instructor only:**

End by handing out the post-test activity to class participants. Give 5 minutes for participants to answer; then collect tests.



# Hand Hygiene

- Hand hygiene reduces the incidence of healthcare-associated infections (HAI)
- Remember your “5 Moments” of hand hygiene
- Follow proper technique when performing hand hygiene
- ABHR is the preferred method of hand hygiene

# Instructor Notes

- On the front of this flipchart, you will find the subject to be discussed; the back of each picture and subject has a suggested script. The script will help guide the learning experience between you and your staff; it does not need to be followed exactly.
- Try to start a dialogue to involve your staff.
- You may start your session with a pre-test activity. Give 5 minutes for participants to answer; then collect tests.
- To begin, let participants know that this presentation will teach them the importance of hand hygiene in infection prevention.

