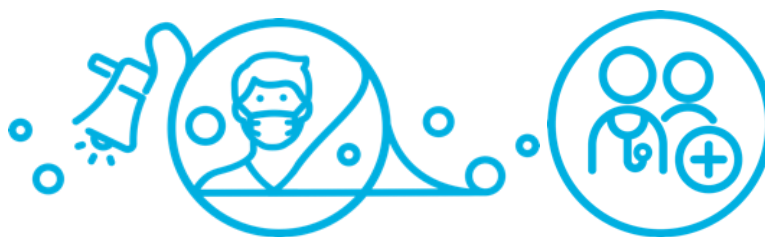




***Resource materials for in-country
development and implementation of
national action plans to address
antimicrobial resistance***



2024 UPDATE



**World Health
Organization**



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What's new in the AMR Resource Pack 2024 update

Section	New resources
General	- A pocket guide for ministers across sectors: How to respond to antimicrobial resistance A pocket guide for ministers across sectors (amrleaders.org) Health and economic impacts of antimicrobial resistance in the Western Pacific Region, 2020-2030 (who.int) Antimicrobial resistance (who.int) Fact Sheet (updated 2023)
Awareness	AMR Quiz - WHO/Europe - RC73 (EN, GER, RU) No time to wait (who.int)
Surveillance	GLASS manual for antimicrobial resistance surveillance in common bacteria causing human infection (who.int) - Global Antimicrobial Resistance and Use Surveillance System (GLASS) Dashboard: https://worldhealthorg.shinyapps.io/glass-dashboard - Antimicrobial resistance surveillance in Europe 2023 – 2021 data https://www.who.int/europe/publications/i/item/9789289058537
Laboratory strengthening	See Section 7 for all new resources added
AMR national action plan implementation resources	- People-centred approach to addressing antimicrobial resistance in human health: WHO core package of interventions to support national action plans People-centred approach to addressing antimicrobial resistance in human health (who.int) - WHO AMR NAP costing & budgeting tool now available in SP and FR Mali national action plan on antimicrobial resistance: review of progress in the human health sector (EN, FR) Kenya national action plan on antimicrobial resistance: review of progress in the human health sector (who.int) - WHO/World Bank. Sustaining Action Against Antimicrobial Resistance: A Case Series of Country Experiences
Infection prevention and control	- WHO Global Strategy for Infection Prevention and Control - WHO Global report on infection prevention and control: executive summary (EN, FR) - E-learning course Infection Prevention and Control in Maternal and Neonatal Care (openwho.org) My 5 Moments for Hand Hygiene game: https://5mgame.lxp.academy.who.int/ - New IPC in primary care section
Water, sanitation & hygiene	A field guide to improving small drinking-water supplies: water safety planning for rural communities (who.int) - Water, sanitation and hygiene in health-care facilities: a practical tool for situation assessment and improvement planning Water, sanitation and hygiene in health-care facilities: a practical tool for situation assessment and improvement planning (who.int) - Water, sanitation, hygiene, waste and electricity services in health care facilities: progress on the fundamentals. 2023 Global Report. WHO-UNICEF-Global-progress-report-2023.pdf (washinhcf.org) - Countries Posters from the Global Summit on WASH and Waste in Healthcare Facilities June 2023 All-countries-posters-in-Global-Summit-.pdf (washinhcf.org)
Immunization	Global and regional burden of attributable and associated bacterial antimicrobial resistance avertable by vaccination: modelling study (bmj.com) - WHO repository of recommendations for use of vaccines: https://www.who.int/teams/immunization-vaccines-and-biologicals/policies/position-papers

	WHO/UNICEF estimates of national immunization coverage: https://worldhealthorg.shinyapps.io/wuenic-trends-2023/
AMR & essential medicines and products	- WHO Model List of Essential Medicines - 23rd list, 2023 WHO Model List of Essential Medicines - 23rd list, 2023 - WHO Model List of Essential Medicines for children – 9th list, 2023 WHO EMLc 9th List (2023) The selection and use of essential in vitro diagnostics: report of the fourth meeting of the WHO Strategic Advisory Group of Experts on In Vitro Diagnostics, 2022 (including the fourth WHO model list of essential in vitro diagnostics) - The WHO Member State mechanism on substandard and falsified medical products https://www.who.int/publications/i/item/WHO-MHP-RPQ-REG-2022.01 - WHO global surveillance and monitoring system: Substandard and Falsified medical products https://www.who.int/publications/i/item/9789241513425 iLearn Training on substandard/falsified (SF) medical products, Module 1: Introduction & overview Training on substandard/falsified (SF) medical products, Module 2: Responding to incidents
Antimicrobial stewardship	- The WHO AWaRe (access, watch, reserve) antibiotic book: https://apps.who.int/iris/handle/10665/365237 - Infographics: https://apps.who.int/iris/handle/10665/365135 - Mobile App : WHO AWaRe Antibiotic Book (firstline.org) AWaRe classification of antibiotics for evaluation and monitoring of use, 2023 (who.int)
Monitoring	- TrACSS 2023 results - TrACSS 2022 country reports Guidance to facilitate monitoring and evaluation for antimicrobial resistance national action plans (who.int)
One Health	Animal Health and Welfare and Antimicrobial Resistance and Use (amrleaders.org) Implementation of WOA standards: the Observatory Annual Report, First edition 2022 The Lancet Series on One Health and Global Health Security 1st Global Joint Summit of Human and Veterinary Medicines Regulatory Authorities to Preserve Antimicrobials Summit Report - WHO global strategy for food safety 2022-2030: towards stronger food safety systems and global cooperation. https://iris.who.int/bitstream/handle/10665/363475/9789240057685-eng.pdf?sequence=1
Research (new section)	- WHO fungal priority pathogens list to guide research, development and public health action https://www.who.int/publications/i/item/9789240060241 - Global research agenda for antimicrobial resistance in human health Global research agenda for antimicrobial resistance in human health (who.int) - A one health priority research agenda for antimicrobial resistance. 2023 https://apps.who.int/iris/handle/10665/370279
IHR/Pandemic preparedness	Responding to outbreaks of antimicrobial-resistant pathogens in health-care facilities: guidance for the Western Pacific region (who.int)

