



Background

Antimicrobial resistant (AMR) organisms and the lack of effective alternative therapies is a serious threat to patient safety and the future of healthcare. It is a major worldwide public health issue

Antimicrobial Stewardship (AMS) is essential to control AMR. The three major goals for AMS (1) are:

- optimisation of therapy for individual patients
- prevention of overuse, misuse and abuse
- minimising AMR development at both patient and community levels

Competences Development

- The ultimate goal of AMS is to improve patient safety and outcomes including reducing AMR and decreasing the spread of infections caused by multidrug resistant organisms.
- Educating the public and clinicians in the prudent use of antimicrobials as part of an antimicrobial stewardship programme is of paramount importance to control AMR. Improving surveillance, and infection prevention and control are other key strategies.
- Using current available evidence, regulatory documents and national antimicrobial stewardship guidance for primary and secondary care, **five competency dimensions (31 statements)** for antimicrobial prescribing and stewardship competences were developed in England (table 1)
- The convened group comprised individuals representing 22 national organisations and professional bodies (e.g. Infection control, doctors, nurses, pharmacists, podiatrists) and Department of Health/Public Health England, Wales, Scotland and Northern Ireland (2). The organisations represented are listed in the **published abstract**
- The competences are designed to complement the United Kingdom's Generic prescribing competency framework for all prescribers

Conclusion

- The implementation of the competences will be taken forward by Health Education England, in collaboration with Public Health England
- A “cross-roads” site which would comprise links to members’ sites’ competency documents, syllabus, learning outcomes and assessment methods for CPD/Courses and other agreed items is recommended.
- We believe these are the **first antimicrobial prescribing and stewardship competences to be developed world-wide** and their implementation will be an important contribution to the delivery of the UK 5 year Antimicrobial Resistance Strategy (3)

References:

1. Doron and Davidson 2011 86(11): 1113-23 2. DH-ARHAI Antimicrobial Prescribing Stewardship Competences 2013 - 3. Department of Health. UK Five Year Antimicrobial Resistance Strategy 2013 to 2018 <https://www.gov.uk/government/publications/uk-5-year-antimicrobial-resistance-strategy-2013-to-2018>

The five dimensions of competencies are shown in the table with one example of a competency statement for each category

All competencies can be found on the Department of Health’s website - <https://www.gov.uk/>

Five Dimensions	No of Statements	Illustrative example of competency statements
1) Infection prevention and control: all independent prescribers must understand the principles and demonstrate competence in preventing and controlling infections	5 statements	Understand how current vaccines can benefit prescribing practices, including reducing the need for prescribing antimicrobials and decreasing resistant antimicrobial resistant strains e.g. of <i>S. pneumoniae</i> .
2) Antimicrobial resistance and antimicrobials: including modes of action and spectrum of activities of antimicrobials and the mechanisms of resistance	6 statements	Knowledgeable in the appropriate use of antimicrobial agents for: <ul style="list-style-type: none"> • prophylaxis to minimise the risk of infection • treatment of infections
3) Prescribing antimicrobials: including the key elements in prescribing appropriate antimicrobial agents for prophylaxis and treatment	8 statements	Competent in AM prescribing by demonstrating knowledge of when not to prescribe antimicrobials, and use of alternatives, such as the removal of invasive devices, e.g intravenous or urinary catheters and incision and drainage of abscesses.
4) Antimicrobial stewardship: demonstrating an understanding and including antimicrobial stewardship in day to day practice	8 statements	Demonstrate clinical competence and understand the importance of Appropriately choosing one of the five antimicrobial prescribing decisions 48 hours after initiating antimicrobial treatment (ARHAI Guidance – Start Smart – then Focus)
5) Monitoring and learning: all independent prescribers must demonstrate continuing professional development in antimicrobial prescribing and stewardship	4 statements	Demonstrate CPD in AMS by using locally agreed process measures of quality (eg compliance with guidance), outcome and balancing measures, such as unintended adverse events or complications.

Table 1: The five antimicrobial prescribing and stewardship competency dimensions with an illustrative example for each of the dimensions