

# TACKLING ANTIMICROBIAL RESISTANCE IN THE PRIMARY CARE SETTING

A JOINT REPORT



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ON ANTIBIOTICS



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All-Party  
Pharmacy Group 



All-Party Parliamentary Group for Dentistry  
and Oral Health

# BACKGROUND

Following the publication of the [UK Government's 5-year action plan for antimicrobial resistance \(AMR\) 2019 to 2024](#), an evidence session on AMR was held jointly by the [All-Party Parliamentary Group \(APPG\) on Antibiotics](#), the All-Party Pharmacy Group, and the [APPG for Dentistry and Oral Health](#).

This session looked at the ways in which the primary care sector has so far helped to overcome the many complex challenges posed by AMR, and at what more needs to be done by health professionals, patients and the NHS to address these challenges – not least because AMR would appear to have far-reaching consequences for the burden of illness in the community, including common infections.

# OBJECTIVE

The objective of this meeting was to explore the theme of tackling AMR across primary and community care, and to produce recommendations for the Government to consider as part of its ambition to 'contain and control' AMR by 2040.

# HOST ORGANISATIONS

## All-Party Parliamentary Group on Antibiotics

Primary care professionals have a critical part to play in meeting the challenges posed by AMR, generally – and the UK National Action Plan's target of cutting antibiotic prescriptions by 15%, specifically.

Given that 80% of antibiotics are prescribed in primary care settings, it is vital that GPs, pharmacists, and dentists are given the chance to talk publicly about the risks and opportunities they face in negating the threats posed by AMR. Such a discussion should aid our understanding of the nature of those threats, as well as the interventions that could overcome them (e.g. rapid diagnostic testing, benchmarking data, and supporting conversations between patients and practitioners).

The [British Society for Antimicrobial Chemotherapy \(BSAC\)](#) provides the secretariat for the APPG on Antibiotics. It is a learned society whose members are among the world's leading infectious disease physicians, pharmacists, microbiologists, and nurses.

With almost 50 years of leadership in antibiotic research and education, BSAC is dedicated to the responsible use of antimicrobials. It does this by supporting a global network of experts via workshops, conferences, guidelines, e-learning courses, and its own high-impact international journal. BSAC also provides national surveillance and susceptibility testing programmes, as well as an outpatient parenteral antimicrobial therapy (OPAT) initiative.

In collaboration with Public Health England and primary care colleagues, BSAC has produced [the TARGET Antibiotic Training Modules](#). TARGET takes the form of seven free learning resources that highlight the actions primary care professionals can take to improve antibiotic prescribing, the patient journey, self-care, and reductions in consultations.

## All-Party Pharmacy Group

Pharmacists are on the frontline in healthcare and play a key role in the fight against antimicrobial resistance. Community pharmacies provide a vital channel for raising awareness, educating, and supporting people in communities across the country.

They see people when they are well, and not just when they are unwell. They also have a critical role in reviewing prescriptions for antimicrobials and challenging those that may be inappropriate. It is therefore important that moving forward community pharmacy is supported to continue to play a full part in the fight against AMR.

## All-Party Parliamentary Group for Dentistry and Oral Health

As a small but significant proportion of antibiotics in the UK is prescribed for dental infections, dentists have an important role to play in reducing the amount of antibiotic prescribing. In 2017, in England alone dentists prescribed almost 3 million courses of NHS antibiotics – this not including any antibiotics provided by dentists on a private basis.

Crucially, a large proportion of antibiotics prescribed in dentistry could be avoided. Acute dental conditions are almost always best managed by operative treatment, but unfortunately due to clinical time pressures and the way NHS dentistry is commissioned it is often difficult for dentists to immediately address the problems patients present with, and they resort to prescribing antibiotics as a stopgap instead. Dentists have been calling on the Government to commission appropriately funded urgent care slots, which would allow them to provide appropriate interventional treatment when required, rather than prescribe antibiotics unnecessarily. As fewer dental problems would mean less need to use antibiotics, the profession has also campaigned for more focus on preventive oral health interventions, such as supervised tooth-brushing in schools and early years settings, fluoride varnish applications and stronger action on sugar.