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1. General AMR resources

- [Antimicrobial resistance \(who.int\)](#) Fact Sheet (updated 2023)
- Global action plan on antimicrobial resistance <https://www.who.int/publications/i/item/9789241509763>
- Lancet publication: Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. Antimicrobial Resistance Collaborators, January 19, 2022.
 - ❖ Full report here [Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis - PubMed \(nih.gov\)](#)
 - ❖ Animation: https://www.youtube.com/watch?v=xyv_QrroYZM
 - ❖ Social media graphics: <https://cloud.ihme.washington.edu/s/6M2fNj3raArEFMX>
 - ❖ GRAM report launch video. <https://vimeo.com/675487510>
- A pocket guide for ministers across sectors: How to respond to antimicrobial resistance [A pocket guide for ministers across sectors \(amrleaders.org\)](#)
- 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/publications/i/item/no-time-to-wait-securing-the-future-from-drug-resistant-infections>
- 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>
- Financing to Address Antimicrobial Resistance - Information note of the Global Leaders Group on Antimicrobial Resistance <https://www.amrleaders.org/resources/m/item/financing-to-address-antimicrobial-resistance>
- Antimicrobial Resistance, Fueled by the COVID-19 Pandemic. Policy Brief November 2021 (EN, SP, POR) <https://iris.paho.org/handle/10665.2/55864>
- [Health and economic impacts of antimicrobial resistance in the Western Pacific Region, 2020-2030 \(who.int\)](#)

2. AMR National action plan implementation resources

- WHO AMR community exchange platform: <https://amrcommunityexchange.org/>
- Antimicrobial resistance: [A manual for developing national action plans](#)
- People-centred approach to addressing antimicrobial resistance in human health: WHO core package of interventions to support national action plans [People-centred approach to addressing antimicrobial resistance in human health \(who.int\)](#)

- WHO implementation handbook for national action plans on antimicrobial resistance: guidance for the human health sector. (AR, CH, EN, FR, RU, SP). <https://www.who.int/publications/i/item/9789240041981>
 - eLearning course: <https://openwho.org/courses/AMR-NAP-6steps-for-implementation>
 - Infographic : 6 steps for sustainable implementation of national action plans on antimicrobial resistance. <https://www.who.int/multi-media/details/6-steps-for-sustainable-implementation-of-national-action-plans-on-antimicrobial-resistance>
- WHO costing and budgeting tool for national action plans on antimicrobial resistance
 - [WHO AMR Costing and Budgeting Tool](#) (EN, FR, SP)
 - [WHO costing and budgeting tool for national action plans on antimicrobial resistance: user guide](#) (EN, FR, SP)
 - eLearning course <https://openwho.org/courses/AMR-NAP-costing-tool>
- [Kenya national action plan on antimicrobial resistance: review of progress in the human health sector \(who.int\)](#)
- Mali national action plan on antimicrobial resistance: review of progress in the human health sector (EN, FR) <https://www.who.int/publications/i/item/9789240065468>
- Burkina Faso national action plan on antimicrobial resistance: review of progress in the human health sector. (EN, FR) <https://www.who.int/publications/i/item/9789240040410>
- Malawi national action plan on antimicrobial resistance: review of progress in the human health sector. <https://www.who.int/publications/i/item/9789240056848>
- WHO/World Bank. Sustaining Action Against Antimicrobial Resistance: A Case Series of Country Experiences <https://openknowledge.worldbank.org/handle/10986/38162?sequence=1&isAllowed=y>
- AMR National Action Plan Support Tools (webpage) <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 <https://apps.who.int/iris/handle/10665/311386>
- Thematic brief: Multisectoral action to tackle AMR <https://apps.who.int/iris/handle/10665/346539>
- Tackling antimicrobial resistance (AMR) together. Working Paper 5.0: Enhancing the focus on gender and equity <https://apps.who.int/iris/handle/10665/336977>

3. Health workforce AMR education resources

- OpenWHO: New Antimicrobial Resistance channel [Antimicrobial Resistance \(openwho.org\)](https://openwho.org/courses/amr-sti-anc)
- Online course: Reducing AMR of curable Sexually Transmitted Infections (STIs) in Antenatal Care (ANC) settings <https://openwho.org/courses/amr-sti-anc>
- Online course: Surgical site infections. <https://openwho.org/courses/IPC-SSI-EN>
- Online course: WHO Policy Guidance on Integrated Antimicrobial Stewardship Activities. <https://openwho.org/courses/policy-guidance-on-AMS>
- Online course: WHO practical toolkit for antimicrobial stewardship programmes in health-care facilities in low- and middle-income countries. <https://openwho.org/courses/practical-toolkit-for-AMS>
- 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(EN, FR, IT, Macedonian, RU, SP). <https://openwho.org/courses/AMR-competency>
- Antimicrobial stewardship interventions: a practical guide. WHO Regional Office for Europe 2021, (EN,RU, POL, GEO, TUR, SP, CRO, FR) <https://apps.who.int/iris/bitstream/handle/10665/340709/9789289054980-eng.pdf>
- Responding to Outbreaks of Antimicrobial-resistant Pathogens in Health-care Facilities: Guidance for the Western Pacific Region (EN, CHN) <https://apps.who.int/iris/handle/10665/363498>

4. Awareness, communications and behaviour change

- World AMR Awareness Week [World AMR Awareness Week \(who.int\)](https://www.who.int/world-amr-awareness-week)
- AMR Quiz - WHO/Europe - RC73 (EN, GER, RU) [No time to wait \(who.int\)](https://www.who.int/europe/activities/2019/04/amr-quiz)
- Trello board for Quadripartite WAAW resources <https://trello.com/b/tBoXeVae/world-amr-awareness-week-toolkit-fao-unep-who-woah>
- WAAW materials (for GPs and leaflet) (EN, RU) <https://who.canto.global/v/LI33QQ5N04/album/SO8B9?viewIndex=0>

