HNC01274

Antimicrobial Resistance and Infection Control Programme

Hand Hygiene Preventing avoidable harm in our care

Mandatory Hand Hygiene Training Programme for Healthcare Workers in Community Healthcare Services



Seirbhís Sláinte Building a Níos Fearr Better Health á Forbairt Service

What this training includes



Healthcare associated Infections and how they spread to cause harm

Why, where and when you should clean your hands

The '5 Moments of Hand Hygiene'

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Hand hygiene technique

Hand hygiene and glove use

Learning outcomes

- Reflect on the current experiences for performing hand hygiene in your workplace
- Understand why, how and where hand hygiene is important when providing care to prevent healthcare associated infection (HCAI)
- How to make improvements to achieve hand hygiene compliance that is safe



What is a healthcare associated infection (HCAI)?

- Infections that are acquired following any healthcare intervention or contact with a healthcare setting.
- Antimicrobial resistant organisms (AMROs), are organisms that can be more difficult to treat, due to their resistance to antibiotics.
- If someone has a device inserted (*e.g*uarinary catheter) or take antibiotics frequently, they can be at a higher risk of acquiring an AMRO which may be carried on or in the body.
 - Examples include
 - MRSA on the skin
 - CPE in the gut

If any of these bugs enter the blood stream they can cause serious infection.

A bit more about some of the examples used

Carbapenem producing *Enterobacterales* (CPE) are a variant of common bacteria which live in the gut and have become resistant to a critical group of antibiotics known as carbapenems. They are generally like other gut bacteria in that they are harmless when they remain in the gut.

Persons who have CPE in the gut are known as CPE carriers (or colonised) and do not require treatment

However

- If CPE travels from the gut to other parts of the body (including wounds, IV sites, bladder and bloodstream) they can cause harmful infection
- It is important to know that CPE can be spread from the gut by person to person directly or indirectly through contaminated hands, equipment or the environment
- The continued spread of CPE as a HCAI in Irish healthcare facilities was declared a National Public Health Emergency in 2017



Methicillin resistant *Staphylococcus aureus (MRSA)*

 A bacterium that can be carried on skin. When MRSA gets into wounds, the respiratory system, bladder or bloodstream, serious infection can occur

Clostridioides difficile (C. diff)

 A bacteria commonly referred to as C. diff can be acquired after antibiotic use and can be spread from person to person through direct contact with hands or contaminated environment and equipment



COVID-19 transmission

Direct spread:

respiratory droplets from coughing or sneezing

Indirect spread: contaminated surfaces where the virus can survive for several hours

plastic: up to 72 hours stainless steel: up to 48 hours copper: up to eight hours



Indirect spread contaminated hands (not cleaned)

person infects themselves by touching their eyes, nose or mouth



An example of a HCAI which is preventable

Catheter associated urinary tract infection (CAUTI) may be reduced by:

- Ensuring a correct and consistent approach to hand hygiene when in contact with an invasive device
- Performing hand hygiene before catheter care and after removing gloves on completion of catheter care



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 on patients and their families





So could we spread HCAIs?

- 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 HCAIs could spread in our own service

Is this avoidable?



How germs are spread: chain of infection



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Remember, breaking <u>ANY</u> link of the chain can stop the transmission of infection!

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Steps that help break the chain of infection:

- Clean hands
- Clean equipment
- Clean environment

An example of how microorganisms can spread

The 5 stages of hand transmission

One	Тwo	Three	Four	Five
Microorganisms present on patient skin and immediate environment surfaces	Microorganisms transfer onto health-care worker's hands	Microorganisms survive on hands for several minutes	Suboptimal or omitted hand cleansing results in hands remaining contaminated	Contaminated hands transmit microorganisms via direct contact with patient or patient's immediate environment



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What is hand hygiene?



Hand Hygiene includes cleaning hands with alcohol based hand rub (ABHR) or soap and water in order to remove germs, also known as microorganisms



Why do we clean our hands?

- To protect people receiving care against microorganisms carried on your hands or present on their skin that can spread HCAIs
- To protect yourself and the environment from microorganisms that can spread HCAIs



Why is hand hygiene so important?

- It is one of the single most effective measures for preventing the spread of infection and HCAIs
- If done properly, can be up to and over 90% effective in preventing infection spread



Where should you clean your hands?

- Hand hygiene is important in all places where health care is provided
- Providing alcohol-based hand rub at the point of care (within arms reach) is important to perform hand hygiene. This is recommended as the most effective method providing hands are visibly clean
- Hand washing with soap and water is required when hands are visibly unclean or after caring for someone with known or suspected C.diff where gloves have been breached or damaged



Time constraint is a major obstacle for hand hygiene

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



- Average time usually adopted by healthcare workers: <10 seconds
- Alcohol-based hand rubbing: 20–30 seconds



How does hand hygiene work?

