

Containing and controlling antimicrobial resistance: A knowledge and skills framework for health and social care in Scotland - Preventing infection and protecting antimicrobials

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Our problem

Antimicrobial resistance (AMR) is a major threat to public health, and we need urgent action to preserve the antimicrobials available today.

31.2 % of the Scottish population received an antibiotic prescribed in primary care in 2023 (excluding dental). This was an increase of 1.2% from 2022. From 2022 to 2023, total antibiotic use in humans in Scotland increased by 5.1%.¹

Antimicrobials are now increasingly prescribed by nurses, pharmacists and other non-medical HCPs.

We aim to reduce prescriptions significantly by 2029, and antimicrobial stewardship is everyone's business in health and social care – we all have a role to play, whether or not we are prescribing antibiotics.

At a glance

“The education of the health workforce is of crucial importance, as they form the front line in safeguarding the effectiveness of antimicrobial medicines.”²

The framework is:

- one of the Scottish actions to support the UK 5-year action plan for antimicrobial resistance 2024 to 2029³
- multidisciplinary
- for Scottish health and social care staff and students
- the basis for the development of supporting local and national learning materials and underpins and supports many of the targets set in the UK 5-year action plan for AMR 2024 to 2029

Aims of the framework

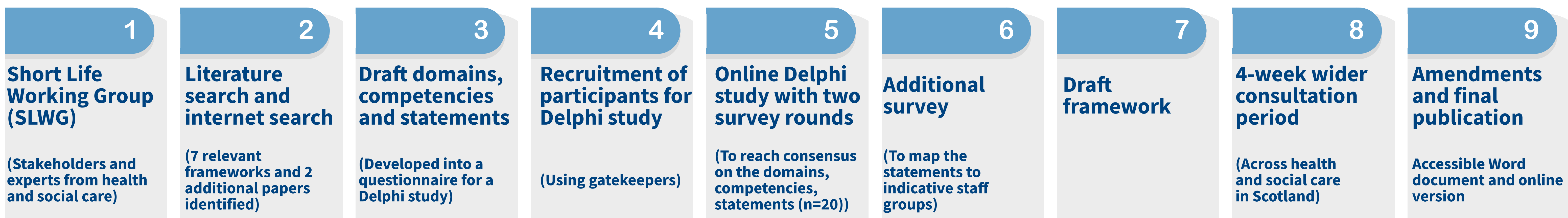
The framework aims to raise awareness of AMR and highlight the need for coordinated action to safeguard antimicrobials for the future.

It aims to support:

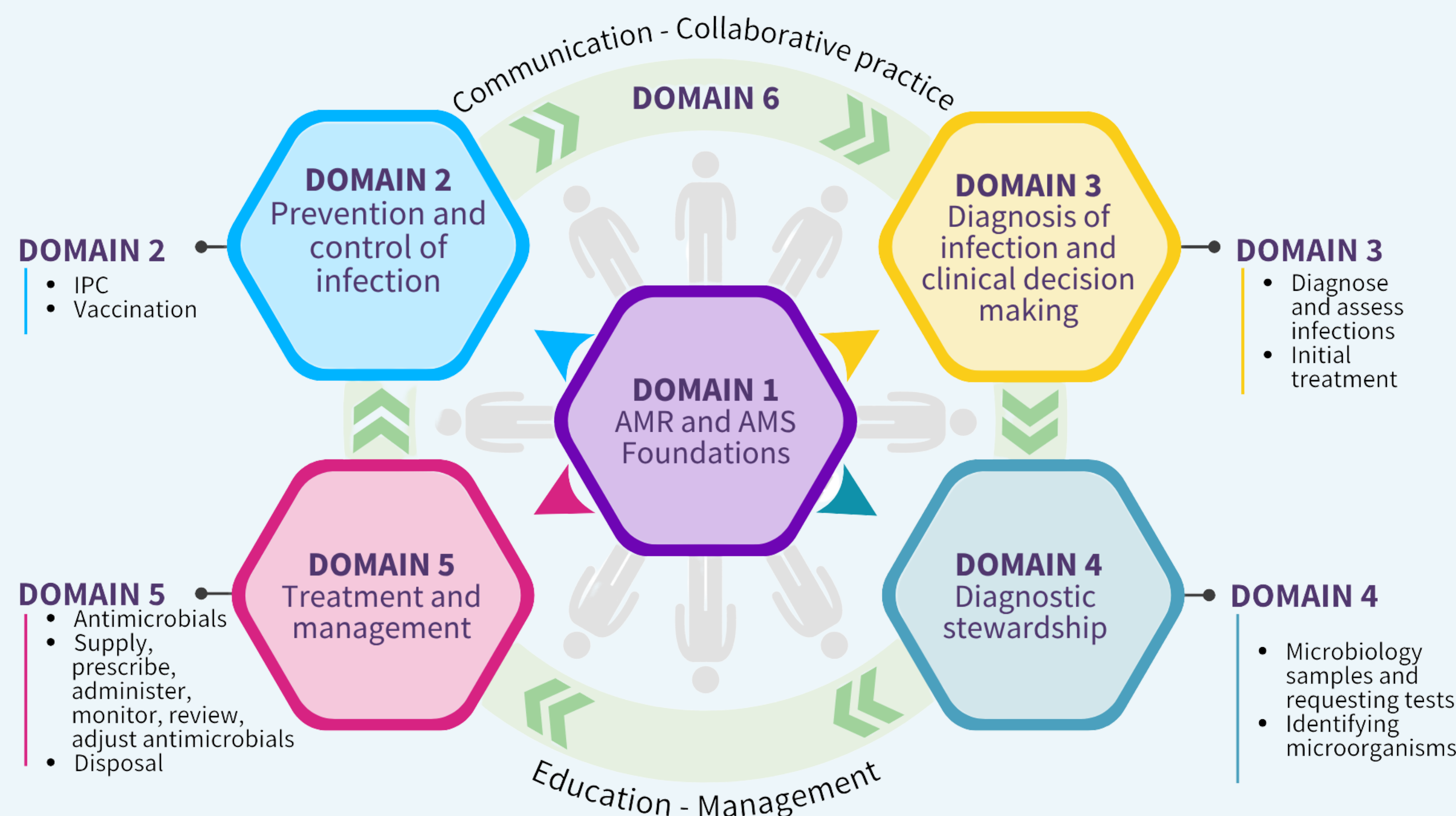
- Staff and students** – play your part and contribute to managing and reducing AMR
- Collaborative practice** – work with others and make joint decisions
- Employers / recruiters** – assess skills you need
- Educators** – create appropriate learning materials and opportunities

