

Origin: Department of Hospital Epidemiology and Infection Control (HEIC)

I. PURPOSE

Effective hand hygiene removes transient microorganisms, dirt and organic material from the hands and decreases the risk of cross contamination from patients, patient care equipment and the environment.

Hand hygiene is the single most important strategy to reduce the risk of transmitting organisms from one person to another or from one site to another on the same patient. Cleaning hands promptly and thoroughly between patient contact and after contact with blood, body fluids, secretions, excretions, equipment and potentially contaminated surfaces is an important strategy for preventing healthcare-associated infections.

II. REFERENCES

1. Centers for Disease Control and Prevention. 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 (October 25, 2002 / Vol. 51 / No. RR-16)
2. World Health Organization. Guidelines on Hand Hygiene in Health Care (Advanced Draft) 2008
3. Centers for Medicare and Medicaid Services. Conditions of Participation 2008
4. The Joint Commission. 2010 Hospital Accreditation Standards
5. Association of Operating and Perioperative Nurses. Recommended Practices for Hand Hygiene in the Perioperative Setting 2012 Perioperative Standards and Recommended Practices.
6. Artificial fingernails & enhancements (see Employee Dress Standards A.3) [Employee Dress Standards - 4.03.04](#)
7. ABHR & Soap & Water [videos](#).
8. [HEIC Standard and Transmission Based Precautions Policy 1.1](#)
9. California Fire Code 2010, Section 1003.3.3.1, Exception 2
10. NFPA 101 Life Safety Code 2000 Edition

III. DEFINITIONS

“Staff” refers to all medical center employees, faculty, temporary workers, trainees, volunteers, students and vendors regardless of employer. This includes staff who provide services to or work in UCSF Medical Center.

IV. POLICY

- A. Clean hands before and after routine patient care activities, including entering and exiting the patient care environment and after hand-contaminating activities. Clean hands before handling medication or preparing food.
- B. Glove use does not replace the need for hand hygiene.
- C. The choice of alcohol-based hand rub (ABHR), antimicrobial soap, or surgical hand preparation is based on:
 1. The degree of hand contamination.
 2. The degree to which reduced bacterial burden is required according to activity (see Table A. Guide for Hand Hygiene Decision-Making).
 3. Transmission and patient risk factors:
 - i. Requirements of immediate patient care
 - ii. High risk patient care (e.g., adult critical care, pediatric critical care, neonatal critical care (See Table A)
 - iii. Confirmed or suspected infection requiring Contact Precautions
 4. Invasive or surgical procedure.

Table A. Guide for Hand Hygiene Decision-Making

TYPE	PRODUCT	METHOD	PURPOSE
Hand decontamination	ABHR	Rub product over all surfaces of hands until dry, at least 20 seconds. Hands must not have VISIBLE SOILING .	To destroy transient and resident microorganisms on hands without visible soiling.
Antimicrobial hand antiseptics	Antimicrobial soap	Wet hands. Rub soap over all surfaces of the hands and wrists, then rinse with water and pat dry with paper towels. Total time 1 to 1 ½ minutes.	To remove soil and remove or destroy transient microorganisms.
Surgical hand antiseptics:	Waterless surgical scrub: Surgicept	Apply antimicrobial scrub agent and water with sponge to achieve friction for 5 minutes.	To remove or destroy transient microorganisms and reduce resident flora.
		OR apply waterless surgical scrub (Surgicept) per manufacturer's instructions	

D. Wearing a simple wedding ring (band) during routine care may be acceptable, but in high-risk settings, such as the operating room and Intensive Care Nursery, all rings or other jewelry must be removed. [Employee Dress Standards - 4.03.04](#)

E. Fingernails:

1. Are to be kept neatly manicured and short, i.e. should not extend past the tip of the finger.
2. Are to be kept clean.
3. Artificial nails or enhancements are prohibited for staff who have direct patient contact, who prepare instruments for sterile procedures or who prepare sterile pharmaceuticals.
4. Nail polish without embedded enhancements in good repair is permitted.

F. Avoid bar soap for hand hygiene by staff.

V. PROCEDURES

A. Hand hygiene indications include:

1. Before touching a patient. For example:
 - a. At the beginning of work
 - b. Upon entry to the patient's room
 - c. Before patient contact, including dry skin contact
 - d. Before contact with a wound
 - e. **Before** donning gloves when providing direct patient care (wearing gloves does not substitute for hand hygiene)
2. Before clean/aseptic procedure. For example:
 - a. Before handling sterile or clean supplies including medications
3. After body fluid exposure. For example:
 - a. After contact with wounds
 - b. When moving from a contaminated body site to a clean body site during patient care;
 - c. Between completing a "dirty" task and starting a clean task e.g. emptying the urine Foley bag, and doing a BP check;
 - d. After removing a dirty dressing and before applying a new dressing
 - e. After contact with patients' body substances

- f. After handling equipment, supplies, or linen contaminated with body substances
 - g. After removing other personal protective equipment **including gloves**
 4. After touching a patient, including:
 - a. Upon exiting the patient care area
 5. After touching patient surroundings. For example:
 - a. Exiting the patient care area
 - b. Before leaving the unit
 6. Additional hand hygiene indicators
 - a. Before preparing food
 - b. After using the restroom
 - c. After touching your face, nose or hair or personal device (e.g. pager, phone)
 - d. Other unique hand hygiene situations as approved by HEIC. ([Appendix D](#))
 7. One hand hygiene episode may satisfy multiple hand hygiene indicators e.g. hand hygiene at room entry may satisfy “before patient contact” or “before handling medications”. Hand hygiene at exit may satisfy “after touching the patient” or “after touching the patient’s surroundings”. In addition to hand hygiene at the points of entry or exit from the patient care environment, additional hand hygiene may be required after a hand contaminating event within the patient care area e.g. “after body fluid exposure”.
- B. Products for cleaning hands (refer to Table B):
1. Use ABHR for routine hand decontamination when hands are not visibly soiled.
 2. Use ABHR or antimicrobial soap for hand washing before invasive procedure such as IV insertion, bronchoscope or urinary catheter insertion.
 3. Use soap and water hand washing for visibly soiled hands.
 4. Use soap and water hand washing upon exit from the room of a patient on Contact Precautions regardless of whether you had contact with the patient.
 5. Use a surgical hand preparation before performing surgery.
 6. Antimicrobial-impregnated wipes (e.g. towelettes) are not as effective as (and are not a substitute for) alcohol-based hand rubs or washing hands with an antimicrobial soap and water for reducing bacterial counts on the hands of staff.
 7. Avoid bar soaps.
 8. Use cassette-refillable dispensers. Do not refill or “top off” soap or ABHR cassettes, and do not use dispensers with refillable reservoirs. This practice can lead to bacterial contamination.
- C. Hand lotion may be used to prevent skin dryness and damage. See [Appendix C](#). Limitations include:
1. Lotion may promote the growth of bacteria. Do not refill containers.
 2. Petroleum-based (ingredients include mineral oil, petrolatum) lotions degrade latex.
 3. Petroleum-based lotions negate the persistent antimicrobial effect of CHG.
- D. Procedures for cleaning hands. Video instructions for proper hand hygiene can be found online: ABHR & Soap and Water [videos](#).
1. ABHR (not for visibly soiled hands)
 - a. Apply product to palm of one hand.
 - b. Rub hands together, covering all surfaces of hands and fingers until hands are dry.
 - c. Follow the manufacturer’s recommendations for product volume.Total time to complete procedure = approximately 20 seconds
 2. Soap and water hand washing
 - a. Stand near the sink, but avoid touching it, as the sink itself may be a source of contamination.
 - b. If using a lever-operated paper towel dispenser, dispense a portion of towel before washing hands.

