Hand Hygiene:
Train the Trainer

National Hand Hygiene Training Programme for Healthcare Workers
in Community and Primary Care

HCAI AMR Clinical Programme 2017
Who can become a trainer?

The trainer will be considered to be more effective if they have:

- Experience in providing formal or informal education or influence in making healthcare improvement
- Been nominated with agreed support from Service/Facility Manager as outlined in Governance Protocol
Getting started as a Hand Hygiene Trainer

Starting Essentials:

- Interested in educating peers in hand hygiene
- Complete HSELand E-learning module on Hand Hygiene
- Complete HSELand E-Learning module on Standard Precautions
- Undertake ‘Train the Trainer` education programme with follow up assessment to support your learning
- Become a champion for Hand Hygiene in your workplace
Why are we here?
Train the Trainer overview overview

• You will understand the importance of a national programme for hand hygiene in primary care, mental health and social care settings
• Develop confidence and skills to teach hand hygiene and influence behaviour
• Bring education and resources to healthcare workers in the workplace.
Governance of Hand Hygiene

- National Taskforce
- CHO Lead
- HCAI/AMR Committee
- Facility/ Service Manager
- Hand Hygiene Trainer
Head of Service/Facility responsibility

- Notify all staff of the Hand Hygiene trainer’s role
- Facilitate time and release of staff to receive Hand Hygiene training
- Support the Hand Hygiene Trainers to attend relevant training provided by their local IPCN/National Hand Hygiene Programme
- Arrange administration of hand hygiene programme including record of attendance
- Address breaches in adherence to hand hygiene compliance.
Let’s not make it difficult!
Any burning issues you wish to clarify around Hand Hygiene Trainer commitment?
Meeting the standard

**Standard 6:**
Hand hygiene practices that prevent, control and reduce the risk of the spread of Healthcare Associated Infections are in place.

**Rationale:**

Hand hygiene is recognised internationally as the single most important preventative measure in the transmission of HCAIs, particularly in health and social care services. It is essential that a culture of hand hygiene practice is embedded in every service at all levels.
an identified staff member has responsibility for monitoring compliance with national standards for infection prevention and control procedures such as hand hygiene, the use of protective clothing, the safe disposal of sharps, management of laundry and waste management
What are Healthcare associated Infections (HCAIs)?

Infections that are acquired as a result of healthcare interventions (HIQA, 2009)
What are Healthcare Associated Infections

- An infection that is acquired after contact with healthcare services. Examples include Clostridium difficile (C diff.) and Methicillin Resistant Enterococcus (MRSA)
- A bacteria commonly referred to as C diff which can be acquired after antibiotic use
- Spread from person to person or picked up in the environment/equipment or healthcare workers hands that is contaminated with C diff.
- (MRSA) can be transmitted from person to person or again from the healthcare workers hands, environment or equipment
Example of a HCAI which is preventable

- Catheter associated urinary tract infections (CAUTI).
- By reducing the number of people that access/manipulate the catheter
- By ensuring that those that do access/manipulate the urinary catheter, do it correctly and consistently
- Good Hand hygiene practices will help reduce the risk of CAUTI for the person that has the urinary catheter in place
The most common bacteria causing HCAIs are those which have become resistant to antibiotics

- MRSA (Methicillin resistant staphylococcus aureus)
- VRE (Vancomycin-Resistant Enterococci)
- ESBL (Extended Spectrum Beta-Lactamase)
- CRE (Carbapenem-Resistant Enterobacteriaceae)
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
Even in a resource-poor area of Pakistan very good improvement has been achieved

Household hand-washing campaign

• Demonstrated a 50 percent lower incidence of pneumonia in children younger than 5 years compared to households that did not practice hand washing. ?ref

• Children under 15 years in hand-washing households had a 53 percent lower incidence of diarrhoea and a 34 percent lower incidence of impetigo.
Is there evidence of acquiring infection in the community?

• Risk is **THOUGHT** to be low in community and primary care settings
• Absence of surveillance data to support this assumption
• More invasive procedures being performed in outpatient clinics, nursing homes, home settings and GPs, including minor surgery, management of invasive medical devices, *i.e.* urinary catheters, enteral feeding devices etc.
Evidence to support hand hygiene in long term care facilities

- 224 facilities surveying 10,044 residents
- HCAI prevalence rate 2016 = 4.7% (1 in 20 residents)

Most common HCAIs:
- Respiratory Tract Infections
- Urinary Tract Infections
- Skin and Soft Tissue Infections
Other important bacteria and viruses that commonly cause HCAI

- C. diff (Clostridium difficile)
- Norovirus
- Influenza
Evidence to support hand hygiene in Day Care Centre for under 2 year olds

Compliance with hand hygiene led to:

• 50-66% decrease in diarrhoeal episodes

And a

• 17% decrease in Upper Respiratory tract Infections.
Acute v primary and community healthcare settings

Anywhere outside an acute hospital where healthcare is provided. Examples include

- **Social care**: older persons and disability services, long term care facilities, residential homes/hostels, day hospitals and day centres
- **Mental Health**: long term care facilities, day hospitals and day centres, and residential homes/hostels
- **Primary care**: health centres, dentistry, addiction services, GP practice and patients home.
How are HCAIs reduced?

