
Hello everyone, welcome

Thank you for joining this TARGET webinar today. I know we have a lot of people signed up and we're looking forward to an evening of lots of interesting discussion.

My name is Cath, I'm a researcher and project manager at UK Health Security Agency and I work within the TARGET team.

This is our 10th webinar in a series we have done with the RCGP, 'navigating antimicrobial stewardship for new and early career prescribers'. You can find all our previous webinars on the TARGET toolkit on the RCGP website and the recordings and slides of this webinar will be uploaded there in the next few weeks.

I will be chairing the session today and will be introducing our speakers and panelists in a moment. The format will be the same as previous webinars. I'm going to take you through some introductions and our speakers will present for around 40-45 minutes and we will aim to have 15 minutes at the end dedicated to Q&A discussion with our panelists

Housekeeping

- The chat function is disabled, so please ask questions throughout the presentation using the Q&A function on your screens, you do not need to wait until the end of the talk. If you wish to ask your question anonymously, please tick the anonymous box before submitting your question. We will answer as many questions as possible in the allotted time.

- Panellists can provide written answers to questions and we will save some questions for discussion at the end.

- As mentioned the recording of this webinar will be uploaded to the TARGET toolkit

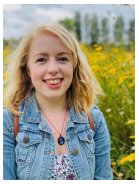
- You will be sent a link with a brief survey from RCGP directly to your email shortly after the webinar, please do assist us in improving our webinars by filling this out. Links to sign up to our next webinar on recurrent UTIs in March will also be included so do sign up if you're interested.

Click: Next slide

# Introductions: TARGET and RCGP


Dr Donna Lecky


Emily Cooper


Catherine Hayes


Ming Lee


Emily Whitehorne


Julie Brooke


Liam Clayton


Joseph Besford


Camilla Stevenson


Dr Dharini Shanmugabavan

www.rcgp.org.uk/TARGETantibiotics

Just want to highlight some of the amazing TARGET and RCGP team who are responsible for the work that underpins the TARGET toolkit.

An especially big thank you to Ming Lee and Camilla who you won't see today, but worked hard to develop and organise this webinar.

Click – next slide

# Introductions: Speakers and panellist

**Dr Haroon Ahmed**
GP, Rumney Primary Care Centre
Clinical Reader at Cardiff University

Speaker and panellist

**Dr Linda Strettle**
GP Partner, The Village Surgery,
Rotherham

Speaker and Panellist

**Dr Graham Duce**
GP Partner, Park Green Surgery, Macclesfield

Panellist

**Raje Dhillon**
Consultant Microbiologist and AMS lead
University Hospitals Bristol and Weston NHS

Panellist

**Dr Toyosi Adeniji**
GP Partner in Northampton, RCGP National First 5 Chair

Panellist

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Next a big thank you to our speakers and panellists for supporting this event

I will ask them to turn on their cameras and introduce themselves now

Intros and then click to next slide

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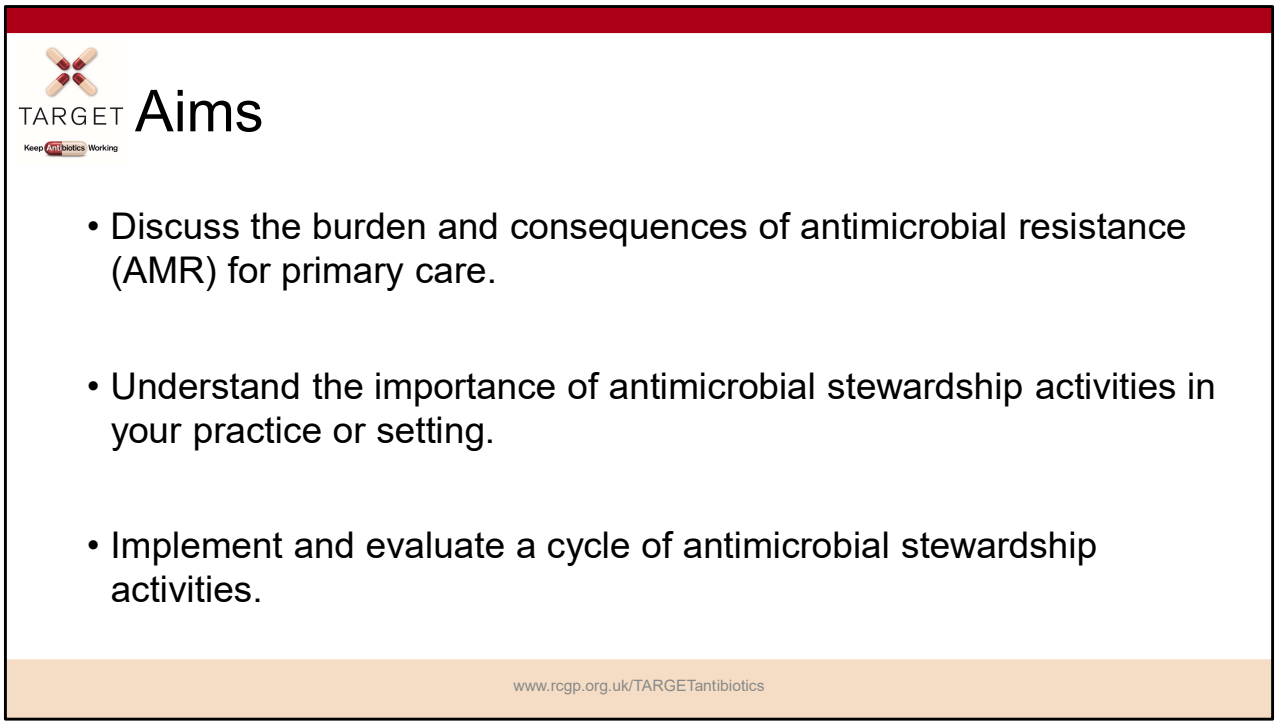



Presenter Talk:

This webinar theme was chosen based on feedback from users requests and participants of our previous events

The aims of this webinar are:
1.Discuss the burden and consequences of antimicrobial resistance (AMR) for primary care.
2.Understand the importance of antimicrobial stewardship activities in your practice or setting.
3.Implement and evaluate a cycle of antimicrobial stewardship activities. - Linda will take us through a real-life example from her practice.

**Poll
Before we start we would like to know a bit about who we have on the call so we're going to do a quick poll, please tell us how long you have been a prescriber for.

*Finally a quick reminder to please send in your questions throughout the talk using the box on the screen.

I'll now pass over to Harry for the first section of the talk.

**Background notes:**
In 2022 80% of all antibiotics were prescribed in primary care [1]. Research suggests that around 20% of these prescriptions may be inappropriate [2]. Understanding the importance of antimicrobial stewardship is key to working towards the aim of reducing total antibiotic use in human populations by 5% from the 2019 baseline as set out by the national action plan for antimicrobial resistance [3].
This webinar is designed for early career prescribers as our individual prescribing cultures are often formed during our training or early in our career with evidence highlighting that once formed, prescribing habits are likely to remain stable over time [4, 5]. We will discuss antimicrobial resistance, its consequences, and tools available that can help support healthcare professionals.

**References:**
1. UK Health Security Agency, 2024. *English surveillance programme for antimicrobial utilisation and resistance (ESPAUR) report 2022 to 2023*. [online] Available at: https://www.gov.uk/government/publications/english-surveillance-programme-antimicrobial-utilisation-and-resistance-espaur-report [Accessed 7 August 2024].

2. Smieszek, T., Pouwels, K.B., Dolk, F.C.K., Smith, D.R.M., Hopkins, S., Sharland, M., Hay, A.D., Moore, M.V. and Robotham, J.V., 2018. Potential for reducing inappropriate antibiotic prescribing in English primary care. *Journal of Antimicrobial Chemotherapy*, 73(suppl_2), pp.ii36-ii43. Available at: Oxford Academic [Accessed 7 August 2024]

3. Department of Health and Social Care, The Scottish Government, Welsh Government, Department for Environment, Food & Rural Affairs, Department of Health (Northern Ireland), and Department of Agriculture, Environment and Rural Affairs (Northern Ireland), 2024. *Confronting antimicrobial resistance 2024 to 2029: Executive Summary*. [online] Available at: https://www.gov.uk/government/publications/uk-5-year-action-plan-for-antimicrobial-resistance-2024-to-2029 [Accessed 7 August 2024]

4. Kitano, T., Langford, B.J., Brown, K.A., Pang, A., Chen, B., Garber, G., Daneman, N., Tu, K., Leung, V., Candido, E. et al., 2021. Association Between High and Unnecessary Antibiotic Prescribing: A Cohort Study Using Family Physician Electronic Medical Records. *Clinical Infectious Diseases*, 72(9), pp.e345-e351. Available at: Oxford

Academic [Accessed 7 August 2024].

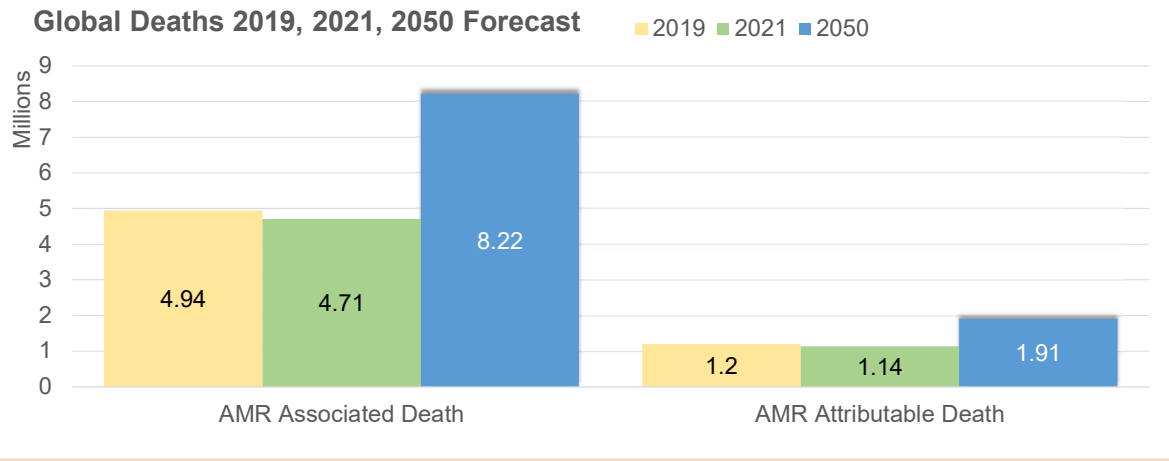
5. Björnsdóttir, I., Kristinsson, K.G. and Hansen, E.H., 2010. Diagnosing infections: a qualitative view on prescription decisions in general practice over time. *International Journal of Clinical Pharmacy*, 32(6), pp.805-814. Available at: Springer Link [Accessed 7 August 2024].

TARGET
Keep Antibiotics Working

# Navigating antimicrobial stewardship for new and early career prescribers

**Dr Haroon Ahmed**
GP, Rumney Primary Care Centre
Clinical Reader at Cardiff University

# Scale of the problem




www.rcgp.org.uk/TARGETantibiotics

(IHME, 2024; Naghavi et al., 2024) )

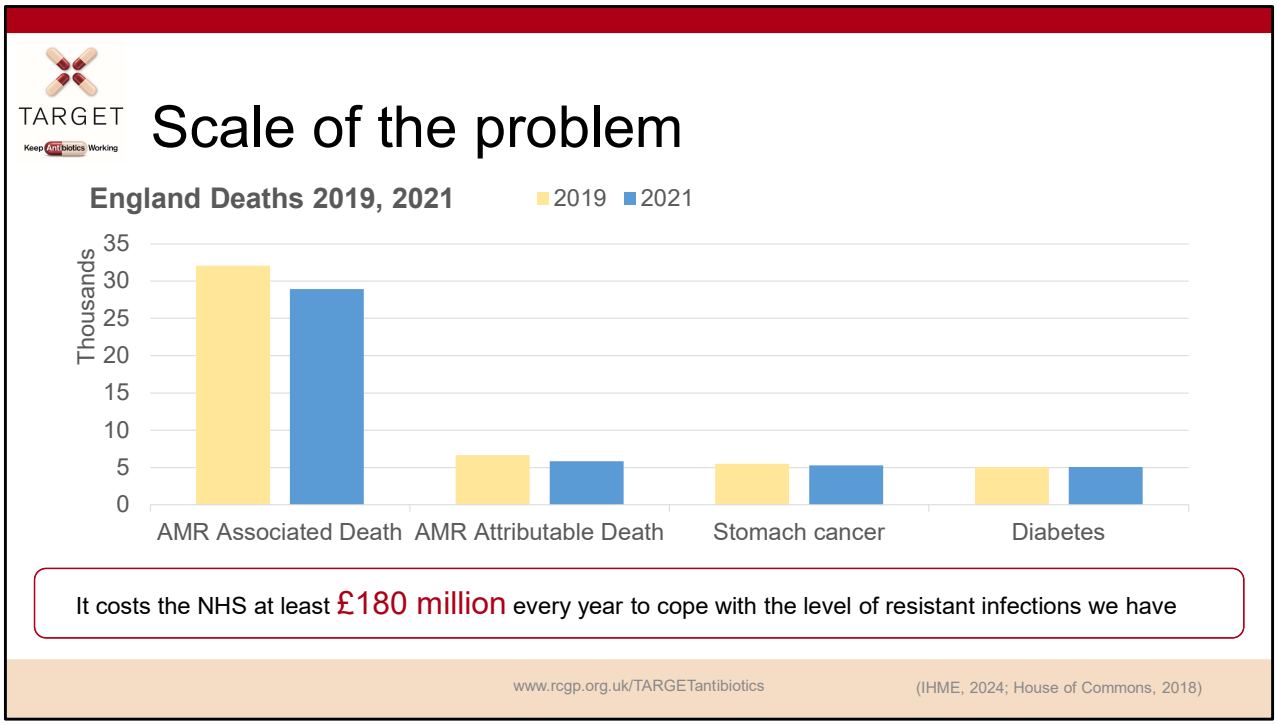
**Presenter Talk:**

Antimicrobial resistance is a one of the top global public health threats. On a global scale, AMR related death count is at about 5-6 million in 2019 and 2021, but it has recently been forecasted that this is going to go up to 10 million by 2050.