- c. Using tepid water, wet hands. Avoid splashing and keep moisture away from sleeves and clothing. Avoid using hot water, as repeated exposure to hot water may increase the risk of dermatitis.
- d. Apply soap product according to manufacturer's recommendations.
- e. Rub hands together for at least 15 seconds, covering all surfaces of the hands and fingers.
- f. Rinse hands thoroughly.
- g. Dry hands with disposable towel.
- h. Use towel to turn off faucet for handle-operated faucets to prevent contaminating your hands.

Total time to complete procedure (a to h) = 1–1.5 minutes

Table B. Method of Hand Cleaning Indicated for Reducing Bacterial Burden Based Upon Activity

Activity/Method	Routine Patient Care	High Risk Patient Care	Invasive Procedure	Resistant Organisms	Any Contact Precautions	Surgery
Hand decontamination: ABHR on visibly clean hands	√	√	√	√		
Antimicrobial hand washing: antimicrobial soap and water	√	√	√	√	√	
Surgical hand antisepsis: Use of either an antimicrobial surgical scrub agent intended for surgical hand antisepsis or an alcohol-based antiseptic surgical hand rub is acceptable.						√

E. Surgical Team hand hygiene

1. A traditional, standardized, surgical hand scrub procedure includes:
 - a. Remove jewelry including rings, watches, and bracelets.
 - b. Don a surgical mask during hand scrub.
 - i. Anyone standing at the scrub sink (regardless of whether they are scrubbing), must wear a surgical mask while in the presence of anyone else performing hand scrub activity.
 - c. Wash hands and forearms if visibly soiled with soap and running water immediately before beginning the surgical scrub.
 - d. Clean the subungual areas of both hands under running water using a disposable nail cleaner.
 - e. Rinse hands and forearms under running water.
 - f. Dispense the approved antimicrobial scrub agent according to the manufacturer's written directions.
 - g. Apply the antimicrobial agent to wet hands and forearms using a soft, nonabrasive sponge.
 - h. A three- or five-minute scrub should be timed to allow adequate product contact with skin, according to the manufacturer's written directions.
 - i. Visualize each finger, hand, and arm as having four sides. Wash all four sides effectively, keeping the hand elevated. Repeat this process for opposite fingers, hand, and arm.

- j. For water conservation, turn water off when it is not directly in use, if possible.
 - k. Avoid splashing surgical attire.
 - l. Discard sponges, if used, in appropriate containers.
 - m. Hands and arms should be rinsed under running water in one direction from fingertips to elbows as often as needed.
 - n. Hold hands higher than elbows and away from surgical attire.
 - o. In the OR, dry hands and arms with a sterile towel before donning a sterile surgical gown and gloves.
2. A standardized surgical hand scrub procedure **using an alcohol-based surgical hand rub product (Surgicept)** includes:
- a. Remove jewelry including rings, watches, and bracelets.
 - b. Don a surgical mask. If others are at the scrub sink, a surgical mask should be worn in the presence of hand scrub activity.
 - c. If visibly soiled, prewash hands and forearms with plain soap and water or antimicrobial agent.
 - d. Clean the subungual areas of both hands under running water using a disposable nail cleaner.
 - e. Rinse hands and forearms under running water.
 - f. Dry hands and forearms thoroughly with a disposable paper towel.
 - g. Dispense the manufacturer-recommended amount of the surgical hand rub product. See [Appendix B](#).
 - h. Apply the product to the hands and forearms according to the manufacturer's written instructions.
 - i. Repeat the product application process as directed.
 - j. Rub thoroughly until completely dry.
 - k. In the OR or other invasive procedure room, don a sterile surgical gown and gloves.

VI. RESPONSIBILITIES

A. Indications and Technique

HEIC is responsible to determine indications and techniques for hand hygiene and product suitability to accomplish desired hand hygiene results.

B. Dispenser Type, Location, and Maintenance

1. HEIC recommends that ABHR dispensers be installed at the entry to the patient care environment (e.g., rooms, bays) and other convenient locations. The unit manager is responsible to recommend specific locations that are applicable to the unit's workflow and accessible at the point of care.
2. Facilities Management is responsible for dispenser installation through the Work Order process and assures compliance with applicable Fire Code and other regulations related to location of ABHR products. Facilities Management works with managers to review smoke compartment limitations on ABHR, identify appropriate dispenser locations, and install dispensers.
3. Hospitality Services is responsible for dispenser ordering, cleaning, and replacement if damaged or not functioning.

C. Hand Hygiene Products Inventory

1. Hospitality Services is responsible to order and maintain product availability in all dispenser and other hand hygiene locations.
2. Hospitality Services ensures the appropriate storage of ABHR product.

D. Product Evaluation

The Value Analysis Committee is responsible to review information related to

- a. Capacity to achieve desired hand hygiene results
- b. Manufacturer information regarding known interactions among any of the following:

- i. hand hygiene products
 - ii. skin care products
 - iii. gloves used in the institution
 - iv. persistent effects of antimicrobial soaps used in the institution
- c. Low irritancy potential
 - d. Cost
 - e. Staff feedback regarding feel, fragrance, and skin tolerance of any products under consideration
 - f. Dispenser evaluation related to functioning and maintenance, suitability to deliver appropriate volume of product, and compliance with regulations and codes

E. Skin Irritation and Alternate Products

1. Occupational Health Services is responsible for responding to and evaluating staff skin irritation complaints and alternate product recommendations.
2. Hospitality Services provides one hand lotion dispenser at patient care unit stations. Additional lotion dispensers can be ordered by patient care unit managers.

