Australian Commission on Safety & Quality in Healthcare

Antimicrobial Stewardship in Australian Hospitals

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Thanks to PENICILLIN
...He Will Come Home!
Antibiotic resistance – the three keys to control

- Infection Control
- Antibiotic stewardship
- Surveillance
  - Antibiotic-resistant bacteria
  - Antibiotic usage

Control of antibiotic resistance is like a three-legged stool – if you take away one of the legs – the whole thing falls over!
Antibiotic Stewardship - Definition

- The optimisation of antibiotic utilisation
- The appropriate use of antibiotics and the limitation of unnecessary antibiotic administration/exposure
  - Optimising diagnosis
  - Selecting appropriate antibiotics
  - Optimal dosing
Australian Commission on Safety & Quality in Health Care (ACSQHC)

- “National strategic framework and associated work program”
- 9 key areas of ACSQHC work
- Health Care Associated Infections (HAIs) are one of the 9 key areas
- HAIs nominated as one of the priority areas for 2007/10
HAI Strategy – 5 Key Initiatives

• National surveillance for the prevention of HAIs
• Building Clinician Capacity Project
• National Infection Control Guidelines
• National Hand Hygiene Project
• Antimicrobial Stewardship Project
1st AMS Forum

- Convened by the Commission in September 2008
- Attended by representatives of all the jurisdictions (policy makers, clinicians and pharmacists, private hospitals, medical colleges, professional organisations)
- Established the current activity in the antimicrobial usage surveillance and containment in the acute care sector (both public and private)
- Agreed on core components of a successful AMS program at local, state and national levels
- Identified barriers to developing local AMS programs
- Developed recommendations for a national strategy for AMS in the acute care sector
Antimicrobial Stewardship Advisory Committee

- Aim: to promote the optimal use of antimicrobials to maximise treatment efficacy in individuals while minimising the impact of antimicrobial resistance on communities
- Focus on developing strategy that would serve at the national, state, institutional and community levels
ACSQHC AMS Advisory Committee

Members:
Celia Cooper (Chair)
Kirsty Buising  John Ferguson
David Kong       David Looke
David Maxwell till 6/2010 Graeme Nimmo
John Turnidge   Karen Thursky
Helen van Gessel Tara Anderson
Morgyn Warner from 11/2010 Vesna Morosin (NHMRC Observer)
Work of the Antimicrobial Stewardship Committee

- All members of the committee will have an equal opportunity to contribute to the end result
- Each committee member is responsible for developing a particular part of the strategy
Work Program of the Antimicrobial Stewardship Committee

• 10 Key components
• Each one is the responsibility of a committee member
• The program is divided into:
  – Strategies for antimicrobial stewardship
  – Resources
  – Evaluation, audit and feedback
“The Book”

- The rationale and evidence for effective AMS programs
- Provides guidance on developing and introducing a hospital AMS program tailored to the Australian context
- Tools used by Australian hospitals to create and maintain AMS programs
“The Book”

• 10 chapters & divided into 2 parts
  – Strategies for implementing and sustaining AMS
  – Resources required for AMS

• Each chapter begins with key points and recommendations required for implementing effective AMS in hospitals

• Appendix 2 contains examples of templates, policies, guidelines and other educational material contributed by hospitals across Australia
Key points and recommendations

1 Implementing an antimicrobial stewardship program

1.1 Key points

- Effective antimicrobial stewardship programs have been shown to improve the appropriateness of antimicrobial use, reduce patient morbidity and mortality, and reduce institutional bacterial resistance rates and healthcare costs.

- The overall accountability for antimicrobial management control lies with the hospital administration. They should be responsible for ensuring an antimicrobial stewardship program is developed and implemented, and outcomes are evaluated.

- International literature strongly suggests that the most effective approach to antimicrobial stewardship involves multidisciplinary antimicrobial stewardship teams with the responsibility and resources for implementing a program to improve antimicrobial prescribing.

- The support and collaboration of the hospital executive is essential to the success of antimicrobial stewardship teams, and clear lines of accountability to the hospital executive should be defined.

- Successful stewardship programs include a range of interventions. Two of the most effective strategies are restrictive methods, such as requiring approval to prescribe an antimicrobial, and the proactive strategy of prospective review with direct intervention and feedback to the provider.

