

JOINT INFECTION PREVENTION AND CONTROL GUIDELINES

ENHANCED STANDARD PRECAUTIONS (ESP)

CALIFORNIA LONG-TERM CARE FACILITIES, 2010



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The information in this guideline is intended to be advisory only and was developed to assist long-term care facility infection prevention committees in the development of a rational approach to preventing the transmission of epidemiological important infectious agents such as methicillin-resistant *Staphylococcus aureus* (MRSA).

Introduction

Enhanced Standard Precautions (ESP) is an update to *Prevention and Control of Antibiotic Resistant Microorganisms in California Long-Term Care Facilities*.¹ This comprehensive guideline, one of the first published specifically for long-term care facilities (LTCF) by any state agency, was adapted from the 1996 Centers for Disease Control and Prevention's (CDC) *Guideline for Isolation Precautions in Hospitals*.² In the decade that followed healthcare-associated infections (HAI) especially those caused by multidrug-resistant organisms (MDRO) such as methicillin-resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile* have escalated in U.S. health care facilities and in the community. To keep pace with the evolving complexity of HAI, the CDC subsequently published recommendations for the *Management of Multidrug-Resistant Organisms in Health Care Settings, 2006*³ followed by the *Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Health Care Settings, 2007*.⁴ These two guidelines, briefly described below, created a three tiered, increasingly complex set of recommendations for preventing the transmission of infectious agents including MDRO.

The first and most important CDC tier, Standard Precautions, presumes that ***all*** moist body fluids from ***all*** patients/residents are colonized or infected with one or more transmissible infectious agents. These agents primarily include viruses (e.g., influenza, bloodborne pathogens) and bacteria. The most common bacterial agents include methicillin-sensitive and methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant *Enterococci* (VRE), *Clostridium difficile*, and the gram-negative bacilli such as *E-coli*, *Klebsiella spp.* and *Pseudomonas spp.* Moist body fluids include blood, excretions (except sweat) and secretions (regardless of whether blood is visible), non-intact skin and mucous membranes. All body fluids are presumed infectious because it is not possible to know whether or not an infectious agent is present. It is also not possible to determine if a body fluid is infected with a bloodborne pathogen such as human immunodeficiency virus (HIV) based on the patient's/resident's physical characteristics. In addition to hand hygiene, Standard Precautions require gowns, gloves, masks, and face shields when health care personnel (HCP) anticipate that their hands, clothes or the mucous membranes of the eyes, nose or mouth or skin on the face will be exposed to blood or other body fluids. Standard Precautions are always used in addition to Transmission-Based Precautions and Intensified Interventions.

The second CDC tier, Transmission-Based Precautions, includes Droplet, Airborne and Contact Precautions. Droplet Precautions are recommended primarily for respiratory infections such as seasonal (not pandemic) influenza, which almost always occurs in LTCF as an outbreak and not as an individual case. Annually the California Department of Public Health publishes a guideline for the management of influenza outbreaks in LTCF. Airborne Precautions are required for active tuberculosis disease and some viral infections such as varicella (chicken pox) and measles. Because of the requirement for special ventilation rooms and respiratory protection, Airborne Precautions are rarely implemented in LTCF. Contact Precautions are an extension of Standard Precautions in that gowns and gloves are required for all patient/resident contacts (as opposed to

gowns and gloves for anticipated contact with body fluids) as well as contact with environmental surfaces in the patient's/resident's room.

In LTCF Contact Precautions are generally modified and based on the presence of a condition that is likely to result in contamination of a resident's skin or their environment such as excessive, uncontained wound drainage, fecal incontinence, or other body fluids rather than identification of a MDRO by a microbiology test. Because mobility and socialization are important to the resident's quality of life, it is generally not feasible or appropriate to use Contact Precautions in LTCF as recommended by the CDC for acute care hospitals (ACH). The matrix below points out important differences between LTCF and ACH which affects the rationale for using Contact Precautions for colonized and infected patients/residents:

Situation	Hospital	LTCF
Prevalence of MDRO	Low except in intensive care units; many patients are admitted from the community and have not been previously exposed to a MDRO or recent antibiotic therapy	High; most residents have been previously exposed to a MDRO in a hospital and have received many antibiotics
Need for mobility, rehabilitation and socialization	Low	High
Presence of highly vulnerable patients (immunocompromised [current chemo/radiation therapy, organ/bone marrow transplant)	Common	Uncommon

The third CDC tier, Intensified Interventions, is suggested for implementation when an unusual infectious agent or a common infectious agent with an unusual resistance pattern is identified or the incidence of new cases of a specific infectious agent is either increasing or fails to decrease despite the implementation of and adherence to standard infection prevention procedures. Essentially these situations would indicate that an outbreak is occurring. These recommendations include: (1) active surveillance testing (AST) to identify colonized and infected residents; (2) cohorting infected and colonized residents with dedicated staff, (3) restricting new admissions or closing affected nursing units; and (4) increased attention to environmental sanitation. An example of this would be an increase in the incidence or outbreak of infections caused by a gram-negative bacillus (such as *Acinetobacter spp.* or *Klebsiella pneumoniae*) resistant to a class of antibiotics called carbapenems, since infections caused by these organisms are extremely challenging to treat.

Enhanced Standard Precautions (ESP) integrates and consolidates the CDC recommendations for Standard Precautions with many of the recommendations for Transmission-based Precautions and Intensified Interventions. The purpose of this guideline is to create, to the extent possible, a single-tiered approach to prevent the transmission of all transmissible infectious agents. The Centers for Medicare and Medicaid Services (CMS) issued new Interpretive Guidelines for the Condition of

Coverage 42 CFR 483.65 Infection Control, effective September 30, 2009 (last revision released in December 2009).⁵ The interpretive guidelines require, to the extent possible, the implementation of evidence-based infection prevention and control process measures as recommended by the CDC. According to CMS, health care personnel (HCP) compliance with these process measures will result in improved resident outcomes by reducing the transmission of and possible infection with healthcare-associated infectious agents.

One of the most common concerns about accepting new and returning MDRO-positive residents is room placement. Residents are often first identified as infected or colonized with an infectious agent such as MRSA when they are tested at the time of transfer to an ACH. Refusing to accept these residents back into the LTCF often creates friction between the facilities. There is no state or federal requirement for one or more negative tests for any MDRO including MRSA prior to accepting new or returning residents. Additionally there is no “test for cure” or serial tests for clearance for *Clostridium difficile* diarrhea as most persons will continue to have a positive test long after the diarrhea has resolved. As long as facility staff can provide appropriate care for any medical/surgical condition that a pending transfer may have there is no basis to deny admission based on a positive MDRO test (e.g., MRSA, VRE). To facilitate assessing a pending transfer for placement an inter-facility transfer form has been developed (attachment 1).

The ESP guideline also emphasizes the appropriate use of personal protective equipment (PPE) when in contact with all moist body fluids from all residents regardless of known or presumed infection status. In addition to hand hygiene, PPE (e.g., gloves, gowns, surgical masks, and eye protection) should be worn when HCP anticipate contact with any resident with uncontrolled or uncontained secretions or body fluids (e.g., large blood spill, uncontained wound drainage, large open wounds, fecal incontinence including contact with ostomy bags/tubes, exacerbation or new onset of sputum production or vomit). In recent studies, increased attention to hand hygiene, environmental sanitation⁶ and daily bathing with an antimicrobial soap⁷ (e.g., chlorhexidine gluconate 4%) have been shown to significantly decrease MRSA and VRE transmission in ACH. This suggests that transmission of infectious agents can be reduced significantly by decreasing the bacterial contamination on residents’ skin and in their immediate environment. Although not specifically studied, there is no reason to think that these methods will not work as well or better in LTCF. This guideline also provides skills check lists that can be used to monitor HCP compliance with hand hygiene, environmental sanitation and appropriate use of PPE. (Attachments 2 – 6)

Resident Admission and Room Placement

Rationale:

In addition to MRSA, VRE and *C. difficile*, other infectious agents that are virtually resistant to all available classes of antibiotics such as *Acinetobacter baumannii* and carbapenem-resistant *Klebsiella pneumonia* (CRKP) may be thriving in LTCF and should be included in the category of epidemiologically important infectious agents. Therefore, when developing a room placement policy for new admissions, readmissions as well as permanent residents it is important to develop a policy that specifically defines conditions that facilitate transmission rather than on knowledge of a positive or negative test result.

