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Reducing antibiotic prescribing in dentistry

Submission date
21/06/2013

Recruitment status
No longer recruiting

Registration date
15/08/2013

Overall study status
Completed

Last Edited
01/09/2016

Condition category
Other

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
In April 2008 (updated in August 2011), the Scottish Dental Clinical Effectiveness Programme (SDCEP) published guidance for drug prescribing within dental practices. It contains information to help support dentists when making decisions about the need to prescribe an antibiotic. Despite the introduction of this guidance, there is wide variation in dental drug prescribing in Scotland. Antibiotic prescribing by dentists accounts for 9% of total antibiotic prescriptions in dental practices in Scotland and is increasing every year. It is widely recognised that antibiotic resistance (germs becoming resistant to antibiotics) is a major threat to public health and patient safety. There is evidence to suggest that prescribing by dentists in Scotland is too high and as many as 40% of antibiotic prescriptions issued in dental practices may be inappropriate. This study will test a method that aims to improve compliance with the SDCEP guidance recommendations to reduce antibiotic prescription.

Who can participate?
General dental practices providing NHS dental treatment across the 14 Scottish Health Boards will be included in the study. All dentists in these practices listed as practicing in March 2013 will be included. Hospitals and community health centres will be excluded from the study.

What does the study involve?
NHS dental practices will be randomly allocated to one of three groups 1. current practice, 2. graphical feedback on antibiotic prescribing and 3. graphical feedback on antibiotic prescribing combined with recommendations for antibiotic prescribing taken from the SDCEP Drug Prescribing for Dentistry guidance. To produce the graphical feedback, information from the Prescribing Information System for Scotland (PRISMS) will be combined with information from the Management Information and Dental Accounting System (MIDAS), which contains information on all courses of NHS dental treatment provided in Scotland. The initial feedback will contain prescribing activity taken from the most recently available 14 months of information (November 2011 to December 2012). Dentists will receive a further graphical report at 6 months and 50% of dentists will receive a third report at 9 months. The antibiotic prescribing rates of the two groups receiving feedback will be compared with each other and with the current practice group.

What are the possible benefits and risks of participating?
Dentists may increase awareness of their antibiotic prescribing patterns. Patients may benefit

from more appropriate prescribing. There is low risk to both dentists and patients. No patient identifiable information will be used in the study. Dentists receiving feedback will not be given information about the prescribing levels of the other dentists in their practice and it will not be possible to identify any other dentists from the feedback given.

Where is the study run from?
TRiaDS Programme Office, Dundee Dental Education Centre (UK), NHS Education for Scotland (UK), Smalls Wynd, Dundee (UK), supported by the Health Services Research Unit, University of Aberdeen (UK).

When is the study starting and how long is it expected to run for?
May 2013 to April 2014

Who is funding the study?
NHS Education for Scotland (UK)

Who is the main contact?
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Contact information

Type(s)
Scientific

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Additional identifiers

Study information

Scientific Title
Translation Research in a Dental Setting (TRiaDS) evaluation of an audit and feedback intervention for reducing antibiotic prescribing behaviour in primary dental care in Scotland

Acronym
RAPiD

Study objectives

In comparison to current practice does the provision of individualised feedback on antibiotic prescribing, with or without a comparator, plus or minus a text-based intervention lead to a reduction in antibiotic prescribing in dental primary care? The text-based intervention reiterates the active ingredients within the Scottish Dental Clinical Effectiveness Programmes (SDCEP) Drug Prescribing for Dentistry guidance.

Ethics approval required
Old ethics approval format

Ethics approval(s)
In line with the Governance Arrangements for Research Ethics Committees (GAfREC) 2011, studies involving NHS staff no longer require ethical review. This was confirmed by the East of Scotland Research Ethics Service on 20/12/2011, ref: 11/GA/229.

Primary study design
Interventional

Study design
12-month three-arm randomised controlled trial

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Antibiotic prescribing in dental primary care

Interventions
All dentists within each practice allocated to an intervention group will receive a graphical representation of their antibiotic prescribing rate. This will be in one of four formats:
1. Feedback material that illustrates their monthly antibiotic prescribing rate per 100 treatment claims submitted to PSD for payment (henceforth referred to as claims) over the previous 14 month period
2. Feedback material that illustrates their monthly antibiotic prescribing rate per 100 claims along with the overall prescribing rate for their Health Board over the previous 14 month period.
3. Feedback material as described in 1, but supplemented with a text based intervention.
4. Feedback material as described in 2, but supplemented with a text based intervention.
The initial feedback report will contain retrospective prescribing activity taken from the most recently available 14 months of prescribing and treatment provision data (covering the period from November 2011 to December 2012). During the course of the study, dentists in 50% of the practices allocated to an intervention group will receive two reports (at 0 and 6 months); those in the other practices will receive three reports (at 0, 6 and 9 months).

Practices in the control group will experience current audit practice i.e. they will receive no audit and feedback information on their antibiotic prescribing behaviour.

Intervention Type
Other

Phase
Not Specified

Primary outcome(s)
Total number of antibiotic items (from Section 5.1 of the British National Formulary) dispensed per 100 courses of treatment over the 12 months from May 2013 to April 2014.

Key secondary outcome(s)
1. Total number of Amoxicillin 3g items dispensed per 100 courses of treatment over the 12 months from May 2013 to April 2014
2. Total number of second-line antibiotic items (Clindamycin, Co-amoxiclav, Clarithromycin) dispensed per 100 courses of treatment over the 12 months from May 2013 to April 2014
3. Total defined daily doses of antibiotics (from Section 5.1 of the British National Formulary) dispensed per 100 courses of treatment over the 12 months from May 2013 to April 2014
4. Total defined daily doses of Amoxicillin 3g dispensed per 100 courses of treatment over the 12 months from May 2013 to April 2014
5. Total defined daily doses of second-line antibiotics (Clindamycin, Co-amoxiclav, Clarithromycin) dispensed per 100 courses of treatment over the 12 months from May 2013 to April 2014
6. Uptake of a national audit on antibiotic prescribing

Completion date
30/04/2014

Eligibility

Key inclusion criteria
Practice inclusion criteria: NHS general dental practices in the 14 Scottish Health Boards.

Participant inclusion criteria: General Dental Practitioners (GDPs), from included practices, listed by the Practitioners Services Division (PSD) of NHS National Services Scotland as currently practicing in March 2013.

Participant type(s)
Health professional

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
Practice exclusion criteria:
1. Practices in mainland Health Boards with salaried dentists. (Salaried dentists are used as a proxy to identify community and emergency dental services. Predominantly due to geography, the majority of dental services in the Island Boards are provided by the NHS salaried service. For this reason, practices with salaried dentists in the Island Boards are not excluded).
2. Practices where no NHS courses of treatment was provided in more than 6 months out of the most recently available 12 months of treatment provision data (January to December 2012).

Participant exclusion criteria: GDPs who are not recorded in the PSD list of dentists.

Date of first enrolment
01/05/2013

Date of final enrolment
30/04/2014

Locations

Countries of recruitment
United Kingdom

Scotland

Study participating centre
Dundee Dental Education Centre
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Sponsor information

Organisation
NHS Education for Scotland (UK)

ROR
https://ror.org/011ye7p58

Funder(s)

Funder type
University/education

Funder Name
NHS Education for Scotland (UK)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	30/08/2016		Yes	No
Protocol article	protocol	24/04/2014		Yes	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes