



MRSA (Methicillin Resistant Staph Aureus) Procedure

Procedure Number
WCDHB-IC-0029

Version Nos:
7

1. Purpose

This Procedure outlines the process to prevention the introduction and spread of Methicillin Resistant Staph Aureus (MRSA) within West Coast District Health Board (WCDHB) facilities.

2. Application

This Procedure is to be followed by all clinical staff throughout the WCDHB.

3. Definitions

For the purposes of this Procedure:

Staphylococcus aureus is an organism that is a natural inhabitant of the skin, mucous membranes and the gastro-intestinal tract. **MRSA** is taken to mean Methicillin Resistant *Staphylococcus aureus* is the same organism but has developed resistance to all groups of commonly used antibiotics. It is potentially pathogenic and has adverse effects on a patient's medical and surgical outcomes.

4. Responsibilities

For the purposes of this Procedure:

Clinical Nurse Specialist - Infection Control is required to:

- Oversee all aspects of this Procedure
- Monitor the performance of WCDHB staff members in relation to this Procedure;

Staff Members are required to:

- Ensure they abide by the requirements of this Procedure;
- Abide by all WCDHB Infection Control Policy and Procedures;
- Abide by all WCDHB Health and Safety Policy and Procedure.

5. Resources Required

This Procedure requires:

- i) WCDHB Health and Safety Declaration Form
- ii) Impervious linen bags (white with yellow stripe)
- iii) Gloves and Gown
- iv) Alcoholic Hand gel
- v) Single Room
- vi) Locker
- vii) Dedicated Sphygmomanometer, BP Cuff and Stethoscope

6. Process

1.00 Introduction

1.01 MRSA is not endemic within WCDHB facilities and the aim of the Procedure is to eliminate sporadic cases and outbreaks, & to spare no effort in order to prevent the introduction and spread of this organism within these facilities.

1.02 MRSA is an opportunistic bacterium which may colonize and grow readily on the skin and mucous membranes of a person without harm to that person. It competes with other microorganisms found on the skin surface and is commonly found in the nose, groin, perineum or any other warm, moist site.



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The human skin is constantly shedding skin scales – MRSA is shed with the skin as it falls from the human body. The greater the number of MRSA colonies on a person, the greater the potential for contamination of the environment and the transmission of MRSA to others.

- 1.03 MRSA can be transferred through:
- i) Direct Contact – direct contact between a source and a susceptible host resulting in physical transfer of microorganisms.
 - ii) Indirect Contact – personal contact of the susceptible host with a contaminated intermediate object, bed linen, clothing, instruments, dressings, mattress and floor.
- 1.04 It is important to control MRSA because of:
- i) the high cost and frequency of side effects resulting from the treatment of choice (Vancomycin).
 - ii) lack of oral agents that can be used on an outpatient basis.
 - iii) potential for the emergence of resistance to Vancomycin, thereby seriously restricting the choice of treatments from MRSA infection.
- 1.05 Handwashing is the single most important practice in preventing the transmission of MRSA. Therefore the requirements of the WCDHB Handwashing Procedure are to be followed at all times.
- 1.06 A number of factors associated with an increased risk that a person will be colonized with, or have a MRSA infection including:
- i) Chronic lesions e.g.: dermatitis, ulcers, sores and wounds
 - ii) New Born umbilicus
 - iii) Household member tested MRSA positive
 - iv) Previous / Multiple hospitalisation
 - v) Work history
 - vi) Insulin dependent diabetics, haemodialysis, IV drug users, underlying medical conditions. e.g.: lung disease
 - vii) Age (>50 years)
 - viii) Long term indwelling devices. e.g. urinary catheter, tracheostomy, percutaneous endoscopic gastrostomy
 - ix) Administration of broad spectrum antibiotics or multiple antibiotic therapy
 - x) Immunocompromised/suppressed patients e.g.: ICU, Oncology Transplant Neonatal and Burns.

2.00 MRSA Screening Process For Staff Members

- 2.01 Prior to commencing work with the WCDHB, **all** new staff members (clinical and domestic) need to provide a negative MRSA screen.
- 2.02 This includes:
- i) Staff who have worked in an overseas healthcare facility in the last 2 years; or
 - ii) Staff who have worked in a New Zealand healthcare facility in the last 12 months; or
 - iii) have been previously found to be colonised/infected with MRSA; or
 - iv) returning from long term leave, such as sabbatical or parental leave (12 months or longer)
 - v) have been hospitalized in New Zealand or overseas health care facility in the previous 12 months.



