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CLINICAL SUMMARY

HAND HYGIENE: WHY, HOW & WHEN?

By: World Health Organization (WHO)

BACKGROUND

Hands are the main vector of germ transmission in healthcare. Therefore, appropriate hand hygiene is the most important measure to avoid the transmission of pathogens and prevent healthcare-associated infections (HAI's).

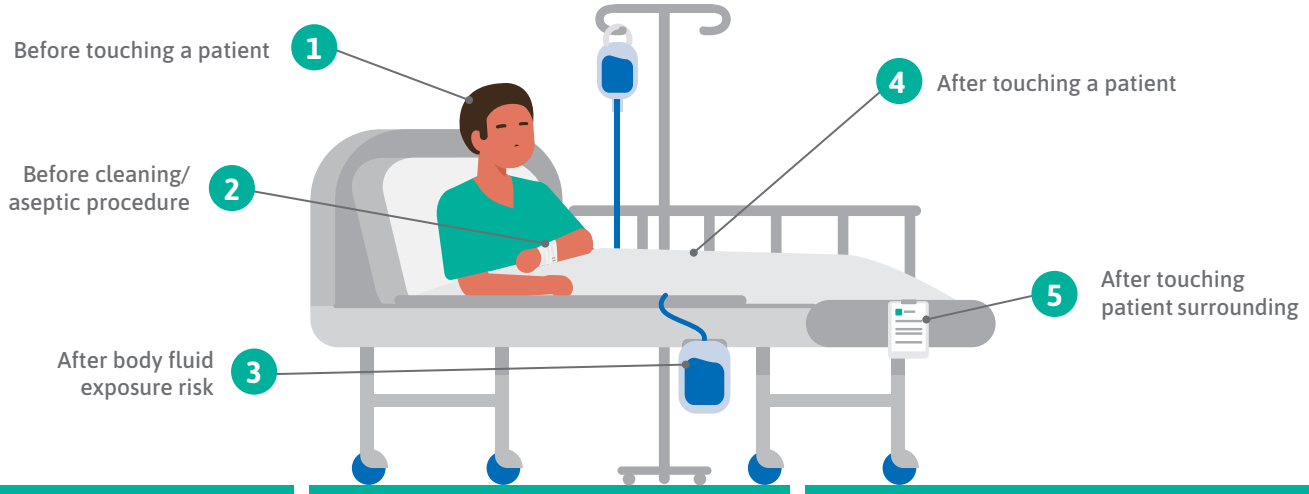
OBJECTIVES

HAI's are recognized to negatively impact patient safety and financial costs. The World Health Organization (WHO) identified the importance of hand hygiene to decrease the burden of HAI's and the ensuing cost in US of 6.8 billion US dollars. In response, WHO developed a Hand Hygiene Improvement Program which included "My Five Moments for Hand Hygiene" to guide healthcare workers, and the glove use pyramid to aid in the decision-making process. Hand hygiene can be performed with an alcohol-based hand rub (20-30 seconds) or soap and water (40-60 seconds) and is manufacturer's specific.[1]

This quasi-experimental study aimed to assess the effect of implementing WHO Multimodal Hand Hygiene Improvement Strategy among healthcare workers of a tertiary teaching hospital in a developing country.[2] The Multimodal strategy aims to influence healthcare worker behavior to improve patient outcomes for HAI's.[1]

METHODS

The WHO's compliance to hand hygiene practices was assessed before and after the implementation of the Multimodal Hand Hygiene Improvement Strategy. The strategy includes "My five moments for hand hygiene":



Sterile glove 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 situation

Potential exposure to blood, body fluids, secretions, excretions and items visibly soiled by body fluids.

