

## ESPAUR report infographics 2024 to 2025

ESPAUR:
English
Surveillance
Programme for
Antimicrobial
Utilisation and
Resistance

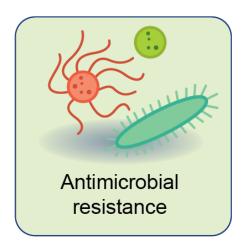
Over 30
member
organisations including
all UK nations,
government and
member organisations
and lay
representations

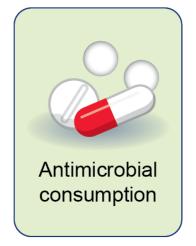
Multiprofessional and Multi-organisation group led by UKHSA ESPAUR Oversight Group reports since established in 2013

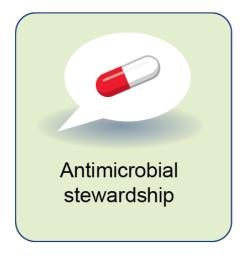
over 90 author contributions (2024-25 report) 106
UKHSA AMR
peer-reviewed
publications from
April 2024 to
March 2025

## **ESPAUR Report 2024-25**











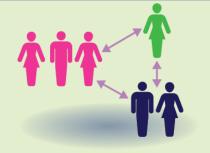
NHS England improvement and assurance schemes



Professional and public education, engagement, and training



Research insights and knowledge mobilisation



ESPAUR oversight group members' activities and actions to tackle AMR – mapping to the National Action Plan

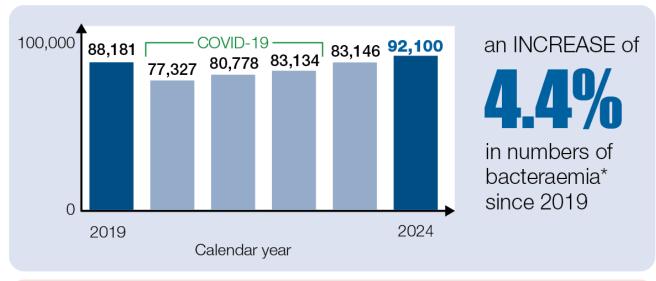


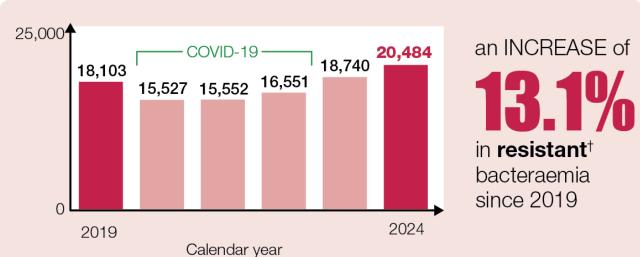
Knowledge mobilisation of ESPAUR report: evaluation of feedback from report users

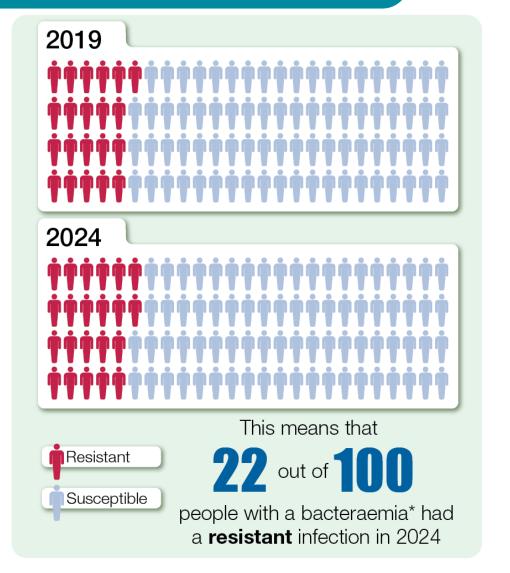


## Chapter 2: Antimicrobial resistance (AMR)

#### The burden of bacteraemia and resistant bacteraemia





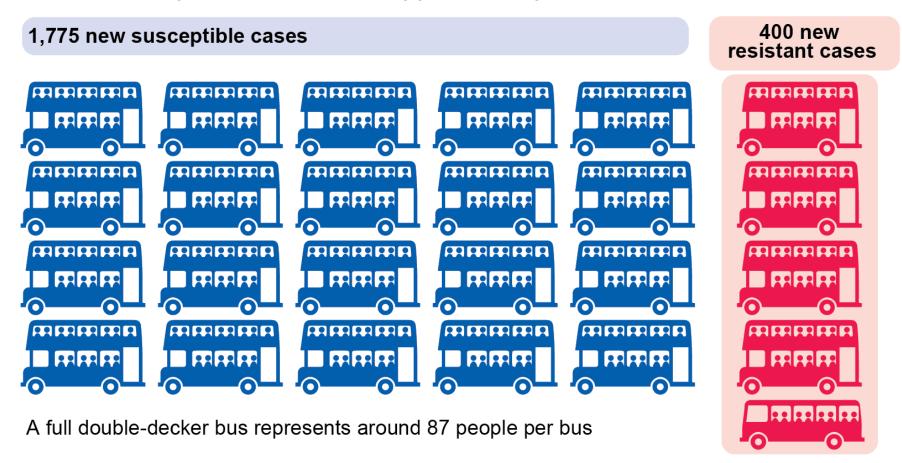


<sup>\*</sup> Pathogens include: E. coli, K. pneumoniae, K. oxytoca, Acinetobacter spp. Pseudomonas spp., Enterococcus spp., S. aureus and S. pneumoniae.

† E. coli, K pneumoniae and K. oxytoca: resistant to any of: carbapenems, third-generation cephalosporin, aminoglycosides or fluoroguinolones; Acinetobacter spp: resistant to aminoglycosides and fluoroquinolones, or carbapenems; Pseudomonas spp. resistant to three or more antimicrobial groups, or carbapenems; Enterococcus spp. resistant to glycopeptides; S. aureus resistant to meticillin; S. pneumoniae resistant to penicillin and macrolides, or penicillin.

### The burden of resistant<sup>†</sup> bacteraemia per week in England in 2024

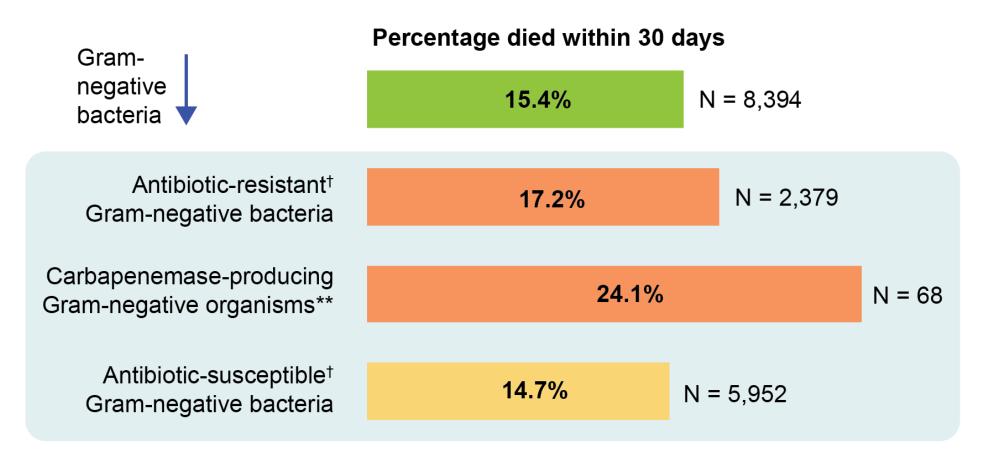
In 2024, every week there were approximately:



<sup>\*</sup> Pathogens include: E. coli, K. pneumoniae, K. oxytoca, Acinetobacter spp. Pseudomonas spp., Enterococcus spp., S. aureus and S. pneumoniae.

<sup>†</sup> E. coli. K pneumoniae and K. oxytoca: resistant to any of: carbapenems, third-generation cephalosporin, aminoglycosides or fluoroquinolones; Acinetobacter spp: resistant to aminoglycosides and fluoroquinolones, or carbapenems; Pseudomonas spp. resistant to three or more antimicrobial groups, or carbapenems; Enterococcus spp. resistant to glycopeptides; S. aureus resistant to meticillin; S. pneumoniae resistant to penicillin and macrolides, or penicillin.

# 30-day all-cause mortality of patients with Gram-negative bacteraemia\* in 2024

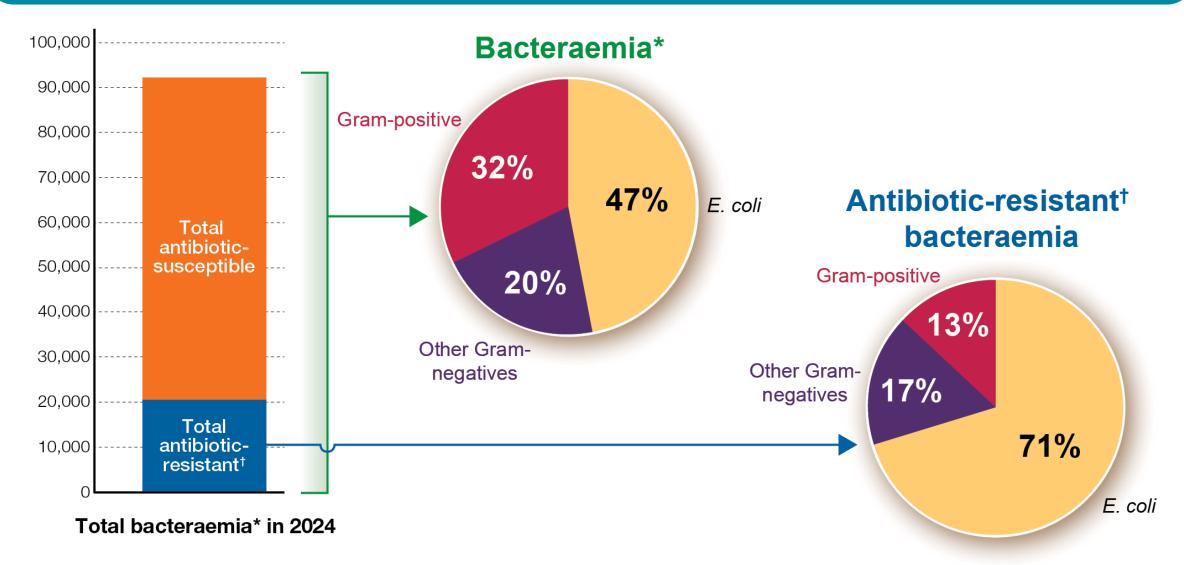


<sup>\*</sup>Pathogens include: E. coli, K. pneumoniae, K. oxytoca, Acinetobacter spp., and Pseudomonas spp.

