Survey identifies opportunities to improve use of antibiotics to prevent post-surgical infections

More than half (60%) of antibiotics given to patients after surgery to prevent infections are prescribed inappropriately, usually because they are not required at all – a situation that may be contributing to the rise of antibiotic resistance.

The findings come in a new survey that also shows over 43.4% of antibiotics given to patients before or during surgery to prevent post-operative infections fall short of good prescribing practice in at least one respect. The most common failing is that the antibiotic is given at the wrong time.

Resistance to antibiotics and other antimicrobials is recognised globally as a critical threat to public health. Overuse and inappropriate use of these medicines is a key factor contributing to bacteria and other pathogens becoming unresponsive to even the strongest drugs.

The Surgical National Antimicrobial Prescribing Survey (SNAPS) is an annual survey of antimicrobial prescribing for the prevention of infections (prophylaxis) in surgical settings across Australian hospitals. SNAPS was developed to provide a more detailed assessment of prescribing practice and to permit comparisons.

Earlier Hospital NAPS surveys have shown that giving patients antibiotics before surgery to reduce the risk of post-surgical infections – called ‘surgical prophylaxis’ – is the most common reason for antimicrobial use in Australian hospitals.

Professor Karin Thursky, director of the National Centre for Antimicrobial Stewardship, said this type of review “enables participating hospitals to reflect on opportunities to improve the safety and quality of antimicrobial use.”

“We strongly recommend that all Australian hospitals participate in the SNAPS in 2018 as part of their quality improvement activities,” Professor Thursky said.

Professor John Turnidge, Senior Medical Advisor at the Australian Commission on Safety and Quality in Health Care, said antibiotics “allow us to perform complex and vital surgical procedures, but we must make sure they are used appropriately and only when they are really necessary”.

“This is a critical patient safety issue,” Professor Turnidge said.

SNAPS provides an opportunity for healthcare organisations and surgeons to work together to ensure that surgical prophylaxis is prescribed in accordance with evidence-based therapeutic guidelines.
The results of SNAPS have been communicated to all 67 participating hospitals to facilitate local quality-improvement initiatives and published as part of the Antimicrobial Use and Resistance in Australia (AURA) Surveillance System.

Key Findings

4,507 surgical episodes were included in the analysis of the 2016 SNAPS (conducted between April and November 2016). Key findings include:

- **Antimicrobials** – administered either immediately prior to or during the surgical procedure (procedural) – were prescribed in 2,641 surgical episodes (58.6%), with a total of 3,189 individual doses.
  - Of these, 43.4% had at least one inappropriate prescribing element. The most common element of inappropriate procedural antimicrobial prescribing was incorrect timing (n=481, 45.7%).

- **Post-procedural prophylactic antimicrobials** (antimicrobials prescribed following, but directly relating to, the procedure for the purposes of prophylaxis) were prescribed in 1,248 (27.7%) episodes.
  - Of these, 59.9% had at least one inappropriate prescribing element. The most common element of inappropriate post-procedural antimicrobial prescribing was that post-procedural prophylaxis was not required (n=503, 40.3%).

Experts are available for media interview

**About the Surgical National Antimicrobial Prescribing Survey (SNAPS)**
The SNAPS is conducted by the National Centre for Antimicrobial Stewardship, which is based at the Peter Doherty Institute for Infection and Immunity (a partnership between the University of Melbourne and the Royal Melbourne Hospital). The survey’s online platform was developed by the Guidance Group (Royal Melbourne Hospital). The SNAPS receives funding support from the Australian Commission on Safety and Quality in Health Care as part of the Antimicrobial Use and Resistance in Australia program.

**About the Australian Commission on Safety and Quality in Health Care**
The Commission’s role is to lead and coordinate national improvements in the safety and quality of health care. The Commission works in partnership with the Australian Government, state and territory governments and the private sector to achieve a safe, high-quality and sustainable health system. In doing so, the Commission also works closely with patients, carers, clinicians, managers, policymakers and healthcare organisations.

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