

**Management of Patients/Residents  
with  
Vancomycin Resistant Enterococci  
in Acute Care Hospitals  
and  
Long Term Care Facilities**

**Guidelines**

Prepared by

*The VRE Interagency Advisory Committee  
in Conjunction with the  
Connecticut Department of Public Health*

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# **Guidelines for Management of Patients/Resistents with Methicillin-Resistant Vancomycin Resistant Enterococci in Acute Care Hospitals and Long Term Care Facilities**

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## **GLOSSARY**

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### **Case**

Any patient infected or colonized with vancomycin resistant enterococci (VRE)

### **Cohorting**

Placement of two or more patients with VRE in the same room or separation of VRE patients from patients who have not acquired VRE.

### **Colonized patient (carrier)**

Any patient who is found to be culture-positive for VRE, but has no signs or symptoms of infection caused by the organism.

### **Decolonize**

To administer topical and/or systemic antimicrobial agents for the purposes of eradicating VRE carriage by an individual.

### **Endemic**

The usual (baseline) frequency of VRE infection in a given facility.

### **Epidemic**

An increase in the incidence of VRE infection above its expected endemic level of occurrence in a given facility.

### **Incidence**

The number of new cases of VRE that occurred during a given interval of time divided by the population at risk during that given interval of time.

### **Infected patient**

A patient who has laboratory and clinical evidence of disease (e.g., wound infection).

### **Outbreak**

An increase in the incidence of VRE above its expected endemic level of occurrence in a given facility.

### **Prevalence**

The total number of old and new cases of VRE colonized or infected residents in a given population.

### **Vancomycin resistant enterococci**

A strain of Enterococci (including *E. faecalis* and *E. faecium*) resistant to vancomycin.

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## BACKGROUND

Enterococci are the second most common cause of nosocomial infections in the United States. They are estimated to be responsible for 10 to 20% of all such infections in the U.S.<sup>1</sup> and for approximately 8% of all nosocomial bloodstream infections.<sup>2</sup> In recent years, enterococci resistant to the antibiotic vancomycin have appeared with increasing frequency.

The emergence of vancomycin-resistant enterococci (VRE) as an important nosocomial pathogen in susceptible populations represents a significant challenge to infection control personnel. Concern about VRE is related to the potential for nosocomial transmission, the lack of antibiotics to treat infections caused by this organism, and the possibility that the vancomycin-resistant genes present in VRE can be transferred to other gram-positive microorganisms such as *Staphylococcus aureus*.

As the prevalence of VRE in hospitalized patients has been increasing nationwide, all health care facilities have the potential to be affected. Vancomycin-resistant enterococcal infection is a laboratory reportable finding in Connecticut. From 1994 through 1996, 64% of all laboratories that perform vancomycin-susceptibility testing of *enterococci* have identified VRE from sterile site specimens.

In 1995, the Centers for Disease Control and Prevention (CDC), Hospital Infection Control Practices Advisory Committee (HICPAC) published Recommendations for Preventing the Spread of Vancomycin Resistance.<sup>3</sup> The HICPAC recommendations, which in most instances apply specifically to acute care hospitals, are summarized on pages 3 - 10. Specific recommendations for Long Term Care Facilities (LTCFs), which begin on page 11, were developed by an advisory committee of health professionals from both acute and LTCFs and representatives from the Connecticut Department of Public Health.

## VRE, THE ORGANISM

Enterococci are gram-positive cocci that are part of the normal flora of the gastrointestinal and female genital tracts. The two most common species causing human infection are *Enterococcus faecalis*, which causes 80% to 90% of all enterococcal infections, and *Enterococcus faecium*, which causes 5% to 15%. Other species include *E. durans*, *E. avium*, *E. casseliflavus*, *E. gallinarum*, *E. raffinosus*, and *E. hirae*.<sup>4</sup>

These organisms were traditionally susceptible to penicillin, vancomycin, aminoglycosides and quinolones. As a consequence of widespread use and misuse of antimicrobial agents, enterococcal resistance to these antibiotics has emerged. Between 1989 and 1993, the percentage of nosocomial enterococcal infections reported to the CDC that were vancomycin resistant increased from 0.3% to 7.9%.<sup>1</sup>

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In addition to the increase in VRE, the potential spread of vancomycin resistance to *Staphylococcus aureus* or *Staphylococcus epidermidis* is a serious public health concern. The genes for vancomycin resistance are frequently plasmid-borne and have been transferred in vitro from enterococci to staphylococci. Clinical strains of vancomycin-resistant *Staphylococcus haemolyticus* and *S. epidermis* have already been reported. Spread of vancomycin resistance must be controlled to prevent the development of untreatable staphylococcal infections.<sup>3</sup>

## **EPIDEMIOLOGY OF VRE**

The epidemiology of vancomycin resistant enterococci (VRE) has not yet been elucidated completely. Populations found to be at increased risk for VRE include:

1. Those who have received vancomycin and/or multi-antimicrobial therapy;
2. Those with severe underlying disease or immunosuppression;
3. Those who have had intra-abdominal or cardiothoracic surgical procedures;
4. Those who have an indwelling urinary catheter or central venous catheter.

Because enterococci are part of the normal flora of the gastrointestinal and female genital tracts, most infections with these bacteria have been attributed to the patient's endogenous flora. However, recent reports have documented spread of VRE by direct patient-to-patient contact and via carriage on the hands of personnel. Transmission of VRE may also occur through indirect spread since contamination of the environment around the colonized or infected resident has been demonstrated. Organisms have been recovered from bedrails, sheets, call buttons, telephones, horizontal surfaces, doorknobs and patient care equipment such as stethoscopes and thermometers.

## **GENERAL RECOMMENDATIONS FOR THE CONTROL OF NOSOCOMIAL TRANSMISSION OF VRE**

### **Prudent Vancomycin Use**

Exposure to vancomycin has been consistently reported as a risk factor for colonization and/or infection with VRE. Every health care facility should develop guidelines for vancomycin use and provide education for medical staff. Guideline development should be intra-disciplinary with participation from the facility's pharmacy and therapeutics committee, infection control staff, and medical and/or surgical staff. Compliance to the guidelines can be tracked through the facility's quality improvement process, or as part of the drug utilization review of the pharmacy and therapeutics committee and medical staff. The guidelines should include the following considerations.

1. Situations in which the use of vancomycin is appropriate:

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- a. For treatment of serious infections due to beta-lactam resistant gram-positive microorganisms. Clinicians should be aware that vancomycin may be less rapidly bactericidal than beta-lactam agents for beta-lactam susceptible staphylococci.
  - b. For treatment of infections due to gram-positive microorganisms in patients with serious allergy to beta-lactam antimicrobials.
  - c. When antibiotic-associated colitis (AAC) fails to respond to metronidazole therapy or if AAC is severe and potentially life-threatening.
  - d. Prophylaxis, as recommended by the American Heart Association, for endocarditis following certain procedures in patients at high risk for endocarditis.
  - e. Prophylaxis for surgical procedures in patients with serious allergy to beta-lactam antimicrobials.
  - f. Prophylaxis for surgical procedures involving implantation of prosthetic materials or devices at institutions with a high rate of infections due to methicillin-resistant *S. aureus* (MRSA) or methicillin-resistant *S. epidermidis*. A single dose administered immediately before surgery is sufficient unless the procedure lasts more than 6 hours, in which case the dose should be repeated. Prophylaxis should be discontinued after a maximum of two doses.
2. Situations in which the use of vancomycin should be discouraged:
- a. Routine surgical prophylaxis.
  - b. Empiric antimicrobial therapy for a febrile neutropenic patient, unless there is strong evidence at the outset that the patient has an infection due to gram-positive microorganisms (e.g., inflamed exit site of Hickman catheter), and the prevalence of infections due to beta-lactam-resistant gram-positive microorganisms (e.g., MRSA) in the health care facility is substantial.
  - c. Treatment in response to a single blood culture positive for coagulase-negative staphylococcus, if other blood cultures drawn in the same time frame are negative (i.e., if contamination of the blood culture is likely). Because contamination of blood cultures with skin flora (e.g., *S. epidermidis*) may cause vancomycin to be inappropriately administered to patients, phlebotomists and other personnel who obtain blood cultures should be properly trained to minimize microbial contamination of specimens.
  - d. Continued empiric use with vancomycin for presumed infections in patients whose cultures are negative for beta-lactam-resistant gram-positive microorganisms.

- e. Systemic or local prophylaxis for infection or colonization of indwelling central or peripheral intravascular catheters or vascular grafts.
- f. Selective decontamination of the digestive tract.
- g. Eradication of MRSA colonization.
- h. Primary treatment of AAC.
- i. Routine prophylaxis for patients on continuous ambulatory peritoneal dialysis.

