

*Sameeksha** – Antimicrobial Resistance (AMR)

**Sameeksha* is a Hindi word, meaning review. This compilation of publications and resources (along with a brief summary) aims to review and share information to facilitate containment of antimicrobial resistance in India, 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.

Key highlights of volume 16

- Advocacy factsheet for policymakers action on AMR in agri-food systems
- Review of laboratory-based surveillance in Southeast Asia
- WHO's self-assessment tool on IPC minimum requirements for primary health care facilities
- Review of non-pharmaceutical behaviour change interventions for antimicrobial stewardship
- WHO research for hand hygiene in health care

Strategic priority 1: Awareness and understanding

Why should policymakers act on antimicrobial resistance in agrifood systems?

- Identifies interlinkages between AMR, health, economy, environment, and food systems.
- Key actions for policymakers include biosecurity measures at farms, food safety, data collection and consumer actions to reduce antimicrobial use in the food chain.

FAO | Fact sheet | 2023 | [Online link](#)

WHO's science in 5: three things to keep in mind when taking antibiotics

- This short video provides guidance on appropriate use of antibiotics to preserve their efficacy.
- Key messages for governments include reducing exposure to antibiotics by implementing effective hygiene systems, facilitating national action plans and investing in public health programs.

WHO | Video | 12 May 2023 | [Online link](#)

Treatment and disposal practices of pharmaceutical effluent containing potential antibiotic residues in two states in India and perceptions of various stakeholders on contribution of pharmaceutical effluent to antimicrobial resistance: a qualitative study

- Explores knowledge, perceptions and practices of multinational pharmaceutical companies around treatment and disposal practices of effluent with potential antibiotic residues.
- Reveals varying practices depending on size of company and highlights the need for better government regulation and awareness.

Journal of Pharmaceutical Policy and Practice | Research article | 1 May 2023 | [Online link](#)

Perspectives of pharmacy employees on an inappropriate use of antimicrobials in Kathmandu, Nepal

- Studied knowledge, attitudes and practices of pharmacy employees on antimicrobial dispensing across urban and rural areas in Nepal.
- Reveals high demand for non-prescription antimicrobials, with 36% of respondents reporting dispensing antimicrobials without prescription.

PLOS One | Research article | 3 May 2023 | [Online link](#)

Strategic priority 2: Laboratories and surveillance

A scoping review on laboratory surveillance in the WHO Southeast Asia region: past, present and the future

- Reviews existing literature on laboratory-based surveillance and modifications due to the COVID-19 pandemic.
- Recommends an integrated standardized hospital-based surveillance system with mortality surveillance.

Journal of Global Health | Review article | 21 April 2023 | [Online link](#)

Antimicrobial consumption in food-producing animals in Thailand between 2017 and 2019: the analysis of national importation and production data

- Identifies and quantifies patterns of antimicrobial consumption in food producing animals.
- Reports 49% decrease in consumption of antimicrobials, and a notable 25% reduction in use of antimicrobials listed by WHO as critically important antimicrobials.

PLOS One | Research article | 27 April 2023 | [Online link](#)

Methicillin resistant *Staphylococcus aureus* isolated from surgical patients in Cambodia over a 10-year period

- MRSA positivity in *S. aureus* isolates in Cambodia were compared over a 10 year period to find stable MRSA rates (53.8%).
- Patients with wound infections due to trauma or orthopaedic implants were found to be more likely to acquire MRSA.

Tropical Doctor | Research article | 8 May 2023 | [Online link](#)

Strategic priority 3: Infection prevention and control

Assessment tool on infection prevention and control minimum requirements for primary health care facilities

- A self-assessment tool for primary health facilities to help assess, plan and implement a facility based IPC programme in line with the WHO minimum requirements for IPC programmes.

WHO | Standards | 4 May 2023 | [Online link](#)

Hand Hygiene Acceleration Framework Tool (HHAFT) – excel tool

- An update on the 2022 framework, the tool helps governments track progress towards development, implementation and quality of their plan of action for hand hygiene at national and sub-national level.

WHO | Technical document | 17 April 2023 | [Online link](#)

Water, sanitation, hygiene, waste and electricity services in health care facilities: progress on the fundamentals

- 1 billion people in LMICs are served by HCFs that lack access to WASH services, and this global report identifies insights and key gaps for priority action.
- Costs for ensuring WASH/IPC practices in HCFs are relatively modest with a high return on investment.

