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Are We Performing Hand Hygiene: A Lifesaving Skill Correctly?

Nishith Govil*, Shalini Dadu, Vinay Rai***, Parag Kumar***

Abstract

Introduction: This question is asked invariably just like being asked during CPR's correct method and right timing of practicing hand hygiene to avoid a loss of life to hospital acquired infection (HAI). Are we doing enough? Are we reminding others enough? Aim: This study is done to assess the level of knowledge; attitudes and practices among health care worker in ICU with regard to hand hygiene and to suggest documented and globally accepted recommendation for betterment in present practices and to improve compliance.

Methodology: 100 nurses were selected by stratified random sampling technique and given a questionnaire consisted of standard precautions for hand hygiene. Next we intervene with an education module explaining all the measures that should be followed to control nosocomial infection and correct indications and methods for hand hygiene then we study the impact of education and measure any change in the level of compliance and attitude among different health care worker. Objectively we compared the result of skin swab culture from the dorsum of nurse's hands for presence of endogenous microbial flora before and after the educational intervention.

Statistical analysis: Descriptive statistics were used to summarize the data obtained.

Result and conclusion: If the measures followed for hand hygiene are continuously pursued and upgraded, the infection level can be further reduced. This can be done by giving training, conducting awareness programme, providing asses of healthcare worker to standard requirements of hand hygiene and implementation of infection control programs.

Keywords: Hand Hygiene; ICU; Lifesaving Skill.

Introduction

This question is asked invariably just like being asked during CPR – correct method and right timing of practicing hand hygiene to avoid a loss of life to hospital acquired infection (HAI). Are we doing enough? Are we reminding others enough? To know the answers of these questions we conducted a observational study to assess the knowledge, attitude and practices among health care worker (HCW) in the role of hand hygiene in preventing HAI in a teaching medical school.

Nosocomial infections affect both developed and resource-poor countries and are a significant economical and morbidity burden both for the patient and for public health [1]. Prolonged stay not only increases direct costs to patients but also indirect costs due to lost work. A study by Coella R et al [2] showed that the overall increase in the duration of hospitalization for patients with surgical wound infections was 8.2 days, ranging from 3 days for gynecology to 9.9 for general surgery and 19.8 for orthopaedic surgery. The increased use of antibiotics, need for isolation and the use of additional laboratory and other diagnostic studies also contribute to costs. Hospital-acquired infections divert resource allocation for primary and secondary health care to the management of potentially preventable conditions.

The WHO study [1] has shown that the highest prevalence of nosocomial infections occurs in intensive care units and in acute surgical and orthopaedic wards. There are various modes of acquiring nosocomial infections but direct transmission from one patient to another by way of health

Author's Affiliation:
*Assistant Professor, **Associate Professor, ***Professor, Department of Anesthesiology, Shri Gururam Rai Institute of Medical and Health Sciences, Dehradun-248001, Uttarakhand, India.

Corresponding Author:
Nishith Govil, House No 707, Street 4, Lane 5, Rajendranagr, Dehradun-248001, Uttrakhand, India.
E-mail: nishithgovil@rediffmail.com

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care workers (HCWs) who have not washed their hands between patients or HCWs who do not practice control measures such as hand disinfection or glove use is the most common cause. Despite knowing the significance of hand hygiene compliance of HCWs with the recommended hand hygiene practices remains low. Causes of poor compliance are lack of awareness among HCW and the organization, cost containment, logistical barriers and other reasons like dryness of skin, being too busy, and wards being full and understaffed. At many places lack of access to sinks, running water and alcohol-based handrub is likely to contribute to lower rates of compliance in hand hygiene

The importance of hand hygiene is universally acknowledged by organizations such as the Joint Commission, World Health Organization (WHO) and Centers for Disease Control (CDC) which recommend hand hygiene practices and interventions to improve hand hygiene compliance in order to reduce health care-acquired infections [3,4].

This study is done to identify priorities area for change, guide the preparation and revision of ongoing action plans. Finding out details about the baseline knowledge of HCW, prevailing practices and hand hygiene compliance rates ideally should be completed by the hand hygiene programme coordinator at speciûed follow-up intervals when an update is necessary to maintain the required hand hygiene infrastructures.