### **Education of Staff**

Health care workers are not at risk for infection from VRE. However, health care workers can carry this organism on their hands and serve as vehicles for transmission to other residents. Education should be provided regarding the transmission of VRE, implication for patient outcome, methods for control, and costs related to the care of patients with VRE. Patient care practices should be periodically reviewed so high standards of care may be maintained. This may necessitate focused education programs tailored to the specific needs of the audience.

## **THE ROLE OF THE MICROBIOLOGY LABORATORY**

The microbiology laboratory is the first line of defense against the spread of VRE in a health care facility. The laboratory's ability to identify VRE promptly and accurately is essential to avoid complex, costly containment efforts that are required when recognition of the problem is delayed. In addition, cooperation and communication between the laboratory and the infection control program will facilitate control efforts substantially.

### **1. Identification of enterococci**

Presumptively identify colonies on primary isolation plates as enterococci by using the colonial morphology, gram stain, and pyrrolidonyl arylamidase (PYR) test. Although identifying enterococci to the species level can help predict certain resistance patterns (e.g., *E. faecium* is more resistant to penicillin than *E. faecalis*) and may help determine the epidemiologic relatedness of enterococcal isolates, such identification is not essential if antimicrobial susceptibility testing is performed.

### **2. Antimicrobial susceptibility testing**

Determine vancomycin resistance as well as high-level resistance to penicillin and aminoglycosides for enterococci isolated from blood, sterile body sites (with the possible exception of urine), and other sites as clinically indicated. Evaluate the laboratory's method of susceptibility testing, whether by automated microdilution or disk diffusion technique, for its ability to detect vancomycin resistance by using *E. faecalis* ATCC 51299. This strain has a moderate level of vancomycin resistance

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mediated by the vanB gene, which, unlike high-level resistance mediated by vanA, is difficult to detect by most methods used in clinical laboratories. Laboratories using disk diffusion should incubate plates for 24 hours and read zones of inhibition by using transmitted light. If testing as above reveals that the method used by the laboratory is inadequate to detect vancomycin resistance, the laboratory should perform either of the following:

- a. Streak 1  $\mu$ l of standard inoculum (0.5 McFarland) from an isolated colony of enterococci onto BHI agar containing 6  $\mu$ g/ml of vancomycin, and incubate the inoculated plate for 24 hours at 35°C. Consider any growth indicative of vancomycin resistance.
- b. Determine the minimum inhibitory concentration by agar dilution, broth macrodilution, manual broth dilution, or E test strips.
- c. When VRE is isolated from a clinical specimen:
  1. Confirm vancomycin resistance by repeating antimicrobial susceptibility testing using any of the recommended methods above, particularly if VRE isolates are unusual in the health care facility.
  2. Immediately, while performing confirmatory susceptibility tests, notify the patient's care giver and infection control staff so that the patient can be placed on appropriate precautions promptly. Follow this preliminary report with the final result of the confirmatory test. Additionally, highlight the report regarding the isolate to alert staff that precautions are indicated.

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## **RECOMMENDATIONS FOR ACUTE CARE HOSPITALS**

Aggressive infection control measures and strict compliance by hospital personnel are required to limit nosocomial spread of VRE. Control of VRE requires a collaborative institution-wide multidisciplinary effort to identify specific problems in hospital operations and design, implement, and evaluate appropriate changes in patient-care systems.

### **Notification when VRE are Detected**

1. Promptly notify appropriate hospital personnel when VRE are detected.
2. Clinical staff should be aware of hospital policies regarding management of VRE-infected or colonized patients. The required procedures should be implemented as soon as VRE are detected to prevent nosocomial spread of VRE.
3. Establish system(s) for monitoring appropriate process and outcome measures for control of VRE. Relay these data to the clinical, administrative, laboratory, and support staff as reinforcement to ongoing education and control efforts.

### **Screening studies to detect VRE in hospitals where VRE has not been detected**

Early detection, and hence, prompt institution of control measures may provide an efficient means of control of the microorganism. Additional laboratory testing may be performed to screen for the presence of VRE infection or colonization in hospitals where routine culturing procedures may not include susceptibility testing of all enterococcal isolates.

#### **1. Antimicrobial Susceptibility Survey**

Susceptibility testing done of all clinical isolates of *Enterococcus* should be done periodically. This would include isolates from urine and other non-sterile body sites that are often not tested routinely. This testing should be considered particularly in high risk patients (i.e., ICU or oncology patients). Each hospital should determine the sample size as well as the frequency of testing as the hospital's patient population and number of routine cultures will vary.

Large hospitals processing large numbers of cultures can determine an appropriate sample among the total isolates where small hospitals processing fewer cultures may need to test all enterococcal isolates during the study period.

