

Manitoba Infection Control Guidelines for Preventing the Spread of Vancomycin-Resistant Enterococci (VRE)

(LONG-TERM CARE FACILITIES)

(SEE REVERSE FOR ACUTE HEALTH-CARE FACILITIES)

VRE Working Group
Infection Control Subcommittee
Manitoba Advisory Committee on Infectious Diseases
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C O M M U N I C A B L E D I S E A S E C O N T R O L

Manitoba
Health
Public Health Branch



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I. Introduction

These vancomycin-resistant enterococci (VRE) Guidelines have been developed by a working group of Infection Control Practitioners with expertise in long-term care.

The recent identification of VRE in acute care facilities, which transfer residents to long-term care facilities, highlighted the need for specific guidelines for long-term care.

The guidelines presented in this document are based on the experience of the working group members and the most recent literature addressing the topic.

The guidelines are intended as a framework for managing residents with VRE, and may be modified to accommodate the specific needs of the resident population and services found in Manitoba long-term care facilities.

For the purposes of this document the term “resident” will be used and will refer to clients, patients or individuals who reside in long-term care facilities.

II. Preamble

Vancomycin resistance in enterococci was initially reported in Europe in 1986.

Enterococci are gram-positive bacteria generally found as normal inhabitants of the lower intestinal tract.

The occurrence of important antibiotic resistance in enterococci has been noted for a number of years. All enterococci have reduced susceptibility to most penicillins, but may be susceptible to the synergistic combination of a penicillin and an aminoglycoside.

In recent years treatment has become complicated by increasing levels of penicillin resistance or high-level aminoglycoside resistance. Vancomycin therefore became more commonly used in treating enterococcal infections.

There is limited data about the epidemiology or clinical nature of VRE infections in long-term care facilities.

Studies have shown that colonized residents of long-term care facilities may serve as a reservoir for VRE when transferred to acute care facilities, and patients from acute care facilities may introduce VRE into long-term care facilities. The incidence of infection related to VRE in long-term care facilities is

significantly lower than the incidence of colonization, and VRE has not been reported as causing serious illness in long-term care facility residents. However infection control practices remain important to limit the occurrence and nosocomial spread of VRE in long-term care facilities.

III. Definitions

Cohorting: Physical separation (e.g., in a separate room or ward) of two or more residents colonized or infected with VRE from other residents who are not infected or colonized.

Colonized: Resident who is VRE culture positive and has no signs and symptoms of infection caused by the organism.

Contact: Resident who is exposed to a VRE case in a manner in which transmission can occur.

Flagging: A system which uses specific terminology to highlight information on a resident’s record. Example: VRE Infection, Contact of VRE.

Infected: Resident who is VRE culture positive and shows signs and symptoms of infection caused by the organism.

Resident: Includes clients, patients or individuals who reside in long-term care facilities.

Screening/ Surveillance Cultures: Cultures done in attempt to identify VRE in an individual with risk factors for acquisition of the organism.

IV. Guidelines for the Management of VRE in Long-Term Care Facilities

1. Identification/Notification of VRE

Each facility must designate who is responsible to do the following:

- Notify Infection Control, and if applicable, admitting department.
- Identify on the resident’s record/care plan the VRE status and the type of precautions required.
- Institute appropriate infection control precautions (see Section IV.3).

- Determine the extent of colonization/infection:
 - Do surveillance cultures:
 - rectal swab or ostomy site
 - invasive line sites
 - open wounds and lesions
 - draining sites
 - Mark Microbiology requisition “Look for VRE”.
- Provide residents and visitors with verbal instruction re:
 - VRE and Infection Control precautions
 - A Resident Information Sheet (see Section V)

2. Admission and Screening of High Risk Residents

- a) Residents whose VRE status is unknown: (see Section IX, VRE Screening Algorithm)

Surveillance cultures are recommended for the following residents:

- Admitted to a long-term care facility with a known history of positive VRE culture
- Identified as a VRE contact and discharged before follow-up cultures
- Hospitalized for more than 24 hours within the previous six months outside of Manitoba or in a provincial hospital with a VRE outbreak in the previous six months.