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- 2.03 No clinical or domestic staff member (who meets the criteria outlined in Section 2.01) can commence work without providing a negative MRSA screening result.
- 2.04 **All** prospective clinical staff are required to present a clear MRSA screen, from all 3 sites (Nasal, natal cleft, groin) This negative screen must be from Canterbury Health or West Coast DHB Laboratories. This includes medical staff on honorary staff status and all nursing, medical and Allied health students. If working outside of New Zealand then this needs to be 30 days prior to their work commencement date. If this screen is clear, another screen is to be undertaken 10 days before the work commencement date. If this screen is clear the staff member is clear to commence work. If any of the screens are positive, they are to be treated as per Section 6.00 of this Procedure. In situations where no clearance results are available, the Infection Prevention and Control Service may assess the risk and advise topical treatment while allowing the employee to start work and awaiting clearance. Commencement of work should be deferred for 48 hours of treatment, if possible
- 2.05 Students undertaking placements with WCDHB are required to present a clear MRSA screen 10 days prior to their commencement date. If this screen is clear and the student will not be in a clinical environment before their WCDHB student placement, then they may commence the student placement. If the student will be in a clinical environment before their WCDHB student placement, then another screen is required before they can commence their WCDHB student placement. If any of the screens are positive, they are to be treated as per Section 6.00 of this Procedure.

3.00 Rescreening

- 3.01 Following initial pre-employment testing, rescreening is not required unless epidemiologically indicated i.e. : contact tracing or outbreak situation Existing Staff who have clinical contact in DHB's outside of the Canterbury and West Coast DHB's must provide 6 monthly MRSA screens.
- 3.02 Company Representatives who visit the Operating theatre or have clinical contact as part of their clinical teaching roll must submit a MRSA Clearance Screen to the Infection Prevention & Control Service at six monthly intervals
- 3.03 Where a staff member tests positive for MRSA, they are to immediately cease patient contact and commence treatment. Further screening is performed as per the WCDHB MRSA Screening Technique Procedure. Staff cannot recommence patient contact until they provide 3 negative clear screens.

4.00 Screening Of Patients For MRSA

- 4.01 All patients who are admitted to any WCDHB facility from any other hospital outside of the West Coast must be placed into a single room, with appropriate additional Contact Isolation precautions taken and screened (tested) for MRSA.
- 4.02 All patients who have been treated or worked in any hospital or Health Care Facility in New Zealand in the previous 12 months must be placed in a single room, with appropriate Contact Isolation precautions taken, and screened (tested) for MRSA.



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- 4.03 All patients who have worked, been treated or admitted to any other hospital or Health Care Facility overseas in the previous 2 years must be placed in a single room, with appropriate Contact Isolation precautions taken, and screened (tested) for MRSA.
- 4.04 All patients who are from overseas but who have had **No** hospitalization in the previous 2 years are to be asked the following questions:
- i) Have they been prescribed any antibiotics in the previous 3 months?
 - ii) Do they have any wounds, skin lesions or infected piercings?
 - iv) Have they been tested and found to be MRSA positive in the past?
 - iv) Have they had any close personal contact with any other person who has tested? Positive for MRSA in the previous 6 months?

If the response from the patient (or their representative) is “Yes” to any of these questions, the patient is to be placed into a single room, with appropriate contact precautions taken, and screened (tested) for MRSA.

- 4.05 Isolation precautions are to be maintained until either a clear screening result is obtained or the patient is discharged from the WCDHB facility.
- 4.06 All patients admitted to any WCDHB facility and who have been MRSA positive in the past must be placed in a single room, appropriate additional precautions taken and screened for MRSA.
- 4.07 In the event of a positive result, consideration should be given to treatment, depending on the patient’s circumstances. Staff members are to consult with the WCDHB Infection Prevention & Control Service.
- 4.08 When a negative screening result is obtained, isolation precautions can be discontinued, but the ideal is to continue the patient’s care in a single room.

5.00 Process For Transferring/Discharging Of MRSA Positive Patients

- 5.01 Where a patient who has tested positive for MRSA while in a WCDHB facility is to be transferred to another hospitals or resthomes, they are to be screened (tested) prior to their transfer. Staff are to ensure this is timed to enable the result to be sent with the patient (screens require 2-3 days for a result) to the receiving hospital/resthome.
- 5.02 Where a patient who has tested positive for MRSA while in a WCDHB facility is to be discharged to the community all individuals and organisations involved in post discharge care need to be informed. In addition, the patient’s MRSA positive status must be documented on all referral letters
- 5.03 An alert is to be placed in the patient’s electronic records and an alert label placed on their clinical record indicating their positive MRSA status.