- The TAP manual: an in-depth guide for planning and implementing tailoring antimicrobial resistance programmes <https://apps.who.int/iris/handle/10665/363136>
- Tailoring Antimicrobial Resistance programmes (TAP) Quick Guide <https://apps.who.int/iris/handle/10665/341631> , EN, SP, GRE, FR, RUS, GER
 - Spanish: <https://iris.paho.org/handle/10665.2/55628>
- Tailoring Antimicrobial Resistance programmes (TAP) Toolbox <https://apps.who.int/iris/handle/10665/341632> (EN, RU, GRE, GER, FR , SP)
 - SP: <https://iris.paho.org/handle/10665.2/55629>
- Tailoring Antimicrobial Resistance programmes (TAP) Process Poster <https://who.canto.global/v/I6NL4P77JP/album/IB2K9?viewIndex=0> (EN, RU, GRE, GER, FR)
- El proceso de adaptacion de intervenciones a medida contra la resistencia a los antimicrobianos
 - <https://iris.paho.org/handle/10665.2/55627>
- Handbook for Communication on the Rational Use of Antimicrobials for the Containment of Resistance (ENG, [SP](#)) <https://iris.paho.org/handle/10665.2/54995>
- [Africa Regional Strategy on Antimicrobial Resistance Communications and Advocacy \(fao.org\)](#) (EN, [FR](#))
- Wellcome Trust. Toolkit on communicating Antimicrobial Resistance <https://wellcome.ac.uk/reports/reframing-antimicrobial-resistance-antibiotic-resistance>
- 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>
- The fight against Antimicrobial Resistance is significant for cancer prevention and treatment , EN,RU <https://apps.who.int/iris/handle/10665/337511>
- Stop the COVID-19 pandemic from becoming an AMR catastrophe (EN, [RU](#)) <https://apps.who.int/iris/handle/10665/337513>
- The fight against Antimicrobial Resistance with Evidence-informed policy-making (EN, [RU](#)) <https://apps.who.int/iris/handle/10665/337527>
- Food Safety and the fight against Antimicrobial Resistance (EN, [RU](#)) <https://apps.who.int/iris/handle/10665/337525>
- Immunization strengthens the fight against Antimicrobial Resistance (EN, [RU](#)) <https://apps.who.int/iris/handle/10665/337523>
- The fight against Antimicrobial Resistance supports efforts towards Better Labs for Better Health (EN, [RU](#)) <https://apps.who.int/iris/handle/10665/337515>
- The fight against Antimicrobial Resistance supports migrant health (EN, [RU](#)) <https://apps.who.int/iris/handle/10665/337521>

- The fight against Antimicrobial Resistance is closely linked to the Sustainable Development Goals (EN, [RU](#))
<https://apps.who.int/iris/handle/10665/337519>
- Bacteria can make us ill. Antibiotics then (usually) help (EN, [RU](#))
<https://apps.who.int/iris/handle/10665/337517>
- Tuberculosis and the fight against Antimicrobial Resistance (EN, [RU](#))
<https://apps.who.int/iris/handle/10665/352460>
- Behavioural and Cultural Insights and the fight against Antimicrobial Resistance (EN, [RU](#))
<https://apps.who.int/iris/handle/10665/352458>
- The fight against Antimicrobial Resistance requires a focus on gender (EN, [RU](#))
<https://apps.who.int/iris/handle/10665/352456>
- The fight against Antimicrobial Resistance requires a focus on the health workforce (EN, [RU](#))
<https://apps.who.int/iris/handle/10665/359109>
- The fight against Antimicrobial Resistance supports efforts towards Child and Adolescent Health (EN, [RU](#))
<https://apps.who.int/iris/handle/10665/359106>

5. Surveillance resources

a) Antimicrobial resistance surveillance

- Global Antimicrobial Resistance and Use Surveillance System (GLASS) Dashboard:
<https://worldhealthorg.shinyapps.io/glass-dashboard>
- Global antimicrobial resistance surveillance system (GLASS) reports – all reports. [GLASS Resource Centre \(who.int\)](#)
- [GLASS manual for antimicrobial resistance surveillance in common bacteria causing human infection \(who.int\)](#)
- Methodological principles of nationally representative surveys as a platform for global surveillance of antimicrobial resistance in human bloodstream infections
<https://www.who.int/publications/i/item/9789240067004>
- Antimicrobial Resistance in the WHO African Region: a systematic literature review
<https://apps.who.int/iris/handle/10665/349223>
- Antimicrobial resistance surveillance in Europe 2023 – 2021 data
<https://www.who.int/europe/publications/i/item/9789289058537>

- GLASS 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>
- 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/9789240021402>
- National antimicrobial resistance surveillance systems and participation in the Global Antimicrobial Resistance Surveillance System (GLASS): A guide to planning, implementation, and monitoring and evaluation <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
<http://apps.who.int/iris/bitstream/10665/251553/1/WHO-DGO-AMR-2016.3-eng.pdf?ua=1>
- Emerging antimicrobial resistance reporting framework (GLASS-EAR).
<https://www.who.int/publications/i/item/9789241514590>
- 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 (PoP project): protocol: version 2.0: <https://apps.who.int/iris/handle/10665/346076>
- Molecular methods for antimicrobial resistance (AMR) diagnostics to enhance the Global Antimicrobial Resistance Surveillance System. <https://www.who.int/publications/i/item/WHO-WSI-AMR-2019.1>
- Global Antimicrobial Resistance Surveillance System (GLASS) early implementation protocol for the inclusion of *Candida* spp. (EN, [SP](#)). <https://www.who.int/publications/i/item/WHO-WSI-AMR-2019.4>
- GLASS Resource Centre <https://www.who.int/initiatives/glass/resource-centre>
- Central Asian and European Surveillance of Antimicrobial Resistance CAESAR Manual Version 3, 2019 (EN, [RU](#)) <https://apps.who.int/iris/handle/10665/346572>
- Surveillance of Antimicrobial Resistance and Use - Information note of the Global Leaders Group on Antimicrobial Resistance
 - <https://www.amrleaders.org/resources/m/item/surveillance-of-antimicrobial-resistance-and-use>
- Surveillance of Bacterial Pneumonia and Meningitis in Children Aged Under 5 Years: Field Guide, 2nd ed., PAHO: <https://iris.paho.org/handle/10665.2/54637>

