



Work Package 7

List of revised guidelines, tools and implementation methods for antibiotic stewardship

LEVEL OF CARE

Long-term facility care

Antibiotic Stewardship Programmes (ASPs)

Antimicrobial Stewardship in Australian Health Care

<i>Publishing year</i>	2018
<i>Author(s)</i>	Australian Commission on Safety and Quality in Health Care
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	Australia
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Book on antimicrobial stewardship in Australian health care with a summary of the current evidence on antimicrobial stewardship, strategies for implementing and sustaining antimicrobial stewardship programmes, and a description of the roles of different clinicians.

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Antimicrobial stewardship: From principles to practice

<i>Publishing year</i>	2018
<i>Author(s)</i>	British Society for Antimicrobial Chemotherapy
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	United Kingdom
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Practical e-book on global antimicrobial stewardship with (among other chapters) key steps in the development of antimicrobial stewardship programmes, a toolkit and practical recommendations and examples for different settings.

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EU Guidelines for the prudent use of antimicrobials in human health

<i>Publishing year</i>	2017
<i>Author(s)</i>	European Commission
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	Europe
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Non-binding guidelines to promote the prudent use of antimicrobials in humans. It includes measures, good clinical practice, activities, resources, systems and processes targeting to all actors involved in the use of antimicrobials.

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Building a national Infection Intelligence Platform to improve antimicrobial stewardship and drive better patient outcomes: the Scottish experience. (J Antimicrob Chemother)

<i>Publishing year</i>	2017
<i>Author(s)</i>	Bennie et al.
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	Scotland
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	A summary of the experience with and the capabilities of a new national platform for infection-related health data (NHS Scotland Infection Intelligence Platform - IIP) to improve antimicrobial stewardship and drive better patient outcomes.

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Guidelines on Implementation of the Antimicrobial Strategy in South Africa: One Health Approach & Governance

<i>Publishing year</i>	2017
<i>Author(s)</i>	Department of Health, South Africa
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	South-Africa
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	From source: These guidelines are intended to act as a blueprint for the steps to be taken by South African healthcare and veterinary workforce to enact AMS at national, provincial, district and health establishment levels as appropriate, in line with the Strategic Framework and Implementation Plan. It aims to provide a practical, step-by-step or 'how to' guide, addressing the governance framework at each level of the health system.

Antimicrobial stewardship overview. NICE Pathways

<i>Publishing year</i>	2017
<i>Author(s)</i>	National Institute for Health and Care Excellence (NICE)
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	United Kingdom
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Interactive topic-based flowcharts that allow navigating NICE recommendations on Antimicrobial stewardship.

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Antibiotic Stewardship Implementation Framework for Health Departments

<i>Publishing year</i>	2017
<i>Author(s)</i>	Centers for Disease Control and prevention
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	USA
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	This framework describes what activities state and local health departments can do to implement antibiotic stewardship: 1) Establish leadership in health departments, 2) Conduct surveillance, 3) Coordinate activities, 4) Provide and develop education and tools, 5) Develop a communications plan, 6) Inform the legislative process.

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Long-Term Care Antimicrobial Stewardship Program Resources

<i>Publishing year</i>	2017
<i>Author(s)</i>	Centers for Medicare & Medicaid Services (CMS)
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Locally developed
<i>Country/region</i>	USA
<i>Setting(s)</i>	Long-term facility care
<i>Short summary</i>	A document with links to many resources about antibiotic stewardship programs in nursing homes.

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Template for an Antibiotic Stewardship Policy for Post-Acute and Long-Term Care Settings. (JAMDA)

<i>Publishing year</i>	2017
<i>Author(s)</i>	Jump et al.
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	USA
<i>Setting(s)</i>	Long-term facility care
<i>Short summary</i>	Describes a template for antimicrobial stewardship programs in long-term care facilities (LTC) developed by Infection Advisory Committee at AMDA - The Society for Post-Acute and Long-Term Care Medicine. Includes lists of resources for antibiotic stewardship in LTC in the US, and antibiotic use metrics.

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Antimicrobial stewardship: Quality Standard

<i>Publishing year</i>	2016
<i>Author(s)</i>	The National Institute for Health and Care Excellence (NICE)
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	United Kingdom
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	From source: This quality standard covers the effective use of antimicrobials to reduce the emergence of AMR (loss of effectiveness of antimicrobials). It covers all settings, all formulations of antimicrobials (oral, parenteral and topical agents) and is for health and social care practitioners, organisations that commission, who provide or support the provision of care, as well as people using antimicrobials and their carers.

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Antimicrobial stewardship: systems and processes for effective antimicrobial medicine use. Recommendations

<i>Publishing year</i>	2016
<i>Author(s)</i>	National Institute for Health and Care Excellence (NICE)
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	United Kingdom
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Recommendations for organisations (commissioners and providers): Antimicrobial stewardship programmes

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Antimicrobial stewardship: tools and resources

<i>Publishing year</i>	2016
<i>Author(s)</i>	National Institute for Health and Care Excellence (NICE)
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	United Kingdom
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Tools to help you put the guidance into practice: Implementation advice; Tailored service improvement support; Guidance into practice - practical steps

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Implementing an Antibiotic Stewardship Program: Guidelines by the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America (Clinical Infectious Diseases)

<i>Publishing year</i>	2016
<i>Author(s)</i>	Barlam et al. (IDSA)
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	USA
<i>Setting(s)</i>	Hospital care Long-term facility care
<i>Short summary</i>	Evidence-based guidelines (2016) for implementation and measurement of antibiotic stewardship interventions in inpatient populations including long-term care.

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New Antimicrobial Stewardship Standard

<i>Publishing year</i>	2016
<i>Author(s)</i>	Joint Commission Perspectives (US)
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	USA
<i>Setting(s)</i>	Hospital care Long-term facility care
<i>Short summary</i>	The antimicrobial stewardship standard developed by the Joint Commission in 2015 is updated. It concerns 1) Hospitals and Critical Access Hospitals and 2) Nursing Care Centers. Key elements are leadership, education, monitoring.

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A Path to Better Antibiotic Stewardship in Inpatient Settings

<i>Publishing year</i>	2016
<i>Author(s)</i>	The Pew Charitable Trusts
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)

<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	USA
<i>Setting(s)</i>	Hospital care Long-term facility care
<i>Short summary</i>	10 in-depth case studies map how to improve antibiotic use in acute and long-term care facilities. Though ASPs differ in their details, these case studies reveal themes that are critical to any successful program implementation.

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Antibiotic Stewardship in Long-Term Care Facilities - A Fact Sheet

<i>Publishing year</i>	2016
<i>Author(s)</i>	The Pew Charitable Trusts
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	USA
<i>Setting(s)</i>	Long-term facility care
<i>Short summary</i>	A summary of the core elements of antibiotic stewardship for nursing homes.

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The Core Elements of Antibiotic Stewardship for Nursing Homes

<i>Publishing year</i>	2015
<i>Author(s)</i>	Centers for Disease Control and prevention
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	USA
<i>Setting(s)</i>	Long-term facility care
<i>Short summary</i>	Summary on the core elements of successful antibiotic stewardship programs in nursing homes, taking into account leadership commitment, accountability, drug expertise, actions, tracking, reporting and education.

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The Core elements of Antibiotic Stewardship for Nursing Homes CHECKLIST

<i>Publishing year</i>	2015
<i>Author(s)</i>	Centers for Disease Control and prevention
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	USA
<i>Setting(s)</i>	Long-term facility care
<i>Short summary</i>	A checklist to be used as a baseline assessment of policies and practices which are in place. Then use the checklist to review progress in expanding stewardship activities on a regular basis (e.g., annually). The checklist is a companion to the Core Elements of Antibiotic Stewardship in Nursing Homes

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Guidelines for Antimicrobial Stewardship in Hospitals in Ireland

<i>Publishing year</i>	2009
<i>Author(s)</i>	Strategy for the Control of Antimicrobial Resistance in Ireland (SARI) - Hospital Antimicrobial Stewardship Working Group
<i>Type of document</i>	Antibiotic Stewardship Programme (ASP)
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	Ireland
<i>Setting(s)</i>	Hospital care Long-term facility care
<i>Short summary</i>	Provides the following guidelines: 1. Rationale for antimicrobial stewardship in hospitals; 2. Resources and structures that need to be in place to develop stewardship programmes; 3. Specific guidance on stewardship interventions.

