Mr Suman Adhikari, Mr Stuart Bond, Dr Craig Boutlis, Ms Adriana Chubaty, Dr Kate Clezy, Ms Anna Fischmann, Dr Pam Konecny, Mr Alastair McDougall, Dr Michael McGlynn, Mr Arun Subhag, Ms Julie Thompson, Ms Johneen Tierney

October 2013
Background

- Antimicrobial stewardship knowledge (ASK) is a multidisciplinary, multi-site project to improve antimicrobial prescribing
- Hospitals used different manual methods to manage antimicrobial use
- Staff did not feel empowered to effect changes for inappropriate antimicrobial use
- Guidelines not standardised – difficult to find, not routinely updated
- Smaller sites did not have access to same level of resources or expertise as larger hospitals
Implementation

- Electronic solution seen as enabler to drive clinical improvement
- Selected Guidance MS after rigorous tendering process
- Extensive consultation and collaboration to develop clinical guidelines and governance process
  - ID specialists, AMS pharmacists
  - Other medical staff, pharmacists
  - Hospital executive, clinical councils
  - Drug and therapeutics committees
  - Infection prevention and control
This patient meets the criteria for approval for ceftriaxone use.

The recommended dose is CEFTRIAZONE 1 g (child: 25 mg/kg up to 1 g) IV, daily.

This antibiotic is usually given with other antibiotics for this indication.

Use the link on the right to view this topic in the Therapeutic Guidelines: Antibiotic.

The approval number is valid for 3 days.

Note: No dose adjustment is needed with renal impairment. Ceftriaxone is category B1 in pregnancy and is compatible with breastfeeding but may cause diarrhoea in the infant.

Click 'Get Approval' or press 'Enter' to get an approval number.

--- END OF GUIDELINE ---
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Antimicrobial Stewardship

- **NEW: Antibiotic hotlines for instant advice 9 to 5, Monday to Friday**
  - Wollongong (ext. 3838), Shellharbour (3838), Bulli (#2828), Pt. Kembla (3535)

- Restricted antimicrobials list (ISLHD, 2012)
- What is antimicrobial stewardship?

Helpful links for antibiotic prescribing

- Creatinine clearance calculator
- Febrile neutropenia guidelines (ISLHD)
- Gentamicin dosing / monitoring of prolonged use
- MIMS drug interactions
- Pathology (MedCouRieR)
- **Pneumonia: SMART-COP / CORB / Mild / Mod / Severe Rx**
- Renal impairment: Dosage adjustment (eTG)
- Sepsis Kills: Antibiotics / Pathway / Guidelines
- Therapeutic guidelines (eTG)
- Vancomycin dosing and monitoring (eTG)
- **Viral swabs (nose and throat)**
Results

- Improved appropriateness of prescribing according to evidence-based clinical guidelines
- Reduction in usage of many broad spectrum antibiotics relative to National Antimicrobial Utilisation And Surveillance program benchmarks
Less “powerful” and more “targeted”

TWH percentage of national benchmark in 2012

Data kindly provided by Vicki McNeil and team at NAUSP
Reduction in antimicrobial costs

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Other benefits

- High uptake of the program
- High user satisfaction
- Enabled sites to meet national accreditation standards
- Ability to identify and address previously unknown practices
- Efficient use of resources through collaboration
Key learning and advice

- Collaborative, multi-site and multidisciplinary approach to improve antimicrobial prescribing and management
  - Infectious Diseases/Microbiology/Pharmacy/IT partnership
  - Executive support
  - Monitoring and restriction in real time
  - Presence in the hospital (website, branding, etc)
Key learning and advice

- Transitioned from struggling to contain and manage inappropriate antimicrobial prescribing to implementing a consistent, sustainable, state of the art program that supports appropriate antimicrobial prescribing
- Enables clinical teams to work efficiently and effectively together to improve patient outcomes
Acknowledgements

- Executive Sponsors across SESLHD and ISLHD
- Clinical Champions
  - Infectious Diseases Specialists
  - Microbiologists
  - Pharmacists
- Information Communication and Technology (ICT) team
- Sydney Children’s Hospital Network (Randwick campus) colleagues
- Melbourne Health – Guidance MS