There are several references to resident placement as a MDRO transmission prevention and control measure in the revised CMS interpretive guidelines.⁵ The following are examples of those recommendations:

- “In nursing homes, it is appropriate to individualize decisions regarding resident placement (shared or private), balancing infection risks with the need for more than one occupant in the room, the presence of risk factors that increase the likelihood of transmission, and the potential for adverse psychological impact on the infected or colonized resident.”
- “It is appropriate to use the least restrictive approach possible that adequately protects the resident and others. Maintaining isolation longer than necessary may adversely affect psychosocial well-being. The facility should document in the medical record the rationale for selecting Transmission-based Precautions.”
- “Depending on the situation, options for residents on Contact Precautions may include the following: a private room, cohorting or sharing a room with a roommate with limited risk factors.”
- “Transmission-based precautions are employed for residents who are actively infected with multi-drug resistant organisms.” The CMS definition of “infection” is “the establishment of an infective agent in or on a suitable host, producing clinical signs and symptoms (e.g., fever, redness, heat, purulent exudates, etc).”

The CMS also states: “it is important that all infection prevention and control practices reflect current CDC guidelines. The CDC’s 2006 Guideline for Management of Multidrug-Resistant Organisms in Healthcare Settings³ is applicable to LTCF and includes:

- V.A.5.c.ii. “In LTCF, consider the individual patient’s (resident’s) clinical situation and prevalence or incidence of MDRO in the facility when deciding whether to implement or modify Contact Precautions...:

- V.A.5.c.ii.1 “For relatively healthy residents (e.g., mainly independent) follow Standard Precautions making sure that gloves and gowns are used for contact with uncontrolled secretions, pressure ulcers, draining wound, stool incontinence, and ostomy tubes/bags.”
- V.A.5.c.ii.2. For ill residents (e.g., those totally dependent upon healthcare personnel for healthcare and activities of daily living...) and for those residents whose infected secretions or drainage cannot be contained, use Contact Precautions, in addition to Standard Precautions.”
- V.A.5.c.iii. For MDRO colonized or infected patients without draining wounds, diarrhea, or uncontrolled secretions, establish ranges of permitted ambulation, socialization, and use of common areas based on their risk to other patients and on the ability of the colonized or infected patients to observe proper hand hygiene and other recommended precautions to contain secretions and excretions.
- V.A.5.g.i. “When single-patient (resident) rooms are available, assign priority for these rooms to patients (residents) with known or suspected MDRO colonization or infection. Give highest priority to those patients (residents) who have conditions that may facilitate transmission (e.g., uncontained secretions or excretions).”
- V.A.5.g.ii. “When single-patient rooms are not available, cohort patients with the same MDRO in the same room.”
- V.A.5.g.iii. “When cohorting ... is not possible, place MDRO patients in rooms with patients who are at low risk for acquisition.”
- V.B.6.a.iii. In LTCF, modify Contact Precautions to allow MDRO colonized/infected patients (residents) whose site of colonization or infection can be appropriately contained and who can observe good hand practices to enter common areas and participate in group activities.”
- V.B.7. Discontinue Contact Precautions after signs and symptoms of the infection have resolved or according to pathogen-specific recommendations in Appendix A. (Appendix A – MDROs judged by the infection control program, based on local, state, regional, or national recommendations, to be of clinical or epidemiological significance. Contact Precautions recommended in settings with evidence of ongoing transmission, acute care settings with increased risk for transmission or wounds that cannot be contained by dressings. See recommendations for management options in Management of Multidrug-Resistant Organisms in Health care Settings, 2006. Contact state health department for guidance regarding new or emerging MDROs.)

From a review of the new CMS interpretive guidelines and the CDC recommendations it is obvious that there is no simple answer when it comes to placement of residents known to be colonized or infected with a MDRO in LTCF. It is also important to remember that residents who may have a condition that facilitates transmission may or may not have a positive test for any specific infectious agent. For instance, when testing residents with diarrhea for *C difficile* it is not uncommon to have a negative test. Similarly, MRSA surveillance tests obtained at the time of transfer to a hospital as required by legislation in several states including California (SB 1058) are generally taken from the nares. However, these tests are only positive about 70.0% of the time therefore it is possible to have a negative MRSA nares culture when in fact MRSA is present. It is also possible to have a negative MRSA surveillance nares test and a positive test at a different site such as a gastrostomy insertion site.

Process Measures – Admission Assessment

- **NO** request for long-term care facility admission or readmission should be refused based on knowledge of a positive test for any MDRO (e.g., MRSA, VRE, *C. difficile*, etc.).
- **NO** request for negative tests prior to inter-facility transfer should be made. New or returning residents should be admitted based on the ability of the facility to provide supportive and restorative care.
- Obtain information about new or returning resident's infection or colonization status prior to transfer (See Attachment 1) from the hospital's discharge coordinator or infection preventionist.
- Develop a resident care plan which takes into consideration the individual's risks of transmission or acquisition of infectious agents.
- Prior to transfer, meet with an interdisciplinary team (e.g., infection prevention coordinator, charge nurse, director of nurses, medical director, social worker, treatment nurse, etc) and discuss the advantages and disadvantages of placing the MDRO positive resident in a private room or with a compatible roommate.
- Assess the resident's skin on admission. Place the resident in Contact Precautions in a private room if a scabies infestation is suspected.⁸

Process Measures - Initiating and Discontinuing Contact Precautions

- Document the decision for private room placement (e.g., Contact Precaution as recommended by the CDC) or roommate selection in the resident's medical record.
- Educate HCP about the reason for choosing a private room or roommate selection.
- Identify the infection prevention measures to be implemented (e.g., gloves, gowns, masks, eye protectors, hand hygiene, etc).
- Ensure that the appropriate instructions (signage) are communicated to all HCP.
- Discontinue Contact Precautions when the condition that facilitates transmission has resolved. (See V.B.7. above)

Hand Hygiene

Rationale:

Infectious agents including MDRO can be recovered from infected wounds, non-infected wounds, mucous membranes and from dry, intact skin. The moist intact skin of the perineum and the inguinal areas are usually the most heavily colonized, but the axillae, trunk and upper extremities including the hands are also colonized. Residents with chronic diseases such as diabetes, renal failure and dermatological conditions can be heavily colonized with *Staphylococcus aureus* including MRSA. Because approximately 10^6 skin squames (1 million skin cells) containing viable organisms are shed daily from normal intact skin each day, surfaces such bed linens, furniture, countertops and other objects in the resident's immediate environment are also contaminated.⁹ Therefore, any contact with the resident or surfaces in their immediate environment can contaminate the gloved and ungloved hands as well as clothing worn by the HCP.

Employee Education

As required by the Health and Safety Code, Section 1279.7 all facility staff including those who have direct resident contact and those in administrative positions should be educated during new employee orientation, annually and when observations indicate that employees are not in compliance with the facility hand hygiene procedure. Visitors, volunteers and residents should also be educated and instructed in hand hygiene procedures. Guidelines for developing an effective facility hand hygiene procedure have been published by the CDC and the World Health Organization (WHO).^{9, 10} Artificial nails including extenders and (hand) jewelry except wedding bands should be prohibited for all HCP who may have direct or indirect resident contact including contact with the immediate environment.⁹

Essential elements of the hand hygiene education program should include the:

- Rationale for hand hygiene (e.g., prevent transmission of infectious agents),
- Indications for performing hand hygiene (e.g., touching intact and non-intact skin, blood, body fluids and environmental surfaces),
- Techniques for hand hygiene (amount of product to use, duration of application, differentiation between visibly dirty and contaminated hands),
- Selecting an appropriate product,
- Maintaining the integrity and health of the skin,
- Expectations of the facility administrative staff (e.g. monitoring compliance with procedure), and
- Indications for and limitations of glove use (e.g., does not replace hand hygiene).