Multimodal approach:

- Hand hygiene education
- Hand hygiene culture in the workplace
- Easy access to alcohol based hand rubs hand wash sinks
- Having reminders in the workplace (hand hygiene posters)
- Information leaflets for patients and families
- Monitoring and feedback to staff.
Studies where hand hygiene was used as the main intervention

• A significant improvement in hand hygiene compliance and/or increased Alcohol-based Hand Rubs (ABHRs) consumption were achieved

• Demonstrated substantial decrease in MDROs infections and or colonisation rates, mainly for MRSA.
How can you pass infection from your hands?
For an infection to develop, each link of the chain must be connected.

Breaking any link of the chain can stop the transmission of infection!
The Chain of Infection
**Infectious Disease**
Any microorganism that can cause a disease such as a bacterium, virus, parasite, or fungus. Reasons that the organism will cause an infection are virulence (ability to multiply and grow), invasiveness (ability to enter tissue), and pathogenicity (ability to cause disease).

**Reservoir**
The place where the microorganism resides, thrives, and reproduces, i.e., food, water, toilet seat, elevator buttons, human feces, respiratory secretions.

**Portal of Exit**
The place where the organism leaves the reservoir, such as the respiratory tract (nose, mouth), intestinal tract (rectum), urinary tract, or blood and other body fluids.

**Mode of Transmission**
The means by which an organism transfers from one carrier to another by either direct transmission (direct contact between infectious host and susceptible host) or indirect transmission (which involves an intermediate carrier like an environmental surface or piece of medical equipment).

**Portal of Entry**
The opening where an infectious disease enters the host’s body such as mucus membranes, open wounds, or tubes inserted in body cavities like urinary catheters or feeding tubes.

**Susceptible Host**
The person who is at risk for developing an infection from the disease. Several factors make a person more susceptible to disease including age (young people and elderly people generally are more at risk), underlying chronic diseases such as diabetes or asthma, conditions that weaken the immune system like HIV, certain types of medications, invasive devices like feeding tubes, and malnutrition.
Why hand hygiene is so important

• Good hand hygiene remains one of the single most effective measures for preventing the spread of infection and HCAIs
  – It protects the patient against germs from your hands
  – It protects yourself and the health care environment from harmful germs.
## 5 stages of hand transmission of infection

<table>
<thead>
<tr>
<th>one</th>
<th>two</th>
<th>three</th>
<th>four</th>
<th>five</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germs present on patient skin and immediate environment surfaces</td>
<td>Germs transfer onto health-care worker’s hands</td>
<td>Germs survive on hands for several minutes</td>
<td>Suboptimal or omitted hand cleansing results in hands remaining contaminated</td>
<td>Contaminated hands transmit germs via direct contact with patient or patient’s immediate environment</td>
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</tbody>
</table>
So why do we not practice hand hygiene when we should?

- Too busy and it takes too long
- Staff shortages
- Not a priority
- No role model
- Irritating to our skin
- Poor access to hand hygiene facilities
- Wearing gloves seen as protection
- Lack of education.
Time Spent Cleansing Hands

- One nurse per 8 hour shift

- Hand washing with soap and water: 56 minutes
  - Based on seven (60 second) hand washing episodes per hr

- Alcohol-based hand rub: 18 minutes
  - Based on seven (20 second) hand rub episodes per hr

~ Alcohol-based hand rubs reduce time needed for hand hygiene ~

What are the challenges with hand hygiene in our workplace?
‘Train-the-Trainer’ Part 2

Understanding when and how we clean our hands
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 ("My 5 Moments for Hand Hygiene" approach)

To clean your hands, you should prefer handrubbing with an alcohol-based 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 caring for someone with diarrhoea who may be suspected to have Clostridium difficile

You must perform hand hygiene using the appropriate technique and time duration.
The geographical perception of the transmission risk

Important things to understand:

- What a patient zone means
- What a healthcare zone means
- What a social setting means
- What does the point of care mean
Social setting: different to the acute hospital

• Direct personal care and clinical procedures do not routinely take place within these areas of the healthcare facility
• These are communal settings to promote social interaction including sitting room, dining room or leisure area.
Definitions of patient zone and health-care area

To understand this you see the health-care setting as divided into two virtual geographical areas

– patient/client zone may be the room/bed or home belonging to the individual who is dependant on care and in which their equipment and personal items are kept

– health-care area is the environment directly outside of the patient/client zone.
Definitions of patient zone and health-care area (2)

• **Health-care area**: it contains **all surfaces in the health-care setting outside the patient zone**

It includes:

• area where clinical activity occurs such as the GP practice room or outpatient room were consultation, examination and clinical procedures occur

• other patients/clients and their zones in a residential facility

• The wider health-care facility environment including utility room, reception area.