Good handwashing practices are sufficient while waiting for culture results, and additional infection control precautions are only required if culture is positive.

- b) Resident whose VRE status is known – follow Infection Control Precautions below. (see Section IX – VRE Screening Algorithm)

3. Infection Control Precautions

3.1 Room

A resident who is VRE-positive does not require a separate room or restriction from group activity if:

- the resident is continent of bowel and bladder or managed by an incontinence system.
- the resident does not have profuse diarrhea
- VRE is colonizing/infecting a wound or stoma which is covered with a dressing to contain drainage.
- resident’s personal hygiene is adequate and contamination of the environment is unlikely.

Shared accommodation must be with a low-risk roommate who:

- has no open wounds or decubitus ulcers
- has no urinary catheters, feeding tubes or other invasive devices
- is not bed-bound requiring extensive hands-on care.

Place appropriate Infection Control Sign on outside of resident’s room indicating the precautions required.

Provide a barrier at the door of the VRE-positive resident to exclude individuals who wander

3.2 Handwashing

Handwashing is the most effective method of preventing transmission of VRE.

It is important that all health care workers wash their hands:

- before and after direct resident contact.
- after handling contaminated equipment/articles/surfaces, linens/dishes or waste.
- after removing gloves.
- when hands are visibly soiled.

Handwashing must be done for a minimum of 10 seconds with a facility-approved handsoap.

Waterless alcohol-based hand rinses may be used as an alternative where access to handwashing facilities is limited and there is no visible soiling. Antimicrobial handsoap may be indicated if transmission is occurring in the facility.

3.3 Gowning, Masking and Gloving

Gowns and gloves need to be worn only when there will be direct contact with the infected/colonized body site, i.e., if the resident is incontinent, has an ileostomy and/or colostomy, has diarrhea or has wound drainage not contained by a dressing.

Change gloves after contact with infected sites/body fluids or stool, and before continuing with care. Wash hands thoroughly after removing gloves.

Masks are only necessary if the resident has been diagnosed with VRE pneumonia.

3.4 Equipment, Articles and Supplies

In the absence of an outbreak, cleaning and disinfection should be as per facility policy. Items frequently handled require more frequent cleaning/disinfection schedules (e.g., commodes). Items contaminated with feces must be disinfected immediately.

Equipment that cannot be cleaned should not be used (e.g., foam).

Equipment used for multiple residents (e.g., Portable x-ray, EKG, blood glucose monitors, pulse oximetry) must be adequately cleaned and disinfected after use with a VRE resident.

As much as possible VRE infected/colonized residents should be bathed as the last resident on bathing schedules. Any shared equipment (shower chair, mechanical lift, bathtub) must be cleaned and disinfected according to facility policy prior to use by another person. It is recommended that a mechanical lift sling be designated for the VRE-positive resident.

After handling any contaminated equipment, the health care worker must immediately wash his/her hands with soap and water.

3.5 Linen

Handled as per facility policy. Linen does not need to be double bagged. There is no evidence of transmission of infection from the outside of linen bags.

After handling soiled linen or linen bags, the health care worker must immediately wash his/her hands with soap and water.

3.6 Dishes

Handled as per facility policy. No special precautions required.

After handling used dishes, the health care worker must immediately wash his/her hands with soap and water.

4. Needles/Syringes

Sharps disposal should be handled as per facility policy.

After handling contaminated needles or syringes, the health care worker must immediately wash his/her hands with soap and water.

5. Laboratory

Specimens are handled according to facility policy.

Mark "Look for VRE" on surveillance cultures.

After handling laboratory specimens, the health care worker must immediately wash his/her hands with soap and water.

6. Waste Disposal

Garbage should be placed directly into a plastic garbage bag in a regular trash container. For disposal the bag should be closed tightly and disposed of with other garbage as per facility policy.

After handling any garbage, the health care worker must immediately wash his/her hands with soap and water.

7. Environmental Cleaning

In the absence of an outbreak cleaning should be done according to facility policy with particular attention paid to bathing and toileting facilities,

recreational equipment, horizontal surfaces in the resident's room, and in particular, areas/items that are frequently touched, i.e., handrails, light cords, laundry hamper lids.