**References**


1. GBD Compare Data Visualization [Internet]. IMHE, University of Washington 2024. Available from: https://www.healthdata.org/data-tools-practices/interactive-visuals/gbd-compare.
2. Naghavi M, Vollset SE, Ikuta KS, Swetschinski LR, Gray AP, Wool EE, et al. Global burden of bacterial antimicrobial resistance 1990–2021: a systematic analysis with forecasts to 2050. The Lancet.

2024;404(10459):1199-226.




**Presenter Talk:**

In England, deaths related to AMR in England is higher than deaths caused by stomach cancer and diabetes put together
2019:
AMR Associated Death - 32, 056
Attributable death - 6,639
Stomach Cancer – 5,513
Diabetes – 5,253

2021:
AMR Associated death - 28,929
Attributable death at 5,841
Stomach cancer - 5,267
Diabetes 5,056

Highest contributor to AMR deaths were bloodstream infections and lower respiratory infections.

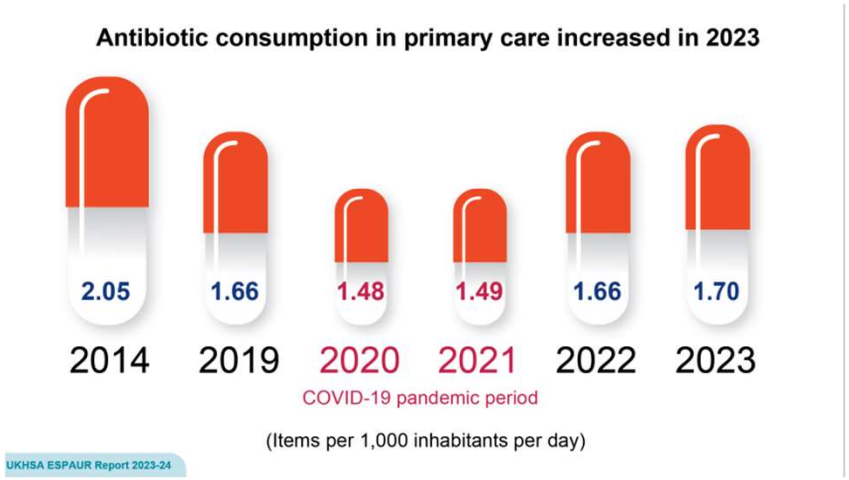
In a parliamentary review on AMR in 2018, it was heard that AMR costs the NHS at least £180 million every year to cope with the current levels of resistant infections.

Why do these statistics matter for primary care?

**References**


1. GBD Compare Data Visualization [Internet]. IMHE, University of Washington 2024. Available from: https://www.healthdata.org/data-tools-practices/interactive-visuals/gbd-compare.
2. Institute for Health Metrics and Evaluation (IHME), University of Oxford. **MICROBE**. Seattle, WA: IHME, University of Washington, 2024. Available from https://vizhub.healthdata.org/microbe
3. House of Commons. Oral Evidence: Antimicrobial resistance, HC 962: Hearing before the Dr Sarah Wollaston, Luciana Berger, Mr Ben Bradshaw, Dr Lisa Cameron, Rosie Cooper, Diana Johnson, Andrew Selous, Derek Thomas, Dr Paul Williams (2018). Available from: https://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/health-and-social-care-committee/antimicrobial-resistance/oral/88745.html

# Prescribing in primary care




www.rcgp.org.uk/TARGETantibiotics (ESPAUR, 2024)

**Presenter Talk:**

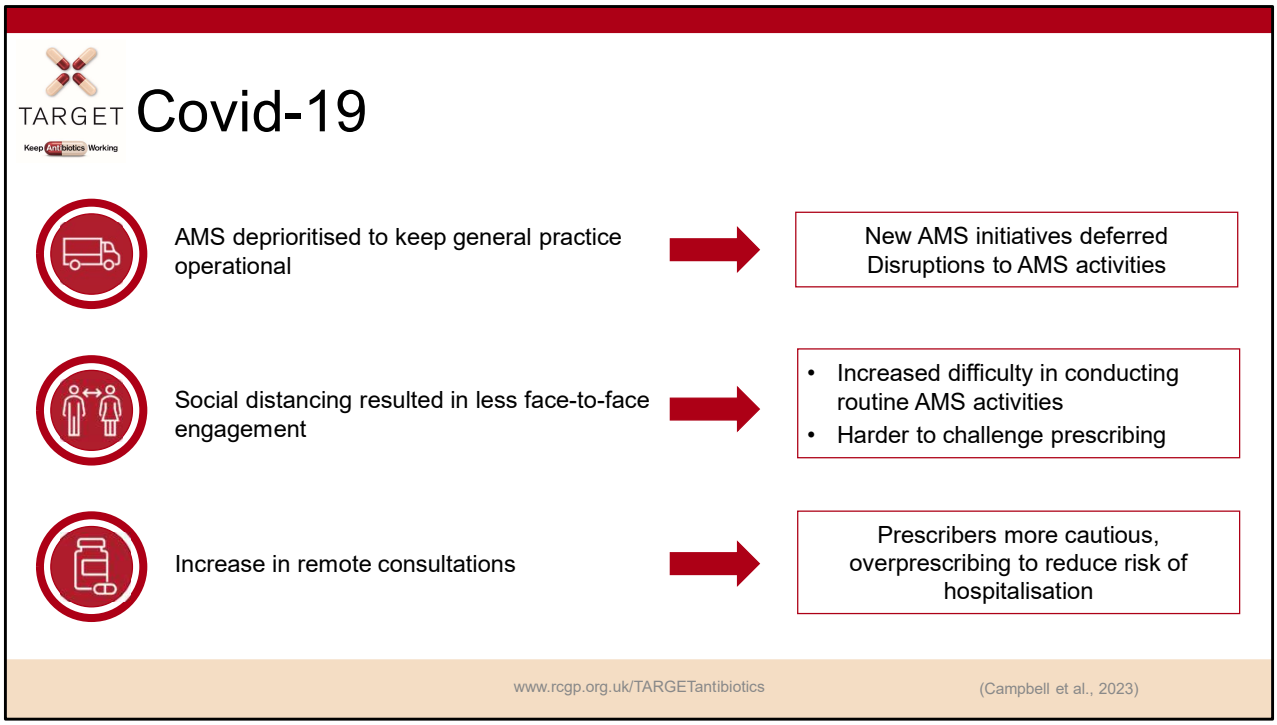
Primary care accounts for the majority of antibiotic prescribing across the healthcare system as such it has a crucial role in addressing antimicrobial resistance (AMR). This graphic shows that antibiotic prescribing within primary care increased from 1.66 to 1.70 items per 1,000 inhabitants per day between 2019 and 2023, an increase of 2.3% (Figure 3.5), emphasising the need for continued AMS efforts.

Over the past 5 years, antibiotic use in the primary care setting accounted for approximately 80% of total consumption in England. In 2023, there were over 35 million antibiotic prescriptions dispensed.

The COVID pandemic had a significant impact on prescribing and it is across these years that we see the highest decrease in prescribing rates (2020 and 2021) but as we get back to the normal, prescribing rates in primary care are starting to increase again and are in fact slightly higher than 2019 levels.

**References**

1. UK Health Security Agency. English surveillance programme for antimicrobial utilisation and resistance (ESPAUR) Report 2023 to 2024. 2024.




**Presenter Talk:**

The higher rates of prescribing in the last year compared to 2019, may be explained by the impact Covid-19 had on AMS efforts. Findings from Campbell et al. (2023) who interviewed primary care professionals (mostly pharmacy roles) revealed that:

1. AMS was deprioritized to keep general practice operational, meaning that new initiatives were deferred, and routine practices were disrupted.
2. Social distancing regulations introduced disrupted support in AMS activities as staff had less opportunity to engage with each other, making it difficult to conduct previously routine AMS activities or challenge antibiotic prescribing due to fewer occasions for opportunistic conversations
3. While social distancing was perceived to reduce antibiotic prescribing due to reduction in seasonal RTIs and reduced access to GPs which minimized opportunistic requests for antibiotics, participants also perceived that the increase in remote consultations meant that prescribers were more cautious and over prescribing to reduce risk of hospitalisations.

Therefore, we want to re-emphasize antimicrobial resistance (AMR) in clinical

practice to ensure that antimicrobial stewardship (AMS) regains its priority and effectiveness in the post-COVID-19 era

**References**

1. Campbell A, Borek AJ, McLeod M, Tonkin-Crine S, Pouwels KB, Roope LSJ, et al. Impact of the COVID-19 pandemic on antimicrobial stewardship support for general practices in England: a qualitative interview study. BJGP Open. 2023;7(3):BJGPO.2022.0193.

# Risk of resistance after prescribing antibiotics

Meta analysis of antibiotic resistance in individuals prescribed antibiotics in primary care

| | Increased risk of resistant organism | |
|---|---|---|
| | Antibiotic in past 2 months | Antibiotic in past 12 months |
| RTI<br>7 studies, n=2,605 | 2.4 times | 2.4 times |
| UTI<br>5 studies, n=14,348 | 2.5 times | 1.33 times |

www.rcgp.org.uk/TARGETantibiotics (Costelloe et al., 2010)

**Presenter talk:**

We have shown that resistance has deathly consequences and that primary care accounts for most of the prescribing across the healthcare system – why does this matter? does our antibiotic use cause increased risk of antibiotic resistant infections in our patients?

This meta-analysis goes some way to illustrate that. Costelloe et al. conducted a systematic review and meta-analysis examining previous antibiotic use and subsequent resistance.

It was found that the pooled odds ratio (OR) for RTI for having increased risk of resistance of subsequently carrying resistant organisms was 2.4 times within 2 months of antibiotic treatment and it remains the same within 12 months. For UTI, the pooled odds ratio for UTI is 2.5 times within the first two months

This shows that individuals prescribed an antibiotic in primary care for a respiratory or urinary tract infection have an increased risk of subsequently carrying resistant organisms. This will be particularly so for antibiotics that attain higher concentrations

in the gut. And less so for those that only concentrate in the urine, or are inactive in the gut.

In conclusion, any antibiotic use increases our future risk of carrying resistant bacteria, even if it is amoxicillin, as this resistance gene is often linked to others like trimethoprim.