• Home care- the equipment the HCW brings to and from the home
Health care area and patient zone

Health care area and patient zone

Critical site with infectious risk for the patient

Critical site with body fluid exposure risk
How do we make this work in LTCFs

• Where residents are cared for in a dedicated space with dedicated equipment the five moments for performing hand hygiene apply

• Where residents are semi-autonomous they have their own room or shared room but they also move within the facility: four moments may apply to where healthcare is delivered

• 4 and 5 moments approach to hand hygiene do not cover any social contacts with or among residents in LTCFs unrelated to healthcare (shaking hands)
Definitions of patient zone and health-care area (recap)

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It includes:

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- other patients/clients and their zones in a residential facility

- the wider health-care facility environment including utility room, reception area.
HAND HYGIENE SHOULD BE PERFORMED AT THE POINT-OF-CARE
The 5 Moments apply to any setting where health care involving direct contact with patients takes place.
WHAT IS THE POINT OF CARE?

Point of care refers to the place where three elements occur together:
- The patient
- The health-care worker
- And the care or treatment involving patient contact
Getting to grips with ‘The 5 Moments for Hand Hygiene’
Your 5 moments for HAND HYGIENE

1. BEFORE PATIENT CONTACT
2. BEFORE ASEPTIC TASK
3. AFTER BODY FLUID EXPOSURE RISK
4. AFTER PATIENT CONTACT
5. AFTER CONTACT WITH PATIENT SURROUNDINGS

Based on WHO poster ‘Your 5 Moments for Hand Hygiene’ and reproduced with their kind permission.
FIGURE 3
Example of Moment 1 occurrence in a paediatric consultation

1 BEFORE TOUCHING A PATIENT
Moment 1 - Before Touching the patient/resident

**When** - clean the hands before touching the resident/client

**Why** - to protect the resident/client from harmful micro-organisms carried on the HCW hands

**Examples**

- helping a resident/client to get washed, dressed or assistance with feeding
- Prior to changing incontinence wear
- taking pulse, blood pressure, examination of skin, abdominal palpation.
Moment 2 - Before a Clean/Aseptic Procedure

**When**- clean the hands immediately before performing an aseptic or clean procedure

**Why**- to protect the resident/client from harmful micro-organisms, including the resident/client's own from entering his/her body

**Examples**
- oral care, giving eye drops, suctioning
- skin lesion care, wound dressing, subcutaneous injection
- Urinary catheter care & insertion,
- Accessing , commencing enteral feeding system
- preparation of medication, or dressing
- Taking samples, blood, urine.
Example of Moment 2 occurrence during dental care
Moment 3 - After Body Fluid Exposure Risk

When- clean the hands immediately after an exposure risk to bodily fluids (and after glove removal)

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

Examples
- clearing up urine, faeces, vomit, handling waste (dressings, tissues, 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.
Example of Moment 3 occurrence during haemodialysis in ambulatory care
Moment 4 - After Touching the Client/Resident

**When** - clean the hands after touching the resident/client when leaving their side

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

**Examples**
- helping a resident get washed, get dressed,
- taking pulse, blood pressure.
Example of Moment 4 occurrence in a paediatric consultation

4 AFTER TOUCHING A PATIENT
**Moment 5 - After Touching the Patient / Residents Surroundings**

**When-leaving patient / residents**

Clean the hands after touching any object or furniture or personal items in the residents/clients immediate surroundings or home, even if the resident/patient has not been touched.

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

**Examples**

- Clearing the bedside table
- Touching patients personal items
- Leaving the patients home
Your Moments for Hand Hygiene

Health care in a residential home

1. BEFORE TOUCHING A PATIENT
2. BEFORE CLEAN/ASEPTIC PROCEDURE
4. AFTER TOUCHING A PATIENT
Outpatients Setting 1

In outpatient settings moment 5 after touching the patient’s surroundings only applies where the patient is placed in a dedicated space for a certain amount of time with dedicated equipment – in this case the environment will become contaminated –

e.g. dental treatment area, shedding in a wound care clinic
Outpatient Settings 2

- In the outpatient setting the patient is considered the patient zone as the space and equipment is **not exclusively dedicated** to the patient for any prolonged time.

  e.g. vaccination clinic
Workshop 30 minutes

- Scenarios for each of ‘The 5 Moments’
- Each healthcare worker will take time individually to reflect and give examples from within the group of how each moment applies in their area of work

- IPCN will go through each of the 5 moments with the group and discuss how these may be applied in primary and community healthcare settings
How do we clean our hands?