In outbreaks, consideration should be given to more frequent cleaning and/or cleaning with a low-level disinfectant.

When precautions are discontinued or the resident is moved/transferred, thorough cleaning and changing of privacy curtains is required. Cloth or string light and call bells must be changed. Gloves are worn while performing cleaning duties.

Any equipment or furnishings soiled with feces must be immediately cleaned with a recommended facility cleaner/disinfectant. Mop heads should be laundered before re-use.

8. Visitors

Visitors to residents on VRE precautions shall be instructed regarding handwashing.

Visitors/family members providing direct care will be instructed on the use of appropriate protective articles.

9. Duration of Infection Control Precautions

Careful handwashing must be performed as long as resident remains in facility.

In consultation with Infection Control Practitioner, additional infection control precautions may be discontinued based on culture results and transmission risk factors.

10. Re-Culturing

Every three months as long as resident remains positive. Once cultures are negative, two more negative cultures at two-week intervals are required before discontinuing additional infection control precautions. After removal from infection control precautions, follow-up culturing of previously positive residents is based on:

- evidence of transmission
- the resident becoming acutely ill
- the resident developing diarrhea (change from normal bowel pattern or three or more loose stools in 24-hour period).

11. Management of Contacts and Outbreak Investigation

Outbreak is when more than the usual numbers of infections are present.

11.1 Residents are cultured:

- if linked to a VRE-positive resident and presents signs/symptoms of an acute infectious process
- as part of an outbreak investigation within the facility
- as part of an investigation from another facility when notified by the Infection Control Practitioner from that facility.

Culture all of the following and mark requisitions "Look for VRE":

- rectum or ostomy site,
- wounds,
- open skin invasive line sites,
- draining sites.

Additional infection control precautions are not necessary unless cultures are positive.

If VRE-positive, follow-up contact investigation will be required for this individual in consultation with Infection Control.

If the resident's contact has been transferred to another facility, notify Infection Control in that facility so appropriate surveillance cultures may be obtained.

11.2 Staff

Surveillance cultures are not recommended unless an individual(s) is linked to further VRE cases. This should be done in consultation with Infection Control and Occupational Health. A staff case/carrier should be managed by Occupational Health in consultation with Infection Control.

11.3 Family and Volunteers

Culturing is not indicated.

11.4 Environment

Culturing is not indicated.

12. Diagnostic Procedures

Before a VRE-positive resident is transported from his/her room all lesions/wounds must be covered and the employee transporting the resident must wash his/her hands after direct contact with lesion/wound.

Equipment used in testing the resident must be cleaned with the recommended facility cleaner/disinfectant.

Should a diagnostic procedure be required in a hospital the resident's VRE status should be communicated prior to transfer since more stringent precautions will likely be required in that setting.

13. Resident Activity

Resident care planning should strive toward maximal participation in social and rehabilitation activities and freedom of movement in the facility while minimizing risk of transmission.

Residents should be restricted from handling/preparing food during group activities.

Residents may participate in group activities, visits to the cafeteria, etc. provided:

- they have good personal hygiene
- their hands are washed prior to activity
- soiling of the environment is minimized through the use of wound dressings and incontinence products.

14. Discharging or Transferring a Resident to Another Facility

Each facility must designate who is responsible to do the following:

- Notify the receiving facility or agency by telephone of the resident's VRE status.
- Fax the completed VRE Infection Control Communication Form (See Section VIII) to the receiving facility.
- Ensure appropriate information is on transfer sheet.
- Ensure ground transportation staff (e.g., ambulance, stretcher car service) are informed prior to transfer, of the need for precautions.
- Arrange transfer of resident by a transportation company that has trained staff and ability to follow proper infection control precautions. Transport service staff must follow the *Infection Control Guidelines for Health Care Workers in the Community* (Section VII) and the interim statement "Transport of MRSA/VRE-Positive Patient (See Section X) until the completion of the *Infection Control Manual for Emergency Medical Services*.

Family members do not need to glove and gown or disinfect their vehicles to transport a resident.