Product Instruction

Each employee, resident and visitor should be trained in the use of the specific hand hygiene products. Training should include:

- Instructions for the use of the alcohol-based hand hygiene product,
- Location of the alcohol-based product dispensers within the facility,
- Hazards (e.g., fire, accidental ingestion) associated with alcohol-based products,
- The department responsible for replacing empty dispensers, and
- Selection and use of soap products, water and paper towels.

Demonstration of Knowledge

Each HCP, volunteer and visitor should periodically be required to verbally and physically demonstrate the proper techniques and indications for hand hygiene including alcohol-based products and soap and water. (See attachment 2)

Observation of Hand Hygiene

The infection prevention professional or other designated person specifically trained to observe for and document compliance with the hand hygiene procedure should, at least every 2 – 3 weeks and on all shifts, discretely observe all HCP including physicians, physician assistants and nurse practitioners as well as ancillary staff, volunteers and visitors. Non-compliance should be immediately addressed. (See Attachment 2)

Location of Alcohol-based Hand Hygiene Dispensers

Alcohol-based hand hygiene dispensers should be located as close to the entrance (e.g., immediately adjacent to the door frame) to resident-occupied areas as possible and between each bed in multiple-bed rooms. As permitted by the Life and Safety Code and the California state fire code, dispensers should also be located in hallways between resident rooms and at other strategic areas including facility entrances, nursing stations, dictation booths, medication and treatment carts, dining rooms, physical therapy and computer terminals.

Process Measures

HCP, visitors and volunteers must wash their hands with soap (antimicrobial or non-antimicrobial) and water:

- Before eating,
- After using the bathroom,
- When soiled with visible dirt or debris
- After unprotected (ungloved and damaged gloves) contact with blood, other body fluids, secretions, excretions, mucous membranes, non-intact skin, intact

skin soiled with blood and other body fluids, wound drainage and soiled dressings,

- After contact with intact and non-intact skin, clothing and environmental surfaces of residents with active diarrhea even if gloves are worn,
- Before and after food preparation, and
- Before and after assisting residents with dining if direct contact with food is anticipated or occurs.

Alcohol-based hand hygiene products can and should be used to decontaminate hands:

- Immediately upon entering a resident occupied area (single or multiple bed room, procedure or treatment room) regardless of glove use,
- Immediately upon exiting a resident occupied area (e.g., before exiting into a common area such as a corridor) regardless of glove use,
- Before moving from one resident to another in a multiple-bed room or procedure area regardless of glove use,
- Before putting on sterile gloves for the purpose of performing procedures for which aseptic technique is required (e.g., insertion of vascular access devices, urinary catheters, etc.), and
- After removing personal protective equipment PPE and before moving to another resident in the same room or exiting the room.

There is no CDC recommendation for decontaminating the bare skin between the wrist and the elbow following close resident contact. However, following activities such as lifting, moving, and turning immobile or partially immobile residents the forearms should be washed with soap and water, if gowns are not worn.

Residents should perform hand hygiene:

- Before meals,
- Before and after therapy and social activities,
- After toileting, and
- Frequently throughout the day.

Personal Protective Equipment (PPE)

Rationale:

Personal protective equipment (gowns, gloves, masks, eye protection) is worn to prevent:

- Resident-to-resident, HCP-to-resident and resident-to-HCP exposure to and possible colonization or infection with community-and healthcare-associated infectious agents including MDRO, and
- Occupational exposure to bloodborne pathogens including, but not limited to hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency

virus (HIV).

PPE should be readily available on all nursing units and in ancillary departments (e.g., physical therapy, activities, dining rooms, etc) at all times. (See Attachment 3) All HCP who may have resident contact or work in resident care areas should be periodically observed for compliance with the PPE policy. (See Attachment 4) For detailed instructions on how to put on and remove PPE, the facility should consult the CDC Guideline for Isolation Precautions.⁴

Gloves

The effectiveness of wearing gloves in preventing hand contamination and transmission of infectious agents in health care settings has been confirmed in many clinical studies. However, to be effective gloves must be worn appropriately and **hand hygiene must be performed before gloving and when gloves are removed.**

Gloves should not be washed for the purpose of reuse and should be disposed according to state or county regulatory requirements. When non-sterile examination gloves are worn by environmental services personnel to clean and disinfect residents' rooms, they should be removed and discarded upon exiting each room or procedure area.

Process Measures

Clean, durable, non-sterile, snug-fitting, disposable, examination gloves should be:

- Put on after hand hygiene and immediately prior to contact with the resident's:
 - Non-intact skin,
 - Intact skin soiled with blood and body fluids,
 - Clothing and linens soiled with blood and body fluids, and
 - Contact with mucous membranes,
- Worn when in contact with containers of blood and body fluids (e.g., suction canisters, urinals or commodes, emesis basins),
- Removed and hand hygiene performed after completing procedures that involve direct resident contact, contact with blood and body fluids, contact with environmental surfaces,
- Changed and hands washed with soap and water when the integrity of the glove is compromised,
- Changed and hand hygiene performed when moving from a contaminated body site (perineum or wound) to a clean body site (e.g., face or iv site),
- Removed and hand hygiene performed before moving from one resident to another in a multi-bed room or procedure area, and
- Removed and hand hygiene performed immediately upon exiting a resident occupied room (e.g., before exiting into a common area such as a corridor), and
- Should not be worn for multiple-resident contacts.

Gowns

Gowns are worn to prevent soiling of clothing with blood and body fluids. Gowns are also worn to prevent the transfer of infectious agents from the resident's skin, clothing, bedding and environmental surfaces to the HCP bare skin and clothing. The physical characteristics of the material (e.g., moisture repelling vs.: cloth) are based on the anticipated degree of physical contact with the resident and the potential for fluid penetration. Laboratory coats or jackets worn over personal clothing, uniforms and scrubs are not considered PPE.

Disposable aprons or cloth cover gowns can be worn for routine resident care activities that require prolonged contact (e.g., bed bath, changing bed linens, moving or turning the patient, physical therapy, etc.). Reusable cloth cover gowns, if used, should not be worn by multiple HCP or for contact with more than one resident and should be discarded when wet or soiled and at the end of each shift.

Gowns should be worn correctly (tied at the neck and waist, if applicable) and always in combination with disposable gloves that cover the cuff of the gown's sleeve. Gowns should be removed after gloves and immediately before or upon exiting the resident's room or when moving from one resident to another in a multi-bed room. Hand hygiene should be performed following gown and glove removal.

Process Measures

To prevent the transmission of infectious agents and soiling of clothes and exposed skin of the forearm with blood and body fluids disposable, gloves in combination with moisture repelling gowns should be worn when:

- In contact with non-intact skin (e.g., large draining wounds, extensive dermatological conditions including skin rashes, burns, etc.),
- Handling fluid filled containers that are likely to leak, splash, spill or splatter when moved (e.g., bedside commodes, bedpans, urinals, and emesis basins),
- In contact with residents who soil their bed linens, clothing, and/or environmental surfaces with blood and body fluids, and
- Performing procedures likely to generate splashes, sprays, splatters or droplets of blood and other body fluids, and
- Entering a Contact Precautions designated room.

Masks and Eye Protectors or Face Shields

The mucous membranes of the mouth, nose, and eyes are susceptible portals of entry for viral and bacterial respiratory infectious agents expelled from the lungs and upper airway of infected and colonized residents. Masks and eye protectors or face shields are worn to:

- Protect HCP from exposure to and possible infection with bloodborne pathogens (e.g., HBV, HCV and HIV) when performing procedures or activities likely to aerosolize splashes, sprays, splatters or droplets of blood and other body fluids, and
- To protect residents from exposure to infectious agents that may be colonizing the HCP's mouth or nose.

