The use of topical antibiotics to prevent surgical site infection; a survey of practice and opinion

Charlotte Cooper¹, Gavin Barlow², Niels Fibæk Bertel³, Tracey Guise⁴, Carolyne Horner⁴, Hilary Humphreys⁵

¹School of Biosciences, University of Birmingham, UK ²Hull and East Yorkshire NHS Trust, Hull, UK ³European Wound Management Association, Frederiksberg, Denmark ⁴British Society of Antimicrobial Chemotherapy, Birmingham, UK ⁵Royal College of Surgeons in Ireland and Beaumont Hospital, Dublin, Ireland
Aims

Topical antibiotics to prevent SSI

Clinical practice

Reasoning and influences

Advisors

Opinion
Key findings

- Commonly used
- Considerable variation in clinical practice
- More confusion than consensus
- Varied influences
- Lack of local guidance
Clinical practice: circumstance of use

- 47% use >50% of cases
- 55% in all procedures
- 24% only in clean surgery, 3% only in clean contaminated surgery, 6% only in contaminated surgery, 15% only in surgery carried out on high risk patients

I never use topical antibiotics

n=33 responses
Clinical practice: agent and application

- Wound irrigation or lavage: 29%
- Collagen sponges or implants: 15%
- Dressings or wound sealants: 15%
- Powders or pastes: 15%

n=108 responses
Opinion: The use of topical antibiotics to prevent SSI

- There is a significant body of evidence in favour of use: 56% Agree/Strongly agree, 31% Neither agree or disagree, 13% Disagree/Strongly disagree.
- Are cost effective: 46% Agree/Strongly agree, 33% Neither agree or disagree, 22% Disagree/Strongly disagree.
- Rarely result in detrimental side effects for the patient: 35% Agree/Strongly agree, 34% Neither agree or disagree, 31% Disagree/Strongly disagree.
- Do not contribute to the development of antibiotic resistance: 81% Agree/Strongly agree, 12% Neither agree or disagree, 7% Disagree/Strongly disagree.
- Confer additional benefits to other forms of prophylaxis: 53% Agree/Strongly agree, 24% Neither agree or disagree, 23% Disagree/Strongly disagree.

n=160 responses
Conclusions

• Common use in practice but with considerable variation
• No clear consensus on main issues
• Varied influences
• Lack of local guidance
• Targeting with antimicrobial stewardship programs
• Need for high quality future studies to properly inform use
Acknowledgements

All survey participants

**Dr Andrew Kirby**, Consultant Microbiology, Leeds Teaching Hospitals Trust

**Dr Fidelma Fitzpatrick**, RCSI and Beaumont Hospital, Dublin, Ireland

**Dr Anna-Rose Prior**, RCSI and Beaumont Hospital, Dublin, Ireland

**Dr Roisin Connolly**, RCSI and Beaumont Hospital, Dublin, Ireland

**Dr Felicity Drummond**, Project Manager, BSAC, Birmingham

**Dr Jan Stryja**, Vascular Surgeon, member of the EWMA Council, Czech Republic

**Dr Kylie Sandy-Hodgetts**, Research Scientist and representative of Wounds Australia to EWMA