- Teams are more likely to be effective in leading and sustaining changes in clinical practice if they have access to, and training in, effective quality improvement methods and knowledge.

1.2 Recommendations

1.2.1 Hospitals have an antimicrobial stewardship program that includes an antimicrobial prescribing and management policy, plan and implementation strategy that are regularly reviewed.

1.2.2 Hospitals have an antimicrobial formulary and guidelines for antimicrobial treatment and prophylaxis that align with Therapeutic Guidelines: Antibiotic and are regularly reviewed.

1.2.3 Hospitals establish a multidisciplinary antimicrobial stewardship team that is responsible for implementing the antimicrobial stewardship program. At a minimum, the team should include either an infectious diseases physician, clinical microbiologist or nominated clinician (lead doctor), and a pharmacist.

1.2.4 The antimicrobial stewardship program resides within the hospital’s quality improvement and patient safety governance structure and is included within the hospital’s quality and safety strategic plan.

1.2.5 Antimicrobial stewardship teams have clearly defined links with the drug and therapeutics committee, infection prevention and control committee, and clinical governance or patient safety and quality units.

1.2.6 Team members have clearly defined roles and responsibilities. Team members should be sufficiently supported and trained to enable them to effectively and measurably optimise antimicrobial use by using interventions appropriate to local needs, resources and infrastructure.

1.2.7 Antimicrobial stewardship process and outcome indicators are measured and reported to the hospital executive.
“The Book”

- Released in 2010

- Supported by
  - Inter-Jurisdictional & Private Hospital Sector Committees (Feb 2011)
  - ACSQHC (March 2011)
  - AHMAC (June 2011)
  - AHMC (Aug 2011)
Strategies for Implementing AMS

Implementing a program (Chapter 1)

• Change management
• Governance, executive support
• AMS team, engaging clinicians
• Program plan
• Goals and measuring improvement
• Selecting strategies
Strategies for AMS

Restrictive (Chapter 2)
- Formulary restriction
- Antimicrobial approval systems

Persuasive (Chapter 3)
- Review and prescriber feedback
- Direct interaction and feedback to the prescriber

Point of care interventions (Chapter 4)
- Directed antimicrobial therapy on the basis of culture results
- Dose optimisation
- Parenteral to oral conversion /Educational
Strategies for AMS

Measuring performance – Chapter 5
- Monitoring use
  - Quantity (pharmacy data)
  - Quality (DUE, Point prevalence studies)
- Process and outcome indicators

Education – Chapter 6
- Education of prescribers, including the impact of the pharmaceutical industry
Resources for AMS

- Clinical microbiology services – Chapter 7
  - Antibiograms
  - Selective reporting
- Infectious diseases services – Chapter 8
  - Leadership, approval systems
  - Policies, guidelines, education
- Pharmacy services – Chapter 9
  - Roles and responsibilities of ID/AMS pharmacists
  - Formulary management, restrictions, DUE
Resources for AMS

E- Systems (Chapter 10)
- Integration of stewardship programs into electronic decision support systems and IT platforms

Appendices
- Antimicrobial usage: monitoring and analysis
- Examples of policies, guidelines education material from Australian hospitals
- List of useful websites
- Guidelines, policies on managing conflicts of interest, liaison with pharmaceutical industry
AMR Summit – Feb 2011

- Convened jointly by ASID and ASA
- An urgent call to action
- Proposed the creation of a national antimicrobial resistance management body
2nd AMS Forum in April 2011

- 7th April – World Health Day-(theme of AMS)
- Official launch of Antimicrobial Stewardship in Australian Hospitals
- Objective to assist jurisdictions and the private hospital sector to develop a strategic approach to implementing AMS in hospitals
- Focus on small to medium sized hospitals, rural and regional hospitals, private sector and paediatrics
- The AMR Summit, the AMS Forum and contributions from the AMS Advisory Committee have informed the Commissions proposed AMS work program supported by AHMAC and AHMC
Commission’s AMS work program

- Business case and job description to engage a suitable project manager

- Proposed Work Program
  - e-learning module
  - AMS indicators for QUM
  - Gap analysis
  - Consultation
  - Recommend final plan of work
  - National antibiogram system
Project 1: Improving antimicrobial prescribing