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Commentaries, Statements and Opinions

Antimicrobial resistance and antibiotic stewardship programs in the ICU: insistence and persistence in the fight against resistance. A position statement from ESICM/ESCMID/WAAAR round table on multi-drug resistance.

<i>Publishing year</i>	2018
<i>Author(s)</i>	De Waele JJ, Akova M, Antonelli M, Canton R, Carlet J, De Backer D, et. All
<i>Type of document</i>	Commentary/Statement/Opinion
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	Belgium
<i>Setting(s)</i>	Hospital care
<i>Short summary</i>	Recommendations from the ESICM/ESCMID MDR round table panel. Conference Reports and Expert Panel

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Antimicrobial stewardship and infection prevention—leveraging the synergy: A position paper update (American Journal of Infection Control)

<i>Publishing year</i>	2018
<i>Author(s)</i>	Manning et al.
<i>Type of document</i>	Commentary/Statement/Opinion
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	USA
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Update of the position paper of APIC (The Association for Professionals in Infection Control and Epidemiology)/SHEA (The Society for Healthcare Epidemiology of America) (Moody et al. 2012, ID43) on the importance of antimicrobial stewardship. The critical role of infection preventionists and health care epidemiologists is reaffirmed and the synergistic strategy of

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The pharmacy contribution to antimicrobial stewardship

<i>Publishing year</i>	2017
<i>Author(s)</i>	Royal Pharmaceutical Society, UK
<i>Type of document</i>	Commentary/Statement/Opinion
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	United Kingdom
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	This policy focuses on the pharmacist's role as part of a multidisciplinary approach in tackling the challenges of inappropriate use of antibiotics.

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Guidance for the Knowledge and Skills Required for Antimicrobial Stewardship Leaders (Infection control and hospital epidemiology)

<i>Publishing year</i>	2014
<i>Author(s)</i>	Cosgrove et al. (The Society for Healthcare Epidemiology of America)
<i>Type of document</i>	Commentary/Statement/Opinion
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	USA
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Overview of the core knowledge and skills that are needed to lead and maintain an antimicrobial stewardship program.

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Education on antibiotic use. Education systems and activities that work.

<i>Publishing year</i>	2013
<i>Author(s)</i>	Cisneros J.M. et al.
<i>Type of document</i>	Commentary/Statement/Opinion
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	Spain
<i>Setting(s)</i>	Hospital care
<i>Short summary</i>	Education systems and activities that work for the antimicrobial stewardship use

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Policy Statement on Antimicrobial Stewardship by the Society for Healthcare Epidemiology of America (SHEA), the Infectious Diseases Society of America (IDSA), and the Pediatric Infectious Diseases Society (PIDS). (Infect Control Hosp Epidemiol 2012)

<i>Publishing year</i>	2012
<i>Author(s)</i>	SHEA/IDSA/PIDS
<i>Type of document</i>	Commentary/Statement/Opinion
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	USA
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Policy paper on antimicrobial stewardship with recommendations for the mandatory implementation of antimicrobial stewardship throughout health care, process and outcome measures to monitor interventions, and attention for deficiencies in education and research.

