Press release: Research reveals levels of inappropriate prescriptions in England

This implies that antibiotic prescribing nationally should be reduced by 10% by 2020, in accordance with the national ambition to cut levels of inappropriate prescribing in half. These data are published in 5 articles in a supplement to the Journal of Antimicrobial Chemotherapy.

Professor Paul Cosford, PHE Medical Director said:

> Antibiotics are critical to modern medicine, saving millions of lives since the 1940s when they were first introduced. Using antibiotics when you don't need them threatens their long term effectiveness and we all have a part to play to ensure they continue to help us, our families and communities in the future.
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> This publication highlights the role GPs can play and I urge all practices to look at ways they can reduce their inappropriate prescribing levels to help make sure the antibiotics that save lives today can save lives tomorrow.

Health Secretary, Jeremy Hunt said:

> Drug-resistant infections are one of the biggest threats to modern medicine and inappropriate prescribing of antibiotics is only exacerbating this problem.
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> We are leading the world in our response. Since 2012, antibiotics prescribing in England is down by 5% and we've invested more than £615 million at home and abroad in research, development and surveillance. But we need to go further and faster otherwise we risk a world where superbugs kill more people a year than cancer and routine operations become too dangerous.

Antibiotics are important for treating serious bacterial infections, but their effectiveness is threatened by antibacterial resistance. Antibiotics are unique among drugs as the more they are used, the less effective they become and over time resistance develops. In response to this, the UK government set an ambition to reduce inappropriate antibiotic prescribing by 50% by 2020. This work seeks to quantify the amount of current antibiotic prescribing that is inappropriate.

The research found that the majority of antibiotic prescriptions in English primary care were for infections of the respiratory and urinary tracts.

However, in almost a third of all prescriptions, no clinical reason was documented. Antibiotic prescribing rates varied substantially between GP practices, nonetheless, there is scope for all practices across the country to reduce their rates of prescribing.

For most conditions, substantially higher proportions of GP consultations resulted in an antibiotic prescription than is appropriate according to expert opinion. An antibiotic was prescribed in 41% of all uncomplicated acute cough consultations when experts advocated 10%, as well as:

- bronchitis (actual: 82% versus ideal: 13%)
- sore throat (actual: 59% versus ideal: 13%)
- rhinosinusitis (actual: 88% versus ideal: 11%)
- acute otitis media in 2 to 18 year olds (actual: 92% versus ideal: 17%)

This work demonstrates the existence of substantial inappropriate antibiotic prescribing and poor diagnostic coding in English primary care. Better diagnostic coding, more precise prescribing guidelines, and a deeper understanding of appropriate long-term uses of antibiotics would allow identification of further reduction potentials.

Read the supplement Appropriateness of antibiotic prescribing in English primary care.

Contact Daniel Luzer to request a copy of the journal supplement.

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