JSNA Gloucestershire 2022/23

Antimicrobial resistance (AMR)

Health ◊ Care ◊ Wellbeing

Antimicrobial resistance arises when an organism that causes infection changes and can survive treatments.

The term antimicrobial includes antibiotic, antiprotozoal, antiviral and antifungal medicines.

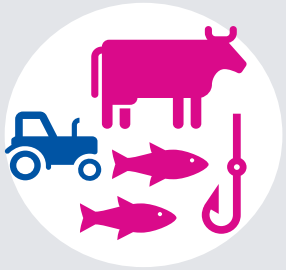
Antimicrobial resistance (AMR) has been identified as one of the most pressing **global challenges** we face this century.

In 2019 there were **4.95 million deaths** associated with **bacterial AMR** across **204 countries**, and **1.27 million** of those were directly attributed, leading the WHO to declare it a top global **public health threat.**[1]

CAUSES OF ANTIBIOTIC RESISTANCE[2]

Over-prescribing of antibiotics

Lack of hygiene and poor sanitation



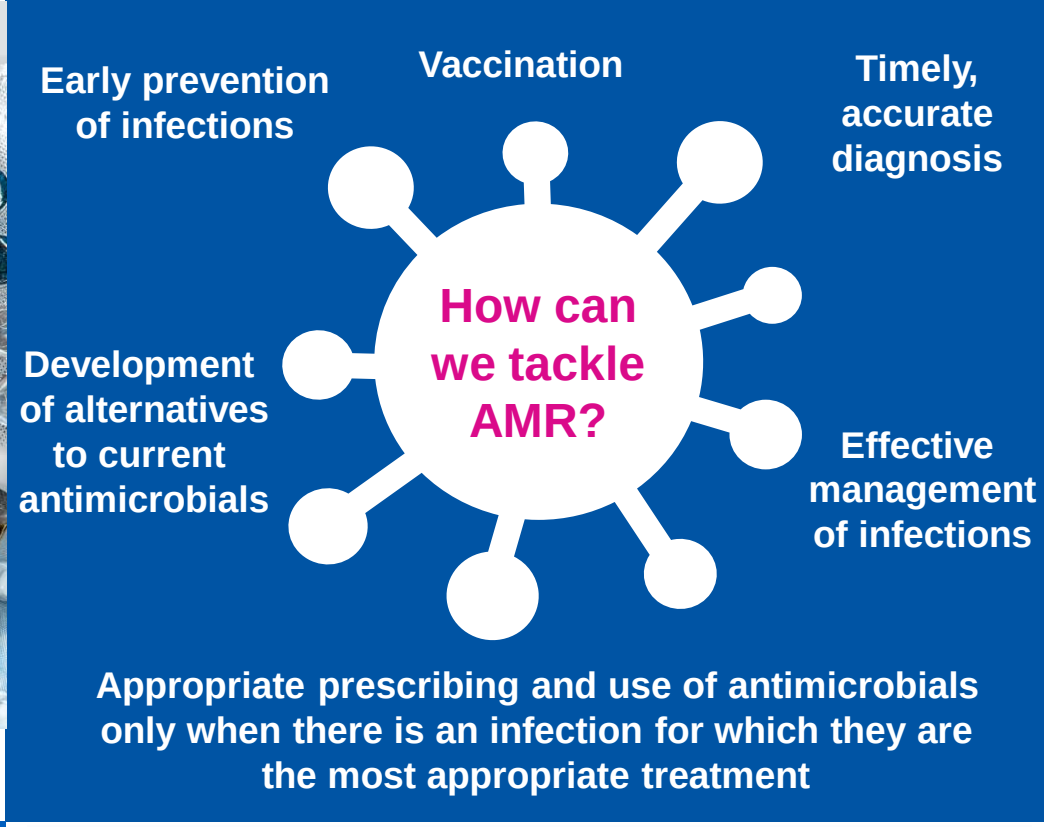
Over-use of antibiotics in livestock and fish farming

Patients not finishing their treatment

Lack of new antibiotics being developed

Poor infection control in hospitals and clinics

Watch our locally made video on AMR here.



Appropriate prescribing and use of antimicrobials only when there is an infection for which they are the most appropriate treatment

Click here to view the 'Caring for children with coughs' leaflet[3]

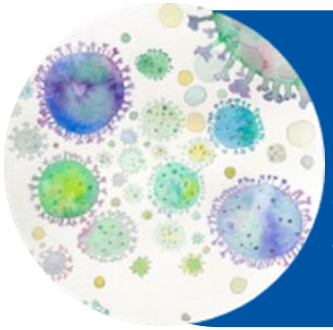
n Gloucestershire in March 2022 there were…

9.45%

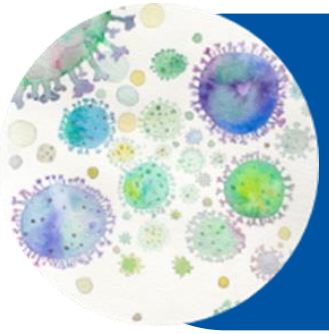
of **prescribed antibiotic items from cephalosporin, quinolone and co-amoxiclav** class on a twelve-month rolling percentage compared to 8.76% in England.[4]