Objective

1. To assess the level of knowledge, attitudes and practices among health care worker in ICU with regard to hand hygiene.
2. To suggest documented and globally accepted recommendation for betterment in present practices and to improve compliance.

Methodology

The study was done over a period of one month in the two surgical ICU of a tertiary hospital associated with a teaching medical college after taking due permission from the research committee, medical superintendent and ICU in charge This is a Descriptive Prospective study where 100 ICU nursing staff of either sex was enrolled and data collection was done by interviewing them through semi structured questionnaire. After collecting the data, it was analyzed by using percentage analysis and bar graphs to reach a conclusion.

100 nurses were selected by stratified random sampling technique from the directory for each ICU. For our survey we use the instrument "Hand Hygiene Knowledge Questionnaire for Health- Care Workers" prepared by infection control experts from WHO according to international guidelines on standard hand hygiene practices. The questionnaire consisted of three main domains, with 21 close-ended items i.e., students' demographic profile (10 items), knowledge (5 items), and following standard precautions for hand hygiene (6 items).

Prior to the study, participants were given a brief introduction to the purpose of the study, after which their consent was sought and obtained. All the participants completed and returned the Questionnaire giving a response rate of 100%. After the collection of filled questionnaire feedbacks were taken from them about their current hand hygiene practices in ICU in preventing nosocomial infection

Next day we intervene with an education module explaining all the measures that should be followed to control nosocomial infection and correctindications andmethods for hand hygiene. Then we again distribute the questionnaire at different time intervals to study the impact of education and measure any change in the level of compliance and attitude among different health care worker. Objectively we compared the result of skin swab culture from the dorsum of nurse's hands for presence of endogenous microbial flora before and after the educational intervention. These cultures were collected from the hands of all the nurses during their working hours in the ICU while giving medical care to the patients.

We have conducted our study in the Surgical ICU of our hospital which has the capacity to intake 24 patients for postoperative care as well as patients of trauma and other surgical emergencies. Majority of patients are admitted for a prolong stay with Foley's catheter, central lines or peripheral IV cannulas, drains and have to undergo regular dressing changes by the doctors and nursing staffs. Patient's mobilization during nursing care or dressings or for recuperation as well as their waste management is also carried out by nursing staff and ward aides.

Statistical Analysis and Results

We used a data capturing form to collect subjects' sociodemographic characteristics, their understanding of nosocomial infection and their main source of information.Descriptive statistics were used to summarize the data obtained. Questions were

asked regarding practices followed for hand hygiene, compliance of hand hygiene and HCW's knowledgeand interest in upgrading their knowledge about nosocomial infections were assessed. A response rate of 100% was achieved through close follow-up among the participants.

Profiles of 100 nursing staff randomly sampled to participate in our studycomprised of 28 males (28%) and 72 females (72%). Their mean age was 23.5 ± 1.20 years. Their education background with respect to qualifications and working experience in ICU were similar.

Of the staff interviewed, 80% of the nursing staff has not received any formal training in hand hygiene in the last three year. The knowledge they have got is generally acquired from their colleagues and seniors. Also what they have learned during their internship and professional course has not been updated anytime with respect to hand hygiene as well as others measures undertaken to reduce incidence of hospital acquired infection. 38% of the respondents use hand rub as a method of hand hygiene in comparison to soap and water wash because it takes less time to sterilize their hands with alcohol based preparation, washing area is far from their service area and due to other factors discussed later.

Majority of health care worker (26%) consider that "Health-care workers' hands when not clean" is the main route of cross-transmission of potentially harmful germs between patients in a health-care facility. "Patients' exposure to colonized surfaces" is perceived as the second most common (12%) cause of spreading HAI. 40% of the participated staff feels that "The hospital's water system" is the most frequent source of germs responsible for health care-associated infections while only 32% feels that germs already present on or within the patient is the major source of germs.