Methods

NHS Education for Scotland (NES), the Scottish Antimicrobial Prescribing Group (SAPG) and Glasgow Caledonian University have created a framework to support the education of health and social care staff and students in Scotland.



Results / Outcomes



What does the framework cover?

The framework looks at AMR and antimicrobial stewardship (AMS) through the lens of a care journey. It highlights where in the journey staff can contribute to keeping antimicrobials and those in their care safe. It has 83 topics and 177 statements across 6 domains.

What were the key challenges in developing the framework?

- Developing the staff groups
- Allocating knowledge and skills statements to staff groups (indicative only)
- Keeping the language simple so it is accessible for all, including those with little or no previous awareness or knowledge

Who is the framework for?

- The framework covers very broad groups of staff and students:
- Staff and students who **interact / will interact with those in care or their families / carers**
- Those who are involved in **direct care or in a supporting role**
- **Laboratory staff** who provide diagnostic expertise and laboratory reports which are essential for the treatment of infections
- **Staff in management organisational oversight roles** who can influence and direct the provision of services

How do you use the framework?

- 1 Identify the staff group:** Which of the main staff groups is most appropriate?
- 2 Select a domain/subdomain:** Which parts of the care journey are you / your target audience involved in?
- 3 Select a topic:** What is the level or previous knowledge? Where can you make an impact on service delivery and AMR?

What can you do to help implement the framework?

- Access the framework via the “**Antimicrobial resistance and stewardship**” Zone on Turas Learn
- Use the framework and raise awareness of it, perhaps through staff/line manager communications
- Think about how it can be embedded in your organisation, e.g. via local AMS leads or champions
- Encourage AMS learning
- Provide **feedback** on the framework

Conclusions and next steps



“By emphasising prevention, accurate diagnosis, and a multidisciplinary approach, the framework ensures that everyone, from frontline staff to managers, can contribute to preserving the effectiveness of antimicrobials for current and future generations” (Scottish Microbiology and Virology Forum).

The framework was published in August 2025 on Turas Learn in a new **Antimicrobial Resistance and Stewardship Zone**.

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For questions and comments please contact: hai@nes.scot.nhs.uk



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a: NHS Education for Scotland; b: Healthcare Improvement Scotland / Scottish Antimicrobial Prescribing Group; c: Glasgow Caledonian University; d: Scottish Government

References:

- 1: ARHAI Scotland (2024): Antimicrobial Resistance and Healthcare Associated Infection Scotland. Scottish One Health Antimicrobial Use and Antimicrobial Resistance in 2022. Glasgow [Report]. <https://www.nss.nhs.scot/publications/scottish-one-health-antimicrobial-use-and-antimicrobial-resistance-in-2023/> (accessed 29 Nov 2024).
- 2: World Health Organization (2024): Promoting antimicrobial stewardship to tackle antimicrobial resistance. <https://www.who.int/europe/activities/promoting-antimicrobial-stewardship-to-tackle-antimicrobial-resistance> (accessed 02.02.2024).
- 3: Department of Health and Social Care, UK. 'Confronting antimicrobial resistance 2024 to 2029 - UK 5-year action plan for antimicrobial resistance 2024 to 2029'. Available on GOV.UK.