The resistance combinations included are: *E. coli, K pneumoniae* and *K. oxytoca*, resistant to any of: carbapenems, third-generation cephalosporins, aminoglycosides, or fluoroquinolones; *Acinetobacter* spp., resistant to aminoglycosides and fluoroquinolones, or carbapenems; *Pseudomonas* spp., resistant to 3 or more antimicrobial groups, or carbapenems

<sup>\*\*</sup> Sterile site infections

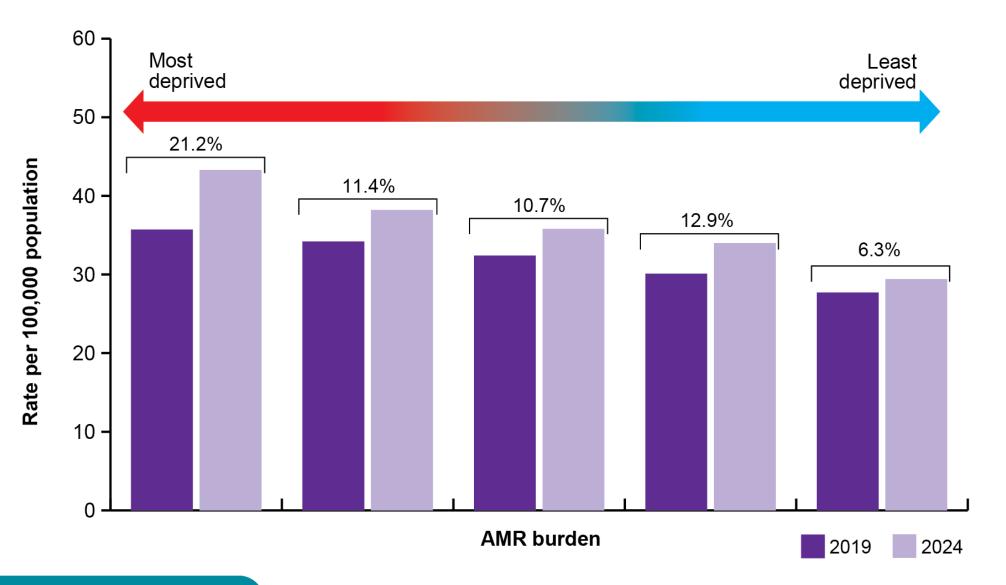
#### The burden of bacteraemia\* resistant to critically important antibiotics



<sup>\*</sup> Pathogens include: E. coli, K. pneumoniae, K. oxytoca, Acinetobacter spp. Pseudomonas spp., Enterococcus spp., S. aureus and S. pneumoniae.

† E. coli, K pneumoniae and K. oxytoca: resistant to any of: carbapenems, third-generation cephalosporin, aminoglycosides or fluoroquinolones; Acinetobacter spp: resistant to aminoglycosides and fluoroquinolones, or carbapenems; Pseudomonas spp. resistant to three or more antimicrobial groups, or carbapenems; Enterococcus spp. resistant to glycopeptides; S. aureus resistant to meticillin; S. pneumoniae resistant to penicillin and macrolides, or penicillin.

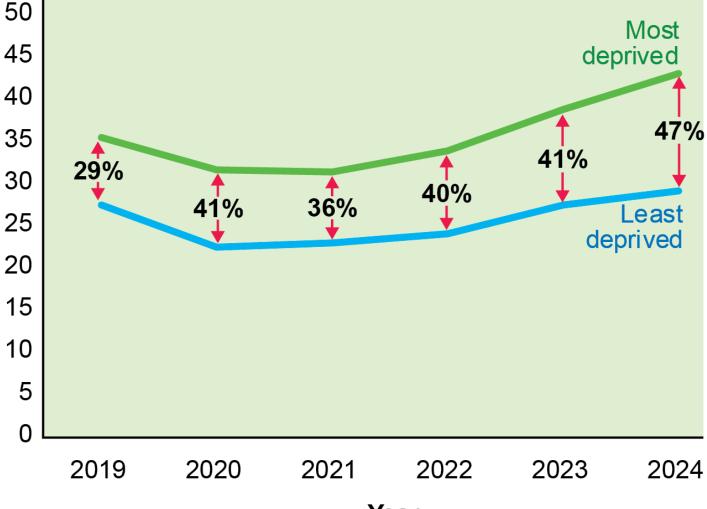
## Rate of resistant bacteraemia<sup>†</sup> per 100,000 population by Index of Multiple Deprivation in 2019 and 2024



- † The resistance combinations included are:
- E. coli, K pneumoniae and K. oxytoca, resistant to any of: carbapenems, third-generation cephalosporins, aminoglycosides, or fluoroquinolones;
- Acinetobacter spp., resistant to aminoglycosides and fluoroquinolones, or carbapenems;
- Pseudomonas spp., resistant to 3 or more antimicrobial groups, or carbapenems;
- Enterococcus spp., resistant to glycopeptides;
- S. aureus, resistant to meticillin;
- S. pneumoniae, resistant to penicillin and macrolides, or penicillin.

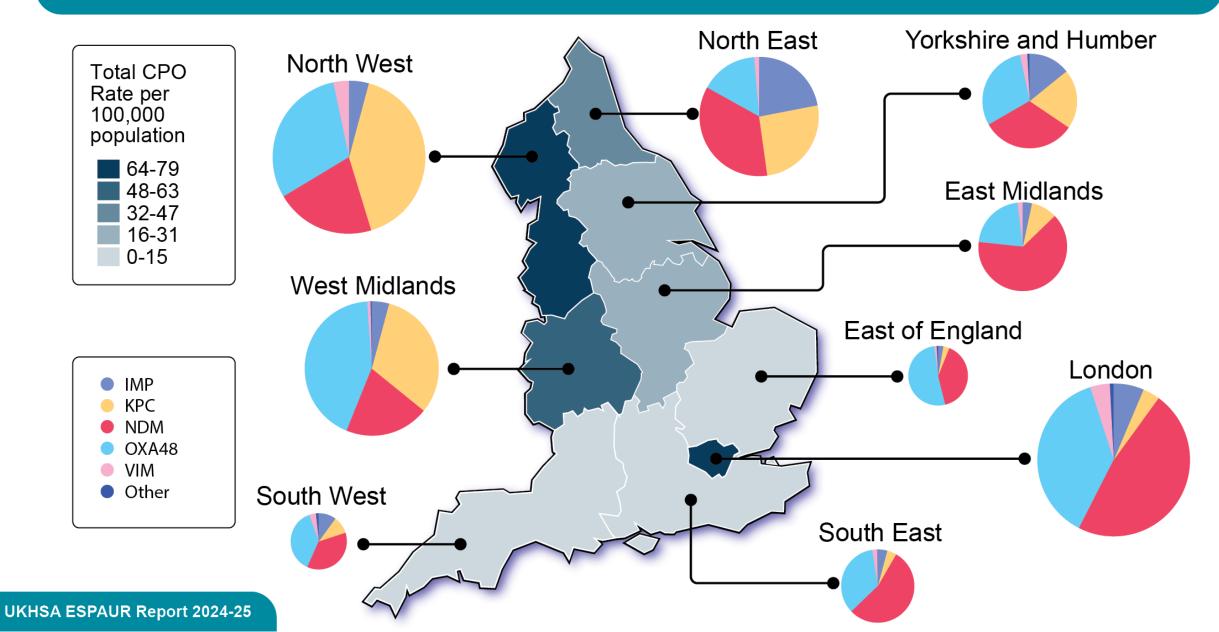
# Rate of resistant bacteraemia<sup>†</sup> by Index of Multiple Deprivation from 2019 - 2024

Rate of resistant bacteraemia per 100,000 population

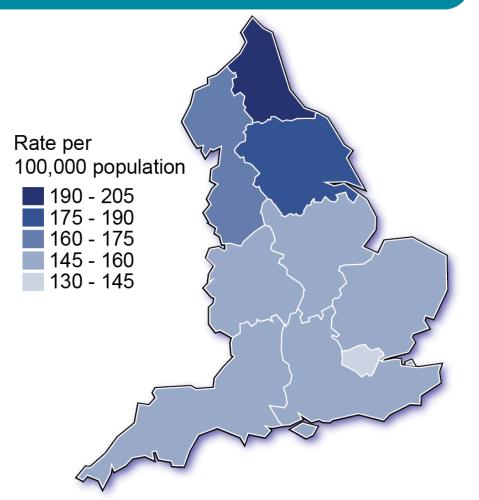


- † The resistance combinations included are:
- E. coli, K pneumoniae and K. oxytoca, resistant to any of: carbapenems, third-generation cephalosporins, aminoglycosides, or fluoroquinolones;
- Acinetobacter spp., resistant to aminoglycosides and fluoroquinolones, or carbapenems;
- Pseudomonas spp., resistant to 3 or more antimicrobial groups, or carbapenems;
- Enterococcus spp., resistant to glycopeptides;
- S. aureus, resistant to meticillin;
- S. pneumoniae, resistant to penicillin and macrolides, or penicillin.