F. Enforcement

1. Managers are responsible for enforcing compliance with all elements of this policy in their departments
2. As per Medical Staff Rules and Regulations (Section II Patient Affairs, II. Infection Control and Communicable Diseases) all providers are responsible for complying with all elements of this policy.

G. Improvement Program

The Hand Hygiene Improvement Program is managed by HEIC and described in [Appendix E](#).

VII. HISTORY OF POLICY

Revisions: 12/06, 03/10, 03/11, 6/12, 9/14, 1/15, 4/15

Reviewed By:

Amy Nichols Susan Garritson Rebecca Taylor	Hospital Epidemiology and Infection Control	May 2015
Amy Nichols Susan Garritson Hema Murugesan	Hospital Epidemiology and Infection Control	June 2012

This guideline is intended for use by UCSF Medical Center staff and personnel and no representations or warranties are made for outside use. Not for outside production or publication without permission. Direct inquiries to the Office of Origin or Medical Center Administration at (415) 353-2733

Appendix A

Surgical hand preparation technique with an alcohol-based antiseptic surgical hand rub

The handrubbing technique for surgical hand preparation must be performed on perfectly clean, dry hands. On arrival in the operating theatre and after having donned theatre clothing (cap/hat/bonnet and mask), hands must be washed with soap and water. After the operation when removing gloves, hands must be rubbed with an alcohol-based formulation or washed with soap and water if any residual talc or biological fluids are present (e.g. the glove is punctured).

Surgical procedures may be carried out one after the other without the need for handwashing, provided that the handrubbing technique for surgical hand preparation is followed (Images 1 to 17).



1
Put approximately 5ml (3 doses) of alcohol-based handrub in the palm of your left hand, using the elbow of your other arm to operate the dispenser



2
Dip the fingertips of your right hand in the handrub to decontaminate under the nails (5 seconds)



3
Images 3–7: Smear the handrub on the right forearm up to the elbow. Ensure that the whole skin area is covered by using circular movements around the forearm until the handrub has fully evaporated (10-15 seconds)



4
See legend for Image 3



5
See legend for Image 3



6
See legend for Image 3



7
See legend for Image 3



8
Put approximately 5ml (3 doses) of alcohol-based handrub in the palm of your right hand, using the elbow of your other arm to operate the dispenser



9
Dip the fingertips of your left hand in the handrub to decontaminate under the nails (5 seconds)

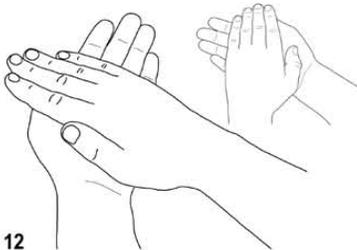
Surgical hand preparation technique with an alcohol-based antiseptic surgical hand rub continued...



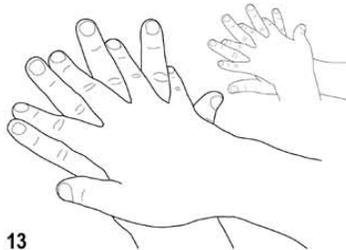
10
Smear the handrub on the left forearm up to the elbow. Ensure that the whole skin area is covered by using circular movements around the forearm until the handrub has fully evaporated (10-15 seconds)



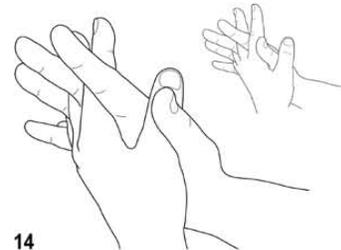
11
Put approximately 5ml (3 doses) of alcohol-based handrub in the palm of your left hand, using the elbow of your other arm to operate the distributor. Rub both hands at the same time up to the wrists, and ensure that all the steps represented in Images 12-17 are followed (20-30 seconds)



12
Cover the whole surface of the hands up to the wrist with alcohol-based handrub, rubbing palm against palm with a rotating movement



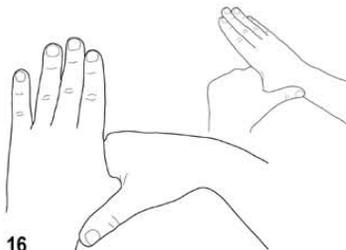
13
Rub the back of the left hand, including the wrist, moving the right palm back and forth, and vice-versa



14
Rub palm against palm back and forth with fingers interlinked



15
Rub the back of the fingers by holding them in the palm of the other hand with a sideways back and forth movement



16
Rub the thumb of the left hand by rotating it in the clasped palm of the right hand and vice versa



17
When the hands are dry, sterile surgical clothing and gloves can be donned

Repeat the above-illustrated sequence (average duration, 60 sec) according to the number of times corresponding to the total duration recommended by the manufacturer for surgical hand preparation with an alcohol-based handrub.

Appendix B





Discover the soft, clean feeling of Surgicept®

Surgicept Application Instructions:

Apply to clean, dry hands. Surgicept can be used for first scrub and every scrub of the day. For the first scrub of the day, clean under nails using a nail pick under running water.

Step 1

Dispense sufficient quantity of Surgicept® antiseptic to cover one hand (approximately 2mL*) into cupped palm. Dip the fingertips of your opposite hand into Surgicept and work under the nails. Spread remainder of Surgicept on hand and lower two-thirds of forearm.

Step 2

Repeat step 1 with other hand and forearm.

Step 3

Dispense an additional sufficient quantity (approximately 2mL) of Surgicept antiseptic, and apply to all surfaces of hands up to wrists, paying particular attention to the nails, cuticles and interdigital spaces. Rub hands until dry.

Allow to dry before donning gloves. Do not dry with towel.

*Dispenser releases 1mL at a time.

For Healthcare Personnel Handwash Use:
Wet hands thoroughly with Surgicept and allow to dry without wiping.

Do not use if you are allergic or have known or suspected hypersensitivity to any ingredient in this product. **Stop use and ask a doctor** if irritation, redness or allergic reaction occurs.