- Working with *NPS: Better Health Better Outcomes*

- *Antimicrobial Prescribing E-Learning Module*

- Aimed at new prescribers (years 1 & 2 post-graduation)

- A series of five antimicrobial prescribing modules
  - A story board with a clinical scenario that requires participants to make clinical decisions including the prescription of antimicrobials (AMS committee members)
  - A drug tool that sits behind the scenario and contains information on the various drugs that the participant can select to prescribe (Commission)

- “Surgical Prophylaxis” and “Staphylococcus aureus” bacteraemia available January 2012
Project 2: AMS Indicators for QUM in Australian Hospitals

- Commission’s review of the *Indicators for QUM in Australian Hospitals* will include AMS indicators

- Focus on process indicators

- Primarily designed as tools for internal hospital use

- Over time, may also be used at area, jurisdictional and national level
Project 3: Develop AMS self-assessment checklist for hospitals

- A self-assessment checklist to identify current AMS activity and gaps within an individual hospital

- Based on recommendations in *Antimicrobial Stewardship in Australian Hospitals*

- Identify systems for gathering and analysing data to:
  - Provide information on current activities
  - Suggest gaps in relation to *Antimicrobial Stewardship in Australian Hospitals* recommendations
  - Identify interventions to support hospitals to fill the gaps
Project 4: Consultation

- Consultation of States/Territories, private hospitals and health professionals

- Health professionals views on opportunities and barriers to comprehensive hospital-level AMS
Project 5: Point Prevalence Survey (PPS)

- Provide information on prescribing practices for individual patients

- Supplement volume of usage data collected through NAUSP and CHRISP

- Currently ESAC-developed point prevalence methodology and online data submission is being validated in a number of Australian hospitals

- Specialist Paediatric hospitals participating in ARPEC

- Aim to participate in a national PPS which will provide information about current prescribing patterns and a baseline to assess the impact of future Commission work
Project 6: Reporting on AMS gaps and priority Commission activities

- AMS Priorities Report will guide national, jurisdictional and hospital-level AMS activities

- Will compile information from:
  - Project 3 – Gap Analysis
  - Project 4 – Consultation
  - Project 5 – Point Prevalence Survey

- Will provide a comprehensive picture of current activities

- Will prioritise future activity

- Will form the basis of an AMS program to be considered by the Commission and its sub-committees
Project 7: National Antibiogram System

- Currently Australia has no national system of antimicrobial resistance (AMR) surveillance
- Queensland Antibiogram System is capable of processing very large volumes of data
- Can the Queensland system be used as a model for a national database for AMR surveillance?
- The project will develop a first stage proposal for a national antibiogram system
- The work will be undertaken in conjunction with the Information Strategy Program and the Healthcare Associated Infection Program
Links to Accreditation

- National Safety and Quality Health Standards (June 2011)

- Developed by ACSQHC with significant consultation

- Transitional phase of 18 months as health services progressively start to implement the standards

- Full implementation from January 2013

- The Commission is developing guides to help implementation – available shortly for consultation and piloting

National Safety and Quality Health Standards

- Ten Standards
- Standard 3 – Preventing and Controlling Healthcare Associated Infections
- 3.14 Antimicrobial Stewardship
- Developing, implementing and regularly reviewing the effectiveness of the AMS program
  - 3.14.1 An antimicrobial stewardship program is in place
  - 3.14.2 The clinical workforce prescribing antimicrobials have access to current endorsed therapeutic guidelines on antibiotic usage
  - 3.14.3 Monitoring of antimicrobial usage and resistance is undertaken
  - 3.14.4 Action is taken to improve the effectiveness of antimicrobial stewardship
Colloquium July 2011

• Develop a national plan to combat AMR

• Chaired by Professor Chris Baggoley – CMO

• Representation NHMRC, DoHA, NPS, ASA, ASID

• NHMRC and Commission agreed to jointly work on a national approach that includes
  – A well-researched report of internal and external threats of AMR
  – A gap analysis
  – Develop a process to advance actions
  – Take a whole of systems approach

• Prepare a paper to take to AHMC in mid 2012