



Guideline for the Management of Antimicrobial Resistant Microorganisms in Minnesota Long-Term Care Facilities

Minnesota Department of Health

Infectious Disease Prevention and Control Division

Facility and Provider Compliance Division

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<http://www.health.state.mn.us/divs/idepc/dtopics/infectioncontrol/guideline.html>

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Introduction:

The Minnesota Department of Health (MDH) receives many inquiries from long-term care facilities (LTCFs) regarding the placement and care of persons with antimicrobial resistant microorganisms (ARMs). The most common questions concern persons who are colonized or infected with methicillin resistant *Staphylococcus aureus* (MRSA) or vancomycin resistant enterococcus (VRE). Due to concern about ARMs, some LTCFs have restricted the admission of persons known to be infected or colonized with ARMs.¹ This has caused persons with ARMs to experience delays or denial of admission to LTCFs.² There is no evidence that restricting the admission of persons with ARMs is effective in keeping LTCFs free of ARMs. Because LTCF residents are not generally screened for ARMs, colonization is often not detected. Therefore, a policy restricting the admission of persons with ARMs may lead to a false sense of security that a facility is free of ARMs.³

MDH Position Statement:

Based on currently available knowledge, persons with ARMs should **NOT** be denied LTCF admission solely on the basis of a positive ARM culture from any site.³ Also, it is not appropriate for LTCFs to refuse to re-admit residents who have been found to have ARMs after transfer from the LTCF to an acute care facility. New or returning residents should be admitted to LTCFs based on the ability of the facility to provide necessary care to the resident and should not be based on ARM status. Denying admission or re-admission based on ARM status alone is discriminatory and may lead to review by government agencies. The Society for Healthcare Epidemiology of America (SHEA), the American Hospital Association (AHA) task force and the Veterans' Affairs (VA) consensus panel all oppose restricting the access of MRSA colonized residents to LTCFs.^{3,4,5} Guidelines published by other states also oppose such restrictions.^{6,7,8} LTCFs should be prepared to implement appropriate infection control measures for **all** prospective or current residents colonized or infected with ARMs. This guideline, which is based on the best current recommendations on the subject, describes infection control measures for LTCF residents with ARMs in non-outbreak situations and is meant to supplement previously published recommendations for VRE in 1996 and MRSA in 1993.^{9,10,11} It is important to note that due to incomplete data specific to certain issues in the community LTC setting, extrapolation from studies done in other settings and/or situations has been necessary. As additional research is published, this guideline will be revised as necessary.

Background:

- The presence of ARM colonization in LTCF residents appears to be quite common. Studies have estimated that more than 20% of LTCF residents may be colonized with MRSA and more than 10% may be colonized with VRE.^{12,13 14} In addition to MRSA and VRE, antibiotic resistant gram-negative bacilli (GNB) are also common in this setting (e.g., *E. coli*, *Pseudomonas aeruginosa*, *Klebsiella* species).¹⁵ It has been shown that a significant portion of residents are already colonized with MRSA and VRE upon admission to LTCFs and fewer residents acquire MRSA or VRE during their LTCF stay.^{12,16} The admission of persons with ARMs into LTCFs does **not** appear to increase LTCF infection rates or commonly result in excess morbidity or mortality.¹⁷

- Although ARM colonization may result in infection, it has been demonstrated that LTCF residents colonized with MRSA and VRE are less likely to develop infections due to these organisms than are hospitalized patients. In studies of VA affiliated LTCFs, few deaths resulted from MRSA infection and in a study of VRE colonization in a LTCF, subsequent development of infection was rare.^{12,13,14} In addition, studies involving MRSA and VRE indicate that roommate to roommate transmission of these ARMs in the LTCF setting, although possible, is not common.^{14,18,19} Therefore, control measures that may be appropriate in the acute care setting are not generally indicated in the LTCF setting.