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Antimicrobial stewardship: A collaborative partnership between infection preventionists and health care epidemiologists (American Journal of Infection Control)

<i>Publishing year</i>	2012
<i>Author(s)</i>	Moody et al. (The Association for Professionals in Infection Control and Epidemiology/The Society for Healthcare Epidemiology of America)
<i>Type of document</i>	Commentary/Statement/Opinion
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	USA
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Position paper from The Association for Professionals in Infection Control and Epidemiology (APIC) and the Society for Healthcare Epidemiology of America (SHEA) on the critical role of health care epidemiologists and infection preventionists in effective antimicrobial stewardship programs.

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Reports

ARNA project: Antimicrobial resistance and causes of non-prudent use of antibiotics in human medicine in the EU.

<i>Publishing year</i>	2017
<i>Author(s)</i>	John Paget et al. (European Commission)
<i>Type of document</i>	Report
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	Europe
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Final report of the ARNA ('Antimicrobial resistance and the causes of non-prudent use of antibiotics') project, funded by the European Commission, which aimed to: 1) investigate the use of antibiotics without a prescription, 2) assess the level of enforcement of 'prescription-only' legislation, 3) document good practices for the prudent use of antibiotics, 4) develop policy options.

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Global Framework for Development & Stewardship to Combat Antimicrobial Resistance

<i>Publishing year</i>	2017
<i>Author(s)</i>	WHO
<i>Type of document</i>	Report
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	International
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Description of the current state and the future tasks of WHO for the establishment of a global development and stewardship framework (background information to the 'Global Action Plan on Antimicrobial Resistance' of WHO).

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Prudent use of antimicrobial agents in human medicine: third report on implementation of the Council recommendation

<i>Publishing year</i>	2016
<i>Author(s)</i>	European Commission
<i>Type of document</i>	Report
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	Europe
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Analysis of countries' reports on the implementation of the Council recommendation of 15 November 2001 (2002/77/EC) on the prudent use of antimicrobial agents in human medicine.

DRIVE-AB WP1A: Quality Indicators and Quantity Metrics of Antibiotic Use

<i>Publishing year</i>	2015
<i>Author(s)</i>	Driving reinvestment in research and development and responsible antibiotic use (DRIVE-AB)
<i>Type of document</i>	Report
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	Europe
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Overview of quality indicators and quantity metrics of antibiotic use, identified in the Drive-AB project (work package 1A)

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Global Action Plan on Antimicrobial Resistance

<i>Publishing year</i>	2015
<i>Author(s)</i>	WHO
<i>Type of document</i>	Report
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	International
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Sets out the key actions structured around 5 strategic objectives: 1) effective communication, education and training; 2) surveillance and research, 3) effective sanitation, hygiene and infection prevention measures; 4) optimize the use of antimicrobial medicines in human and animal health, 5) develop the economic case for sustainable investment and increase investment in new medicines, diagnostic tools etc.

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Ensuring Prudent Use of Antimicrobials In Human Medicine In the European Union.

<i>Publishing year</i>	2005
<i>Author(s)</i>	Werner & Bronzwaer (Eurosurveillance)
<i>Type of document</i>	Report
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	Europe
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Report on the main actions in the EU Member States to implement the 'Council Recommendation on the prudent use of antibiotics in human medicine (2002)': national strategies and intersectoral mechanism, surveillance systems for AMR and use, control and preventive measures, education/training and commission support for EU action.

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Researches

The Current State of Antimicrobial Stewardship: Challenges, Successes, and Future Directions (Current Infectious Disease Reports)

<i>Publishing year</i>	2018
<i>Author(s)</i>	Emberger et al.
<i>Type of document</i>	Research
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	USA
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Review on the current state (2018, USA) of the field of antimicrobial stewardship with key challenges, successes and future directions.

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What is antimicrobial stewardship? (Clinical Microbiology and Infection)

<i>Publishing year</i>	2017
<i>Author(s)</i>	Dyar et al. (ESCMID Study Group for Antimicrobial stewardship)
<i>Type of document</i>	Research
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	Europe
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Review on the emergence and evolution of the term ‘antimicrobial stewardship’.