The British Dental Association, which provides secretariat to the APPG for Dentistry and Oral Health, has taken a lead role in developing measures to help dentists to reduce dental antibiotic prescribing, and in 2014 hosted a summit on AMR in dentistry which raised the profile of this issue with the profession and other stakeholders and led to development of an action plan and a prescribing self-audit tool for practices. As a result of this and other initiatives UK dental practices have made huge strides in reducing antibiotic prescribing in oral health care – dentists prescribed around a quarter fewer prescriptions for antibiotics in 2017 compared to 2013 – but with 5.2% of all antibiotics still prescribed in dentistry, much more remains to be done.

## KEY POINTS OF DISCUSSION

### GP Findings

*Dr Oliver van Hecke, General Practitioner and Clinical Lecturer at the Nuffield Department of Primary Care Health Sciences, University of Oxford, and Council Member, British Society for Antimicrobial Chemotherapy*

- GPs should be on the frontline of efforts to improve the responsible use of antibiotics, but issues related to prognostic uncertainty, attitude to risk, and time and workload pressures may outweigh GPs' concerns about antibiotic resistance.
- About 80% of antibiotics are prescribed in primary care settings – of which about 74% are prescribed by GPs.
- The UK Government's National Action Plan (2019 to 2024) has set a target of reducing the use of antibiotics in human medicine by 15%. Evidence shows the majority of GP Practices in England prescribe considerably more antibiotics than would be expected based on guidelines and expert opinion. This is especially so for common respiratory tract infections (e.g. sore throat, sinusitis, earache) where at least a third of antibiotics are not needed. To support this target GPs would benefit from routine receipt of data on their prescribing rates (at individual and practice-level) to provide a meaningful benchmark of performance. Currently, individual prescriber feedback is not possible unless there is an individual drive to audit the prescribing practice and compare this with colleagues in their own practice.
- Opportunities for frontline clinicians in primary care (GPs and nurse prescribers) to optimise their antibiotic prescribing include:
  - Addressing the expectation for antibiotics early in the consultation by using enhanced communication skills and available consultation toolkits such as TARGET
  - Being mindful of their own expectations versus those of patients; clinicians can overestimate patients' expectations for antibiotics which, in turn, can lead to a greater likelihood of prescribing
  - Coordinating a national strategy to implement and evaluate rapid diagnostic tests for common infections that are fit-for-purpose, as not all bacterial infections need antibiotics, and even where bacteria are detected they may not be causing the patient's symptoms. Diagnostic tests that can distinguish self-limiting bacterial infections from infections that would benefit from antibiotics are required. If primary care clinicians are going to use diagnostics, there needs to be a governance framework to run and maintain rapid diagnostic tests in the community

- Giving more consideration to setting antibiotic prescribing targets and providing incentives to improve prescribing quality. A simple reduction in the number of antibiotic prescriptions does not necessarily reflect more appropriate antibiotic prescribing. Improving the appropriate use of antibiotics requires an understanding of prescribing, the diagnostic process, as well as social and cultural factors that create demand in the community. Quality indicators that focus on the diagnostic process for common infections, together with community antibiotic resistance surveillance systems are needed to improve appropriate prescribing
- Improving data to assess the impact of antibiotic resistance on communities. Predictions about the consequences of antibiotic resistance can seem remote to individuals with common infections facing decisions about treatment. The clinical relevance of antibiotic resistance for common infections is of far greater interest to patients and clinicians in the community. This is important to incorporate into new public health messages aimed at reducing antibiotic use. Generally, campaigns have used a top-down approach (i.e. messages delivered by health authorities) instead of a grassroots approach (i.e. messages designed alongside target audiences). [A recent 2017 WHO evaluation of public-facing antibiotic awareness campaigns](#) showed that the majority were not based on behaviour-change theory, and that evaluations had not determined whether these interventions had worked. Public understanding of antibiotics and the impact of AMR is vital because consultation expectations are a significant determinant of inappropriate antibiotic use.