Procedure and surgical masks should not be confused with particulate (N-95) respirators that are recommended to prevent the transmission of airborne infectious agents such as *Mycobacterium tuberculosis*. Additionally, a higher level of respiratory protection (N-95 respirators) may be required for novel (new) respiratory infectious agents (e.g., pandemic H1N1 influenza).

LTCF should consult with their local health department for recommendations for preventing the transmission of airborne infectious agents. When influenza-like illnesses (ILI) are circulating in the community the facility should implement a respiratory hygiene/cough etiquette program as defined by the CDC Guideline for Isolation Precautions.⁴

Process Measures

Wear disposable masks (surgical or procedure) over the nose and mouth and in combination with eye protection (goggles) or a face shield when performing any of the following procedures:

- Intubation, nebulized respiratory therapy treatments, bronchoscopy, CPR, open airway suctioning (if not using in-line suction catheters) and sputum induction,
- Oral or tracheal suctioning that induces projectile secretions, and
- Irrigation of open infected and non-infected wounds including burns.

Wear disposable surgical/procedure masks only over the nose and mouth when:

- Performing invasive procedures such as lumbar puncture or the insertion of central vascular access devices including percutaneous intravascular catheters (PICC),
- Performing dressing changes on central vascular access devices including PICC,
- Performing dressing changes on large open wounds,
- A HCP has a new onset of productive cough and nasal congestion (upper respiratory infection) without fever, and
- A resident has a new onset or exacerbation of a respiratory condition with increased sputum production or nasal secretions.

Wear a National Institute of Occupational Safety and Health (NIOSH) approved respirator (N-95 or above) when:

- In contact with a suspected or confirmed airborne infectious disease as defined the California Occupational Safety and Health Administration (CAL-OSHA). Consult California Aerosol Transmissible Disease (ATD) Standard at www.dir.ca.gov/Title8/5199.html.

Environmental Sanitation

Rationale:

Environmental sanitation is as important as hand hygiene in preventing the transmission of infectious agents in health care facilities. A recent study concluded that admission to a room previously occupied by a known MRSA or VRE culture-positive patient was a significant risk factor for acquiring these pathogens by subsequent room occupants.⁶ In another study, 70% of cultures obtained from environmental surfaces in the rooms of patients known to be infected or colonized with MRSA were positive for MRSA.¹¹

What is known from published studies is that regardless of the original site of the infection (e.g., wound, respiratory, etc) or colonization (e.g., nares) infectious agents such as MRSA, VRE, *C. difficile* can contaminate all or parts of the patient's skin surface, especially those sites that are moist (e.g., groin, axillae, etc). The bacteria are then shed in the skin squames (cells) onto environmental surfaces such as bedrails and table tops in the patient's immediate environment. These organisms can survive on dry environmental surfaces from several hours to many weeks and serve as a source of hand, glove and clothing contamination.

Definition of Environmental Hygiene

Cleaning and disinfecting environmental surfaces and medical equipment to remove soil and contamination.

Employee Education

Each employee working in environmental services should be trained during new employee orientation, annually and when observations indicate non-compliance with the facility procedures for maintaining a hygienic environment. Additionally, HCP who provide direct resident care (e.g., nursing personnel, physical therapists, activities coordinator, etc) should be educated about their responsibilities in cleaning and disinfecting medical equipment and environmental surfaces.

Essential elements of the employee education program include:

- The rationale for environmental hygiene (e.g., prevent transmission of infectious agents),
- The development and implementation of current, evidence-based procedures,

- Demonstration with return demonstration of the correct method to clean and disinfect a resident-occupied room, bathroom, and recreational and food service areas,
- Demonstration with return demonstration of the correct method to clean and disinfect a discharge/transfer room,
- A review of the hazards (e.g., material safety data sheets) associated with all products,
- Selection and use of appropriate products for specific surfaces,
- Delineation of responsibilities (e.g., nursing VS: environmental services employees) for cleaning and disinfecting medical equipment (e.g., electronic thermometers and other electronic equipment, monitors, fluid administration pumps, ventilators, etc.),
- Proper use of PPE,
- Compliance with daily, weekly, and monthly schedules,
- Proper product dilution and contact time, and
- Compliance with CAL-OSHA standards.

Demonstration of Knowledge

Each employee should periodically be required to verbally and physically demonstrate the proper procedures for environmental hygiene including the selection and application of the appropriate product.

Observation of Environmental Hygiene

The infection prevention professional or other designated person specifically trained to observe for and document compliance with facility procedures should, at least every 2 – 3 weeks, visually observe employees responsible for environmental hygiene. Non-compliance should be immediately addressed. (See Attachments 5 and 6)

Process Measures

- Assign responsibility and accountability for environmental hygiene to each department manager, supervisor and employee.
- Daily or more frequently if visibly soiled, environmental services employees should clean and disinfect frequently touched surfaces and objects (e.g., bedrails, table tops, chairs, television and nurse call and television controls, etc) in resident-occupied rooms, nursing stations, and other areas as assigned.
- Daily or more frequently if visibly soiled, nursing service employees should clean and disinfect equipment such as monitors, fluid administration pumps and other equipment directly related to the care and treatment of a resident.
- Develop and implement a schedule for cleaning and disinfecting air vents, supply storage cabinets, offices, waiting areas, carpets, medication and treatment carts as well as other equipment.
- Develop and implement a schedule for cleaning and disinfecting beds, furniture, storage closets, and equipment in rooms assigned to long term residents.

- Terminally clean and disinfect all equipment, furniture, cabinets, and shelves and change privacy curtains in discharge-transfer rooms.
- Use an Environmental Protection Agency (EPA) registered detergent/disinfectant in all resident care areas. The manufacturer's recommendations for amount, dilution, and contact time should be followed.¹²
- Currently there is no approved EPA-registered detergent/disinfectant that is effective in killing *C. difficile* spores. Therefore a 1:10 dilution of 5.25% sodium hypochlorite (household bleach) and water freshly mixed daily should be used to disinfect the rooms of those residents with symptomatic (e.g., diarrhea) infection. If there is evidence of ongoing *C. difficile* transmission, the facility should consider using a bleach solution daily in all resident rooms until transmission has ceased.

Use a clean cloth saturated with a properly diluted disinfecting solution for each residents' area of the room. Work from clean to dirty (e.g., bedside tables, bedrails to bathroom). Spray bottles should be replaced with bottles that pour the disinfecting solution onto a cloth or surface.¹²

- Replace mop bucket solution every 3rd room and when debris is visible in the solution. Wash and dry cloths and mops daily.¹²
- Clean and disinfect reusable medical equipment (e.g., surgical instruments and other equipment) according to the manufacturers' instructions prior to sterilization. Cleaning to remove organic material must always precede disinfection and sterilization because residual blood and body fluid reduces the effectiveness of the sterilization process.
- Clean and disinfect multiple-resident use equipment (e.g., commodes, shower chairs, bedside scales, lifts, blood pressure cuffs, electronic thermometers, etc) between each resident use.
- Clean and disinfect equipment such as computer keyboards as well as other frequently touched peripheral equipment at least daily.
- Locate disinfectant impregnated disposable wipes close to shared, moveable monitoring equipment such as electronic thermometers and blood pressure devices. Shared equipment such as thermometers, stethoscopes and blood pressure cuffs should be disinfected between each resident encounter.
- Use moisture-resistant mattress covers and replace when soiled with blood and body fluids and at discharge/transfer. Replace torn pillows and mattresses. Wash pillows and their protective covers when soiled.
- Clean and disinfect glucometers and other point-of-care testing devices after each use. Consult manufacturer's recommendations for disinfecting solution concentration.

