

P0838 Antimicrobial prescribing in paediatric patients pre- and post-implementation of an uncomplicated appendicitis surgical pathwayCelia Cooper*¹, Ulrik Lorenzen¹, Sanjeev Khurana^{1,2}¹ Women's and Children's Hospital, North Adelaide, Australia, ² The University of Adelaide, Adelaide, Australia

Background: Appendicectomy is a commonly performed surgical procedure in paediatric hospitals (400 performed per annum at Womens' and Childrens' Hospital (WCH)). Surgical prophylaxis and treatment of surgical patients accounts for 22% of total antimicrobial prescribing at WCH and is therefore an important target for Antimicrobial Stewardship activities. In 2015 the Department of Pediatric Surgery at WCH introduced a standardised pathway to streamline treatment of uncomplicated appendicitis and improve antimicrobial stewardship in these patients. A baseline audit was conducted in 2014-2015 and then repeated at 3 separate yearly intervals post pathway implementation, to assess the impact of the pathway on perioperative prophylaxis and post-operative antimicrobial prescribing.

Materials/methods: Data from medical records of all patients with uncomplicated appendicitis, managed according to the pathway from:

- December 2015 to January 2016
- October 2016 to May 2017
- December 2017 to January 2018

were compared with baseline data collected from December 2014 to January 2015.

Data collected:

- Patient demographics
- Appendicectomy method
- Surgical prophylaxis
- Postoperative, including post-discharge, antimicrobial treatment
- Patient outcome

Results: The duration of post-operative antibiotic treatment became far more uniform post-pathway implementation with 98% of patients completing antibiotic treatment by 24 hours compared with 56% pre pathway. This was associated with a decreased length of stay and decreased hospital costs without any increase in adverse events.

Conclusions: Comparing the results of pre- and post-intervention audits, the uncomplicated appendicitis pathway had a positive impact on antimicrobial usage in the Department of Paediatric Surgery at WCH. Variability both within and between surgical teams reduced leading to greater consistency of antimicrobial prescribing and an overall reduction in antibiotic usage in this patient group without increased adverse patient outcomes. The sustained improvements in post-operative management have resulted in the management pathway for

uncomplicated appendicitis being introduced as standard postoperative care at WCH. Ongoing auditing of this pathway will continue as part of the WCH Antimicrobial Stewardship Program. A standardised management pathway for advanced appendicitis, developed using similar principles, is currently being trialled at WCH.

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