Ordering Information:

SKU	Product	Cs Qty
0064-1080-11	1150mL	6/cs
109245	Dispenser for 1150mL	1/cs
0064-1080-80	800mL	12/cs
109246	Dispenser for 800mL	1/ea
0064-1080-59	2oz bottle	24/cs
0064-1030-15	Nail Picks	12/cs



References: 1. Surgical scrub comparison market research. Bernstein-Rein, 2010. 2. Final Report 051001-102. 2006. 3. Centers for Disease Control and Prevention. 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. *MMWR*. 2002;51(No. RR-16).

surgicept.com | 800.523.0502




© 2011 CareFusion Corporation or one of its subsidiaries. All rights reserved. Surgicept is a registered trademark of Healthpoint, Ltd. Avagard is a registered trademark of 3M Corporation. Endure is a trademark of Ecolab Inc. MRK-5-12033

Appendix C

SKIN INTEGRITY ISSUES WITH HOSPITAL-PROVIDED HAND HYGIENE PRODUCTS

Staff who experience skin integrity issues attributed to hospital-provided hand hygiene products must be evaluated by Occupational Health Services. Occupational Health Services and the staff persons' manager/supervisor will use the checklist to address hand skin integrity issues. This checklist may be used for two purposes:

1. To educate healthcare workers about the proper way to clean hands and preserve hand skin integrity.
2. For managers/supervisors to evaluate staff adherence to hand skin integrity strategies when a healthcare worker reports breakdown in hand skin integrity.

EVALUATING PRACTICE FOR HAND SKIN INTEGRITY

A. Soap-and-water hand hygiene (total procedure takes 1-1.5 minutes):

- Wet hands first before applying soap.*
- Use only one squirt of soap per wash. It is difficult to thoroughly remove excessive product, and the residual chemicals and perfumes have been associated with developing dermatitis.
- Rinse thoroughly—allow enough time and water to remove all traces of soap.
- Pat hands dry with paper towels (rather than rubbing hands dry).
- Always use an *antimicrobial* hand soap to clean hands prior to an invasive procedure (e.g., starting an IV, placing a urinary catheter).

B. ABHR (total procedure takes approximately 20 seconds):

- Use whenever hand hygiene is indicated and hands are not visibly soiled.
- There is no “set” number of uses after which one should wash with soap and water. Let your senses be your guide, and when you feel like washing, wash.

C. Lotion use:

- Apply lotion to your hands at least at the following 4 times every day, making sure to leave it on your skin for at least 30 minutes after each application:
 - o With your waking toilette
 - o At your meal break
 - o At the end of your work shift
 - o Upon retiring
- Use the UCSF-provided lotion. Our hand product manufacturer develops products that are formulated to work cooperatively on your skin.

SKIN INTEGRITY ISSUES WITH HOSPITAL-PROVIDED HAND HYGIENE PRODUCTS

D. What if hands develop rash, dermatitis, lesions?

- If you develop a rash or open areas on your hands, do not perform direct patient care.
- If you develop dry skin, pay very close attention to all variables: what products have changed at home and at work? Are you following all the steps above? Is it a dry time of year? (Recall that dermatitis and dry skin occur cyclically, with worsening in winter.)
- If you develop a skin reaction that you believe is related to a hand hygiene product, advise your manager and make an appointment to be evaluated by Occupational Health Services (OHS). Skin reactions related to products provided by the institution should be documented in your record. Alternative products can be provided for your use as a direct patient care provider.
- Above all, communicate with OHS if a problem persists.

Appendix D

UNIQUE HAND HYGIENE SITUATIONS

There are some circumstances when the hand hygiene rule (clean hands on entry and exit) must be adapted for a task when being completed by staff while maintaining patient safety. HEIC and the department(s) jointly evaluate workflow and hand hygiene in order to determine efficiency and safety. HEIC must approve modifications.

PATIENT CARE

HANDS-FULL TECHNIQUE:

1. Enter patient room & place items in an appropriate place in the room/environment
2. Immediately clean hands
3. Complete task
4. Clean hands upon exit

If clean items need to be removed from the room at the end of the task:

- a. Clean hands
- b. Pick up the items
- c. Exit patient room/environment

If soiled items need to be removed from the room at the end of the task:

- a. Pick up the items
- b. Exit patient room/environment with soiled items
- c. Clean hands upon completion

PATIENT CARE

30-SECOND RULE:

1. Allow 30 seconds before/after entry or exit for the person to complete hand hygiene
2. Hand hygiene at room exit also counts as compliant for entry to the next room when then exit/entry is done within 30 seconds

PATIENT CARE

GLOVE USE:

1. Clean hands before donning gloves
2. Remove gloves and clean hands when task is complete

FOOD & NUTRITION SERVICE (FNS)

FOOD TRAY DELIVERY (CLEAN TRAYS):

1. Clean hands
2. Pick up tray
3. Walk into patient room/environment
4. Place tray on over-bed table or as directed by patient/visitor or staff
5. Clean hands upon exit and en route to tray cart
6. Pick up the next tray
7. Repeat until all trays are delivered

FOOD TRAY PICK-UP (DIRTY TRAYS):

1. Clean hands upon entry to patient room/environment
2. Pick up used tray
3. Place tray in the cart
4. Clean hands and repeat until all the trays have been collected.

Glove use: Assess the need to wear gloves before picking up the tray.

1. Clean hands
2. Don gloves if the tray is visibly soiled
3. Pick up tray and place in cart
4. Remove gloves and clean hands upon entering next room

If the tray is visibly soiled with blood or body fluids, report incident to nursing staff. Nursing staff will remove the blood or body fluids from the tray. Do not throw away flatware, china etc.

1. Clean hands
2. Don gloves
3. Pick-up tray and place in cart
4. Remove gloves and clean hands
5. Report to supervisor as per FNS policy

HOSPITALITY SERVICES

TRASH & LINEN PICK-UP:

1. Clean hands upon entry to patient care unit
2. Don gloves
3. Pick up trash/linen bags in patient room/environment as per Hospitality Services policy
4. Place trash/linen bags in cart
5. Repeat 1-4 until all areas have been serviced *
6. Remove gloves and clean hands

* When trash or Linen cart is full take cart to trash/linen chute.

1. Place trash/linen bags into chute
2. When cart is empty remove gloves & clean hands
3. Don new gloves

SHARPS BOX EXCHANGE:

1. Clean hands upon entry to patient care unit
2. Don gloves
3. Exchange sharps boxes for entire patient care unit
4. Remove gloves and clean hands after the unit's sharps boxes have been exchanged,

ROOM CLEANING:

- a. Place cart outside patient room per Hospitality Services policy
- b. Clean hands upon entry to patient room/environment
- c. Return to cart put on gloves & pick-up ALL supplies
- d. Enter the room and clean room per Hospitality Services policy
- e. Remove gloves and clean hands when vacating the room
- f. Take supplies back to cart
- g. When leaving room to get extra supplies:
 - i. Remove gloves
 - ii. Clean hands
 - iii. Go pickup supplies
 - iv. Clean hands put on new gloves when you re-enter the room

TRANSPORT:

GLOVES ARE NOT REQUIRED FOR ROUTINE PATIENT TRANSPORT

1. Clean hands upon entry to patient room/ environment
2. Assist patient on gurney, wheelchair or bed

3. Arrive at destination (leave gurney, wheelchair, bed)
4. Clean hands on exit
5. End of observation; do *not* include cleaning of transport unit as part of compliance observation

REHABILITATION SERVICES

GLOVES ARE NOT REQUIRED FOR ROUTINE REHABILITATION SERVICE AND ARE NOT TO BE WORN IN THE HALLWAY UNLESS PERFORMING PATIENT CARE

1. Clean hands upon entry and don gloves as necessary
2. Complete Rehabilitation service, which may include exiting patient room with the patient
3. Return patient to room, remove gloves and clean hands upon service completion.

