



# Preventing Avoidable Harm In Our Care

Hand Hygiene  
Training Programme  
for Healthcare Workers  
in Acute Hospitals



# Hand Hygiene Training Includes:



- Healthcare associated Infections
- The '5 Moments of Hand Hygiene'
- Hand Hygiene Technique
- Hand hygiene and glove use
- How to support patients to clean their hands

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# What are Healthcare Associated Infections?

Healthcare associated infections (HCAIs) are infections that develop as a result of healthcare interventions

This may include medical or surgical treatment or following contact with any healthcare setting

## Examples of Healthcare Associated Infections

- John is admitted to hospital for surgery. After the operation he develops a wound infection
- Mary is admitted with a heart attack and she has an IV line put in. She gets a blood stream infection from the IV line
- Anne lives in a nursing home. She has a urinary catheter in place. She gets a urinary tract infection and blood stream infection related to the urinary catheter
- Sheila is admitted to hospital with pneumonia and she is treated with antibiotics. 5 days later she develops severe diarrhoea caused by **C.diff infection**

# What are Antimicrobial Resistant Organisms (AMROs)

- Antimicrobial resistant organisms (AMROs)
- Multidrug resistant organisms (MDROs)
- Antibiotic resistant organisms (AROs)
- **All mean more or less the same thing which is that antibiotics used to kill this type of bacteria (bug) 10 or 20 years ago no longer work. Some people call these “superbugs”**
- Examples
  - MRSA** (methicillin-resistant *Staphylococcus aureus*)
  - VRE** (vancomycin-resistant-Enterococcus)
  - ESBL** (extended spectrum beta-lactamase producer)
  - CPE** (carbapenemase producing Enterobacterales)

# Spread of micro-organisms (bacteria, virus and fungi)

- Most micro-organisms spread by contact. In healthcare this means getting carried from one place to another, on people or on things
- Almost any type of micro-organism can be carried from one place to another. We are especially concerned about AMROs and flu virus getting carried
- **Hands** are the main way micro-organisms spread in hospitals. But they can also travel on patient equipment including commodes and stethoscopes

## Colonisation with AMROs

**Colonisation:** the bacteria just sits there doing no harm. But bacteria can multiply, grow and spread to other patients, equipment or the environment

Examples of colonisation:

- MRSA sitting in the nose but causing no symptoms
- ESBL sitting in the urine but causing no symptoms
- CPE sitting in the colon but causing no symptoms

But **colonisation** can develop into **infection**

# Colonisation developing into infection

Jane Doe comes to hospital for chemotherapy

CPE gets carried to Jane on the hands of a healthcare worker who forgot to clean their hands

The CPE is just sitting in the colon causing no problems

Jane has a urinary catheter inserted

Three days after the catheter is inserted, CPE is found in Jane`s urine but she has no symptoms

Ten days later, after Jane`s first cycle of chemotherapy the CPE has invaded the blood stream

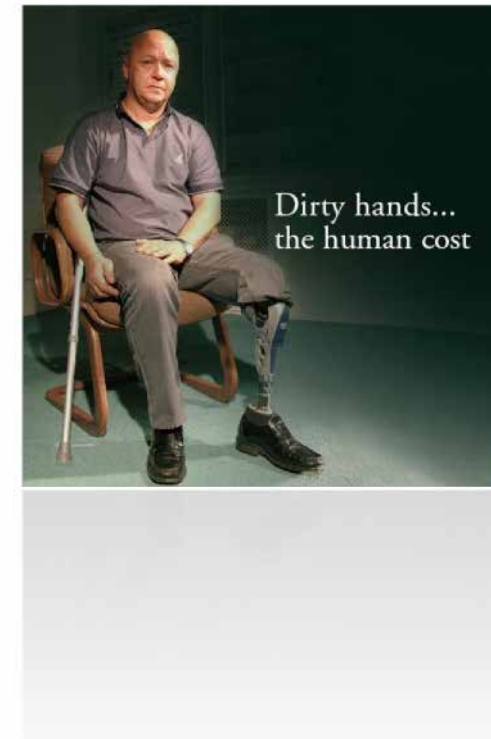
Most of the common antibiotics won`t treat the CPE blood stream infection



# The impact of HCAI on our patients

HCAI can cause:

- More serious illness
- Prolonged stay in a health-care facility
- Long-term disability
- Excess deaths
- High additional financial burden to health services
- High personal costs to patients and their families



# Example of a Preventable HCAI

## Catheter Associated Urinary Tract Infection

- Reduce the number of people who have urinary catheters
- Reduce how long urinary catheters stay in for
- Reduce the number of people who access and manipulate the catheter
- Ensuring that those who access the catheter, use the correct aseptic technique every time

**Good hand hygiene practices will help reduce the risk of infection for people with a catheter in place**

# So how could we spread harmful micro-organisms?



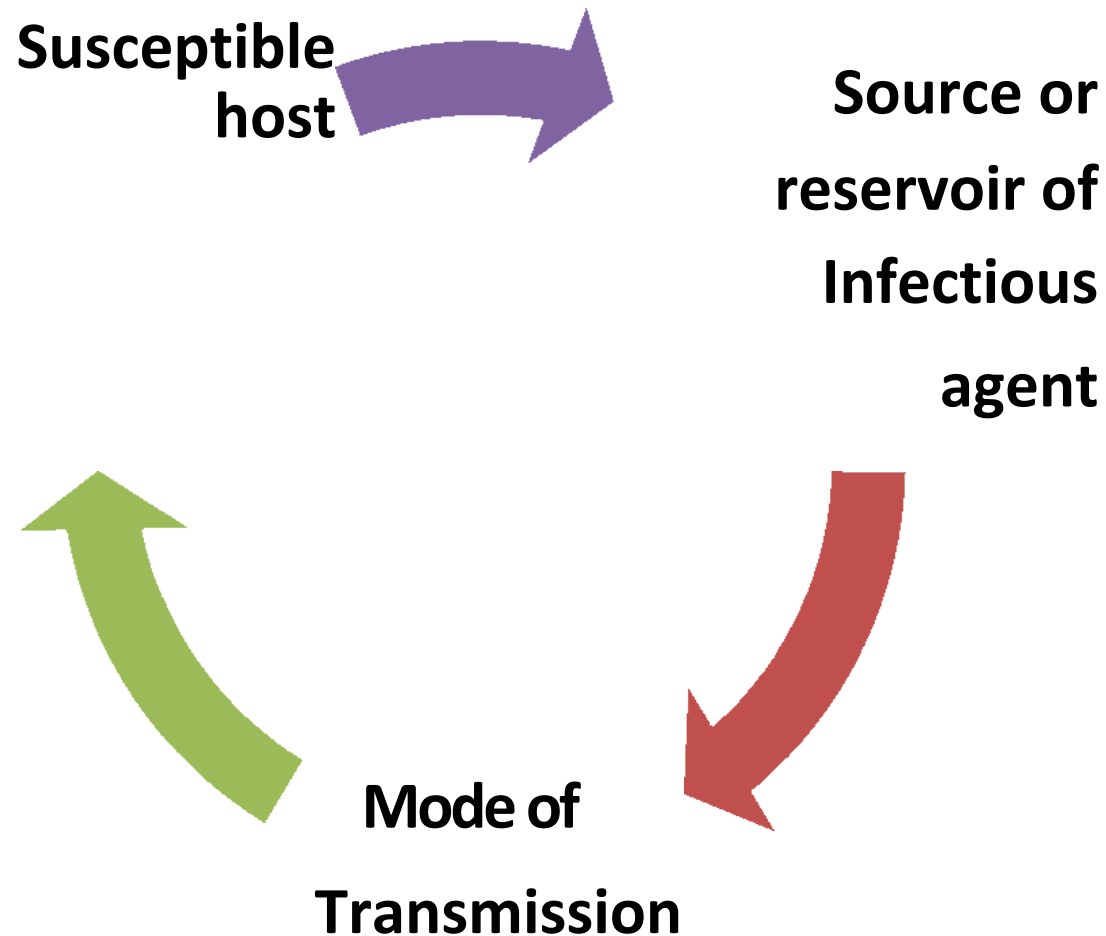
- From person- to- person directly from the healthcare workers hands
- From the environment or equipment if they are contaminated

**Stop and think** of ways how HCAs could spread in our own service

**Is this avoidable?**



# How germs are spread: Chain of infection



For an infection to develop, each link of the chain must be connected



Remember breaking **ANY** link of the chain can stop the spread of infection!

