Resource materials for in-country development and implementation of national action plans to address antimicrobial resistance

September 2021

World Health Organization

- Contents

What's new in the AMR Resource Pack September 2021 update

Section	New resources
AMR surveillance	• Global Antimicrobial Resistance and Use Surveillance System (GLASS) Report: 2021 • WHO integrated global surveillance on ESBL-producing E. coli using a "One Health" approach. Implementation and opportunities: 2021 • The detection and reporting of colistin resistance. 2nd edition: 2021 • WHO Regional Office for Europe Antimicrobial Medicines Consumption (AMC) Network: AMC data, 2014-2018 (2021)
WHO laboratory strengthening tools	• New section
Education, awareness & behaviour change	• WHO Antimicrobial Stewardship: A competency-based approach Open Online Course (English, French, Italian, Russian and Spanish) • Infographic: AMR and COVID-19 • The TAP quick guide: a practical handbook for implementing tailoring antimicrobial resistance programmes (2021) • The TAP toolbox • TAP Process Poster • Two-page advocacy briefs on AMR and related issues: new advocacy briefs on COVID-19 and Food Safety
Infection prevention and control	• Infection prevention and control: guidance to action tools. World Health Organization. Regional Office for Europe.
Water, sanitation & hygiene	• Global progress report on WASH in healthcare facilities: Fundamentals first. • WHO Briefing note: Antimicrobial resistance: An emerging water, sanitation and hygiene issue • WHO (2021). Understanding barriers to quality of care: an approach for conducting a situational analysis of water, sanitation and hygiene (WASH) and quality in health care facilities
AMR & essential medicines and products	• COVID-19 Clinical management: living guidance 25 January 2021 • 2020 antibacterial agents in clinical and preclinical development: an overview and analysis. • Essential Diagnostics List
Antimicrobial stewardship	• WHO policy guidance on integrated antimicrobial stewardship activities • Antimicrobial stewardship interventions: a practical guide (2021) • Antimicrobial Stewardship: A competency-based approach – new languages: Russian, Spanish, Italian
Immunization	• Annex to Immunization Agenda 2030: Leveraging Vaccines to Reduce Antibiotic Use and Prevent Antimicrobial Resistance: An Action Framework. • WHO. (2019). Intervention guidebook for implementing and monitoring activities to reduce missed opportunities for vaccination

Monitoring	• Monitoring global progress on antimicrobial resistance: Tripartite AMR country self-assessment survey (TrACSS) 2019-2020
	• Monitoring regional progress on addressing antimicrobial resistance in the WHO South-East Asia Region: analysis report of results of three rounds of AMR national self-assessment surveys.
Other useful AMR resources	• International instruments on the use of antimicrobials across the human, animal and plant sectors
	• Fleming Fund Online learning: Tackling Antimicrobial Resistance Courses
	• OpenWHO: New Antimicrobial Resistance channel

Acknowledgements

1. General AMR resources

- Global action plan on antimicrobial resistance (Also in French, Russian, Spanish)
http://www.who.int/antimicrobial-resistance/publications/global-action-plan/en/

- Follow-up to the political declaration of the high-level meeting of the General Assembly on antimicrobial resistance. Report of the Secretary-General. May 2019 (Also in Arabic, Chinese, Russian, Spanish).
https://undocs.org/en/A/73/869

- No time to wait: Securing the future from drug-resistant infections. IACG report to the Secretary-General of the United Nations. April 2019 (Arabic, Chinese, Russian, Spanish). https://www.who.int/antimicrobial-resistance/interagency-coordination-group/IACG_final_report_EN.pdf?ua=1

- WHO antimicrobial resistance webpage (also in Arabic, Chinese, French, Russian & Spanish)
https://www.who.int/health-topics/antimicrobial-resistance

- World Bank 2019. Pulling Together to Beat Superbugs: Knowledge and Implementation Gaps in Addressing Antimicrobial Resistance. World Bank, Washington, DC. © World Bank.
https://openknowledge.worldbank.org/handle/10986/32552

2. AMR National action plan resources

- Antimicrobial resistance: A manual for developing national action plans
http://www.who.int/antimicrobial-resistance/national-action-plans/manual/en/

- AMR National Action Plan Support Tools https://www.who.int/activities/supporting-countries-with-national-action-plan-implementation

- Library of national action plans: https://www.who.int/teams/surveillance-prevention-control-AMR/national-action-plan-monitoring-evaluation/library-of-national-action-plans