Risk Factors for ARMs:

The following factors have been found to be associated with ARM colonization: underlying illness; intravenous, urinary, or enteral feeding devices; antibiotic use; wounds; decline in functional status; and increased intensity of nursing care.¹⁵ Factors that favor the spread of ARMs in LTCFs include high resident to staff ratios, lack of attention to basic infection control measures, use of common equipment without disinfection between residents, limited facilities for handwashing and the inappropriate use of antimicrobials.²⁰

Infection Control Measures:

In 1996 the Centers for Disease Control and Prevention (CDC) published a “Guideline for Isolation Precautions in Hospitals.”²¹ This guideline was designed for acute care facilities and acknowledged that facilities “will modify the recommendations according to their needs and circumstances and as directed by federal, state or local regulations. Modification of the recommendations is encouraged if the principles of epidemiology and disease transmission are maintained and precautions are included to interrupt spread of infection by all routes that are likely to be encountered.” Information from this guideline, modified for use in LTCFs, is summarized below.

Standard Precautions:

- **Most** LTCF residents with ARMs can be cared for using Standard Precautions (Attachment 1), with the addition of **hand antisepsis** (see below). Unless otherwise indicated (see below), Standard Precautions and hand antisepsis are adequate for LTCF residents who have **contained** ARM colonized or infected secretions/excretions. Secretions/excretions (including wound drainage, stool and urine) are contained when they are unable to leak out of containment products. This includes wound dressings, incontinence products, urine bags, ostomy bags, etc.
- Because colonization with ARMs is often unrecognized and because other infectious organisms may also spread in LTCFs, it cannot be emphasized too strongly that compliance with Standard Precautions is important in the care of **ALL** residents, whether or not they are known to have an ARM. Emphasis should be placed on appropriate glove use and hand antisepsis in LTCFs.

Hand Antisepsis:

- ARMs are transmitted primarily via the contaminated hands of staff. The **single most effective means** of reducing the potential for ARM transmission is hand antisepsis (destroying or removing transient microorganisms from the hands) before and after contact with residents with ARMs, including after glove removal.
- Hand antisepsis can be accomplished by cleaning hands with antimicrobial soap or by using a waterless alcohol based hand antiseptic.^{22,23} The use of a waterless alcohol based hand antiseptic should be **strongly considered** in the care of all LTCF residents. Recent studies show that such products are as effective as antimicrobial soaps, may increase handwashing compliance, and are not harmful to hands.^{24,25,26}
- If hands are not visibly soiled and a waterless alcohol based product is to be used for hand antisepsis, apply a sufficient amount of the product to wet hands thoroughly, rub hands together and cover entire surface of hands (including nails) and allow to dry. However, if hands are visibly soiled with organic material or debris (e.g., feces, dirt), hands should be cleaned with antimicrobial soap and running water, rather than or prior to using a waterless product. Convenient access to hand antisepsis products will improve compliance, therefore it is helpful to install pump dispensers of waterless alcohol based hand antiseptic in or near each resident room. Small containers of waterless alcohol based hand antiseptic may also be carried by staff and residents for use when handwashing facilities or pump dispensers are not readily accessible.

Room Placement:

There is **no** requirement that residents with ARMs must be placed in a private room. Residents with ARMs may be placed with appropriate roommates. An appropriate roommate is either a resident with the **same ARM** (cohorting) **or** a resident who:

- has intact skin with no significant open wounds or breaks in skin (superficial tears or breaks in the skin such as minor scratches, would be acceptable) **and**
- has no invasive devices, indwelling vascular or urinary catheters or drainage devices (e.g., tracheostomy or tracheal tubes, chest tubes, gastrostomy tubes, broviac/hickman catheters, intravenous lines, etc.) **and**
- is not significantly immunocompromised (e.g., due to organ transplantation, neutropenia, serious acute or chronic infection, systemic steroids or chemotherapy) - please note that based on age alone, most “healthy” elderly residents are not considered **significantly** immunocompromised - **and**
- is not colonized or infected with a different ARM.

Contact the MDH Institutional Infection Control Unit (612-676-5414) if assistance is needed with placement issues. Situations in which a current resident is found to have an ARM and there is concern about risk in a roommate should be evaluated on a case by case basis.