- Procedimientos para el diagnóstico de Neumonías y Meningitis Bacterianas y la caracterización de cepas de *Streptococcus pneumoniae* y *Haemophilus influenzae*, 2nd ed., PAHO: <https://www.paho.org/es/node/51879>
- Enhanced Gonococcal Antimicrobial Surveillance Programme (EGASP): general protocol, WHO: <https://www.who.int/publications/i/item/9789240021341>

b) Antimicrobial consumption surveillance

- Global Antimicrobial Resistance and Use Surveillance System (GLASS) Dashboard: Global AMC data [WHO GLASS Dashboard \(shinyapps.io\)](https://apps.who.int/iris/handle/10665/354258)
- Training on GLASS methodology for national surveillance of antimicrobial consumption. World Health Organization 2022. <https://apps.who.int/iris/handle/10665/354258>
- GLASS methodology for surveillance of national antimicrobial consumption, World Health Organization; 2020 (EN, [FR](#)) <https://www.who.int/publications/i/item/9789240012639>
- GLASS manual on the management of antimicrobial consumption data, World Health Organization; 2020 (EN, [FR](#)) <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> (EN, [FR](#), [POR](#), [RU](#), [SP](#))

- 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>
- Antimicrobial consumption in the WHO Western Pacific Region: early implementation of the Western Pacific Regional Antimicrobial Consumption Surveillance System (WPRACSS) (2022): <https://www.who.int/publications/i/item/9789290619543>
- Antimicrobial consumption in the EU/EEA (ESAC-Net) Annual Epidemiological Report for 2020 <https://www.ecdc.europa.eu/sites/default/files/documents/ESAC-Net%20AER-2020-Antimicrobial-consumption-in-the-EU-EEA.pdf>
- WHO Collaborating Centre for Drug Statistics Methodology: ATC/DDD Index 2023 https://www.whocc.no/atc_ddd_index/
- Introduction to drug utilization research (EN, [RU](#)) <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.who.int/europe/publications/i/item/9789289055567>

- Assessing non-prescription and inappropriate use of antibiotics (2019)
<https://apps.who.int/iris/handle/10665/312306>

6. Research

- WHO fungal priority pathogens list to guide research, development and public health action. 2022
<https://www.who.int/publications/i/item/9789240060241>
 - Global research agenda for antimicrobial resistance in human health. 2023
<https://www.who.int/publications/m/item/global-research-agenda-for-antimicrobial-resistance-in-human-health>
 - A one health priority research agenda for antimicrobial resistance. 2023
<https://apps.who.int/iris/handle/10665/370279>
-

7. WHO laboratory strengthening tools

a) National policy and strategy

- Development of National Laboratory Policies: Best practices document and facilitators' guide (EN, [RU](#)):
<https://apps.who.int/iris/handle/10665/355631>
- Developing a national laboratory strategic plan: Best practices document and facilitators' guide (EN, [RU](#)):
<https://apps.who.int/iris/handle/10665/353746>

b) Quality management and assurance

- Laboratory quality management system: handbook ([FR](#), [RU](#), [SP](#)).
<https://www.who.int/publications/i/item/9789241548274>
- Quality Manual template (EN, [FR](#), [RU](#), [SP](#)) <https://www.who.int/publications/m/item/laboratory-quality-manual>
- Quality assurance in bacteriology and immunology, 3rd ed., SEARO:
<https://apps.who.int/iris/handle/10665/205730>
- LQMS training toolkit (EN, [FR](#), [RU](#)) <https://extranet.who.int/hslp/content/LQMS-training-toolkit>
- Laboratory Quality Stepwise Implementation tool ([FR](#), [RU](#), [SP](#), [Turkish](#)). <https://extranet.who.int/lqsi/>

c) Biosafety

- Laboratory Biosafety Manual, 4th edition
<https://www.who.int/publications/i/item/9789240011311>
- Tuberculosis laboratory biosafety manual, WHO:
<https://www.who.int/publications/i/item/9789241504638>

d) Tools and guidance

- Laboratory Assessment Tool
2 tools: 1 to assess the system, 1 to assess the facility. (FR, RU, SP)
<https://www.who.int/publications/i/item/WHO-HSE-GCR-LYO-2012.2>
- Manual of basic techniques for a health laboratory, 2nd ed, WHO:
<https://apps.who.int/iris/handle/10665/42295>
- Maintenance manual for laboratory equipment, 2nd ed.,
WHO: <https://www.who.int/publications/i/item/9789241596350>
- Manual for the Laboratory Identification and Antimicrobial Susceptibility Testing of Bacterial Pathogens of Public Health Importance in the Developing World, WHO, CDC, USAID:
<https://apps.who.int/iris/handle/10665/68554>
- Laboratory methods for the diagnosis of meningitis caused by *Neisseria meningitidis*, *Streptococcus pneumoniae*, and *Haemophilus influenzae*: WHO manual, 2nd ed:
<https://apps.who.int/iris/handle/10665/70765>
- Microbiología: lo esencial y lo práctico, PAHO: <https://iris.paho.org/handle/10665.2/51601>
- Basic laboratory procedures in clinical bacteriology, 2nd ed. WHO:
<https://apps.who.int/iris/handle/10665/42696>
- Guidelines on standard operating procedures for microbiology, SEARO:
<https://apps.who.int/iris/handle/10665/205200>
- Laboratory diagnosis of sexually transmitted infections, including human immunodeficiency virus, WHO:
<https://apps.who.int/iris/rest/bitstreams/304701/retrieve>
- Specimen collection and transport for microbiological investigation, EMRO:
<https://apps.who.int/iris/handle/10665/119529>
- WHO laboratory manual for the diagnosis of diphtheria and other related infections:
<https://apps.who.int/iris/handle/10665/352275>
- Laboratory manual for diagnosis of fungal opportunistic infections in HIV/AIDS patients, SEARO:
<https://apps.who.int/iris/handle/10665/205404>
- Diagnostic stewardship: a guide to implementation in antimicrobial resistance surveillance sites:
<https://www.who.int/publications/i/item/WHO-DGO-AMR-2016.3>

