

www.eu-jamrai.eu

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

Publishing year	2018
Author(s)	Australian Commission on Safety and Quality in Health Care
Type of document	Antibiotic Stewardship Programme (ASP)
Scope/aim	Nation-wide
Country/region	Australia
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Download

Antimicrobial stewardship: From principles to practice

Publishing year	2018
Author(s)	British Society for Antimicrobial Chemotherapy
Type of document	Antibiotic Stewardship Programme (ASP)
Scope/aim	International relevance
Country/region	United Kingdom
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

EU Guidelines for the prudent use of antimicrobials in human health

Publishing year	2017
Author(s)	European Commission
Type of document	Antibiotic Stewardship Programme (ASP)
Scope/aim	International relevance
Country/region	Europe
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Download

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

Publishing year	2017
Author(s)	Bennie et al.
Type of document	Antibiotic Stewardship Programme (ASP)
Scope/aim	Nation-wide
Country/region	Scotland
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Download

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

Publishing year	2017
Author(s)	Department of Health, South Africa
Type of document	Antibiotic Stewardship Programme (ASP)
Scope/aim	Nation-wide
Country/region	South-Africa
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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

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

Download

Antibiotic Stewardship Implementation Framework for Health Departments

Publishing year	2017
Author(s)	Centers for Disease Control and prevention
Type of document	Antibiotic Stewardship Programme (ASP)
Scope/aim	Nation-wide
Country/region	USA
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Long-Term Care Antimicrobial Stewardship Program Resources

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

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

Publishing year	2017
Author(s)	Jump et al.
Type of document	Antibiotic Stewardship Programme (ASP)
Scope/aim	International relevance
Country/region	USA
Setting(s)	Long-term facility care
Short summary	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.

Download

Antimicrobial stewardship: Quality Standard

Publishing year	2016
Author(s)	The National Institute for Health and Care Excellence (NICE)
Type of document	Antibiotic Stewardship Programme (ASP)
Scope/aim	International relevance
Country/region	United Kingdom
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Download

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

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

Antimicrobial stewardship: tools and resources

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

Download

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

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

Download

New Antimicrobial Stewardship Standard

Publishing year	2016
Author(s)	Joint Commission Perspectives (US)
Type of document	Antibiotic Stewardship Programme (ASP)
Scope/aim	Nation-wide
Country/region	USA
Setting(s)	Hospital care
	Long-term facility care
Short summary	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.

Download

A Path to Better Antibiotic Stewardship in Inpatient Settings

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

Scope/aim	Nation-wide
Country/region	USA
Setting(s)	Hospital care
	Long-term facility care
Short summary	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.

Download

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

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

Download

The Core Elements of Antibiotic Stewardship for Nursing Homes

Publishing year	2015
Author(s)	Centers for Disease Control and prevention
Type of document	Antibiotic Stewardship Programme (ASP)
Scope/aim	Nation-wide
Country/region	USA
Setting(s)	Long-term facility care
Short summary	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.

Download

The Core elements of Antibiotic Stewardship for Nursing Homes CHECKLIST

Publishing year Author(s)	2015 Centers for Disease Control and prevention
	Antibiotic Stewardship Programme (ASP)
Scope/aim	Nation-wide
Country/region	USA
Setting(s)	Long-term facility care
Short summary	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

Guidelines for Antimicrobial Stewardship in Hospitals in Ireland

Publishing year	2009
Author(s)	Strategy for the Control of Antimicrobial Resistance in Ireland (SARI) - Hospital Antimicrobial Stewardship Working Group
Type of document	Antibiotic Stewardship Programme (ASP)
Scope/aim	Nation-wide
Country/region	Ireland
Setting(s)	Hospital care
	Long-term facility care
Short summary	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.

Download

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.

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

Download

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

Publishing year	2018
Author(s)	Manning et al.
Type of document	Commentary/Statement/Opinion
Scope/aim	Nation-wide
Country/region	USA
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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

infection prevention and control and antimicrobial stewardship programmes is highlighted.

Download

The pharmacy contribution to antimicrobial stewardship

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

Download

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

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

Download

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

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

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)

Publishing year	2012
Author(s)	SHEA/IDSA/PIDS
Type of document	Commentary/Statement/Opinion
Scope/aim	International relevance
Country/region	USA
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Download

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

Publishing year	2012
Author(s)	Moody et al. (The Association for Professionals in Infection Control and Epidemiology/The Society for Healthcare Epidemiology of America)
Type of document	Commentary/Statement/Opinion
Scope/aim	International relevance
Country/region	USA
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Reports

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

Publishing year	2017
Author(s)	John Paget et al. (European Commission)
Type of document	Report
Scope/aim	International relevance
Country/region	Europe
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Download

Global Framework for Development & Stewardship to Combat Antimicrobial Resistance

Publishing year	2017
Author(s)	WHO
Type of document	Report
Scope/aim	International relevance
Country/region	International
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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).