Resident Hygiene

Rationale:

Resident hygiene is as important as hand hygiene and environmental sanitation in LTCF. There are no current CDC recommendations for resident hygiene to reduce skin colonization with MRSA, VRE or other infectious agents. In one recent study, the incidence of MRSA and VRE bloodstream infection rates in intensive care unit patients who were bathed daily with 4% chlorhexidine gluconate was greatly reduced when compared to those bathed with plain soap and water. Further, in this study weekly surveillance tests found a 32 percent and 50 percent reduction in MRSA and VRE colonization respectively. The study warned that chlorhexidine gluconate was only effective against gram-positive bacteria and that the incidence of gram-negative bacteria should be monitored.⁷

Process Measures

- Shower (bathe) residents according to facility schedule. Consider daily showers for those residents at increased risk for HAI (e.g., immunosuppressed, invasive devices, etc.) or who have frequent episodes of infection.
- Evaluate the current shower/bath product to determine if the product contains an antimicrobial substance.
- Consider bathing new and returning residents at the time of admission.
- If the incidence of MRSA, VRE or another gram-positive infectious agent is increasing consider daily showers with 4% chlorhexidine gluconate.
- Ensure that incontinent residents are cleansed thoroughly with each diaper change.
- Assist residents to decontaminate their hands with soap and water after bowel and bladder elimination.
- Remind or assist residents to decontaminate their hands with an alcohol hand hygiene product or soap and water when leaving their room and prior to attending social activities and before eating.

MRSA Decolonization

- The use of nasal mupirocin to decolonize MRSA-positive residents is discouraged primarily because there is no evidence of its effectiveness in LTCF. In this setting, where 20% or more of residents will be colonized with MRSA, recolonization will likely occur quickly. Additionally, the resident may be colonized with a mupirocin-resistant MRSA strain, in which case decolonization may be unsuccessful. The use of mupirocin will increase the risk of resistance throughout the facility, so that its future utility, for example upon hospitalization of a resident for a surgical procedure, will be placed in jeopardy.

Resident Transport

Rationale:

Transporters pushing a wheelchair or a gurney rarely need to wear PPE such as gloves and gowns in corridors or elevators. If exposure to blood or body fluids is anticipated, the transporter should put on a clean gown and gloves after assisting the resident and upon exiting the room. Appropriate protective barriers (e.g., reinforced wound dressings, surgical/procedure mask, clean diaper, etc) should be used, when applicable, to contain and confine blood, body fluids and respiratory secretions.

Process Measures

- Follow instructions for Contact Precautions, if applicable,
- Assist the resident with hand hygiene prior to exiting the room,
- Ensure containment of fecal and urinary excretions and wound drainage,
- Place a mask over the nose and mouth if the resident has evidence of upper respiratory infection (URI) or exacerbation of chronic respiratory disease with increased sputum production,
- Communicate change of condition (e.g., URI) to receiving department,
- Notify transport service and complete Interfacility Infection Control Transfer Form, (Attachment 1), if resident has an active infection or is known to be colonized with a multidrug-resistant organism such as MRSA or VRE.

Soiled Linens

Soiled linens such as sheets, towels, incontinence pads and patient gowns are contaminated with community- and healthcare-associated organisms even if visible soil is not evident. According to the latest CMS guidance document double-bagging of linens from isolation rooms (Contact Precautions) is not necessary unless the outside of the bag is wet or visibly soiled with blood or body fluids. Laundry wash water temperatures should be maintained at or above 160⁰ F (71⁰ C). Alternately, low temperature washing at 71–77⁰ F (22-25⁰ C) plus 125 parts-per-million (ppm) chlorine bleach rinse has been found to be effective. If the later recommendation is implemented the use of chlorine bleach should be carefully monitored. Commercial laundry facilities, if used, should be monitored for compliance with recommended practices.

Process Measures

- Wear gowns and gloves when in contact with linens visibly soiled with blood, excretions and secretions,
- Avoid contact with skin and clothing when handling linens regardless of visible soil,
- Locate the laundry hamper close to point-of-use and place soiled linen directly into a leak-proof laundry bag or other container,

- Avoid putting soiled linens on floors, tabletops and chairs,
- Ensure that employees assigned to the laundry service wear PPE including moisture repelling gowns and gloves when handling and sorting soiled linens, and
- Periodically observe employees assigned to the laundry for compliance with facility policies and procedures including PPE, laundry wash water temperature, and cleanliness of clean and soiled laundry areas.

Lab Coats and Uniforms

Lab coats and jackets are not PPE and should not be worn when exposure to blood and other body fluids is anticipated. HCP including physicians, nurse practitioners and technicians should be reminded that lab coats and jackets become contaminated during direct resident contact encounters and that transmission of infectious agents from one resident to another is possible. Direct HCP should wear clean apparel (e.g., uniforms, scubs) each working day.

Dishes and Utensils

Routine dietary sanitation procedures should be used for dishes, eating utensils, water carafes and cups; no special handling is required. There are no requirements for the use of disposable dishes or utensils.

Visitors

Visitors, including children, should be verbally screened for symptoms of current upper respiratory infection, gastrointestinal infection, and draining and non-draining skin and soft tissue lesions. If any of these conditions are present, visitors should be dissuaded from visiting. The number of visitors, including children permitted in a resident's room at any given time should be limited.

Outcome Surveillance

Outcome surveillance is the ongoing, systematic collection, analysis, interpretation, and dissemination of data to all HCP related to the occurrence of HAI in LTCF. According to CMS, if HCP are in compliance with facility infection prevention process measures the occurrence of HAI should be low. Outcome surveillance consists of documenting each individual case of an infection occurring in residents using standardized definitions.¹³

The facility's infection prevention program should review the current definitions of infections for surveillance in LTCF and adopt develop a structured method by which data is collected, analyzed and reported to the infection control and/or quality improvement committee.¹ (See Attachment 7) (Also see the California Health and Safety Code 1279.6)

Outbreaks

LTCF should develop a policy and procedure for identifying and containing an outbreak. According to CMS an outbreak is defined as: (1) the occurrence of more cases of the same infectious agent than is normally expected; (2) the occurrence of an unusual infectious agent; or (3) the occurrence of a common infectious agent with an unusual antibiotic resistance pattern. California communicable disease reporting regulations (CCR Title 17 Section 2500 (a) (20)) defines an outbreak for reporting purposes as:

“the occurrence of cases of a disease (illness) above the expected or baseline level, usually over a given period of time, in a geographic area or facility, or in a specific population group. The number of cases indicating the presence of an outbreak will vary according to the disease agent, size and type of population exposed, previous exposure to the agent, and the time and place of occurrence. Thus, the designation of an outbreak is relative to the usual frequency of the disease in the same facility or community, among the specified population, over a comparable period of time. A single case of a communicable disease long absent from a population or the first invasion by a disease not previously recognized requires immediate reporting and epidemiologic investigation.”

Local and state health departments can offer assistance in outbreak management. Once an outbreak is suspected the facility **must** by regulation notify the local health officer and the licensing and certification office with jurisdiction over the facility.

Attachment 1 Interfacility Infection Control Transfer Form

Complete form within 24 hours prior to transfer to a LTCF

Sending Facility Name		Sending Facility Address		
Patient Last Name	First Name	Date of Birth	MR #	Date Discharge
Name Person Completing Form		Contact Telephone #	Contact E-mail	Alternate Contact Name
				Alternate Telephone # /E-mail

Name Receiving Facility	Name Person Contacted Prior to Transfer	Contact Telephone #	Contact E-mail

Does patient currently have OR is known to have a positive culture for a MDRO or other organism of epidemiological significance? <i>Please send copy of culture report with susceptibilities to receiving facility</i>	Colonized or history <i>Check if YES</i>	Active Infection with Current Treatment <i>Check if YES</i>
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)		
Vancomycin-resistant enterococcus (VRE)		
<i>Clostridium difficile</i> (C. diff)		
<i>Acinetobacter</i> species, multi-drug resistant		
<i>E coli, Klebsiella, Proteus</i> w/Extended Spectrum B-Lactamase (ESBL)		
<i>K pneumoniae</i> with ESBL resistant to carbapenems (KPN)		
Other infectious agent (identify)		

Does the patient currently have any of the following symptoms?

