

PATIENT INFORMATION BROCHURE – MULTIDRUG-RESISTANT ORGANISMS

This information has been designed to assist you in understanding more about multidrug-resistant organisms (MROs). MROs are bacteria and other microorganisms that have developed resistance to antimicrobial drugs. Common examples of these organisms are Methicillin-resistant *Staphylococcus aureus* (MRSA) (also known as “staph” or “golden staph”), and Vancomycin-resistant Enterococci (VRE), as described below.

Methicillin-resistant *Staphylococcus aureus* (or MRSA)

ABOUT MRSA

Staphylococcus aureus (*S. aureus* hereafter) is a type of bacteria commonly found on the skin and in the nose of healthy people. Occasionally *S. aureus* can enter the body and cause an infection. This infection may be minor (such as pimples, boils and other skin conditions) or serious (such as bloodstream infections or pneumonia).

Methicillin-resistant *S. aureus* (MRSA) is a type of *S. aureus* that has developed resistance to several antibiotics and can no longer be treated by these antibiotics. As methicillin has been the drug of choice for treating such infections in the past, MRSA are now emerging as a serious health care issue.

WHERE MRSA IS FOUND

MRSA can be found on the skin or in the nose without the person being sick. MRSA can also occur in wounds, around drips and catheters and may infect many different sites.

COLONISATION AND INFECTION

Patients can be colonised or infected with MRSA:

- **Colonisation** means that MRSA is being carried on, or in, the body without causing illness.
- **Infection** means that MRSA is making the person ill.

RISK FACTORS

- MRSA infection usually occurs in the elderly or very sick hospital patients, especially those who have a wound (such as after an operation, or due to a bedsore) or a tube (such as a urinary catheter) entering their body.
- Healthy people rarely get MRSA infections.

TREATMENT

- Although MRSA is resistant to many antibiotics and often difficult to treat, a few antibiotics can still successfully cure MRSA infections.
- Patients who are only colonised with MRSA do not usually need treatment.

HOW MRSA IS SPREAD

- MRSA can spread to other patients who are often very sick, especially those where there is a breakdown in the body's normal defences against bacteria. Examples of this are patients who have surgical incisions, drips and urinary catheters.
- MRSA is almost always spread by physical contact and not through the air.
- Hospitals take special steps to prevent the spread of MRSA from patient to patient. One such step may be to separate (isolate) a patient with MRSA infection from other patients. The decision to isolate any patient or not isolate is dependent on a number of factors that may vary between patients and between hospitals.

MANAGEMENT

Although the procedures (precautions) may vary between hospitals, some of the following strategies may be used:

- The patient may be placed in a single room or a room with one or more patients who also have MRSA. (This is also described as cohorting). Hospital staff will determine when it is appropriate for a person with MRSA to come out of a single room. Because MRSA is difficult to treat, this period of isolation may last from a few days to a few weeks or longer.
- Health care workers (such as nurses, doctors, allied health and/or cleaning staff) may put on gloves (and sometimes a gown) before entering the room. The gloves (and gown) are removed before the health care worker leaves the room and the health care worker immediately **washes his/her hands**.
- Visitors may also be asked to put on gloves (and gowns), particularly if they are assisting with patient care and are likely to come into contact with the patient's skin, blood, urine, wound or other body substance.
- Visitors should always **wash their hands** before leaving the room to ensure they don't take MRSA out of the room with them.

CARE OF A PERSON WITH MRSA AT HOME

- Prior to the patient leaving hospital you should ask the staff (nurse or doctor) about the precautions, if any, you should take at home. Usually no precautions are necessary.
- You may also wish to check with your general practitioner for additional advice.
- Generally speaking it is recommended all persons should practice normal hygiene and should **wash their hands** after physical contact with a person with MRSA.

COMMONLY ASKED QUESTIONS

Is it safe to be in the same room as a person with MRSA?

- Yes. Healthy people are at very little risk of becoming infected or colonised with MRSA. If family members and other visitors are healthy then it is okay for them to be in the same room with a person with MRSA.
- Casual contact, for example, touching or hugging, is also okay. However, you may wish to **wash your hands** before you leave the patient's room or home.

