Securing the future supply of effective antibiotics

January 2024

Antimicrobials are a category of medicines used to prevent and treat infections in humans, animals and plants. They include antibiotics, antivirals, antifungals and antiparasitics.[1]

Antibiotics are the cornerstone of modern medicine. Not only are they pivotal in the treatment of common infections, but they are also essential to supporting therapies for many routine healthcare procedures and treatments – including major surgery (such as hip replacement, transplants), caesarean sections and chemotherapy.[2]

Without urgent action, antimicrobial resistance (AMR) could end modern medicine as we know it.

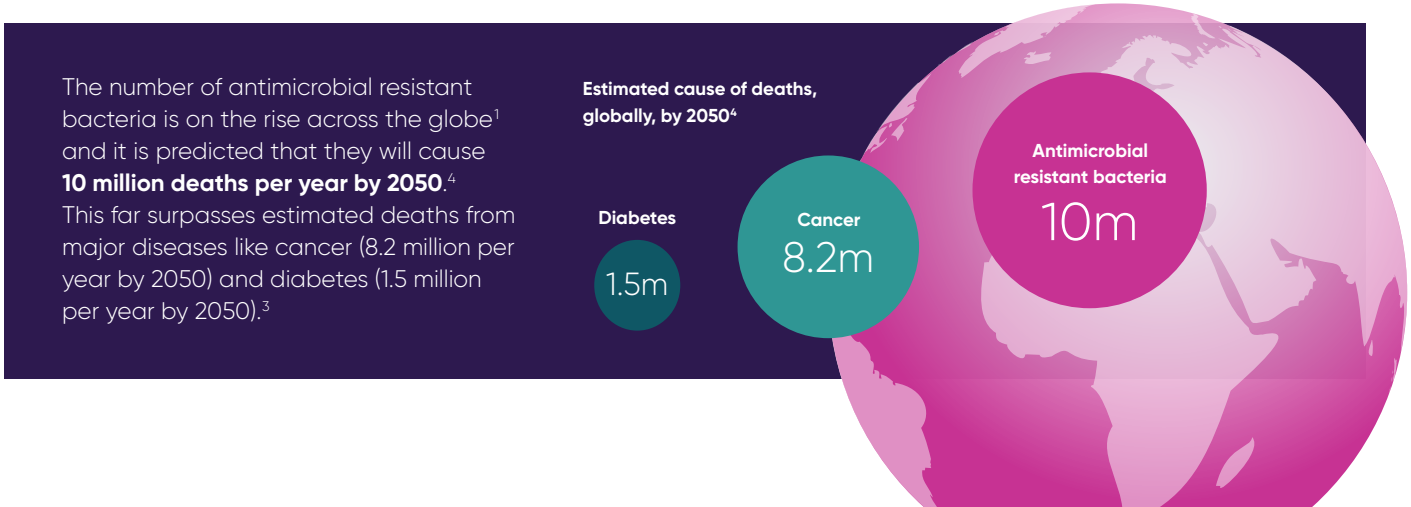
What is antimicrobial resistance?

Resistance to antimicrobials, including antibiotics, occurs naturally. However, resistance is on the increase, which means some infections are no longer treatable with existing antibiotics. It is important to note that the bacteria (not the people themselves) become resistant to antibiotics. This is known as antimicrobial resistance (AMR).[3]

Other factors that contribute to AMR span different policy areas. For example, factors include:

- **Lack of access to clean water, sanitation and hygiene for people and animals.**
- **Poor access to good quality and affordable medicines, vaccines and diagnostics.**
- **Misuse and overuse over decades has accelerated the development of resistance in some bacteria.**
- **Poor infection prevention and management in healthcare settings and farms.**
- **Lack of awareness and knowledge of AMR amongst healthcare professionals and the public.**
- **Lack of enforcement and legislation to tackle AMR.[1]**

The number of antimicrobial resistant bacteria is on the rise across the globe[1] and it is predicted that they will cause **10 million deaths per year by 2050**.[4] This far surpasses estimated deaths from major diseases like cancer (8.2 million per year by 2050) and diabetes (1.5 million per year by 2050).[3]



How will antimicrobial resistance impact people and healthcare in the UK?

AMR is not a future issue, it is here with us today.

In 2019/20, more than

90,000

people were **admitted to NHS hospitals** in England with antibiotic resistant infections.[5]

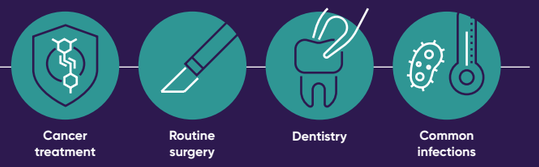
People with lived experience of antibiotic resistant infections report that they can have a **devastating and long-term impact** on their quality of life, mental and physical wellbeing, social and family life, and ability to work or volunteer.[6]

In 2018, the estimated **cost of antimicrobial resistant infections** was

£180m

per year in England.[7]

Left unchecked, AMR could result in the end of modern medicine as we know it, making elective surgery impossible and **increasing the risk** for people undergoing other treatments.