#### **2. Cultures of stools or rectal swabs.**

In hospitals with large high risk populations (critically ill, ICU, oncology, transplant) periodic culturing can quickly identify gastrointestinal colonization with VRE.

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The frequency and intensity of surveillance should be based on the size of the population at risk and the specific hospital unit(s) involved. If VRE has been detected in other institutions in a hospital's area and/or if a hospital wishes to determine whether VRE is present in the hospital despite the absence of recognized clinical cases, stool or rectal-swab culture surveys are very useful. The cost of screening can be reduced greatly by inoculating specimens onto vancomycin-containing selective media, such as campylobacter plates, and restricting screening to those patients who have been in the hospital long enough (e.g., 5-7 days) to have a substantial risk of colonization, or who have been admitted from a facility, such as a tertiary-care hospital or a chronic-care facility, where VRE is known to be present. Once colonization with VRE has been detected, it would be appropriate to begin to screen routinely all of the enterococcal isolates from patients in the hospital (including those from urine and wounds) for vancomycin resistance to intensify efforts to contain VRE spread (i.e., by strict adherence to hand washing and compliance with isolation precautions).

### **Patient Placement**

Place VRE-infected or colonized patients in single rooms or in the same rooms (cohort) as other VRE positive patients. VRE infected or colonized patients should not be cohorted with other patients who, in addition, have other resistant organisms (e.g., MRSA, penicillin resistant *streptococcus pneumoniae* or multiple resistant gram negative organisms).

### **Protective Equipment**

1. Gloves should be worn when entering the room of VRE-infected or colonized patients. During the course of caring for the patient, a change of gloves may be necessary after contact with material that may contain high concentrations of VRE (e.g., stool). Gloves should be removed and hands washed immediately with an antimicrobial soap before leaving the patient's room.
2. Gowns should be worn when entering the rooms of VRE-infected or colonized patients if contact with the patient or environmental surfaces in the patient's room is anticipated. Gowns should be removed and hands washed immediately with an antimicrobial soap before leaving the patient's room.

### **Handwashing**

Handwashing is essential for preventing the transmission of VRE. Hands should be washed for a minimum of 15 seconds using an antimicrobial soap immediately after removal of gloves, gown and/or other protective equipment.

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### **Exiting Patient Room**

Ensure that after removal of protective equipment and/or after handwashing, that clothing and hands do not contact environmental surfaces potentially contaminated with VRE (e.g., door knob or patient's curtain) in the patient's room.

### **Patient Dedicated Equipment**

1. Consider the use of patient dedicated equipment or disposable equipment of noncritical items such as stethoscope, sphygmomanometer, or thermometer for a single patient or cohort of patients infected or colonized with VRE.
2. Equipment that cannot be dedicated must be adequately cleaned and disinfected immediately after use with a hospital approved disinfectant.

### **Culturing of Roommates**

Obtain culture of stool or rectal swab of roommates of patients newly found to be infected or colonized with VRE to determine their colonization status, and apply isolation precautions as necessary. Additional screening of patients may be performed at the discretion of the infection control staff.

### **Discontinuation of Precautions**

1. To remove a patient from precautions, two consecutive sets of cultures must be negative for VRE. A set includes the originally positive site (e.g. urine culture) and a rectal swab or stool culture.
2. The first set of cultures should not be obtained until treatment of an infection has been completed and the patient is off all antibiotics for at least 24 hours.
3. The second set of cultures should be obtained at least 24 hours after the first set and after the first set is confirmed culture negative for VRE.
4. In cases of prolonged colonization or infection, it is recommended that surveillance cultures be sent at weekly intervals.

### **Identification of Patients on Readmission**

Facilities should develop internal mechanisms for identifying previously known VRE-infected or colonized patients so that they can be recognized and placed on isolation precautions promptly upon readmission to the hospital.

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## **Cleaning of the Environment**

Rooms of VRE-infected or colonized patients should be thoroughly cleaned and disinfected daily with special attention to environmental surfaces (e.g., bed rails, bedside tables, carts, doorknobs, faucet handles, bedside commodes, work surfaces in the room).

The appropriate agent for cleaning the patient's room or contaminated equipment is a hospital grade, EPA approved disinfectant. The use of disposable cleaning agents and/or equipment should be considered.

Facilities should have measures in place for the monitoring of cleaning procedures and practices and that these procedures are followed by housekeeping personnel.