VANCOMYCIN- RESISTANT ENTEROCOCCI (VRE)

*Adapted from Manitoba Infection Control Guidelines for
Preventing the Spread of Vancomycin-Resistant Enterococci
(Acute Health Care Facilities)
VRE Working Group*

Manitoba Advisory Committee on Infectious Diseases, 1997

**INFORMATION
FOR
RESIDENTS AND FAMILIES**

What is VRE?

Enterococci are common germs that live in the gut, and sometimes genital tract, of most people and do not cause any illness. When Vancomycin, a modern antibiotic, cannot kill this germ, it is said to be “resistant.” VRE stands for Vancomycin-Resistant Enterococci.

How can VRE spread?

VRE can survive on surfaces like toilet seats, tables and equipment. Diarrhea, poor hygiene and inadequate cleaning are ways in which the germ can spread. Good handwashing and hygiene are the best way to prevent spreading the germ. It is important for ALL patients, ALL staff and ALL families/visitors to wash their hands.

What does this mean for you?

One of your test results (cultures) shows that you have VRE. Some special precautions may be taken to stop the germ from spreading to other residents who may be prone to developing infection.

What special precautions will be followed in the facility?

- The resident may be asked to restrict some activity.
- Staff caring for you may wear gloves and a gown.
- It is important for all people entering and leaving your room to wash their hands.
- A special instruction sign may be posted to alert staff and visitors.
- Special arrangements may be made in co-operation with your doctor for tests during this time.

What about your family and visitors?

You may have visitors. They may be asked to put on gloves and wear a gown over their clothes, which should be removed before the visitors leave the room. It is important that visitors wash their hands before they leave the room.

Residents with VRE do not pose a risk to their families or to other healthy people. VRE is only a problem for people who are already seriously ill and are prone to develop infections.

What can you do?

- Wash your hands well and frequently.
- If you are admitted to another health care facility, please tell the doctor or nurse you had VRE.
- We understand the inconvenience caused you by this problem with VRE. Your co-operation in assisting us to keep this problem from spreading further will be most appreciated.

Thank you.



What You Should Know About Vancomycin Resistant Enterococci (VRE)

COMMUNICABLE DISEASE CONTROL

What are Enterococci?

Enterococci are common germs that are found in the bowels of healthy people. There are many different types of these germs and they rarely cause illness in healthy people.

What are Vancomycin Resistant Enterococci?

Vancomycin is an antibiotic used to treat serious infections. Sometimes, the enterococci germs become resistant to certain antibiotics, including Vancomycin. This means the drugs are no longer effective against them, making it harder to treat infection. These resistant germs are called Vancomycin Resistant Enterococci (VRE).

People may have VRE in their bowels without showing any signs of illness. These people are called carriers.

Who gets VRE?

People who get VRE usually have other medical conditions which make them prone to infection. Such medical conditions include:

- critically ill patients in intensive care units;
- patients with severe underlying disease or problems with their immune systems;
- patients in hospital who have had major surgery;
- patients with urinary catheters; and
- patients who have received many antibiotics.

Healthy people are unlikely to get VRE. If healthy people do get VRE, they usually have it only for a short time and rarely become ill.

What is the treatment for VRE?

Treatment for illness caused by VRE is difficult because the germ resists most antibiotics. Treatment plans will be determined by your physician.

How are VRE spread?

Enterococci, including VRE, are normally found in the human bowel and are passed from the body through feces. Enterococci can be found on people's hands, or on things that are touched such as toilet seats, door handles or furniture. VRE are passed from one person to another by direct contact with feces, or indirectly through equipment or materials that have the germs on them. They are not spread through the air.

How is the spread of VRE prevented?

Diarrhea, especially when it is uncontrolled, poor hygiene and inadequate cleaning increase the likelihood of transmission of this germ. If you or someone you are living with or visiting has VRE, the following measures should be taken.

- **Hand washing.** The most important way to prevent the spread of VRE is to wash hands well with soap and water for 10-15 seconds.
- **Cleaning.** Regular cleaning with household cleaners is important. As the germs are found in feces, toilets and bathroom facilities should be cleaned regularly.
- **Personal Hygiene.** Persons with VRE should not be restricted from moving freely throughout their homes and communities. However, they must clean themselves well after a bowel movement, and then wash

their hands thoroughly. If a person with VRE has uncontrolled bowel movements, diapers should be used to prevent the spread of the germ.