6.00 Operating Theatre & Post Anaesthetic Care Unit Process For Managing MRSA Patients

- 6.01 Standard Precautions must be adhered to at all times for all patients.



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- 6.02 Should an MRSA positive patient present for surgery the operation list is be arranged so that the MRSA positive patient's surgery is performed at the end of the list, particularly if a wound or skin lesion is colonised or infected?
- 6.03 The MRSA positive patient is to be transported to theatre on a trolley, other than their own bed, via the Anaesthetic Room, and returned via the PACU. This is to reduce the potential dissemination of contaminated skin.
- 6.04 he operating theatre is to be free of any extraneous equipment or people.
- 6.05 Following surgery, all instruments are to be washed and sterilised as for routine procedures.
- 6.06 Anaesthetic equipment, i.e. BP cuffs pulse oximeters are to be washed with Phensol and water and dried.
- 6.07 Linen is to be handled carefully to minimise dispersion of shed skin. Used linen is to be discard into appropriate linen bag, double bagged into Impervious bag with yellow stripe.
- 6.08 Terminal clean of theatre as per Phensol protocol.
- 6.09 In the Recovery Room, all reusable equipment must be decontaminated. This includes BP cuffs and pulse oximeters which are to be washed with Phensol and water and dry wiped.
- 6.10 Recovery Room staff are to wear gloves and gowns during patient contact, and a mask if patient has a respiratory tract colonisation or infection.

7.00 Treating MRSA

- 7.01 This treatment procedure applies to all patients and staff who may or may not be currently receiving systemic antibiotic treatment for MRSA infection.
- 7.02 Mupirocin (Bactroban) is to be applied to the anterior nasal nares three times a day.
- 7.03 Tridosan 1% is to be used for daily washing of skin and bathing. Cetrimide shampoo for hair washing twice weekly.
- 7.04 Treatment is to be for an initial period of seven days, then wait 48 hours and collect first set of swab for screening, wait a further 24 hours for the second set off swabs then a further 24hours for the last set off swabs to be sent for screening. A clearance of all 3 sets is required for the final clearance.
- 7.05 Management of wounds or other colonised or infected sites will need to be discussed with the WCDHB Clinical Nurse Specialist - Infection Control or Clinical Microbiologist. It is unlikely a patient will be cleared of MRSA if they have it in a wound.
- 7.06 This regime may be altered by the Infection Control Service if the MRSA strain demonstrates resistance to Mupirocin (Bactroban)



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- 7.07 Infected staff members will be given MRSA follow-up surveillance information, relevant dates for subsequent surveillance swabs. If a positive result is detected over the twelve months, this will be assessed at that time.
- 7.08 A down turn in a staff member's health status, such as treatment with antibiotics or the development of wounds or dermatitis can weaken the immune mechanisms of the body. This may lead to the re-emergence of MRSA even though previous screens have been clear. If this occurs, staff members are to discuss it with the Infection Control Team.
- 7.09 The staff member is to be advised by the Infection Control Team to inform his/her GP of the MRSA result. This is important if antibiotics are required in the future to prevent recolonisation.
- 7.10 MRSA positive individuals with unhealed wounds or skin lesions should continue topical treatment until all wounds have healed, or as discussed with the Infection Control Team.

7. Precautions And Considerations

- ➔ Before commencing work all new clinical and domestic staff members (who meet the criteria as stated in Section 2.01) must provide recent evidence (within the previous 10 days) of a negative MRSA screening result.
- ➔ All patients who are admitted to any WCDHB facility from any other hospital must be placed into a single room, with appropriate additional precautions taken and screened (tested) for MRSA.
- ➔ All Patients who have been treated/ admitted or worked in any Hospital or Health Care Facility overseas in the last 2 years must be placed in a single room, with appropriate Contact isolation precautions taken and screened (tested) for MRSA
- ➔ Should an MRSA positive patient present for surgery the operation list is be arranged so that the MRSA positive patient's surgery is performed at the end of the list
- ➔ Cleaning of the Isolation room after discharge.

8. References

New Zealand Standard – Infection Control (NZS 8142:2008)

Ministry of Health Guidelines For The Control Of Methicillin Resistant Staph Aureus In New Zealand (August 2002)

Canterbury District Health Board Infection Control Manual (2010)



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9. Related Documents

- WCDHB Infection Control Procedure Manual
- WCDHB MRSA Screening Technique Procedure.
- WCDHB Health and Safety Policy and Procedure Manual
- WCDHB Accident-Incident Form

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