Urgent action is needed to protect people from antibiotic resistant infections and ensure the NHS can continue to provide care and support to anyone who needs it.

What has the UK done to date?

UK efforts to combat AMR

- The UK is currently a global leader in efforts to tackle AMR. In May 2023, the Government announced £39 million of funding for AMR research through the Global AMR Innovation Fund, including up to £25 million over four years to support the early development of new antibiotics, vaccines, rapid diagnostics and other products to treat life threatening drug-resistant infections.[8]
- The UK has had a national AMR strategy or action plan in place since 2000.[9]
- The AMR review, chaired by Lord O'Neill,[11] triggered a wave of political and public momentum that resulted in the UN General Assembly reaffirming its commitment to a Global Action Plan on Antimicrobial Resistance.[11]

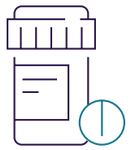
Efforts in the UK have reduced antibiotic use in humans and food-producing animals, strengthened surveillance data and driven investment in research.[9] **Despite this, drug resistant infections in humans continue to increase**, indicating we still have a long way to go.

One major policy challenge is **incentivising the development of new antibiotics** to treat the resistant infections appearing in our healthcare systems. These new medicines would need to be used correctly and sparingly to avoid worsening AMR.

There are few new antibiotics in development – as of 2021, there were only

43

new antimicrobials in clinical trials,[12] compared with the



1,800

immuno-oncology medicines (a form of cancer treatment) in 2020.[13]

This happens because:

Developing new antibiotics carries a **high cost** and **high risk of failure** for pharmaceutical companies and the use of new antibiotics is low as a result of strict stewardship controls to reduce the risk of AMR developing.

Companies are therefore unlikely to make back what they invest in researching and developing new antimicrobials, which discourages overall investment in this research area.

The UK Government has played a leading role to encourage the development of new antibiotics and ensure a return for companies willing to invest, by launching the Pilot Antimicrobial Evaluation and Purchasing Project.[14]

- As part of this pilot, **NHS England pays a flat rate per year** (like a subscription fee) to specific pharmaceutical companies for access to new antibiotics.
- The flat rate does not depend on how much the new antibiotic is used, thereby **supporting responsible use** *and* **guaranteeing pharmaceutical companies some form of return** for developing these much-needed new medicines.

What can you do to advance progress on AMR in the UK?

AMR is an issue for everyone that spans across every part of healthcare. It is vital that policymakers hold the line on AMR, ensuring it remains on the national policy agenda and pushing the UK to fulfil its responsibilities as a global pioneer in this area.

Given the growing demand on healthcare services, **we must ensure that the NHS's foundations** – including a sustainable supply of antibiotics – **are maintained and protected**.

NHS England recently conducted **a consultation on the Antimicrobial Products Subscription Model**. This consultation will consider key learnings from the earlier pilot scheme and inform the UK's permanent approach to purchasing antimicrobials.

A permanent approach should:

- **Be UK-wide** to cover all four nations.
- **Provide a 'fair share' contribution to a global pull incentive**, which ensures future revenue for a company that successfully brings a new antimicrobial to market.
- **Align with the World Health Organization priority pathogens list**, but also be expandable when there is a specific UK need.
- **Include both new and existing antibiotics**, with flexibility to consider eligibility once sufficient data is available for an antibiotic, regardless of when marketing authorisation is obtained.
- **Establish an agreed process** for collecting information on the usage of antimicrobials in the scheme.
- **Be open and transparent** and include opportunities for stakeholder engagement throughout the evaluation process of antimicrobials.

To support the adoption of a permanent approach, you can:

- **Make enquiries** to the Secretary of State for Health and Social Care to determine what progress his department has made in implementing the commitments in the UK's AMR National Action Plan.
- **Raise awareness** in Parliament of the pivotal role that a sustainable supply of antibiotics has in patient care and a functioning NHS, including in priority policy areas like cancer and respiratory disease.
- **Advocate** for dedicated funding and accountability measures in Government and the NHS to deliver on the UK's AMR policy commitments.
- **Explore Government analysis** on the likely success of the proposed antibiotic subscription model.

For more information, please contact:

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About the ABPI

The ABPI exists to make the UK the best place in the world to research, develop and use new medicines and vaccines. We represent companies of all sizes who invest in discovering the medicines of the future.

Our members supply cutting edge treatments that improve and save the lives of millions of people. We work in partnership with Government and the NHS so patients can get new treatments faster and the NHS can plan how much it spends on medicines.

Every day, we partner with organisations in the life sciences community and beyond to transform lives across the UK.

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