GPs’ perceptions of AMR and antimicrobial stewardship

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The authors present the results of a small survey conducted within NHS Kernow CCG to determine GPs’ awareness of antimicrobial resistance (AMR) and antimicrobial stewardship and how this influences their prescribing decisions, as well as their suggestions on how antibiotic prescribing practices could be improved.

You will be aware of the ongoing focus on antibiotic resistance and antimicrobial stewardship. Nationally and locally there has been a lot of work undertaken in general practice to promote prudent antibiotic prescribing. This brief survey seeks your views on some issues relevant to this topic.

1. Are you aware of the recommendations in the NICE clinical guideline from Aug 15 “Antimicrobial Stewardship: Systems and Processes for Effective Antimicrobial Medicine Use”? Please tick one answer
   - I personally have scanned the sections relevant to me
   - We have discussed this among the GPs at our surgery
   - No, I haven’t read the NICE guideline nor seen any summary of it anywhere
   - No, not aware of it at all

2. Do you accept that antimicrobial resistance is a real threat to your patients? Please circle one answer
   - Yes
   - No
   - Don’t really know

3. Do you perceive having seen increasing evidence of antibiotic resistance in your patients over the past 3 years or so? Please circle one answer
   - Yes
   - No
   - Don’t really know

4. Do you consider the potential for antibiotic resistance when coming to a decision whether to prescribe an antibiotic or not? Please tick one answer
   - Yes, most of the time
   - Yes, some of the time
   - No, hardly at all – it does not influence my decision

5. To what extent do you think other doctors (be it locums or partners) in your surgery should be changing their approach so that they are more ‘prudent’ with prescribing of antibiotics. Please tick one answer
   - They could do a lot better at reducing their prescribing
   - They could do a little better at reducing their prescribing
   - Their prescribing seems okay
   - Actually I’m concerned they are too restrictive with their prescribing of antibiotics

6. In general do you think patients are still too demanding of an antibiotic prescription? Please circle one answer
   - Yes
   - No
   - Don’t really know

7. Finally, what suggestions do you have for helping to improve antibiotic prescribing. Please enter any free-text comments below.

Figure 1. Questionnaire used to assess GPs’ attitudes to prescribing antibiotics

Until recently, antibiotic consumption in England had been on the rise, with increased antibiotic prescribing fuelling increased bacterial resistance. Antimicrobial resistance (AMR) is therefore seen as one of the greatest health and public health challenges of our time. The consequences of AMR include increased treatment failure for common infections and decreased treatment options where antibiotics are vital, such as during certain cancer treatments. Antimicrobial stewardship is crucial to combating AMR and is an important element of the UK Five Year Antimicrobial Resistance Strategy, which has seven key areas for action, one of which is optimising prescribing practice. The NICE guideline on antimicrobial stewardship can support the effective delivery of the strategy: it outlines recommendations for organisations (commissioners and providers) as well as for prescribers and other health and social care practitioners, including GPs, nurses, pharmacists and dentists.

Antimicrobial stewardship toolkits for England are available to assist organisations to fulfil their obligations with regard to national guidance and regulations. For primary care, the Treat Antibiotics Responsibly, Guidance, Education, Tools (TARGET) toolkit includes resources such as guidance (local or national antibiotic treatment recommendations), educational materials and tools that GPs can share with patients during consultations (including information on expected duration of infection, self-care and back-up prescriptions), and suggested antibiotic practice audits.

Antibiotic prescribing at CCG level was monitored as part of the Quality Premium for 2015/16, which is intended to reward CCGs for improvements in the quality of services they commission as well as for associated improvements in...
health outcomes and in reducing health inequalities. NHS Kernow was one of 24 CCGs for the 12 months to March 2015 and one of the 154 CCGs for 12 months to December 2015 that met both targets in the NHS England Antibiotic Quality Premium monitoring data set. We set out to gain an understanding of what GPs within our CCG think of AMR.

Method
Across Cornwall, locality-based prescribing meetings are held four times a year. These meetings, organised by NHS Kernow CCG medicines optimisation team, are intended to have a focus on clinical prescribing and medicines optimisation. A GP prescribing lead from each surgery is invited to attend these meetings and disseminate the learning within their own practice.

