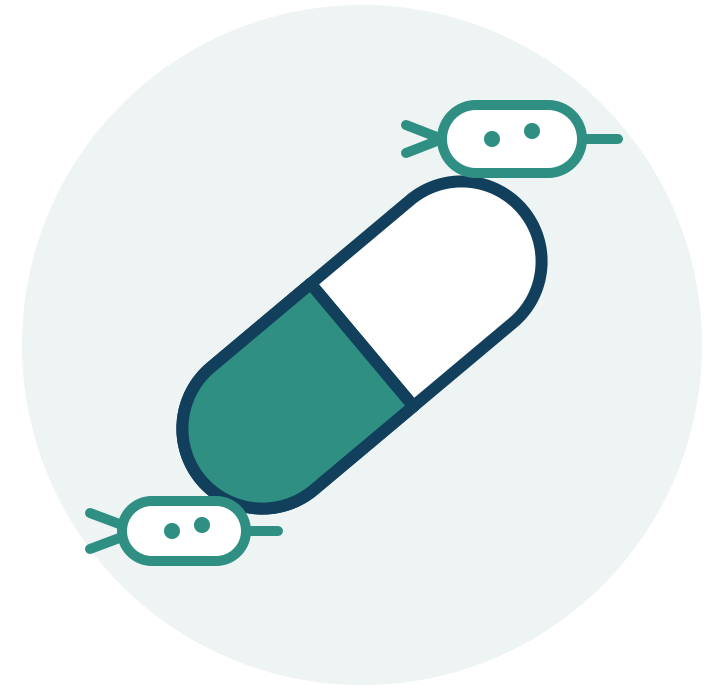


Prudent antibiotic prescribing in primary care

A practical update for general practitioners

CONTINUING MEDICAL EDUCATION



Learning objectives

By the end of this session, you will be able to:



1

Describe the burden of antimicrobial resistance and the EU targets for 2030.



2

Apply the EU recommendations on prudent antibiotic use in the consultation.



3

Use delayed prescribing and safety-netting advice when immediate antibiotics are not needed.

Antimicrobial resistance already causes more than 35,000 deaths a year in the EU

GLOBAL

1.14 M → **1.91 M**

deaths in 2021

forecast for 2050

Deaths directly attributable to bacterial resistance¹

EU/EEA

>35,000

deaths per year

Comparable to the combined mortality of influenza, tuberculosis and HIV/AIDS^{2,3}

Nine out of ten antibiotics are used outside hospitals



■ **Community sector:** 90% of human antibiotic consumption in the EU/EEA³

■ **Hospital sector:** the remaining 10%

⚙️ Avoiding antibiotics when they are not needed, such as for viral infections, reduces the chance of bacteria becoming resistant.³

The EU is off track for four of its five targets

	Reduce total antibiotic consumption by 20%	2% higher than in 2019
	At least 65% of consumption from the WHO "Access" group	60.3%
	Reduce MRSA bloodstream infections by 15%	20.4% lower: target reached
	Reduce third-generation cephalosporin-resistant <i>E. coli</i> bloodstream infections by 10%	5.9% higher
	Reduce carbapenem-resistant <i>K. pneumoniae</i> bloodstream infections by 5%	More than 60% higher

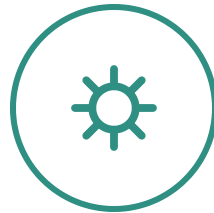
Targets for 2030 set by the Council Recommendation of 13 June 2023, with 2019 as the baseline.² EU situation in 2024.³

Before prescribing, confirm that an antibiotic is needed

EU guidelines recommend that prescribers:⁴



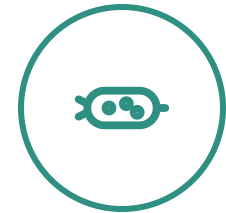
Make a diagnosis during an in-person consultation, except in exceptional circumstances.



Avoid antibiotics when there is only evidence of a viral or self-limiting bacterial infection.



Use scoring systems or symptom checklists to guide testing, treatment and urgent referral.



Avoid treating colonisation without evidence of infection.