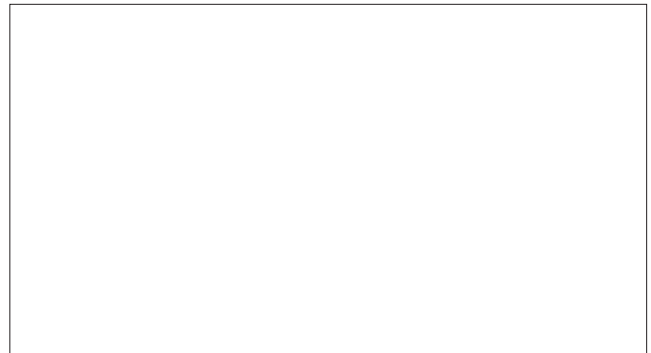
- **Laundry and waste disposal.** No special precautions are necessary as VRE are destroyed during the normal laundering process. Garbage can be bagged for pick-up as usual.

Are family members at risk when a patient has VRE?

Patients with VRE do not pose a risk to their family, especially if hand washing and normal cleaning measures are followed.

Where can I get more information?

For further information, call your local public health unit (municipal and provincial listings in the grey pages at the back of the telephone book).



Infection Control Guidelines for Health Care Workers in the Community



COMMUNICABLE DISEASE CONTROL

PREAMBLE:

These infection control practice guidelines outline the standards for preventing the spread of all infective microorganisms in community settings. Precautions used in acute care settings may be more intensive depending on the microorganism (eg. MRSA, VRE) and will generally be stopped once the individual is discharged from that facility.

1. HANDWASHING

- A 10-15 second handwash with soap and running water is the most effective method of preventing the spread of infective microorganisms. Paper towels or a clean towel must be used to dry hands and turn off faucets. Use only bar soap that is well drained, or liquid soap. Clients should be encouraged to wash out liquid soap containers before refilling.
- Handwashing should be done before and after direct care; after removing gloves; after handling body substances, contaminated equipment, articles and surfaces, linen, garbage and dishes; and before leaving the clients' home.
- When handwashing facilities are inaccessible use a waterless alcohol or chlorhexidene-based handwashing product and rub vigorously for 10-15 seconds, eg. towelettes, liquid, gel. Wash hands with soap and water at the next possible opportunity.

2. GOWNS, MASKS, PROTECTIVE EYE WEAR AND GLOVES

(Personal Protective Attire)

- **Disposable Gowns or Aprons** should be used when splashing or soiling of clothes with blood or body fluids is likely to occur.
- **Masks and Protective Eyewear** should be used if splashing of blood or body fluids is likely to occur.
- **Disposable Gloves** should be used when contact with blood is likely to occur. They should also be used for handling of potentially infectious material such as feces, wound secretions, mucous membrane lesions, skin lesions, and also when the health care worker has nonintact skin on hands.

3. NURSING/MEDICAL EQUIPMENT AND SUPPLIES

- **Reusable equipment** should be cleaned after use and then either sterilized or disinfected depending on how it will be used. eg: Footcare instruments or forceps for wound care should be sterilized; bed pans and urinals should be disinfected; and stethoscopes should be wiped with 70% alcohol. Standard procedures should be developed by health care agencies for processing all equipment and supplies.

- **Use of disposable equipment** may eliminate the need for cleaning, disinfection or sterilization procedures for reusable equipment. Disposable equipment should be placed in a bag and discarded with regular waste.
- **Needles, syringes and other sharps** should be placed in a puncture resistant container. If a commercial disposal container is not available a plastic, thick walled, household container (eg: bleach, vinegar bottle) should be used.

4. HOUSEHOLD EQUIPMENT/ ARTICLES/SUPPLIES

- Equipment such as bath stools, etc. should be cleaned with a normal household cleaner before use by other individuals.
- After handling contaminated equipment hands should be washed immediately with soap and running water for 10-15 seconds.

