

Guidebook for Use of Hand Hygiene Surveillance Instrument

Yale New-Haven Hospital and Yale University

Please note: The information contained within this guidebook reflects guidelines for the practice of observing hand hygiene compliance at Yale New-Haven Hospital and Yale University with supporting materials cited from The United States Department of Health and Human Services, Centers for Disease Control and Prevention <http://www.cdc.gov/od/oc/media/pressrel/fs021025.htm> and US Centers for Disease Control and Prevention (CDC) Guideline for Isolation Precautions in Hospitals, 1996. These guidelines may vary slightly from those recommended by the Canadian Patient Safety Institute and the World Health Organization.

This guidebook is designed for observers of hand hygiene to understand how to use the data collection form for hand hygiene observations in order to standardize the process as much as possible.

The guidebook includes:

- 1) Definitions for every column heading and data elements on the form
- 2) Frequently asked questions (FAQs) for each heading
- 3) Appendices of
 - o Hand Hygiene Opportunities
 - o Hand Hygiene Guidelines Fact Sheet
 - o When to Use Gloves.

Directions:

Each row on the observation form corresponds to a separate hand hygiene observation opportunity. The following section describes in detail how each row is to be filled out, and the data recorded, for each individual hand hygiene observation.

Data Elements on Hand Hygiene Observation Form

Hospital Name: Observers should record the name of the hospital where the observations are being performed at the top left hand corner on every observation form.

Date: Observers should record the date of the observation(s) in DD/MM/YYYY format at the top right hand corner of the form. *Each observation form should be used for a single date only. Do not record observations from more than one date on the same sheet. Multiple observation forms may be used for the same date if necessary; however, the date must be recorded at the top of every form.*

For example: June 18, 2004 should read 18/06/2004

Unit name/department: The hospital representative should provide the observer with the name of the unit and/or department being observed:

For example: Urology #3 Ward

FAQs:

1. *How many departments/wards should be observed?*
The observations should cover all inpatient departments, if at all possible. If an individual department has more than one ward associated with it, try to spread the observations across all the wards of the department.
2. *How many observations are required for each department/ward?*
There are no absolute numbers for each department/ward; however, we highly recommend obtaining at least 10 observations of hand hygiene opportunities before contact with patients and at least 10 observations of hand hygiene after contact with patients for each ward.
3. *Are observations to be performed on inpatient and on outpatient units?*
Observations of hand hygiene compliance are to be performed only on inpatient acute care wards or units.

Time of day: Observers should record on the form the time of the observation using a 24-hour (24:00) time scale (re: military time).

FAQs:

1. *Is there a preferred time to do observations?*
No, there is no preferred time to do observations. Each hospital has different schedules and routines on wards. One should try to perform observations at times when there are more health care workers present on the wards. This is the best way to increase the number of hand hygiene opportunities that can be observed.
2. *Can observations be performed on evenings, nights and weekends?*
Yes, if this fits the observer's schedule and there are enough hand hygiene opportunities to observe during those times as anonymously as possible.

Personnel: Observers should record with a CHECKMARK (✓) on the form the position of the individual(s) being observed. There are 4 personnel position categories:

Physician (includes residents)

Nurse

Other clinician (includes respiratory, physical, occupational therapists; medical students and other students; technicians (radiology, electrocardiogram, or ultrasound); clinical staff whom you are not sure of their position)

Other non-clinicians (includes environmental/cleaning staff, food service staff, pharmacists, dieticians, unit secretarial staff, transportation staff, other non-medical staff, and anyone whom you are not sure of their position unless clinical - those would be marked under "other clinician")

FAQs:

1. *What should I record if I do not know the observed person's position?*
If you believe the person is a clinician, but are not sure if they are a nurse or doctor, then record them as "Other clinician". If the person is not a clinician, record them as "Other non-clinicians".
2. *Should I record health care workers' names during the observations?*
No, individual's names are not to be recorded.
3. *How many observations can be done of one individual daily?*
Under each type of hand hygiene opportunity, please only record one observation for each person daily.

For example: Observation of nurse A's hand hygiene compliance may include one hand hygiene opportunity before she had contact with a patient and one after she had contact with the same patient.

