

AMR *Sameeksha**

Highlights

- WHO policy brief on AMR prevention and education in schools
- National Academy of Medical Sciences task force report on AMR in India
- Novel AWaRe-based microbiology reporting format for judicious antibiotic selection
- Antibiotic treatment for 7 versus 14 days in patients with bloodstream infections
- Antifungal agents in clinical and preclinical development
- AMR in bacterial pathogens isolated from cancer patients

1) Awareness and understanding

Antimicrobial resistance prevention and education in schools: a brief for education policymakers and school practitioners

- Aims to guide education policymakers and school practitioners on preventing and AMR through targeted educational strategies in schools.
- Emphasizes the importance of young people in bringing together wider society and stakeholder groups to address AMR and provides guidance on integration of AMR in school education.

WHO | Policy brief | 2 April 2025 | [Online link](#)

Veterinarians approach towards antimicrobial stewardship and one health: a survey study

- Provides results from an online knowledge, attitude and practices survey of veterinarians in Gujarat, on AMR, to understand their perspective on antimicrobial stewardship and One Health.
- Reveals that veterinarians recognize the importance of antimicrobial stewardship but face barriers such as lack of resources and support for effective implementation.

Research in Veterinary Science | Research article | 21 January 2025 | [Online link](#)

Healthcare worker views on antimicrobial resistance in chronic respiratory disease

- Assesses global healthcare worker views on AMR in chronic respiratory disease through an online survey conducted by the AMR-Lung Clinical Research Collaboration.
- Reveals weekly encounters with AMR, common inappropriate antimicrobial prescribing, inadequate antimicrobial stewardship programs and significant challenges including availability of rapid diagnostics and understanding about regional epidemiology of AMR strains.

BMC Antimicrobial Resistance and Infection Control | Research article | 22 January 2025 | [Online link](#)

2) Laboratories and surveillance

Antimicrobial resistance of bacterial pathogens isolated from cancer patients: a systematic review and meta-analysis

- Finds high resistance prevalence among major bacterial pathogens, especially ESKAPE pathogens, highlighting the urgent need for improved infection prevention and antimicrobial stewardship in cancer care.

BMC Infectious Diseases | Research article | 1 March 2025 | [Online link](#)

Insights of SEDRIC, the Surveillance and Epidemiology of Drug-Resistant Infections Consortium

- Describes the work of SEDRIC (an international think tank that aims to inform global AMR surveillance), highlighting successes and milestones, and provides examples where technical analyses helped inform policy.

Wellcome Open Research | Open letter | 13 January 2025 | [Online link](#)

Genetic diversity in antimicrobial resistance determinants among pathogenic *Pseudomonas aeruginosa* in India

- Assesses specific resistance pattern and sequence types of *P. aeruginosa* in India to inform diagnostics and therapy, revealing high prevalence of multidrug-resistant and extensively drug-resistant strains.
- Highlights the need for ongoing surveillance of these strains for effective infection management.

Current Microbiology | Research article | 13 March 2025 | [Online link](#) (abstract)

3) Infection prevention and control

Sameeksha – Infection Prevention and Control | volume 17

- Investment case for strengthening infection prevention and control
- Role of masks and respirators in preventing respiratory infection in healthcare and community settings
- Systematic review of IPC measures for multidrug-resistant organisms
- WHO training on prevention of vascular catheters-associated bloodstream infections
- Global report on implementation of the water and sanitation for health facility improvement tool (WASH-FIT)
- WHO training on IPC in maternal and neonatal care

WCO India | Publication | 26 March 2025 | [Online link](#)

4) Optimise use of antimicrobials

Enhancing antibiotic stewardship: physicians' acceptance of AWARe (Access, Watch, Reserve)-based microbiology reporting and its impact on judicious antibiotic selection – a cross-sectional study

- Assesses the effectiveness of a novel AWARe-based microbiology reporting format developed by Government Medical College, Thiruvananthapuram.
- Demonstrates that it can effectively guide clinicians towards better antibiotic selection and support AMS.

GMS Hygiene and Infection Control | Research article | 4 March 2025 | [Online link](#)

Antifungal policy and practice across five countries: a qualitative review

- Assesses invasive fungal infections (IFI) burden and policies in five countries – China, India, Italy, Netherlands and South Korea – reflecting different types of economic and health systems.
- Identifies substantial gaps, including low prioritization of IFI diagnostics, omission of fungal pathogens from AMR policies, and lack of awareness and trainings on IFI management.

MDPI | Review | 19 February 2025 | [Online link](#)

Emerging antimicrobial therapies for Gram-negative infections in human clinical use

- Reviews emerging therapeutics successfully used for compassionate care or undergoing clinical trials.
- Highlights alternative therapies such as bacteriophage, anti-virulence, antimicrobial peptides, plasmapheresis and immunotherapy.

Source | Review | 27 February 2025 | [Online link](#)

Impact of COVID-19 on antimicrobial stewardship activities in hospitalised children: a scoping review

- Reviews primary studies on antimicrobial use in hospitalized children during the COVID-19 pandemic.
- Shows that paediatric antimicrobial stewardship activities were disrupted during the pandemic and a robust paediatric-focus AMS resilient to future pandemics is needed.