WHO-UNICEF | Global Report | 13 June 2023 | [Online link](#)

Biosecurity and water, sanitation, and hygiene (WASH) interventions in animal agricultural settings for reducing infection burden, antibiotic use, and antibiotic resistance: a One Health systematic review

- Reviews and details biosecurity and WASH interventions on farms.
- Also highlights challenges of preventing infections and AMR even in well resources farms and the need for complementary interventions to address AMR across all sectors.

Lancet Planetary Health | Systematic Review | May 2023 | [Online link](#)

SHEA/IDSA/APIC practice recommendation: strategies to prevent healthcare-associated infections through hand hygiene: 2022 Update

- Updated recommendations for acute-care hospitals based on new evidence since 2014 guidelines.
- Recommendations are categorized as essential practices and additional approaches and include two new essential practices related to use of gloves and environmental contamination.

Infection Control and Hospital Epidemiology | Guidelines | March 2023 | [Online link](#)

Strategic priority 4: Optimise use of antimicrobials

Behavior-change interventions to improve antimicrobial stewardship in human health, animal health, and livestock agriculture: a systematic review

- Reviews non-pharmaceutical behaviour-change interventions for antimicrobial stewardship (AMS).
- Interventions improve adherence to clinical guidelines and AMS, however did not impact clinical outcomes.

PLOS Global Public Health | Systematic review | 8 May 2023 | [Online link](#)

Routine antibiotics for infants less than 6 months of age with growth failure/faltering: a systematic review

- Reviews antibiotic use among infants with growth challenges to compare therapeutic value and safety profiles.
- Reports a lack of appropriate studies to assess potential risks and benefits of antibiotic use in this population, highlighting the need for more studies to develop sufficient evidence to develop best practices.

BMJ Open | Systematic Review | 10 May 2023 | [Online link](#)

Is adherence to national guidelines for parenteral empiric antibiotic therapy effective? Experience from a Sri Lankan center

- Prospective, cross-sectional study reports high level of adherence of physicians' empiric prescriptions to national guidelines (92%).
- Recommends national guidelines be regularly updated based on surveillance data and local bacteria spectra.

The Journal of Infection in Developing Countries | Research article | 30 April 2023 | [Online link](#)

'If you want to go far, go together' – community-based behaviour change interventions to improve antibiotic use: a systematic review of quantitative and qualitative evidence

- Reviews evidence to assess value of community-based behaviour change interventions for antibiotic use.
- Highlights the potential of such interventions in tackling AMR and complementing clinical approaches.

Journal of Antimicrobial Chemotherapy | Systematic Review | 6 May 2023 | [Online link](#)

Strategic priority 5: Research, innovations, and finance

WHO research for hand hygiene in health care 2023–2030: summary

- A 21 domain research agenda to aid researchers in defining their projects and funding proposals.
- Provides guidance to policy makers, implementers and donors on strengthening hand hygiene promotion programmes.

WHO | Technical document | 5 May 2023 | [Online link](#)

Global trends in research related to the links between microbiota and antibiotics: a visualization study

- A bibliometric analysis maps history of microbiota and antibiotic research, direction for future research.
- Highlights increasing volume of research in this domain since 2017, including in India, which ranked 4th globally in volume of research produced.

Scientific Reports | Research article | 27 April 2023 | [Online link](#)

Current clinical landscape and global potential of bacteriophage therapy

- Reviews history, benefits and limitations of bacteriophages as novel agents for combatting AMR.
- While numerous successful case reports among individual patients have been observed, the authors call for clinical trials, standardisation, commitment and investment for further research.

Viruses | Review article | 21 April 2023 | [Online link](#)

Strategic priority 6: Collaborations

Moving from assessments to implementation: promising practices for strengthening multisectoral antimicrobial resistance containment capacity

- Presents evaluation of USAID's program to support national AMR action plans in 13 countries.
- Authors identified 4 best practices: use of WHO benchmarks tool, integrating AMR into national and global agendas, improving governance for AMR and mobilising long-term, diversified funding for AMR.

One Health Outlook | Research article | 14 April 2023 | [Online link](#)

9th meeting of the One Health High-Level Expert Panel (OHHLEP)

- Aimed at generating knowledge and evidence on One Health, OHHLEP reviews progress and provides guidance to working groups and partner agencies to further the research agenda.
- Meeting report outlines key dissemination materials, current projects, and the Pandemic Fund.

WHO | Meeting report | 5 May 2023 | [Online link](#)

Antimicrobial resistance in the global health network: known unknowns and challenges for efficient responses in the 21st century

- Little information is available on the interaction of factors facilitating the development, spread and evolution of AMR with various stakeholders
- Reviews AMR through a global health lens considering socioeconomic factors, surveillance methodologies and different stakeholders.

Microorganisms | Review article | 17 April 2023 | [Online link](#)