Group Activities:

Residents with ARMs may use common living areas, recreational areas, and group dining facilities. Such activities serve an important purpose in maintaining quality of life for LTCF residents. Control measures that limit resident activity and movement, such as those used in the acute care setting, are generally **not** necessary and may result in emotional and social deprivation in the LTCF setting. The following factors should be considered in terms of group activities:

- Hand antiseptics are a very important component of participation in group activities. Residents with ARMs should have their hands cleaned with antimicrobial soap or a waterless alcohol based hand antiseptic prior to leaving their room and whenever they again become contaminated when the resident is out of their room.
- Residents with ARMs should have clean, dry wound dressings that adequately contain any drainage. Residents with ARMs (e.g., VRE) in stool or urine, who are incontinent of either, should be clean and wear an incontinence product when leaving their room. In addition, all residents with ARMs should wear clean clothes or a clean cover gown when leaving their rooms.
- Residents with ARMs who are cognitively or behaviorally impaired and cannot maintain hygienic practices present challenges for LTCFs. However, in most cases strategies can be devised that will address infection control issues as well as allow the resident the opportunity for movement and socialization. In rare cases some restriction of movement may be necessary (e.g., residents who may be shedding large numbers of ARM bacteria **and** who have been linked to the development of infection in other residents). To discuss specific situations, please contact the MDH Institutional Infection Control Unit (612-676-5414).

Environmental Cleaning:

- **Room cleaning** - Standard facility procedures can be followed for cleaning the rooms of residents with MRSA and VRE in the LTCF setting. Use of the facility's standard disinfectant is adequate, but it is important to monitor compliance with manufacturer's recommended application procedures and contact times.²⁷
- **Physical and recreational therapy equipment** - The hands of residents with ARMs should be cleaned before the resident uses recreational or physical therapy equipment. Standard facility procedures should be followed for routine cleaning and disinfection of recreational and physical therapy equipment used by residents with ARMs. However, this equipment should be disinfected before use by another resident if it becomes soiled with body secretions/excretions.
- **Trash disposal** - Follow standard facility procedures for trash disposal, no special handling is necessary.

Shared Bathrooms, Showers, Tubs:

As previously stated, roommate to roommate transmission does not appear to be common in LTCFs. Hygienic toileting practices (including thorough hand cleaning) are important for all residents.

- **Bathrooms** - In situations where a resident with an ARM shares a bathroom with a roommate who does not have the same ARM, the bathroom should be cleaned and disinfected using standard facility procedure (e.g., daily and when visibly soiled). Commodes may be useful for certain residents with ARMs and should not be shared with roommates who do not have ARMs.
- **Showers, Tubs** - Shared tubs and showers should be cleaned and disinfected per standard facility procedure after use by residents with ARMs. It may be practical to bathe residents with ARMs after other residents.

Dishes, Glasses, Cups and Eating Utensils:

No special precautions are needed for dishes, glasses, cups or eating utensils. The combination of hot water and detergents used in institutional dishwashers is sufficient to decontaminate these items.

Laundry:

- Standard precautions are adequate for handling laundry from all residents. However, soiled laundry, especially bed linens and towels from residents with uncontained stool, urine or other secretions/excretions, should be handled in such a way as to minimize contamination of staff and the environment. Gloves and long sleeved gowns should be worn when changing the beds of residents with uncontained stool, urine or other secretions/excretions and all soiled laundry should be placed directly in a moisture resistant container and not on the floor or other room surfaces. Special handling (i.e., double bagging, etc.) is not necessary. Laundry should not be rinsed at point of use.
- Laundry staff should wear gloves and long sleeved gowns when sorting laundry. No special laundering procedure is required.

Decolonization:

- Routine decolonization for MRSA is not recommended for LTCF residents.^{3,4,28} Decolonization therapy for MRSA may result in the emergence of resistance to the agents used and since recolonization is common, decolonization has had little impact on the incidence of infections experienced by LTCF residents.
- There is no proven decolonization regimen for VRE. Among LTCF residents, VRE colonization is likely to persist for extended periods of time.

