

## [Antibiotic Stewardship in Dentistry \[1\]](#)

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### Context

Within the global threat of antimicrobial resistance (AMR), the spread of antibiotic resistance presents a world-wide major health risk due to prolonged illnesses, longer hospital stays and mortality, with the prospect of antibiotics becoming ineffective in the treatment of even simple infections<sup>1</sup>. It is calculated that 700,000 people already die each year as a result of AMR and it is predicted the rate will rise to 10 million deaths globally by 2050 if effective steps are not taken<sup>2</sup>. The wide availability of low-quality medicinal products, self-medication, inappropriate or unnecessary antibiotic prescribing and poor infection prevention and control all contribute to the development and spread of antibiotic resistance. Attention is now being given to this very serious situation by human and animal health communities, agriculture, manufacturing and research communities and, increasingly, by wider society.

Dentists are responsible for about 10% of antibiotic prescribing for humans (depending on the country). Studies have shown that despite efforts to reduce the number of unnecessary or inappropriate prescriptions, too many are still being written by dental professionals<sup>3</sup>. The dental profession thus has a vital responsibility, globally and nationally, to contribute to the reduction of antibiotic resistance.

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### Scope

This policy statement highlights the crucial role that dentists, their teams, and National Dental Associations (NDAs) have in proactive engagement in antibiotic stewardship to ensure appropriate use of antibiotics.

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### Definitions

**Antibiotic resistance (ABR):** Change of bacteria, when exposed to antibiotic, in ways that render ineffective those previously efficient antibiotics

**Antibiotic stewardship (ABS):** Coherent set of actions which promote appropriate use of antibiotics, i.e. in ways that ensure sustainable access to effective therapy for all who need them

**Antibiotic stewardship programme (ABS Programme):** Detailed set of actions/interventions planned and implemented by all stakeholders, aiming at promoting and improving the appropriate use of antibiotics by targeting the diagnostic, prescribing and behavioural steps of the whole infection management process

**Infection prevention and control programme:** Detailed set of actions/interventions in health care planned and implemented by all stakeholders aimed at preventing infections and reducing the transmission of micro-organisms and their resistance genes to patients and health workers<sup>4</sup>

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### Principles

The One Health principle proposed and adopted by many agencies to tackle antibiotic resistance worldwide in all sectors (humans, animals, environment) requires the active engagement, commitment and contribution of the dental profession.

There is an overwhelming case for improved antibiotic stewardship, with the aim of restricting the use of antibiotics to that which is strictly necessary. This will require the development of government policy and clear guidance on antibiotic prescribing coupled with effective surveillance and more studies on antibiotic stewardship.

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It has been demonstrated that antibiotic stewardship programmes in dentistry can be effective in optimizing antibiotic prescribing<sup>5</sup>.

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### Policy

- FDI supports the improvement of knowledge and understanding of antibiotic resistance and stewardship through further research, better information, intelligence and data, and the promotion of epidemiological work at regional and national levels.
- FDI encourages research and development of additional solutions for prevention and treatment of dysbiosis of oral microbiota.
- FDI acknowledges that dentists should ensure their knowledge is up to date on antibiotic resistance and stewardship and that their antibiotic prescribing is in line with best practice.
- FDI encourages the development of educational programmes on antibiotic resistance, prescribing and stewardship that are suitable for the continuum of the professional lives of dentists and dental teams.
- FDI strongly encourages dentists to provide the necessary information for their patients regarding antibiotic resistance and appropriate use of antibiotics.
- FDI acknowledges that, along with antibiotic stewardship programmes, infection prevention and control programmes should be implemented as fundamental components of good clinical practice.
- FDI encourages and supports NDAs to actively engage in their AMR national action plan framework and to plan and implement antibiotic stewardship programmes in dentistry at local and national levels. NDAs can assist the improvement of dentists' antibiotic prescribing practices by making scientific evidence available to them.
- FDI encourages NDAs to advocate their policy makers to ensure that a robust national action plan to tackle antibiotic resistance is in place.
- FDI encourages major stakeholders (pharmaceutical companies, scientific journals, policy makers, NDAs) to provide information and communicate about antibiotic resistance and stewardship, in particular in scientific and professional journals but also at the practice and patient levels.

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### Disclaimer

The information in this Policy Statement was based on the best scientific evidence available at the time. It may be interpreted to reflect prevailing cultural sensitivities and socio-economic constraints.

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### References

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8. World Health Organization, 2018. Antibiotic Resistance. Available at: <https://www.who.int/news-room/fact->

[sheets/detail/antibiotic-resistance](#) [8]

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<https://www.cdc.gov/drugresistance/about.html> [9]

[Science Committee](#) [10] **Classification:** [Antibiotics](#) [11]

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[1] <https://www.fdiworlddental.org/resources/policy-statements/antibiotic-stewardship-in-dentistry>

[2] <http://www.fgdp.org.uk/antimicrobial-prescribing>

[3] <https://amr-review.org/>

[4] <https://dx.doi.org/10.1111/cdoe.12199>

[5] <https://www.who.int/infection-prevention/about/ipc/en/>

[6] <https://www.gov.uk/government/publications/english-surveillance-programme-antimicrobial-utilisation-and-resistance-espaur-report>

[7] <https://www.nice.org.uk/guidance/ng15>

[8] <https://www.who.int/news-room/fact-sheets/detail/antibiotic-resistance>

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