- Guidance on regulations for the Transport of Infectious Substances
<https://www.who.int/publications/i/item/9789240019720>
- GLASS whole-genome sequencing for surveillance of antimicrobial resistance
<https://www.who.int/publications/i/item/9789240011007>
- GLASS guidance for national reference laboratories
<https://www.who.int/publications/i/item/9789240010581>
- Molecular methods for antimicrobial resistance diagnostics to enhance the GLASS
<https://www.who.int/publications/i/item/WHO-WSI-AMR-2019.1>
- GLASS: the detection and reporting of colistin resistance, 2ND ed.
<https://www.who.int/publications/i/item/glass-the-detection-and-reporting-of-colistin-resistance-2nd-ed>

8. 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>

This page provides resources on

- Hand hygiene
- Core components
- AMR
- Surgical site infection
- Injection safety
- Sepsis
- Basic IPC and primary care

Newest publications are highlighted on this page

- [WHO Global Strategy for Infection Prevention and Control](#)
- E-learning courses are found on the IPC channel on OpenWHO: <https://openwho.org/channels/ipc>
- Global report on infection prevention and control <https://www.who.int/publications/i/item/9564>
- WHO Global report on infection prevention and control: executive summary ([EN](#), [FR](#))

- Understanding accelerators and overcoming barriers - the journey for developing or adapting an infection prevention and control guideline, <https://www.who.int/europe/publications/m/item/understanding-accelerators-and-overcoming-barriers---the-journey-for-developing-or-adapting-an-infection-prevention-and-control-guideline--an-easy-to-follow-country-approach>
- Understanding accelerators and overcoming barriers to IPC guideline development or adaptation – when, how, why, <https://www.who.int/europe/publications/m/item/understanding-accelerators-and-overcoming-barriers-to-ipc-guideline-development-or-adaptation--explaining-the-when--how-and-why-of-using-the-country-roadmap-approach>

IPC and antimicrobial resistance (AMR) page [Infection prevention and control \(who.int\)](#)

Key documents on this page include:

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

Of interest related to this topic are the following courses on OpenWHO:

- Catheter-associated urinary tract infections <https://openwho.org/courses/IPC-CAUTI-EN> and
- Bloodstream infections <https://openwho.org/courses/BSI-EN>

Hand Hygiene

Tabs on this [page](#) for [Guidelines and evidence](#), [Implementation tools](#), [Training tools](#) and [Monitoring tools](#). You will also find an alcohol-based handrub planning and costing tool, leaflets on glove use, multimodal improvement and tools for creating an institutional safety climate.

OpenWHO online course, Standard precautions: Hand hygiene: <https://openwho.org/courses/IPC-HH-en>

My 5 Moments for Hand Hygiene game: <https://5mgame.lxp.academy.who.int/>

Guidelines and evidence

- [WHO guidelines on hand hygiene in health care h](#)
- Hand hygiene in outpatient and home-based and long-term care facilities: a guide to the application of the WHO multimodal hand hygiene improvement strategy and the “My Five Moments for Hand Hygiene” approach <https://www.who.int/publications/i/item/9789241503372>

Implementation Tools

- Hand hygiene acceleration framework tool (HHAFT) – excel tool, <https://www.who.int/publications/i/item/WHO-HEP-ECH-WSH-2023.1>
- A guide to the implementation of the WHO multimodal hand hygiene improvement strategy <https://www.who.int/publications/i/item/a-guide-to-the-implementation-of-the-who-multimodal-hand-hygiene-improvement-strategy>
- Guide to local production: WHO-recommended handrub formulations <https://www.who.int/publications/i/item/WHO-IER-PSP-2010.5>
- Hand hygiene for all initiative: improving access and behavior in health care facilities <https://www.who.int/publications/i/item/9789240011618>

[Training tools](#) At this tab, you will find training and education resources on the importance of hand hygiene, the "My 5 Moments for Hand Hygiene" approach and the correct procedures for handrubbing and handwashing.

[Monitoring tools](#) - resources to support evaluation of hand hygiene practices among health-care workers.

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 [Spanish](#)). <https://www.who.int/publications/i/item/9789241549929>
- Interactive core components, <http://www.developers-maraltro.com/who/4/>

There are several courses on the IPC channel of OpenWHO accessible here: <https://openwho.org/channels/ipc>. Of specific interest on the topic of core components is IPC core components and multimodal strategies: <https://openwho.org/courses/IPC-CC-MMIS-EN>

Surgical Site Infection

Here you will find guidelines as well as implementation resources, training tools, and monitoring tools for the prevention of SSIs, including the following key publications:

- [Global guidelines for the prevention of surgical site infection](#)
- Implementation manual to support the prevention of surgical site infections at the facility level: turning recommendations into practice <https://www.who.int/publications/i/item/WHO-HIS-SDS-2018-18>
- Decontamination and reprocessing of medical devices for health-care facilities <https://www.who.int/publications/i/item/9789241549851>

- The Surgical site infections online course is also available on OpenWHO [Surgical site infections | OpenWHO](#)

Injection safety

Several injection safety resources are available [here](#), including guidelines, a toolkit, videos and leaflets.

OpenWHO online course, Standard precautions: Injection safety and needle-stick injury management ([EN](#), [RU](#)) <https://openwho.org/courses/IPC-IS-EN>

Sepsis

There are several links to relevant sepsis resources available [here](#), including the Global report on the epidemiology and burden of sepsis <https://www.who.int/publications/i/item/9789240010789>

Primary Care

- New website for Basic IPC and primary care: <https://www.who.int/teams/integrated-health-services/infection-prevention-control/basic-ipc-and-primary-care>
- Strengthening infection prevention and control in primary care: A collection of existing standards, measurement and implementation resources <https://www.who.int/publications/i/item/9789240035249>
- Standard precautions for the prevention and control of infections: aide-memoire <https://www.who.int/publications/i/item/WHO-UHL-HIS-IPC-2022.1>
- Transmission-based precautions for the prevention and control of infections: aide-memoire <https://www.who.int/publications/i/item/WHO-UHL-HIS-IPC-2022.2>
- Decontamination and reprocessing of medical devices for health care facilities: aide-memoire <https://www.who.int/publications/i/item/WHO-UHL-HIS-IPC-2022.4>
- Surgical site infection prevention in the primary health care setting <https://www.who.int/multi-media/details/surgical-site-infection-prevention-in-the-primary-health-care-setting>