Indications for Contact Precautions (in addition to Standard Precautions):

Although Standard Precautions and hand antisepsis are sufficient for most residents with ARMs, Contact Precautions (see below) may be indicated for residents with ARMs who are potentially more likely to shed ARM bacteria into their environment. It is **not** required that LTCF residents on Contact Precautions be placed in a private room. The components of Contact Precautions that should be emphasized in this population are glove use and hand antisepsis. Residents for whom Contact Precautions, in addition to Standard Precautions, are indicated include the following:

- Residents who have ARM infected or colonized wounds that cannot be covered fully by dressings or who have drainage that cannot be contained by dressings.
- Residents with fecal or urinary carriage of ARMs whose urine or stool cannot be contained in incontinence products, urine bags or ostomy bags.
- Residents with a tracheostomy who have an ARM colonized or infected respiratory tract and large amounts of uncontained respiratory secretions.
- Residents who have been epidemiologically linked to ARM infections in other residents (or additional residents if an ARM outbreak occurs).

Contact Precautions: Gloves

- In addition to wearing gloves as necessary for Standard Precautions, gloves (clean, non-sterile gloves are adequate) should be worn when providing direct care (changing clothing, toileting, bathing, dressing changes, etc.) to residents with ARMs.
- Gloves should also be worn when handling items potentially contaminated by ARMs. Potentially contaminated items include bedside tables, overbed tables, bed rails, bathroom fixtures, television and bed controls, IV poles, suction and oxygen tubing and electronic equipment, especially control knobs. If urine or stool is colonized/infected with an ARM, gloves should be worn when handling urine/stool containers or bags.
- During the course of providing care for residents, gloves should be changed and hands cleaned after contact with material that could contain high concentrations of microorganisms (e.g., stool, urine or wound drainage).
- Wearing gloves is not a substitute for hand antisepsis. Gloves should be removed and discarded and hands cleaned (see Hand Antisepsis above) after providing care to a resident with an ARM and **before** leaving the resident's immediate environment or providing care to another resident. Avoid touching items in the resident's room with contaminated gloves and avoid touching potentially contaminated surfaces or items after glove removal and hand antisepsis.

Contact Precautions: Gowns

- For all residents, gowns should be worn as necessary for Standard Precautions. In addition, when caring for residents on Contact Precautions clean, non-sterile gowns should be worn if direct care (bathing, lifting) will be provided or when substantial contact with secretions/excretions (linen changes) is anticipated. When such contact is anticipated it is generally most practical to put on a gown **before** entering the room or before approaching the resident. Long-sleeved gowns typically provide the best protection.
- Gowns should also be worn when contact with environmental surfaces and items in the resident's room which are likely to be contaminated (those close to or used by the resident) is anticipated. This is particularly true if the resident is incontinent of urine or stool or has diarrhea, an ileostomy, a colostomy, or wound drainage not contained by a dressing. Gowns should be removed and discarded before leaving the resident's environment. After gown removal, ensure that clothing does not contact potentially contaminated environmental surfaces.

Contact Precautions: Patient Care Equipment

- Dedicate patient care equipment to a single resident (e.g., commodes, thermometers, blood pressure cuffs, and stethoscopes). If equipment is to be shared it must be cleaned and disinfected before use by another resident. Use of standard facility disinfectants is adequate. Personal items of residents with ARMs should not be shared with other residents unless they have been cleaned and disinfected. (See Environmental Cleaning)

Masks, Eye Protection, Face Shields:

- MRSA and VRE are not known to be transmitted via the airborne route and masks are **not** a routine component of Contact Precautions. However masks and eye protection or face shields should be worn during the care of **ANY** resident if indicated by Standard Precautions. Masks and eye protection or face shields should be worn during resident care activities that are likely to generate splashes or sprays of blood, body fluids, secretions and excretions. Such activities include suctioning or working within 3 feet of a resident who is likely to expel droplet secretions (e.g., those with uncontained respiratory secretions or those with tracheitis and a tracheostomy tube in place).

Discontinuing Contact Precautions:

- When the condition of a resident with an ARM changes (e.g., drainage is contained) and they therefore no longer meet the criteria for needing Contact Precautions, they may be cared for using Standard Precautions. However, if the resident continues to have secretions or excretions that are not contained, Contact Precautions should be continued.

