

Antimicrobial stewardship: 9b-Timely administration of prophylactic antibiotics prior to surgery

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Antimicrobial stewardship: 9b-Timely administration of prophylactic antibiotics prior to surgery

Identifying and definitional attributes

Metadata item type:	Indicator
Indicator type:	Indicator
Short name:	Indicator 9b-Timely administration of prophylactic antibiotics prior to surgery
METEOR identifier:	612231
Registration status:	Health! , Standard 12/09/2016 Australian Commission on Safety and Quality in Health Care , Retired 25/01/2022
Description:	Proportion of patients who are administered indicated prophylactic antibiotics within two hours preceding surgery.
Rationale:	One-third to one-half of antibiotic use in hospitals is for surgical antibiotic prophylaxis. Surgical antibiotic prophylaxis is used inappropriately 30–90 per cent of the time, especially with respect to timing and duration (Antibiotic Expert Group 2014).
Indicator set:	Clinical care standard indicators: antimicrobial stewardship Australian Commission on Safety and Quality in Health Care , Retired 25/01/2022 Health! , Standard 12/09/2016
Outcome area:	Surgical prophylaxis Health! , Standard 12/09/2016

Collection and usage attributes

Computation description:	<p>Prophylaxis is the use of antibiotics to prevent surgical site infection and, in some circumstances, bacteraemia.</p> <p>The numerator and denominator include patients undergoing surgery for which there are documented guidelines for the administration of prophylactic antibiotics prior to surgery, that is, the <i>Therapeutic guidelines: antibiotic</i> (Antibiotic Expert Group 2014) or locally-endorsed antibiotic prescribing guidelines.</p> <p>The numerator and denominator exclude patients undergoing surgery for which there are no documented guidelines for the administration of prophylactic antibiotics prior to surgery, that is, the <i>Therapeutic guidelines: antibiotic</i> or locally-endorsed antibiotic prescribing guidelines, or for whom guidelines recommend otherwise.</p> <p>Presented as a percentage.</p>
Computation:	$(\text{Numerator} \div \text{denominator}) \times 100$
Numerator:	Number of admitted patients who received prophylactic antibiotics within two hours preceding surgery.
Denominator:	Number of admitted patients undergoing surgery for which there are documented guidelines for the administration of prophylactic antibiotics prior to surgery.

Comments:

The current version of the *Therapeutic guidelines: antibiotic* recommend that prophylactic antibiotics be provided as soon as the patient is stabilised after induction of anaesthesia for most surgery, except for cardiac surgery, where there may be benefit from 24 hours of antibiotic prophylaxis. Some local guidelines can recommend the administration of surgical prophylaxis of up to 2 hours before surgery.

The *Therapeutic guidelines: antibiotic* provides guidelines for administration of prophylactic antibiotics for the following types of surgery:

- abdominal surgery, including:
 - colorectal surgery, appendectomy, and upper gastrointestinal tract or biliary surgery (including laparoscopic approaches)
 - endoscopic procedures
 - hernia repair
- burns, extensive skin loss
- cardiac surgery
- head, neck and thoracic surgery
- lower limb amputation
- neurosurgery
- obstetric and gynaecological surgery, including:
 - hysterectomy and termination of pregnancy
 - caesarean section
- orthopaedic surgery
- urological surgery, including:
 - prostatectomy
 - transrectal prostatic biopsy
- vascular surgery.

Services may select specific procedures to focus on as part of the audit process, based on their own patient mix and priorities.

This indicator is based on surgical antibiotic prophylaxis indicators developed by the then Victorian Hospital Acquired Infection Surveillance System Coordinating Centre (VICNISS) (Department of Human Services 2007) (now the Healthcare Associated Infection Surveillance Coordinating Centre), and the Western Australian Safety and Quality Investment for Reform (SQulRe) Program (Department of Health WA 2009).

Representational attributes

Representation class:	Percentage
Data type:	Real
Unit of measure:	Service event
Format:	N[NN]

Source and reference attributes

Submitting organisation:	Australian Commission on Safety and Quality in Health Care
Reference documents:	Antibiotic Expert Group 2014. <i>Therapeutic guidelines: antibiotic</i> . Version 15. Melbourne: Therapeutic Guidelines Limited.

Department of Health WA 2009. SQulRe 2 CPI guide: Surgical site infection prevention. Perth: DHWA.

Department of Human Services 2007. Type 2 surveillance manual version 10. Melbourne: Victorian Hospital Acquired Infection Surveillance System Coordinating Centre, DHS.