If you do not prescribe, give the patient a plan

Explain to the patient:⁴



The expected course of the illness



The limited or absent benefit of antibiotics



Possible side effects, such as diarrhoea and rash



How to manage symptoms



What to do if their condition worsens (safety netting)

Delayed prescribing cuts antibiotic use by two thirds

The patient receives a prescription to use only if symptoms do not improve or get worse.

Antibiotic use



Patient satisfaction (no significant difference)



Cochrane review of 11 randomised trials (3,555 participants with acute respiratory infections). No differences in complication rates; symptoms of acute otitis media and sore throat improved modestly with immediate antibiotics.⁵

If you prescribe, choose a first-line option for the shortest effective duration

Select an antibiotic according to guidelines:⁴



At an appropriate dose



For the shortest effective duration



By the oral route whenever possible



Considering age, comorbidities, renal and hepatic function, pregnancy, allergies and drug interactions

Prefer antibiotics from the WHO "Access" group when the guidelines allow it.^{2,3}

Key messages



Most antibiotics in Europe are used in the community, so general practice is central to the response.



Do not prescribe antibiotics for viral or self-limiting infections.



When in doubt, consider delayed prescribing with clear safety-netting advice.



When antibiotics are needed, choose a first-line option for the shortest effective duration.

References

1. GBD 2021 Antimicrobial Resistance Collaborators. Global burden of bacterial antimicrobial resistance 1990-2021: a systematic analysis with forecasts to 2050. *Lancet*. 2024;404(10459):1199-1226. doi:10.1016/S0140-6736(24)01867-1
2. Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach (2023/C 220/01). *Official Journal of the European Union*. 2023;C220:1-20.
3. European Centre for Disease Prevention and Control. European Antibiotic Awareness Day: key messages, 2025 campaign. Accessed October 17, 2026. <https://antibiotic.ecdc.europa.eu/en/key-messages-2025-campaign>
4. European Commission. EU Guidelines for the prudent use of antimicrobials in human health (2017/C 212/01). *Official Journal of the European Union*. 2017;C212:1-12.
5. Spurling GK, Del Mar CB, Dooley L, Foxlee R, Farley R. Delayed antibiotic prescriptions for respiratory infections. *Cochrane Database Syst Rev*. 2017;9:CD004417. doi:10.1002/14651858.CD004417.pub5

Speaker notes

SLIDE 1

This session looks at antimicrobial resistance from the general practitioner's point of view: how big the problem is, what the EU has committed to, and what can be done in a routine consultation to avoid unnecessary prescriptions.

SLIDE 2

The first objective gives the context; the other two are practical. All three are based on European guidelines and on evidence from randomised trials in primary care.

SLIDE 3

The Global Burden of Disease study separates deaths directly attributable to resistance, those that would not have happened if the infection had been susceptible, from deaths associated with it. The slide uses the more conservative figure. In the EU, the burden is already similar to that of influenza, tuberculosis and HIV/AIDS together.

SLIDE 4

Because most antibiotics are prescribed in the community, general practice has more room than any other setting to reduce unnecessary use. Antibiotics have no effect on colds, influenza or COVID-19.

SLIDE 5

Only the MRSA target has been reached. Total consumption has not fallen, and the share of "Access" antibiotics, first- and second-line options with a lower potential for resistance, is still below 65%. These first two targets depend largely on prescribing in primary care.

Speaker notes

SLIDE 6

These recommendations come from the EU Guidelines for the prudent use of antimicrobials in human health, published by the European Commission on the basis of a technical report by the European Centre for Disease Prevention and Control.

SLIDE 7

With this information, the patient can manage the illness at home and knows when to come back. Safety netting means agreeing in advance which warning signs should lead to a new consultation.

SLIDE 8

Patient satisfaction did not differ significantly between the two strategies. EU guidelines suggest considering delayed prescribing in specific situations, such as acute otitis media or acute rhinosinusitis, always with safety-netting advice.

SLIDE 9

Short courses and "Access" antibiotics help to minimise the potential for resistance. The EU target is for at least 65% of antibiotic consumption to come from the "Access" group.

SLIDE 10

Each unnecessary prescription avoided in primary care helps to keep antibiotics effective for the patients who need them.