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ESGAP inventory of target indicators assessing antibiotic prescriptions: a cross-sectional survey. (J Antimicrob Chemother)

<i>Publishing year</i>	2017
<i>Author(s)</i>	Howard et al. (ESCMID Study Group for Antimicrobial stewardship)
<i>Type of document</i>	Research
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	Europe
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Results of a European survey among all ESGAP (ESCMID Study Group for Antimicrobial stewardship) members, on indicators assessing antibiotic prescriptions at a national levels is presented, with both targets and incentives

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A global call from five countries to collaborate in antibiotic stewardship: united we succeed, divided we might fail (Lancet Infect Dis)

<i>Publishing year</i>	2017
<i>Author(s)</i>	Goff et al.
<i>Type of document</i>	Research
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	International
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Review on different approaches for antibiotic stewardship in five countries: USA, South Africa, Colombia, Australia, and the UK.

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Antibiotic stewardship in low- and middle-income countries: the same but different? (Clinical Microbiology and Infection)

<i>Publishing year</i>	2017
<i>Author(s)</i>	Cox et al.
<i>Type of document</i>	Research
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	International
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	A literature review of antibiotic stewardship programs in low- and middle-income countries, highlighting challenges in LMICs. Examples of national programs are listed.

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Managing responsible antimicrobial use: perspectives across the healthcare system (Clinical Microbiology and Infections)

<i>Publishing year</i>	2017
<i>Author(s)</i>	ESCMID Study Group for Antimicrobial stewardshiP (ESGAP) (Dyar et al.)
<i>Type of document</i>	Research
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	International
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	To review real-world examples of how healthcare systems can promote responsible antimicrobial use, focusing on the role of governance and managers. Based on literature review, official documents (governments and agencies), and the experience that ESGAP has gained on the topic.

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Disease-based antimicrobial stewardship: a review of active and passive approaches to patient management. (J Antimicrob Chemother)

<i>Publishing year</i>	2017
<i>Author(s)</i>	Foolad et al.
<i>Type of document</i>	Research
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	USA
<i>Setting(s)</i>	Hospital care Long-term facility care
<i>Short summary</i>	Disease-based antimicrobial stewardship interventions for the following diseases were evaluated: pneumonia, acute bacterial skin and skin structure infections, bloodstream infections, urinary tract infections, asymptomatic bacteriuria, Clostridium difficile infection and intra-abdominal infections. The effect of these ASPs varies based on infectious disease syndrome, resource availability and intervention type.

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Implementing Antimicrobial Stewardship in Long-term Care Settings: An Integrative Review Using a Human Factors Approach (Clinical Infectious Diseases)

<i>Publishing year</i>	2017
<i>Author(s)</i>	Katz et al. (IDSA)
<i>Type of document</i>	Research
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	USA
<i>Setting(s)</i>	Long-term facility care
<i>Short summary</i>	Review on the implementation of antimicrobial stewardship in long-term care facilities, using a human factors engineering approach to understand all aspects associated with successful implementations of multimodal interventions.

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Antibiotic Stewardship in Nursing Facilities. (Infect Dis Clin N Am)

<i>Publishing year</i>	2017
<i>Author(s)</i>	McElligott et al.
<i>Type of document</i>	Research
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	USA
<i>Setting(s)</i>	Long-term facility care
<i>Short summary</i>	A review describing factors that influence antibiotic prescribing decisions, strategies to improve antibiotic prescribing, the current state of ASPs, and suggestions for expansion of antibiotic stewardship activity, in nursing facilities.