0.75 per STAR-PU*

of **prescribed antibiotic items** (twelve-month rolling total number) which was better when compared to England at 0.80 per STAR-PU*.[5]



Rolling quarterly average for quarter 1* of 2023, the average proportion of **E.coli blood specimens resistant to any 1 of the key antimicrobials** was **73%** in Gloucestershire, compared to 34% in England[6]



The 2 year average between October 2021 to September 2023 for **E. coli completion of antibiotic information** in Gloucestershire was **10%** compared to England at 42.8%[7]


GPs
Can issue a delayed prescription that the patient can use at a later date if symptoms do not improve or get worse
Local Authorities
Should provide information on antimicrobial resistance to stakeholders, and work with CCGs to support the implementation of the NICE guidance
Pharmacists
Can educate patients about the importance of hygiene in reducing infection risk and encourage responsible use of antibiotics
Nurses
WE ALL HAVE A ROLE TO PLAY
Medical Royal Colleges & Health Education England
Undergraduate and postgraduate curricula should include topics on antibiotic use and resistance
Can educate the public with self-care advice and play a role in AMR stewardship
Review patients prescribed antibiotics at 48-72 hours and regularly thereafter
Hospital prescribers
Directors of Infection Prevention and Control
Should ensure that they have an active surveillance programme of antibiotic resistance and antibiotic use

What are we doing locally?

- Gloucestershire County Council and the Integrated Care Board produced a video aimed at young people advising on how to reduce AMR, winning an Antibiotic Guardian award in 2019. Watch here.
- Promotion of e-Bug lesson plans to teach about hygiene, microbes, vaccinations, and antimicrobial resistance from ages 3-16, through our Health Lifestyles and Learning Team (GHLL). e-Bug
- All Infection Prevention and Control leads in the county report into the Integrated Care Board 'Infection Prevention and Management Group'. This group has been recently put in place to provide strategic direction.
- An IPC audit and a self-assessment tool for care homes on approaches to hydration has been developed to help reduce the incidence of urinary tract infections in care home residents and identify opportunities for reducing transmission of respiratory and other infections in the home.
- Point of Care testing for a range of respiratory viruses is provided in primary care and in emergency departments to quickly identify pathogens and enable appropriate treatment and help avoid antibiotic prescribing for viral infections.

Areas of best practice

- The Gloucestershire Formulary provides clear guidance to primary and community care, and acute providers on prescribing for common infections Primary Care Antimicrobial Guidelines
- TARGET (which stands for Treat Antibiotics Responsibly, Guidance, Education and Tools). It is a toolkit designed to support primary care clinicians, prescribers and community pharmacy to champion and implement antimicrobial stewardship activities. This is promoted through the county, including to help manage patient expectations. TARGET antibiotics toolkit hub
- The Maximising Immunisation Uptake in Gloucestershire (MIUG) are a multi-agency steering group chaired by NHS England that meet regularly to monitor trends in uptake across a range of vaccination programmes and take action to increase uptake where needed, either through outreach, community engagement or communication activity.
- Clostridioides difficile (C. diff) is a type of bacteria that can cause diarrhoea. It often affects people who have been taking antibiotics. Nationally there has been an increase in the prevalence of C.difficile.

Gloucestershire has a system wide Clostridioides difficile infection (CDI) improvement group and action plan which aims to prevent CDI, optimise treatment to reduce the number of people who have relapse and/or recurrent infection and monitor CDI rates, learning from cases.

Key evidence

- Antimicrobial resistance (AMR) - GOV.UK (www.gov.uk)
- Public Health England's national campaign: Keep Antibiotics Working
- AMR 5 year National Action Plan (NAP)

DATA SOURCES: **1**. Antimicrobial resistance (who.int). **2.** Antimicrobial resistance (who.int). **3.** Childrens cough leaflet. **4**. Public health profiles - OHID (phe.org.uk). **5.** Public health profiles - OHID (phe.org.uk) **STAR-PU = Specific Therapeutic group Age-sex Related Prescribing Unit). STAR-PU is an adjusted rate that removes confounding effects of age and sex in the comparison of prescribing between different geographical areas. This method allows for more accurate comparison of prescribing. The aim is to reduce antibiotic use, as overuse and incorrect use are major drivers of antimicrobial resistance (AMR).* **6.** Public health profiles - OHID (phe.org.uk) **The Fingertips definition suggests this data is the average over the last four quarters "**Total number of test results** on initial E. coli positive blood specimens resistant to any 1 of the 5 key strategy antimicrobials for the most recent 4 quarters is aggregated and divided by 4; creating the average quarterly value across the last year. This value is divided by the average quarterly value for the number of susceptibility tests on initial E. coli positive blood specimens for all 5 of the key antimicrobials across the last year at **the specified geography**".* **7.** Public health profiles - OHID (phe.org.uk) although the 2 year average has been calculated by the GCC Data and Analysis **team.** **8.** Antimicrobial resistance (AMR): applying All Our Health - GOV.UK (www.gov.uk)