## Presenter notes

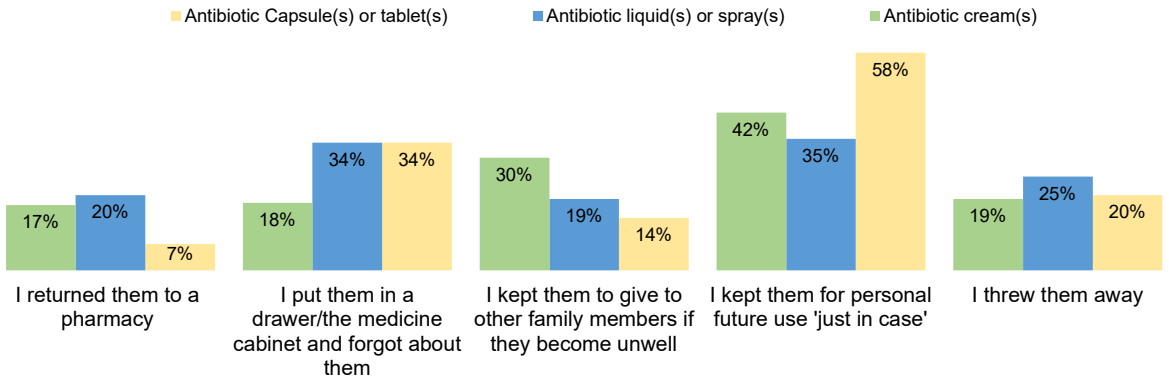
*The review* referenced included 24 studies; 22 involved patients with symptomatic infection and two involved healthy volunteers; 19 were observational studies (of which two were prospective) and five were randomised trials. In five studies of urinary tract bacteria (14 348 participants), the pooled odds ratio (OR) for resistance was 2.5 (95% confidence interval 2.1 to 2.9) within 2 months of antibiotic treatment and 1.33 (1.2 to 1.5) within 12 months. In seven studies of respiratory tract bacteria (2605 participants), pooled ORs were 2.4 (1.4 to 3.9) and 2.4 (1.3 to 4.5) for the same periods, respectively. Studies reporting the quantity of antibiotic prescribed found that longer duration and multiple courses were associated with higher rates of resistance. Studies comparing the potential for different antibiotics to induce resistance showed no consistent effects. Only one prospective study reported changes in resistance over a long period; pooled ORs fell from 12.2 (6.8 to 22.1) at 1 week to 6.1 (2.8 to 13.4) at 1 month, 3.6 (2.2 to 6.0) at 2 months, and 2.2 (1.3 to 3.6) at 6 months.

Therefore in conclusion, individuals prescribed an antibiotic in primary care for a respiratory infection have an increased risk of carrying resistant organisms – so that the next time they have an infection it is with a antibiotic resistant organism. The effect is greatest in the month immediately after treatment but may persist for up to 12 months. This effect not only increases the population carriage of organisms resistant to first line antibiotics, but also creates the conditions for increased use of second line antibiotics in the community.

## Slide references

Costelloe C, Metcalfe C, Lovering A, Mant D, Hay AD. Effect of antibiotic prescribing in primary care on antimicrobial resistance in individual patients: systematic review and meta-analysis. BMJ. 2010 May 18;340:c2096. doi: 10.1136/bmj.c2096. PMID: 20483949. https://pubmed.ncbi.nlm.nih.gov/20483949/ [Accessed 06 December 2023]

# What did patients do with leftover antibiotics?




Base: All England participants who had the following antibiotics left over: Antibiotic capsule(s)/tablet(s):390, Antibiotic liquid(s) or spray(s):270, Antibiotic cream(s):142, fieldwork conducted online 15-27 March 2024

www.rcgp.org.uk/TARGETantibiotics

Presenter Talk:

This graph shows findings from a UKHSA annual survey with the general public in 2024. Respondents who had taken any antibiotic in the past 12 months for any infection, were asked if there were any leftover antibiotic capsules, liquids or creams? And what did they did with them?

You can see here, only a small proportion returned to the pharmacy and more reported throwing them away. Most people reported keeping their leftover antibiotics for future use or put them away and forgot about them.

Understanding what people do with leftover antibiotics is central to the One Health concept as you can better manage antibiotic resistance such as ensuring that patients use antibiotics correctly, develop better strategies in preventing overprescribing, and guide patients on the proper disposal of leftover antibiotics to minimise environmental contamination.

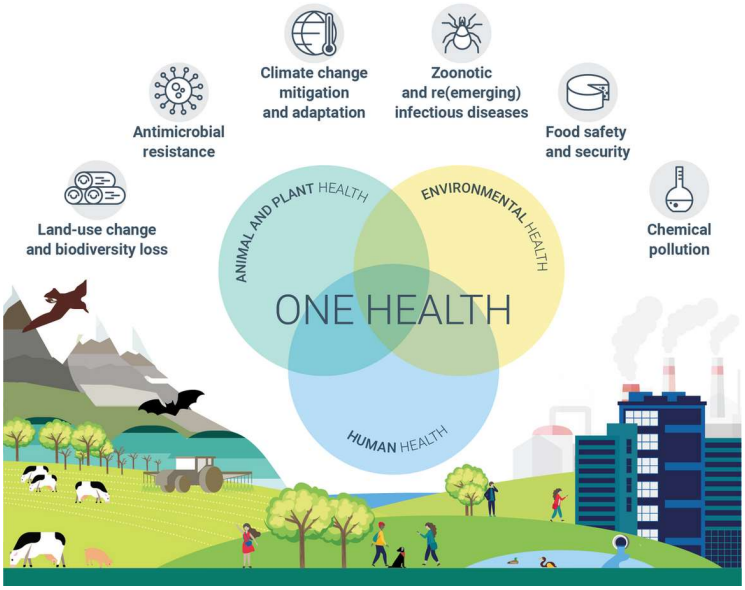
**References**

TARGET Keep Antibiotics Working

# One Health

A multi-sectoral approach that aims to balance and optimise the **health of people**, **animals**, **plants**, and their **shared environment**, recognising their interconnection.

**Leftover antibiotics**




www.rcgp.org.uk/TARGETantibiotics

(ECDC, 2024; WHO, 2024)

## Presenter Talk

One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes that the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and interdependent.

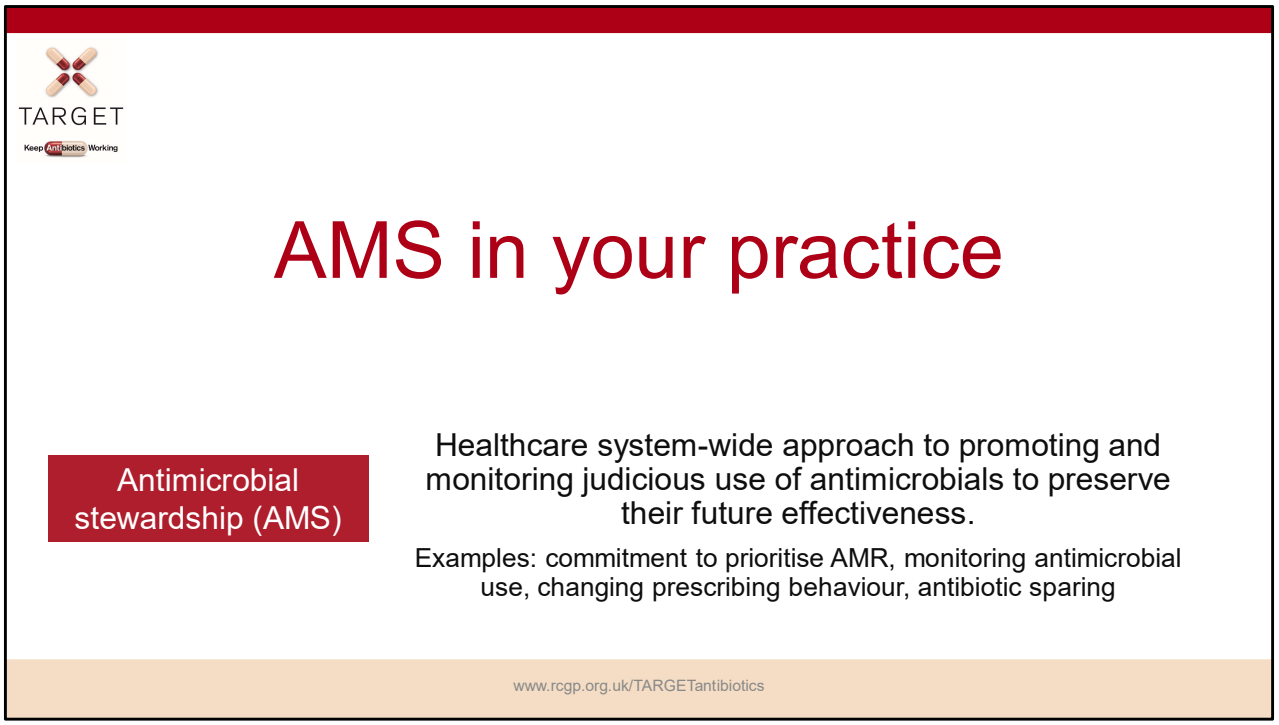
The One Health approach is particularly important for AMR because resistant organisms can spread quickly through health-care facilities, animals, food and the environment (soil and water), making the treatment of certain infections more challenging.

One example where you can take a One Health view is on the discussion around leftover antibiotics.

**References**

1. European Centre for Disease Prevention and Control (ECDC). One Health 2024 [Available from: https://www.ecdc.europa.eu/en/one-health.

2. World Health Organisation. Action against antimicrobial resistance requires a One Health approach 2024. Available from: https://www.who.int/europe/publications/i/item/WHO-EURO-2024-9510-49282-73655.



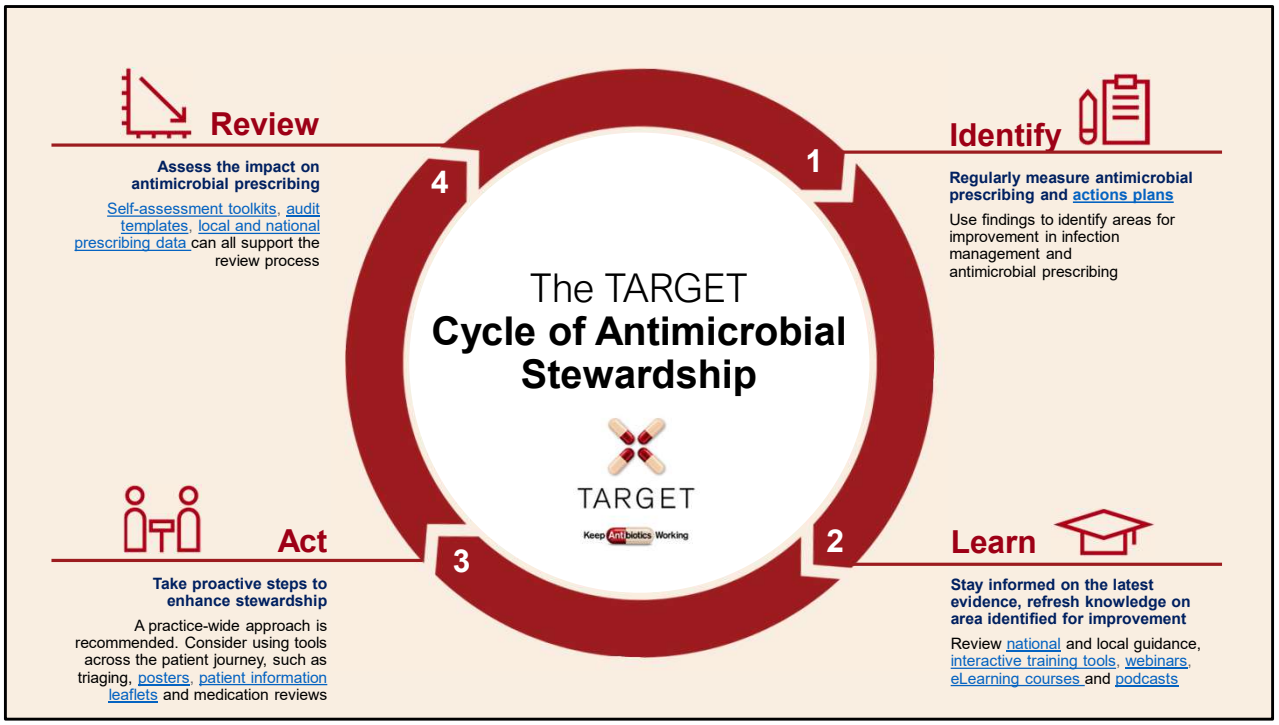

**Presenter Talk:**

To address antimicrobial resistance, there needs to be an implementation of antimicrobial stewardship actions. This is the definition of antimicrobial stewardship by NICE which emphasises a system-wide approach.

In general practice, this can mean taking a whole practice approach whereby all staff from GPs, nurses, receptionists and admin staff are involved in stewardship actions to ensure consistent practice and messaging.

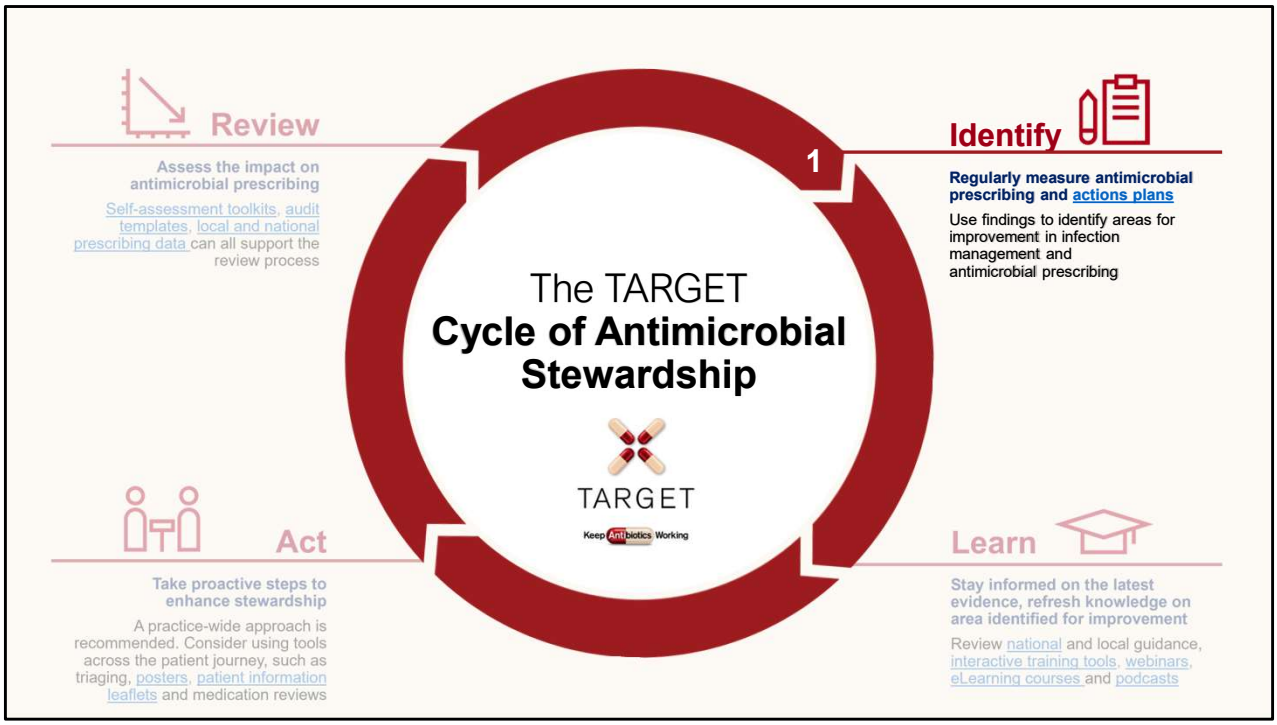
**References**

Presenter Talk:



The Cycle of Stewardship can be a good starting point for you to implement antimicrobial stewardship in your practice. The cycle of stewardship is a visualisation of the AMS process for primary care teams. It was developed following focus groups with GP-practice teams to explore their current approach to AMS, looking at barriers and facilitators. It is a step by step process starting with identifying an area for improvement, using this to advance knowledge and learning in the identified area, using tools and resources to enhance stewardship through to reviewing the impact that this had on antimicrobial prescribing.

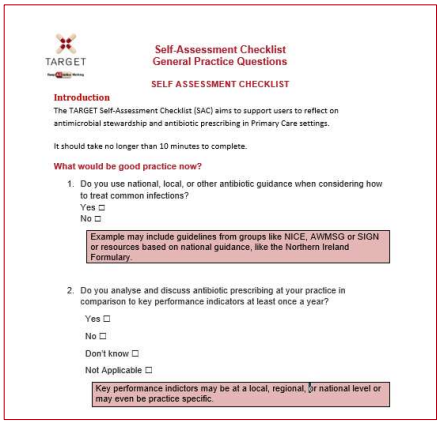
- GP teams reported this infographic may be helpful in practice meetings, training and development reviews focused on antimicrobial stewardship




Step 1 is all about identifying areas where improvements are needed.

# Identify

**Self-assessment tools**



Self-Assessment Checklist
General Practice Questions

SELF ASSESSMENT CHECKLIST

**Introduction**

The TARGET Self-Assessment Checklist (SAC) aims to support users to reflect on antimicrobial stewardship and antibiotic prescribing in Primary Care settings.

It should take no longer than 10 minutes to complete.

**What would be good practice now?**

1. Do you use national, local, or other antibiotic guidance when considering how to treat common infections?
   Yes ☐
   No ☐
   Example may include guidelines from groups like NICE, AWMSG or SIGN or resources based on national guidance, like the Northern Ireland Formulary.

2. Do you analyse and discuss antibiotic prescribing at your practice in comparison to key performance indicators at least once a year?
   Yes ☐
   No ☐
   Don't know ☐
   Not Applicable ☐
   Key performance indictors may be at a local, regional, or national level or may even be practice specific.

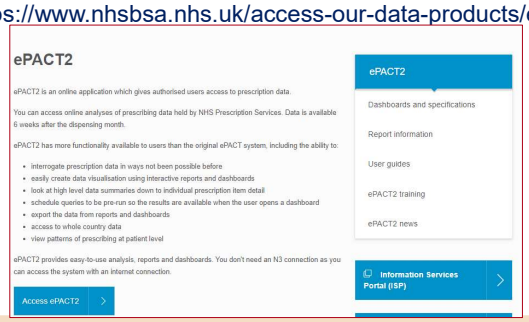
*Digital version will be published Spring 2025

**Benchmarking**

**ePACT2**

- Register with ePACT2
- Dashboards
- Prescribing reports
- Customised for your ICB/practice

https://www.nhsbsa.nhs.uk/access-our-data-products/epact2



ePACT2

ePACT2 is an online application which gives authorised users access to prescription data.

You can access online analyses of prescribing data held by NHS Prescription Services. Data is available 6 weeks after the dispensing month.

ePACT2 has more functionality available to users than the original ePACT system, including the ability to:

- interrogate prescription data in ways not been possible before
- easily create data visualisation using interactive reports and dashboards
- look at high level data summaries down to individual prescription item detail
- schedule queries to be pre-run so the results are available when the user opens a dashboard
- export the data from reports and dashboards
- access to whole country data
- view patterns of prescribing at patient level

ePACT2 provides easy-to-use analysis, reports and dashboards. You don't need an N3 connection as you can access the system with an Internet connection.

Access ePACT2

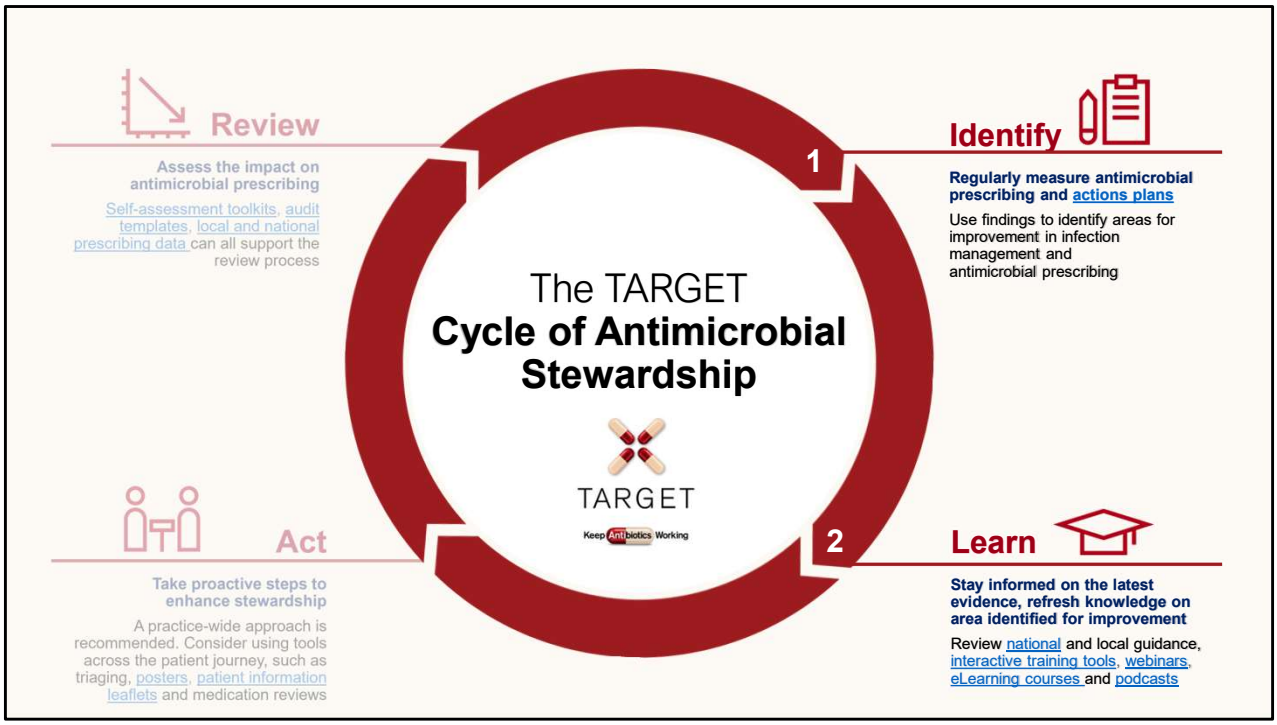
ePACT2
Dashboards and specifications
Report information
User guides
ePACT2 training
ePACT2 news
Information Services Portal (ISP)

www.rcgp.org.uk/TARGETantibiotics

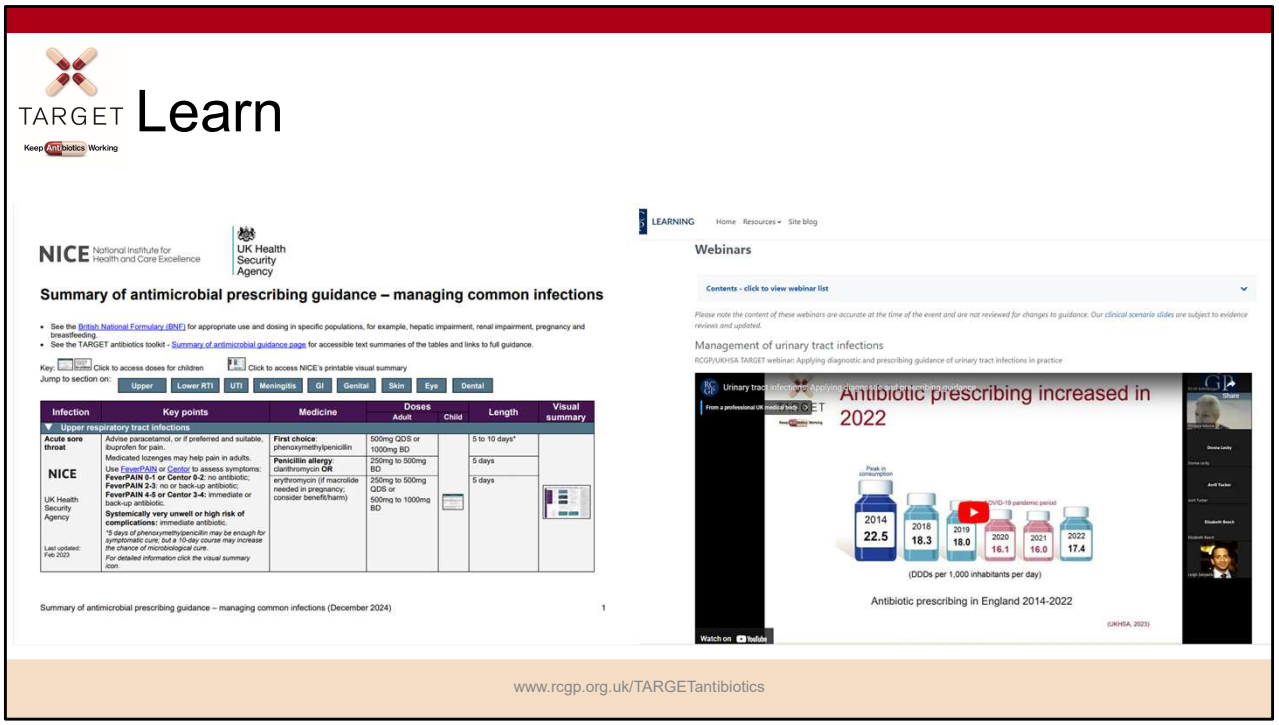
Here are some ways you can identify areas you need to take action or investigate.

Firstly, the TARGET self-assessment tool is a short questionnaire for prescribers to assess their own antibiotic prescribing.
It asks you questions on what AMS initiatives are in place such as do you analyse and discuss antibiotic prescribing at your practice in comparison to local indicators at least once a year? Have you been involved in a practice audit etc. This in conjunction with practice meetings can be helpful as a baseline and aid discussions around areas to action or practices to introduce.
A digital version of this questionnaire is under development and will be published this Spring.

You could also use data resources such as ePACT2 to benchmark your practice's prescribing.
To access ePACT2, you have to register on the platform. ePACT2 includes dashboards and reports which can be customised for your ICB or practice.




The next step is to learn. Once you have identified areas to improve, refresh your knowledge and look for the latest guidance so that you can take action.

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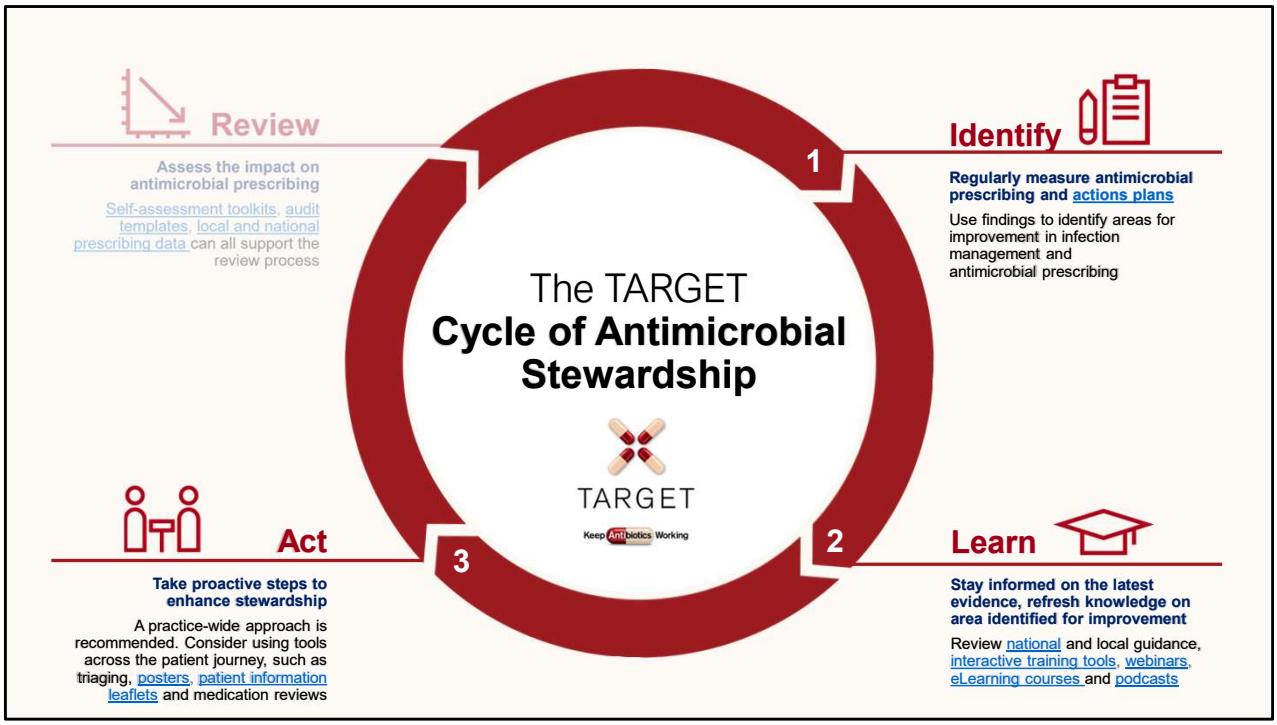
To do this, you could refer to the latest guidance by NICE/CKS/BASHH. TARGET has produced a list of the conditions within the Summary of Antimicrobial Prescribing Guidance linked to the available national guidance.

You could also sign up for webinars or rewatch webinars. For example, that is a webinar on how to manage urinary tract infections we hosted in March last year, available for re-watch on our site.




Now you need to act on what you know so far, and a practice-wide approach is recommended for this step. That is to get everyone in the practice involved.

TARGET Act

**Posters**

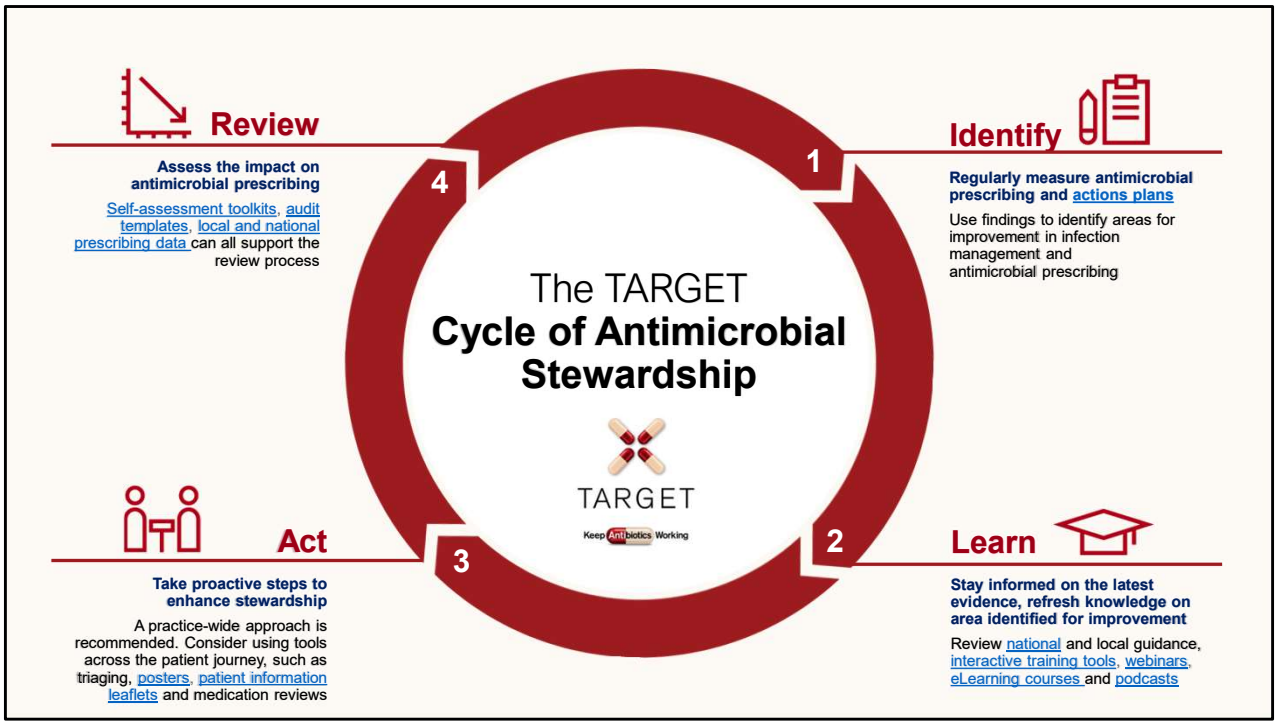


www.rcgp.org.uk/TARGETantibiotics

Practice staff could put up posters in the waiting area for patients to read. The one here is a poster by antibiotic guardian.

During consultation, use leaflets to provide explanation as to why you're prescribing or not prescribing an antibiotic and to provide self-care, prevention and safety netting information to patients.

It's important to review and manage adults on long-term and repeated antibiotics as these are often a large source of prescribing (and risk of AMR to the patient) and some patients may be taking antibiotics longer than guidance advised. The TARGET how to series aim to support primary care teams to review the appropriateness of antimicrobials in the evidence-based treatment and prevention of conditions such as acne and COPD. A guide to recurrent UTI is being developed and will be available very soon.

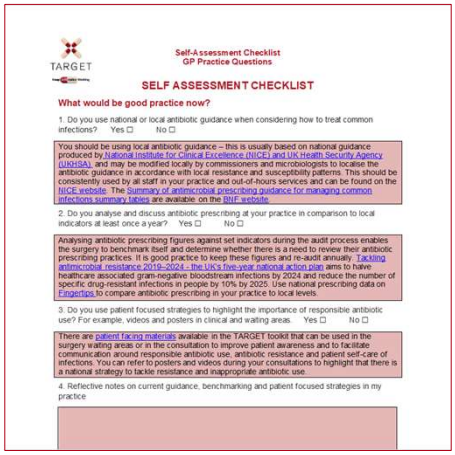



Finally, you need to review and see whether you've achieve what you intended to achieve and if applicable look at any changes in prescribing to measure impact

# TARGET Review

Keep Antibiotics Working

## Self-assessment tools



TARGET

Self-Assessment Checklist
GP Practice Questions

SELF ASSESSMENT CHECKLIST

What would be good practice now?

1. Do you use national or local antibiotic guidance when considering how to treat common infections? Yes ☐ No ☐

You should be using local antibiotic guidance – this is usually based on national guidance produced by National Institute for Clinical Excellence (NICE) and UK Health Security Agency (UKHSA), and may be modified locally by commissioners and microbiologists to localise the antibiotic guidance in accordance with local resistance and susceptibility patterns. This should be consistently used by all staff in your practice and out-of-hours services and can be found on the NICE website. The Summary of antimicrobial prescribing guidance for managing common infections summary tables are available on the BNF website.

2. Do you analyse and discuss antibiotic prescribing at your practice in comparison to local indicators at least once a year? Yes ☐ No ☐

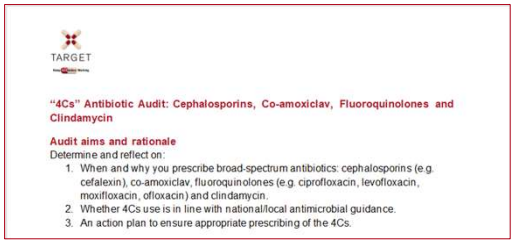
Analysing antibiotic prescribing figures against set indicators during the audit process enables the surgery to benchmark itself and determine whether there is a need to review their antibiotic prescribing practices. It is good practice to keep these figures and re-audit annually. Tackling antimicrobial resistance 2019–2024 - the UK's five-year national action plan aims to halve healthcare associated gram-negative bloodstream infections by 2024 and reduce the number of specific drug-resistant infections in people by 10% by 2025. Use national prescribing data on Fingertips to compare antibiotic prescribing in your practice to local levels.

3. Do you use patient focused strategies to highlight the importance of responsible antibiotic use? For example, videos and posters in clinical and waiting areas. Yes ☐ No ☐

There are patient facing materials available in the TARGET toolkit that can be used in the surgery waiting areas or in the consultation to improve patient awareness and to facilitate communication around responsible antibiotic use, antibiotic resistance and patient self-care of infections. You can refer to posters and videos during your consultations to highlight that there is a national strategy to tackle resistance and inappropriate antibiotic use.

4. Reflective notes on current guidance, benchmarking and patient focused strategies in my practice

## Audits



TARGET

"4Cs" Antibiotic Audit: Cephalosporins, Co-amoxiclav, Fluoroquinolones and Clindamycin

Audit aims and rationale

Determine and reflect on:

1. When and why you prescribe broad-spectrum antibiotics: cephalosporins (e.g. cefalexin), co-amoxiclav, fluoroquinolones (e.g. ciprofloxacin, levofloxacin, moxifloxacin, ofloxacin) and clindamycin.
2. Whether 4Cs use is in line with national/local antimicrobial guidance.
3. An action plan to ensure appropriate prescribing of the 4Cs.

Use of data

**PrescQIPP** | **OpenPrescribing**

**Fingertips** | **ePACT2**

www.rcgp.org.uk/TARGETantibiotics

A review may be conducted during practice meetings. It may be useful to re-do the self-assessment checklist and reflect on what has changed. Conduct audits to see if prescribing patterns at your practice or region have changed. This allows you to gauge whether actions you take have an impact. It can also reveal areas where prescribing practices can be improved.

To get prescribing data of your practice and compare to others, you can explore these databases. We previously introduced ePACT2, but there are others such at PrescQIPP, OpenPrescribing and Fingertips

**Presenter information ONLY**

PrescQIPP

# PrescQIPP
## (NHS funded)

**PrescQIPP**

- AMS hub - free to access
- Evidence based resources and tools for primary care commissioners
- Platform to share innovation

https://www.prescqipp.info/our-resources/webkits/antimicrobial-stewardship/

- Other resources available on PrescQIPP include:
    - Bulletins and briefings: clinical evidence, information and guidance about a range of treatments and conditions
    - Data: to help commissioners benchmark their activity and identify where they can make the biggest difference
    - Web kits: practical tools and materials such as patient information and letters, pathways and audits
    - Webinars: support learning on a variety of relevant topics

**Presenter key messages**

- PrescQIPP is freely accessible and no login is required. It can be accessed through the link on the screen: https://www.prescqipp.info/our-resources/webkits/antimicrobial-stewardship/

**References/links**

- PrecQIPP - https://www.prescqipp.info/our-resources/webkits/antimicrobial-stewardship/

**Presenter information ONLY**

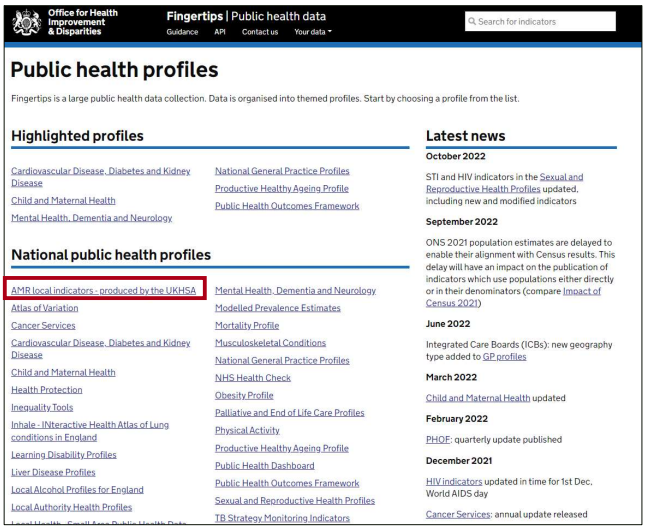
Fingertips

# Fingertips
(produced by UKHSA)

## Public Health profiles/Fingertips

- Open access
- Browse indicators at different geographical levels
- Benchmark against the regional or England average
- Export data to use locally

fingertips.phe.org.uk/



- NA

**Presenter key messages**

- Fingertips is also open access
- Allowing you to browse antimicrobial resistance indicators at different geographical levels
- You can compare data against the regional or English average and export data to use locally
- To access the data you click here on “AMR local indicators” *[Click mouse to highlight]*.
- It is produced by the UK Health Security Agency (UKHSA, formerly Public Health England).

**References/links**

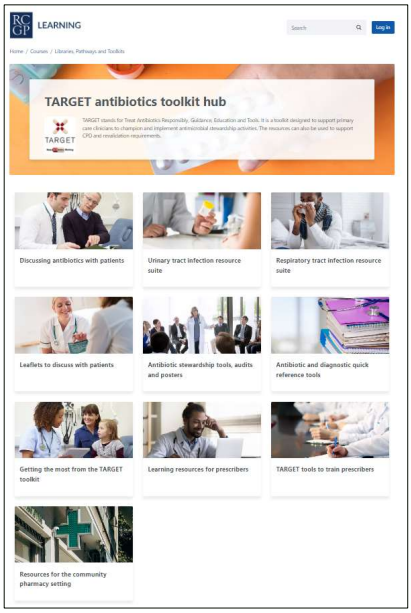
- Fingertipps - https://fingertips.phe.org.uk/

# TARGET Toolkit

T Treat
A Antibiotics
R Responsibly
G Guidance,
E Education and
T Tools

**Hosted on the RCGP website, FREE to use**

✓ Summary of antimicrobial guidance
✓ Leaflets to discuss with patients (translated to 25 languages)
✓ Learning resources



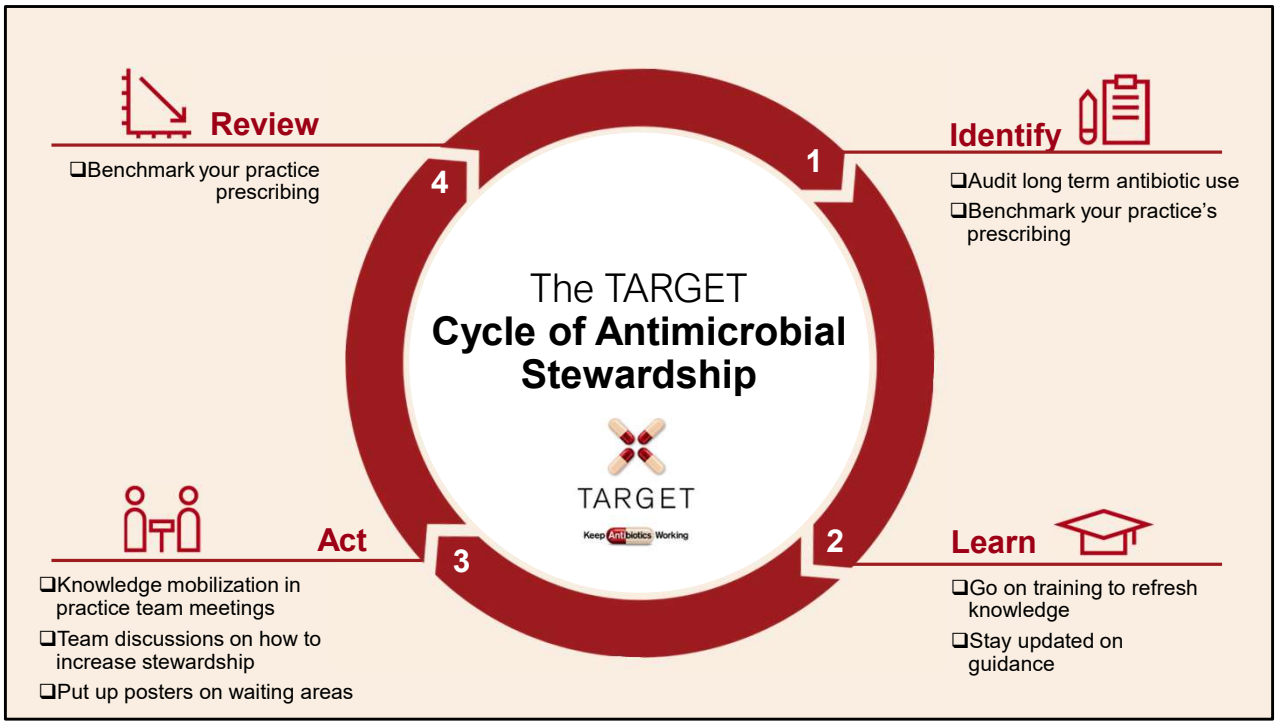

www.rcgp.org.uk/TARGETantibiotics

Presenter Talk:

To find more information about resources that you can use, head on over to TARGET. The toolkit consists of resources such as summary of antimicrobial guidance, leaflets for patients, learning resources, audit tools, and sign posting to other resources.
The link to the site is at the bottom of the slide

TARGET stands for Treat Antibiotics Responsibly. Guidance, Education and Tools and the toolkit is hosted on the RCGP website. The toolkit is available to all wherein you do not need to be a member to access the resources.
The toolkit has been available since 2009 and we are aware that it is already used widely by prescribers.

To summarise, at each step, these are the actions that you can take.

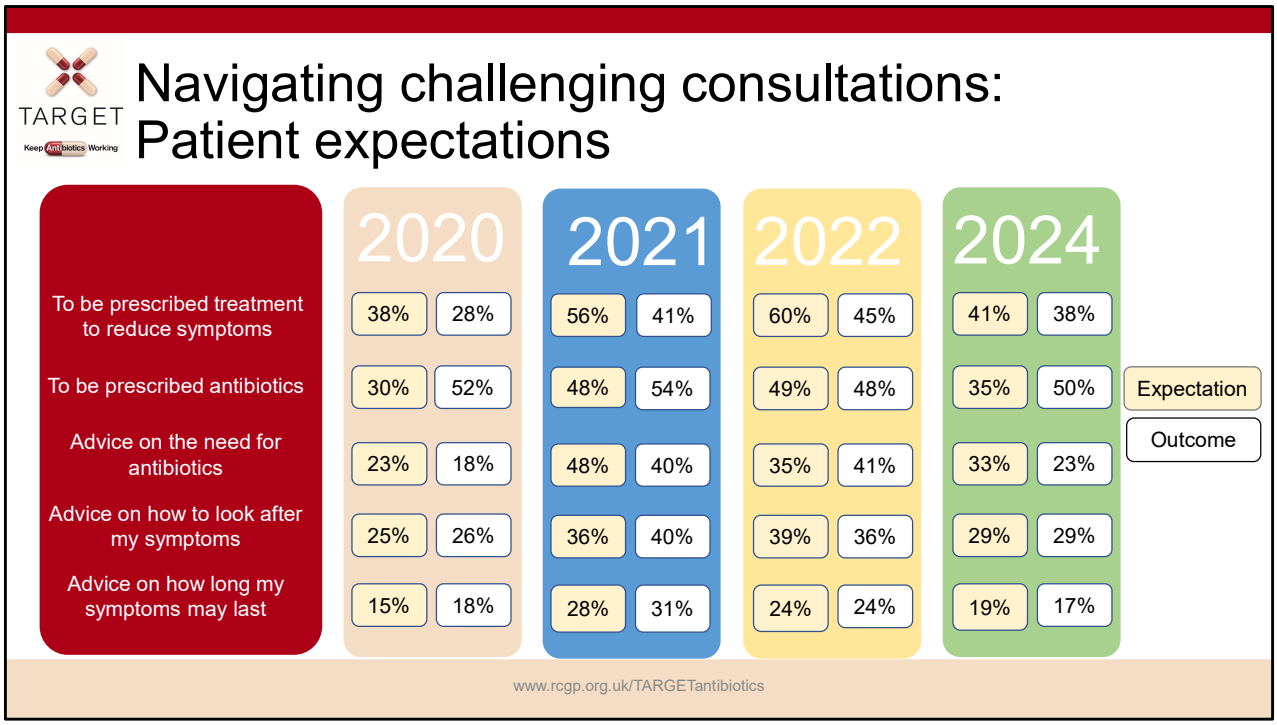


TARGET
Keep Antibiotics Working

# Challenges you may face

www.rcgp.org.uk/TARGETantibiotics

Now that you know how to implement antimicrobial stewardship in your practice. What are the challenges you might face?




**Presenter talk**

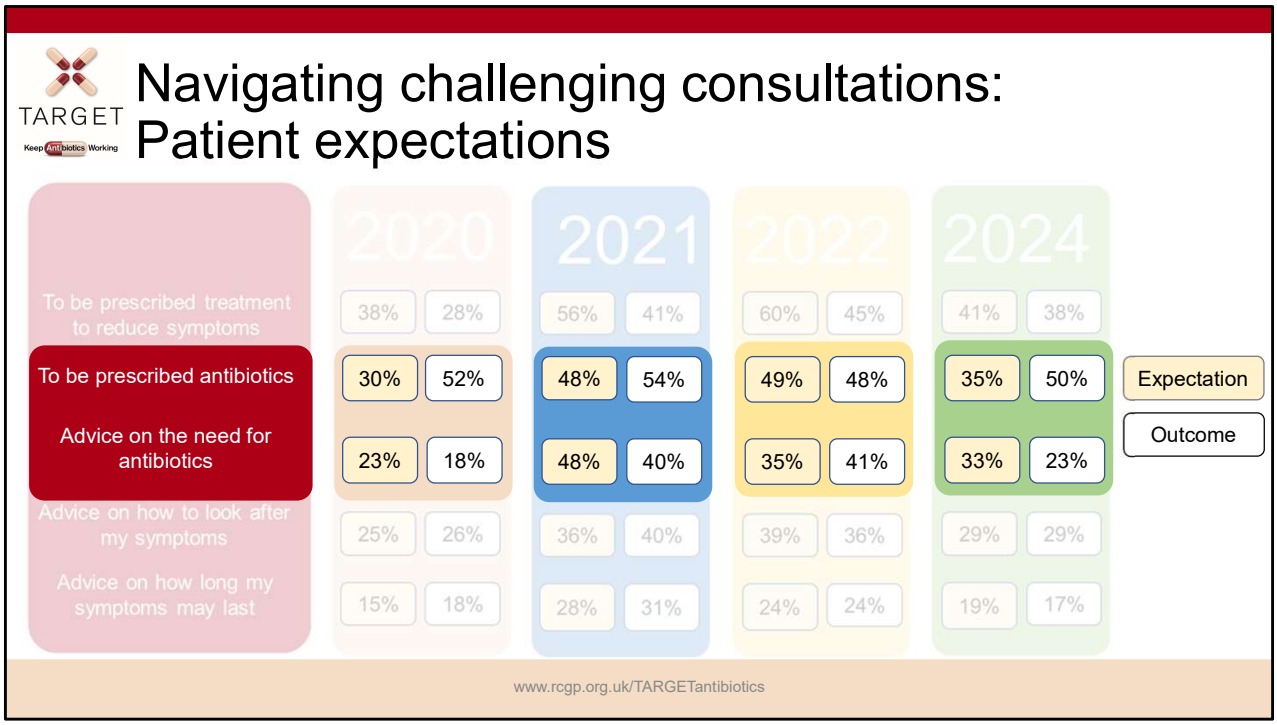
One of the challenge that you may face is having to navigate difficult consultations and managing patient expectations.

A common reason why prescribers have said they prescribe is due to patient demand and expectation.

These are findings from the UKHSA annual survey with the general public. Patients who consulted a doctor's surgery for an RTI in the last 12 months, which was around 27% of those with an RTI, were asked what they expected from the consultation shown in cream, and what happened, shown in white.

Throughout the pandemic we observe an increase in expectations across the board but in 2024 we see this settle back to pre-pandemic levels give or take a few percentage points.

**References**




**Presenter talk**

While there was an increase in those expecting antibiotics from the GP compared to pre-Covid however there was also a marked increase in those wanting information on whether or not they actually needed the expected antibiotic.

This suggest that a patient that appears 'demanding' may actually just want reassurance that the infection has not 'gone down to the chest', rather than antibiotics.

**Presenter notes**

Of those who went to a GP expecting to be prescribed antibiotics, 37% had also expected advice about whether they needed the antibiotics.

An increase in those expecting antibiotics from the GP compared to the previous year,

Specifically, to note,  more people received antibiotics than those who expected for antibiotics.
It is also worth noting here is that more people expected advice on the need for antibiotics than those who received this advice.

**References**

# Navigating challenging consultations: Patient expectations

| | |
|---|---|
| **C:** Ask specifically about **concerns** | **'What are the things you are most worried about?'** |
| **H**: Discuss **history and exam** | While doing an examination provide 'no problem' commentary<br>'Your heart rate is normal, your temperature isn't raised' |
| **E**: Ask specifically about **expectations** | **How do you think I could most help you today?' or 'How do you feel about antibiotics?'** |
| **S**: Provide non-serious explanation for **symptoms** | 'Your body produces phlegm as a **normal reaction** to inflammation in your airways. The phlegm catches particles and helps keep your lungs clear.' |
| **T**: Be specific about illness **timeline**/usual course | **'A typical cough can take 3-4 weeks to clear completely.'** |
| **S**: Explain **shortcomings** of antibiotics | Antibiotics **don't help with pain** but **side effects**, such as diarrhoea, nausea and rash, can be **experienced by up to 1 in 10 people**.' |
| **S**: **Self-care** advice | 'Pain in the chest or throat is normal due to inflammation, **you can take paracetamol, and/or ibuprofen, which will help the pain and soothe the inflammation**.' |
| **S**: **Safety-netting** advice | Provide patients with specific **information on red-flag symptoms** and when they should seek further help |

www.rcgp.org.uk/TARGETantibiotics (Little et al., 2013)

**Presenter talk**

To support consultations, you can use the CHESTSSS acronym.

CHESTSSS presents specific communication techniques. These techniques have been developed based on patient expectations and needs specific to antibiotic discussions so can be more useful and effective than general approaches (e.g., 'ICE' or 'Calgary-Cambridge' models).

- **C:** Ask specifically about **concerns**
- **H**: Discuss **history and exam**
- **E**: Ask specifically about **expectations**
- **S**: Provide non-serious explanation for **symptoms**
- **T**: Be specific about illness **timeline**/usual course
- **S**: Explain **shortcomings** of antibiotics
- **S**: **Self-care** advice
- **S**: **Safety-netting** advice

CHESTSSS can help you to remember specific phrases which:

- Reassures patients

- Increase patient understanding and satisfaction with a prescribing decision
- May be particularly helpful for patients who are expecting antibiotics

**Presenter notes**

**C- ask specific concerns**

Asking the patient specifically about their concerns. This can be difficult as, if not careful, one can sound patronising or give the impression that you have not been listening. However, if concerns are not specifically asked about, the patient will sometimes not share their main worries for fear of being seen as 'overly-anxious'.

Example phrases you can use:

*'There are probably a number of things that are worrying you about this illness, but what would you say are the things that you are most worried about?'*

*'You've mentioned the high temperature; is that the thing that is causing you most worry at the moment, or is it something else?'*

**H – history**

A good history and examination, conducted prior to providing the patient with advice and/or reassurance, is an essential component of reassuring patients that their illness is being taken seriously.

Consider:

Providing a "running commentary", especially a "no problem commentary" [7,8], to the patient while doing an examination, for example:

*'Your heart rate is normal', 'Your temperature isn't raised', 'Your lungs sound good."*

**E- Expectations**

Research has shown that there is often a mismatch between what GPs think patients are expecting and what they actually want. A patient that appears 'demanding' may actually just want reassurance that the infection has not 'gone down to the chest', rather than antibiotics.

Consider:

Asking the patient specifically about their expectations, for example:

*'How do you think I could most help you today?'*

*'Some people have a clear idea about what they are expecting when they come to see me. Is there something that you were hoping for or expecting that we haven't talked about yet?'*

**S – Symptoms**

Telling patients that you can find no sign of serious illness when they are worried about symptoms, might not be enough to make them feel reassured – they just think you have failed to detect how serious their illness is!

Consider:

Finding out what symptoms the patient is concerned about and then providing convincing non-serious explanations for these symptoms [7,8]. For example:
'*Your body produces phlegm as a normal reaction to inflammation in the airways to your lungs. The phlegm catches particles in your airways and helps keep your lungs clear.'*
It can be helpful to acknowledge that these non-serious symptoms can still be very disruptive for patients so showing empathy that they are feeling very unwell is important.

**T - Timelines**

Prescribers might not always set realistic expectations and sometimes suggest that patients will get better 'in a few days', when we now know that it often takes much longer than this to recover.
In addition, patients often have unrealistic expectations about how quickly they will recover, and these can lead to unnecessary anxiety and re-consultation.
Consider:
Research has provided us with valuable information on expected duration of common infections. It is useful to tell these durations to patients to reassure them that their symptoms are not unusual.

**S - Shortcomings**

Prescribers don't always discuss pros and cons of antibiotics with patients, and patients often are not aware that antibiotics have no or very limited benefit for several common infections.
Consider:
Several trials have shown no or limited benefit of antibiotics for several types of common infections. Antibiotics are not usually indicated in sore throat, sinusitis, acute otitis media and acute cough where pneumonia is not suspected. Consider expanding on antibiotics effects on illness duration, AMR and side effects.

**S – Self-care**

Most patients are looking for **something positive that they can do** to feel better more quickly.
Consider:
Asking patients what they have done already to manage their symptoms and reassure them that what they are doing will help. Giving reassurance and advice on other things they can do can go a long way to make patients feel more in control and comfortable.

Reinforcing the fact that the **patient's own immune system** is their best source of defence, and advise on **what they can do themselves to help their body fight the**

**infection**. Patient leaflets can support how you discuss self-care advice.

**S – Safety netting**

Lastly it is important that patients understand what they should be looking out for, and when they should re-consult.

Consider:

Providing patients with specific information on 'red-flag symptoms' and advising them on what to do if symptoms get worse.

Supporting the safety-netting advice by discussing a patient leaflet.

Finally, it can be useful for you to **summarise key messages** - the natural history, reassurance that nothing serious is going on (assuming you have found no indication for antibiotics) and to check that the patient understands and is happy with the management plan.

The CHESTSSS acronym was developed and tested in a randomised-controlled trial which resulted in improved antibiotic prescribing and patient satisfaction when used by experienced GPs in the UK

**References**

1.Effects of internet-based training on antibiotic prescribing rates for acute respiratory-tract infections: a multinational, cluster, randomised, factorial, controlled trial. Little, Paul et al. The Lancet, Volume 382, Issue 9899, 1175 – 1182. https://www.thelancet.com/article/S0140-6736(13)60994-0/fulltext

# Navigating challenging consultations: Patient expectations

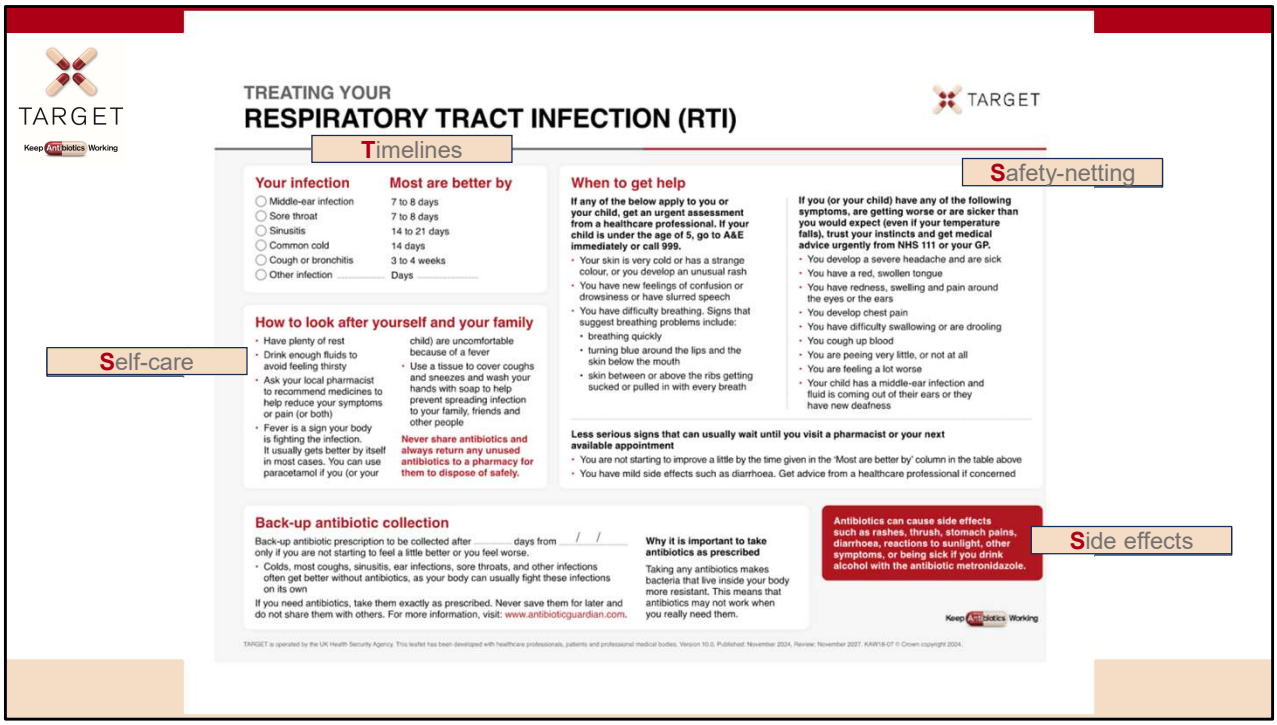
| | |
|---|---|
| **C**: Ask specifically about **concerns** | **'What are the things you are most worried about?'** |
| **H**: Discuss **history and exam** | While do<br>'Your he |
| **E**: Ask specifically about **expectations** | **How do** **biotics?'** |
| **S**: Provide non-serious explanation for **symptoms** | 'Your bod **normal reaction** The phlegm catches particles and helps keep your lungs clear.' |
| **T**: Be specific about illness **timeline**/usual course | **'A typical cough can take 3-4 weeks to clear completely.'** |
| **S**: Explain **shortcomings** of antibiotics | Antibiotic<br>**experier** sh, can be |
| **S**: **Self-care** advice | 'Pain in t<br>**ibuprofe** **l, and/or** |
| **S**: **Safety-netting** advice | Provide patients with specific **information on red-flag symptoms** and when they should seek further help |

First 5 min of the consultation

Covered in the patient information leaflets

**Presenter talk**

We recognise that with CHETSSS there is a lot to cover in a consultation where time can be limited. To save time, use patient information leaflets to support your consultation as it covers the last 4 letters of the acronym. The next slide provides you an example



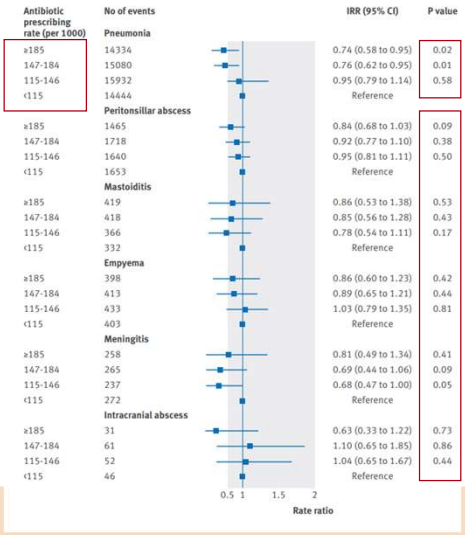

**Presenter talk**

This is a  patient information leaflet for RTIs. As you can see, it provides the information as advised by CHESTSSS.
This demonstrates how you can leverage patient information leaflets during consultation, empowering patients in their health while maximising consultation time.

**References**

You can access all leaflets via the patient information leaflet section of the toolkit website: https://elearning.rcgp.org.uk/mod/book/view.php?id=12647

# Navigating challenging consultations: Worry of complications




Estimated that in a practice with ~7,000 patients, a 10% reduction in antibiotic prescribing for RTI might expect:

- 1 additional peritonsillar abscess each 10 years
- 1 additional pneumonia each year

www.rcgp.org.uk/TARGETantibiotics (Gulliford et al., 2016)

**Presenter talk**

Another challenge that you might face is a worry of complications if you do not prescribe.

If we prescribe less, do we see more complications? The short answer, perhaps, but hardly any. In a practice with an average list of 7000 patients, a 10% reduction in antibiotic prescribing for RTI may result in 1 additional pneumonia each year and 1 additional peritonsilar abscess every 10 years.

**Additional presenter notes**

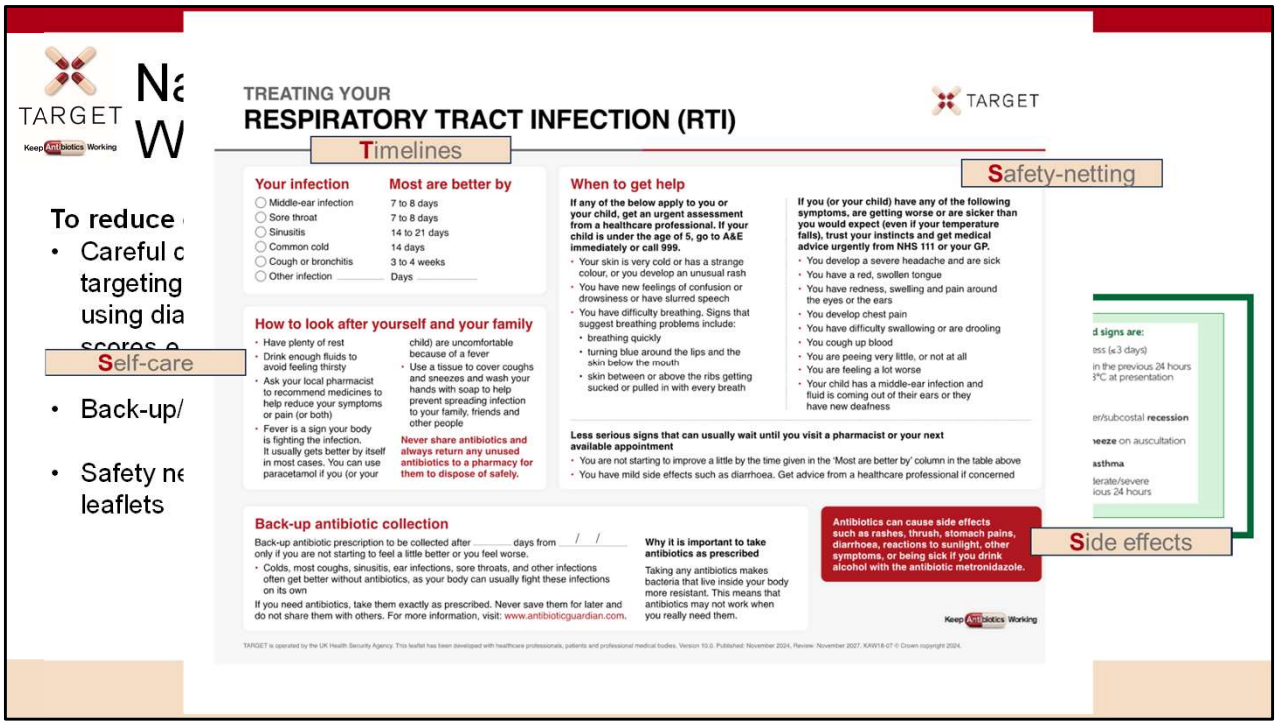
This study stratified practices by their antibiotic prescribing rates into four quartiles. (≥185, 147-185, 115-147 and less than 115 antibiotic prescriptions per 1000 patients. They then looked at infection related complications – pneumonia, peritonsillar abscess, mastoiditis, empyema, meningitis and intracranial abscess.

There was no significant reduction in peritonsilar abscess, mastoiditis, empyema, or intracranial abscess, in practices where antibiotics were given much more often, as you can see the confidence intervals cross one and the p values are over 0.05. Although the slight increase in peritonsilar abscess they suggested would result in

one additional peritonsilar abscess every 10 years.
There was a significant reduction in pneumonia, indicating that this equated to one additional pneumonia per year. This indicates that we need to be careful in this area – and consider the age and risk of patients with suspected pneumonia, and consider using CRP too.

**References**

1. Gulliford MC, Moore MV, Little P, Hay AD, Fox R, Prevost AT, et al. Safety of reduced antibiotic prescribing for self limiting respiratory tract infections in primary care: cohort study using electronic health records. BMJ. 2016;354:i3410.




**Presenter Notes:**

To reduce complication risks, consider using diagnostic flowcharts and symptom scores such as FeverPAIN and STARWAVe to guide your decisions on whether to prescribe immediately or delay the prescription.

It can be difficult having the to prescribe or not to prescribe discussion with patient. Here, consider printing out leaflets such as the one shown [click]. The leaflets are aimed to increase patients' confidence to self-care and to facilitate the use of back-up antibiotics, but it also allows the patients to go away with something, so ending the consultation on a positive note.

**References**


1. Little P, Moore M, Hobbs FDR, Mant D, McNulty C, Williamson I, et al. PRImary care Streptococcal Management (PRISM) study: identifying clinical variables associated with Lancefield group A β-haemolytic streptococci and Lancefield non-Group A streptococcal throat infections from two cohorts of patients presenting with an acute sore throat. BMJ Open. 2013;3(10):e003943.
2. Hay AD, Redmond NM, Turnbull S, Christensen H, Thornton H, Little P, et al.

Development and internal validation of a clinical rule to improve antibiotic use in children presenting to primary care with acute respiratory tract infection and cough: a prognostic cohort study. The Lancet Respiratory Medicine. 2016;4(11):902-10.

TARGET
Keep Antibiotics Working

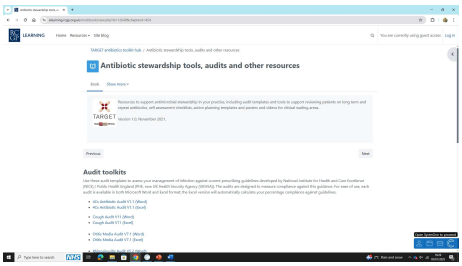
# Implementing a cycle of antimicrobial stewardship:

## A case study from the Village Surgery

**Dr Linda Strettle**
GP Partner , The Village Surgery, Rotherham

# Identify

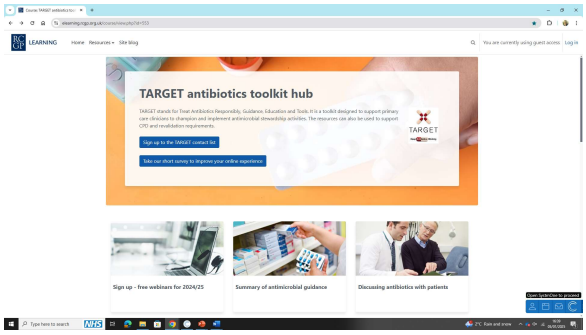

- Village surgery STAR-PU prescribing was above local prescribing target in 2022-23
- Reviewed all antibiotics used in highest prescribing month (June 2022)
- TARGET audits




| TARGET AUDIT | % patients with appropriately prescribed antibiotics |
|---|---|
| UTIs >65 years (non catheterized patients) | 67% |
| UTI in women <65 years | 65% |
| Rhinosinusitis | 50% |
| Acute Cough | 91% |

# TARGET Learn

Keep Antibiotics Working





NICE National Institute for Health and Care Excellence

UK Health Security Agency

**Summary of antimicrobial prescribing guidance – managing common infections**

- See the British National Formulary (BNF) for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breastfeeding.
- See the TARGET antibiotics toolkit - Summary of antimicrobial guidance page for accessible text summaries of the tables and links to full guidance.

Key: Click to access doses for children Click to access NICE's printable visual summary

Jump to section on: Upper | Lower RTI | UTI | Meningitis | GI | Genital | Skin | Eye | Dental

| Infection | Key points | Medicine | Doses Adult | Doses Child | Length | Visual summary |
|---|---|---|---|---|---|---|
| ▼ Upper respiratory tract infections | | | | | | |
| **Acute sore throat** | Advise paracetamol, or if preferred and suitable, ibuprofen for pain.<br>Medicated lozenges may help pain in adults.<br>Use FeverPAIN or Centor to assess symptoms:<br>**FeverPAIN 0-1 or Centor 0-2**: no antibiotic;<br>**FeverPAIN 2-3**: no or back-up antibiotic;<br>**FeverPAIN 4-5 or Centor 3-4**: immediate or back-up antibiotic;<br>**Systemically very unwell or high risk of complications**: immediate antibiotic.<br>**3 days of phenoxymethylpenicillin may be enough for symptomatic cure; but a 10-day course may increase the chance of microbiological cure.*<br>*For detailed information click the visual summary icon.* | **First choice**: phenoxymethylpenicillin | 500mg QDS or 1000mg BD | | 5 to 10 days* | |
| NICE<br>UK Health Security Agency<br>Last updated: Feb 2023 | | **Penicillin allergy**: clarithromycin **OR** | 250mg to 500mg BD | | 5 days | |
| | | erythromycin (if macrolide needed in pregnancy; consider benefit/harm) | 250mg to 500mg QDS or 500mg to 1000mg BD | | 5 days | |

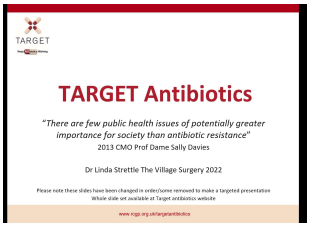
Summary of antimicrobial prescribing guidance – managing common infections (December 2024) 1

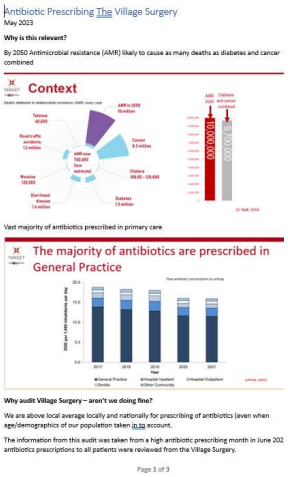
https://elearning.rcgp.org.uk/mod/book/view.php?id=14887

# TARGET Act

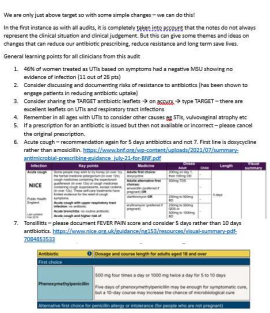
Keep Antibiotics Working

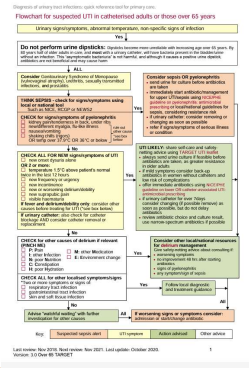
- Protected learning time event
- Individual prescriber feedback
- Practice feedback
- Involvement of the whole team





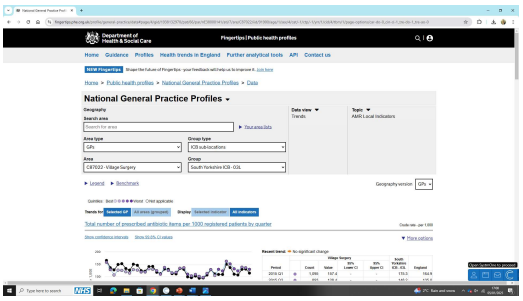


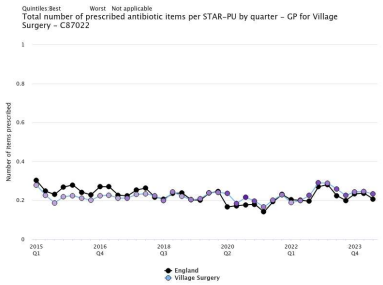



# TARGET Review

Keep Antibiotics Working

| TARGET AUDIT | % patients with appropriately prescribed antibiotics 2022 | % patients with appropriately prescribed antibiotics 2024 |
|---|---|---|
| UTIs >65 years (non catheterized patients) | 67% | 92% |


Accessed 5/1/2025 Office for Health Improvement and Disparities.
Public health profiles.
2025 https://fingertips.phe.org.uk/



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- Katherine Henderson




Before we get on to the Q&A…

# Thank you for listening!

**Please complete the feedback survey and let us know what topic you would like next!**

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# Panel discussion