# What is hand hygiene?



**Hand Hygiene** includes cleaning hands with an alcohol based hand rub (ABHR) or soap and water in order to remove germs also known as micro-organisms

## So why do we clean our hands?

Hand Hygiene is one of the **single most effective** measures for preventing the spread of infection and HCAs

Hand Hygiene **done properly**, can be highly effective in preventing infection from spreading by:

- **Protecting patients** from harmful germs carried on your hands or present on their skin that can spread HCAs
- **Protect yourself, equipment and the environment** from harmful germs that can spread HCAs

## Time constraint is considered a major obstacle for hand hygiene



Adequate hand washing with water and soap requires **40 -60 seconds**

- Average time usually adopted by health-care workers: **<10 seconds**
- **Alcohol based hand rub (ABHR): approximately 20–30 seconds**



## How Does Hand Hygiene Work?

**Alcohol-based hand rub ( ABHR)** removes micro-organisms and is the gold standard of care for hand hygiene practice in healthcare settings

**Hand hygiene with soap and water** done correctly, removes micro- organisms and is essential when **hands are not visibly clean**

# Change on the way: Hand Hygiene Practice Recommendation

Australian IPC Guidance 2019 recommend using **alcohol hand rub or hand washing** following care delivery to someone with C.diff

This recommendation is agreed by the Guideline Development Group for National IPC Guideline<sup>1</sup>

1. endorsement by NCEC pending



## What does this mean in practice?

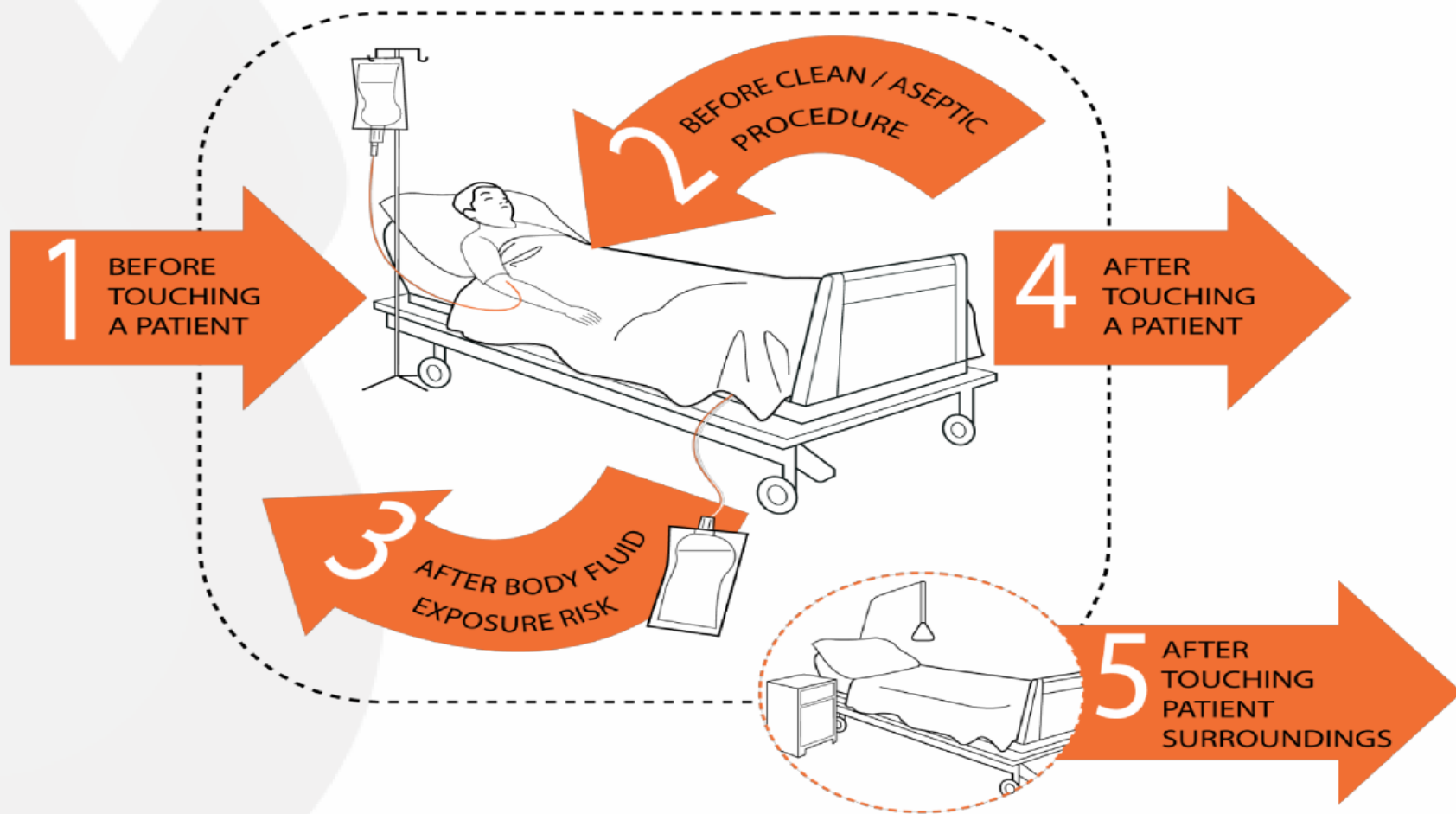
Mary is a patient in an isolation room as she has been confirmed to have C. diff.