PORTABLE EQUIPMENT

CLEAN EQUIPMENT BEFORE EACH PATIENT EXAM: DON GLOVES, CLEAN EQUIPMENT; REMOVE GLOVES

HAND HYGIENE REQUIREMENTS BEGIN NOW:

1. Clean hands upon entry to patient room
2. DON GLOVES;
3. MOVE EQUIPMENT INTO ROOM, PERFORM EXAM, TRANSMIT IMAGE, RETURN PATIENT TO POSITION
4. Remove gloves; perform hand hygiene; exit room (HH observation ends here)
5. Clean equipment following gloving requirements

OTHER

1. Health Care Provider must always apply posted Precaution requirements
2. Empty room: Hand hygiene entry/Hand hygiene on exit standards still apply
3. Zone=Patient, equipment, and bed/gurney. Hand hygiene is required when entering or exiting a Zone and after a hand-contaminating event within the zone.

Appendix E
UCSF Medical Center Hand Hygiene Improvement Plan

I. Overview

The goal of the UCSF Medical Center Hand Hygiene Improvement Plan (the HH Plan) is to improve patient safety and meet regulatory and accreditation requirements by achieving long-term compliance with hand hygiene standards. This plan is critical to safe patient care delivery since hand hygiene has been shown to decrease hospital-associated infections. The HH Plan is multifaceted and multidisciplinary and is designed to improve Health Care Worker (HCW) adherence to recommended hand hygiene practices.

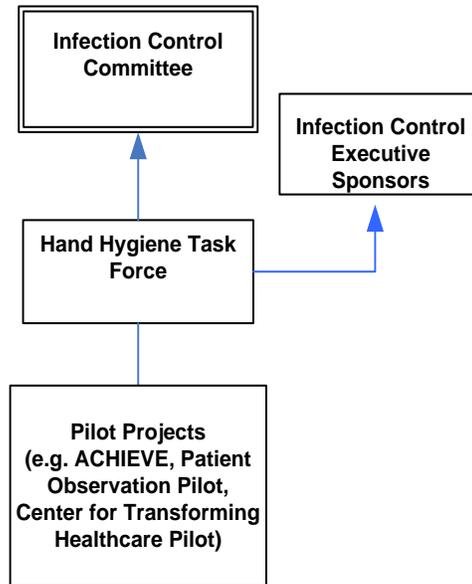
Hand hygiene improvement is an institutional priority supported by leadership, administrative, and financial resources. In FY16, the hand hygiene target will continue to be 90% compliance each month for the participating units identified in Appendix IV.

II. Program Components

The HH Plan consists of a defined governance structure, project management resources, policy, education, observer training program, objective and measurable compliance criteria, data collection methodology, report preparation, determination of contributing factors, corrective actions, and communications.

III. Governance

Governance Diagram



1. Executive Sponsors

The Executive Sponsors are responsible to ensure that the Hand Hygiene Compliance Program has adequate resources to accomplish the program goals. The Executive Sponsors are:

- Josh Adler, MD, Chief Medical Officer
- Adrienne Green, MD, Associate Chief Medical Officer
- Kim Scurr, RN, Interim Executive Director, Children's Hospital
 - Alternate representatives: Michelle Cathcart, RN, Director Patient Care Services; Jim Obrien, RN, Interim Director of Nursing for Acute Care and Support Services

- Steve Wilson, MD, Associate Chief Medical Officer, Children's Hospital
- Sheila Antrum, RN, Chief Nursing Officer
- Traci Duncan, RN, Associate Chief Nursing Officer
- Lynn Ramirez, MD, co-chair Physician Hand Hygiene Workgroup & Infection Control Committee HEIC Medical Director, Pediatric Services
- Catherine Liu, MD, co-chair Physician Hand Hygiene Workgroup & Infection Control Committee, HEIC Medical Director, Adult Services
- Tina Mammone, Interim Executive Director, Quality Services
- Amy Nichols, Director, Hospital Epidemiology & Infection Control
- Susan Garritson, Hand Hygiene Improvement Project Coordinator

2. Infection Control Committee

The Infection Control Committee is charged to review reports of compliance and successful workplan implementation; recommend strategies, resources, or partnerships to the Hand Hygiene Coordinator, report program summaries through the institutional governance structure.

3. Hand Hygiene Task Force

The Task Force (HHTF) membership is composed of departmental directors and representatives for key occupational groups and departments throughout the Medical Center whose compliance is critical to the achievement of the overall hand hygiene target. (Appendix I).

The Hand Hygiene Task Force meets as needed.

The Task Force is charged to review, monitor, and approve the program priorities, workplan implementation, compliance, communication, and reporting; ensure compliance with regulatory and accreditation requirements; ensure data reliability; recommend resources for program implementation and improvement; educate; evaluate and integrate pilot projects in order to encompass best practices within the institution-wide program; and identify gaps in service. (Appendix II).

A. Ad hoc workgroups

- a. Other ad hoc workgroups may be convened as needed to address specific topics that impact performance or regulatory compliance e.g. Facilities-Hospitality-Safety workgroup to address fire code issues.

B. Pilot Projects and Innovations

- a. Pilot projects are used to test new solutions to improve hand hygiene.
- b. Executive Sponsors approve and Hand Hygiene Task Force is informed of new pilot projects in order to ensure consistent data collection standards, overall awareness of hand hygiene initiatives, and any data privacy or research review requirements. Any request for resources to support the pilot project must be approved in advance.

4. Project Manager

A. The Project Manager is responsible to:

- a. Develop the overall Hand Hygiene Plan and workplan, informed by external regulation and guidelines.
- b. Ensure that workplan projects stay aligned and move forward to successful results; provide direction as necessary.
- c. Keep leadership team informed of project progress.
- d. Identify and request resources.
- e. Oversee and resolve issues related to data gathering and analysis process and report development and distribution.
- f. Provide formal and informal training.
- g. Communicate widely throughout the institution.