– Handrubbing with alcohol-based handrub is the preferred routine method of hand hygiene if hands are not visibly soiled.

– Handwashing with soap and water is essential when hands are visibly dirty or when caring for someone with diarrhoea who is suspected / known to have *Clostridium difficile*.
Practical Workshop:

Demonstration of hand hygiene technique

- Divide into groups and IPCN will demonstrate application of ABHR
- Each HCW will demonstrate the technique

- Observation feedback from peers in group on the HCW demonstration

- Complete same exercise for hand washing technique

- Self evaluation of trainers by applying ultraviolet cream / ultraviolet gel and observe areas of hands that have been missed under hand hygiene inspection cabinet.
Examples of hand hygiene products easily accessible at the point-of-care
Gloves are the worst enemy of hand hygiene!

- Wearing gloves is a significant risk factor for poor hand hygiene compliance.

- Hand Hygiene is undertaken to protect patients and HCWs, however studies indicate that addressing glove use with hand hygiene education and training is critical to improve patient safety.
### Examples of when we wear gloves

<table>
<thead>
<tr>
<th>Activity</th>
<th>Gloves Recommendation</th>
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<tbody>
<tr>
<td>Changing bed linen which is not soiled</td>
<td>No gloves recommended</td>
</tr>
<tr>
<td>Handling soiled laundry</td>
<td>Recommended to always wear gloves</td>
</tr>
<tr>
<td>Assisting with personal care or wash</td>
<td>Gloves sometimes needed</td>
</tr>
<tr>
<td>Assisting with preparing meals or feeding</td>
<td>Gloves are not usually recommended</td>
</tr>
<tr>
<td>Caring for someone with diarrhoea</td>
<td>Gloves usually recommended</td>
</tr>
<tr>
<td>Undertaking a clients blood sugar test</td>
<td>Gloves recommended</td>
</tr>
</tbody>
</table>
What should prompt you to wear gloves?

Any activity that involves a risk of contact with blood or body fluids

• Direct contact with broken skin ie. rash or a wound
• Handling equipment likely to be contaminated
• Direct contact with eyes, inside the nose or mouth
• Clean or aseptic technique

Remove gloves immediately after the task you needed to wear them for and carry out hand hygiene
Glove Use Pyramid

**STERILE GLOVES INDICATED**
Any surgical procedure; vaginal delivery; invasive radiological procedures; performing vascular access and procedures (central lines); preparing total parental nutrition and chemotherapeutic agents.

**EXAMINATION GLOVES INDICATED IN CLINICAL SITUATIONS**
Potential for touching blood, body fluids, secretions, excretions and items visibly soiled by body fluids.

**DIRECT PATIENT EXPOSURE:** Contact with blood; contact with mucous membrane and with non-intact skin; potential presence of highly infectious and dangerous organism; epidemic or emergency situations; IV insertion and removal; drawing blood; discontinuation of venous line; pelvic and vaginal examination; suctioning non-closed systems of endotracheal tubes.

**INDIRECT PATIENT EXPOSURE:** Emptying emesis basins; handling/cleaning instruments; handling waste; cleaning up spills of body fluids.
• Next Steps
• Having reflected on Hand Hygiene in your workplace can everyone individually identify a change in practice they might start with to improve hand hygiene
Embedding a Culture of hand hygiene

Helpful tips for hand hygiene assessors

• Put “hand hygiene” as an agenda item on your regular staff meetings
• Give people TIME to take on board what you are saying
• Come back another day or follow up at a later stage if you feel the person needs time to take on board
• Answer questions as they arise and have theory to back up your answers
• If you cannot answer on the spot - make a note of the question and link with your Infection Prevention and Control Nurse for additional support
• Encourage the staff you work with to jointly come up solutions with you, as to what works best in your own team/site
Currently there is no nationally comparable reporting of hand hygiene audit in the community, however....
Getting started as a hand hygiene trainer

• Get started as soon as possible from the training day (within 3 weeks)
• Contact local IPCN before and after training
• Resources: Flip Chart of presentation/laptop and hand hygiene inspection cabinet
• Keep record of attendance and give to Head of Service/Facility
• Don't forget to complete the online evaluation for CHO's after you complete training - it only takes a minute and this information is very valuable in monitoring progress at local and national level. If you are having any difficulty contact the IPCN
Acknowledgments

IPCNs who have shared their journey and materials for training staff to teach hand Hygiene

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