After delivering care to Mary, the nurse removes her gloves correctly and cleans her hands with an alcohol based hand rub (ABHR)



[Ref: https://www.nhmrc.gov.au/about-us/publications/australian-guidelines-prevention-and-control-infection-healthcare-2019](https://www.nhmrc.gov.au/about-us/publications/australian-guidelines-prevention-and-control-infection-healthcare-2019)

# My “5 Moments” for Hand Hygiene



# My “5 Moments” for Hand Hygiene



# Moment 1 -Before Touching the Patient



**When-** clean the hands before any patient contact

**Why-** to protect the patient from harmful micro-organisms carried on the HCW hands

## Examples

- Assisting with personal care, assistance with eating
- Before checking an IV line
- Taking a pulse or blood pressure, examination of skin and abdominal palpation

## Moment 2: Before a Clean/Aseptic Procedure



**When-** clean the hands **immediately** before performing an aseptic or clean procedure (even though you may have cleaned your hands before patient contact for other reasons)

**Why-** to protect the patient from micro-organisms (including their own) entering their body during procedures

### **Examples**

- Oral care, suctioning, instilling eye drops
- Surgical wound care,
- Urinary catheter care & insertion,
- Accessing an IV or enteral feeding system
- Taking samples of blood, sputum and urine



# Moment 3: After Body Fluid Exposure Risk



**When-** clean the hands immediately after exposure to body fluids (and after glove removal)

**Why-** protects healthcare workers and the healthcare surroundings from acquiring micro-organisms from patients

## Examples

- Clearing up urine, faeces, vomit, handling waste (dressings, incontinence pads),
- Cleaning soiled equipment or environment (bathroom, commode, sharps tray)
- Oral care and suctioning
- Skin lesion care, wound dressings, administering injections
- Taking blood and urine samples from a catheter (CSU), emptying urinary catheters





## Moment 4 - After Touching the Patient



**When:** clean hands after touching the patient and moving on to another task/procedure

**Why:** protects healthcare workers and the healthcare surroundings from acquiring infectious microorganisms from patients

### *Examples*

- Assisting with personal care
- After taking a pulse, blood pressure or temperature

## Moment 5 -After Touching the Patient Surroundings



**When:** clean hands after touching any objects, furniture or personal items in the patient zone, even if there has been no direct contact with the patient

**Why:** to protect the HCW and the healthcare environment from micro-organisms

### ***Examples***

- Clearing the bedside table
- Touching patients personal items
- Touching equipment in the patient zone
- Handling a chart at the end of a patients bed
- Turning off a patient call bell



# The golden rules for Hand Hygiene

Hand hygiene must be performed exactly where you are delivering health care to patients (at the point-of-care)

During health care delivery, there are 5 moments or indications when you must perform hand hygiene

To clean your hands, hand rubbing with an alcohol-based hand rub is preferred. It makes hand hygiene possible right at the point-of-care. AHRB is faster, more effective and better tolerated

You should wash your hands with soap and water when visibly soiled

Perform hand hygiene using the correct technique and remember to cover all parts of the hands