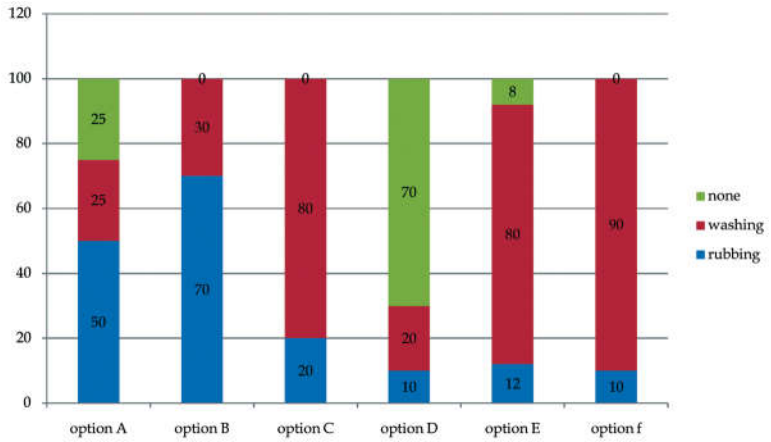
Respondents gave varying answers in response to the question that which hand hygiene action prevents transmission of germs to the patient. Majority feel that "Before touching a patient" and "Immediately before a clean/aseptic procedure" are absolute indications to perform hand washing followed by hand rub with an alcohol based solution. Similarly for the question that which hand hygiene action prevents transmission of germs to the health care worker. Consensus was that "Immediately after a risk of body fluid exposure" and "after touching a patient" exposes the health worker to risk of contamination

A short glossary of terms like hand washing, hand rubbing etc. were provided to nursing staff before they filled the questionnaire. Almost above 90% believe that alcohol based hand rubbing is more rapid, more effective against germs but cause more irritation to the skin than soap and water based hand washing. Surprisingly and correctly 90% of respondents feel that handwashing and hand rubbing are to be done in sequence to protect from the germs present in water

Majority of the staff believed that giving more time for hand rub will be more effective against germs and so around 50% believe that 1 minute is the minimal time needed for alcohol-based handrub to kill most germs on your hands as against 20 seconds (only 25%). Lastly, almost 96 % feels that wearing jewellery and damaged skin are associated with increased likelihood of colonization of hands with harmful germs. Rubbing is the preferred of hand hygiene method before performing a sterile procedure or touching a patient while washing is the preferred method when exposure to blood or bodily fluid occurs.

Varying response was obtained (Table 1) for the query related to their daily working "Which type of hand hygiene method is required in the following situations?" which showed that their knowledge is based on their own assumptions and not on formal protocols.

Which type of hand hygiene method is required in



the following situations?

Option A:before palpation of the abdomen

Option B: before giving an injection

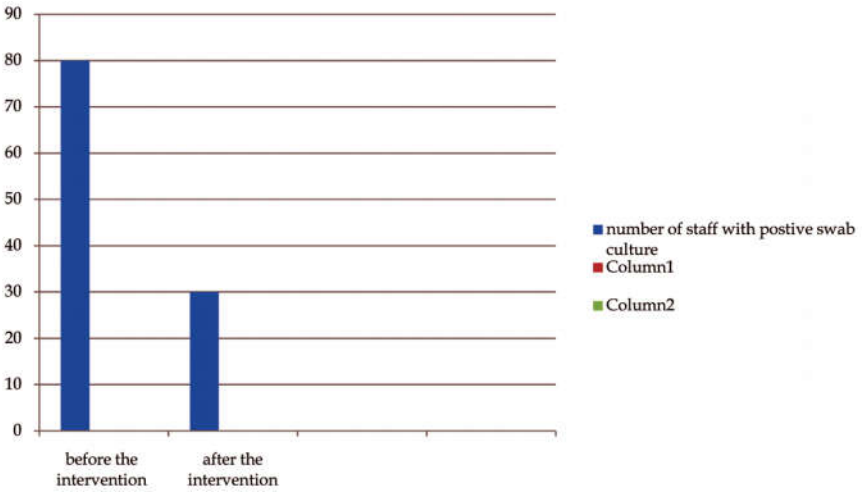
Option C: after emptying a bedpan

Option D: after removing examination gloves

Option E: after making a patient's bed

Option F: after visible exposure to blood

Results of skin swab culture from the dorsum of hand where positive culture means growth of endogenous microbial flora.



Discussion

WHO (2002) Definitions [1]of HAI states thatany infection acquired in hospital by a patient who was admitted for a reason other than that infection or an infection occurring in a patient which was not present or incubating at the time of admission. For most bacterial infections the onset of symptoms more than 48-72 hours after admission and within 10 days after hospital discharge are defined as nosocomial or hospital acquired. When the incubation period is unknown, an infection is called nosocomial if it develops any time after admission. Surgical site infections (SSI) are considered nosocomial if the infections occur within 30 days after the operative procedure or within 1 year if a device or foreign material is implanted.

