MULTI-RESISTANT ORGANISMS (MRO) SCREENING - INTENSIVE CARE UNIT (ICU)

| Cross references (including NSW Health/SESIAHS policy directives) | NSW Health PD2007_084, Infection Control Policy: Prevention and Management of Multi-Resistant Organisms (MRO)  
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<td>1. What it is</td>
<td>Screening for MROs in ICU is to augment the existing program of surveillance cultures of urine and sputum samples as well as other clinically determined samples submitted for bacterial culture.</td>
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<td>2. Employees it applies to</td>
<td>Nursing and Medical Staff employed at The St George Hospital Intensive Care Unit</td>
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<td>3. When to use it</td>
<td>For all patients admitted to STG ICU</td>
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<td>4. Why the rule is necessary</td>
<td>To monitor and detect the prevalence of MROs within the STG ICU. To facilitate were possible the isolation of ICU patients with a positive MRO. To reduce the risk of transmission of MROs within a high-risk population of patients and associated environment. Increasingly, hospitalised patients can be colonised or infected with an MRO, in particular Methicillin-Resistant Staphylococcus Aureus (MRSA). Vanco-mycin Resistant Enterococci (VRE), Meropenem-resistant Acinetobacter baumanii (MRAB) and other miscellaneous Multi-resistant Gram negative rods (MRGN) are also encountered. Screening protocols for MRSA are mandatory in ICU / ICU2. Other programs are elective based on current problems.</td>
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| 5. Who is responsible | Director of ICU, SGH  
Nurse Manager, ICU |
| 6. Process | Routine screening of all patients admitted to the unit. |

All elective ICU admissions must have MRO screening prior to booking. It is the responsibility of the home team requesting the bed to ensure compliance and notification of results when completing the ICU booking process. Where possible screening to be carried out in the pre-admission clinic at least a week prior to admission to allow sufficient time for results to return.

6.1 Routine Organism Specific Screening

- **Methicillin Resistant Staphylococcus Aureus (MRSA)**
  Routine screening for MRSA is performed from the following sites including
  - Skin swabs from Nose & Groin
  - Sputum and Urine
  - Drain / wound / catheter sites if present.
  - No other sites need be sampled from patients admitted electively to ICU for care if they have not been admitted to another HCF.

- **Vancomycin resistant enterococcus (VRE)**
  Screening for VRE is by performing a swab of faecal matter or rectal swab.
6.2 Elective or interval organism specific screening is carried out for
- Meropenem - resistant Acinetobacter baumanii (MRAB)
- Multi-resistant Gram Negative Organisms (MRGN)
- During a suspected outbreak of colonisation or infection in ICU

6.3 Weekly Surveillance Screening during ICU stay
Surveillance specimens should be collected from all ICU patients weekly during their ICU stay. The screening sites and specimens are as per routine admission screening.

If an ICU patient returns a positive result and is located in the main area, it is recommended that the adjacent patients will have repeat screening.

6.4 Elective or Interval Screening
Will be determined by the Director of ICU in consultation with the Microbiology and Infection Control and will depend on the prevalence of those particular organisms in the ICU population or the ward or HCF from which the patient has been referred.

6.5 Responsibilities in relation to Routine Screening, Interval Screening & Surveillance Screening:
- ICU Nursing Staff are responsible for conducting weekly surveillance, for taking samples and completing microbiology request forms.
- ICU Resident is responsible for checking the microbiology results and documenting in the patients clinical notes.
- ICU Resident is responsible for notifying a positive result to the bedside nurse and ICU medical team.

6.6 Isolation of Infected Patients in Single Room
Where possible the following patients are given priority
- All patients with proven MRSA / VRE / MRGN / MRAB / C-Diff / ESBL
- Other patients with a known communicable illness requiring isolation

Followed by:
- All intra-hospital admissions from wards if hospital stay is > 5 days, or presence of wound sites, etc.
- All CICU patients
- All inter-hospital transfers
- Other multi-resistant organisms/infectious diseases flagged by microbiology as an organism of concern.