Monitoring/Assessment tools

- National infection Prevention and Control Assessment tool 2 (IPCAT2), <https://iris.who.int/handle/10665/330078>
- Infection Prevention and Control Assessment Framework (IPCAF), <https://apps.who.int/iris/handle/10665/330072>
- Assessment tool of the minimum requirements for infection prevention and control programmes at the national level, <https://www.who.int/publications/m/item/assessment-tool-of-the-minimum-requirements-for-infection-prevention-and-control-programmes-at-the-national-level>
- Assessment tool on IPC minimum requirements for primary health care facilities, <https://www.who.int/publications/i/item/WHO-UHL-IHS-IPC-2023.2>

- International Health Regulations (2005): state party self-assessment annual reporting tool, 2nd ed. [9789240040120-eng.pdf \(who.int\)](https://www.who.int/publications/i/item/9789240040120-eng.pdf)
- Joint external evaluation tool: International Health Regulations (2005), 3rd ed. World Health Organization, <https://apps.who.int/iris/handle/10665/357087>

Additional IPC and AMR resources:

- Environmental cleaning and infection prevention and control in health care facilities in low- and middle-income countries, 2023
 - Trainers guide <https://www.who.int/publications/i/item/9789240051041>
 - Modules and resources <https://www.who.int/publications/i/item/9789240051065>
- Framework and toolkit for infection prevention and control in outbreak preparedness, readiness and response at the national level, <https://apps.who.int/iris/handle/10665/345251>
- Responding to Outbreaks of Antimicrobial-resistant Pathogens in Health-care Facilities: Guidance for the Western Pacific Region <https://apps.who.int/iris/handle/10665/363498>
- Responding to Outbreaks of Antimicrobial-resistant Pathogens in Health-care Facilities: Guidance for the Western Pacific Region (EN, CHN) <https://apps.who.int/iris/handle/10665/363498>
- Framework and toolkit for infection prevention and control in outbreak preparedness, readiness and response at the health care facility level, <https://apps.who.int/iris/handle/10665/361522>
- 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](https://cdn.who.int/media/docs/default-source/integrated-health-services-(ihs)/amr/ipc_amr_a4.pdf?sfvrsn=ede4a5cd_7)
- 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/10665/341416>
- OpenWHO IPC channel <https://openwho.org/channels/ipc>

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.
- WASHFIT portal. <https://washinhcf.org/wash-fit/>
- The WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) website (<https://washdata.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/WOAH (formerly OIE), 2020. Technical brief on water, sanitation, hygiene and wastewater management to prevent infections and reduce the spread of antimicrobial resistance. <https://www.who.int/publications/i/item/9789240006416>
- WHO, 2020. Achieving quality health services for all, through better water, sanitation and hygiene: Lessons from three African countries <https://www.who.int/publications/i/item/9789240009493>
- 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 2019. Burden of disease attributable to unsafe drinking-water, sanitation and hygiene: 2019 update [Burden of disease attributable to unsafe drinking-water, sanitation and hygiene: 2019 update \(who.int\)](https://www.who.int/publications/i/item/9789240009493)
- WHO 2018. Guidelines on sanitation and health (AR, EN, FR, RU, SP) <https://www.who.int/publications/i/item/9789241514705>
- Overview of technologies for the treatment of infectious and sharp waste from health care facilities (AR, EN, FR, SP) <https://www.who.int/publications/i/item/9789241516228>

- WHO 2017. Safe management of waste from health-care activities: a summary. World Health Organization, Geneva. <https://www.who.int/publications/i/item/WHO-FWC-WSH-17.05> (EN, [FR](#), [RU](#)).

Monitoring

- WHO/UNICEF country tracker: progress on WASH in healthcare facilities <https://washinhcf.org/country-progress-tracker/#country-progress-tracker>
- WHO Regional Office for Europe, 2022. Drinking-water, sanitation and hygiene in the WHO European Region: highlights and progress towards achieving Sustainable Development Goal 6 (2022) (document for download) <https://washdata.org/report/who-2022-regional-highlights-euro>
- WHO and UNICEF, 2023. Progress on WASH in health care facilities 2000–2021: special focus on WASH and infection prevention and control (IPC) <https://www.who.int/publications/i/item/9789240058699>
- WHO/UNICEF 2023 Water, sanitation, hygiene, waste and electricity services in health care facilities: progress on the fundamentals <https://www.who.int/publications/i/item/9789240075085>
- WHO/UNICEF, 2020. Global progress report on WASH in healthcare facilities: Fundamentals first. ([AR](#), EN, [FR](#), [SP](#)) <https://www.who.int/publications/i/item/9789240017542>
- WHO/UNICEF, 2019. WASH in health care facilities. Global baseline report 2019. <https://www.who.int/publications/i/item/9789241515504>. ([AR](#), EN, [FR](#), [RU](#), [SP](#))
- WHO/UNICEF, 2019. Progress on household drinking water, sanitation and hygiene 2000–2017: special focus on inequalities. <https://www.who.int/publications/i/item/9789241516235>. ([AR](#), EN, [FR](#), [RU](#), [SP](#))
- WHO/UNICEF (2018) Core questions and indicators for monitoring WASH in health care facilities in the Sustainable Development Goals. <https://www.who.int/publications/i/item/9789241514545>

Tools

- WASH FIT: A practical guide for improving quality of care through water, sanitation and hygiene in health care facilities. Second edition. <https://www.who.int/publications/i/item/9789240043237>
- WHO/UNICEF WASH FIT Manual for Trainers <https://www.who.int/publications/i/item/9789240047730>
- WASH FIT all technical modules. <https://www.washinhcf.org/wp-content/uploads/WASH-FIT-Modules.zip>
- [WASH FIT Fact Sheets | WASH in Health Care Facilities \(washinhcf.org\)](#)
- [A field guide to improving small drinking-water supplies: water safety planning for rural communities \(who.int\)](#) (EN, [RU](#))
- [Water, sanitation and hygiene in health-care facilities: a practical tool for situation assessment and improvement planning \(who.int\)](#) (EN, [RU](#))