Common Routes of transmission of HAIare by direct contact – hands andindirectly by contaminated or unsterilized instruments, airborne contacts of dust particles, spores and common vehicle spread. In 1999, Dancer [5]depicts that many microorganisms associated with hospital-acquired infections display two particular features; firstly, they are pathogens of well-established medical importance and secondly, they can withstand the rigorous sterility of the hospital environment. Some pathogens originate from the patient's own flora, especially those who are immunocompromised and others can survive only in human tissues and thus rely upon person-to-to person spread in order to disseminate. In 2009, the WHO published guidelines for proper hand-hygiene[3] protocol and how to design a multi-faceted, multi-modal intervention to increase proper hand hygiene with special focus on individual factors such as normative beliefs (peer behavior), perceived control, and attitude (awareness of being observed) to decrease the spread of nosocomial infection.

A 2008 systematic review [6] addressed studies evaluating the impact of hand hygiene interventions and its impact in reduction of HAI. Interventions included multifaceted initiatives, introduction of new hand-hygiene products, implementation of practices and policies, direct surveys and electronic monitoring. Eighteen of 31 included studies (58%) reported a statistically significant reduction in healthcare-associated infections with the intervention compared with the control group.

However progress in decreasing HAI is stopped by decrease of compliance with the standard protocols. Some Observed risk factors for poor adherence to recommended hand-hygiene practices are Physician status (rather than a nurse), Nursing assistant status (rather than a nurse), Male sex, working in an ward with high patient load rather than ICU and activities with low risk of cross-transmission. Self-reported factors by nurses for poor adherence with hand hygiene are handwashing agents causing irritation and dryness, sinks are inconveniently located, lack of soap and paper

towels, being too busy, understaffing, patient needs taking priority. And lastly lack of knowledge of guidelines/protocols, beliefs that glove use obviates the need for hand hygiene, forgetfulness, no role model from colleagues or superiors, skepticism regarding the value of hand hygiene, disagreement with the recommendations and lack of scientific information of definitive impact of improved hand

Hand Hygiene Knowledge Questionnaire for Health-Care Workers

Period Number*

- The knowledge required for this test is specifically transmitted through the WHO hand hygiene training material and you may find the questions more difficult if you did not participate in this training.
- Tick **only one answer** to each question.
- Please read the questions carefully before answering. Your answers will be kept confidential.
- **Short Glossary:**

Alcohol-based handrub formulation: an alcohol-containing preparation (liquid, gel or foam) designed for application to the hands to kill germs.

Facility: health-care setting where the survey is being carried out (e.g., hospital, ambulatory, long-term facility, etc).

Handrubbing: treatment of hands with an antiseptic handrub (alcohol-based formulation).

Handwashing: washing hands with plain or antimicrobial soap and water.

Service: a branch of a hospital staff that provides specified patient care.

Ward: a division, floor, or room of a hospital for a particular category or group of patients (it corresponds to the smallest segmentation of the health-care facility; one service can include multiple wards).

1. **Personal ID**:**
2. **Date:**
3. **Facility:**
4. **Service**:**
5. **Ward**:**
6. **City:****
7. **Country**:**

8. **Gender:** ☐ Female ☐ Male
9. **Age:** ☐ years
10. **Profession***:** ☐ Nurse ☐ Auxiliary nurse ☐ Midwife ☐ Medical doctor ☐ Resident ☐ Technician ☐ Therapist ☐ Nurse student ☐ Medical student ☐ Other

11. * To be completed by the data manager.
** **Optional**, to be used if appropriate, according to the local needs and regulations.
*** **Technicians**: radiologist, cardiology technician, operating room technician, laboratory technician
Therapist: physiotherapist, occupational therapist, audiologist, speech therapist
Others: dietician, dentist, social worker, etc.