At each of the three locality meetings in November 2015, the GPs attending were asked to complete a questionnaire (see Figure 1) during the tea break, having been advised that it was anonymous and would take only a few minutes to complete. The questionnaire contained a small number of questions seeking their views on AMR. The introduction to the survey simply noted that GPs would be aware of the ongoing focus on AMR and antimicrobial stewardship, and that nationally and locally there has been a lot of work undertaken in general practice to promote prudent antibiotic prescribing. This small survey consisted of mainly closed questions with predetermined answers to choose from, and one question that allowed respondents to make free-text comments.

Results
The three meetings were attended by a total of 45 GPs, with completed questionnaires returned from 40 (89 per cent). No other GP characteristics were recorded.

All 40 GPs accepted that AMR is a real threat to their patients. When asked if they were aware of the recommendations in the NICE guideline on antimicrobial stewardship, 15 responded that they had personally scanned the sections relevant to them, 14 had discussed the guideline among the GPs at their surgery, 10 had not read the guideline nor seen any summary of it anywhere, and one was not aware of the guideline.

In response to a question asking whether they had seen increasing evidence of antibiotic resistance in patients over the past three years or so, 21 out of 40 GPs perceived that yes, they had seen such resistance, 17 responded no, and two did not know. When asked if they consider the potential for antibiotic resistance when coming to a decision on whether to prescribe an antibiotic or not, 31 ticked “Yes, most of the time”, and nine ticked “Yes, some of the time”. The predetermined response “No, hardly at all – it does not influence my decision” was not ticked by any GP.

As to whether other doctors (be it locums or partners) in their surgery should be changing their approach so that they are more “prudent” with prescribing of antibiotics, four GPs responded that these other doctors could do a lot better at reducing their prescribing, 19 thought they could do a little better at reducing their prescribing, 15 thought their prescribing was reasonable, and two agreed with the predetermined response that they were concerned that these other doctors were too restrictive with their prescribing of antibiotics. Finally, when asked if, in general, patients are still too demanding of an antibiotic prescribing, four GPs responded that these other doctors were too restrictive with their prescribing, 19 thought they could do a lot better at reducing their prescribing, 15 thought their prescribing was reasonable, and two agreed with the predetermined response that they were concerned that these other doctors were too restrictive with their prescribing of antibiotics. Finally, when asked if, in general, patients are still too demanding of an antibiotic prescription, 26 GPs responded “Yes” and 14 answered “No”.

### Table 1. GP respondents’ free-text suggestions on actions that could help improve antibiotic prescribing practices

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>Number of GPs</th>
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<tbody>
<tr>
<td>Patient awareness campaign/patient education/patient information</td>
<td>10</td>
</tr>
<tr>
<td>Peer pressure via comparison of prescribing at individual GP level, including locums</td>
<td>5</td>
</tr>
<tr>
<td>More focused antibiotic guidelines for primary care</td>
<td>3</td>
</tr>
<tr>
<td>Improved use of, and access to, microbiological diagnostics</td>
<td>3</td>
</tr>
<tr>
<td>Behavioural change approach within the surgery: use of TARGET toolkit, participating in Public Health England’s antimicrobial resistance (AMR) trial, financial incentives to reduce prescribing, no prescribing over the telephone</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
</tr>
</tbody>
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The final question asked for free-text comments relating to actions that could help improve antibiotic prescribing practices and 27 respondents provided 37 suggestions. These responses fell into the categories listed in Table 1. The 12 ‘other’ suggestions included having the option to prescribe a placebo antibiotic, having nurses deal with minor infections, and advising care homes on the appropriate use and value of urinalysis.

Discussion
It is known that improving prescribing practice can be difficult, especially in the face of patient demand. Antibiotic prescribing is one area where the forces of prescriber knowledge, patient expectations and the prescriber’s perceptions of these expectations, and culture all collide together. Certainly, research has highlighted how difficult it is to capture the complex interactions that contribute to antibiotic prescribing for UTIs.