## Pharmacy Findings

*Prof Tracey Thornley, Senior Manager for Contract Framework and Outcomes at Boots, Honorary Professor in Pharmacy Practice at the University of Nottingham, Member of the Royal Pharmaceutical Society English Pharmacy Board*

- Community pharmacies have the potential to contribute to antimicrobial resistance through stewardship. However, their challenges and opportunities are not well understood.
- No single intervention will be effective in isolation and responses to the Governments actions plan will be multi-layered and multi-faceted.
- All stakeholders (from academics and healthcare professionals to patients) need to take responsibility and engage in cooperation.
- Practice must be informed by the use of data which should also drive education.
- Currently pharmacies are supporting self-care and providing safety netting advice, utilising antibiotic check lists to ensure appropriate usage, implementing formal campaigns, discouraging stockpiling, and highlighting the importance of vaccinations. There needs to be an assessment of which elements of support are most effective to support better understanding of best practise and spread innovation to support the right behaviours.
- Maintaining consistent messaging and encouraging health care professionals to work collaboratively within a system wide approach is key to improving prescribing behaviours and expectations. More widespread commissioning to ensure consistent messages are maintained and increasing public engagement to maximise messages at every opportunity. Campaigns are also helpful when communicating to encourage positive behaviour change. The latest evaluation indicates that the AG campaign engagement has increased over the four years and has contributed to global awareness.
- Consistent messaging across all stakeholder groups, and coordination of activities, will be key in improving the way healthcare professionals and patient groups work together. PHE and NHSE have undertaken some work to promote the adoption of system wide AMR strategies and collaborative working. One example is the work PHE has undertaken in collaboration with a learned society and Royal College to develop the TARGET toolkit and e-learning webinars and courses, materials that have been adopted for use by over 95% of CCGs.
- The role of community pharmacy is important when discussing the conditions for which antibiotics are most often unnecessarily prescribed and collecting data on this. Although, more could be done to increase powers and responsibilities. Community pharmacy has an important role to play in helping to identify and monitor inappropriate prescribing. Community pharmacists can currently challenge antibiotics dosages and it would be helpful if this was extended to questioning antibiotic guidelines.
- Data collected by community pharmacists is used by the NHS to drive improvement, and NICE has also

provided guidance on appropriateness which allows for a more consistent approach, however minor infections are where diagnostics and clinical scoring systems have a role to play alongside self-care. However improvements in antibiotic resistance surveillance in the community are needed. Surveillance is currently poor due to the cost of implementation.

- Studies show that AMR training for pharmacists is known to improve inappropriate prescribing as pharmacists are better able to intervene. Such training is sporadic but should be made obligatory.
- Similarly, there also needs to be improved training of diagnostics. The diagnostic process is key to informing and improving appropriate prescribing but must be done in the context of a clinical pathway, and to treat based on
- consultations. Here, there needs to be safety netting materials so that where the decision not to treat is taken, patients have clear indicators to look for if symptoms get worse. These consultations can also be used to help change behaviour with patients and support triage.

## Dentistry Findings

*Dr Susie Sanderson OBE, President of the British Dental Association (BDA) and Member of the Council of European Dentists' Board Task Force on Antibiotics in Dentistry*