1. **Department (please select the department which best represents yours):**

☐ Internal medicine ☐ Surgery ☐ Intensive care unit ☐ Mixed medical/surgical

☐ Emergency unit ☐ Obstetrics ☐ Paediatrics ☐ Long-term/rehabilitation

☐ Outpatient clinic ☐ Other

2. **Did you receive formal training in hand hygiene in the last three years?** ☐ Yes ☐ No

3. **Do you routinely use an alcohol-based handrub for hand hygiene?** ☐ Yes ☐ No

4. **Which of the following is the main route of cross-transmission of potentially harmful germs between patients in a health-care facility? (*tick one answer only*)**

a. ☐ Health-care workers' hands when not clean

b. ☐ Air circulating in the hospital

c. ☐ Patients' exposure to colonised surfaces (i.e., beds, chairs, tables, floors)

d. ☐ Sharing non-invasive objects (i.e., stethoscopes, pressure cuffs, etc.) between patients

5. **What is the most frequent source of germs responsible for health care-associated infections? *(tick one answer only)***

a. ☐ The hospital's water system

b. ☐ The hospital air

c. ☐ Germs already present on or within the patient

d. ☐ The hospital environment (surfaces)

6. **Which of the following hand hygiene actions prevents transmission of germs *to the patient*?**

e. Before touching a patient ☐ Yes ☐ No
f. Immediately after a risk of body fluid exposure ☐ Yes ☐ No
g. After exposure to the immediate surroundings of a patient ☐ Yes ☐ No
h. Immediately before a clean/aseptic procedure ☐ Yes ☐ No

7. **Which of the following hand hygiene actions prevents transmission of germs *to the health-care worker*?**

i. After touching a patient ☐ Yes ☐ No
j. Immediately after a risk of body fluid exposure ☐ Yes ☐ No
k. Immediately before a clean/aseptic procedure ☐ Yes ☐ No
l. After exposure to the immediate surroundings of a patient ☐ Yes ☐ No

8. **Which of the following statements on alcohol-based handrub and handwashing with soap and water are true?**

a. Handrubbing causes skin dryness more than handwashing ☐ True ☐ False

b. Handrubbing is more effective against germs than handwashing ☐ True ☐ False

c. Handwashing and handrubbing are recommended to be performed in sequence ☐ True ☐ False

1. **What is the minimal time needed for alcohol-based handrub to kill most germs on your hands?** ***(tick one answer only)***

   d. ☐ 20 seconds

   e. ☐ 3 seconds

   f. ☐ 1 minute

   g. ☐ 10 seconds

2. **Which type of hand hygiene method is required in the following situations?**

h.	Before palpation of the abdomen	☐ Rubbing	☐ Washing	☐ None
i.	Before giving an injection	☐ Rubbing	☐ Washing	☐ None
j.	After emptying a bedpan	☐ Rubbing	☐ Washing	☐ None
k.	After removing examination gloves	☐ Rubbing	☐ Washing	☐ None
l.	After making a patient's bed	☐ Rubbing	☐ Washing	☐ None
m.	After visible exposure to blood	☐ Rubbing	☐ Washing	☐ None

3. **Which of the following should be avoided, as associated with increased likelihood of colonisation of hands with harmful germs?**

n.	Wearing jewellery	☐ Yes	☐ No
o.	Damaged skin	☐ Yes	☐ No
p.	Artificial fingernails	☐ Yes	☐ No
q.	Regular use of a hand cream	☐ Yes	☐ No

Thank you very much for your time!

WHO acknowledges the Hôpitaux Universitaires de Genève (HUG), in particular the members of the Infection Control Programme, for their active participation in developing this material.

hygiene on health-care–associated infection rates.

A study by Boyce [7] in 2011 with the focus on "Monitoring health care workers' compliance with hand hygiene practices"recommends using validated methodology for monitoring compliance which include patient-observations, measuring of hand hygiene product consumption and electronic hand hygiene compliance monitoring systems (e.g. real-time location systems or video monitoring). Similarly the Joint Commission created a monograph for health care organizations to properly measure hand hygiene compliance using three measurement methods i.e. surveys, measuring product use and directly observing hand hygiene performance. Comprehensive content for the monograph came from the Consensus Measurement in Hand Hygiene Project and published review literature [8].