It is reassuring that all GP respondents to our short survey agreed that antibiotic resistance is a threat, as it is argued that one challenge in reducing antibiotic use is the disconnect between individual behaviour and population-level resistance. It is interesting to note that 57 per cent (23/40) of respondents perceived that colleagues in their practice could do a lot or a little better at reducing their prescribing. This may be an example of the fundamental attribution error,
where our perspective is on the person we are observing, which may make us lose sight of the possible situation that explains the behaviour we are critical of. We did not specifically ask the respondents if they thought they themselves could be more prudent prescribers.

All GPs said they consider the potential for AMR most or some of the time when coming to a decision whether to prescribe an antibiotic. NICE guidance recommends that when prescribers are deciding whether or not to prescribe an antimicrobial, the risk of AMR for individual patients and the population as a whole should be taken into account.

In a recent review of clinicians’ knowledge and beliefs about the importance and the causes of AMR, and strategies to reduce resistance, the authors concluded that clinicians believe AMR is a serious problem but think it is caused by others. They also noted that social cognitive theory also explains why clinicians experience a conflict between minimising AMR and avoiding clinical deterioration in their patients when prescribing antibiotics: AMR is a distant and physically removed consequence of antibiotic prescribing, whereas patient distress and clinical deterioration are proximal and confronting consequences.

Two-thirds of our GPs viewed patients as still being too demanding of antibiotics. Studies have shown that a third of the public believes that antibiotics will treat coughs and colds, and that one in five people expect antibiotics when they visit their doctor. GPs commonly express concerns that they feel pressurised by patients or both if they thought they themselves could be more prudent prescribers.

Although this was a small study, it is encouraging that all GP respondents agreed that AMR is a real threat to their patients and consider the potential for AMR when making antibiotic prescribing decisions. Almost three-quarters of the GPs were familiar with the NICE antimicrobial stewardship guideline and a number of the recommendations in the guidance have been carried out locally in NHS Kernow, contributing to a reduction in antimicrobial prescribing. However, there is clearly a continued need for patient education about AMR to encourage a reduction in patient demand and expectation for antibiotics for self-limiting illnesses.

References

Declaration of interests
None to declare.

Michael Wilcock and Neil Powell are both pharmacists in the Pharmacy Department at Royal Cornwall Hospitals NHS Trust, and Kathryn Wisner is a medicines optimisation pharmacist at NHS Kernow CCG

POEMs

Inhaled steroids are effective prevention for wheezing preschoolers

Clinical question: In preschoolers with recurrent wheeze, do ‘controller’ treatments decrease recurrences?

Bottom line: Daily moderate-dose inhaled corticosteroids can decrease episodes of wheezing that require oral corticosteroid treatment in children six years or younger, especially if they have persistent asthma. Intermittent treatment might be effective. Inhaled corticosteroid treatment is more effective than montelukast. (LOE = 1a)


Study design: Meta-analysis (randomised controlled trials).
Funding: Self-funded or unfunded.
Setting: Various (meta-analysis).

Synopsis: The researchers searched three databases, including Cochrane CENTRAL, to identify randomised studies of children six years or younger with asthma or recurrent wheeze (at least two episodes in the past year) that compared inhaled corticosteroids, given daily or intermittently, with placebo or montelukast to prevent exacerbations requiring systemic steroids. The studies were selected and the data abstracted independently by two researchers. They found 22 studies enrolling a total of 4550 patients. The studies for the most part were of high quality, and heterogeneity was not significant. Most of the studies (n=15, 3278 patients) compared daily inhaled corticosteroids with placebo.

On average, the exacerbations were decreased by 30 per cent (risk ratio [RR] = 0.70; 95% CI 0.61–0.79), with one fewer exacerbation for every nine children treated. Results were better in patients with persistent asthma. In a single study of 202 patients, treatment with daily inhaled corticosteroids was more effective than with montelukast at preventing exacerbation (RR=0.59; 0.38–0.92). Daily versus intermittent inhaled corticosteroids were found to be equal in two studies, but the number of patients (and events) was too small to draw firm conclusions. Though not formally a part of this analysis, height was slightly (0.7–1.1cm) affected by treatment with inhaled corticosteroids but growth differences resolved following discontinuation.