- Countries Posters from the Global Summit on WASH and Waste in Healthcare Facilities June 2023 [All-countries-posters-in-Global-Summit-.pdf \(washinhcf.org\)](#)
- 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/docs/default-source/wash-documents/wash-in-hcf/combating-antimicrobial-resistance.pdf?sfvrsn=cba673f_4
- 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 (EN, [FR](#), [RU](#), [SP](#)). <https://www.who.int/publications-detail-redirect/9789241515511>

c) Immunization resources

- Global and regional burden of attributable and associated bacterial antimicrobial resistance avertable by vaccination: modelling study [Global and regional burden of attributable and associated bacterial antimicrobial resistance avertable by vaccination: modelling study \(bmj.com\)](#)
- WHO/UNICEF estimates of national immunization coverage: <https://worldhealthorg.shinyapps.io/wuenic-trends-2023/>
- Bacterial vaccines in clinical and preclinical development 2021. <https://www.who.int/publications/i/item/9789240052451>
- 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
- Immunization Agenda 2030. <https://www.immunizationagenda2030.org/>
- WHO Immunization dashboard. <https://immunizationdata.who.int/>
- WHO. (2019). Intervention guidebook for implementing and monitoring activities to reduce missed opportunities for vaccination. <https://www.who.int/publications/i/item/9789241516310>
- WHO repository of recommendations for use of vaccines: <https://www.who.int/teams/immunization-vaccines-and-biologicals/policies/position-papers>

9. Optimize the use of antimicrobial medicines

a) Antimicrobial selection

- WHO Model List of Essential Medicines - 23rd list, 2023 [WHO Model List of Essential Medicines - 23rd list, 2023](#)

- WHO Model List of Essential Medicines for children – 9th list, 2023 [WHO EMLc 9th List \(2023\)](#)
- 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>
- Exposure to World Health Organization's AWARe antibiotics and isolation of multidrug resistant bacteria: a systematic review and meta-analysis. <https://www.sciencedirect.com/science/article/pii/S1198743X22001537>

b) Antimicrobial stewardship

- The WHO AWARe (access, watch, reserve) antibiotic book: <https://apps.who.int/iris/handle/10665/365237>
- Infographics: <https://apps.who.int/iris/handle/10665/365135>
- Mobile App : [WHO AWARe Antibiotic Book \(firstline.org\)](#)
- [AWARe classification of antibiotics for evaluation and monitoring of use, 2023 \(who.int\)](#)
- [WHO's AWARe Framework WHO Antibiotics Portal \(essentialmeds.org\)](#)
- WHO policy guidance on integrated antimicrobial stewardship activities (2021) <https://www.who.int/publications/i/item/9789240025530>
- Online course: WHO Policy Guidance on Integrated Antimicrobial Stewardship Activities. <https://openwho.org/courses/policy-guidance-on-AMS>
- Antimicrobial stewardship programmes in health-care facilities in low- and middle-income countries: a WHO practical toolkit. WHO 2019. (AR, EN, FR, RU, SP) <https://www.who.int/publications/i/item/9789241515481>
- Online course: WHO practical toolkit for antimicrobial stewardship programmes in health-care facilities in low- and middle-income countries. <https://openwho.org/courses/practical-toolkit-for-AMS>
- Virtual Antimicrobial Stewardship Escape Room Game <https://www.biomerieux.com>
- Antimicrobial stewardship interventions: a practical guide. WHO Regional Office for Europe 2021 <https://apps.who.int/iris/bitstream/handle/10665/340709/9789289054980-eng.pdf>

- WHO EURO online course “Antimicrobial Stewardship: A competency-based approach” (EN, FR, IT, RU, SP) <https://openwho.org/courses/AMR-competency>.
- COVID-19 Clinical management: living guidance 23 November 2021
<https://www.who.int/publications/i/item/WHO-2019-nCoV-clinical-2021-2>
- Recommendations for Implementing Antimicrobial Stewardship Programs in Latin America and the Caribbean: Manual for Public Health Decision-Makers 2018 (EN, [SP](#))
<https://www.paho.org/en/documents/recommendations-implementing-antimicrobial-stewardship-programs-latin-america-and>
- WHO Regional Office for Europe. Assessing non-prescription and inappropriate use of antibiotics (2019) <https://apps.who.int/iris/handle/10665/312306>
- EVIPNet evidence brief for policy: tackling antimicrobial resistance in primary health care through promoting the appropriate use of antibiotics
Estonia <https://apps.who.int/iris/handle/10665/351528>
- WHO 2018. Methods to analyse medicine utilization and expenditure to support pharmaceutical policy implementation (EN, [RU](#)) <https://apps.who.int/iris/handle/10665/274282>
- Drug and Therapeutics Committees - A Practical Guide, WHO, 2003 (EN, [FR](#), [SP](#)).
<https://apps.who.int/iris/handle/10665/68553>
- [The selection and use of essential in vitro diagnostics: report of the fourth meeting of the WHO Strategic Advisory Group of Experts on In Vitro Diagnostics, 2022 \(including the fourth WHO model list of essential in vitro diagnostics\)](#)
- WHO 2021. The selection and use of essential in vitro diagnostics - TRS 1031
<https://www.who.int/publications/i/item/9789240019102>

c) Substandard and falsified medical products

- The WHO Member State mechanism on substandard and falsified medical products
<https://www.who.int/publications/i/item/WHO-MHP-RPQ-REG-2022.01>
- WHO global surveillance and monitoring system
<https://www.who.int/publications/i/item/9789241513425>
- iLearn resources
 - [Training on substandard/falsified \(SF\) medical products, Module 1: Introduction & overview](#)
 - [Training on substandard/falsified \(SF\) medical products, Module 2: Responding to incidents](#)

d) Quality of antimicrobials

- Operational principles for good pharmaceutical procurement (EN, [FR](#), [SP](#))
<https://apps.who.int/iris/handle/10665/66251>
- Model quality assurance system for procurement agencies
<https://apps.who.int/iris/handle/10665/69721>
- TRS 1025 - Annex 7: Good storage and distribution practices for medical products (EN, [FR](#))
 - <https://www.who.int/publications/m/item/trs-1025-annex-7>
- TRS 961 - Annex 10: Procedure for prequalification of pharmaceutical products
 - a. <https://www.who.int/publications/m/item/annex-10-trs-961>

e) Resources specific to Latin America

- El acceso a los medicamentos de alto costo en las Americas(2009)
 - <http://www1.paho.org/hq/dmdocuments/2009/Alto%20Costo%20Americas.pdf>
- El acceso y uso racional de los medicamentos y otras TS estrategicos 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 (EN, [SP](#)) <https://www.paho.org/en/node/58472>