In response to feedbacks in removing the flaws and additional perceived barriers that come to our notice from the respondents of our study are lack of active participation in hand-hygiene promotion at institutional level, lack of role model, lack of motivation and rewarding for compliers with hand hygiene and lastly lack of HCW's concern for own individual safety from protection from HAI. Similar views are echoed in a 2010 review [9] that a successful hand hygiene educational program has several key features which include reinforcement of hand hygiene

messages, health care workers' perceived importance of hand hygiene and its role in prevention of healthcare-associated infections, monitoring and feedback of hand hygiene practices. Further practical education tools, role-modeling by senior staff, supportive infrastructure, multimodal interventions and teaching methodology should be progressive that include local culture, priorities and available resources to make a significant change.

The Institute for Healthcare Improvement, in collaboration with the CDC, the Association for Professionals in Infection Control and Epidemiology, and the Society of Healthcare Epidemiology of America, created a how-to guide [10] on improving hand-hygiene among health care workers for organizations withfour key aims to improve knowledge, implement knowledge, to ensure the availability of hand hygiene products at the point of care and to ensure that competency and compliance in hand hygiene is regularly verified, monitored and appropriate feedback loops are in place. The CDC has given guideline [11] that provides suggestions and rationale for proper hand hygiene techniques and indications for glove use, interactive tools, educational, motivational and promotional posters aiming to demonstrate and remind proper hand-hygiene practice.

A 2010 Cochrane systematic review (updated 2007 review) [12] included randomized controlled trials, controlled clinical trials, controlled before and after studies, and interrupted time series analyses from 1980-2009 found insufficient evidence that hand-hygiene interventions improve hand hygiene in the hospital setting. Four studies were included with one study finding a statistically significant improvement in hand hygiene 4 months post-intervention, two studies finding a statistically significant increase in product use which was sustained at one site for 2 years, and one study finding no effect in the intervention compared with the control group 3 months post-intervention. However in our study data regarding culture of microbial flora from HCW's hand collected confirmed presence of compliance with regard to hand hygiene after one month. Not included in this study but we have planned for check of compliance at every 3 months interval by same parameter of skin swab culture till one year.

After our intervention in form of knowledge and reminders skin swab culture showing growth in 30 % of the nurses shows that level of compliance is still not satisfactory, long term follow up with constant reminder is necessary to instill the desire to perform.. An interesting study by Irene Okran [13] concluded that HCWs have knowledge of HAIs' preventive methods however, implementation of these knowledge through compliance were poor resulting in 54.9% washing hands always with water, 53.5% washing always with soap and 71.9% disinfecting with alcohol rub.

Lastly an important consideration that we miss in our study is the role of patient and visitors in reducing HAI. A 2011 review by McGuckin and colleagues found evidence of the importance of patient engagement or empowerment in terms of patient participation, knowledge, observatory skills and a facilitating environment for their participation in hand hygiene improvement create a huge difference. The majority of patients agreed that they would ask their health care provider to wash their hands (80% to 90%). However later studies found little efficacy of patient empowerment interventions to improve health care worker hand hygiene [14].

Conclusion

Our study revealed that current physical facilities available in our hospital for infection control are good and meets the standard level although knowledge of the health care provider about hand hygiene is not based on formal training but is based on their own assumptions and prevailing practices. If the measures followed for hand hygiene are continuously pursued and upgraded, the infection level can be further reduced. This can be done by giving training, conducting awareness programme, providing asses of healthcare worker to standard requirements of hand hygiene and implementation of infection control programmes. Besides healthcare provider, the awareness about infection control should also be developed among visitors and patient's attendant. All available material, efforts, skill and knowledge should be directed towards achieving the common objective of decreasing the incidence of hospital acquired infection.

Following limitation is felt after conducting this study:

In order to assess the efficacy of education programme we did not observe for the change in compliance long term with hand washing procedures in nursing staff after imparting them education. Further studies are needed to study the impact of interventions on the level of change in attitude and practices at different interval of time.

Well-developed tools are available for implementing hand hygiene interventions, although studies are needed to know high-quality evidence demonstrating which interventions are most effective.

New strategies, such as patient engagement in hand-hygiene interventions, are an emerging area with only a few studies assessing their effectiveness, and need further research on how best to implement them effectively.

Many factors potentially influenced the response of participants in this study ranging from different levels of entry of HCW into the observation phase of program, extent of physical contact with patients, training in hands-on techniques and general patient handling practices.

