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Contacting GPs to reduce unnecessary prescriptions of antibiotics

Submission date
10/09/2014

Recruitment status
No longer recruiting

Registration date
26/09/2014

Overall study status
Completed

Last Edited
24/02/2016

Condition category
Infections and Infestations

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

Plain English summary of protocol

Background and study aims
Antibiotics are vitally important medicines. They are used to treat infections caused by bacteria, some of which would kill the person affected. In recent years, however, antibiotic resistance, a situation where an antibiotic no longer works against one or more bacteria, has become a major problem. It has been caused by a number of factors, including general practitioners (GPs) prescribing them for minor illnesses that do not need them or for conditions that antibiotics can t cure (such as the common cold). Here, we are going to test whether sending out letters designed with behavioural science techniques to GPs in practices known to have high antibiotic prescription rates (prescribe a lot of antibiotics) will encourage them to prescribe fewer of them.

Who can participate?
GPs in practices in England whose antibiotic prescribing rate is in the top 20% for their NHS Local Area

What does the study involve?
GP practices are randomised into one of two groups. GPs in group 1 are sent a letter designed to reduce prescription rates. It is sent by the governments Chief Medical Officer and contains some key messages about the importance of antibiotic resistance, levels of antibiotic prescribing, and importantly, simple actions that they can take to reduce the risk of resistance. GPs in group 2 are not sent a letter. Antibiotic prescription rates between the two groups are then measured.

What are the possible benefits and risks of participating?
Benefits of taking part are support and motivation to improve clinical practice by reducing the risk of antibiotic resistance and prolonging the effectiveness of antibiotics in the future. The benefits to GPs are that information about levels of prescribing of antibiotics, resources to facilitate improved prescribing, and simple actions that can be implemented should enable and support them to improve their clinical practice. The risks are minimal because increased awareness and concern about antibiotic resistance is expected and necessary given the serious and growing threat to our health. Careful thought has gone into the content of the letter to make it enabling and supportive rather than negative.

Where is the study run from?
Public Health England (UK)

When is the study starting and how long is it expected to run for?
September 2014 to February 2015

Who is funding the study?
Public Health England (UK)

Who is the main contact?
Dr Tim Chadborn
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Contact information

Type(s)
Scientific

Contact name
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Additional identifiers

Protocol serial number
TP2014015

Study information

Scientific Title
Contacting GPs to reduce unnecessary prescriptions of antibiotics: a randomised controlled trial

Study objectives
A letter designed with behavioural science techniques and sent to GPs in practices with high antibiotic prescribing rates will reduce the antibiotic prescription rates of those GP practices as a whole. Practices randomised to receive the letter will have lower antibiotic prescription rates than practices that do no receive anything.

Ethics approval required

Old ethics approval format

Ethics approval(s)
NRES Committee London Harrow, 19/09/2014, ref. 14/LO/1544

Primary study design
Interventional

Study design
Randomised controlled trial

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Antibiotic resistance

Interventions
1,500 GP practices with high antibiotic prescribing rates are randomly allocated into one of two treatment arms:
1. Experiment arm: a letter designed with behavioural science techniques and sent to all GPs in the practice
2. Control arm: no letter is sent

Intervention Type
Other

Phase
Not Applicable

Primary outcome(s)
Our primary outcome measure is a comparison of the change in the antibiotic prescribing rate from September to October 2014 between treatment and control groups, controlling for changes between these two months experienced by GP practices in previous years.

Key secondary outcome(s)
We will look at prescription rates for specific classes of antibiotics used to treat upper respiratory tract infections: pencillins, macrolides, Coamoxiclav, tetracyclines. This analysis will include looking at changes in the number of doses of specific types antibiotics generally prescribed for upper respiratory tract infections per 1,000 registered patients and whether the intervention has a stronger or weaker effect depending on the location, age, and gender of the recipients. We will compare changes in the antibiotic prescribing rate from September to October 2014 controlling for changes in prescribing between the same two months in 2013 as there is a three-month lag in the publication of the data, we will receive the data to the end of October 2014 in January.

Completion date
27/02/2015

Eligibility

Key inclusion criteria
1. GP practices in England who issued prescriptions in May 2014, according to HSCIC prescribing data (the latest data available at the time of design)
2. GP practices whose antibiotic prescribing rate is in the top 20% for their NHS Local Area, controlling for relevant patient characteristics. More specifically, we will apply the Health and Social Care Information Centre's STARPU weightings for oral antibiotics (BNF 5.1 subset). These consist of age and gender weightings.

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
1. GP practices are excluded if their current level of prescription (doses per 1000 head of population) is classed as an outlier. The cut-off for outliers is made at the 95th percentile of the distribution, since figures above this level were considered to be the result of measurement error. This judgment was made based on medical advice.
2. We exclude practices that have been in operation for less than a year in September 2014, since we require data for September 2013 in order to apply the difference-in-differences analysis.

Date of first enrolment
29/09/2014

Date of final enrolment
27/02/2015

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Public Health England
London
United Kingdom
SE1 6LH

Sponsor information

Organisation
Public Health England (UK)

Funder(s)

Funder type
Government

Funder Name
Public Health England (UK)

Alternative Name(s)
PHE

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

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	23/04/2016		Yes	No
HRA research summary			28/06/2023	No	No