Hand Hygiene
Objective

• **Objectives**
  – Demonstrate correct Hand Hygiene technique
  – Knowledge of multi-faceted plans to improve hand hygiene
  – Understand appropriate Hand Hygiene practices when caring for patient with suspected or confirmed Ebola

• **Suggested Reading:**
  – WHO Aide-Memoire: Hand Hygiene
  – How to Hand Rub / How to Hand Wash Poster

• **Hand out/materials**
  – See activities
Hand Hygiene

BASICS
Hand Hygiene Quiz

What is the number one way to prevent healthcare-associated infections?
Hand Hygiene…

…the single most effective measure to reduce healthcare-associated infections
Hand Hygiene Quiz

Where should hand hygiene be performed

a. At the nurses’ station
b. At the nearest sink
c. At the point of care
OPTIMAL HAND HYGIENE SHOULD BE PERFORMED...

...AT THE POINT-OF-CARE

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Hand Hygiene Quiz

What is the best way to achieve hand hygiene at the point of care?
...with alcohol based hand rub unless visibly soiled

Alcohol-based hand rubs can be produced at the facility level by following the WHO recommendations and instructions

• it makes hand hygiene possible right at the point-of-care,
• it is faster, more effective, and
• better tolerated.

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Examples of Hand Hygiene Products Easily Accessible at the Point-of-Care

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Hand Hygiene Quiz

What are the WHO 5 Moments for hand hygiene?
Your 5 Moments for Hand Hygiene

1. BEFORE TOUCHING A PATIENT
   Clean your hands when leaving the patient’s side, after touching a patient and his/her immediate surroundings, To protect yourself and the health-care environment against germ spread!

2. BEFORE CLEAN / ASEPTIC PROCEDURE
   Clean your hands immediately before accessing a critical site with infectious risk for the patient!
   To protect the patient against harmful germs, including the patient’s own, entering his/her body!

3. 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 health-care environment from harmful germs!

4. AFTER TOUCHING A PATIENT
   Clean your hands after touching any object or furniture in the patient’s immediate surroundings, when leaving without having touched the patient!
   To protect yourself and the health-care environment against germ spread!

5. AFTER TOUCHING PATIENT SURROUNDINGS

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The 5 Moments

Applies to all settings where direct contact with patients takes place.

1. BEFORE TOUCHING A PATIENT
2. BEFORE CLEAN / ASEPTIC PROCEDURE
3. AFTER BODY FLUID EXPOSURE RISK
4. AFTER TOUCHING A PATIENT
5. AFTER TOUCHING PATIENT SURROUNDINGS

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Hand Hygiene Quiz

For how many seconds to perform hand wash?
How to handwash

To effectively reduce the growth of germs on hands, handwashing must last 40–60 secs and should be performed by following all of the illustrated steps.
Hand Hygiene Quiz

For how many seconds should you perform hand rub?
To effectively reduce the growth of germs on hands, **handrubbing** must be performed by following all of the illustrated steps. This takes only 20–30 seconds!
Time Spent Cleansing Hands:
one nurse per 8 hour shift

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

- Alcohol-based handrub: 18 minutes
  - Based on seven (20 second) handrub episodes per hour

~ Alcohol-based handrubs reduce time needed for hand disinfection ~

Voss A and Widmer AF, Infect Control Hosp Epidemiology 1997:18;205-208
Alcohol-Based Handrubs: What benefits do they provide?

- Require less time
- More effective for standard handwashing than soap
- More accessible than sinks
- Reduce bacterial counts on hands
- Improve skin condition
Areas Frequently Missed by Healthcare workers

Hand hygiene activity
Golden Rules: Summary

- Performed at the **point-of-care**
  - exactly where **you** are delivering health care to patients

- Performed when any of the **5 Moments** (indications) occurs

- Using the appropriate **technique** and time **duration**

- Performed with an **alcohol-based formulation** if available

- Performed with **soap and water** when visibly soiled
Hand Hygiene Quiz

After using gloves there is no need for hand hygiene.

True or False?
Hand Hygiene and Glove Use

GLOVES PLUS
HAND HYGIENE
= CLEAN HANDS

GLOVES WITHOUT
HAND HYGIENE
= GERM
TRANSMISSION

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Hand Hygiene

IMPROVING COMPLIANCE
Obstacles to Hand Hygiene

Do healthcare workers perform Hand Hygiene 100% of the time?
– Average reported compliance with hand hygiene is about 39%

Why is Compliance so poor?

WHO 2009
Self-Reported Factors for Poor Adherence with Hand Hygiene

- Handwashing agents cause irritation and dryness
- Sinks are inconveniently located/lack of sinks
- Lack of soap and paper towels
- Too busy/insufficient time
- Understaffing/overcrowding
- Patient needs take priority
- Low risk of acquiring infection from patients
- Adherence not typically tracked individually
- Not rewarded
- Adverse events aren’t immediate and their relationship to the missed HH opportunity isn’t always clear

Adapted from Pittet D, Infect Control Hosp Epidemiology 2000;21:381-386.
Obstacles to Hand Hygiene

Discussion: What are the main obstacles to performing 100% hand hygiene?
Overcoming Obstacles

• Multifaceted interventions can lead to improvements and good HH performance
  – Adequate hand hygiene products at point of care
  – Frequent Training
  – Reminders in workplace
  – Rigorous monitoring and feedback with rewards/recognition
  – Accountability
  – Institutional safety climate

• Achieving improvement requires:
  ✓ Ongoing education,
  ✓ Communication,
  ✓ Perseverance and dedication,
  ✓ Engagement,
  ✓ Leadership support,
  ✓ Creativity and adaptability

Pittet, 1999; Boyce Editorial
Improving Hand Hygiene Compliance: Supplies, Equipment and the Environment

- Point of use supplies
  - Sinks
  - Soap
  - Paper towels
  - Alcohol hand rub

- Room set up to make hand hygiene easy
Education/Motivation Programs

- Monitor healthcare workers (HCWs) adherence with recommended hand hygiene practices and give feedback
- Implement a multidisciplinary program to improve adherence to recommended practices
- Encourage patients and their families to remind HCWs to practice hand hygiene

Improving Hand Hygiene Compliance: Communications Campaigns

• Raise awareness
• Educate
• Remind
• Demonstrate leadership commitment
• Clarify institutional priorities
• Define HH as the “norm” and an expectation
• Materials available from WHO… or from other sources!
Administrative Measures to Improve Hand Hygiene

- Make improved hand hygiene an institutional priority
- Place alcohol-based handrubs at entrance to patient room, or at bedside
- Provide HCWs with pocket-sized containers

Guideline for Hand Hygiene in Health-care Settings. MMWR 2002; vol. 51, no. RR-16.
Improving Hand Hygiene Compliance: Tools

WHO Guidelines on Hand Hygiene in Health Care

- Based on evidence and expert consensus (>100 international experts)
- Summary translated in the UN official languages
- Implementation strategy and tool package tested in 2007-2008
- Final version including evidence update and lessons learned from testing

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Improving Hand Hygiene Compliance: Measurement

• Why Measure Hand Hygiene Compliance?
  – To understand performance
  – To use data to change behaviors
  – To assess impact of interventions

• How to Measure Hand Hygiene Compliance
  – Direct observation of practice
  – Alcohol hand rub utilization
  – Technology monitoring
  – Healthcare-associated infection (HAI) rates
Performance Indicators

- Monitor and record adherence to hand hygiene by ward or service
- Provide feedback to healthcare workers about their performance
- Monitor the volume of alcohol-based handrub used per 1,000 patient days
- Monitor adherence to policies on wearing artificial nails

Improving Hand Hygiene Compliance: Tools

Key tools recommended for rapid understanding of hand hygiene and Ebola

<table>
<thead>
<tr>
<th>Hand hygiene Why, When and how brochure</th>
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<tbody>
<tr>
<td>How to Handrub Poster</td>
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<tr>
<td>How to Handwash Poster</td>
</tr>
<tr>
<td>Your Five Moments for Hand Hygiene Poster</td>
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<tr>
<td>Glove use information leaflet</td>
</tr>
<tr>
<td>Guide to local production of ABHR</td>
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<tr>
<td>5 Components of the multimodal hand hygiene strategy</td>
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<tr>
<td>Hand Hygiene Self Assessment Framework</td>
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<tr>
<td>Template Action Plan</td>
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<tr>
<td>Observation form</td>
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</tbody>
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Links are on reference page

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Hand Hygiene

WHEN CARING FOR A PATIENT IN EBOLA ISOLATION
Hand Hygiene and Ebola

100% compliance
- Meticulous hand hygiene required to remove potential contamination
- Neglecting to perform hand hygiene after removing PPE will reduce or negate any benefits of the protective equipment

Suggested Products & Techniques
- Use an alcohol-based hand rub or soap and running water
  - Alcohol-based hand rubs if hands are not visibly soiled
  - Soap and water if hands are visibly soiled or sanitizers are unavailable
- Use the correct technique

Availability of hand hygiene supplies
- Make alcohol-based hand rubs available where needed
- Alcohol-based hand rubs can be produced at the facility level by following the WHO recommendations and instructions
Hand Hygiene: Ebola

Perform hand hygiene

BEFORE:

• Putting on gloves and wearing PPE before entry to the isolation room/area

IMMEDIATELY AFTER

• Removal of PPE, upon leaving the care area

Note: Cleaning gloved hands with 0.5% chlorine solution between removing each item of PPE is a common practice in Ebola Care Centers and Ebola Treatment Units.
Do Not Remove Gloves in High Risk Area

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Hand Hygiene: Ebola

IN HIGH RISK AREA:

• Avoid touching contaminated or potentially contaminated surfaces/items/equipment when possible

• If gloves become visibly soiled wipe or clean off with 0.5% chlorine solution

• If gloves become torn or damaged leave isolation area

Note: Cleaning gloved hands with 0.5% chlorine solution between patients is a common practice in Ebola Care Centers and Ebola treatment units
It is NECESSARY and possible to improve hand hygiene in your facility, to protect patients and yourself!