- It is appropriate to obtain cultures for clinical reasons such as determining if infection is present or to guide antimicrobial treatment. However, non-clinically indicated cultures to determine if a resident remains colonized with an ARM are not generally recommended. It is likely that LTCF residents who are colonized with ARMs will continue to be colonized for significant lengths of time and repeated culturing will not be beneficial.

Communication with other facilities:

It is important for LTC and acute care facilities to work together in an attempt to control the spread of ARMs. Effective communication between LTC and acute care facilities is important in ensuring that the ARM status of residents is known and that appropriate precautions are instituted or maintained in both types of facilities. Because of the acuity level, the frequent presence of invasive devices, and the vulnerability of many patients in the acute care setting, Contact Precautions are generally implemented for all patients known to have ARMs in the acute care setting. Because Contact Precautions may not be indicated for the same resident in the LTCF, the rationale for the difference in precautions (as described above) should be explained to the resident and their family.

Staff Education:

- Continuing education programs for staff who have direct contact with residents or items in their environment is strongly encouraged. Staff who are responsible for making decisions regarding the care of residents should receive information about ARMs and should thoroughly review of the information presented in this guideline.
- When educating staff about MRSA and VRE it should be noted that healthy people are at very little risk of developing an infection with MRSA or VRE. In addition, there are no special precautions for pregnant staff who work with residents with MRSA or VRE.

Resident, Family, Visitor Education:

- Residents and their families and visitors should be educated about the ARM and the precautions to be taken in the LTCF, including hand antisepsis and methods to limit environmental contamination with stool, urine, and respiratory secretions.
- Family and visitors should clean their hands before entering and leaving the room of a resident with an ARM. Family/visitors should wear gloves when handling the secretions/excretions of residents with ARMs or when providing direct care (e.g., bathing). Hands should be cleaned after glove removal.
- Regardless of whether additional infection control precautions (Contact Precautions) are in place for a particular resident, it is important to encourage **all** family/visitors to LTCFs to clean their hands before and after visiting **any** resident.
- In addition, families, visitors and other residents must have sufficient education to alleviate their concerns, ensure that precautions are maintained, and understand that residents with ARMs need not be avoided.

Surveillance:

- Surveillance is an important component of all infection control programs, including those in LTCFs.²⁹ Surveillance should include the regular review of all microbiology culture and susceptibility data to detect MRSA, VRE and other epidemiologically important microorganisms. Although residents **known** to have MRSA and VRE are likely to represent only a portion of the residents with ARMs, screening residents for ARMs is **not** indicated as a routine infection control measure in LTCFs.
- A confidential line list of residents with ARMs should be maintained.
- Surveillance of cultures obtained for clinical reasons can establish baseline rates of ARM infections for a facility. High rates of endemic infection (e.g., more than 1 case per 1,000 resident-care days) or an outbreak (e.g., > 3 infections in one week or twice the number of infections per month observed for 3 consecutive months) may be identified by surveillance.²⁰
- Facilities can use surveillance data in educational programs to reinforce infection control practices and to prioritize infection control activities.
- Culture and susceptibility data can be used to guide the choice of "empiric therapy." Empiric therapy is the antimicrobial treatment that is prescribed based on a presumed diagnosis **before** culture and susceptibility results are known. Monitoring culture and susceptibility data will provide information on antimicrobial susceptibility and resistance patterns in a particular facility. Communicating this information can help guide physicians in the selection of the most appropriate empiric therapy for residents with infections.

Discharge Home:

- Family members should be advised that healthy persons have very little risk of developing an infection due to an ARM.
- Family members should wear gloves when handling secretions/excretions that are known to contain ARMs and should clean their hands with antimicrobial soap or a waterless alcohol based hand antiseptic after glove removal. When gloves have not been used, family members should clean their hands after providing direct care.
- Healthcare providers should be informed of the ARM.
- The person with an ARM should clean his/her hands frequently with antimicrobial soap or a waterless alcohol based hand antiseptic.

