

Is it getting easier to obtain antibiotics in the UK?

Public knowledge and understanding of antibiotics are poor, with only 56% of the UK general public aware that antibiotics cannot kill viruses,¹ and those with poorer knowledge are more likely to use them.¹ Clinical assessment therefore remains a vital step in assessing the need for and safety of antibiotics, and an essential opportunity for education about appropriate use, antimicrobial resistance (AMR), and self-care.

In the UK, antibiotics are, with very few exceptions, only prescribable by doctors or other health professionals with prescribing qualifications. This has meant that, until recently, access to antibiotics has been possible only through face-to-face medical assessment in primary or secondary care, providing a significant disincentive to seeking antibiotics unnecessarily.

Inappropriate prescribing of antibiotics in UK primary care remains of concern,² but antimicrobial stewardship (AMS) initiatives are having a measurable effect, with prescribing rates falling in response to interventions.³ However, novel routes to obtaining antibiotics, associated with either a lower threshold for prescribing or issuing of antibiotics without medical assessment, undermine these strategies and are likely to increase inappropriate use.

A LOWER THRESHOLD FOR PRESCRIBING ANTIBIOTICS: TELEPHONE AND ONLINE CONSULTING

Workforce shortage and increasing demand in primary care has led many NHS providers to try alternatives to face-to-face appointments as a means of managing workload. Telephone consultations are now commonplace in NHS primary care, and continued government pressure for greater integration of technology means that many practices give patients the option of sending queries to their GP via email or online forms. Public demand for more convenient access to health care has also led to a proliferation of private providers, both pharmacies and GPs, offering, for a fee, remote clinical advice and treatments via online forms, computer algorithms, and video consultations. These providers also offer their services to NHS patients in some areas.

Although these alternative forms of consulting offer greater convenience to patients, a number of factors may make

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prescription of antibiotics more likely than in traditional face-to-face settings.⁴

The inability to examine patients when conducting consultations remotely will have an important impact on clinical judgement and assessment of risk. Doctors are significantly less satisfied with their examination via video compared with face-to-face consultations,⁵ and testing with video vignettes has shown that doctors find upper respiratory tract infections one of the most difficult conditions to assess via video consultation.⁶ Reduced availability of diagnostic testing such as laboratory urine and throat swab culture when consulting remotely may further contribute to diagnostic uncertainty, leading clinicians to prescribe just in case.⁷ Clinicians engaging in telephone or online consulting are also likely to feel pressure to 'close' the consultation rather than bring the patient in to the surgery, making prescribing of antibiotics more likely.⁸

In private sector online consulting, GPs additionally lack the usual safety nets available in NHS primary care, with limited background information on patients and reduced scope for follow-up. Consequently, they may well be more likely to prescribe antibiotics. Furthermore, perceived patient expectations, likely to be high in private consultations,⁹ are known to increase prescribing;¹⁰ patients who obtain antibiotics also give more positive feedback, an important factor for all providers in a competitive marketplace.¹¹

Evidence regarding levels of prescribing of antibiotics via telephone and online consulting is limited. However, it has been reported that antibiotics are frequently prescribed in these settings.^{12,13} Several studies have demonstrated significantly increased likelihood of antibiotic prescribing where patients consult health professionals via telephone or video compared with face-to-face settings for a variety of commonly seen infections including pharyngitis, bronchitis, sinusitis, and urinary tract infections.^{7,14,15}

ANTIBIOTICS WITHOUT PRESCRIPTION: SALE OF ANTIBIOTICS ONLINE

Another threat to AMS is the sale of antibiotics without a prescription by online retailers based outside the UK.¹⁶ Although the extent of this activity is difficult to quantify, a study in 2009 identified 136 unique online retailers prepared to ship antibiotics to consumers in the US without prescription;¹⁷ it is very likely that availability has grown substantially since then.¹⁸ Not only does this increase the likelihood of unnecessary antibiotics use, but also exposes patients to potentially significant risks. Allowing patients to bypass medical assessment completely, such retailers often offer consumers a wide choice of antibiotics, with limited or no checks of suitability and safety prior to sale.¹⁶ Lack of medical assessment may delay recognition of important symptoms or signs, while the antibiotics may be inappropriate in choice, dose, or duration.¹⁶ Furthermore, the existence of counterfeit antibiotics is a problem worldwide, and antibiotics obtained from online retailers may be of unclear provenance.¹⁸

EU data suggest that the internet is not currently an important source of antibiotics without a prescription.¹⁹ However, online availability is increasing, and its impact may differ in the UK; in other EU states, significant over-the-counter sales of antibiotics take place in pharmacies,¹⁹ whereas in the UK availability of antibiotics from physical pharmacy stores without a prescription is almost non-existent. Perceived availability of antibiotics over-the-counter without a prescription is known to increase the probability of self-medication,²⁰ often for conditions not requiring antibiotics such as viral respiratory tract infections.¹⁹ As public awareness of availability online without prescription increases, it seems very likely that self-medication with antibiotics obtained online, and their use for inappropriate indications, will also increase.

IMPLICATIONS FOR UK POLICY AND PRACTICE

There is clearly demand for the rapid and convenient access to healthcare advice offered by new alternatives to face-to-face medical consultations. However, there is a substantial risk that, whether via NHS or private providers, these may result in easier availability of antibiotics and increased inappropriate use, through a lower threshold for prescribing. Research is needed to quantify the extent of prescribing by these routes. However, with the potential of telephone and online consulting to reduce workload pressure in NHS primary care debatable, further implementation should be avoided until evidence of possible unintended consequences for AMR is clearer.

There is also a pressing need for action in relation to online pharmacies selling antibiotics without medical assessment, with development of effective means of monitoring this activity essential. The impact of availability of antibiotics over-the-counter without prescription in other EU countries suggests that the sale of antibiotics online is likely to increase inappropriate use, while exposing patients to the risk of taking poor-quality or counterfeit medications. In 2015, the Review on Antimicrobial Resistance highlighted the problem of sale of antimicrobial drugs on the internet without prescription, calling for globally coordinated regulatory activity to address this.¹⁸ Regulators and professional bodies must work together with government to find solutions, including legislation, while engaging with the public to highlight the risks of self-medication.

ADVERTISING REGULATIONS

Finally, various pharmacies and private online GP services appear to use sponsored links to place themselves at the top of internet searches relating to antibiotics. Sending a message of easy accessibility of antibiotics, this further undermines AMS strategies. Formal regulation of advertising of healthcare services that may be interpreted as promoting inappropriate use of antibiotics, or where access to antibiotics appears to be used as a marketing tool, is essential.

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