- 2.78 million courses of NHS antibiotics were prescribed in 2018 by dentists in England alone and the profession clearly has an important role to play in the fight against antimicrobial resistance.
- Dental organisations have taken the lead on reducing inappropriate prescribing – in 2014 the BDA hosted a summit on AMR in dentistry which raised the profile of this issue with the profession and other stakeholders and led to development of an action plan and a prescribing self-audit tool for practices. This and other initiatives have led to UK dental practices making strides in reducing antibiotic prescribing – dentists dispensed around a quarter fewer prescriptions for antibiotics in 2017 compared to 2013 – but 5.2% of all antibiotics are still prescribed in dentistry.
- Despite the progress already made, a large proportion of the antibiotics still prescribed in dentistry are avoidable. To achieve further reductions in prescription, dentists need the time and the confidence to do the right thing. More consistent access to NHS dentistry would help reduce the need for antibiotic prescribing for dental pain and reduce the number of patients presenting with toothache at A&E and GP surgeries where they can't receive the appropriate operative treatment.
- There is a need for Government to commission appropriately funded urgent care slots to allow dentists to provide appropriate interventional treatment when required, rather than be under pressure to prescribe antibiotics unnecessarily. In addition, dentists need access to the electronic prescribing network and Summary Care Records, which are available in other parts of the health service but not in dentistry. It is generally accepted that clinicians respond favourably to data that can inform their own practices and that are benchmarked against others. Practitioner level data would help support monitoring and auditing antibiotic prescribing levels in general dental practice.
- Reducing the incidence of dental decay and gum disease, particularly in our most vulnerable communities, would mean less pressure to use antibiotics. We therefore need government action to secure investment in oral disease prevention measures such as supervised tooth-brushing in schools and early years settings, fluoride varnish applications and action on sugar.
- Policymakers should act to reduce waiting lists for child hospital tooth extractions. Currently children in many parts of England face waits of anything up to a year to have their badly decayed and infected teeth removed – that means it's not atypical that they receive 2 or 3 courses of amoxicillin during that time to help control their pain and infection from this completely preventable disease.
- There is a pressing need to educate patients on when antibiotics are needed and the dangers of their inappropriate or unnecessary use as changing patient behaviour and expectations is necessary to minimise unnecessary antibiotic prescribing for dental pain. Patients often – understandably – prefer to receive antibiotics rather than face the dental intervention necessary to resolve the underlying problem. Dentists need support from politicians and other health professionals in spreading the message that antibiotics do not cure toothache, which will almost always – sooner or later – require operative treatment.

# RECOMMENDATIONS: THE JOINT REPORT ON AMR IN PRIMARY CARE

**1. Implement, as a matter of urgency, a sustained national campaign to coordinate prescribing practices across primary care settings, while seeking to inform and change patient expectations.**

Such a campaign should aim to:

- Provide consistent messaging across all areas of the health service, while educating patients (as well as professionals) about when antibiotics are needed, and the risks of inappropriate or unnecessary use
- Deploy the latest behaviour-change research, and establish a link between AMR and the patient's current attitude to health, rather than through forecasts of a "post-antibiotic apocalypse"
- Focus on common complaints like sore throat, sinusitis and toothache, where current prescribing rates are so much higher than ideal prescribing rates
- Take account of prescribing hotspots and focus the campaign accordingly
- Consider investigating how other, similar, campaigns have worked in countries such as the Netherlands.

**2. Introduce routine benchmarking on prescribing data to assist individual practitioners in monitoring their prescribing practices.**

**3. Coordinate national implementation of clinical prediction tools and/or rapid diagnostic tests to reduce clinical uncertainty for common infections.**

**4. Set targets and provide incentives that reward improvements in the quality of prescribing (rather than reductions in prescribing rates) in general practice.**

**5. Give pharmacists access to information on the conditions for which prescriptions are issued so that they can check dosages, challenge decisions appropriately, and advise patients on when it might be worth considering delaying treatment in consultation with the prescribing doctor or dentist.**

**6. Introduce properly funded urgent care slots in NHS dentistry, so dentists have time to provide appropriate interventional treatment when required, rather than being under pressure to prescribe antibiotics for unscheduled patients in pain.**

**7. Invest in oral disease prevention measures such as supervised tooth-brushing in schools and early years settings, fluoride varnish applications, and firmer action on sugar.**

## CONTACT DETAILS

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This is the report of a meeting held jointly between the All-Party Parliamentary Groups on Antibiotics, Pharmacy, and Dentistry and Oral Health, in the House of Commons, on 29th April 2019