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Antimicrobial stewardship in wound care: a Position Paper from the British Society for Antimicrobial Chemotherapy and European Wound Management Association

<i>Publishing year</i>	2016
<i>Author(s)</i>	Benjamin A. Lipsky, Matthew Dryden, Finn Gottrup, Dilip Nathwani, Ronald Andrew Seaton and Jan Stryja
<i>Type of document</i>	Research
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	International
<i>Setting(s)</i>	Hospital care Long-term facility care
<i>Short summary</i>	This guidance document is aimed at providing clinicians an understanding of: the basic principles of why AMS is important in caring for patients with infected wounds; who should be involved in AMS and how to conduct AMS for patients with infected wounds

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Current evidence on hospital antimicrobial stewardship objectives: a systematic review and meta-analysis. (Lancet Infect Dis)

<i>Publishing year</i>	2016
<i>Author(s)</i>	Schuts et al.
<i>Type of document</i>	Research
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	Netherlands
<i>Setting(s)</i>	Hospital care Long-term facility care
<i>Short summary</i>	A systematic review and meta-analysis to study the effect of ASPs on four patient outcomes in hospitals and long-term care facilities: clinical outcomes, adverse events, costs, and bacterial resistance rates.

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Antimicrobial stewardship in long term care facilities: what is effective? (Antimicrobial Resistance and Infection Control)

<i>Publishing year</i>	2014
<i>Author(s)</i>	Nicolle, L. E.
<i>Type of document</i>	Research
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	Canada
<i>Setting(s)</i>	Long-term facility care
<i>Short summary</i>	This review identified a limited number of studies which evaluate the implementation and effectiveness of ASPs for long term care residents. The programs described in these reports are all unique. There is no standardization of program components, implementation strategies, or evaluation.

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Antimicrobial Stewardship Initiatives Throughout Europe: Proven Value for Money.

<i>Publishing year</i>	2017
<i>Author(s)</i>	Edwin J.M. Oberjé, Marit A.C. Tanke Patrick P.T. Jeurissen2,
<i>Type of document</i>	Research
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	Netherlands
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care

Short summary The aim of this study is to highlight some of the success stories of proven cost-effective interventions, and to describe the actions that have been taken, the outcomes that have been found, and the difficulties that have been met. In some cases we came across substantial scope for real-life cost savings. Although the best approach to effectively hinder the spread of antimicrobial resistance remains unclear and may vary significantly among settings, several EU-wide examples demonstrate that cost-effective antimicrobial stewardship is possible. Such examples can encourage others to implement (the most cost-effective) elements in their system.

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Participatory action research in antimicrobial stewardship: a novel approach to improving antimicrobial prescribing in hospitals and long-term care facilities.

<i>Publishing year</i>	2014
<i>Author(s)</i>	van Buul LW1, Sikkens JJ, van Agtmael MA, Kramer MH, van der Steen JT, Hertogh CM.
<i>Type of document</i>	Research
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	Netherlands
<i>Setting(s)</i>	Hospital care Long-term facility care

Short summary It is challenging to change physicians' antimicrobial prescribing behaviour. Although antimicrobial prescribing is determined by contextual (e.g. a lack of guidelines), cultural (e.g. peer practice) and behavioural (e.g. perceived decision making autonomy) factors, most antimicrobial stewardship programmes fail to consider these factors in their approach. This may lead to suboptimal intervention effectiveness. We present a new approach in antimicrobial stewardship programme development that addresses relevant determinants of antimicrobial prescribing: participatory action research (PAR). PAR is a collaborative process that aims to bring about change in social situations by producing practical knowledge that is useful in local practice. It requires substantial involvement of relevant stakeholders to address determinants of the studied behaviour and to facilitate empowerment. PAR is well suited for complex problems in multidisciplinary settings as it adapts to local needs, delivering a tailored approach to improving local practice. We describe how PAR can be applied to antimicrobial stewardship, and describe the PAR design of two ongoing multicentre antimicrobial stewardship projects, in the acute care setting and the long-term care setting, respectively.

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Tools and educational resources

Antimicrobial Stewardship: A competency-based approach

<i>Publishing year</i>	2018
<i>Author(s)</i>	WHO
<i>Type of document</i>	Tool and/or educational resource
<i>Scope/aim</i>	Nation-wide
<i>Country/region</i>	International
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	From source: This course will equip clinicians who frequently prescribe antimicrobials with knowledge and tools to improve their use in daily clinical practice. Through case based examples, the course will highlight how antimicrobial stewardship principles can be applied to common clinical scenarios.