Direct patient exposure
Contact with blood:
- Infectious and dangerous organisms
- Epidemic or emergency situations
- IV insertion and removal
- Discontinuation of venous line
- Pelvic or vaginal examination

Indirect patient exposure
- Emptying emesis bassin
- Handling/ cleaning instruments
- Handling waste
- Cleaning up spills

Gloves not indicated
(Except for CONTACT precautions)

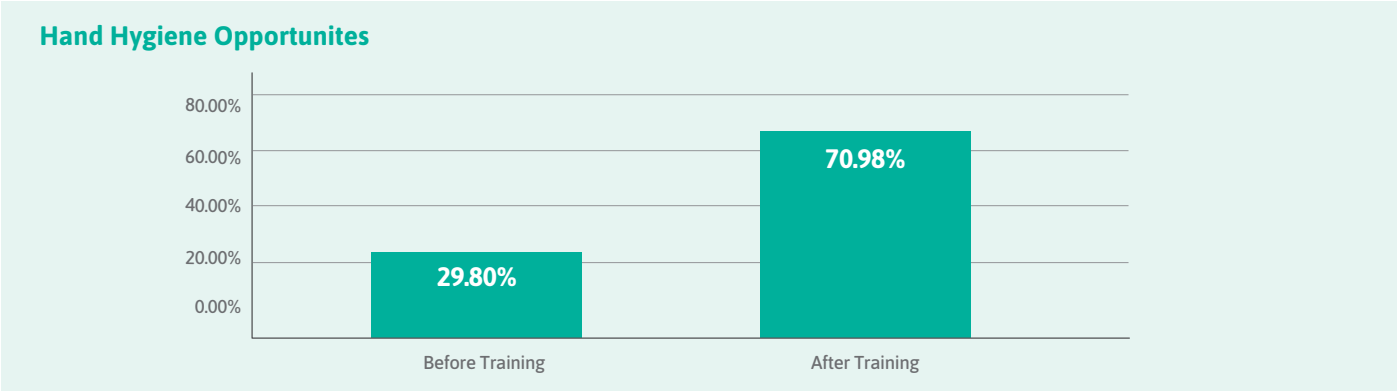
No potential for exposure of body fluid, or contaminated environment.

Direct patient exposure
- Taking blood pressure, temperature or pulse
- Dressing the patient
- Transporting patient

Indirect patient exposure
- Using the telephone
- Writing on patient chart
- Distributing or collecting patient's trays
- Removing or replacing patient's bed

RESULT

A quasi-experimental study was conducted at Nemazee Hospital, the largest hospital in southern Iran, between June 2014 and June 2015. The entire project included the five Multimodal Hand Hygiene Improvement Strategy: (1) facility preparedness, (2) baseline evaluation, (3) implementation, (4) follow-up evaluation, and (5) ongoing planning and review cycle.[1] The average number of opportunities observed improved from baseline to after the intervention from 29.8% to 70.98%.[2]



Hand hygiene compliance was assessed among healthcare workers according to WHO's 5 moments for hand hygiene at a tertiary teaching hospital in Shiraz, Iran. There was a significant change in compliance before and after implementation of WHO Multimodal Hand Hygiene Improvement Strategy (29.8% to 70.98%).[2]

CONCLUSION

The further implementation of the WHO's hand hygiene program can significantly improve hand hygiene compliance and reduce the risk of healthcare-associated infections. Multimodal interventions including education is important for healthcare workers to understand the significance of hand hygiene at the correct moments during patient care. As part of the five moments, it is also key that healthcare workers understand when medical gloves should be worn to prevent hands from becoming exposed to blood or body fluids during a procedure. Hand hygiene must always be performed after step 3 and glove removal.

APPLICATION FOR PRACTICE

1

WHO Multimodal Hand Hygiene Improvement Strategy can lead to an improvement of hand hygiene practice in healthcare

2

An interventional program in a large pilot hospital and in a developing country could serve as an acceptable model for other initiatives

3

The significance of hand hygiene and commitment to it should also be replicated worldwide, especially in countries with lower compliance

Note: This clinical summary is written as an abbreviated version by clinicians at Ansell Healthcare Products LLC. Please refer to the full text version for complete information.

REFERENCES

1. *WHO Guidelines on Hand Hygiene in Health Care: First Global Patient Safety Challenge Clean Care Is Safer Care. Geneva: World Health Organization; 2009.*
2. *Farhoudi F, Sanaei Dashti A, Hoshangi Davani M, Ghalebi N, Sajadi G, Taghizadeh R. Impact of WHO Hand Hygiene Improvement Program Implementation: A Quasi-Experimental Trial. Biomed Res Int. 2016;2016:7026169.*

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