



Tackling antimicrobial resistance 2019-2024

Five year action plan for the Lancashire and South Cumbria integrated care system (ICS)

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Summary

The United Kingdom's Governments 20 year vision for antimicrobial resistance (AMR) "Contained and controlled" and the five-year national action plan "Tackling antimicrobial resistance 2019-24" ¹ were published by the UK Government on 24 January 2019.

The 2013-2018 strategy and ambitions on AMR have already helped reduce antibiotic use in both humans and food producing animals but the UK still remains a high user compared to other European countries.²

The plan has ultimately been designed to ensure progress towards the 20-year vision on AMR, in which resistance is effectively contained and controlled. It focuses on three key ways of tackling AMR:

- reducing need for, and unintentional exposure to, antimicrobials;
- optimising use of antimicrobials; and
- investing in innovation, supply and access

This means focusing on strategies that prevent any healthcare associated infection occurring in the first place not just preventing the spread of antimicrobial resistance.

¹<https://www.gov.uk/government/publications/uk-5-year-action-plan-for-antimicrobial-resistance-2019-to-2024>

²<https://www.gov.uk/government/publications/uk-5-year-antimicrobial-resistance-strategy-2013-to-2018>

The plan also sets out four further measures of success to ensure progress towards our 20-year vision. These include, among others, targets to:

- halve healthcare associated Gram-negative blood stream infections by 2021;
- reduce the number of specific drug-resistant infections in people by 10% by 2025;
- reduce UK antimicrobial use in humans by 15% by 2024;
- reduce UK antibiotic use in food-producing animals by 25% between 2016 and 2020 and define new objectives by 2021 for 2025; and
- be able to report on the percentage of prescriptions supported by a diagnostic test or decision support tool by 2024.

The last two points of the plan may be out of the remit of local infection prevention and control teams (IPCT), but the Lancashire County Council (LCC) IPCT will support any initiatives where able. Infection prevention continues to be recognised as essential to AMR reduction and these strategic plans and LCC's implementation of them are committed to a strong focus on infection prevention and control (IPC)

Background.

What is antimicrobial resistance?

Antimicrobial is the term used for drugs that kill microorganisms that cause infections e.g. bacteria, viruses, fungi and parasites. They are used to reduce infections in humans and animals, but are also of value when used in prophylaxis such as in the prevention of surgical infections or for patients undergoing chemotherapy to prevent neutropenic sepsis.

Antimicrobial resistance occurs when these microorganisms change when they are exposed to antimicrobial drugs. The microorganisms that develop resistance are sometimes referred to as "superbugs". As a result medicines become ineffective and infections become more difficult to treat and increase the risk of spread to others.³

Antimicrobial, and in particular antibiotic, use has increased to such an extent that resistance to these drugs has emerged.

The previous national strategy on AMR 2013-2018 has helped to reduce antibiotic use, but despite this drug resistant infections continue to increase. The overall number of *Escherichia coli* (E.coli) blood stream infections has increased by 23.3% in England. There has also been an increase of Gram negative organisms that are resistant to carbapenamens, a class of highly effective antibiotics that are considered as "last resort". It is vitally important that the spread of these organisms is avoided as once the key antibiotics used for treating them stop working there are few remaining alternatives.⁴

³ <https://www.who.int/en/news-room/fact-sheets/detail/antimicrobial-resistance>

⁴ <https://www.gov.uk/government/publications/uk-20-year-vision-for-antimicrobial-resistance>

Delivery plan

1. Reducing the need for unintentional exposure to, antimicrobials.

Effective Infection Prevention and Control is critical to lowering infections and therefore lead to fewer antimicrobials being used and less risk of resistance. That puts preventing and managing infections firmly at the core of the AMR strategy and ensuring that health and social care providers have the capacity, capability, physical environment and tools for effective IPC. To steer behaviour change and increase public awareness is critical. The public have a huge part to play, handwashing compliance for example, is known to be poor in both high and low-income settings.⁵

Schools and other learning environments are key for promoting better practice among the public as schoolchildren amplify messages across communities. The IPCT are working closely with primary schools across Lancashire to promote hand washing and will begin to endorse the use of e-bug as recommended in the national action plan.

Vaccination is one of the most effective ways of preventing infections in both humans and animals and vaccination of healthcare workers is important to protect patients from spread in healthcare settings; The ICPT will continue to promote the influenza vaccination to health care workers and care home residents via the annual 'flu campaigns.

The number of *Escherichia coli* (*E. coli*) blood stream infections (BSIs) diagnosed across the UK has increased from 45,885 in 2015 to 50,400 in 2017 (a change in rate from 70.5 to 76.8 per 100,000 population). In

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file:///Q:/PH/Health%20Protection%20&%20Policy/Health%20Protection/_RESTRICTED/IPC/AMR/uk-20-year-vision-for-antimicrobial-resistance.pdf

some countries, the level of resistance among Gram-negative organisms is so high it is compromising the ability to provide safe healthcare.

To address these factors and others the IPCT have a robust proactive delivery plan in place for the provision of Infection Prevention and Control across the ICS. (Appendix1)

2. Optimising use of antimicrobials.

Sub-optimal use of antimicrobials in human medicine is one of the main drivers of AMR, in the UK and internationally. It occurs when patients take the wrong type or quantity of antimicrobial medicine through misdiagnosis, over-prescription or lack of awareness as well as when low concentrations of antimicrobials are used.

The IPCT encourage and promote stewardship programmes⁶ via NICE pathways and the Antibiotic Guardian Pledge ⁷ Resources like the TARGET⁸ antibiotic toolkit serve as useful training resources for health professionals. They also help engage patients and their families to support changes in behaviour that can prevent infection and reduce the use of antimicrobials. Implementing the UK antimicrobial prescribing and stewardship competences provides a further opportunity to strengthen capability of healthcare professionals.

Stewardship programmes promote timely specimen collection and testing, stewardship activities are not just focussed on reducing prescribing but also ensuring timely treatment where rapid treatment with antibiotics is essential to save lives and reduce the long-term consequences of serious infection, for example from sepsis. The LCC

⁶ <https://www.england.nhs.uk/ourwork/clinical-policy/sepsis/antimicrobial-stewardship/>

⁷ <https://antibioticguardian.com/>

⁸ <https://www.rcgp.org.uk/clinical-and-research/resources/toolkits/target-antibiotic-toolkit.aspx>

IPCT is working closely across the ICS with colleagues to promote good practice around the diagnosis and correct management of urinary tract infections that can be a cause of gram negative BSIs.

The LCC IPCT have a sepsis strategy for Lancashire care homes 2017-2020 and deliver sepsis training and development sessions for Lancashire care homes. Both residential and nursing care homes are trained to detect and manage/appropriately escalate residents with suspected sepsis.

3. Investing in innovation, supply and access to tackle AMR

Reducing the need for antimicrobials and optimising their use will slow down the rise and spread of resistance. But evolution will inevitably lead to more resistance. That is why any effort to tackle AMR must include a focus on improving the development of, and access to, good quality old and new antimicrobials, vaccines diagnostics and infection prevention and control products, as well as promoting alternatives to antibiotics might be good to list these. Across these areas, research has a role in turning evidence into practice and steering behaviour change.

This is a national ambition and LCC IPCT will support this research locally when and if requested.

Infection Prevention Team Delivery Plan 2019-2022.

ApQ:\PH\Health Protection & Policy\Health Protection_RESTRICTED\IPC\AMR\LCC AMR Plan 2019pendix 1.

If you are unable to access the plan via the link contact infectionprevention@lancashire.gov.uk