- h. Work closely with multidisciplinary leadership and staff throughout the organization to achieve overall hand hygiene compliance.

IV. Project Management Resources

Hospital Epidemiology and Infection Control is responsible to coordinate the implementation of the HH Plan. Additional resources to support data collection, corrective action implementation, and communications are encompassed within on-going operational activities of multiple departments throughout UCSF Medical Center. (Appendix III)

Resource Type	Source
Project Management	<ul style="list-style-type: none"> • Hospital Epidemiology & Infection Control (HEIC)
Data Collection	<ul style="list-style-type: none"> • HEIC staff; • Modified Duty Worker program; • Unit-based Hand Hygiene Heroes (Nursing); • Other Occupational Group observers (MDs, HH Task Force members and their staff) • Volunteers and Student Interns
Data Management	<ul style="list-style-type: none"> • HEIC
Non-personnel resources	<ul style="list-style-type: none"> • HEIC operating budget • Additional budget support as approved by Executive Sponsors

V. Hand Hygiene Policy

1. Hospital Epidemiology and Infection Control’s Hand Hygiene Policy 1.2 defines the responsibilities related to:
 - a. Indications and technique
 - b. Dispenser type, location, and maintenance
 - c. Products inventory
 - d. Product evaluation
 - e. Skin irritation and alternate products
2. HEIC Hand Hygiene Policy 1.2 defines policies and procedure related to hand hygiene indications and techniques including product selection, surgical antisepsis, skin integrity, and approved exceptions to the “entry/ exit” monitoring standard.

VI. Hand Hygiene Performance Indicators

1. Direct Observation method.
 - a. Hand Hygiene Compliance rate is based on the Direct Observation of entry and exit across the threshold of a patient care area.
 - a. The Direct Observation results are reported by unit, occupational group, and physician specialty.
 - b. Direct observations are made by on-site observers and via camera on 11NICU.
 - c. Direct observations may also be used for targeted projects and audits e.g. “appropriate hand hygiene is performed prior to handling a central line” (Nursing PI Care & Maintenance Audit). Data from targeted projects that do not reflect the entry/exit monitoring standard are not included in the overall hand hygiene compliance score but will be reported separately.
 - b. Supplemental Indirect measures may be reviewed periodically:
 - a. volume of alcohol-based hand product used per 1,000 patient days.
 - ii. Patient Satisfaction Score and Comments from the Press Ganey Survey. Survey question is: “Extent to which staff wash their hands before examining you”.

3. The results of these Direct methods are reported to the Infection Control Committee, and Executive Leadership and are widely communicated throughout the institution.
4. Compliance with other elements of Hand Hygiene policy (e.g. artificial nails) is monitored by the unit manager.
5. HEIC assesses the adequacy of HCW hand hygiene as part of an infectious disease outbreak evaluation.

VII. Education

1. Hand hygiene education for Health Care Workers is multifaceted. General Hand Hygiene education addresses:
 - Indications for hand hygiene;
 - Monitoring Criteria and factors found to significantly influence behavior (e.g. Thresholds; glove use, hands full,)
 - Cleansing products and indications for use;
 - Technique
 - Skin integrity tips
 - Behavioral contract
2. Hand hygiene education is integrated into multiple educational opportunities including:
 - A. New Employee Orientation
 - a. New employee signs Certificate of Attendance and New Hire Agreement indicating that they have received information regarding hand hygiene.
 - B. Annual Infection Control Training module
 - a. Annual Infection Control training compliance is reported periodically to the Hand Hygiene Task Force.
 - C. Unit and department-level education and skills review
 - D. Just-in-Time Coaching
 - E. Other staff meetings and presentations by request
 - F. Periodic communications regarding hand hygiene compliance

VIII. Direct Observation: Hand Hygiene Observer Training Program

1. Observer Training
 - A. Training content includes presentation of:
 - a. Hand Hygiene Policy
 - b. Compliance Criteria
 - c. Data Collection Tool
 - d. Data Entry in the Hand Hygiene Website
 - e. Competency Test
 - f. Just-in-Time Coaching
 - B. Observer Power Point Training and competency test are available on the Clean Hands website
<http://cleanhands.ucsfmedicalcenter.org/>
 - C. Training and competency test are offered to observers and others interested in hand hygiene on request.
 - D. Additional training options include:
 - a. Detailed module review of “unique situation” powerpoint training
 - b. Joint observation with more experienced observers
 - c. Periodic inter-rater reliability monitoring
 - d. On-going discussion of questions and unusual situations

IX. Compliance Criteria

Quality criteria are specific, measureable, attainable, relevant, and time-based. Compliance criteria are based on standards established by the Center for Transforming Healthcare's Hand Hygiene Program.

1. These criteria utilize three key concepts as the basis for requiring hand hygiene:
 - A. Crossing a "threshold" (e.g. door sweep, door track, curtain, curtain track, zone)
 - B. 30 Second rules
 - i. 30 second observation window to accomplish hand hygiene
 - ii. HH at exit counts for separate entry when entry occurs within 30 seconds (e.g. room-to-room activities)
 - C. Hands Full Principle
2. Quality of Hand Hygiene
 - A. Correct Type of Hand Hygiene
 - i. Wash with soap and water upon exit from the room of a patient with *C. difficile*
 - ii. Clean hands before donning and after removing gloves
 - iii. Clean hands last after removing personal protective equipment
3. Modifications to these core concepts are made with approval by HEIC. Approved modifications are documented in training materials posted to the Clean Hands website.
4. Alternate hand hygiene criteria and measurement methodology mandated by regulatory requirement or workflow requirement must be approved by HEIC.

X. Data Collection Methodology

1. Direct observation according to standardized techniques (see below) will be recorded by:
 - A. Hand Hygiene Heroes (HHH) (unit-based staff)
 - B. Modified Duty Workers (MDW) (when available)
 - C. Staff and volunteers/student interns from the Department of Hospital Epidemiology and Infection Control (HEIC)
 - D.
 - E. Other HCWs
2. Observers complete a hand hygiene observation tool, then enter observation elements into an on-line database (<http://handhygiene.ucsfmedicalcenter.org/>). Physician observers may fax their data to HEIC at 353-4348 for entry by HEIC staff.
3. A minimum of 30 observations per month are required for a unit to be counted in the reported unit-based monthly rates.
 - A. Units contribute a minimum of 30 observations covering any occupational group
 - B. A minimum of 2,160 total observations per month will be collected (Appendix III)
 - i. This minimum will be re-evaluated periodically as new units and programs are added.
4. All observations on a patient care unit are assigned to the patient care unit on which the observations were made. (*Example, if a Transport worker is observed properly cleaning their hands upon entering a patient room on 12L, that observation will be attributed to 12L.*)
5. Observations are made for any occupational category.
6. Observations are collected on all shifts.