- Tackling Antimicrobial Resistance Together. Working paper 1.0: Multisectoral coordination
https://www.who.int/publications/i/item/tackling-antimicrobial-resistance-together-working-paper-1.0-multisectoral-coordination

- Turning plans into action for antimicrobial resistance (AMR). Working Paper 2.0: Implementation and coordination (also available in Russian) https://www.who.int/antimicrobial-resistance/publications/Turningplansintoactionforantimicrobialresistance/en/

- Thematic brief: Multisectoral action to tackle AMR (http://www.euro.who.int/en/health-topics/health-policy/health-2020-the-european-policy-for-health-and-well-being/implementation-package/1.-introducing-health-2020-to-different-stakeholders-across-sectors/governance-for-health-sector-briefs-multi-and-intersectoral-action-for-better-health-and-well-being/multisectoral-action-to-tackle-antimicrobial-resistance)

- Tackling antimicrobial resistance (AMR) together. Working Paper 5.0: Enhancing the focus on gender and equity. https://www.who.int/antimicrobial-resistance/national-action-plans/workingpaper5enhancingthefocusongenderandequity/en/

3. Health workforce AMR education resources

- OpenWHO: New Antimicrobial Resistance channel https://openwho.org.

- Health workers' education and training on antimicrobial resistance: curricula guide. WHO & Public Health England 2019.   https://apps.who.int/iris/bitstream/handle/10665/329380/9789241516358-eng.pdf

- WHO competency framework for health workers' education and training on antimicrobial resistance. Geneva: World Health Organization; 2018.
  http://apps.who.int/iris/bitstream/handle/10665/272766/WHO-HIS-HWF-AMR-2018.1-eng.pdf?ua=1

- WHO EURO Antimicrobial Stewardship: A competency-based approach Open Online Course (English, French, Italian, Russian & Spanish). https://openwho.org/courses/AMR-competency

4. Awareness, communications and behaviour change

- Materials for WAAW 2021 https://www.who.int/campaigns/world-antimicrobial-awareness-week/2021

- Tailoring Antimicrobial Resistance programmes (TAP) Quick Guide
  https://www.euro.who.int/en/health-topics/disease-prevention/antimicrobial-resistance/publications/2021/the-tap-quick-guide-a-practical-handbook-for-implementing-tailoring-antimicrobial-resistance-programmes-2021

- Tailoring Antimicrobial Resistance programmes (TAP) Toolbox
  https://www.euro.who.int/en/health-topics/disease-prevention/antimicrobial-

resistance/publications/2021/the-tap-toolbox-exercises,-tools-and-templates-to-support-your-tailoring-antimicrobial-resistance-programmes-plan-2021

- Tailoring Antimicrobial Resistance programmes (TAP) Process Poster
  https://who.canto.global/s/RFV33

- Two-page advocacy briefs on AMR and related issues - (new advocacy briefs on COVID-19 and Food Safety) http://www.euro.who.int/en/health-topics/disease-prevention/antimicrobial-resistance/publications/2019/antimicrobial-resistance-advocacy-briefs-2019

- An open access online platform of Tripartite campaign materials to download in multiple languages (**NB**: Internet Explorer does **NOT** open this link): https://trello.com/b/tBoXeVae/world-antibiotic-awareness-week-2017-fao-oie-who

- Infographic: AMR and COVID-19   https://www.euro.who.int/en/health-topics/disease-prevention/antimicrobial-resistance/education,-awareness-and-behaviour-change/infographics/infographic-amr-and-covid-19

- Wellcome Trust. Toolkit on communicating Antimicrobial Resistance
  https://wellcome.ac.uk/reports/reframing-antimicrobial-resistance-antibiotic-resistance

- Antibiotic prescribing and resistance: Views from low- and middle-income prescribing and dispensing professionals. https://www.who.int/antimicrobial-resistance/LSHTM-Antibiotic-Prescribing-LMIC-Prescribing-and-Dispensing-2017.pdf?ua=1

- Huttner B, Saam M, Moja L, et al How to improve antibiotic awareness campaigns: findings of a WHO global survey BMJ Global Health 2019;4:e001239. https://gh.bmj.com/content/4/3/e001239.long

5. Surveillance resources

a) Antimicrobial resistance surveillance

- Global Antimicrobial Resistance and Use Surveillance System (GLASS) Report: 2021
  https://www.who.int/publications/i/item/9789240027336