5. LINEN

- Linen and clothing should be washed by the usual methods. Health care workers should wear protective attire (ie: disposable gloves and gown or apron) to sort or handle linen that is heavily soiled with body fluids.
- Wash hands for 10-15 seconds with soap and running water after removing gloves.

6. DISHES

- Dishes should be washed by the usual methods.

7. GARBAGE

- Dispose of soiled gloves and other supplies in the regular garbage. Wash hands with soap and running water for 10-15 seconds after handling garbage.

8. ENVIRONMENT

- Clean the household/environment as usual with regular household cleaner, paying special attention to items frequently handled during care.
- After a spill of blood or body fluids the surface should be cleaned with soap and hot water and, if possible, disinfected with a solution such as 1:10 bleach and water. Gloves should be used and hands washed after removing gloves.



VIII. VRE Infection Control COMMUNICATION FORM

Manitoba
Health
Public Health Branch



Referring Facility _____

Receiving Facility _____

Patient Name _____

Date of Birth _____ MHSC# _____

PHIN # _____

Physician Name _____

Date VRE Identified _____ Where (Facility/Lab) _____

Infection

Colonization

Describe Treatment _____

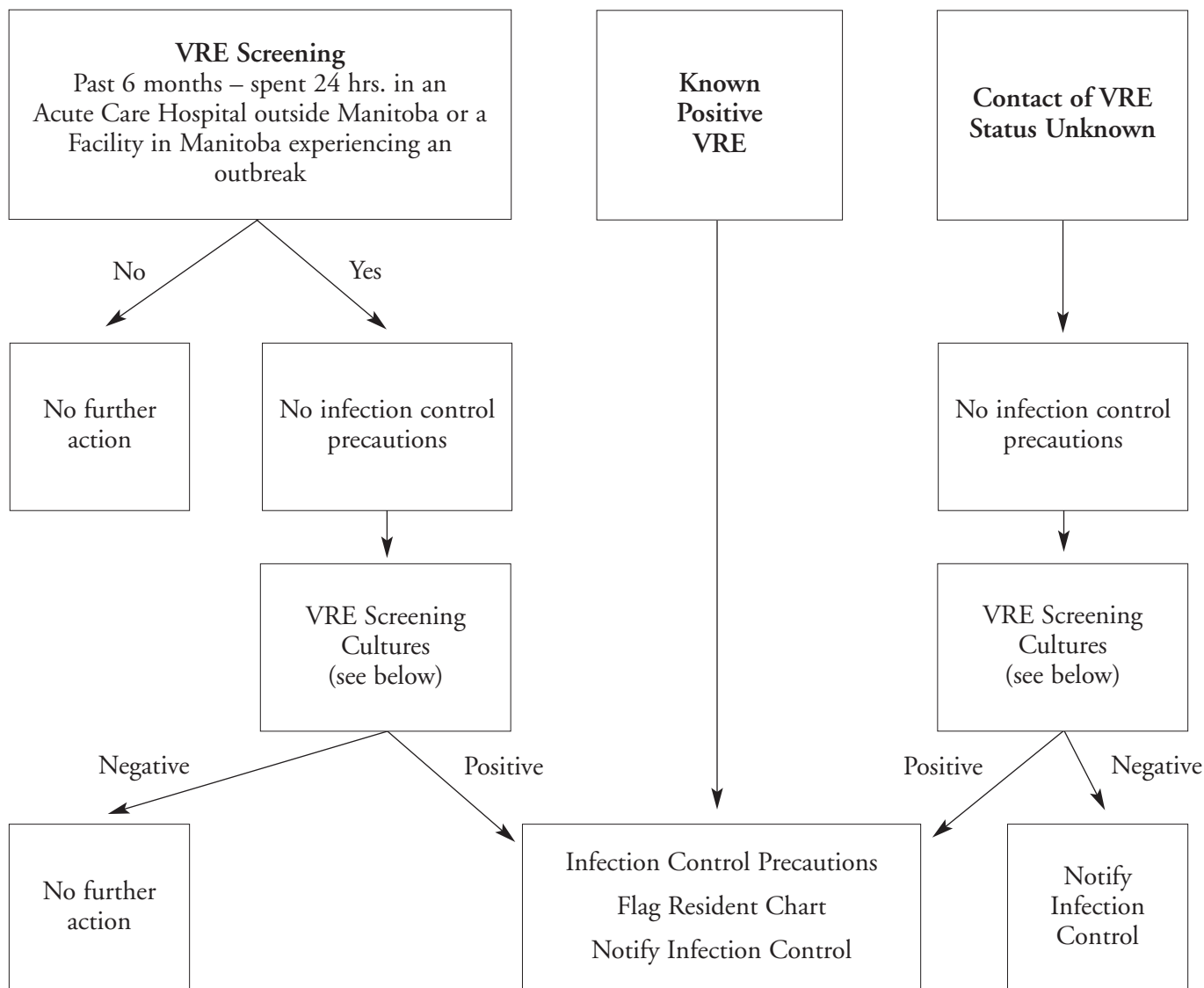
| SITE(S) | DATE | POS. | NEG. | NOT DONE |
|----------------------------|-------|--------------------------|--------------------------|--------------------------|
| RECTAL SWAB OR OSTOMY SITE | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| INVASIVE LINE/DEVICE SITES | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Specify _____ | | | | |
| WOUND | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Specify Where _____ | | | | |
| OTHER DRAINING SITES | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Specify Where _____ | | | | |

