

# Inappropriate use of antibiotics in Dentistry: a systematic review protocol

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**Background:** Dentists account for 10% of human antibiotic prescribing globally, despite when most of the dental infections are generally treated by a procedure without the need for antibiotics and there are still 80% unnecessary antibiotics prescribed for the treatment of acute conditions. The significant driver of antimicrobial resistance is inappropriate antibiotic use.

**Aim:** To systematically assess the literature to estimate inappropriate use of antibiotics by dentist and other oral health professionals.

antibiotics  
**DON'T** cure  
toothache!

## Eligibility criteria

- All study designs except case reports and case series
- Participants: Dentist and other oral healthcare professionals
- No restriction on timings, language and study location

## Exclusion criteria

- In vitro and animal studies
- Studies involving dental students
- Studies based on use of mouthwashes, oral rinses and gels.
- Studies based on antibiotic self-medication and over the counter prescription.

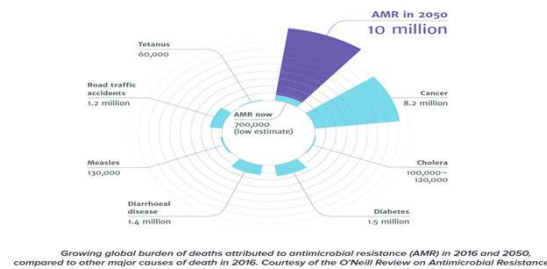
## Primary outcomes

- The antibiotic prescription rates of prophylactic and therapeutic treatments by dental and other oral healthcare professionals and is measured by **descriptive numerical summary analysis.**

## Secondary outcomes

- **Antibiotic prescription rates** differences in high-, middle- and low-income countries
- If sufficient studies are available meta-analysis will be carried out where the data will be pooled and analysed using a random effects.

The study protocol is developed, and the review is ongoing.



## Methods

- Systematic literature search
- Data bases: MEDLINE (OVID), EMBASE, Cochrane, CINAHL, and Web of Science
- Mixed methods appraisal tool
- GRADE approach

## References

1. Antimicrobial resistance and COVID-19 (no date). Available at: <https://bda.org/news-centre/blog/antimicrobial-resistance-and-covid-19> (Accessed: 22 June 2023). 2. Cope, A.L. et al. (2016) 'Antibiotic prescribing in UK general dental practice: a cross-sectional study', *Community Dentistry and Oral Epidemiology*, 44(2), pp. 145–153. Available at: <https://doi.org/10.1111/cdoe.12199>. 3. Dar-Odeh, N.S. et al. (2010) 'Antibiotic prescribing practices by dentists: a review', *Therapeutics and Clinical Risk Management*, 6, pp. 301–306. Available at: <https://doi.org/10.2147/TCRM.S9736>. 4. Dental antimicrobial stewardship: toolkit (2020) GOV.UK. Available at: <https://www.gov.uk/guidance/dental-antimicrobial-stewardship-toolkit> (Accessed: 27 August 2023). 5. Karki, A.J., Holyfield, G. and Thomas, D. (2011) 'Dental prescribing in Wales and associated public health issues', *British Dental Journal*, 210(1), p. E21. Available at: <https://doi.org/10.1038/sj.bdj.2010.1179>. 6. Murray, C.J.L. et al. (2022) 'Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis', *The Lancet*, 399(10325), pp. 629–655. Available at: [https://doi.org/10.1016/S0140-6736\(21\)02724-0](https://doi.org/10.1016/S0140-6736(21)02724-0). 7. Thompson, W. et al. (2021) 'Tackling Antibiotic Resistance: Why Dentistry Matters', *International Dental Journal*, 71(6), pp. 450–453. Available at: <https://doi.org/10.1016/j.identj.2020.12.023>. 8. Thompson, W. et al. (no date) 'The essential role of the dental team in reducing antibiotic resistance'.