## **Discharging of VRE-Infected or Colonized Patients**

1. Discharge/transfer of VRE-infected or colonized patients should not be contingent on obtaining negative cultures.
2. Notify other institutions, as soon as possible, of patient's history of VRE when planning inter-agency transfer. This will help to ensure that optimal infection control measures are instituted.

## **Endemic VRE and Outbreak Measures**

1. Control efforts should focus initially on ICU's and other areas where VRE transmission is highest.
2. Where feasible, consider cohorting staff who provide regular ongoing care to patients to minimize the movement/contact of health care workers between VRE-positive and VRE-negative patients.
3. Consider the possibility of health care personnel as potential carriers involved in transmission of this organism. Remove VRE-positive personnel epidemiologically linked to VRE transmission from the care of VRE-negative patients until carrier state has been eradicated.
4. Investigate the possible role of the environment in the transmission of enterococci. Institutions experiencing ongoing VRE transmission should verify that adequate procedures are in place for the routine care, cleaning, and disinfection of environmental surfaces and that these procedures are being followed by housekeeping personnel.
5. Consider sending representative VRE isolates to reference laboratories for strain typing by pulsed field gel electrophoresis or other techniques to aid in identifying reservoirs and patterns of transmission.

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## **RECOMMENDATIONS FOR LONG TERM CARE FACILITIES**

VRE are as prevalent today in LTCFs as they are in acute care facilities. However, the prevalence of VRE may vary considerably from one facility to another. Once antimicrobial-resistant pathogens are introduced into LTCFs, they tend to persist and become endemic.<sup>5</sup>

The following guidelines are intended to augment the HICPAC guidelines and are aimed at improving infection control practices to minimize the risk of transmission of VRE in LTCFs and to indicate those residents for whom special precautions need to be taken.

### **Admission and Transfer of Patients with VRE**

Interfacility communication is essential for hospital and long term care staff to plan and manage the care of residents infected or colonized with VRE. LTCFs should develop a specific VRE policy that optimizes the opportunity for VRE residents to receive long term care without placing other residents at risk. However, any policy aimed at controlling VRE transmission needs to consider that most LTCFs encourage ambulation and group participation in social events.<sup>6</sup> Isolating residents with VRE not only stigmatizes these residents, but also deprives them of essential interactions with others, and decreases their rehabilitation potential.<sup>6</sup> Therefore, when determining room selection, the risk that a VRE resident presents to other residents and staff in the facility must be evaluated. Criteria to consider include:<sup>7</sup>

- From what body sites has VRE been cultured? Is the drainage or body substance containable?
- What is the mental competence and personal hygiene of the individual? How do these factors relate to the patient's potential to contaminate the environment and transmit VRE to roommates, other residents and health care personnel?
- What kind of direct patient care is being provided to this patient? Are appropriate handwashing and infection control procedures being recommended and are health care providers complying with them?

### **Placement Policies for Residents with VRE**

Residents with VRE in the stool may continue to shed organisms for weeks to months and treatment may not successfully eradicate the organism. Therefore, LTCFs should not expect patients to have negative cultures for VRE before being accepted for admission. Since colonization may continue indefinitely or recur intermittently, followup cultures of stools or wounds are not recommended after admission to the LTCF.

A patient with VRE should not be denied admission to a long term care facility providing the following conditions can be met.

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**Room/roommate selection:**

A resident with VRE may share a room with:

1. Another resident who is known to be VRE positive (cohorting);
2. A low-risk roommate (i.e., one who is not immunocompromised\*);
3. A roommate who does not have indwelling devices (e.g., tubes, catheters, intravascular lines), open wounds or decubiti.

However, residents with VRE should not be placed in the same room with a resident who has a current MRSA infection.

Residents with VRE should be allowed to ambulate and participate in social and therapeutic activities as long as moist body substances are contained and residents wash their hands just prior to leaving their rooms.

**Private rooms or cohorting with other VRE positive residents should be considered for the following:**

1. Residents with VRE isolated from stool and with uncontrolled diarrhea;
2. Residents with VRE isolated from stool and who have behavioral problems with stool or poor compliance with standard practices for personal hygiene;
3. Residents with VRE isolated from a wound that cannot be covered or with drainage that cannot be contained by a dressing.

These residents should not be allowed to ambulate or socialize without one-to-one supervision. This supervision should attempt to minimize direct physical contact with other residents, staff, and visitors.

