

Reducing the burden of multiple resistant organisms (MROs)

Proceedings of the MRO summit convened
by NSW Health, Sydney 6 October 2005



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SHPN (AIDB) 060099

ISBN 0 7347 3963 X

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August 2006

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Introduction

THE NSW MINISTER FOR HEALTH established an Expert Group to advise the Health Department and the Government on all aspects of MROs in response to community and health system concerns about MROs.

MROs can cause serious illness and avoidable deaths in hospital patients in Australia and other western countries. Reservoirs of MROs include patients; occasionally healthcare workers who are colonised or infected with them; and contaminated objects or surfaces in the hospital environment. MROs are often inadvertently transmitted on the hands of healthcare workers. The reasons for the emergence and persistence of MROs include:

- widespread, potentially life-saving but sometimes inappropriate use of antibiotics over many years
- greater numbers of patients with serious or life-threatening injury or illness, who survive longer because of modern therapy, but are then at increased risk of infection because of it
- inadequate standards of hospital hygiene.

The NSW MRO Expert Group developed a set of recommendations regarding the key elements of a framework for MRO control and prevention in NSW. The Expert Group convened the Summit to enable its recommendations to be considered by a range of stakeholders. These included consumers, health service administrators, infection control nurses, microbiologists, pharmacists, industrial groups, learned medical colleges, academics, and housekeeping services managers.

Key elements of the framework for discussion at the Summit were:

- surveillance of MROs
- hand hygiene
- options for patient and staff screening
- environmental cleaning
- appropriate use of antibiotics in hospitals
- evaluation of implementation of strategies.

These topics were selected for specific consideration because they are essential components of any MRO control program, relatively easy to implement, measure and interpret, and are applicable to all Area Health Services.

The Summit, which was facilitated by Dr Norman Swan, was held on 6 October 2005.

This report summarises the Summit's outcomes and discussions.

Summit outcomes

SUMMIT DISCUSSIONS and the recommendations of the MRO Expert Group focused on methicillin resistant *Staphylococcus aureus* (MRSA). The rationale for this is that MRSA is the most prevalent MRO in NSW; and that measures aimed at reducing the spread of MRSA will also be effective against other MROs.

Summit participants broadly endorsed the Expert Group's recommendations, and made some additional recommendations for consideration by NSW Health.

2.1 General themes arising from discussion at the Summit

A number of key themes emerged from discussion at the Summit. They may be summarised as follows.

Consumer issues

- Consumers should be explicitly involved in developing and implementing MRO control and prevention measures. They could play a useful role in advocacy and education.
- Education or information should be provided to consumers and carers in the community as well as at the bedside.
- A supportive environment is needed to help maximise the contribution of consumers and carers.

Resourcing issues

- There is skepticism regarding the availability of resources required to implement the recommendations and whether policies will be translated into action on the ground.
- It was strongly recommended that the resource implications of the recommendations be evaluated, and appropriate funding be made available.
- Extra resources will be needed for infection control staff, laboratories, infectious diseases physicians, information technology and to reflect the extra demands which will be made of the health workforce.

- The screening recommendations, in particular, have significant cost implications: Funding for laboratory screening services should be quarantined from clinical budgets.
- Following cessation of the molecular typing project for which South Western Area Pathology Service (SWAPS) was funded, there are difficulties accessing such a service. Molecular typing contributes to understanding of the epidemiology of MRSA and to clinical management. More work is needed to determine what sort of typing should be done and by which laboratories.
- Concerns were raised about rural hospitals, which may have limited access to infection control and infectious diseases staff.
- The high burden of MRSA in major teaching hospitals, which tend to have the sickest patients, was noted.