XI. Data Management and Reporting

1. IT Integration & Development Services is responsible to manage the on-line data entry and report site.
 - A. Compliance status is available "just-in-time".
 - B. All data must be entered by the last day of the month by midnight to be included in the final monthly report. (*Example: July observations must be entered by July 31 at midnight to be recorded.*)
2. Data will be separated by patient care unit, job category, and physician specialty
3. A compliance rate will be calculated as follows:
 - A. Numerator=number of compliant observations (or "yes" responses)
 - B. Denominator=number of compliant + noncompliant observations

- C. No weighting will be applied to numbers of observations from units or overall rate calculations.
 - D. Unit-specific and institutional compliance rates will be reported with color-coding of the rates for each unit and for the institution.
 - a. Red=lower than 90%
 - b. Green=90% or higher
 - c. No color=insufficient number of observations
4. A weekly compliance report is produced to:
- A. Provide just-in-time information on the current compliance status
 - B. Identify units and occupational groups with low compliance that may benefit from additional education and monitoring during the current reporting period
 - C. Identify areas that require additional observations to meet the minimum threshold of 30 observations/month.
5. A monthly unit, occupational group, and institutional compliance rate is finalized by the 1st day of the month for the previous month. (*Example: Analysis for July will be completed by August 1st.*)
- A. The annual performance goal will be determined from the compliance performance of inpatient, diagnostic, perioperative, and ambulatory units listed in Appendix IV.
- B. Report tables and graph variations are available on <http://handhygiene.ucsfmedicalcenter.org/> and are periodically reviewed.

XII . Communications

1. Weekly and final monthly compliance reports are provided to the following groups:
 - A. Infection Control Executive Sponsors
 - B. Hand Hygiene Task Force (includes Graduate Medical Education)
 - C. All Patient Care Managers and Assistant Managers
 - D. Department Chairs
 - E. Unit Medical Directors
 - F. Other Physician Leaders
 - G. Service Line Managers
 - H. Clinical Science Managers
 - I. Other Hand Hygiene Leadership
2. Manager's Weekly
 - A. A monthly compliance status update with key reminders and announcements is distributed through the Manager's Weekly listserv on the first Monday following the final close of data.
3. Qaldash
 - A. Monthly compliance results for aggregate unit, and service specialty are posted on Qaldash.
4. Executive Dashboard
5. Other Periodic Presentations and Announcements by Executive Sponsors
 - A. Presentation examples: Nursing Performance Improvement Committee, Nursing Grand Rounds; Patient Safety Fellows; staff and faculty meetings; Executive Medical Board

XIII. Corrective Actions

1. Units and department managers are responsible to complete a corrective action plan for compliance below the approved target. A corrective action plan is requested after 3 consecutive months of below target performance.
2. A Corrective Action Plan template provides standard recommended interventions as well as option for individual unit intervention.
(Appendix V)

XIV. Data Transparency and Access

1. Publically posted
 - A. Monthly Institutional-level compliance rate
 - B. Monthly Occupational compliance rate for RN, MD, RT, aggregate Other
2. Access to Unit compliance and other detail
 - A. Written requests are reviewed by Hand Hygiene Executive Sponsors.
 - B. Requests to utilize hand hygiene compliance data for research purposes must have CHR approval.

References

1. 2009 Hospital Accreditation Standards (IC.03.01.01; IC.01.04.01; National Patient Safety Goal .07.01.01)
2. The Joint Commission Center for Transforming Healthcare
<http://www.centerfortransforminghealthcare.org/>
3. Centers for Disease Control Guideline for Hand Hygiene in Health-Care Settings. October 25, 2002/Vol.51/No. RR-16.
<http://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf>
4. World Health Organization Guidelines on Hand Hygiene in Health Care (Advanced Draft) 2006.
http://www.who.int/patientsafety/information_centre/guidelines_hhad/en/index.html
5. UCSF Hospital Epidemiology and Infection Control Hand Hygiene Policy 1.2
6. Pincock T, Bernstein P, Warthman S, Holst E. Bundling hand hygiene interventions and measurement to decrease health care-associated infections. *American Journal of Infection Control*. 2012 May;40 (4 Suppl 1):S18-27.
7. Katherine Ellingson, PhD; Janet P. Haas, PhD, RN, CIC; Allison E. Aiello, PhD; Linda Kusek, MPH, RN, CIC; Lisa L. Maragakis, MD, MPH; Russell N. Olmsted, MPH, CIC; Eli Perencevich, MD, MS; Philip M. Polgreen, MD; Marin L. Schweizer, PhD; Polly Trexler, MS, CIC; Margaret VanAmringe, MHS; Deborah S. Yokoe, MD, MPH. Strategies to Prevent Healthcare-Associated Infections through Hand Hygiene. *Infection Control and Hospital Epidemiology*, Vol. 35, No. 8 (August 2014), pp. 937-960.



HOSPITAL EPIDEMIOLOGY AND
INFECTION CONTROL:
HAND HYGIENE POLICY

POLICY 1.2
Issued: 12/06
Last Approval: 05/15

Appendix I
Hand Hygiene Task Force Membership FY2016

Member	Department/Discipline	2016
Deborah Burge	Nursing	
Dominic Chan	Pharmacy	
Susan Conrad	Spiritual Care Services	
Chris Fee, MD	Emergency Department	
Rafael Fernandez	Nutrition & Food Services	
Shannon Fitzpatrick, RN	Children's Hospital Nursing	
Susan Garritson, RN	HEIC, Project Manager	
Nicole Goldberg	Rehabilitation Services	
Erika Grace, RN	OR/PACUs	
Julio Gonzalez	Radiology	
Matt Haight, MD	Anesthesia	
Christel Henderson	Hospitality Services	
Cynthia Ishizaki	Phlebotomy/Lab	
Shirley Kedrowski	Ambulatory/Outpatient Services	
Vickie Kleeman	Volunteers	
Catherine Liu, MD	Infectious Disease	
Amy Nichols, RN	Director, Infection Control	
Elizabeth Polek	Social Work/Case Management	
Lynn Ramirez, MD	Pediatric Infectious Disease	
Brian Resler, MD	Emergency Medicine & GME	
Glenn Rosenbluth, MD	Graduate Medical Education	
Jensine Russell, RN	Nursing	
Sean O'Keefe	Respiratory Therapy	
Rose Spence	Facilities Management	
Rebecca Taylor	HEIC	
Jose Watson	Hospitality Services	