Contact follow-up completed in referring facility: Yes No

Signature _____ Date _____

Health-Care Worker Name/Position _____

IX. VRE Screening and Follow-up Algorithm



| | Screening Culture | Infection Control Precautions |
|-----|--|--|
| VRE | <ul style="list-style-type: none"> • Rectal (Ostomy) • Open Wounds/Skin Lesions • Invasive Line Sites • Draining Sites | <ul style="list-style-type: none"> • Only required if cultures are positive |

VRE Working Group, Manitoba Advisory Committee on Infectious Diseases (MACID), 1998.

Adapted with thanks and permission from Infection Control Service, Seven Oaks General Hospital, Winnipeg.

X. Transport of the MRSA/VRE Positive Patient (Interim statement October, 1998)

MRSA OR VRE POSITIVE patients must be identified on the patient's transfer sheet. The MRSA or VRE Communication Sheet must be filled out by the facility Infection Control Practitioner or designate and sent with the patient or be forwarded by fax.

A Stretcher Car Service can be used for the transport unless the patient's clinical condition other than MRSA or VRE warrants an ambulance – e.g., trauma, other medical condition, deterioration, or circumstance where an ambulance service is required. The transferring or referring hospital/facility **MUST** notify the receiving department and the transport service/agency of the need for infection control precautions.

Prior to transfer, the health care worker in the hospital or facility **MUST**:

For **MRSA positive** patients:

- cover any wounds/lesions;
- wrap the patient in a sheet if the patient has extensive skin lesions or shedding;
- place a mask on the patient until outside the facility if masking is part of the isolation requirements.

For **VRE positive** patients:

- cover any wounds/lesions;
- wrap the patient in a sheet if the patient has extensive skin lesions or shedding.

Whether the patient is transferred by stretcher car service or by ambulance the transporting service/agency must ensure their staff are trained in proper infection control policies and procedures. The transport service/agency must also ensure that staff follow the infection control policies and procedures.

The transport service/agency staff **MUST**:

- follow the *Infection Control Guidelines for Health Care Workers in the Community* and *Infection Control Manual for Emergency Medical Services*;
- the **MRSA positive** patient does not need to be masked during transport unless the transferring or referring hospital/facility staff indicate this is required due to the patient's condition;
- re-mask the **MRSA positive** patient prior to entering **HOSPITALS ONLY**;
- consider the wheelchair/stretcher used to transport patient as contaminated;
- disinfect the vehicle surfaces and any equipment that was in contact with the patient with an appropriate disinfectant immediately after use;
- dispose of contaminated linen and supplies as per infection control guidelines;
- use clean sheets for the next patient.