Download

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

Publishing year	2016
Author(s)	European Commission
Type of document	Report
Scope/aim	International relevance
Country/region	Europe
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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

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

Download

	Global Action Plan on Antimicrobial Resistance
Publishing year	2015
Author(s)	WHO
Type of document	Report
Scope/aim	International relevance
Country/region	International
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Download

	Ensuring Prudent Use of Antimicrobials In Human Medicine In the European Union.
Publishing year	2005
Author(s)	Werner & Bronzwaer (Eurosurveillance)
Type of document	Report
Scope/aim	International relevance
Country/region	Europe
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Ensuring Drudont Lloo of Antimicrobials In Human Medicine In the Fu

Researches

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

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

Download

What is antimicrobial stewardship? (Clinical Microbiology and Infection)

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

Download

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

Publishing year Author(s)	2017 Howard et al. (ESCMID Study Group for Antimicrobial stewardship)
Type of document	Research
Scope/aim	International relevance
Country/region	Europe
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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

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

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

Download

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

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

Download

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

Publishing year	2017
Author(s)	ESCMID Study Group for Antimicrobial stewardshiP (ESGAP) (Dyar et al.)
Type of document	Research
Scope/aim	International relevance
Country/region	International
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

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

Publishing year	2017
Author(s)	Foolad et al.
Type of document	Research
Scope/aim	International relevance
Country/region	USA
Setting(s)	Hospital care
	Long-term facility care
Short summary	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.
	Description

Download

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

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

Download

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

Publishing year	2017
Author(s)	McElligott et al.
Type of document	Research
Scope/aim	International relevance
Country/region	USA
Setting(s)	Long-term facility care
Short summary	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.

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

Publishing year	2016
Author(s)	Benjamin A. Lipsky, Matthew Dryden, Finn Gottrup, Dilip Nathwani, Ronald Andrew Seaton and Jan Stryja
Type of document	Research
Scope/aim	International relevance
Country/region	International
Setting(s)	Hospital care
	Long-term facility care
Short summary	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

Download

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

Publishing year	2016
Author(s)	Schuts et al.
Type of document	Research
Scope/aim	International relevance
Country/region	Netherlands
Setting(s)	Hospital care
	Long-term facility care
Short summary	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.

Download

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

Publishing year	2014 Nicollo I. F
Author(s)	Nicolle, L. E.
Type of document	Research
Scope/aim	International relevance
Country/region	Canada
Setting(s)	Long-term facility care
Short summary	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.

Antimicrobial Stewardship Initiatives Throughout Europe: Proven Value for Money.

Publishing year	2017
Author(s)	Edwin J.M. Oberjé, Marit A.C. Tanke Patrick P.T. Jeurissen2,
Type of document	Research
Scope/aim	Nation-wide
Country/region	Netherlands
Setting(s)	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.

Download

Publishing year Author(s) Type of document Scope/aim Country/region Setting(s)	Nation-wide Netherlands Hospital care
Short summary	Long-term facility care 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.

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

Tools and educational resources

Antimicrobial Stewardship: A competency-based approach

Publishing year	2018
Author(s)	WHO
Type of document	Tool and/or educational resource
Scope/aim	Nation-wide
Country/region	International
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Download

Antimicrobial Stewardship: Managing Antibiotic Resistance (online course)

2018
The British Society for Antimicrobial Chemotherapy (BSAC)
Tool and/or educational resource
International relevance
United Kingdom
Hospital care
Community/primary care
Long-term facility care
Course aims to help participants understand antibiotic resistance, and how antimicrobial stewardship can slow down or reduce it. The course is free.

Download

CDC's Antibiotic Stewardship Training Series

Publishing year	2018
Author(s)	Centers for Disease Control and prevention
Type of document	Tool and/or educational resource
Scope/aim	International relevance
Country/region	USA
Setting(s)	Hospital care
	Community/primary care
	Long-term facility care
Short summary	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.

Download

117

Antimicrobial Stewardship (AMS), Volume Two (book)

Publishing year	2017		
Author(s)	ESCMID study group on antibiotic policies (ESGAP)		
Type of document	Tool and/or educational resource		
Scope/aim	International relevance		
Country/region	International		
Setting(s)	Hospital care		
	Community/primary care		
	Long-term facility care		
Short summary	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.		
	Download		
	Antimicrobial stewardship: changing risk related behaviours in the general population		
Publishing year	2017		
Author(s)	National Institute for Health and Care Excellence (NICE)		

Type of document	Tool and/or educational resource
C	to the second sector second

Scope/aim	International	relevance

Country/region United Kingdom

Setting(s) Hospital care

Community/primary care

Long-term facility care

Short summary 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.

Download

Please note that we are not responsible for the correct functioning of the links to access the original documents. Location of these documents might change over time but they can always be found in the net using the title and the authors' names.

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**.





* This document arises from the Joint Action on Antimicrobial Resistance and Healthcare-Associated Infections (EU-JAMRAI), which has received funding from the European Union, in the framework of the Health Program (2014-2020) under the Grant Agreement N°761296. Sole responsibility lies with the author and the Consumers, Health, Agriculture and Food Executive Agency is not responsible for any use that may be made of the information contained herein.



Co-Funded by the Health Programme of the European Union