Alternatively, observation of nurse A's hand hygiene compliance may include one hand hygiene opportunity before she had contact with a patient and one after she had contact with a different patient or after she had contact with a patient's immediate environment.

If nurse A is observed again later for a hand hygiene opportunity after removing gloves this could be counted if she has not already been observed for this activity.

Therefore, for the same observed individual, the highest number of hand hygiene opportunities that can be observed each day is four.

Hand-hygiene opportunity: Observers should indicate Y/N (Y = YES, N = NO) under the type of hand-hygiene opportunity observed:

1. Before contact with the patient
2. After contact with the patient
3. After contact with environmental surfaces within a patient's immediate area
4. After removal of gloves

FAQs:

1. *What does "patient contact" mean?*

Patient contact includes any type of direct hands on contact with a patient regardless of the type of activity associated with the contact.

For example: shaking hands, examining a patient, positioning a patient in bed, assisting a patient to get in or out of bed, feeding a patient, etc.

Generally, if hand hygiene is performed before patient contact it does not need to be performed again for the same patient, during the same patient encounter, unless one is providing care related to an invasive device or wound; then hand hygiene should be performed in between these activities on the same patient. (See Appendix A)

2. *Must I observe the same person's hand hygiene compliance for both before and after contact with the same patient?*

No, not necessarily. Each observation is independent of the others and does not necessarily have to be part of a paired observation related to the same patient.

3. *If a health care worker wears gloves for contact with a patient, how many hand hygiene opportunities does he/she have and how many observations should I record?*

This scenario would be considered 2 hygiene opportunities. The observer would place one CHECKMARK (✓) under the "Before Contact with Patient" column AND one CHECKMARK (✓) under the "After Gloves Removed" column.

4. *If a health care worker performs hand hygiene after contact with one patient and immediately goes on to the next patient, how should I record this activity?*

If the healthcare worker does not touch *anything or anyone* in between the time they perform hand hygiene after contact with the first patient and contact with the second patient, this can be recorded as two observations (one for "after patient contact" and one for "before patient contact" with the same health care worker).

5. *Under what circumstances should I record activities under “after contact with environmental surfaces within a patient’s immediate area”?*

A health care worker may not touch a patient but instead touches environmental surfaces (e.g. table, chair, telephone, etc.) and/medical equipment (e.g. IV pump or pole) in the immediate vicinity of the patient. The health care worker should then perform hand hygiene before having contact with patients or other environmental surfaces and/or medical equipment outside the patient’s immediate vicinity.

If a healthcare worker has contact with a patient, then performs hand hygiene, then has contact with the patient’s immediate environment but does not perform hand hygiene upon leaving the room before touching other persons or environmental surfaces this would be recorded as 2 separate hand hygiene observations: 1) “Y” (Yes) for “After contact with patient” and 2) “N” (No) for “After contact with environmental surfaces within patient’s area”.

6. *Should the number of observations for before contact with patients be as same as that of after contact patients?*

Not necessarily, but you should try to balance the observations in both categories as much as possible. It can be difficult to capture observations for before patient contact as one has to anticipate that moment in patient care and observe. The after patient contact moment in patient care is generally more obvious and easier to observe.

Hand-Hygiene Practice: Observers should record the materials used to perform hand hygiene (water, soap, alcohol-based hand rub). For hand hygiene opportunities that were observed but not performed, observers should still record data in the appropriate columns regarding availability of hand hygiene materials and agents.

Hand Hygiene Practice: Soap and Water (CHECKMARK: “√” in the column that applies to the individual observation)

1. Hand hygiene with soap* and water for AT LEAST 15 seconds**
2. Hand hygiene with soap* and water for LESS THAN 15 seconds**
3. Hand washing with water only (any duration)

* Soap may be bar or liquid formulation

** Please refer to www.handhygiene.ca for the Canadian Patient Safety Institute's recommendations

Hand Hygiene Practice: Alcohol-Based Hand Rub (ABHR)

ABHR available (Y/N ; Y = YES, N = NO) :

This category should be recorded for each observation regardless of whether hand hygiene was performed or not, including observations where soap/water was used for hand hygiene.