## Before you begin “Bare the wrists”

- Remove any items from the wrist at the beginning of work including watches, jewellery, fit-bits and pedometers
- Plain ring/band only to be worn
- Long sleeves should not be worn when delivering care
- Keep nails short
- Artificial nails /nail varnish or any nail enhancements should not be worn

# Hand Hygiene Technique

## Practical Demonstration with hand Hygiene trainer

Ensure that that all part of the hands are cleaned

- **Alcohol hand rub:** apply sufficient volume of hand rub to cover hands and clean hands using the technique demonstrated
- **Handwashing:** wet hands, apply soap, clean all surfaces of the hands, rinse off and dry with paper towels (as per technique demonstrated)

**Now practice both hand hygiene techniques following demonstration by the Hand Hygiene Trainer**

## Support the person you are providing care to in attending their own Hand Hygiene

- Encourage anyone who is mobile to wash their hands with soap and water
- Alcohol hand rub or patient hand wipes are useful to assist in hand hygiene with someone who is less mobile
- The most important times to ensure that encouragement and assistance with hand is provided are:
  - **After using the toilet**
  - **Before meals**
  - **After coughing/sneezing**

# Gloves can be the Enemy of Hand Hygiene

Wearing gloves unnecessarily can result in poor hand hygiene compliance. It also adds to unnecessary waste and cost

**Wear gloves only when indicated, examples include:**

- Any contact with blood and body fluids
- Touching broken skin including rashes and wounds
- Providing direct care to patients who require contact precautions
- Clean or aseptic procedures where direct touching of key parts and key sites cannot be avoided. Examples include cleaning a wound or changing an iv line



- Gloves are worn for self protection during procedures to prevent **you** from acquiring an infection



- If gloves are worn **when not required** or for multiple tasks, there is a high possibility that unwanted germs will spread to patients, equipment and the environment

**Remember to clean your hands immediately before donning and after removing gloves correctly**

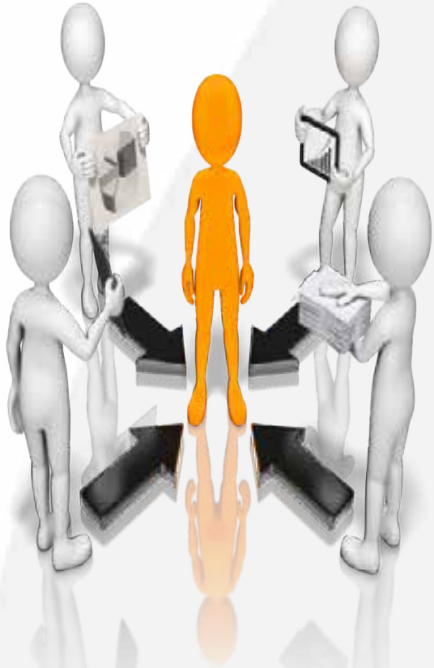


## Some other key issues to remember

- Keep cuts and abrasions covered with a waterproof dressing or plaster
- Thorough rinsing and drying of hands after washing will prevent skin irritation
- Use disposable paper hand towels for drying hands in clinical areas
- Apply hand cream frequently to prevent skin dryness

## Keep up the knowledge

- Hand Hygiene education is mandatory **at least** every 2 years and should start at induction to any job where healthcare is provided
- Infection prevention and control should be on everyone's agenda **at all levels** in the healthcare service
- **Everyone** is **responsible** for their own hand hygiene practices to keep people we care for safe
- Lack of appropriate hand hygiene facilities or resources to perform hand hygiene should be brought to your managers attention immediately



**“If you see something - say something”**

# **In Summary-** we have covered

- When, where and why **you** should clean your hands
- Healthcare Associated Infections
- The '**5 Moments**' of Hand Hygiene
- **Hand Hygiene Technique** for using alcohol based hand rub and hand washing
- Hand Hygiene and **Glove Use**
- The **Golden Rules** of Hand Hygiene



## Hand Hygiene Trainer Information when delivering education

1. Staff should record attendance **immediately after** each hand hygiene training session has occurred on the training template (which is in the training folder)
2. Keep a copy of attendance records in your local department/service and send a copy to management for central recording/ monitoring of training
3. Further information available for download on Hand Hygiene materials at [www.hse.ie/infectioncontrol](http://www.hse.ie/infectioncontrol)