- Whole-genome sequencing for surveillance of antimicrobial resistance. Sept 2020
  https://www.who.int/publications/i/item/9789240011007

- GLASS guidance for national reference laboratories. Sept 2020
  https://www.who.int/publications/i/item/9789240010581

- Global antimicrobial resistance surveillance system (GLASS) reports.
  https://www.who.int/glass/reports/en/

- GLASS method for estimating attributable mortality of antimicrobial resistant bloodstream infections. https://www.who.int/publications/i/item/9789240000650

- WHO integrated global surveillance on ESBL-producing E. coli using a "One Health" approach. Implementation and opportunities: 2021 https://www.who.int/publications/i/item/who-integrated-global-surveillance-on-esbl-producing-e.-coli-using-a-one-health-approach

- National antimicrobial resistance surveillance systems and participation in the Global Antimicrobial Resistance Surveillance System (GLASS): A guide to planning, implementation, and monitoring and evaluation (Also in French) http://apps.who.int/iris/bitstream/10665/251554/1/WHO-DGO-AMR-2016.4-eng.pdf?ua=1

- Diagnostic stewardship: A guide to implementation in antimicrobial resistance surveillance sites (Also in French) http://apps.who.int/iris/bitstream/10665/251553/1/WHO-DGO-AMR-2016.3-eng.pdf?ua=1

- Global Antimicrobial Resistance Surveillance System (GLASS) Manual for Early Implementation (Chinese, English, French, Russian, Spanish) http://www.who.int/antimicrobial-resistance/publications/surveillance-system-manual/en/

- Emerging antimicrobial resistance reporting framework. https://www.who.int/glass/resources/publications/emerging-antimicrobial-resistance-reporting-framework/en/

- The detection and reporting of colistin resistance. 2nd edition: 2021 https://apps.who.int/iris/bitstream/handle/10665/343654/9789240019041-eng.pdf

- Proof-of-principle antimicrobial resistance routine diagnostics surveillance project (2018) (English & Russian). http://www.euro.who.int/en/health-topics/disease-prevention/antimicrobial-resistance/publications/2018/proof-of-principle-antimicrobial-resistance-routine-diagnostics-surveillance-project-pop-project-2018

- Molecular methods for antimicrobial resistance (AMR) diagnostics to enhance the Global Antimicrobial Resistance Surveillance System. https://www.who.int/glass/resources/publications/molecular-methods-for-amr-diagnostics/en/

- Laboratory Assessment Questionnaire for Antimicrobial Resistance Testing. https://www.who.int/glass/resources/publications/laboratory-assessment-questionnaire-antimicrobial-resistance/en/

- Global Antimicrobial Resistance Surveillance System (GLASS) early implementation protocol for the inclusion of *Candida* spp. (Also in Spanish). https://www.who.int/glass/resources/publications/early-implementation-protocol-for-the-inclusion-of-candida-spp/en/

- Other GLASS enrolment and data management documents and tools (English & French) http://www.who.int/glass/resources/en/

- Central Asian and European Surveillance of Antimicrobial Resistance. Annual report 2020 https://www.euro.who.int/en/health-topics/disease-prevention/antimicrobial-resistance/publications/2020/central-asian-and-european-surveillance-of-antimicrobial-resistance.-annual-report-2020

- Central Asian and European Surveillance of Antimicrobial Resistance CAESAR Manual Version 3, 2019 http://www.euro.who.int/en/health-topics/disease-prevention/antimicrobial-resistance/publications/2019/central-asian-and-european-surveillance-of-antimicrobial-resistance-caesar-manual-version-3,-2019

b) Antimicrobial consumption surveillance

- GLASS methodology for surveillance of national antimicrobial consumption (version 1.1), World Health Organization; 2020 https://www.who.int/publications/i/item/9789240012639

- GLASS manual on the management of antimicrobial consumption data, World Health Organization; 2020 https://www.who.int/publications/i/item/9789240010192

- GLASS guide for national surveillance systems for monitoring antimicrobial consumption in hospitals, World Health Organization; 2020 https://apps.who.int/iris/handle/10665/336182

- World Health Organization (2019). GLASS Methodology for Point Prevalence Survey for Antibiotic Use in Hospitals, https://apps.who.int/iris/bitstream/handle/10665/280063/WHO-EMP-IAU-2018.01-eng.pdf?ua=1

- WHO Report on Surveillance of Antibiotic Consumption, 2016-2018 early implementation https://apps.who.int/iris/bitstream/handle/10665/277359/9789241514880-eng.pdf?ua=1