- Productive cough: Yes No
- Diarrhea with uncontrolled/uncontained incontinence: Yes No
- Open draining wound(s) (drainage not contained by dressing): Yes No
- Other (specify): _____

Is the patient currently in isolation (other than Enhanced) Precautions? NO YES

If yes, identify type of isolation (Contact, Droplet, Airborne): _____

Is the patient currently on antibiotics? NO YES:

Antibiotic Therapy at Time of Discharge	Dose	Treatment for:	Start Date	Anticipated Stop Date
Vaccination History	Date Administered (If Known)	Lot and Brand (If Known)	Does Patient Self Report Receiving Vaccine?	
Influenza (seasonal)			<input type="radio"/> yes	<input type="radio"/> no
Pneumococcal			<input type="radio"/> yes	<input type="radio"/> no
Other			<input type="radio"/> yes	<input type="radio"/> no
Name of Person Completing Form	Date Completed	Name, Phone and E-mail of Contact at Receiving Facility		

Attachment 2

Hand Hygiene Skills Check List

Date Observed: _____ Observer: _____ Shift Observed: 1 2 3

HCP Name	HCP Position	Nursing Unit or Ancillary Department	Hand Hygiene Random, Unannounced Observations	Person Compliant with Hand Hygiene Policy
1.				YES NO
2.				YES NO
3.				YES NO
4.				YES NO
5.				YES NO
	1. RN/LVN 2. Nurse Aid/CNA 3. Physician 4. Physician Assistant 5. Nurse Practitioner 6. Volunteer 7. Dietary 8. Visitor 9. Student 10. Respiratory Therapist 11. Radiology Tech 12. IV Therapist 13. Other	1. Unit A 2. Unit B 3. Dietary 4. EVS 5. Rehab SVC 6. Dining room 7. Activities room 8. Other	1. Enter Room 2. Leave Room 3. Touch Resident 4. Touch Equipment in room 5. Remove Gloves 6. Before Med Pass 7. After Med Pass 8. Before Feeding 9. After feeding 10. Other	Comments: For the purpose of observation, consider contact with the resident and the resident's immediate (e.g., bed room and bathroom; dining room and chair and table; activities room chair and table) environment as a single, contiguous contact
Hand hygiene verbal skills assessed: Yes No If yes, how many HCP assessed: How many HCP failed verbal skills assessment: Percent failure rate:				
Hand Hygiene with an alcohol-based product return demonstration skills assessed: Yes No If yes, how many HCP assessed: How many HCP failed return demonstration: Percent failure rate:				
Hand Hygiene random, unannounced observations performed: Yes No If yes, how many random observations: How many HCP failed random observations: Percent failure rate:				
Were visitors or volunteers observed for compliance with hand hygiene: Yes No If yes, how many visitors or volunteers observed: How many visitors or volunteers failed random observations: Percent failure rate:				
Data reported to Quality Improvement Committee: Yes Date Recommended Actions:				
*Adapted from Guide to the Elimination of Methicillin-Resistant <i>Staphylococcus aureus</i> (MRSA) in Long-Term Care Facility, 2009; published by the Association for Professionals in Infection Control and Epidemiology, Inc ¹⁴				

Attachment 3 Personal Protective Equipment (PPE) Inventory Tool

Date Observed: _____ Observer: _____ Shift Observed: 1 2 3

Adequate Levels of PPE Maintained		
Process Measures	Observation	Comment
On each shift a HCP is assigned to inventory and restock PPE cart/caddy/cabinet	Yes No	
Supplies are inventoried and restocked at end of each shift and as needed	Yes No	
Supplies are located on each nursing unit	Yes No	
Supplies are located in ancillary care areas such as physical therapy	Yes No	
Supply cart, caddy, or storage cabinet prominently labeled "PPE Supplies"	Yes No	
HCPs know location of supply cart/caddy/cabinet	Yes No	
Extra supplies are easily obtained from store room on all shifts	Yes No	
Storage cart/caddy/cabinet contains <i>only</i> the following supplies		
Supply	Par level (established by facility)	Observation
Gloves (small, medium, large):		Yes No
Gowns (moisture repelling)		Yes No
Gowns/aprons; may be plastic aprons or cloth gowns)		Yes No
Masks (surgical or procedure)		Yes No
Goggles or face shield		Yes No
Blood/body fluid spill containment kit		Yes No
Alcohol-based hand hygiene refill dispensers		Yes No
Environmental hygiene disinfectant wipes		Yes No

NOTE: N-95 or higher level respiratory protection should be immediately available in store room in the event of a pandemic influenza outbreak. Consult with local health department.

Data reported to Quality Improvement Committee: Yes Date
 Recommended Actions:

Attachment 4 Personal Protective Equipment (PPE) Skills Check List

Date Observed: _____ Observer: _____ Shift Observed: 1 2 3

Note: If PPE worn correctly during resident care activities, place a check mark in the appropriate box

HCP Name	Location of Observation	Gloves	Gowns	Aprons	Mask + Eye Protectors	Masks only
1.						
2.						
3.						
4.						
5.						
	1. Unit A (room #) 2. Unit B (room #) 3. Dietary 4. EVS 5. Rehab SVC 6. Dining room 7. Activities room 8. Other					
Verbal knowledge of PPE procedure assessed: Yes No If yes, how many HCP assessed: How many HCP failed assessment: Percent HCP failed assessment:						
Compliance during resident care activities observed: Yes No If yes, how many HCP assessed: How many HCP failed assessment: Percent HCP failed assessment:						
Data reported to Quality Improvement Committee: Yes Date Recommended Actions:						

Attachment 5 Environmental Hygiene Terminal (Monthly/Discharge/Transfer) Skills Check List

Date Observed: _____ Observer: _____ Employee Observed: _____

Process Measures Terminal Environmental Hygiene Tasks	Compliance		Comments/Actions Taken
Detergent/disinfectant solution mixed according to manufacturer's instructions	Yes	No	
Solution in wet contact with surfaces according to manufacturer's instructions	Yes	No	
Clean, saturated cloth used in each room (do not use spray bottles)	Yes	No	
Solution in bucket changed every 3 rd room and when debris is visible in bucket	Yes	No	
Responsibilities of EVS personnel (e.g., bed, bedrails, furniture) and nursing (infusion pumps, respiratory therapy equipment, etc) delineated and understood	Yes	No	
Isolation instruction signage (gowns, gloves, and/or masks) followed, when applicable	Yes	No	
Tasks Performed			
Vent covers (high and low)	Yes	No	
Ceiling/Wall light fixtures	Yes	No	
Television front/back, cables, vent, cabinet	Yes	No	
Wall mounted monitors, cables, vent, cabinet	Yes	No	
Ledges, blinds	Yes	No	
Privacy curtains changed; rods dusted	Yes	No	
Bed frame, bed rails, head/foot boards, springs	Yes	No	
Mattress (top/bottom/sides)	Yes	No	
Television control, nurse call control, bed controls	Yes	No	
Night stand (inside and outside)	Yes	No	
Locker (inside and outside), shelves	Yes	No	
Over bed table (inside and outside)	Yes	No	
Bed and other furniture moved	Yes	No	
Base boards behind bed and night stand	Yes	No	
Electrical outlet panel, oxygen/suction valves	Yes	No	
Bathroom (shower, toilet, sink, grab bars, mirror, spot walls, nurse call control)	Yes	No	
Floors damp dust and mop	Yes	No	
Vacuums HEPA filtered; bags changed 2/3's full	Yes	No	
Other equipment/furniture cleaned/disinfected	Yes	No	
Broken, torn or malfunctioning equipment reported	Yes	No	
Equipment cleaned, maintained and stored appropriately	Yes	No	
Carpet/upholstered furniture (according to policy)	Yes	No	
Waste Receptacles emptied, cleaned, relined	Yes	No	
Needle box replace, if 2/3s full	Yes	No	
Nursing cleans/disinfects critical equipment (infusion pumps, monitors, etc)	Yes	No	

*Adapted from Guide to the Elimination of Methicillin-Resistant *Staphylococcus aureus* (MRSA) in Long-Term Care Facility, 2009; published by the Association for Professionals in Infection Control and Epidemiology, Inc ¹⁴