A decision regarding priority of isolation when demand exceeds number of available single rooms is to be made between the ICU NUM/In-Charge and ICU Duty Consultant.

6.7 Cohorting patients who are colonised or Infected with the same strain of MRO
Accommodation of MRO (MRSA / VRE / MRGN / MRAB / C-Diff / ESBL) positive patients within the general ICU beds is to be avoided where possible, it places the other “clean” ICU patients at significant risk of acquiring colonisation with MRO.

The NUM/ In-Charge of shift and the ICU Consultant on Duty in consultation with the infection control team and infectious diseases will make the decision to cohort within the main unit. This will be based on clinical diagnosis, microbiology confirmation when available, epidemiology and
mode of transmission of the infectious agent. Review of organisms is to occur twice weekly combined ward round.

Every effort should be made to ensure adequate isolation of MRO patients. Any MRO patient not in isolation and not requiring ICU care should be given high priority for ward bed access.

It may be necessary for additional beds to remain off line during an outbreak or when the number of patients requiring isolation exceeds the number of single rooms available, leading to an increased number of MRO cohorts. This decision will be made in consultation with the ICU Director, Deputy Director of Nursing, Microbiology and Infectious Diseases.

As this is a period of increased susceptibility Movement of staff, visitors & patients will be restricted throughout the unit to ensure a reduced risk of further transmission.

6.8 Post ICU Surveillance
It is the responsibility of the receiving ward that ICU patients are screened for MRO on discharge as they are classified as high risk. The resident medical officer should note this in the ICU CIS discharge summary.

6.9 Practical Guidelines
Screening for VRE & MRAB may be done on the same swab. This request form must read VRE & MRAB.

| 7. Compliance evaluation | Q1: Should all ICU patients have admission MRO screening?  
A: Yes, to ensure all patients are captured and screened on admission.  

Q2: What is the difference between elective screening and routine screening?  
A: Elective screening is determined by the Director of ICU in consultation with the Microbiologist and Infection Control and will depend on the prevalence of those particular organisms in the ICU population or the ward or HCF from which the patient has been referred.  

Q3: Who makes the decision to cohort MRO patients in the main unit?  
A: The NUM/ In-Charge of shift and the ICU Consultant on Duty will make the decision to cohort within the main unit. This will be based on clinical diagnosis, microbiology confirmation when available, epidemiology and mode of transmission of the infectious agent. In the event of outbreaks, infectious Diseases, Microbiology, infection control and the STG Executive should be involved.  

Quality Evaluation  
- Surveillance audits of cohort locations and identification of organism specific trends to prevent cross contamination of MROs.  

Approved by: Clinical Governance Document Committee          Date: June 2013
St George/Sutherland Hospitals And Health Services (SGSHHS)

Clinical Business Rule SGSHHS CLIN_ICU

- Daily patient MRO and flow management reported to STG Operations Manager, Medicine & Critical Care Co-Director and Bed Management Centre.
- IMM investigation and trend reports reviewed and reported.
- STG ICU Combined Antibiotic Stewardship Program

8. Keywords

**Screening** – Collection of specimens from a patient and the subsequent laboratory analysis of these samples.

**Multi-Resistant Organisms (MRO)** – A bacterium that is resistant to two or more commonly used antibiotics from different classes (to which they would normally be susceptible).

**Cohorting** – A group of individuals kept together to minimise contact with other patients or staff to decrease the opportunities for transmission of infected agents.

I, Dawn Fowler Clinical Group Manager Medicine and Critical Care of St George Hospital attest that this business rule is not in contravention of any legislation, industrial award or policy directive.

Revision and approval history

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<tr>
<th>Date</th>
<th>Revision number</th>
<th>Contact Officer (Position)</th>
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<td>June 2013</td>
<td>0</td>
<td>Kate Powell A/Nurse Manager ICU</td>
<td>June 2016</td>
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