Can my children get MRSA by being around a person with MRSA?

- Healthy people including children are at very little risk of becoming infected with MRSA.

I have MRSA and I will be going home soon. What should I do to prevent my family from becoming infected or colonised with MRSA?

- Follow good hygiene practices as described above.
- Inform any nurse or doctor who provides health care for you that you have MRSA infection.

When may a person with MRSA return to community activities?

- Colonisation with MRSA should not affect this at all.
- When well enough. Once you have recovered from a severe infection you are able to return to any appropriate activities – your doctor can advise you on this.
- Those persons with a wound infected with MRSA may continue to take part in community activities provided the wound (such as a leg ulcer) is completely covered with a dressing.

What precautions should I take to protect others?

No special precautions are necessary except that everyone should practice good personal hygiene such as described above, and also:

- Washing your hands:
 - After using the toilet.
 - Before and after preparing food.
 - After cleaning.
- Housekeeping:
 - Damp dust to prevent dust particles from settling.
 - Crockery, cutlery and cooking utensils should be washed in hot water and detergent.
 - Linen should be washed in the washing machine using hot water and detergent.

THINGS TO REMEMBER

1. Staphylococcus is commonly found on people's skin.
2. Resistant staphylococcus aureus is known as MRSA.
3. MRSA is spread by direct contact or by contaminated equipment.
4. Good handwashing is vital to prevent the spread of all germs.

Vancomycin-resistant Enterococci (or VRE)

ABOUT VRE

Enterococci are bacteria normally found in the bowel and the female genitourinary tract. They are relatively harmless bacteria but are able to cause urinary tract infections and other infections such as abdominal infections.

Enterococci are frequently resistant to many antibiotics and, as Vancomycin has been the drug of choice for treating such infections in the past, Vancomycin-resistant Enterococci (VRE) are now emerging as a serious health care issue. VRE refers to the species *Enterococcus faecium* and *Enterococcus faecalis*.

COLONISATION AND INFECTION

Patients can be colonised or infected with VRE:

- **Colonisation** means that VRE is being carried on, or in, the body without causing illness.
- **Infection** means that VRE is making the person ill.

RISK FACTORS

- VRE infection usually occurs in the very sick hospital patient who has been in hospital for a while, has a tube or catheter in place (such as a urinary catheter) entering their body or has been on certain types of antibiotics.
- Healthy people rarely get VRE infections. However, VRE has been isolated from people who have never been in hospital.

HOW COMMON VRE IS

- Most people who have been found to have VRE in Victoria to date are colonised, not infected.

TREATMENT

- Although VRE is resistant to many antibiotics and often difficult to treat, a few antibiotics can still successfully cure VRE infections.
- Patients who are only colonised with VRE do not need treatment.

HOW VRE IS SPREAD

- VRE can spread to other patients who are often very sick, with weak immune systems that may not be able to fight off infections.
- Transmission of VRE is usually from patient to patient by direct contact on the hands of personnel or indirectly by contaminated environmental surfaces and patient care equipment.
- Hospitals take special steps to prevent the spread of VRE from patient to patient. This may include separating (isolating) patients with VRE infection from other patients, cleaning all patient equipment and rooms regularly and, designating equipment for use just for that patient.
- Infections and the spread of VRE are much less common in long-term care facilities, such as residential care units, than in acute care facilities.

MANAGEMENT

Although the procedures (precautions) may vary between hospitals, some of the following strategies usually occur:

- The patient is placed in a single room or a room that may be with one or more patients who have VRE. (This is also described as cohorting). Hospital staff will determine when it is appropriate for a person with VRE to come out of a single room. As VRE infection may be difficult to treat, this period of isolation may last from a few days to a few weeks or longer.
- The patient's movement from the room is limited to essential purposes only, for example, for medical procedures or in an emergency.
- Health care workers (such as nurses, doctors, allied health and/or cleaning staff) may put on gloves (and sometimes a gown) before entering the room. The gloves (and gown) are removed before the health care worker leaves the room and the health care worker immediately **washes his/her hands**.
- Visitors may also be asked to put on gloves (and gowns), particularly if they are assisting with patient care and are likely to come into contact with the patient's skin, blood, urine, wound or other body substance.
- Visitors should always **wash their hands** before leaving the room to ensure they don't take VRE out of the room with them.