Attachment 6 Environmental Hygiene Daily Resident Room Skills Check List

Date Observed: _____ Observer: _____ Employee Observed: _____

Process Measures Daily Environmental Hygiene	Compliance	Comments/Actions Taken
Environmental Services Responsibilities		
Detergent/disinfectant solution mixed according to manufacturer's instructions	Yes No	
Solution in wet contact with surfaces according to manufacturer's instructions	Yes No	
Clean, saturated cloth used in each room (do not use spray bottles)	Yes No	
Solution in mop bucket changed every 3 rd room and when debris visible in bucket	Yes No	
Employees can verbally delineate responsibilities of EVS personnel (e.g., bed, bedrails, furniture) and nursing (infusion pumps, respiratory therapy equipment, etc)	Yes No	
Isolation instruction signage (gowns, gloves and masks) followed, when applicable	Yes No	
Night stand, over bed table, bedrails, chair, other equipment in close proximity to resident cleaned and disinfected daily	Yes No	
Syringe disposal box		
Check daily	Yes No	
Replace when 2/3's full	Yes No	
Remove to disposal area (dirty utility room)	Yes No	
Isolation Signage		
Appropriate PPE (gowns, gloves masks) worn	Yes No	
Red bag waste sealed and transported to appropriate receptacle in dirty utility room	Yes No	
Mop and cloths placed in appropriate bag at completion of each isolation room	Yes No	
Nursing Responsibilities		
Patient care equipment (infusion pumps, respirators, etc.) cleaned and disinfected daily and as necessary	Yes No	
Shared Responsibilities		
Spills of food/liquid cleaned up immediately	Yes No	
Spills of blood and other body fluids cleaned up immediately according to facility procedure	Yes No	
Blood and body fluid spill procedure reviewed with both nursing and EVS personnel	Yes No	
Adapted from Guide to the Elimination of Methicillin-Resistant <i>Staphylococcus aureus</i> (MRSA) in Long-Term Care Facility, 2009; published by the Association for Professionals in Infection Control and Epidemiology, Inc. ¹⁴		

**Attachment 7 Healthcare-associated Infections (HAI) in Skilled Nursing Facilities (SNF)
Suggested Definitions of Infections for Surveillance Purposes**

Date onset symptoms:

Resident name:

Unit:

Date of Initial Admission:

Date Previous Admission

Site of Infection	Type of Infection	Criteria for infection	Comments
<input type="checkbox"/> Respiratory Check all applicable symptoms	<input type="checkbox"/> Common Cold No viral/bacterial cultures needed unless outbreak suspected	At least 2 new symptoms: <input type="checkbox"/> runny nose or sneezing <input type="checkbox"/> nasal congestion <input type="checkbox"/> sore throat, hoarseness <input type="checkbox"/> dry cough	Fever may or may not be present. Treatment/antibiotic prescribed?
Check all applicable symptoms	<input type="checkbox"/> Influenza-like illness (ILI) Viral testing suggested if 2 or more residents have onset of similar symptoms within 24-72 hours Viral test obtained: Date: Results:	Any 3 of the following new symptoms: <input type="checkbox"/> chills <input type="checkbox"/> headache (eye pain) <input type="checkbox"/> muscle ache <input type="checkbox"/> malaise <input type="checkbox"/> loss of appetite <input type="checkbox"/> sore throat <input type="checkbox"/> cough dry or productive <input type="checkbox"/> altered mental/functional status	Fever may or may not be present. Did resident receive annual influenza vaccination? Yes Date: Treatment/antibiotic(s) prescribed?
Check all applicable symptoms NOTE: Rule out CHF or exacerbation of chronic diseases such as COPD.	<input type="checkbox"/> Pneumonia <input type="checkbox"/> Bronchitis Sputum culture obtained: Date: Results: Resistance pattern:	<u>Pneumonia</u> CXR suggestive of new infiltrate and any 2 of the following new or increased symptoms <input type="checkbox"/> cough <input type="checkbox"/> new or increased sputum <input type="checkbox"/> pleuritic chest pain <input type="checkbox"/> rales/rhonchi/wheezing <input type="checkbox"/> short of breath <input type="checkbox"/> respiratory rate > 25/min <input type="checkbox"/> altered mental/functional status <u>Bronchitis</u> CXR negative or not done and any 3 new symptoms listed under pneumonia	Fever may or may not be present. Did resident receive pneumococcal vaccination on admission or documented history of vaccination? Yes: Date: Treatment/antibiotic(s) prescribed?
<input type="checkbox"/> Urinary Tract Check all applicable symptoms NOTE: Repeat culture after completion of antibiotic therapy is not necessary.	<input type="checkbox"/> Lower tract infection <input type="checkbox"/> Upper tract (kidney) infection *Culture obtained: Date: Results: Resistance pattern: *Must be clean catch or cath urine specimen	Any 3 of the following new symptoms: <u>No indwelling catheter</u> <input type="checkbox"/> burning or painful urination <input type="checkbox"/> chills <input type="checkbox"/> urgency/frequency <input type="checkbox"/> flank/suprapubic tenderness <input type="checkbox"/> altered mental/functional status <u>Indwelling catheter</u> Any 2 new symptoms listed under no indwelling catheter	Fever may or may not be present. Did resident have indwelling urinary or suprapubic catheter? Yes If yes, can catheter be discontinued? No Yes Treatment/antibiotic(s) prescribed? Note: A change in character of urine (color, foul smell, amount of sediment) may be indication of dehydration; increase fluid intake for 2-4 hours before obtaining specimen for laboratory analysis
<input type="checkbox"/> Gastro-	<input type="checkbox"/> Lower GI tract	Any of the following:	Fever may or may not be

<p>enteritis</p> <p>Check all applicable symptoms</p> <p>NOTE: Rule out non-infectious causes such as new medications.</p>	<p><input type="checkbox"/> Upper GI tract</p> <p>Cultured obtained:</p> <p>Date:</p> <p>Results:</p> <p>Resistance pattern:</p> <p>C. difficile toxin assay or other test?</p> <p>Date:</p> <p>Results:</p>	<p><input type="checkbox"/> 2 or more loose or watery stools above what is normal for resident in 24 hour period and/or</p> <p><input type="checkbox"/> 2 or more episodes of vomiting within 24 hour period and/or</p> <p><input type="checkbox"/> stool positive for bacterial/viral/toxin</p>	<p>present.</p> <p>Treatment/antibiotic(s) prescribed?</p>
<p><input type="checkbox"/> Skin/soft tissue wound</p> <p>Check all applicable symptoms</p> <p>NOTE: Skin scrapings should be done on index or suspect case? Yes: Results:</p>	<p><input type="checkbox"/> Surgical wound</p> <p><input type="checkbox"/> Pressure ulcer</p> <p><input type="checkbox"/> Other skin and soft tissue wound</p> <p>Culture obtained:</p> <p>Date:</p> <p>Results:</p> <p>Resistance pattern:</p>	<p>Skin and soft tissue or surgical wound and any of the following:</p> <p><input type="checkbox"/> heat/redness at site</p> <p><input type="checkbox"/> swelling/tenderness at site</p> <p><input type="checkbox"/> new or increase serous drainage</p> <p><input type="checkbox"/> new or increase purulent drainage</p> <p><input type="checkbox"/> alter mental/functional status</p> <p><input type="checkbox"/> incision and drainage (I&D) yields purulent drainage</p> <p><input type="checkbox"/> Intense scratching or itching</p>	<p>Fever may or may not be present.</p> <p>Surgery performed in past 30 days? Yes : Date: Procedure:</p> <p>NOTE: Infected surgical wounds should be reported to hospital IP where surgery performed. Hospital ICP notified? Yes: Date: Treatment/antibiotic(s) prescribed?</p>
<p><input type="checkbox"/> EENT</p>	<p>Conjunctivitis</p> <p>Culture taken?</p> <p>Date:</p> <p>Results:</p> <p>Resistance Pattern</p>	<p>1 of the following new symptoms:</p> <p><input type="checkbox"/> pus from 1 or both eyes for 24 hours</p> <p><input type="checkbox"/> conjunctival redness with or without pain or itching</p>	<p>Treatment/antibiotic(s) ordered?</p>
<p><input type="checkbox"/> Systemic (Blood) stream infection)</p> <p>Check all applicable symptoms</p>	<p><input type="checkbox"/> Invasive device related infection</p> <p><input type="checkbox"/> No device related infection</p> <p>Blood culture obtained:</p> <p>Date:</p> <p>Results:</p> <p>Resistance pattern:</p>	<p>1 of the following:</p> <p><input type="checkbox"/> 2 sets of blood cultures taken from different sites at least 15 minutes apart are positive for the same organism; or</p> <p><input type="checkbox"/> 1 of 2 sets of blood cultures taken from different sites are positive for an organism(s) (not considered contaminated specimen) and any 2 of the following:</p> <p><input type="checkbox"/> blood pressure < 80 systolic</p> <p><input type="checkbox"/> pulse > 100/minute</p> <p><input type="checkbox"/> respirations > 25/minute</p> <p><input type="checkbox"/> chills</p> <p><input type="checkbox"/> alter mental/functional status</p> <p><input type="checkbox"/> Other</p>	<p>Fever or hypothermia may or may not be present.</p> <p>Antibiotic(s) ordered?</p> <p>Risk factors to consider in diagnosing blood stream infections; presence of</p> <p><input type="checkbox"/> Central/peripheral vascular access device</p> <p><input type="checkbox"/> Indwelling urinary catheter</p> <p><input type="checkbox"/> Mechanical ventilation with tracheostomy</p> <p><input type="checkbox"/> Prosthesis (hip, knee)</p> <p><input type="checkbox"/> Recent surgical procedure</p>