"Available" is defined as:

- ABHR is in the patient's room where the hand hygiene observation was made (may or may not be wall mounted or fixed such as on a mobile treatment cart).
- ABHR is available in the hallway outside the patient room where the hand hygiene observation occurred (may or may not be wall mounted or fixed such as on a mobile treatment cart).

HH with ABHR (Y/N)

If the answer to "ABHR available" is "Yes", observer should record whether or not ABHR was used for hand hygiene during this individual observation.

If the answer to "ABHR available" is "No", then leave the "HH with ABHR" cell in this row blank.

FAQs:

1. *If no hand hygiene is performed, how should this be recorded?*
 - a. Leave the following columns blank:
 - Water and soap; ≥ 15 seconds*
 - Water and soap; < 15 seconds*
 - Water only
 - b. If ABRH is available, record "N" in the column "HH with ABHR".

Gloves Indicated: *Gloves are not a substitute for hand hygiene, thus the "HH Practice" columns must still be recorded as previously described even if the observed person wears gloves for a patient care activity.* Observers should record "Y/N" (Y = YES, N = NO) on the form for the following information regarding gloves for each hand hygiene opportunity observed:

Gloves indicated (Y/N)

In other words, does the observed health care worker's patient care activity or procedure require using disposable latex gloves? Please use Appendix C at the end of this guidebook for general guidance on which patient care activities require the use of gloves. Some examples are: drawing blood, inserting a peripheral IV catheter, changing a wound dressing. Contact with a patient's intact skin, does not require the wearing of gloves.

* Please refer to www.handhygiene.ca for the Canadian Patient Safety Institute's recommendations

Gloves available (Y/N)

“Available” is defined as: gloves are located in the patient’s room or in the hallway just outside the patient’s room. This column should be recorded for each observation regardless of whether gloves are indicated or not, or whether gloves are used or not in this observation.

Gloves used (Y/N)

If the observed person has used gloves, please record “Y” in this column.

If the observed person does not use gloves, regardless of whether or not gloves are indicated, please record “N” in this column.

Gloves disposed of after each patient (Y/N)

Gloves should to be removed and disposed of immediately after each patient use. Please record “Y” if the health care worker being observed removes their gloves after the observed patient contact and disposes of them.

If gloves are not removed between patients or are reused between patients, including if they are removed and washed between patients, this activity should be recorded as “N”.

FAQ:

1. *If the activity does not require the use of gloves, but the health care worker being observed uses gloves how should this be recorded?*

This should be recorded as “N” for the column “Gloves indicated” and “Y” for the column “Gloves used”.

Room Setting: Observers should record the following information on the physical layout regarding the hand hygiene facilities (i.e. sinks) both in the observed patient room and outside of the room. If observations have been done in the same room, only the first row needs to be filled out, and mark the rest of them as “same”.

In Room

Number of sinks in room (#)

Please record the number of sinks located in the observed room. The number of sinks should include any in the patient’s bathroom. If there are no sinks in the patient’s room or bathroom, record “0”.

Soap available (Y/N)

If there is a sink(s), please record if soap (bar or liquid) is available at the sink. If there is no sink(s), leave blank.

Unobstructed access to sink (Y/N)

“Unobstructed” is defined as:

- no obstacles, that must be moved or climbed over, in the path of the health care worker to the sink
- no closed doors, that can only be opened by using one’s hands, to access the sink

Number of occupied beds in room (#)

Please record the number of *occupied* beds in the observed room. For example, if there are six beds in a patient room and only four of them are occupied, then record “4”.

Outside of Room

Sink outside of the Room (Y/N)

Please record if there is a sink(s) outside the patient room (sink(s) in the *same* hallway as the observed patient’s room).

Unobstructed access to sink (Y/N)

Same as “In Room” definition above.

Soap available (Y/N)

If there is a sink(s), please record if soap (bar or liquid) is available at the sink. If there is no sink(s), leave blank.