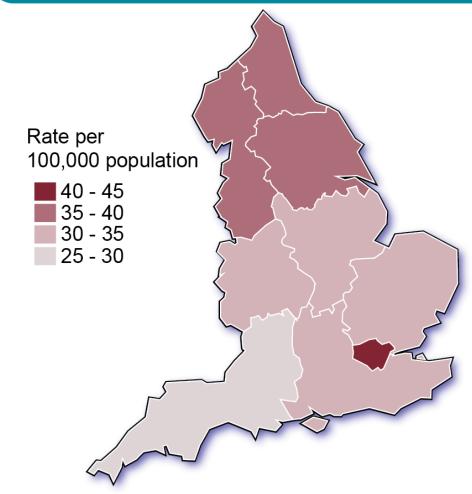
## Regional notifications per 100,000 population of acquired carbapenemase-producing organisms and proportion of carbapenemase mechanism in England, 2024



#### Estimated regional rate of bacteraemia\* per 100,000 population in England, 2024



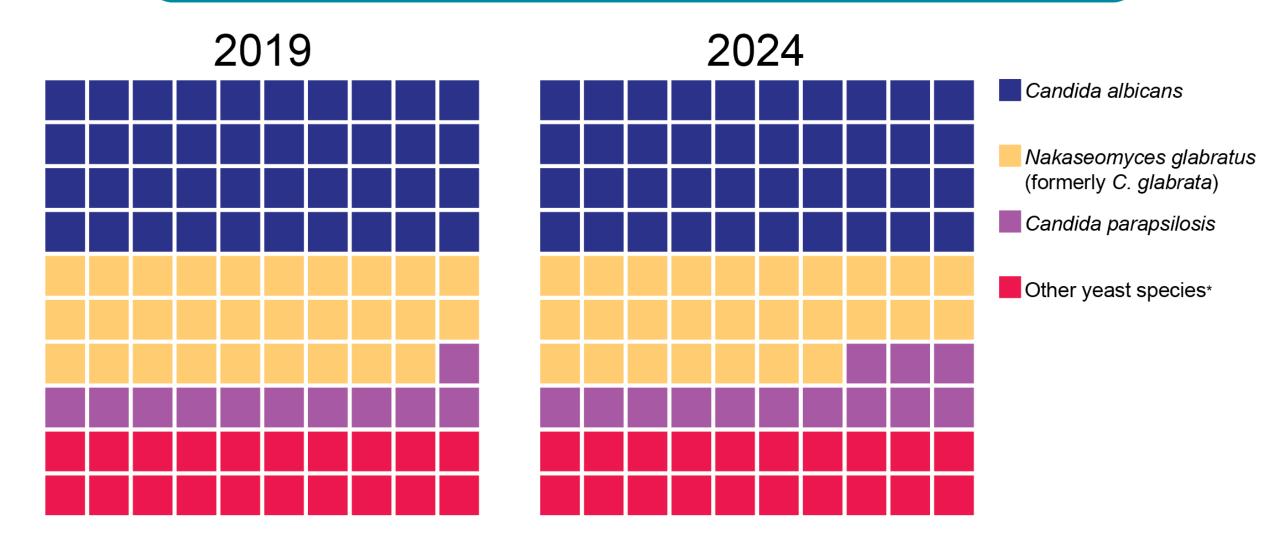
#### **Estimated regional rate of resistant** bacteraemia<sup>†</sup> per 100,000 population in England, 2024



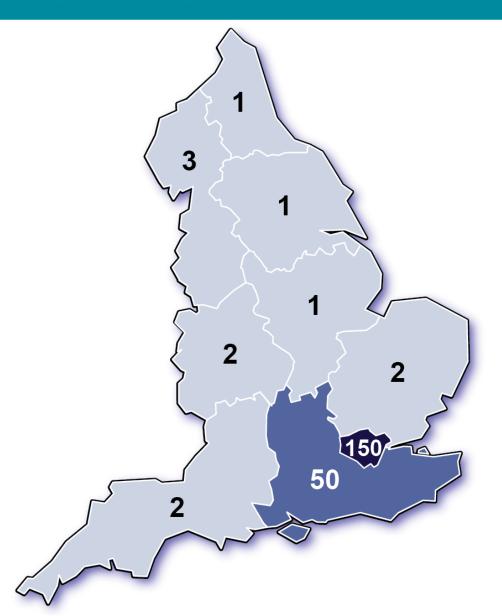
<sup>\*</sup> Pathogens include: E. coli, K. pneumoniae, K. oxytoca, Acinetobacter spp. Pseudomonas spp., Enterococcus spp., S. aureus and S. pneumoniae.

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### Fungaemia due to yeast species - 2019 and 2024



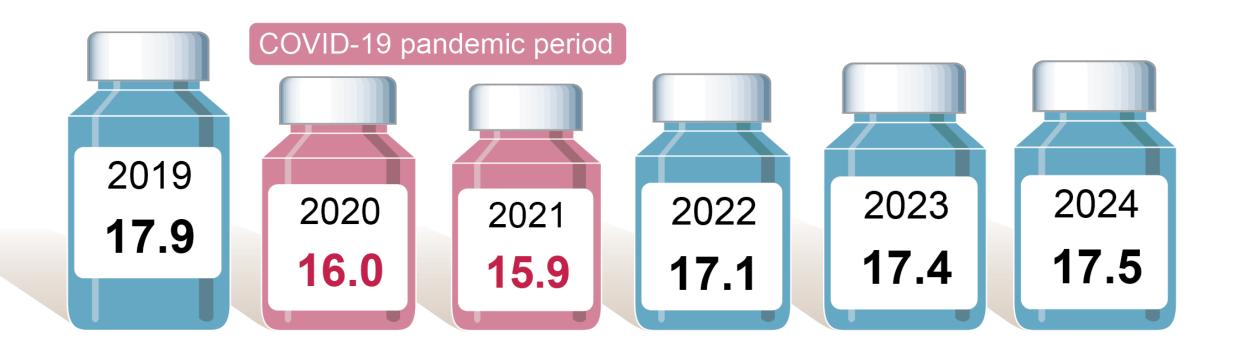
# Detections of *C. auris* in patients in England by UKHSA region; 2024





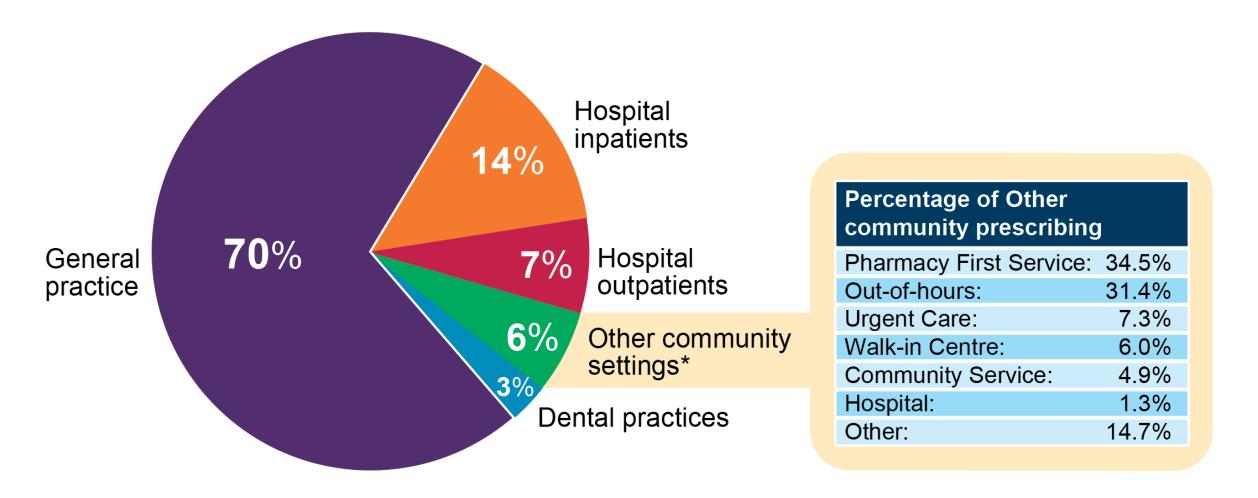
## Chapter 3: Antimicrobial consumption

# Total consumption of antibiotics increasing towards pre-pandemic levels



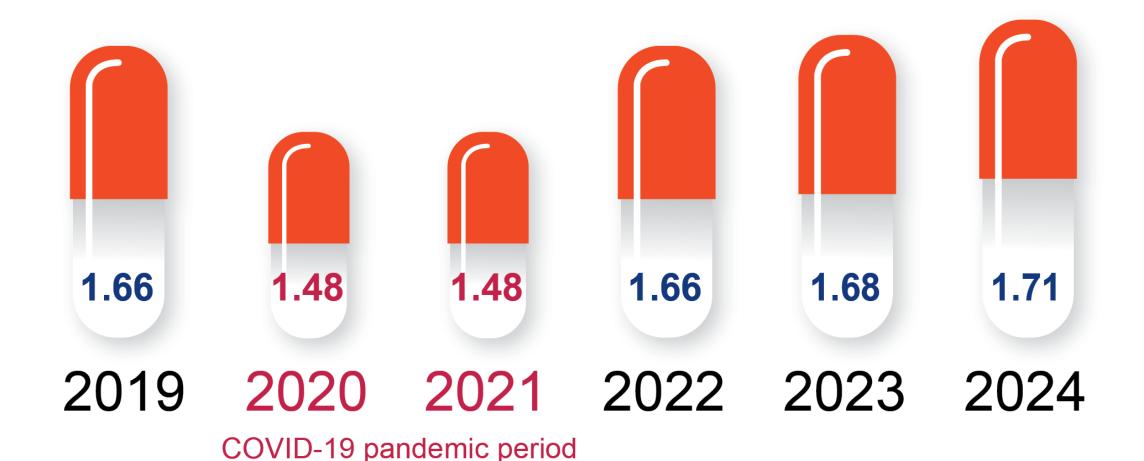
(DDDs per 1,000 inhabitants per day)

# Total antibiotic use in the NHS, by prescriber setting as a proportion of overall prescribing, England 2024



<sup>\*</sup>Other community settings now includes the Pharmacy First service

#### Antibiotic consumption in primary care from 2019 to 2024



(Items per 1,000 inhabitants per day)

# Antibiotic consumption through private (non-NHS) routes has continually increased

Antibiotic consumption in the independent sector (DDDs per 1,000 inhabitants per day)





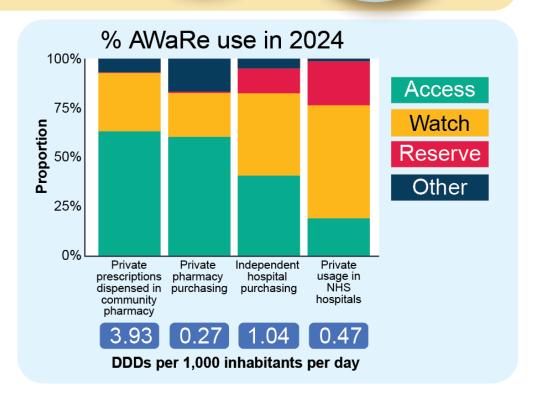
Usage across the independent sector i.e via private (non-NHS) routes includes data on sales to private hospitals and private pharmacies, private prescriptions dispensed in community pharmacies, and private prescription in NHS hospitals

2024: 5.71 DDDs per 1,000 inhabitants per day (DID)

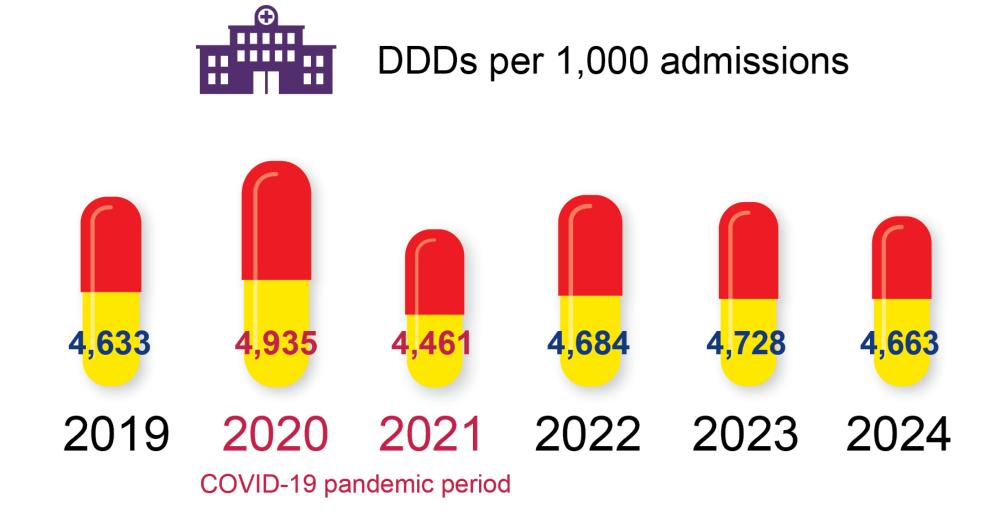
Dispensing Purchasing
4.40 DID 1.31 DID

22% NHS
Primary care

In 2024, 22% of primary care prescribing was from private prescriptions dispensed in community pharmacies



### Antibiotic prescribing in secondary care from 2019 to 2024



## Being AWaRe

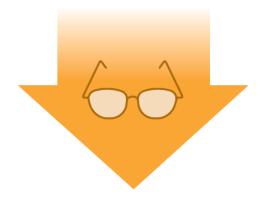
### Access



First and second choice antibiotics for treating the most common infections.

Includes: amoxicillin for pneumonia and penicillin for Streptococcal sore throat

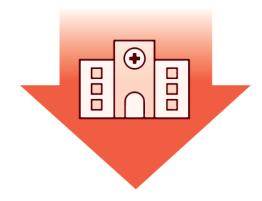
### Watch



Antibiotics with increased toxicity concerns and higher resistance potential, that should only be prescribed for specific indications to minimise unnecessary harm to patients and costs to health care systems

Includes: ciprofloxacin in the treatment of complicated UTI

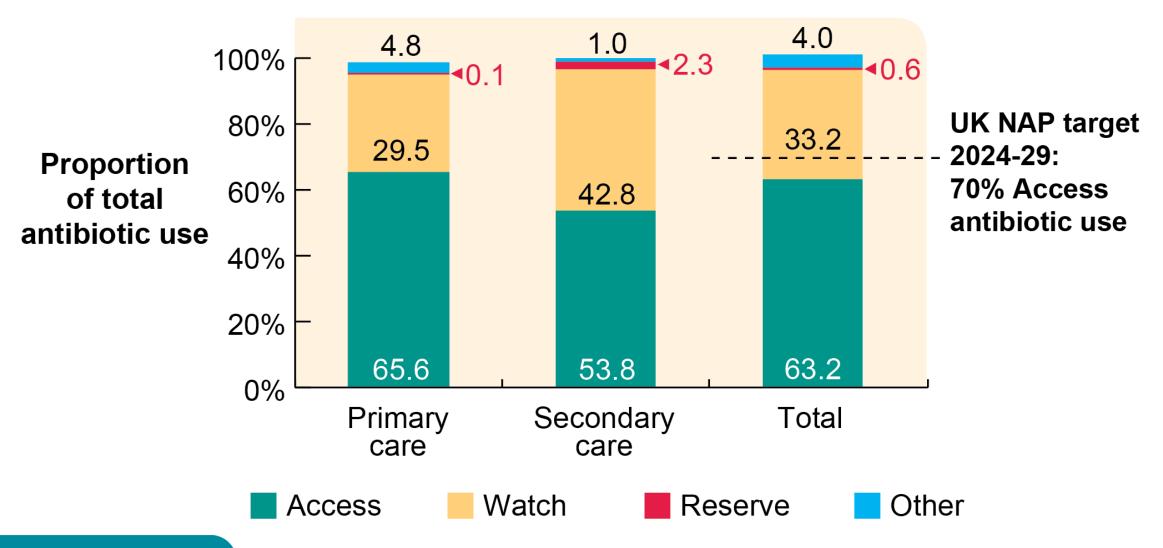
### Reserve



Antibiotics that are last-resort options that should only be used in severe circumstances, when other options have failed.

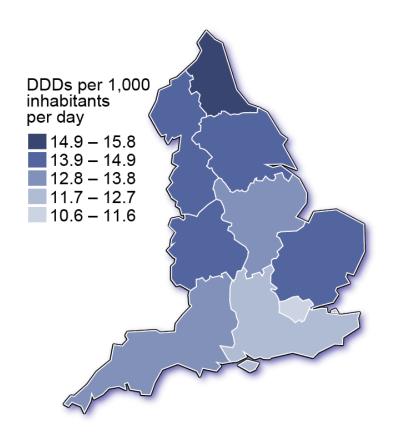
Includes: colistin and IV parenteral fosfomycin

## Proportion of AWaRe antibiotic use across the NHS (primary and secondary care), in 2024 (using the 2024 UK AWaRe classification)

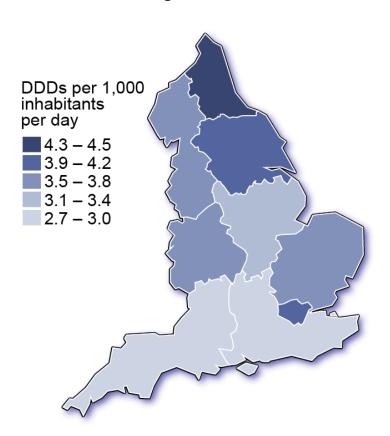


#### England regional variation in antibiotic consumption, across the NHS

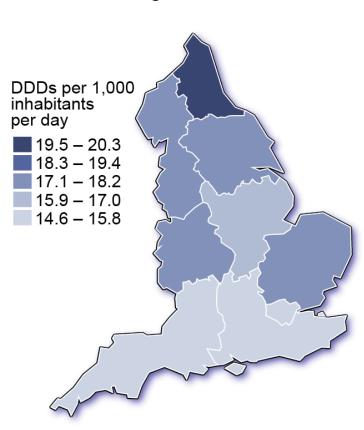
Primary care antibiotic use in UKHSA centres across England in 2024



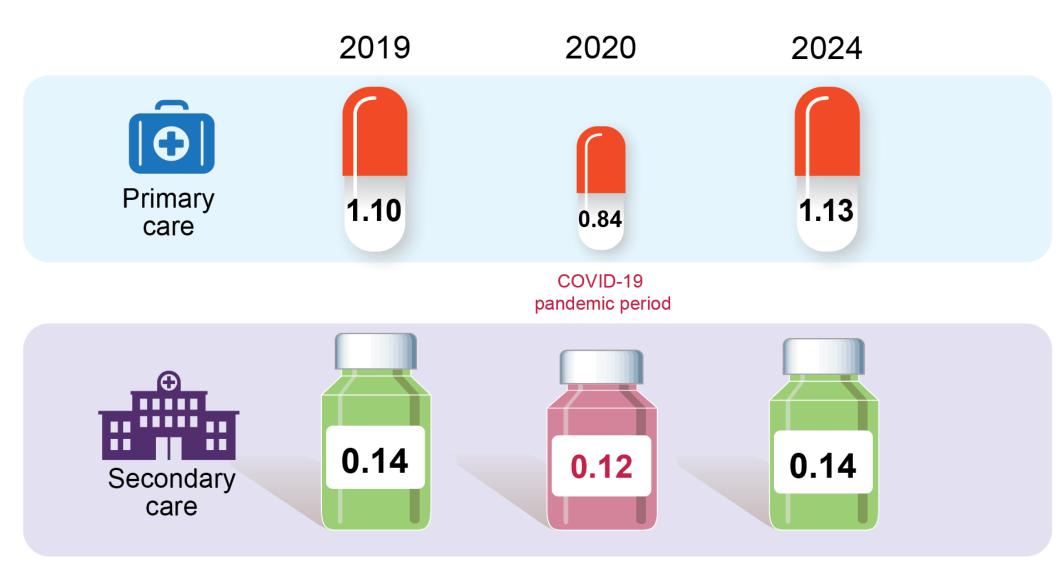
Secondary care antibiotic use in UKHSA centres across England in 2024



Total antibiotic use in UKHSA centres across England in 2024

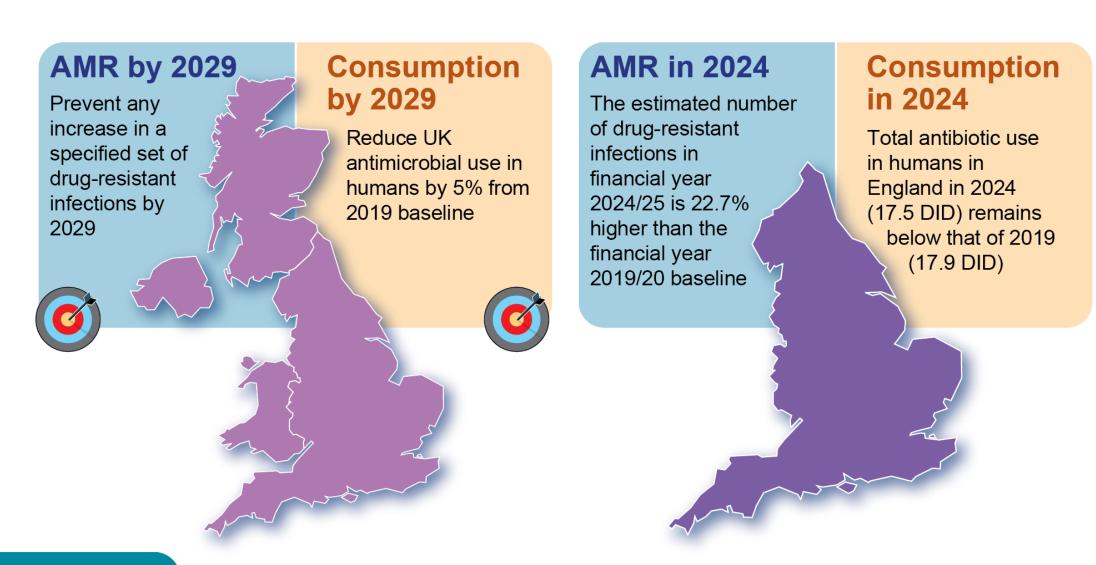


### Consumption of antifungals in primary and secondary care



(DDDs per 1,000 inhabitants per day)

#### **UK National Action Plan ambitions and England progress**





## Chapter 4: Antimicrobial stewardship

### Using TARGET tools throughout the stewardship process

### **Review**

Assess the impact on antimicrobial prescribing

Evaluate the impact of your actions using TARGET self-assessment checklists and audit templates to guide the review process

Act

Take proactive steps to enhance stewardship

Support consultations and promote good stewardship by using TARGET posters and patient information leaflets. A whole-practice approach is encouraged



### **Identify**

Regularly measure antimicrobial prescribing and actions plans

Use the TARGET action plan template to set practice goals and regularly monitor antimicrobial prescribing with audit toolkits

#### Learn

Stay informed on the latest evidence, refresh knowledge on area identified for improvement

Stay up to date with the latest evidence using NICE summary guidance in the TARGET toolkit. Refresh knowledge through training tools, webinars, eLearning courses and podcasts, focusing on areas identified for improvement

#### **TARGET** activities 2024 to 2025



Published updated patient information leaflets following an evidence review and redesign



Published new resources for managing patients on long-term antibiotics for recurrent UTI





UTI pre-consultation survey accessed by over **191,000** people

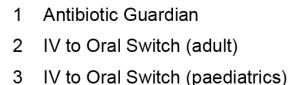


WAAW campaign reached over **45,000** RCGP members and viewed over **1.2 million** times on Google and social media

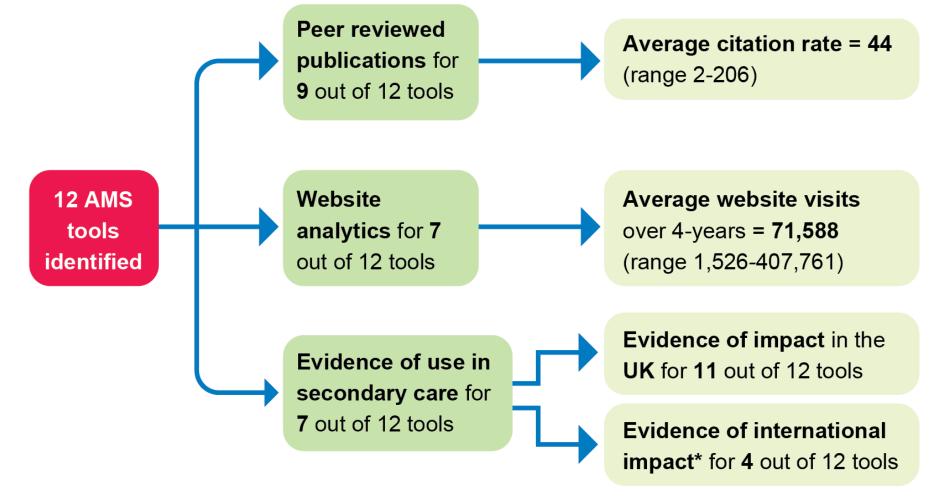


Ran three webinars with a combined total of **577** live attendees and **374** online views

# Summary of findings from an evaluation of UKHSA AMS tools to support secondary care in England



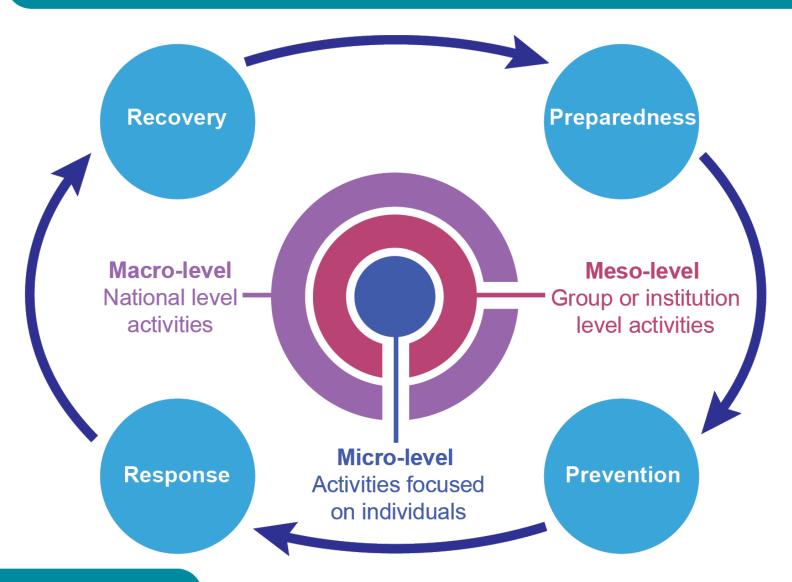
- 4 Fingertips AMS portal
- 5 Prescribing competencies
- 6 ESPAUR report
- 7 WAAW toolkit
- 8 National audit tool
- 9 National AMS surveillance system
- 10 Peer to peer review tool
- 11 Start Smart then Focus toolkit
- 12 England AWaRE categories



<sup>\*</sup> Impact was defined as: Evidence of the tool influencing national or international AMS policy/guidelines or other tools

Berry R and Ashiru-Oredope D. Evidence of impact of national stewardship tools for secondary care in England. 2025

# Summary of the WHO emergency cycle and levels of public health activities undertaken by pharmacy professionals



Infectious disease outbreaks and subsequent high use of antimicrobial treatment can be a driver for AMR. Pharmacy professionals are well placed to undertake pharmaceutical public health roles in the management of outbreaks as part of the WHO emergency cycle, including AMS activities. These activities can be at micro- meso- or macro- levels.

Berry R, Wilkinson A, Turk A, Ng B.Y, Pinkney S, Halai B, Emoche A, Thornley T and Ashiru-Oredope D. Pharmacy professionals' contribution to the prevention, preparedness, response, and recovery of non-COVID outbreaks: a rapid systematic review. 2025

## What indicators are used to estimate or measure appropriateness of antibiotic prescribing in high-income countries: a rapid systematic review

154 studies identified in initial results:

- 119 discussed general indicators
- 35 discussed proxy indicators
- results highlight complexity of defining appropriateness of prescribing
- guideline compliance, drug choice for indication, correct dose and appropriate duration are common indicators used
- these recurring themes reflect core principles of antimicrobial stewardship

GENERAL

EXAMPLES

**PROXY** 



## Antibiotic consumption data

- defined daily doses (DDDs) per patient
- % of AWaRe categories
- antibiotic diversity

### Prescription information

- duration or days of therapy
- seasonal variation

## Prescription information linked to diagnostic coding

- proportion of 1st line antibiotic prescribed for a diagnosis
- appropriate duration of treatment for a diagnosis

### Patient level data required

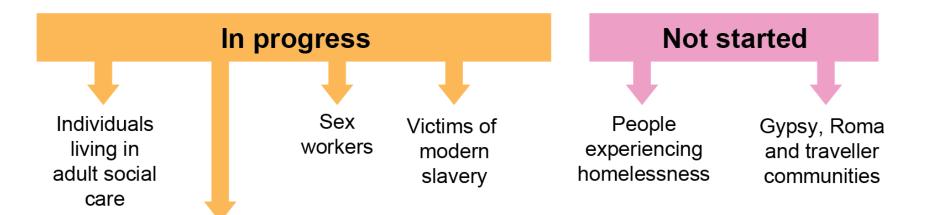
- prescribing vs no prescription
- diagnostic test was carried out
- appropriate for age, diagnosis, gender, pregnancy status

<sup>\*</sup> Berry R, Magrini E, Medioli F, Caris MG, Kherabi Y, Ng BY, Catteau L, Peiffer-Smadja N, Murri R, De Boer M, Ashiru-Oredope D and ESGAP. Measuring appropriateness of antibiotic prescribing in high income countries: a rapid systematic review of indicators. 2025.

# Rapid systematic reviews of inclusion health groups and adult social care

## Submitted for publication

Individuals in contact with the justice system



### Antimicrobial use, antimicrobial resistance and relevant antimicrobial stewardship interventions in people who use drugs

Assessing antimicrobial use, antimicrobial resistance and relevant antimicrobial stewardship interventions in people who use drugs

1765 abstracts identified

Screened in duplicate

103 articles identified for full text review

47 papers ultimately eligible for final inclusion

Screening of meta-analyses and systematic reviews to identify relevant additional papers Synthesis of findings ongoing

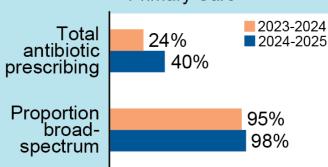


# Chapter 5: NHS England – improvement and assurance schemes

# NHS England Improvement and Assurance Schemes 2024 to 2025 – Antimicrobial Stewardship

#### **NHS Oversight Framework**

Percentage of ICBs meeting NHS Oversight Framework Targets for Primary Care



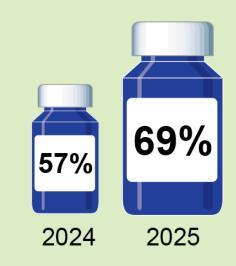


1,221,553

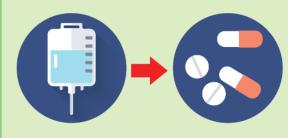
fewer general practice antibiotic prescription items compared to the previous 12 months to 31 March 2024.

#### **National Medicines Optimisation Opportunities**

Optimising antibiotic duration: proportion of amoxicillin 500mg capsules 5-day courses in Primary Care continues to improve



Prompt switching of intravenous to oral antibiotics (non-mandatory CQUIN)



First year of expansion to include paediatrics in 24/25

**24%** of hospital trusts participated

50% of trusts met the threshold of having 15% or fewer patients receiving IV antibiotics past the point at which they meet switch criteria

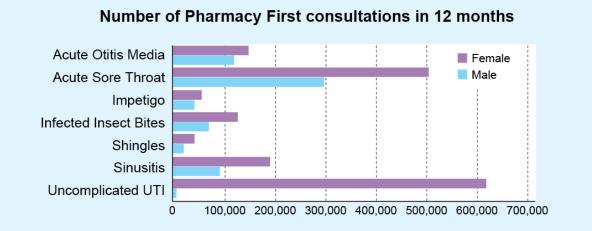


**50%** of trusts reduced their Watch / Reserve antibiotic consumption

36% of trusts achieved 10% or more reduction compared to 2017 baseline – an improvement from 23% in 2023 to 2024

#### Pharmacy First – 12 months April 2024 to March 2025

#### 7 Common Infection Clinical Pathways



Over 2.3million consultations delivered to over 2.2million patients



45% to 85% of consultations had an antimicrobial supplied



97%
of all consultations were face to face



Children aged 0-14 years accounted for 21% of all Pharmacy First consultations

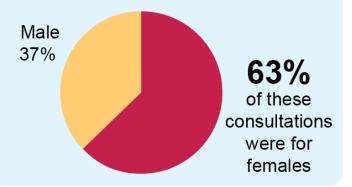
#### Effective analgesia

Acute Otitis Media accounted for half of the consultations for children aged 0-14 years. 30% of consultations were supplied antibiotic-sparing analgesic anaesthetic ear drops.



## Shining a light on gender differences

The largest number of consultations was for **Acute Sore Throat** (n=806,491)



## Improving timely access to appropriate treatment

About 600,000 women aged 16 to 64 years consult the Uncomplicated Urinary Tract Infection pathway

each month with 4 in 5 women supplied an immediate antibiotic



# Capability Framework for Antimicrobial Stewardship (AMS) Specialists

#### Domain 1: Professional practice

Provides specialist AMS knowledge, skills and practices to shape and deliver AMS in their organisation and healthcare system, for the benefit of individual patients and services; collaborating with other patients, and the public

Domain 2: Leadership and management

Provides leadership across organisations and systems to optimise the management of infections and use of antimicrobials; leading on complex issues relating to AMR and behaviours driving antimicrobial use

#### **Domain 3: Education**

Develops and improves the knowledge, attitudes, and practices of others regarding the optimal use of antimicrobials; and uses their own professional development to improve AMS programmes and patient care.

#### Domain 4: Research and Quality Improvement

Co-ordinates and surveillance and monitoring of antimicrobial use across services, organisations, and systems; and develops and applies evidence to improve AMS programmes and interventions and optimise the use of antimicrobials.

Capability statements and descriptors of practice for core, advanced and expert to guide users through benchmarking and professional development

Applicable to healthcare professionals specialising in AMS from all professional backgrounds working in all sectors of the NHS





#### Associated resources:

- Job descriptions
- Person specifications
- Job plans

#### Core

(enhanced)
Supports the
delivery of
AMS activities

#### Advanced

Delivers and develops AMS programmes and activities

#### **Expert**

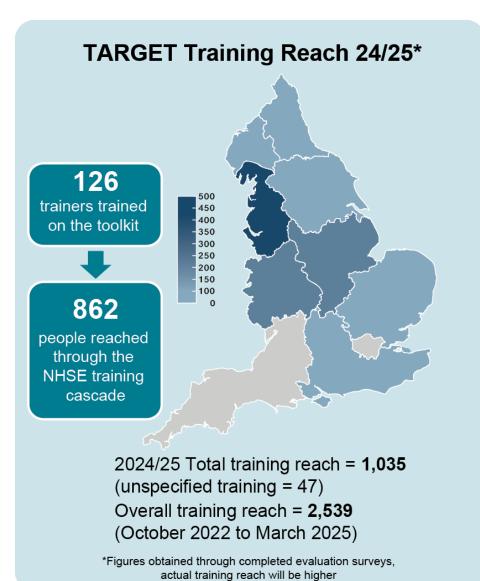
Leads and is responsible for AMS programmes

Signposting to educational resources for AMS knowledge and skills to support practitioners to move from core to advances and expert advice

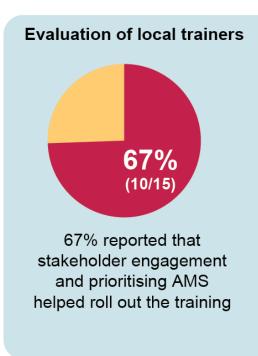


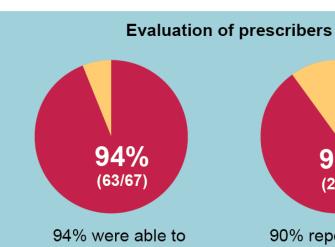
# Chapter 6: Professional and public education and training

### **TARGET Training Roll Out: Reach and Evaluation**



### Local implementation





implement the

strategies planned



antibiotic prescribing

per 1,000 patients

### Impact on prescribing at ICB level:

**1.2% decrease** in prescribing rate following training per ICB

Estimated monthly savings across England = £317,375



### **TARGET and RCGP AMS Webinars**



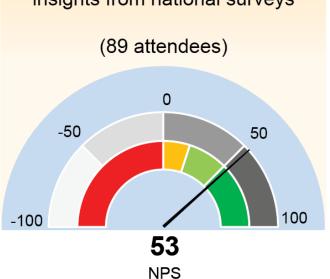


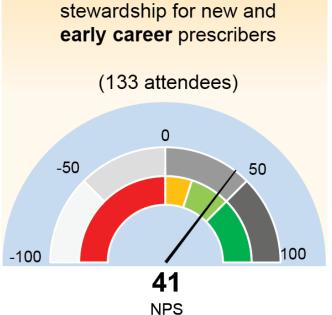
NPS is a metric used to measure customer satisfaction.