- No special laundering procedures are necessary. The clothes of all family members can be washed together using standard detergent. Bleach can be added for items that are heavily soiled with body secretions/excretions.
- Regular cleaning with household disinfectants of surfaces and items contaminated by secretions/excretions or frequently touched by hands is recommended.
- Family members of persons with VRE should clean their hands with antimicrobial soap or a waterless alcohol based hand antiseptic before preparing food and before eating.
- Persons who are very ill or have compromised immune systems should avoid handling secretions/excretions known to contain ARMs. Such persons should also clean their hands with antimicrobial soap or a waterless alcohol based hand antiseptic after contact with a person with an ARM.

Antimicrobial Use:

The appropriate use of antimicrobials is **the most important** method of controlling antimicrobial resistance. One of the ways resistance develops is through the use and overuse of antimicrobials (antimicrobial pressure). When bacteria are exposed to an antimicrobial, those bacteria that are susceptible to the antimicrobial are killed and those that are resistant survive and may become predominant. These antimicrobial resistant microorganisms may then be transmitted to other persons. Overuse of antimicrobials is a problem in ALL healthcare settings. Studies have repeatedly documented that much of the antimicrobial use in LTCFs is inappropriate.³⁰

Attempts to control antimicrobial use in LTCFs are complicated by many factors, including the fact that clinical diagnosis is often difficult in this population due to the frequent absence of the typical signs and symptoms of infection (e.g., fever). However, LTCFs should attempt to develop and institute programs and policies to monitor and control the use of antimicrobials in all residents. SHEA recently published a position paper on antimicrobial use in long-term care facilities.³⁰ This position paper outlines concerns about inappropriate antimicrobial use and recommends approaches to promote the rational use of antimicrobials in this setting. The CDC has also published a guideline regarding the prudent use of vancomycin.⁹

- In particular, treatment of asymptomatic bacteriuria is very common in LTCFs. Such treatment is often inappropriate and can induce the development of resistant organisms. More than 30% of non-catheterized residents and almost all chronically catheterized residents have asymptomatic bacteriuria.³⁰
- The use of antimicrobials for the treatment of viral upper respiratory infections is common and also considered to be inappropriate.³¹
- Evaluation of the resident's clinical signs and symptoms in conjunction with appropriate culture and susceptibility testing should be used to guide therapy.³⁰

- Although empiric antimicrobial therapy may be indicated in some situations, it is important that physicians are informed of culture and susceptibility results so that applicable changes in treatment can be made. Broad spectrum antimicrobials (which are often used for empiric therapy) should be replaced by narrower spectrum antimicrobials once culture and susceptibility results are known. The use of narrower spectrum antimicrobials that target specific microorganisms will lessen antimicrobial pressure.
- Since residents with invasive devices are at greater risk of acquiring an ARM, minimizing the use of invasive devices such as urinary catheters, feeding tubes, tracheostomies, etc. may be helpful in controlling ARMs in LTCFs.³

Summary:

- This guideline was developed to assist Minnesota LTCFs in achieving the goal of prevention and control of ARMs while maintaining quality of life for those residents who are colonized or infected with ARMs.
- Using this guideline as a reference, LTCFs will be able to assess individual residents with ARMs and develop specific care plans to minimize both the restrictions imposed on the resident and the risk of transmission of ARMs to others. It is important that the staff who develop care plans and those who implement them have sufficient knowledge to make appropriate decisions.

Definitions:

- ***Staphylococcus aureus***: a common species of gram-positive bacteria found on the skin and in the anterior nares of many people
- **Methicillin Resistant *Staphylococcus aureus* (MRSA)**: strains of *S. aureus* that are resistant to the antibiotics methicillin, oxacillin, nafcillin and other antimicrobials
- ***Enterococcus* species**: common gram-positive microorganisms that are part of the normal flora in the gastrointestinal and female genital tract
- **Vancomycin Resistant Enterococcus (VRE)**: strains of enterococcus (*E. faecalis* and *E. faecium*) that are resistant to the antibiotic vancomycin and other antimicrobials
- **Colonization**: the presence of microorganisms in or on a host with growth and multiplication but without tissue invasion or damage
- **Infection**: the entry and multiplication of microorganisms in the tissues of the host accompanied by clinical signs and symptoms
- **Disinfection**: a process that kills or destroys nearly all microorganisms, with the exception of bacterial spores, on inanimate objects

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For more information or additional copies, please call:

612-676-5414 or 1-877-676-5414 or (TDD) 651-215-8980. This document may also be downloaded from <http://www.health.state.mn.us/divs/dpc/ades/infect/guideline.htm>

Printed on recycled paper

Attachment 1: (Reference 17) Garner, JS, Hospital Infection Control Practices Advisory Committee (HICPAC). Guideline for Isolation Precautions in Hospitals. *Infect Control Hosp Epidemiol.* 1996;17:53-80.

