

## Antibiotic Prescribing Audit

### Overall Aim

To improve antibiotic prescribing by General Dental Practitioners in Scotland.

### Objectives

- Review current antibiotic prescribing to ensure best practice guidance is being followed.
- Consider alternatives to antibiotic prescribing.
- Implement changes to meet guidance recommendations, if required.

### Background

Antibiotic prescribing by dentists accounts for approximately 9% of total antibiotic prescriptions in primary care in Scotland. In 2012, the overall use of antibiotics in primary care dentistry was reported to be 4.1% higher than in 2011 (Health Protection Scotland, 2014). It is widely recognised that antimicrobial resistance is a major threat to public health and patient safety. Inappropriate antibiotic prescribing contributes to an increasing risk of antimicrobial resistance. Evidence from dental audit suggests that approximately 40% of antibiotic prescriptions issued in primary care dentistry are inappropriate.

The Scottish Dental Clinical Effectiveness Programme's (SDCEP) Drug Prescribing for Dentistry publication ([www.sdcep.org.uk](http://www.sdcep.org.uk)) provides guidance to help support dentists when making decisions about prescribing an antibiotic.

The guidance recommends that antibiotics are appropriate for oral infections where there is evidence of spreading infection (cellulitis, lymph node involvement, swelling) or systemic involvement (fever, malaise). In addition, other indications for antibiotics are acute necrotising ulcerative gingivitis and sinusitis, and pericoronitis where there is systemic involvement or persistent swelling despite local measures.

Broad-spectrum antibiotics such as clindamycin, co-amoxiclav and clarithromycin should be restricted to second-line treatment of severe infections only. These antibiotics offer no advantage over amoxicillin, penicillin, metronidazole and erythromycin. Their use is also associated with the increase in *Clostridium difficile* infection observed in both primary and secondary care.

Many dentists find that they are able to improve their antibiotic prescribing if they specifically plan how to overcome possible barriers to implementing guidance recommendations. Part of the audit requires you to identify these barriers and to develop action plans to overcome them in a way most suitable to you and your practice.

The audit will also provide you with the opportunity to evaluate your record keeping in this area of practice. SDCEP's Practice Support Manual ([www.psm.sdcep.org.uk](http://www.psm.sdcep.org.uk)) provides guidance on record keeping and notes that records must be full, contemporaneous, accurate and legible, and be held either on paper or on a computer.

The guidance recommends that for any treatment (including the use of medication) being carried out, the date of the treatment, the condition being treated, the type of treatment and the reason based on the diagnosis should be recorded. For any drug used, record the drug used including its generic name and concentration (and whether another agent is present), and the dose administered.

By completing this audit, you are likely to increase the quality of care you provide to your patients. It will help you achieve a clearer understanding of how your antibiotic prescribing and record keeping differs from the recommendations described in the SDCEP prescribing guidance and Practice Support Manual.

### **Undertaking the Audit**

This audit has been developed by NHS Education for Scotland's Translation Research in a Dental Setting (TRiaDS) programme. Prior to being made available as a pre-approved, national audit project, TRiaDS, in partnership with the Scottish Dental Practice Based Research Network (SDPBRN), conducted a pilot study with eight SDPBRN Rapid Evaluation Practitioners. This was to explore the feasibility of extracting prescribing information from practice management systems and to evaluate the time it would take to complete the full audit.

In general, feedback on the audit was very positive. All documentation provided was easy to understand and most dentists experienced no difficulties in completing the data collection exercise. The majority of dentists identified the patient records by performing manual searches of either the appointment book or on the records themselves, which for some, did take a little time. To reflect this and the time to complete this project, it has been awarded **7.5 hours**.

To undertake this audit project, you should log into Portal in the usual way at: <https://www.portal.scot.nhs.uk/>

Once you have logged in, go to the iBooklet section where you will find a sub-section entitled, "Dental Audit".

If you click into this section, you will find "Join an Audit". This tab allows you to search for projects that you can join.

To access this project, choose "National Projects" from the drop-down list and click "Find Audits".

Click on the project title “Antibiotic Prescribing Audit” for more information. This will open the pre-completed GP216a Project Details form. Please read through the information in each section of the form carefully. You will find a description and aim of the project, the criteria to be measured, the standards to be used and the methods. You can also access the documentation and the data collection forms in section 10.