You have the tools to make the change. Now is the time!

BASIC infection control for everyone... this simple measure save lives!

Meticulous hand hygiene is essential for prevention of Ebola.
Activities

1. Practice Hand Hygiene Technique
2. Thinking Through the 5 Moments
3. Hand Hygiene Competency
Practice Hand Hygiene
Technique 1

Supplies
1. Red paint (water-based) or similar
2. Sterile gloves, one pair per person
3. How to hand rub instructions on screen
Practice Hand Hygiene
Technique 2

Practice

1. Put on sterile gloves
2. Hold out your hand, you will receive a small amount of paint
3. Close your eyes
4. Perform hand hygiene
5. Open your eyes and see if you covered all areas of your hand
Thinking Through the 5 Moments

Use the following slides to help participants discuss how actual events in their day to day interaction with patients fit into the 5 moments
Can you identify some examples of this indication during your everyday practice of health care?

Situations illustrating direct contact:
- shaking hands, stroking a child’s forehead
- helping a patient to move around, get washed
- applying oxygen mask, giving physiotherapy
- taking pulse, blood pressure, chest auscultation, abdominal palpation, recording ECG

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Can you identify some examples of this indication during your everyday practice of health care?

Situations illustrating clean/aseptic procedures:

- 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.
Can you identify some examples of this indication during your everyday practice of health care?

Situations illustrating body fluid exposure risk:

- 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 urines, faeces, vomit, handling waste (bandages, napkin, incontinence pads), cleaning of contaminated and visibly soiled material or areas (soiled bed linen lavatories, urinal, bedpan, medical instruments)

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Can you identify some examples of this indication during your everyday practice of health care?

Situations illustrating direct contact:
- shaking hands, stroking a child forehead
- helping a patient to move around, get washed
- applying oxygen mask, giving physiotherapy
- taking pulse, blood pressure, chest auscultation,
- abdominal palpation, recording ECG

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Can you identify some examples of this indication during your everyday practice of health care?

Situation illustrating contacts with patient surroundings:

- changing bed linen, with the patient out of the bed
- perfusion speed adjustment
- monitoring alarm
- holding a bed rail, leaning against a bed, a night table
- clearing the bedside table

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Hand Hygiene Competency 1

Supplies

• Alcohol-based hand rub
• How to hand rub poster printed
• Pen/Pencil
Hand Hygiene Competency 2

Competency

• Get supplies
• Find a partner
• Check off your partner as they perform hand hygiene
• Make corrections to their technique if needed
PREVENTION IS PRIMARY!

Protect patients…protect healthcare personnel…

promote quality healthcare!
Resources

- WHO 2014 Interim Infection Prevention and Control Guidance for Care of Patients with Suspected or Confirmed Filovirus Haemorrhagic Fever in Health-Care Settings, with Focus on Ebola
  [Link](http://apps.who.int/iris/bitstream/10665/130596/1/WHO_HIS_SDS_2014.4_eng.pdf?ua=1&ua=1)

- WHO 2011 Aide-Memoire Infection Control: Core components of infection prevention and control programmes in health care
  [Link](http://www.who.int/csr/resources/publications/AM_CoreCom_IPC.pdf)

- WHO Standard Precautions in Health Care
  [Link](http://www.who.int/csr/resources/publications/EPR_AM2_E7.pdf)
Resources

• World Health Organization Hand Hygiene Resources
  – http://www.who.int/gpsc/5may/Hand_Hygiene_Why_How_and_When_Brochure.pdf
  – http://www.who.int/gpsc/5may/Glove_Use_Information_Leaflet.pdf
  – http://www.who.int/gpsc/5may/Guide_to_Local_Production.pdf
  – http://www.who.int/gpsc/country_work/hhsa_framework.pdf
  – http://www.who.int/gpsc/5may/How_To_HandRub_Poster.pdf
  – http://www.who.int/gpsc/tools/HAND_WASHING.pdf
  – www.who.int/gpsc/5may/Observation_Form.doc

• New England Journal of Medicine Hand Hygiene Video (multiple languages) http://www.who.int/gpsc/5may/hand_hygiene_video/en/