Ex Officio Members:	Infection Control Executive Sponsors	
Guests		

Appendix II
Hand Hygiene Task Force Charge

1. Review and update the scope of the UCSF Medical Center Hand Hygiene program in order to ensure sustained Hand Hygiene compliance in all UCSF Medical Center patient care locations;
2. Approve and monitor a work-plan each fiscal year;
3. Determine best practices and methods for their dissemination so there is one institutional program for hand hygiene.
4. Monitor monthly compliance with institutional goal; identify and resolve contributing factors that interfere with achieving desired goal; and review adequacy of Corrective Action Plans for units below the approved threshold.
5. Ensure consistent and reliable observational data used to determine Hand Hygiene compliance;
6. Recommend resources to support Hand Hygiene surveillance activities and to correct factors that contribute to non-compliance;
7. Develop systems to ensure communication of hand hygiene improvement message to a broad, institution-wide audience;
8. Ensure integration of hand hygiene educational information into staff, faculty, and student training;
9. Evaluate and make recommendations for alternative data gathering or program monitoring strategies (e.g. technological solutions; indirect measures) as well as product recommendations.
10. Provide an annual report to the Infection Control Committee and UCSF Medical Center Executive Sponsors detailing services rendered, identified gaps in service, regulatory compliance, and recommendations for performance improvement.
11. Integrate Hand Hygiene program accreditation requirements into on-going operations in order to ensure compliance to these standards;

**Appendix III
FY2016 Minimum Resources for Program Sustainability**

Core Resource Categories	Estimated Observations and Hours		FTE	Funding Source
	Hand Hygiene Observation***	Total Hours/Year @ 10 minutes per observation		
Hand Hygiene Observers	2010 observ./month (minimum 30 obs/unit; 67 units)	4,020	1.64 fte total; (Minimum 1 HHH/ unit)	Existing Nursing Unit & non-Nursing Department resources
HEIC observers (assumes 5 observers-staff)	150 observ./month	300	.14 fte	Existing HEIC resources
Minimum Total Observations	2,160 observ/month	4,320 hours/year		
Project Manager			.25 fte	Existing HEIC resources
Data Management			.1 fte	IT Integration & Development
Total			2.14 fte	Existing Resources



HAND HYGIENE POLICY

**Appendix IV
FY2016 Participating Units**

Category	Location	Unit/Program Name
Inpatient Pediatrics	Mission Bay	C5 MedSurg
		C5 P Trans
		C4 PICU
		C6 BMT
		C6 HEMONC
		C4 PCTC
		C4 PCICU
		C3 ICN
		A3 L&D
		A3 M&B
Inpatient Adults	Mission Bay	A6 SURG
		A5 ONC
		A4 ICU
Inpatient Adults	Moffitt/Long	6S ADULT MEDSURG
		6L ADULT MEDSURG
		7L ADULT MEDSURG
		8NICU
		8S
		8L Neuro
		9ICU
		9L
		10ICC
		10CVT
		11NICU
		11L /L14 Hem/Onc/BMT
		12L Spine/Ortho
		12M CCRC
13 ICU		
13L Med/Surg		
14M M/S High Acuity		
14L Adult Medicine		
Emergency Department/Limited Stay	Parnassus	ED Emergency Department
		LSU Limited Stay Unit
		Mission Bay

Diagnostic	Moffitt-Long	Adult Cath/EP Lab
		Electrophysiology
		M/L Radiology (includes IR)
		M/L EKG & Cardiac Stress
		M/L Adult Echocardiography
		11AHU
	Mount Zion	MZ Radiology (includes IR)
	Mission Bay	Pediatric Non-Invasive Laboratory
		Cardiac Interventional Laboratories
		Radiology
Ambulatory Administration	Moffitt/Long	Transfusion Services
		Radiation Oncology Parn
	Mount Zion	Dialysis MZ
		CA Infusion Center Mount Zion
		Radiation Oncology Mount Zion
	Mission Bay	Radiation Oncology
		Pediatric Treatment Center
		Pediatric Renal Dialysis
		Radiation Oncology
Preop/PACU	Moffitt/Long	Pre-op/PACU
	Mount Zion	Periop
		Endoscopy
	Ambulatory Surgery Center	Preop/PACU
	Orthopaedic Institute	Preop/PACU
	Mission Bay	Periop
Operating Rooms/Endoscopy	OI	OR
	Moffitt/Long	OR
		Endoscopy
	Mount Zion	OR
		Endoscopy
	Ambulatory	OR
	Mission Bay	OR
		Endoscopy



**Appendix V
Correction Action Plan Template**

Unit or Department Name:		Current Compliance %:	
Name of Individual Completing Intervention Plan:			
Date:			
Action:	Yes/No	Date of Action or Plan	Comment
Monthly HH Compliance results are posted in a visible space (e.g. Nurses' station, staff lounge, unit entry, or other visible location)			
Monthly HH Compliance results are discussed in staff meetings			
Unit or departmental leadership (e.g. PCM, Medical Director, Department Director) consistently supports the gel in/gel out standard and communicates the expectation			
Staff have been educated about general gel in/gel out standards			
Staff have been educated about general gel in/gel out standards applicable to any specific workflow modifications			
Unit or departmental leadership monitor staff performance by:			
- Providing Just-in-Time Coaching			
- Gathering Hand Hygiene Observations			
Staff indicate through their signature their knowledge of hand hygiene requirements and their commitment to implement (e.g. behavioral contract; commitment board)			
Unit or departmental leadership intervenes in personnel performance by:			
- Identifying factors that contribute to non-compliance			
-Implementing corrective actions for workflow, equipment, or other common factors that impact compliance			
- Taking action on persistent individual non-compliance			
Unit and departmental leaders collaborate and communicate to improve compliance			
Unit or departmental leadership develops additional program-level corrective action plan to achieve 85% compliance			
HEIC Hand Hygiene Policy: http://infectioncontrol.ucsfmedicalcenter.org/ICMANUAL2007/Section1/Sec%201.2%20Hand%20Hygiene%20Policy.pdf			
Hand Hygiene Training: http:// cleanhands.ucsfmedicalcenter.org/Hand%20Hygiene%20Training.asp			



HOSPITAL EPIDEMIOLOGY AND
INFECTION CONTROL:
HAND HYGIENE POLICY

POLICY 1.2
Issued: 12/06
Last Approval: 06/12