Attendees rated each webinar on a scale from 0-10: 0-6 = detractors (-1); 7-8 = passives (0); 9-10 = promoters (+1). NPS is the total sum of all responses.

Patient perceptions of infections & antibiotics:
Insights from national surveys

Navigating antimicrobial stewardship for new and early career prescribers





-100-0 = Needs improvement

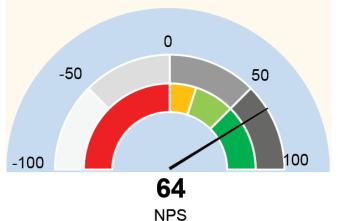
0-20 = Good

20-50 = Great

●50-100 = Excellent

Managing recurrent UTI and reviewing long-term and repeat antibiotic therapy

(355 attendees)



## e-Bug topics across key stages

### EYFS 3-5yrs KS1 5-7yrs

**KS2** 7-11yrs





KS3 11-14yrs

KS4 14-16yrs





	EYFS	KS1	KS2	KS3	KS4
Introduction to Microbes					
Useful Microbes					
Harmful Microbes					
Hand Hygiene					
Respiratory Hygiene					
Oral Hygiene					
Food Hygiene					
Animal and Farm Hygiene					
Sexually Transmitted Infections					
Vaccinations					
Antibiotics					
Antimicrobial resistance					

### e-Bug engagement 2024 to 2025



Over 128,000 views on the e-Bug website





# Newsletter

Quarterly newsletter distributed to 10,000 subscribers



### **Social Media**

Reached over 3,000 followers on X and over 288,000 views on YouTube



### **Global Reach**

Partnered with a further seven countries



### **Training**

Two e-learning courses hosted on FutureLearn

### **Antibiotic Guardian pledges**

### 190,648\*

Antibiotic Guardian pledges on main pledge page from inception (2014) to end of 2024



### 17,053

International pledges on main pledge page, African subpages and translated subpages

### 104

Organisations registering AMS activity through Antibiotic Guardian in 2024



### 194

Countries represented in international pledges

### 75

Entries to the Antibiotic Guardian Shared Learning Awards in 2024





<sup>\*</sup>There are over 200,000 pledges including pledges made on the main and on international pages

### **International Antibiotic Guardian pledges**





TOTAL PLEDGES (29/08/25) 212,741

ETHIOPIA

KENYA

International Pledges (31/12/2024) 17,053

### African AGs registered on the Africa Subpages (n=3,882)



67.7% were healthcare professionals

#### Other categories include:



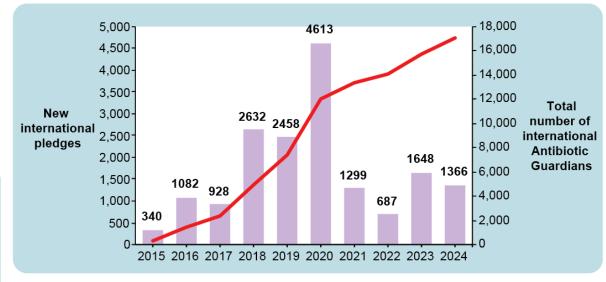
Students 21.1%

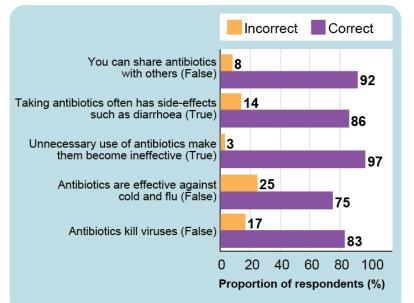


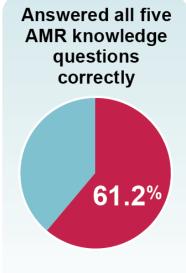
Farmers 10.8%



Citizens 0.4%









2,084

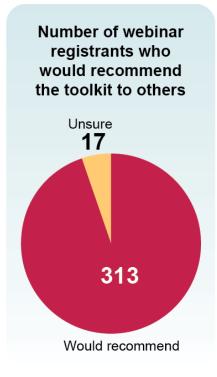
### National World AMR Awareness Week (WAAW) Toolkit Evaluation

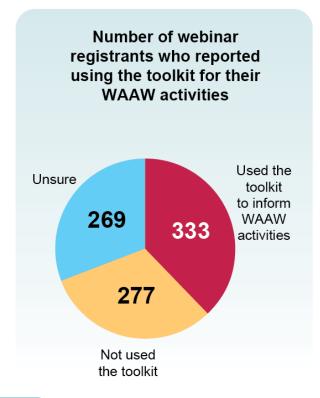
World AMR Awareness Week (WAAW) **Toolkit views** 

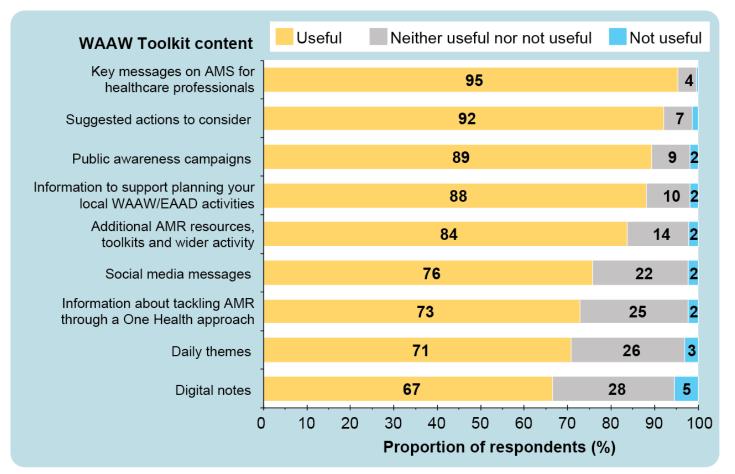
2024 **4,061** 2023 **963** 

**Social media posts** 

#WAAW = 1,513 #KeepAntibioticsWorking = 962 #AntibioticGuardian = 340 WAAW webinar906 registrants



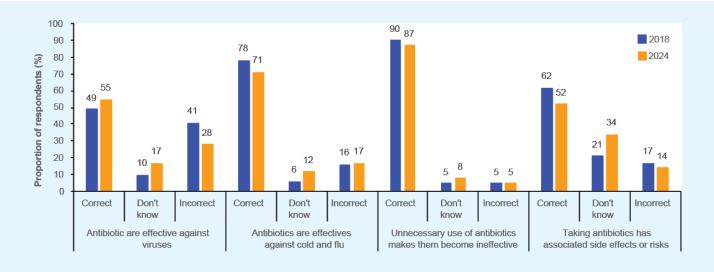




# By 2029, we aim to increase UK public and healthcare professionals' knowledge on AMR by 10%, using 2018 and 2019 baselines, respectively

### **Public Survey Methods**

Ipsos conducted an online questionnaire as part of a routine survey across the UK.
Representativeness of the sample was ensured in 2024 by using quotas set on age, gender, region and working status and weighting.
Results were compared to findings from the 2018 Eurobarometer questionnaire.



% of people answering all four questions correctly

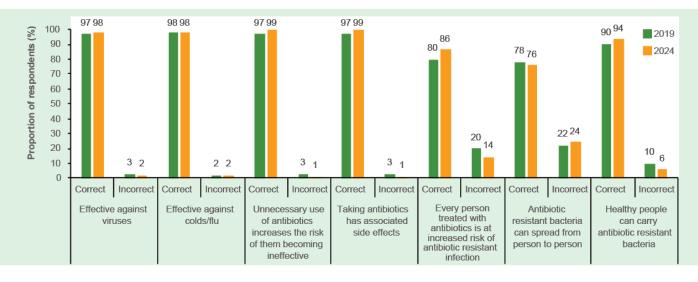
2018 - 29%

2024 - 28%

#### **HCP Survey Methods**

A previously EU-wide validated online survey tool was used to survey HCPs across 30 EU/EEA countries, including the UK, between 28 January and 4 March 2019, and repeated in the UK between 1st and 18th March 2024. Patient-facing HCPs from the four UK nations participated.

Tang et al. JAC-AMR, Under review. 2025



% of people answering all seven questions correctly

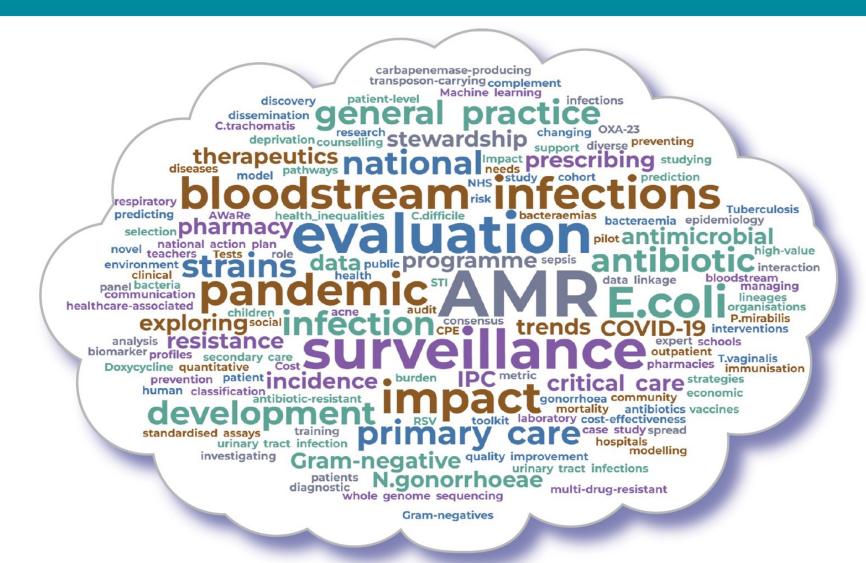
2019 - 59%

2024 - 63%



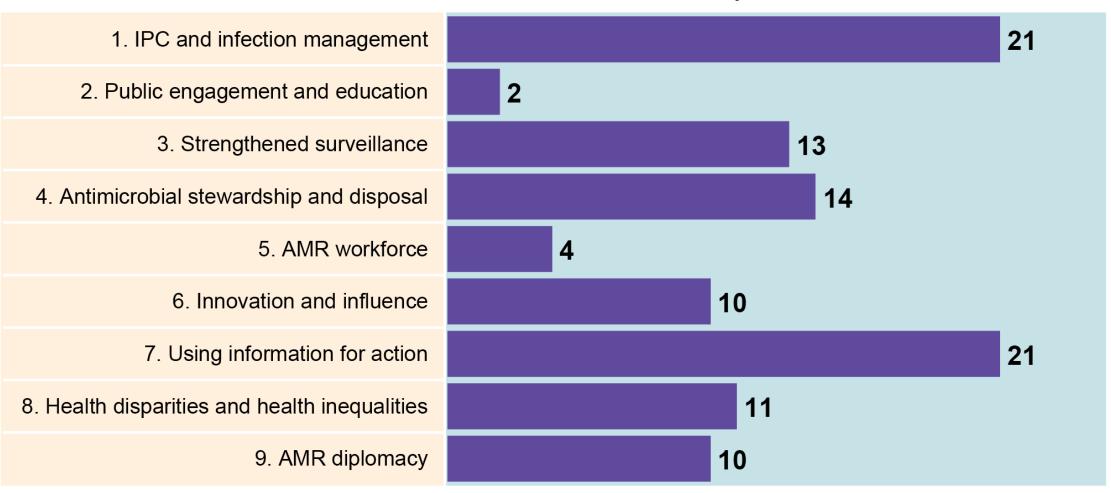
# Chapter 7: Research insights and knowledge mobilisation

# Word cloud representation of keywords for the research projects showcased in 2024-2025 Research insights and knowledge mobilisation chapter



# AMR peer-reviewed publications from April 2024 to March 2025 by UK National Action Plan for AMR 2024-29 outcome

### **Number of publications**



# Examples of current research projects for the UK National Action Plan for AMR 2024-29 top 10 research priorities

### What is the cost of AMR?

Cost and clinical impact of IPC measures for CPE in hospitals: a cost-effectiveness model

# What is the relationship between AMR and health disparities?

Health inequalities in incidence of bacteraemias: a national surveillance and data linkage study, England, 2018 to 2022

# How to influence public awareness and behaviour on AMR?

Exploring community
pharmacy professionals and
general practitioners' views
on primary care
communication and
pathways to access
antibiotics in England

#### How to address AMR in international settings?

Novel vaccines and therapeutics for Tuberculosis and other respiratory diseases

# What are the basic drivers and effects of AMR, and how does it spread?

Dissemination of OXA-23 carbapenemase-producing *Proteus mirabilis* and *Escherichia coli* is driven by transposon-carrying lineages in the UK

Research to better understand how the built environment contributes to the spread of infection

## How can we prevent AMR from spreading?

Preventing and managing urinary tract infections:
Exploring interventions and strategies implemented by NHS commissioning organisations in English primary care, 2017–2022

### How can we optimise the use of antimicrobials?

Adaptation of the WHO AWaRe (Access, Watch, Reserve) antibiotic classification to support national antimicrobial stewardship priorities in the UK

# What methods can be used to prevent, treat and manage infections without antimicrobial medicines?

Predicting the impact of RSV immunisation on antibiotic use and resistance: a modelling and economic analysis for England

# How can we drive innovation of new products for tackling AMR?

Development of
High-Value
Biomarker
Diagnostic Tests for
Hard-to-Diagnose
Infections

# How can we ensure what is known to work is implemented?

Mixed-method impact and implementation evaluation of the 'Pharmacy First' services for management of common conditions

# Examples of Health Protection Research Unit (2020-2025) projects generating public health and patient impact

### **OXFORD UNIVERSITY**

HPRU COVID -19 response: supporting Pillar 1, Pillar 2, Pillar 3 and Pillar 4 of the Government's response

> Lateral flow devices detect asymptomatic COVID -19



The SARS-CoV-2 Immunity and Reinfection Evaluation (SIREN) study

Providing SARS-CoV-2 bioinformatics to the world: Global Pathogen Analysis Service (GPAS) National
carbapenemase
producing
Enterobacterales
admission screening
strategies informed by
model-based evaluation

Network analysis and mathematical modelling informing sentinel -based whole genome sequencing surveillance of novel *C. difficile* strains

Using genetics to diagnose and treat tuberculosis

Innovative dashboard to identify unknown data quality artefact that was creating misleading trends in AMR

Implementation of point of-care tests to reduce antibiotic prescribing in primary care

Using sequencing of bacteria routinely undergoing public health surveillance to understand why Enterobacteralescause bloodstream infection





National definition development and surveillance of hospital onset COVID infection surveillance

Whole genome sequencing of outbreak of GES-5–positive *K. oxytoca*  The impact of COVID -19 on antimicrobial use, infection, and AMR

Investigation of new multidrug resistant C. striatum infection during the COVID -19 pandemic Development of optimised prescribing tools using machine learning and synthetic outcome estimation for antimicrobial cessation Data linkage and machine learning to identify healthcare associated bloodstream infections caused by common skin commensals

Genomic investigation of the emergence of healthcare associated drug-resistant pathogens occurring during the COVID -19 pandemic Portable molecular diagnostic platform for rapid point-of-care detection of infectious diseases

Use of artificial intelligence to improve intravenous to oral antibiotic switching in hospitalised patients

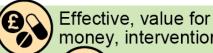
### **IMPERIAL COLLEGE LONDON**

## **UKHSA-Oxford Health Protection Research** Unit (2025-2030) in AMR and HCAI

#### Needs



Better Surveillance



money, interventions



New tools for infection prevention & control



Optimise stewardship



Better routes to diagnostic adoption



Ways to reduce Gram-negative nfections

### **Research Themes**

- 1. Optimising surveillance
- transformative automated surveillance
- advanced analytics using large-scale patient-level national data

#### 2. Establishing population impact

cost-effectiveness of interventions

(e.g. stewardship, diagnostics, IPC, vaccination, surveillance)

#### 3. Advancing stewardship approaches

- optimise stewardship amongst underserved groups
- tailor methods for different primary care contexts and HCPs

#### 4. Mitigating Gram-negative infections

- innovate surveillance to identify drivers and reservoirs for enterobacterales/AMR in healthcare
- define robust intervention strategies

Equality, Diversity & Inclusion

Patient & public involvement, engagement and participation Knowledge mobilisation Tran<mark>slati</mark>onal **Impacts** 



# Chapter 8: ESPAUR oversight group members' activities and actions to tackle AMR – mapping to the National Action Plan

# Examples of activities undertaken by ESPAUR Oversight Group members to support the UK National Action Plan for AMR 2024-29

Theme: Global partner

Outcome: AMR diplomacy

Commitment: 9.2, Access and

stewardship

Undertaking Global Antimicrobial Stewardship Accreditation Scheme to support hospitals globally with quality improvement to develop and potentially become a Centre of Excellence for AMS.

Theme: Optimising the use of

antimicrobials

Outcome: AMR workforce

Commitment: 5.1, Health and Social

Care training

Delivering professional educational programmes on the prevention of infection, aligned to AMS.



Theme: Optimising the use of

antimicrobials

Outcome: Antimicrobial Stewardship

and disposal

Commitment: 4.1, Clinical decision

support

Collaborating with UKHSA to implement the TARGET antibiotics toolkit to support primary care providers to effectively utilise AMS interventions.

**Theme**: Global partner

Outcome: AMR diplomacy

Commitment: 9.2, Access and stewardship, 9.5, Advocacy and

engagement

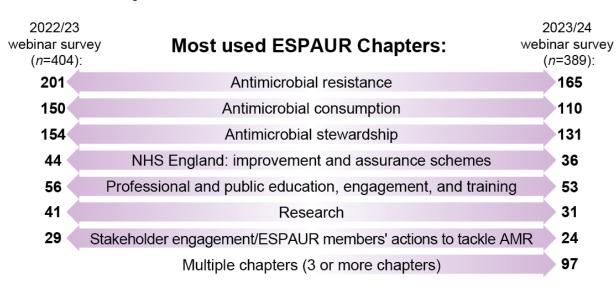
Collaborating with international governments and with World Health Organisation SEARO to present the activities and future direction for dental activities to tackle AMR, and support stewardship.



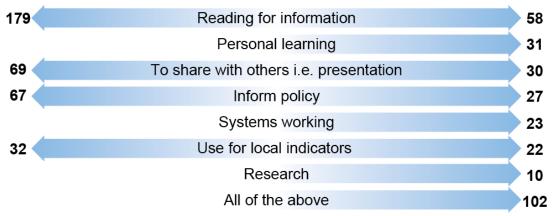
# Chapter 9: Knowledge mobilisation of ESPAUR report: evaluation of feedback from report users

### ESPAUR report knowledge mobilisation and feedback from report users

#### Report user feedback from webinars



#### Most common reasons for accessing report



#### How the ESPAUR report has been used and knowledge mobilised



An AMS scoping review found that the ESPAUR report received

14,499 visits from September 2020 to October 2024



Key messages from the ESPAUR report have been knowledge mobilised by Oversight Group members to their organisations and wider audiences



The ESPAUR report was referenced in

#### 63 articles

when PubMed literature database and Policy Commons grey literature database searches were conducted