- WHO Collaborating Centre for Drug Statistics Methodology: ATC/DDD Index 2021 https://www.whocc.no/atc_ddd_index/

- Introduction to drug utilization research https://apps.who.int/iris/handle/10665/42627

- WHO Regional Office for Europe Antimicrobial Medicines Consumption (AMC) Network: AMC data, 2014-2018 (2021) https://www.euro.who.int/en/health-topics/Health-systems/health-technologies-and-medicines/publications/2021/who-regional-office-for-europe-antimicrobial-medicines-consumption-amc-network-amc-data,-2014-2018-2021

- Assessing non-prescription and inappropriate use of antibiotics (2019) (http://www.euro.who.int/en/health-topics/Health-systems/health-technologies-and-medicines/publications/2019/assessing-non-prescription-and-inappropriate-use-of-antibiotics-2019

6. WHO laboratory strengthening tools

- Laboratory quality management system: handbook

  This is intended to provide a comprehensive reference on Laboratory quality management system for all stakeholders in health laboratory processes, from management, to administration, to bench-work laboratorians. This handbook covers topics that are essential for quality management of a public health or clinical laboratory. They are based on both ISO 15189 and CLSI GP26-A3 documents. The handbook is linked to the training toolkit on laboratory quality management system (Also in French, Russian, Spanish). http://www.who.int/ihr/publications/lqms/en/

- LQMS training toolkit
  http://www.who.int/ihr/training/laboratory_quality/introduction/en/

- Quality Manual template
  http://www.who.int/ihr/training/laboratory_quality/quality_manual/en/

- Laboratory Quality Stepwise Implementation tool

  This web-based tool provides a stepwise plan to guide medical laboratories towards implementing a quality management system in accordance with the requirements of ISO 15189. It was developed by the Royal Tropical Institute for the World Health Organization. Laboratory staff can use this tool to implement, step by step, a quality management system, either by working through phases and activities sequentially, or by working on one quality system essential subject area at a time. Checklists can be created for phases or for subject areas according to need (Also in French, Russian, Spanish, Turkish). https://extranet.who.int/lqsi/

- Developing national laboratory policies and strategies

  - Development of National Laboratory Policies: Best practices document and facilitators' guide (English): http://www.euro.who.int/en/health-topics/health-policy/health-2020-the-european-policy-for-health-and-well-being/publications/2017/development-of-national-laboratory-policies.-best-practices-document-and-facilitators-guide-2017

  - Developing a national laboratory strategic plan: Best practices document and facilitators' guide (English): http://www.euro.who.int/en/health-topics/health-policy/health-2020-the-european-policy-for-health-and-well-being/publications/2017/development-of-a-national-laboratory-strategic-plan.-best-practices-document-and-facilitators-guide-2017

- Laboratory Assessment Tool

  2 tools 1 to assess the system, 1 to assess the facility

  The Laboratory Assessment Tool offers guidance to assess laboratories and national laboratory systems. The target audience is any stakeholder performing laboratory assessments: national health authorities, multilateral agencies, Non-Governmental Organizations (NGOs), laboratory managers, etc. This document describes a general process for assessing laboratories and provides two questionnaires to help assess national laboratory systems (Annex 1) and individual laboratories (Annex 2). Assessors can use it as such or customize the available materials to meet local requirements or specificities and better fit the assessment context (Also in French, Russian, Spanish).
  http://www.who.int/ihr/publications/laboratory_tool/en/

- Laboratory Biosafety Manual

  The *Laboratory Biosafety Manual* provides practical guidance on biosafety techniques for use in laboratories at all levels. The manual covers risk assessment and safe use of recombinant DNA technology, and provides guidelines for the commissioning and certification of laboratories. Laboratory biosecurity concepts are introduced, and the latest regulations for the transport of infectious substances are reflected. Material on safety in health-care laboratories, previously published elsewhere by WHO, has also been incorporated (Also in French, Russian, Spanish, Serbian and Italian).
  http://www.who.int/csr/resources/publications/biosafety/Biosafety7.pdf?ua=1

- Guidance on regulations for the Transport of Infectious Substances
  This publication provides information for identifying, classifying, marking, labelling, packaging, documenting and refrigerating infectious substances for transportation and ensuring their safe delivery. It provides practical guidance to facilitate compliance with applicable international regulations for the transport of infectious substances by all modes of transport, both nationally and internationally, and includes the changes that apply from 1 January 2015 (Also in French and Russian).
  http://www.who.int/ihr/publications/who_hse_ihr_2015.2/en/