CARE OF A PERSON WITH VRE AT HOME

- Prior to the patient leaving hospital you should ask the staff (nurse or doctor) about the precautions, if any, you should take at home.
- You may also wish to check with your general practitioner for additional advice.
- Generally speaking it is recommended all persons should practice normal hygiene and should **wash their hands** after physical contact with a person with VRE and wear gloves if you handle body substances (blood, urine, wound drainage) and **wash your hands** after removing your gloves.

COMMONLY ASKED QUESTIONS

Is it safe to be in the same room as a person with VRE?

- Yes. Healthy people are at very little risk of becoming infected or colonised with VRE. If family members and other visitors are healthy then it is okay for them to be in the same room with a person with VRE.
- Casual contact, for example, touching or hugging, is also okay. However, you may wish to **wash your hands** before you leave the patient's room or home.
- People who are very ill or who have weak immune systems (for example, on chemotherapy) should avoid handling the body substances of a person with VRE. They should also limit their physical contact to no more than casual touching. They should also **wash their hands** after physical contact with a person with VRE.

Can my children get VRE by being around a person with VRE?

- Healthy people including children are at very little risk of becoming infected with VRE, but should wash their hands after visiting someone who carries or has an infection caused by VRE.

I have VRE and I will be going home soon. What should I do to prevent my family from becoming infected or colonised with VRE?

- Follow good hygiene practices as described above.
- Inform any nurse or doctor who provides health care for you that you have VRE infection.

When may a person with VRE return to community activities?

- Colonisation with VRE should not affect this at all.
- When well enough. Once you have recovered from a severe infection you are able to return to any appropriate activities – your doctor can advise you on this.
- Those persons with a wound infected with VRE may continue to take part in community activities provided the wound (such as a leg ulcer) is completely covered with a dressing.

What precautions should I take to protect others?

No special precautions are necessary except that everyone should practice good personal hygiene such as described above, and also:

- Washing your hands:
 - After using the toilet.
 - Before and after preparing food.
 - After cleaning.
- Housekeeping:
 - Damp dust to prevent dust particles from settling.
 - Crockery, cutlery and cooking utensils should be washed in hot water and detergent.
 - Linen should be washed in the washing machine using hot water and detergent.

THINGS TO REMEMBER

1. Enterococci are normally found in the bowel.
2. VRE are enterococci that have become resistant to an antibiotic called vancomycin.
3. VRE infection normally occurs in people who are very sick. Healthy people rarely get VRE infections.
4. VRE is spread by direct contact or by contaminated equipment.
5. Good handwashing is vital to prevent spread of all germs.

FURTHER INFORMATION

For further information about hospital acquired infections contact:

- Your hospital's infection control department.
- VICNISS Coordinating Centre: www.vicniss.org.au.

REFERENCES

- National Health and Medical Research Council. Infection Control in the Health Care Setting. Canberra, April 1996.
- Department of Human Services Victoria, Public Health Infection Control Guidelines.
- Infection control guidelines for the management of patients with Methicillin Resistant *Staphylococcus aureus* (MRSA) and Vancomycin-Resistant *Enterococci* (VRE) in Long Term Care Facilities (LTCF). January 1998.
- Guidelines for the Management of patients with Vancomycin-Resistant Enterococci (VRE) Colonisation/Infection April 1999.
- Centers for Disease Control and Prevention. Hospital Infections Program, MRSA FAQs for Patients. August 1999. (<http://www.cdc.gov/ncidod/hip/aresist/mrsafaq.htm>).

This material is for your information and is not intended to be medical advice. You are encouraged to review the information provided with your doctor or relevant health professional

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