All data collection forms, including an action planning and final report template are available and can be downloaded from section 10. All forms have been designed to be completed electronically. To view and complete the data collection and action planning forms (Appendices 1 & 2), Adobe® Reader® is required. This is the free trusted standard for reliably viewing, printing and annotating PDF documents. Use the following link to download and install:

<http://www.adobe.com/uk/products/reader.html> On completion the forms can be saved to your computer for uploading along with the final report (Appendix 3). The report template is a Microsoft Office™ Word document. If you do not have access to Microsoft Office, the document can be opened and completed using OpenOffice, which is free to download and install from the following link:

<https://www.openoffice.org/>

### **Joining the audit**

Having reviewed the details of the project, if you wish to undertake it, you should “join” the project.

This can be done whilst in the GP216 Project Details section as described above, by clicking on the green ‘+’ symbol (“Join Audit”) in the top right hand corner of the GP216 screen, or by clicking on the blue button marked “Join Audit” next to the project on the Find Audits screen.

A pop-up window will open entitled “Join an Existing Audit”. For this particular project, you should not add any other participant as it is intended to be completed individually. You should choose your Health Board from the drop-down list and then click on the Join Project button. This will open the GP216 page and will allow you to make some limited changes. For this project, you should use the following:

Q14 – A Single Practice

Q15 – No

Q16 – No

Q17 – tick Data Collection, Presentation of results, Production of reports and Data analysis

Once you have entered these choices, click Save and then click Submit. Then click Yes to confirm.

You will receive an automated email advising you that you have successfully joined the pre-approved audit. You now have a maximum of six months to complete this project and it will appear and can be accessed via the “Your Audits” tab of the Dental Audit section of iBooklet. You will find your unique project code next to the audit project title and should quote this in any correspondence. You can also contact the administrator or lead for the project from here, should you have any queries.

## **Round 1**

### **Data Collection 1**

Perform a retrospective analysis from the records of your last 20 consecutive patients who attended for an emergency or unscheduled appointment and were prescribed an antibiotic. For each patient, complete the data collection form provided in Appendix 1a. Please record the information by placing a tick in the appropriate box/boxes provided for each question. Space is provided at the end of the form to provide any additional information.

*N.B. Question 3 requires you to record the dose, frequency and duration of the antibiotic prescribed.*

### **Action Planning**

Using the information collected in Appendix 1a, identify any instances when your prescribing and/or record keeping was not in accordance with the recommendations set out in the SDCEP guidance and practice support manual. Record these in table 1 provided in Appendix 1b. Examples might include:

- An antibiotic was prescribed and none of the symptoms/conditions listed in Q1 were present
- An antibiotic was prescribed but the reason (symptom/condition) for prescribing was not recorded
- A broad spectrum antibiotic (*clindamycin, co-amoxiclav or clarithromycin*) was prescribed as a first line antibiotic
- The dose, frequency and duration of the antibiotic prescribed differed from that recommended in the SDCEP guidance

Identify the possible barriers to achieving the SDCEP guidance recommendations and list these in table 2 (Appendix 1b).

For **three** areas of improvement identified in table 1, develop and implement an action plan to overcome possible barriers to implementing change. An example has been provided in Appendix 2.

## **Round 2**

### **Data Collection 2**

After a period of 3-4 months, conduct a second round of data collection. As before, complete for your last consecutive patients (up to a maximum of 20) prescribed an antibiotic when attending for an emergency or unscheduled appointment since round

1 data collection was completed, Use the same data collection form as round 1 (Appendix 1a).

### **Review Round 1 Action Plans**

Review the information collected and compare your prescribing with the recommendations set out in the SDCEP guidance. Revisit and update the action plans to check if they have been followed and planned improvements implemented.

### **Audit Report**

On completion of both rounds of data collection and after any possible improvements have been implemented; write an audit report using the template provided in Appendix 3. The template provided is a Microsoft Word document. Each section will expand to fit the text. It is possible to insert charts and/or summary tables into the results section.

### **Submission**

On completion of the audit project, you should go to the “Your Audits” tab in the Dental Audit section of iBooklet. From here you can click on the audit title which will open the project. In the Final Reports tab, you can upload your documentation.

This is a national audit where the data may be analysed to further support the implementation of the SDCEP guidance and to identify areas where there might be a training need. For this project, we would therefore ask that the data collection form (for rounds 1 and 2) and the action planning document are submitted along with the final report. Please note that all data will be anonymised before analysis. Once all documents have been uploaded, click the “Submit Reports” button. This alerts NES to the fact that you are ready for your report to be reviewed and you will receive an email confirming this. Once it has been reviewed, you will receive a further email advising either that amendments are required to your final report or that your project has been certified as complete. Once completed, you will be advised as to how to claim Clinical Audit Allowance if you are eligible to claim this.