- WHO European Guidance on standards for infectious diseases laboratories
  http://www.euro.who.int/__data/assets/pdf_file/0005/133457/e94772v2.pdf

7. Prevention of Infection

a) Infection prevention and control (IPC) resources

WHO IPC home page https://www.who.int/teams/integrated-health-services/infection-prevention-control

IPC Core Components

- WHO Minimum requirements for infection prevention and control programmes
  https://www.who.int/publications/i/item/9789241516945

- WHO Guidelines on core components of infection prevention and control programmes at the national and acute health care facility level (also available for download in French and Spanish).
https://www.who.int/publications/i/item/9789241549929

- Implementation manuals and assessment tools (each having documents for both national and facility level) and training modules for the IPC core components (also in French)
http://www.who.int/infection-prevention/tools/core-components/en/

Directly AMR related IPC tools and resources

- IPC focus on AMR – evidence, guidelines and publications
https://www.who.int/infection-prevention/publications/focus-amr/en/

- Guidelines for the prevention and control of carbapenem-resistant Enterobacteriaceae, *Acinetobacter baumanii* and *Pseudomonas aeruginosa* in health-care facilities. https://www.who.int/teams/integrated-health-services/infection-prevention-control/ipc-and-antimicrobial-resistance

- IPC for AMR advocacy document: The essential role of IPC to curb AMR, aimed at health policy decision-makers https://cdn.who.int/media/docs/default-source/integrated-health-services-(ihs)/amr/ipc_amr_a4.pdf?sfvrsn=ede4a5cd_7

- IPC focus on AMR: implementation & advocacy tools and resources
https://www.who.int/infection-prevention/tools/focus-amr/en/

- Implementation manual to prevent and control the spread of carbapenem-resistant organisms at the national and health care facility level. https://apps.who.int/iris/bitstream/handle/10665/312226/WHO-UHC-SDS-2019.6-eng.pdf?ua=1

- Infection prevention and control: guidance to action tools. World Health Organization. Regional Office for Europe. https://apps.who.int/iris/handle/10665/341107.

- Aide-memoire: respiratory and hand hygiene. In: Infection prevention and control: guidance to action tools. World Health Organization. Regional Office for Europe.
https://apps.who.int/iris/handle/10665/341418.

- Aide-memoire: personal protective equipment. In: Infection prevention and control: guidance to action tools. World Health Organization. Regional Office for Europe.
https://apps.who.int/iris/handle/10665/341417.

- Aide-memoire: environmental cleaning, waste and linen management. In: Infection prevention and control: guidance to action tools. World Health Organization. Regional Office for Europe.
https://apps.who.int/iris/handle/10665/341107.

- Minimum Requirements for infection prevention and control (IPC) programmes
https://www.who.int/infection-prevention/publications/min-req-IPC-manual/en/

Other IPC tools and resources

- Global report on the epidemiology and burden of sepsis
  https://www.who.int/publications/i/item/9789240010789

- IPC Training Package   https://ipc.ghelearning.org/

- OpenWHO   https://openwho.org/channels/ipc

- WHO Global guidelines for the prevention of surgical site infection, 2nd ed. 2018
  https://www.who.int/publications/i/item/global-guidelines-for-the-prevention-of-surgical-site-infection-2nd-ed

- WHO. Preventing surgical site infections: implementation approaches for evidence-based recommendations. 2018. https://apps.who.int/iris/handle/10665/273154

- WHO Protocol for surgical site infection surveillance with a focus on settings on limited resources
  http://www.who.int/infection-prevention/tools/surgical/SSI-surveillance-protocol.pdf?ua=1

- Decontamination and Reprocessing of Medical Devices for Health-care Facilities

  http://www.who.int/infection-prevention/publications/decontamination/en/

- Hand hygiene for all initiative: improving access and behaviour in health care facilities
  https://www.who.int/publications/i/item/9789240011618

- Injection safety implementation tools and resources
  http://www.who.int/infection-prevention/tools/injections/en/

- How to prevent sepsis - the role you can play in health care and communities – Infographic and animation video. http://www.who.int/servicedeliverysafety/areas/sepsis/en/

b) Water, sanitation & hygiene (WASH) resources

Webpages

- WHO Water sanitation hygiene webpage: https://www.who.int/health-topics/water-sanitation-and-hygiene-wash

- WHO UNICEF Knowledge portal on WASH in HCF: www.washinhcf.org.