Systems issues

- Effective change management expertise will be essential to the successful implementation of the recommendations, especially given the complacency which often surrounds MRSA because of its endemicity.
- The profile of infection control and rational antibiotic prescribing should be raised within Area Health Service management.
- The importance of timely feedback to clinicians treating patients with *Staphylococcus aureus* blood stream infection while patients are still in hospital was repeatedly highlighted. This has implications for the funding and organisation of services.
- Uncertainty exists as to whether measures effective in low prevalence areas, such as Scandinavia, are relevant to endemic situations such as currently exists in NSW. Nevertheless there was support for key elements of the Scandinavian approach.
- The introduction of patient and staff screening has significant systems implications, and implementation should be staged – focusing on patients and clinical units in order of priority.

- The recommendations discussed were developed to guide the control and prevention framework at the state-wide level. A detailed policy document is also being developed to provide guidance for individual facilities to use, taking into account issues such as local MRO epidemiology, range of clinical services provided and patient mix.
- The needs of community nursing and caregivers should be recognised in the policy, specifically with regard to education.
- The need for a national approach to MRO prevention and control, including a national surveillance system for MROs and for antibiotic usage, was highlighted, and state and territory jurisdictions were urged to lobby the Australian Government to lead the establishment of national systems.

2.2 Recommendations

Area performance reporting

- 1 Key recommendations from the Summit should be made key performance indicators (KPIs) for Area Health Service chief executives and implemented as soon as possible.

MRO surveillance

- 2 Areas must report all healthcare associated MRO blood stream infections (BSIs) for all healthcare facilities as part of the Infection Control Quality Monitoring Program.
- 3 NSW laboratories must report all *Staphylococcus aureus* BSIs. This should be implemented in NSW with a view to developing a national notification system.
- 4 All healthcare-associated MRO BSIs must be reviewed by the Area Health Service Infection Control Committee as soon as possible after diagnosis, according to a standard format, to identify specific issues and circumstances that could be improved, as well as whether they were potentially preventable.

MRO screening

- 5 All intensive care patients should be screened for MRSA colonisation on admission, weekly during their length of stay in ICU and on separation/death from ICU in order to establish ICU-associated MRSA acquisition rates.
- 6 ICU MRSA acquisition rates should be included in the Infection Control Quality Monitoring Program indicators and be reported by CEs to the Director-General.
- 7 Patients at high risk for MRSA colonisation should be screened upon admission to hospital.
- 8 Elective joint replacement, cardiac and vascular surgery units should be ring-fenced by using MRSA screening and other processes to keep MRSA positive patients and staff away from clean areas. Staff of elective joint replacement, cardiac and vascular surgery units should be screened for MRSA colonisation in accordance with the MRO Policy.
- 9 AHS should develop, with the involvement of consumers and key clinicians, detailed local programs for education of healthcare workers and carers in the community regarding MRSA control and prevention.
- 10 A study should be undertaken to determine the scope of staff screening programs and management of colonised staff, including assessment and appropriate treatment and successful decolonisation.

Use of antibiotic prescribing software systems to reduce inappropriate antibiotic prescribing

- 11 NSW Department of Health should, as matter of urgency, evaluate the available antibiotic prescribing systems with decision support, registration/authorisation and audit capacity and identify one or more that is suitable for use in NSW hospitals and facilitate its/their introduction, as soon as possible, in all public acute care facilities.

Environmental cleaning

- 12 NSW Health should adopt the Victorian Department of Human Services uniform standards, guidelines and audit processes for cleaning standards.
- 13 Area Health Services should report annually to the Director-General regarding environmental cleaning performance based on auditing.
- 14 Area Health Services are responsible for resourcing, reviewing, and ensuring compliance with the environmental hygiene recommendations.

Evaluating the framework

- 15 The MRO Expert Group should develop a protocol for detailed evaluation of the implementation of these recommendations in at least one Area Health Service, including assessment of:
 - barriers to implementation
 - compliance with recommendations
 - cost-benefit of measures recommended
 - outcome measures
 - issues or areas for which additional evidence is needed.
- 16 The recommendations and the MRO Policy should be reviewed at regular intervals (at least every three years) to ensure that they remain appropriate and are effective in reducing the spread and incidence of MRO infections in NSW hospitals.
- 17 A study should be undertaken with regard to implementation of staff screening in the NSW context.