

The need for global guidance on antibiotic stewardship in dentistry

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Almost 10% of antibiotics are prescribed by dentists, who should therefore be involved in the development and implementation of national action plans to counter antibiotic resistance. Prescribing decisions are normally made by dentists without restriction or prescribing guidance, which can lead to over-prescribing. Optimizing the use of antibiotics in dentistry therefore requires global attention to achievable and consistently disseminated stewardship policies. The FDI World Dental Federation is active in raising awareness of the need for effective stewardship by dentists and it acts as a resource for National Dental Associations in the implementation of guidelines on appropriate prescribing by dentists.

It is estimated that up to 10% of antibiotics are prescribed in primary care dentistry. Consequently, dentistry must be taken into account in the development of any policy relating to antibiotic resistance and dentists must be involved in the development and implementation of national action plans. Indeed, dentists and their teams are a valuable resource – the daily provision of dental services presents opportunities where dentists not only improve their own prescribing, but also assist the wider health community to educate and advise patients and the public about the risks of inappropriate use of antibiotics and prevention of oral disease (1). Adopting such an approach is in line with the WHO Global Action Plan. Objective 4: Optimize the use of antimicrobial medicines in human and animal health includes the implementation of Antibiotic Stewardship (ABS) programmes in all settings (2).

Optimizing the use of antibiotics in dentistry requires global attention to achievable and consistently disseminated stewardship policies. The principles of effective stewardship are laid out in Table 1. Primary care dentists are largely independent prescribers and their prescribing decisions are normally made without restriction and supervision. Furthermore, prescribing guidance, if it exists, varies from country to country. Over-prescribing of antibiotics in dental practice remains to be confronted in some countries although, in others, good progress is being made. For example, it has been estimated that 81% of prescriptions were issued inappropriately to dental patients in the UK (3), either because they were incorrect for the clinical situation or simply not needed. In addressing this issue, a consensus report (4), published by the British Dental Association in 2014, following a summit of stakeholders, set out the following principles:

➔ In dentistry, there are usually interventions which can be

used as first-line treatments rather than the prescription of antibiotics.

- ➔ Dental pain is primarily an inflammatory condition which can be managed by the appropriate use of analgesics and local measures to the site of pain.
- ➔ It is important to educate and communicate with patients about the choices made for management of dental pain.

The occasions where antibiotics are genuinely needed in a dental care situation are relatively rare. Therefore, engaging effective stewardship measures should lead dentists to be more confident in their prudent use of antibiotics. Indeed, there is evidence that this is so. For example, in England, there was a 24.8% reduction in antimicrobial prescriptions between 2013 and 2017, with an 8.3% decrease from 2016 to 2017 (5). However, there are challenges in implementing good prescribing practices in primary care dentistry. Patients who suffer dental pain, whether from an inflammatory source or an infection, invariably present unscheduled and distressed. Point-of-care tests, making a diagnosis, presenting treatment options, achieving valid consent and carrying out treatment all take significant time within an already busy appointment book. These hurdles are often compounded by the anxiety and distress of the patient who, understandably, believes that antibiotics will solve their problem and would certainly prefer tablets to a more appropriate clinical intervention such as an extraction, incision and drainage of an abscess, or root treatment. Frustrations arise, however, when patients for whom antibiotics have been refused by their dentist subsequently receive an inappropriate prescription from their general medical practitioner or emergency departments. Third party funders of oral care must appreciate that enough

Table 1: Stewardship in dental practice

Guidelines	<ul style="list-style-type: none"> • Establish national ABS guidelines for dentistry – international ones can be adapted • Make available updated evidence-based guidelines on infection management in dental practice (prevention, diagnosis, treatment) (7, 8, 9)
Education of dental teams	<ul style="list-style-type: none"> • Best if associated with other ABS interventions <p>There should be:</p> <ul style="list-style-type: none"> • Consistency of AMR teaching in undergraduate curricula • CPD available throughout professional life in contextualised infection management to include antibiotic prescribing, stewardship, feedback mechanisms <p>Communication skills must be taught to achieve:</p> <ul style="list-style-type: none"> • Management of patients' perceptions, concerns, beliefs and expectations • Management of clinicians' own behavioural tendencies
Audit and feedback	<ul style="list-style-type: none"> • Clinicians benefit from quantitative and qualitative data on own prescribing practices <p>Monitoring in several ways:</p> <ul style="list-style-type: none"> • Automated surveillance and feedback via electronic data (10) • Manual data collection by dental teams via clinical record card review (11, 12)
Education material for patients	<ul style="list-style-type: none"> • As members of wider healthcare community, dentists can assist in delivering AMR messages <p>Messaging specific to oral health should include (13)</p> <ul style="list-style-type: none"> • "Antibiotics don't cure toothache" • Pain relief often best achieved with analgesia. Dentists are first line of care for dental problems • Prevention of oral disease reduces the likelihood of oral infections

properly resourced time is required to carry out the right treatment in the best interests of patients. Governments, in particular, should acknowledge their responsibilities to this if they are truly committed to reducing antibiotic resistance (6).

The contribution that dentists can make to antimicrobial stewardship

The FDI World Dental Federation (FDI) has, for some years, raised awareness of the valuable contribution that dentists can make to the One Health agenda. FDI continues to develop policy and contribute to proactive dialogue in this critical area in the global arena. It also serves as a resource for National Dental Associations who are ideally placed to disseminate advice to their members. Their members will undoubtedly continue to seek assistance in preventing oral disease and reducing ABR with their national health and relevant government departments. FDI hopes that such approaches will be enthusiastically welcomed and supported across the world. ■

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