Standards and guidelines
- WHO/UNICEF, 2020. Water, sanitation, hygiene and waste management for SARS-CoV-2, the virus that causes COVID-19. https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-WASH-2020.4

- WHO/FAO/WOA, 2020. Technical brief on water, sanitation, hygiene and wastewater management to prevent infections and reduce the spread of antimicrobial resistance.
  https://www.who.int/water_sanitation_health/publications/wash-wastewater-management-to-prevent-infections-and-reduce-amr/en/

- WHO, 2020. Achieving quality health services for all, through better water, sanitation and hygiene: Lessons from three African countries https://www.who.int/water_sanitation_health/facilities/healthcare/achieving-quality-health-services-for-all-thru-better-wash/en/

- World Health Organization. (2021). Understanding barriers to quality of care: an approach for conducting a situational analysis of water, sanitation and hygiene (WASH) and quality in health care facilities. World Health Organization. https://apps.who.int/iris/handle/10665/340297

- WHO 2018. Guidelines on sanitation and health (Also in French) https://www.who.int/water_sanitation_health/publications/guidelines-on-sanitation-and-health/en/

- Overview of technologies for the treatment of infectious and sharp waste from health care facilities https://www.who.int/water_sanitation_health/publications/technologies-for-the-treatment-of-infectious-and-sharp-waste/en/

- WHO 2017. Safe management of waste from health-care activities: a summary. World Health Organization, Geneva. http://www.who.int/water_sanitation_health/publications/safe-management-of-waste-summary/en/ (Also in French and Russian).

Monitoring

- WHO/UNICEF, 2020. Global progress report on WASH in healthcare facilities: Fundamentals first. https://www.who.int/publications/i/item/9789240017542

- WHO/UNICEF (2018) Core questions and indicators for monitoring WASH in health care facilities in the Sustainable Development Goals. https://www.who.int/water_sanitation_health/publications/core-questions-and-indicators-for-monitoring-wash/en/ (also in French, Arabic, Russian, Spanish).

- WHO/UNICEF, 2019. WASH in health care facilities. Global baseline report 2019. https://www.who.int/water_sanitation_health/publications/wash-in-health-care-facilities-global-report/en/

- WHO/UNICEF, 2019. Progress on household drinking water, sanitation and hygiene 2000-2017: special focus on inequalities. https://www.who.int/water_sanitation_health/publications/jmp-report-2019/en/

Tools
- Briefing note: Antimicrobial resistance: An emerging water, sanitation and hygiene issue https://www.who.int/publications/i/item/briefing-note-antimicrobial-reistance-an-emerging-water-sanitation-and-hygiene-issue

- WHO/UNICEF/WaterAid 2020. COMBATTING ANTIMICROBIAL RESISTANCE through WATER, SANITATION AND HYGIENE and INFECTION PREVENTION AND CONTROL in HEALTH CARE. Infographic highlighting the benefits of combined efforts https://www.who.int/water_sanitation_health/joint-wash-ipc-amr-actions-2020.pdf

- WHO/UNICEF, 2020. Water, sanitation for Health Facility (WASH FIT) training package with focus on COVID-19. https://www.washinhcf.org/resource/wash-fit-training-package-revised-2020/

- WHO/UNICEF, 2020, WASH FIT simplified for COVID-19 assessment tool (also in Spanish and French) https://www.washinhcf.org/resource/wash-fit-simplified-covid-19/

- WHO. Water, sanitation, hygiene and Health: a primer for health professionals, 2019. https://apps.who.int/iris/bitstream/handle/10665/330100/WHO-CED-PHE-WSH-19.149-eng.pdf

- WHO/UNICEF Water, sanitation, and hygiene in health care facilities: Practical steps to achieve universal access for quality care, 2019. https://www.who.int/water_sanitation_health/publications/wash-in-health-care-facilities/en/

- WHO and UNICEF 2018. Water and Sanitation for Health Facility Improvement Tool (WASH FIT). Also in French. https://www.who.int/water_sanitation_health/publications/water-and-sanitation-for-health-facility-improvement-tool/en/ (available in Arabic, English, French, Russian and Spanish)

c) Immunization resources

- World Health Organization. (2020). Annex to Immunization Agenda 2030: Leveraging Vaccines to Reduce Antibiotic Use and Prevent Antimicrobial Resistance: An Action Framework. https://cdn.who.int/media/docs/default-source/immunization/product-and-delivery-research/action-framework-draft.pdf?sfvrsn=2a63f53e_5&download=true

