Antibiotic use in Australia and Sweden – A cross-country comparison

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Background

• Resistance to antibiotics resulting from overuse has important implications for healthcare systems all over the world in terms of increased morbidity, mortality, and healthcare expenditure (1,2)

• Cross-country comparisons of antibiotic use can help identify contributing factors for prescribing behaviour

Purpose: We aimed to compare and explore the trends in dispensed use of antibiotics in Australia and Sweden from 2006 to 2018.

Methods

• Retrospective time series of drug utilisation of publicly available data, measured as defined daily dose per 1,000 (DDD/1000/d)

Results

The use of antibiotics over the study period:

- Increased in Australia by 1.8%
- Decreased in Sweden by 26.3%
- Use in Australia was double that of Sweden in 2018

Most used class of antibiotics

- Australia: penicillins and penicillins with beta-lactamase inhibitors
- Sweden: beta-lactamase-sensitive penicillins, with penicillins with beta-lactamase inhibitors least used

Conclusions

• Antibiotic use in Australia is higher than in Sweden, with a higher proportion of broad-spectrum penicillins, including combinations with beta lactamase inhibitors, and cephalosporins

• Factors that may contribute to these differences in antibiotic use include differences in guidelines, the duration of national antimicrobial stewardship programs, and differences in funding mechanisms