Journal of Paediatrics and Child Health | Review article | 22 January 2025 | [Online link](#)

Antibiotic treatment for 7 versus 14 days in patients with bloodstream infections

- Compares the efficacy of 7-day versus 14-day antibiotic treatments for bloodstream infections through a multicentre, randomized, non-inferiority trial.
- Shows that antibiotic treatment for 7 days was not inferior to treatment for 14 days with respect to death from any cause within 90 days, with added benefits of shorter hospital stays.

NEJM | Research article | 20 November 2024 | [Online link](#)

5) Research, innovations and finance

Antifungal agents in clinical and preclinical development: overview and analysis

- Presents WHO's first analysis of antifungal agents in clinical and preclinical development.
- Provides an overview of current research and development landscape, to foster the development of antifungal agents for the most urgent unmet medical needs, and highlight associated technical and financial limitations.

WHO | Technical document | 1 April 2025 | [Online link](#)

Landscape analysis of commercially available and pipeline in vitro diagnostics for fungal priority pathogens

- Presents WHO's first analysis of commercially available and pipeline diagnostic products for invasive fungal diseases (IFDs) caused by WHO fungal priority pathogens.
- Aims to map diagnostic products, identify gaps in availability and establish R&D priorities.

WHO | Technical document | 1 April 2025 | [Online link](#)

Challenges and applications of artificial intelligence in infectious diseases and antimicrobial resistance

- Reviews the application of artificial intelligence (AI) driven methods in pathogen detection, resistance prediction, and drug discovery.
- Highlights opportunities and limitations in use the of AI for infectious diseases and AMR.

npj antimicrobials and resistance | Review article | 7 January 2025 | [Online link](#)

Understanding gender inequities in antimicrobial resistance: role of biology, behaviour and gender norms

- Outlines the role of gender disparities and norms in antibiotic overuse and AMR.
- Provides a conceptual framework and explores the contribution of different biological, sociocultural and behavioural factors to the differential incidence of AMR in women.

BMJ Global Health | Analysis | 20 January 2025 | [Online link](#)

Exploring the role of gut microbiota in antibiotic resistance and prevention

- Reviews the role of pathogen-microbiome interactions in determining the outcome of pathogenesis and development of novel antimicrobials.
- Highlights the need to understand microbial diversity and its role in adapting pathogens to AMR.

Annals of Medicine | Research article | 17 March 2025 | [Online link](#)

New antibiotics targeting Gram-negative bacilli

- Reviews new antimicrobial agents for Gram-negative bacilli, including current development status, mode of action, spectra of activity, and indications for which they have been approved.
- Highlights the need for new antibiotics targeting WHO priority pathogens.

Le Infezioni in Medicina | Review article | 1 March 2025 | [Online link](#)

Unveiling the nanoworld of antimicrobial resistance: integrating nature and nanotechnology

- Reviews naturally occurring antimicrobial compounds that offer a viable alternative to synthetic antibiotics.
- Details bacterial resistance mechanisms, nanocarriers for drug delivery, and plant-based compounds for nanoformulations, particularly nanoantibiotics.

Frontiers | Review article | 9 January 2025 | [Online link](#)

6) Collaborations

NAMS task force report on antimicrobial resistance

- National Academy of Medical Science (NAMS) Task force on AMR evaluates the current scenario of AMR and provides recommendations through a comprehensive review of existing data and expert consultations.
- Highlights significant gaps in AMR surveillance, the need for better antimicrobial stewardship and the importance of global collaboration.

Annals of the National Academy of Medical Sciences | Report | 31 March 2025 | [Online link](#)

Japan's AMR response 2013-2025: developing, implementing and evaluating national AMR action plans

- Details the AMR response of Japan from 2013-2025 including AMR response before 2016, development and implementation of Japan's first national action plan on AMR (NAP-AMR; 2016-2020), lessons learnt and development of the second NAP-AMR (2023-2027), and implications for other countries.

WHO | Publication | 14 February 2025 | [Online link](#)

External quality assurance (EQA) network in South and South-East Asia: experience and results from an international EQA programme in One Health sector reference laboratories

- Provides a comprehensive overview of EQA results collected from the EQASIA network on six EQA rounds between 2021 and 2023.
- The results showed a significant improvement in laboratories' performance over time, which is important for effective AMR surveillance.

Journal of Antimicrobial Chemotherapy | Research article | 4 February 2025 | [Online link](#)

Risk factors for antimicrobial-resistant *Enterobacterales* in dogs: a systematic review

- Identifies risk factors associated with carriage of AMR-*Enterobacterales* in dogs, including antimicrobial use, feeding raw diets, and hospitalization.
- Emphasizes the importance of targeted control measures, including prudent use of critically important in companion animals, strengthening IPC procedures in veterinary clinics/hospitals and educating caregivers.

Frontiers | Review | 7 October 2024 | [Online link](#)

Quotable quote

"Invasive fungal infections threaten the lives of the most vulnerable but countries lack the treatments needed to save lives"

– Dr Yukiko Nakatani
WHO ADG for AMR

**Sameeksha* is a Hindi word, meaning review. This compilation of open access publications and resources on One Health containment of AMR (along with a brief summary) are grouped according to the strategic priorities of India's National Action Plan on Antimicrobial Resistance. Kindly note, inclusion of publications and resources in this review/compilation does not imply an endorsement by WHO.