10. Monitoring

- Tracking AMR Country Self-Assessment Survey (TrACSS) [2023 results](#)
- TrACSS [2022 country reports](#)
- [Guidance to facilitate monitoring and evaluation for antimicrobial resistance national action plans \(who.int\)](#)
- Tripartite Monitoring and Evaluation (M&E) framework for the Global Action Plan on Antimicrobial Resistance, with Methodology sheets for recommended indicator
<https://www.who.int/publications/i/item/monitoring-and-evaluation-of-the-global-action-plan-on-antimicrobial-resistance>

11. One Health

- Antimicrobial resistance and the United Nations sustainable development cooperation framework: guidance for United Nations country teams <https://www.who.int/publications/i/item/9789240036024>
- Strategic framework for collaboration on antimicrobial resistance. Together for One Health <https://www.who.int/publications/i/item/9789240045408>
- Global Leaders Group on Antimicrobial Resistance <https://www.amrleaders.org>
 - A pocket guide for ministers across sectors. <https://www.amrleaders.org/resources/m/item/pocket-guide>
 - Statement on Codex Guidelines on integrated monitoring and surveillance of food borne antimicrobial resistance and Code of Practice to minimize and contain food borne antimicrobial resistance <https://www.amrleaders.org/resources/m/item/codex-guidelines-on-integrated-monitoring-and-surveillance-of-food-borne-antimicrobial-resistance-and-code-of-practice-to-minimize-and-contain-food-borne-antimicrobial-resistance>
- One Health Joint Plan of Action 2022-2026, <https://www.woah.org/app/uploads/2022/04/oh-jpa-14-march-22.pdf>
- [Animal Health and Welfare and Antimicrobial Resistance and Use \(amrleaders.org\)](https://www.amrleaders.org)
- [Implementation of WOAHS standards: the Observatory Annual Report, First edition 2022](#)
- [The Lancet Series on One Health and Global Health Security](#)
- 1st Global Joint Summit of Human and Veterinary Medicines Regulatory Authorities to Preserve Antimicrobials [Summit Report](#)

Food safety & zoonotic diseases

- WHO global strategy for food safety 2022-2030: towards stronger food safety systems and global cooperation. <https://iris.who.int/bitstream/handle/10665/363475/9789240057685-eng.pdf?sequence=1>
- FAO and WHO. 2022. Foodborne antimicrobial resistance: Compendium of Codex standards. Revised February 2023 <https://www.fao.org/3/cb8554en/cb8554en.pdf>
- Codex guidelines for Risk Analysis of Foodborne antimicrobial resistance. Adopted in 2011. Revised in 2021. [Guidelines for Risk Analysis of Foodborne Antimicrobial Resistance \(fao.org\)](#)

- Guidelines on Integrated Monitoring and Surveillance of Foodborne antimicrobial resistance (2021)
https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252Fstandards%252FCXG%2B94-2021%252FCXG_94e.pdf
- [Code of practice to minimise and contain foodborne antimicrobial resistance](#) Adopted in 2005. Amended in 2021.
- WHO guidelines on use of medically important antimicrobials in food-producing animals, Nov 2017
Executive summary in AR, CH, EN, FR, RU, SP.
Policy brief in AR, CH, EN, FR, RU, SP. <https://www.who.int/publications/i/item/9789241550130>
- 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>

12.Environment

- Antimicrobial Resistance in the Environment Webinar Series
<https://www.unep.org/events/webinar/antimicrobial-resistance-environment-webinar-series>
- [Technical brief on water, sanitation, hygiene \(WASH\) and wastewater management to prevent infections and reduce the spread of antimicrobial resistance \(AMR\) \(who.int\)](#)
- Call to action by the Global Leaders Group on Antimicrobial Resistance on reducing antimicrobial discharges from food systems, manufacturing facilities and human health systems into the environment (Available in AR, CH, EN, FR, RU, SP)
<https://www.amrleaders.org/resources/m/item/reducing-antimicrobial-discharges-from-food-systems-manufacturing-facilities-and-human-health-systems-into-the-environment>
- Bracing for Superbugs: Strengthening environmental action in the One Health response to antimicrobial resistance. 2023 <https://www.unep.org/resources/superbugs/environmental-action>
- Summary for Policymakers - Environmental dimensions of antimicrobial resistance
<https://www.unep.org/resources/report/summary-policymakers-environmental-dimensions-antimicrobial-resistance>

13.AMR and broader initiatives

- Antimicrobial Resistance and the Climate Crisis - Information note of the Global Leaders Group on Antimicrobial Resistance (AR, CH, EN, FR, RU, SP)
<https://www.amrleaders.org/resources/m/item/antimicrobial-resistance-and-the-climate-crisis>

- CDC 2022 Special Report Covid-19 U.S. Impact on Antimicrobial Resistance
<https://www.cdc.gov/drugresistance/pdf/covid19-impact-report-508.pdf>
- 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

14. Other

- WHO AMR Division online AMR Community Exchange platform. Register at amrcommunityexchange.org
- Global Antibiotic Research & Development Partnership (GARDP) Antimicrobial Encyclopaedia <https://revive.gardp.org/resources/encyclopaedia/>
- ReAct ToolBox <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/>
- Open University/Fleming Fund Online learning: Tackling Antimicrobial Resistance Courses.
<https://www.open.edu/openlearncreate/course/index.php?categoryid=415>
- British Society for Antimicrobial Chemotherapy (BSAC), including GASPH. <https://bsac.org.uk/>

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