- WHO. (2019). Intervention guidebook for implementing and monitoring activities to reduce missed opportunities for vaccination https://www.who.int/immunization/documents/ISBN_9789241516310/en/

8. Optimize the use of antimicrobial medicines

a) Antimicrobial selection

- WHO Model List of Essential Medicines 21st List for adults 2019 (includes the AWaRe categorization starting on page 8) https://apps.who.int/iris/bitstream/handle/10665/325771/WHO-MVP-EMP-IAU-2019.06-eng.pdf?ua=1 2021 edition will be published in Q4 2021 WHO Model Lists of Essential Medicines

- WHO Model List of Essential Medicines for Children 7th List 2019 https://apps.who.int/iris/handle/10665/325772 2021 edition will be published in Q4 2021 WHO Model Lists of Essential Medicines

- The 2019 WHO AWaRe classification of antibiotics for evaluation and monitoring of use (2019 version) available at https://apps.who.int/iris/handle/10665/327957. Update will be published in Q4 2021.

- Selection of essential medicines at country level: using the WHO Model List of Essential Medicines to update a national essential medicines list. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0 IGO https://apps.who.int/iris/bitstream/handle/10665/330898/9789241515443-eng.pdf

- TRS The selection and use of essential medicines: report of the WHO Expert Committee, 2017 (including the 20th WHO Model List of Essential Medicines and the 6th WHO Model List of Essential Medicines for Children). Geneva: World Health Organization; 2017 (WHO technical report series ; no. 1006). Licence: CC BY-NC-SA 3.0 IGO. https://www.who.int/publications/i/item/9789241210157

- The selection and use of essential medicines: report of the WHO Expert Committee on Selection and Use of Essential Medicines, 2019 (including the 21st WHO Model List of Essential Medicines and the 7th WHO Model List of Essential Medicines for Children). Geneva: World Health Organization; 2019 (WHO Technical Report Series, No. 1021). Licence: CC BY-NC-SA 3.0 IGO. https://www.who.int/publications/i/item/9789241210300

b) Antimicrobial stewardship

- OVID-19 Clinical management: living guidance 25 January 2021 https://www.who.int/publications/i/item/WHO-2019-nCoV-clinical-2021-1

- Antimicrobial stewardship interventions: a practical guide (2021) https://www.euro.who.int/en/publications/abstracts/antimicrobial-stewardship-interventions-a-practical-guide-2021

- WHO 2021. The selection and use of essential in vitro diagnostics - TRS 1031 https://www.who.int/publications/i/item/9789240019102

- WHO policy guidance on integrated antimicrobial stewardship activities (2021) https://www.who.int/publications/i/item/9789240025530

- Antimicrobial stewardship programmes in health-care facilities in low- and middle-income countries: a WHO practical toolkit. WHO 2019 (Arabic, English, French, Russian) https://www.who.int/publications/i/item/9789241515481

- WHO EURO online course "Antimicrobial Stewardship: A competency-based approach" (English, French, Italian, Russian & Spanish) https://openwho.org/courses/AMR-competency.

- WHO Regional Office for Europe. Assessing non-prescription and inappropriate use of antibiotics (2019) (http://www.euro.who.int/en/health-topics/Health-systems/health-technologies-and-medicines/publications/2019/assessing-non-prescription-and-inappropriate-use-of-antibiotics-2019)

- WHO 2018. Methods to analyse medicine utilization and expenditure to support pharmaceutical policy implementation

https://www.who.int/medicines/publications/analyse_medicine_utilization_expenditure/en

- Drug and Therapeutics Committees - A Practical Guide, WHO, 2003 (Also in French).
  https://apps.who.int/iris/handle/10665/68553

c) Quality of antimicrobials

- Operational principles for good pharmaceutical procurement
  https://www.who.int/3by5/en/who-edm-par-99-5.pdf

- Model quality assurance system for procurement agencies (also in French)
  https://www.who.int/medicines/publications/ModelQualityAssurance.pdf?ua=1

- Assessment tool based on the model quality assurance system for procurement agencies: aide-memoire for inspection (Also in French).
  https://www.who.int/medicines/areas/quality_safety/quality_assurance/TRS986annex4.pdf?ua=1

d) Resources specific to Latin America

- Acceso a medicamentos de alto costo (2009)
  http://www1.paho.org/hq/dmdocuments/2009/Alto%20Costo%20Americas.pdf