Appendix A

Hand Hygiene Opportunities

Information source: based on Yale-New Haven Hospital education document

Hand hygiene should be performed:

- ❑ When coming on duty and at the completion of duty
- ❑ Before and after consuming food or drinks
- ❑ Before and after any contact with individual patients
 - After removal of gloves
 - Between a contaminated body site to a clean body site during patient care
 - After contact with a patient's intact skin (e.g., taking a pulse or blood pressure, lifting a patient, examining a patient, etc.)
- ❑ After contact with body fluids or excretions, mucous membranes, non-intact skin or wound dressings
 - After contact with an inanimate object (e.g., medical equipment) in the immediate vicinity of the patient
 - After touching a patient's bedpan, commode, urinal or Foley bag
 - After handling any contaminated items such as linens, soiled diapers, garbage, etc.
- ❑ Personal habits
 - After touching your hair, face, etc.
 - After smoking cigarettes
 - After sneezing, coughing or blowing your nose
 - Before and after use of the bathroom

Hand hygiene includes disinfecting hands using a hand hygiene agent such as **soap and water** for 15 seconds* OR an alcohol-based hand rub. If hand disinfection is done properly, any hand hygiene agent will effectively remove transient microorganisms from the hand surfaces including MRSA, VRE and viruses.

Hand hygiene does not need to be repeated if you have performed effective hand hygiene as above, and not touched anything before your next patient contact activity.

* Please refer to www.handhygiene.ca for the Canadian Patient Safety Institute's recommendations

Appendix B

Hand Hygiene Guidelines Fact Sheet

Information source: The United States Department of Health and Human Services,
Centers for Disease Control and Prevention

<http://www.cdc.gov/od/oc/media/pressrel/fs021025.htm>

- ❑ Improved adherence to hand hygiene (i.e. hand washing or use of alcohol-based hand rubs) has been shown to terminate outbreaks in health care facilities, to reduce transmission of antimicrobial resistant organisms (e.g. Methicillin Resistant *Staphylococcus aureus*) and reduce overall infection rates.
- ❑ CDC released new guidelines in 2002 to improve adherence to hand hygiene in health care settings. In addition to traditional hand washing with soap and water, CDC is recommending the use of alcohol-based hand rubs by health care personnel for patient care because they address some of the obstacles that health care professionals face when taking care of patients.
- ❑ When health care personnel's hands are visibly soiled, they should wash with soap and water.
- ❑ The use of gloves does not eliminate the need for hand hygiene. Likewise, the use of hand hygiene does not eliminate the need for gloves. Gloves reduce hand contamination by 70 percent to 80 percent, prevent cross-contamination and protect patients and health care personnel from infection. Alcohol based hand rubs should be used before and after each patient just as gloves should be changed before and after each patient.
- ❑ When using an alcohol-based hand rub, apply product to palm of one hand and rub hands together, covering all surfaces of hands and fingers, until hands are dry. Note that the volume needed to reduce the number of bacteria on hands varies by product.
- ❑ Alcohol-based hand rubs significantly reduce the number of microorganisms on skin, are fast acting and cause less skin irritation.
- ❑ Health care personnel should avoid wearing artificial nails and keep natural nails less than one quarter of an inch long if they care for patients at high risk of acquiring infections (e.g. patients in intensive care units or in transplant units).
- ❑ Allergic contact dermatitis due to alcohol hand rubs is very uncommon.
- ❑ Alcohol-based hand rubs take less time to use than traditional hand washing. In an eight-hour shift, an estimated one hour of an ICU nurse's time will be saved by using an alcohol-based hand rub.

Appendix C

When to Use Gloves

Information source: US Centers for Disease Control and Prevention (CDC) Guideline for Isolation Precautions in Hospitals, 1996

Gloves are worn to:

- ❑ Provide a protective barrier and to prevent gross contamination of the hands when touching blood, body fluids, secretions, excretions [except sweat], mucous membranes, and non-intact skin.

- ❑ Reduce the likelihood that microorganisms present on the hands of personnel will be transmitted to patients and during invasive or other patient care procedures that involve touching a patient's mucous membranes and non-intact skin.

- ❑ Reduce the likelihood that hands of personnel contaminated with microorganisms from a patient or a fomite (inanimate object) can transmit these microorganisms to another patient. Gloves must be changed between patient contacts and hand hygiene should be performed after gloves are removed.

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Louise M. Dembry, MD, MS, MBA
Hospital Epidemiologist, Co-Director, Quality Improvement Support Services
Yale-New Haven Hospital and Associate Professor of Medicine (Infectious Diseases) and Epidemiology, Yale University