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Antimicrobial Stewardship: Managing Antibiotic Resistance (online course)

<i>Publishing year</i>	2018
<i>Author(s)</i>	The British Society for Antimicrobial Chemotherapy (BSAC)
<i>Type of document</i>	Tool and/or educational resource
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	United Kingdom
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	Course aims to help participants understand antibiotic resistance, and how antimicrobial stewardship can slow down or reduce it. The course is free.

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CDC's Antibiotic Stewardship Training Series

<i>Publishing year</i>	2018
<i>Author(s)</i>	Centers for Disease Control and prevention
<i>Type of document</i>	Tool and/or educational resource
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	USA
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	From source: Interactive web-based course designed to help clinicians optimize antibiotic use to combat antibiotic resistance and improve healthcare quality and patient safety. Includes information about antibiotic resistance and threats and explanations of the benefits of antibiotic stewardship.

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Antimicrobial Stewardship (AMS), Volume Two (book)

<i>Publishing year</i>	2017
<i>Author(s)</i>	ESCMID study group on antibiotic policies (ESGAP)
<i>Type of document</i>	Tool and/or educational resource
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	International
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	A ‘hands on’, practical approach, tips to increase success, a description of the most common mistakes, a global picture (out- and inpatient settings, all countries) and a short list of 10-20 landmark references.

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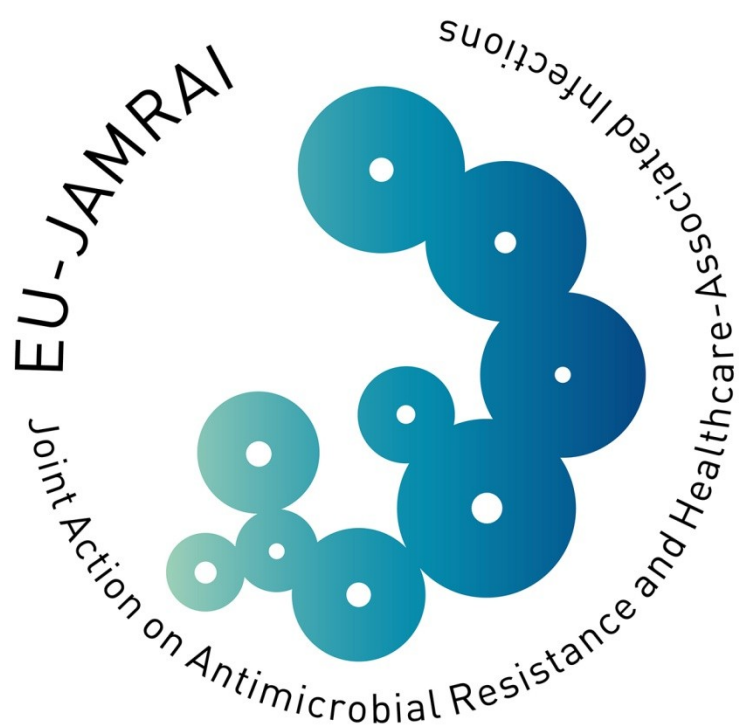
Antimicrobial stewardship: changing risk related behaviours in the general population

<i>Publishing year</i>	2017
<i>Author(s)</i>	National Institute for Health and Care Excellence (NICE)
<i>Type of document</i>	Tool and/or educational resource
<i>Scope/aim</i>	International relevance
<i>Country/region</i>	United Kingdom
<i>Setting(s)</i>	Hospital care Community/primary care Long-term facility care
<i>Short summary</i>	This guideline covers making people aware of how to correctly use antimicrobial medicines (including antibiotics) and the dangers associated with their overuse and misuse. It aims to change people's behaviour to reduce antimicrobial resistance and the spread of resistant microbes. The website also has Tools and Evidence with resources.

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To see or download the complete list of the *Revised guidelines, tools and implementation methods for antibiotic stewardship* or ordered by other level of care please follow this [link](#).



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