Healthcare-associated – not present or incubating at time of or within 3 days after admission; new onset or worsening of symptoms; Community-associated – acquired at home or another facility (GACH or transfer from another SNF)
Reference” McGeer A, Campbell B, Emori G, et al. *Definitions of Infection for Surveillance in Long-term Care Facilities*, Am J Infect Control 19(1): 1-7, 1991. Also available on the Internet; Definitions modified by C. Cahill

Definitions:

Active Infection: Multiplication of infectious agents with tissue invasion and clinical symptoms such as fever, redness, swelling and possible drainage from soft tissue lesions; new onset of diarrhea; new onset or exacerbation of pulmonary symptoms

Airborne Precautions: A CDC approach that requires special ventilation and the use of filtering-facepiece respirators to prevent the transmission of infectious agents that are spread from person-to-person by inhalation of droplet nuclei that remain infectious over long distances when suspended in the air. Examples include: rubeola virus (measles), varicella virus (chickenpox), and *M. tuberculosis*.

Asymptomatic Infection: Presence of an infectious agent without evidence of tissue invasion or clinical disease; also referred to as colonization

Cohorting: Placing residents infected or colonized with another resident known to be culture-positive for the same infectious agent in the same room or in a designated area of a nursing unit, clinic or waiting room. During outbreaks care givers may be designated to work only with the infected or colonized group or with non-infected, non-colonized group, but not both during the same shift.

Colonization: See asymptomatic infection

Contact Precautions: A CDC approach intended to prevent the transmission of infectious agents that are spread by direct or indirect contact with the resident or the resident's contaminated environment. Examples include MRSA wound drainage and Clostridium difficile-associated diarrhea.

Droplet Precautions: A CDC approach intended to prevent the transmission of infectious agents that are spread through close contact with infected respiratory secretions or mucous membranes. These agents do not remain suspended in the air over long distances. Special ventilation and respiratory protection are not required to prevent droplet transmission. Examples include *B. pertussis* [whooping cough], seasonal influenza virus, rhinovirus, *N. meningitides*, and group A streptococcus (for the first 24 hours of antimicrobial therapy)

Enhanced Standard Precautions: Integrates and consolidates the CDC recommendations for Standard Precautions with many of the recommendations for Contact Precautions and Intensified Interventions. The purpose is to create, to the extent possible, a single-tiered approach to preventing the transmission of any transmissible infectious agent, including those deemed by the LTCF to be of epidemiological significance such as MRSA.

Epidemiologically Important Microorganisms: 1) having the propensity for transmission within healthcare facilities based on published reports and the occurrence of temporal or

geographic clusters of > 2 patients, (e.g., MRSA, methicillin-sensitive *Staphylococcus aureus* [MSSA], *Clostridium difficile*); (2) a single case of infection caused by group A streptococcus; (3) resistance to first-line antibiotic therapy (e.g., MRSA, extended-spectrum beta-lactamase [ESBL] producing organisms); (4) the identification of an unusual microorganism or a common organism with an unusual resistance pattern (e.g., the first isolate of *Burkholderia cepacia* complex or *Ralstonia* spp. in non-cystic fibrosis patients or a quinolone-resistant strain of *Pseudomonas* or E-Coli); (5) difficult to treat microorganisms because of natural or acquired resistance to multiple classes of antimicrobial agents (e.g., *Stenotrophomonas maltophilia*, *Acinetobacter* spp.); (6) associated with serious clinical disease, increased morbidity and mortality; or (7) a newly discovered or reemerging infectious agent.

Hand Hygiene: Removal of visible soil (e.g., dirt) and/or spore-forming microorganisms (e.g., *Clostridium difficile* or *C. diff*) from hands using soap (plain or antimicrobial) and water; removal of transient, vegetative microorganisms (e.g., *Staphylococcus aureus* including methicillin-resistant *Staphylococcus aureus* (MRSA) and other gram-negative and gram-positive microorganisms) from hands using an alcohol-based hand hygiene product

Healthcare-associated Infection (HAI): An infection that develops in a resident who is cared for in any setting where healthcare is delivered (e.g., acute care hospital, long-term care facility, dialysis center, etc.) and was not incubating or present at the time of admission to that setting.

Infectious Agent: Microorganisms such as a bacteria, viruses and fungi that may cause an active infection

Long-term care facility: Inpatient and outpatient facilities (e.g., skilled nursing facilities, chronic disease hospitals, foster and group homes, homes for the developmentally disabled, residential care facilities, assisted living facilities, adult day health facilities, rehabilitation centers, long-term psychiatric facilities, etc.) that provide care to people who are unable to manage activities of daily living independently in the community

MDRO: Multidrug-resistant organisms; In general, bacteria (excluding *M tuberculosis*) that are usually resistant to all but one or two commercially available antimicrobial agents (e.g., MRSA, VRE, extended spectrum beta-lactamase (ESBL)-producing or intrinsically resistant gram-negative bacilli)

Resident: Any person residing in a skilled nursing facility or facilities defined in Section 1250 subdivisions (d)(e)(g)(h)(i) and (m) of the California Health and Safety Code. The term resident may also apply to persons residing in community-care licensed facilities.

Standard Precautions: A CDC approach to reducing the risk of transmission of any infectious agent from both recognized and unrecognized sources. Former names include "Universal Precautions" (precautions applied prevent the transmission of bloodborne pathogens) and "Body Substance Isolation" (precautions applied to contact

with moist body fluids). Standard precautions, as defined by the CDC, apply to: 1) blood; 2) all body fluids, secretions and excretions except sweat, regardless of whether or not they contain visible blood; 3) non-intact skin; and 4) mucous membranes

Transmission-Based Precautions: A CDC approach to reducing the risk of transmission of an infectious agent from documented (e.g., culture positive for an infectious agent) or suspected (e.g., culture result unknown or culture not taken) infection or colonization with a highly transmissible or epidemiologically important infectious agent (e.g., MRSA, VRE, etc). These precautions include three subcategories: (1) Contact Precautions, (2) Droplet Precautions, and (3) Airborne Precautions. For some diseases (e.g., SARS), multiple routes of transmission have been identified and more than one category may be required (e.g., Contact plus Airborne Precautions)

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