**\*Any resident with a challenged immune system (i.e., a known HIV infected resident; a resident with WBC < 1000; any resident that has a medical condition(s) that puts them at high risk for skin breakdown; a resident with severe renal or liver failure; fresh post-op residents); or any resident with chronic or frequent infections requiring prolonged antibiotic treatment.**

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## Precautions

Although the epidemiology of VRE transmission has not been completely defined, patient-to-patient spread can occur. Residents can be colonized with VRE and be asymptomatic or be infected and symptomatic; in both situations residents are capable of transmitting the agent to others. Transmission may occur by direct contact (e.g. touching VRE-colonized stool) or by indirect contact (e.g., touching the contaminated hands of health care workers or contaminated environmental surfaces). Since there is a lack of an available antimicrobial for therapy of infections due to VRE, preventive measures to control its spread become very important. Control of this organism should focus on the reinforcement of infection control policies to reduce the risk of nosocomial transmission of VRE. The three most important components in controlling the transmission of VRE include conscientious handwashing, appropriate use of barrier precautions, and careful attention to environmental sanitation.

**Handwashing.** Handwashing is the most important procedure to prevent the transmission of VRE. Wash hands before contact with each patient and again before leaving the room. Residents should also wash their hands before leaving their room. Wash hands with an antimicrobial soap or disinfectant solution (e.g., chlorhexidine). Use disposable paper towels to dry hands. Avoid touching environmental surfaces such as bedside rails and other resident equipment after handwashing.

**Gloves.** Wear gloves when entering the room of a VRE resident when contact with the resident or environmental surfaces is anticipated. When caring for a VRE resident, change gloves between care of different anatomical sites (i.e., after oral care, before moving onto dressing changes). The same pair of gloves should not be worn for prolonged periods or used on multiple residents. Hands should always be washed after removal of gloves.

**Gowns.** Wear gowns or plastic aprons if clothing is likely to become soiled with body secretions, stool, urine or drainage.

**Masks and Eye Protectors or Face Shields.** Wear masks and/or protective eyewear when it is likely that eyes and/or mucous membranes will be splashed with body substances (e.g., when suctioning a resident with copious secretions).

**Dedicated Equipment.** Electronic thermometers used for taking rectal temperatures were implicated in a VRE outbreak among patients within the intensive care unit of a tertiary care hospital. Use dedicated or disposable thermometers on VRE colonized residents. Commodes should also be individually assigned. All other patient-care equipment with which a VRE resident has contact should be cleaned and disinfected prior to use on another resident.

**Laundry.** Soiled linens should be bagged near the location where used. They should not be sorted or rinsed in the patient care area. Linen that is heavily

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soiled with moist body substances that may soak through a linen bag must be placed in an impervious bag to prevent leakage. Linen handlers must wear barrier protection which includes gloves. Soiled linen need not be washed separately.

**Housekeeping.** VRE are capable of prolonged survival on environmental surfaces. Environmental surfaces should be routinely cleaned with an effective EPA-approved Hospital Grade disinfectant-detergent, in accordance with the manufacturer's instructions. On a daily basis and prior to use on another resident, disinfect bedside equipment such as tables, bed rails, bedside commodes, wheelchairs and other assistive devices. In addition, disinfect bathrooms that are shared with a VRE colonized or infected resident.

### **Outbreak Management**

An outbreak is defined as an increase in the incidence of VRE above an expected endemic level. Since treatment options for VRE infection are limited, an outbreak in a LTCF is suggested if there are two or more new nosocomially-acquired infections within a one month period. Subsequent investigation may determine if the cases are linked by person (e.g., same health care provider) or place (e.g., same wing).

Upon recognition or suspicion of an outbreak, immediate reinforcement of infection control procedures should be implemented. In addition, according to Sections 19a-36-A2 and 19-13-D8t(g) of the Public Health Code, suspected institutional outbreaks must be reported to the Connecticut Department of Public Health, Epidemiology Section (860-509-7994), the Hospital and Medical Care Division (566-1257) and the Local Department of Health. These agencies can assist in the investigation of the outbreak and assess the need for further control measures.

### **Surveillance cultures**

In the absence of an outbreak, routine screening of residents, staff personnel and environmental surfaces is not recommended.

### **Communication**

Notify other institutions, as soon as possible, of resident's history of VRE when planning inter-agency transfer. This will help to ensure that optimal infection control measures are instituted.

**FOR MORE INFORMATION:** Contact the Department of Public Health, Bureau of Community Health, Epidemiology Program, 410 Capitol Ave., MS# 11FDS, P.O. Box 340308, Hartford, CT 06134-0308, Phone: 860-509-7994; Fax: 860-509-8286.

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