Standard Precautions

Use Standard Precautions, or the equivalent, for the care of all patients.

A. Handwashing

(1) Wash hands after touching blood, body fluids, secretions, excretions, and contaminated items, whether or not gloves are worn. Wash hands immediately after gloves are removed, between patient contacts, and when otherwise indicated to avoid transfer of microorganisms to other patients or environments. It may be necessary to wash hands between tasks and procedures on the same patient to prevent cross-contamination of different body sites.

(2) Use a plain (nonantimicrobial) soap for routine handwashing.

(3) Use an antimicrobial agent or a waterless antiseptic agent for specific circumstances ..., as defined by the infection control program. (See Contact Precautions for additional recommendations on using antimicrobial and antiseptic agents.)

B. Gloves

Wear gloves (clean, nonsterile gloves are adequate) when touching blood, body fluids, secretions, excretions, and contaminated items. Put on clean gloves just before touching mucous membranes and nonintact skin. Change gloves between tasks and procedures on the same patient after contact with material that may contain a high concentration of microorganisms. Remove gloves promptly after use, before touching noncontaminated items and environmental surfaces, and before going to another patient, and wash hands immediately to avoid transfer of microorganisms to other patients or environments.

C. Mask, Eye Protection, Face Shield

Wear a mask and eye protection or a face shield to protect mucous membranes of the eyes, nose, and mouth during procedures and patient-care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, and excretions.

D. Gown

Wear a gown (a clean, nonsterile gown is adequate) to protect skin and to prevent soiling of clothing during procedures and patient-care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions. Select a gown that is appropriate for the activity and amount of fluid likely to be encountered. Remove a soiled gown as promptly as possible, and wash hands to avoid transfer of microorganisms to other patients or environments.

E. Patient-Care Equipment

Handle used patient-care equipment soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of microorganisms to other patients and environments. Ensure that reusable equipment is not used for the care of another patient until it has been cleaned and reprocessed appropriately. Ensure that single-use items are discarded properly.

F. Environmental Control

Ensure that the hospital has adequate procedures for the routine care, cleaning, and disinfection of environmental surfaces, beds, bedrails, bedside equipment, and other frequently touched surfaces, and ensure that these procedures are being followed.

G. Linen

Handle, transport, and process used linen soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures and contamination of clothing, and that avoids transfer of microorganisms to other patients and environments.

H. Occupational Health and Bloodborne Pathogens

(1) Take care to prevent injuries when using needles, scalpels, and other sharp instruments or devices; when handling sharp instruments after procedures; when cleaning used instruments; and when disposing of used needles. Never recap used needles, or otherwise manipulate them using both hands, or use any other technique that involves directing the point of a needle toward any part of the body; rather, use either a one-handed "scoop" technique or a mechanical device designed for holding the needle sheath. Do not remove used needles from disposable syringes by hand, and do not bend, break, or otherwise manipulate used needles by hand. Place used disposable syringes and needles, scalpel blades, and other sharp items in appropriate puncture-resistant containers, which are located as close as practical to the area in which the items were used, and place reusable syringes and needles in a puncture-resistant container for transport to the reprocessing area.

(2) Use mouthpieces, resuscitation bags, or other ventilation devices as an alternative to mouth-to-mouth resuscitation methods in areas where the need for resuscitation is predictable.

Please see the following website for bloodborne pathogen exposure follow-up information: <http://www.cdc.gov/mmwr/PDF/rr/rr5011.pdf>

I. Patient Placement

Place a patient who contaminates the environment or who does not (or cannot be expected to) assist in maintaining appropriate hygiene or environmental control in a private room. If a private room is not available, consult with infection control professionals regarding patient placement or other alternatives.