Hand hygiene with alcohol-based hand rub correctly applied – kills microorganisms in seconds in routine care

- Exceptions are if hands are visibly dirty
- When caring for someone with diarrhea who is suspected to have *Clostridioides difficile* (C. diff) and gloves have been breached or damaged
- Soap and water is then used to perform hand hygiene
- Hand hygiene with soap and water, done correctly, removes micro-organisms



My "5 Moments for Hand Hygiene"



My "5 Moments for Hand Hygiene"



Moment 1

Before touching the patient/resident





When

Clean the hands before touching the person you are delivering care to

Why

To protect the person receiving care from microorganisms carried on the HCWs hands

Examples

- Helping someone to get washed or dressed
- Prior to changing incontinence wear
- Taking pulse, blood pressure and examination of skin



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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/resident/client from microorganisms, from entering his/her body

- oral care, suctioning, administering eye drops
- skin lesion care, wound dressing
- Urinary catheter care & insertion
- Accessing ,commencing IV therapy, enteral feeding system
- Taking samples, blood, urine

Moment 3 After body fluid exposure risk







When- clean the hands immediately after an exposure risk to body fluids (and after glove removal)Why- to protect staff and the healthcare environment from microorganisms

- clearing up urine, faeces, vomit, handling waste (dressings, incontinence pads)
- cleaning of contaminated and visibly soiled material or areas (bathroom, commodes)
- •oral care, suctioning
- skin lesion care, wound dressings, administering injection
- taking blood, CSU, handling emptying urinary catheters

Moment 4 After touching the patient/resident





When - clean the hands after directly touching the person when you have completed the care you are providing

Why - to protect the HCW and the healthcare environment from microorganisms

- Helping someone to get washed, get dressed
- Taking pulse, blood pressure
- After completing an examination of someone

Moment 5

After touching the patient/ resident's surroundings



When-leaving patients home Clean the hands after touching any object or furniture or personal items belonging to the person you are caring for (including their home), even if the person has not been touched

Why- to protect the HCW and the healthcare environment from microorganisms

- Touching personal items
- Leaving someone's home after providing care

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 (indications) when it is essential that you perform Hand Hygiene

To clean your hands, you should prefer **hand-rubbing** with an alcoholbased hand rub, if available. **Why?** Because it makes hand hygiene possible right at the point-of-care, it is faster, more effective, and better tolerated

You should wash your hands with soap and water when visibly soiled or when caring for someone with C.diff where gloves have been breached or damaged

You must perform Hand Hygiene using a proper technique to cover all parts of the hands



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Before you begin bare the wrists!

- Remove watch/jewellery at the beginning of work
- Plain ring/band only to be worn
- Long sleeves should not be worn when delivering care
- Keep finger nails short
- Artificial nails /nail varnish should not be worn



Hand hygiene technique Practical demonstration

It is possible to use the same technique in principal, when using alcohol hand rub and when using soap to hand wash to ensure that the product covers all part of the hands

The difference is

- Alcohol-hand rub: apply approximately 3-5 mls and clean hands as per technique demonstrated for **20-30 secs**.
- Hand-washing: wet hands, apply soap, clean all surfaces of the hands as demonstrated, rinse off and dry with paper towels. This should take 40-60 secs.

Now practice your hand hygiene technique following demonstration by the hand hygiene trainer



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Support the person you are providing care to in attending to their own hand hygiene

- Hand washing with soap and water, or disposable hand wipe with anyone who is mobile
- Disposable hand wipes are useful to assist in hand hygiene with someone who is less mobile
- The most important times to ensure that assistance is provided with hand hygiene are:

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- Before meals
- After using the toilet
- After personal hygiene

Gloves are the worst enemy of hand hygiene!

Wearing gloves is a significant risk factor for poor hand hygiene compliance and and the transmission of microorganisms

- The use of gloves does not replace the need for cleaning your hands
 - Wearing gloves are recommended if there is a risk of contact with blood and body fluids and when carrying out aseptic procedures
- Examples include taking blood and providing wound care
- Always remember that it is essential to perform hand hygiene immediately after removing gloves



Some key issues to remember

 Cover cuts and abrasions with a waterproof dressing or plaster (This may need to be replaced several times during the day, depending on how wet it gets)

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- Thorough rinsing and drying of hands after washing will prevent skin irritation
- Use disposable paper hand towels for drying hands
- 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 training 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



In summary have covered the essentials in Hand Hygiene which includes the following:

- Healthcare associated infections
- Why and when you should clean your hands
- The '5 moments' of hand hygiene
- Hand hygiene technique for using alcohol hand rub and hand washing
- The golden rules of hand hygiene
- Hand hygiene and glove use



Hand hygiene trainer information for delivering education

- 1. Staff should record attendance at each hand hygiene training on the training template which is in the folder
- 2. Trainers are advised to retain a copy of the training records and leave a copy in relevant local service area
- 3. All materials are available for download or in the Community Hand Hygiene Section at www.hse.ie/infectioncontrol