Finally, research may be directed toward understanding the effectiveness of specific elements of hand hygiene interventions. Interventions should be multimodal, addressing HCW's knowledge, attitudes and beliefs regarding hand hygiene, as well as strategies for behavioral change, and should ideally be tailored to institutional needs as well as different health care situations. Health care administrators embarking on a hand hygiene intervention should take advantage of the tools developed by the CDC and the WHO. This calls for a review of health care curricula to pave the way for more pragmatic infection control teaching in all our health care programs.

Recommendations

Following recommendations are based on the analysis of by Pittet D [15] and Guideline for Hand Hygiene in Health-Care Settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force [16]. CDC MMWR October 25, 2002 / Vol. 51 / No. RR-16

1. Prepare an action plan to implement these recommendations, involving all key health-care providers who will make system change happen. Ensure an adequate infrastructure and continuous supply of hand hygiene products at the right time and at the right location. Consider a timeframe and potential costs for meeting these requirements.
2. Each point of patient care will have sinks for handwashing with safe and clean running water. Soap and alcohol based handrub with single-use towel (paper or cloth) for hand drying should be made available;
3. Where taps are not present, water "flowing" from an already ûlled container with a tap is required. Access to water without touching the tap with soiled hands is preferred.
4. Alcohol-based handrub, meeting the recognized standards for antimicrobial efûcacy (ASTM or EN standards) should be well tolerated for skin, economical and are purchased in adequate quantities.
5. Durable and reusable Dispensers should be made available at the point of care. They should be well-functioning and reliably contain alcohol-based handrub.
6. All health-care workers require full training and education on the importance of hand hygiene, the "My 5 Moments for Hand Hygiene" approach and the correct steps for hand washing and hand rubbing.
7. By spreading clear messages with a user-centered approach, training and education aims to induce behavioral change and ensure that compliance is deep-rooted and maintained. As hand hygiene improvement start occurring, regular education updates and competence checks to all existing and new starts health-care workers is required.
8. A top-down direction to training is needed whereby the hand hygiene programme coordinator will identify the individual's role as trainers and observers. The trainer should have knowledge of infection control policy and familiar with the tools available for surveillance of infection control
9. Activities to train trainers and observers should be led by the hand hygiene programme coordinator, who should have experience of delivering health-care at the bedside and taken part in the facility preparedness.
10. Basic educational sessions for trainers, observers and health-care workers should focus on: background to WHO Patient Safety and the First Global Patient Safety Challenge; Deûnition, impact and burden of HCAI; Major patterns of transmission of health care-associated pathogens, with a particular focus on hand transmission; Prevention of HCAI and the critical role of hand hygiene; WHO Guidelines on Hand Hygiene in Health Care and their implementation strategy and tools, including why, when and how to perform hand hygiene in health care.
11. Reminders in the workplace are the most important tools to prompt and remind health-

care workers about the importance, appropriate indication and procedures for performing hand hygiene. Reminders also inform patients and their visitors of the standard of care that they should expect from their health-care provider with respect to hand hygiene.

12. Posters are the most common reminder and include WHO-branded standard posters to visualize the "My 5 Moments for Hand Hygiene" approach and the correct method of hand washing and hand rubbing. How to Hand wash Poster should be displayed beside each sink (which ideally should coincide with each point of care)
13. Other types of reminders are pocket leaûets, stickers posted at the point of care, special labels including prompting slogans stuck on alcohol-based handrub dispensers and badges with the hand hygiene logo.
14. A pocket leaûet summarizing the key messages to be distributed in the clinical settings where the hand hygiene improvement programme is being implemented. SAVE LIVES: Clean Your Hands Screensaver for computer screens to be displayed on computers used by health-care workers at the facility.
15. Local adaptation of the WHO reminders certainly facilitates local uptake of the strategy by using the best terminology and images according to the culture. Health-care workers will also have access to local hand hygiene guidelines or standard operating procedures.
16. Ensure that the reminders displayed are always in good condition, regularly updated and refreshed changing the images and the slogans regularly.
17. A problem-solving approach should be employed to apply theoretical principles. Facilities should consider implementing a system of checking on the competence of all health-care workers who have received hand hygiene training. This could take the form of an annual training course or a practical hand hygiene demonstration workshop to conûrm competence in relation to correct hand hygiene techniques at the correct moments. Utilizing the hand hygiene knowledge survey will also fulfil the purpose of checks on competence.

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