- Acceso y uso racional de medicamentos y otras TS de alto costo (2016)
  http://www.paho.org/hq/index.php?option=com_docman&task=doc_download&gid=36189&Itemid=270&lang=es

- Lista de productos del Fondo Estratégico
  https://www.paho.org/en/node/58472

- Legislation on antibiotics in Latin America
  https://www.paho.org/spanish/ad/dpc/cd/amr-legis.pdf"

9. Food safety & zoonotic diseases

- WHO List of Critically Important Antimicrobials, 6th Revision, 2019 (WHO CIA List). https://www.who.int/foodsafety/publications/antimicrobials-sixth/en/

- Summary report of the FAO/WHO expert meeting on foodborne antimicrobial resistance: Role of environment, crops and biocides, June 2018. https://www.who.int/foodsafety/areas_work/antimicrobial-resistance/FAO_WHO_AMR_Summary_Report_June2018.pdf?ua=1

- WHO guidelines on use of medically important antimicrobials in food-producing animals, Nov 2017 (Also in French). http://www.who.int/foodsafety/areas_work/antimicrobial-resistance/cia_guidelines/en/

- AGISAR guidance for integrated surveillance of AMR in foodborne bacteria: Application of a One Health approach, 2017. http://apps.who.int/iris/bitstream/10665/255747/1/9789241512411-eng.pdf?ua=1

- Code of practice to minimize and contain antimicrobial resistance: www.fao.org/input/download/standards/1

- Codex guideline for Risk Analysis of Foodborne AMR www.fao.org/input/download/standards/11776/CXG_0

10. Monitoring

- Monitoring global progress on antimicrobial resistance: Tripartite AMR country self-assessment survey (TrACSS) 2019-2020 https://www.who.int/publications/i/item/monitoring-global-progress-on-antimicrobial-resistance-tripartite-amr-country-self-assessment-survey-(tracss)-2019-2020

- Country progress in the implementation of the global action plan on antimicrobial resistance: Data from fifth round of the Tripartite AMR Country Self-Assessment Survey (TrACSS) available in October 2021. WHO, FAO and OIE global tripartite database. https://amrcountryprogress.org/.

- Tripartite Monitoring and Evaluation (M&E) framework for the Global Action Plan on Antimicrobial Resistance, with Methodology sheets for recommended indicators https://www.who.int/antimicrobial-resistance/global-action-plan/monitoring-evaluation/tripartite-framework/en/

- Monitoring regional progress on addressing antimicrobial resistance in the WHO South-East Asia Region: analysis report of results of three rounds of AMR national self-assessment surveys. https://apps.who.int/iris/handle/10665/334084

11. AMR and broader initiatives

- TB, HIV, malaria and neglected tropical diseases: Strengthening collaboration to prevent and manage antimicrobial resistance. https://apps.who.int/iris/bitstream/handle/10665/311689/9789241515450-eng.pdf
- Antimicrobial resistance and primary health care. Technical series on primary health care brief on the occasion of the Global Conference on Primary Health Care. https://apps.who.int/iris/handle/10665/326454?search-result=true&query=primary+health+care&scope=&rpp=10&sort_by=score&order=desc
Short version: http://www.who.int/docs/default-source/primary-health-care-conference/amr.pdf?sfvrsn=8817d5ba_2

12. Other

- WHO AMR Division online Community of Practice. Register at https://ezcollab.who.int/amr-nap/

- Global Antibiotic Research & Development Partnership (GARDP) Antimicrobial Encyclopaedia https://revive.gardp.org/resources/encyclopaedia/

- ReAct ToolBox https://www.reactgroup.org/toolbox/

  ReAct Boîte à outils https://www.reactgroup.org/toolbox/

- CIDRAP Antimicrobial Stewardship Project Newsletter. Subscribe here http://www.cidrap.umn.edu/newsletter

- JAC – Antimicrobial Resistance (JAC-AMR) - an open-access journal that publishes academic content and peer-reviewed commentary on stewardship resources. https://academic.oup.com/jacamr

- Gulf–Middle East–North Africa Educational Collaborative on Antimicrobial Stewardship: a network that hosts a discussion forum and a collection of resources. http://mena-ams.com/

- Fleming Fund Online learning: Tackling Antimicrobial Resistance Courses. https://www.flemingfund.org/wp-content/uploads/a64e213c68f1347bb87909d7fc54d045.pdf