XI. References

- Anderson, R.L., Carr, J.H., Bond, W.W., et al. Susceptibility of Vancomycin-Resistant Enterococci to Environmental Disinfectants. *Infection Control Hospital Epidemiology* 1997; 18:195-199.
- Byers, K.E., Durbin, L.J., Simonton, B.M., et al. Disinfection of Hospital Rooms Contaminated with Vancomycin-Resistant Enterococcus Faecium. *Infection Control Hospital Epidemiology* 1998; 19:261-264.
- Cahill, C. and Rosenberg, J., Guideline for Prevention and Control of Antibiotic-Resistant Microorganisms in California Long-Term Care Facilities. *Journal Gerontologic Nursing* 1996; 40-47.
- Cann, D., Low, D.E., Armstrong, M. et al. VRE: The Next Endemic? (Ontario Nursing Home Association – Markham) 1996; 6:10-12.
- Crossley, K., Vancomycin-Resistant Enterococci in Long-Term Care Facilities. *Infection Control Hospital Epidemiology* 1998; 19:521-525.
- Garcia, M., Hanak, C., Didier, H., et al. Differential Risk Assessment and the Reintegration of Hospitalized Residents Colonized with Vancomycin-Resistant Enterococci (VRE) at a Tertiary Care Institution. *Canadian Journal of Infection Control* 1998; abstract 3.
- Health Canada, Preventing the Spread of Vancomycin-Resistant Enterococci (VRE) in Canada, CCDDR 1997; 23S8: 1-1 – 1-16.
- Kentucky addresses VRE transfer issue, *Hospital Infection Control* 1996; 14-15.
- Kolbe, F., Jeans, R., Duff, Z., et al. Guidelines for Management of Vancomycin-Resistant Enterococcus. *Canadian Nursing Home* 1996; 7:5-9.
- Lai, K.K., Fontecchio, S.A., Kelly, A.L., et al. The Epidemiology of Fecal Carriage of Vancomycin Resistant Enterococci. *Infection Control Hospital Epidemiology* 1997; 18:762-764.
- New York VRE Guidelines for Long Term Care Home. *Hospital Infection Control* 1997; 41-42.
- Nicolle, L.E., Nursing Home Dilemmas. *Infection Control Hospital Epidemiology* 1997; 18:806-808.
- Nicolle, L.E., Strausbaugh, L.J. and Garibaldi, R.A., Infections and Antibiotic Resistance in Nursing Homes. *Clinical Microbiology Review* 1996; 9:1-17.
- Noskin G.A., Stosor V., Cooper, et al. Recovery of Vancomycin-Resistant Enterococci on Fingertips and Environmental Surfaces. *Infection Control Hospital Epidemiology* 1995; 16:577-581.
- Ofner-Agostini, M.E., Conly, J., Paton, S., et al. Vancomycin-Resistant Enterococci (VRE) in Canada – Results of the Canadian Nosocomial Infection Surveillance Program 1996 VRE Point Prevalence Surveillance Project. *Canadian Journal of Infectious Diseases* 1997; 8:73-78.
- Porwancher, R., Sheth, A., Remphrey, S., et al. Epidemiological Study of Hospital-Acquired Infection with Vancomycin Resistant Enterococcus Faecium: Possible Transmission by an Electronic Ear-Probe Thermometer. *Infection Control Hospital Epidemiology* 1997; 18:771-773.
- Smith, P.W., and Rusnak, P.G., Infection Prevention and Control in the Long-Term Care Facility. *Infection Control Hospital Epidemiology* 1997; 18:831-849.
- Strausbaugh L.J., Crossley K.B., Nurse, B.A., et al. Antimicrobial Resistance in Long-Term Care Facilities. *Infection Control Hospital Epidemiology* 1996; 17:129-140.
- Wade J.J., Desai, N. and Casewell, M.W. Hygienic Hand Disinfection for the Removal of Epidemic Vancomycin-Resistant Enterococcus Faecium and gentamicin-resistant Enterobacter cloacae. *J. Hospital Infection* 1991; 18:211-218.
- Yamaguchi, E., Valena F, Smith, S. et al. Colonization Pattern of Vancomycin-Resistant Enterococcus Faecium. *AJIC* 1994; 22:202-206.

