

5. Antimicrobial Resistance – Science & Technology

Union Health Minister Shri J P Nadda Launches National Action Plan on Antimicrobial Resistance 2.0. India has launched NAP-AMR 2.0 (2025–29), a multi-sectoral "One Health" strategy involving the Health, Agriculture, and Environment ministries to combat the rising threat of drug-resistant superbugs through better surveillance, regulation, and public awareness.

National Action Plan on Antimicrobial Resistance (NAP-AMR 2.0)

1. Introduction

India has officially launched the National Action Plan on Antimicrobial Resistance 2.0 (NAP-AMR 2.0) for the period 2025–2029. This strategic roadmap updates India's defence against the escalating threat of drug-resistant infections, addressing gaps from the first phase (2017–2021) and adopting a stronger "One Health" framework.

Nodal Ministry – Ministry of Health & Family Welfare (MoHFW).

2. Understanding Antimicrobial Resistance (AMR)

Definition – AMR is the biological ability of microorganisms (bacteria, viruses, fungi, and parasites) to evolve and resist the effects of medications that previously killed them or stopped their growth.

Consequence – Standard treatments (antibiotics, antifungals) become ineffective, making infections difficult or impossible to treat, increasing the risk of disease spread, severe illness, and death.

Global Status – The World Health Organization (WHO) has recognized AMR as one of the top 10 global public health threats facing humanity.

3. Rationale for NAP-AMR 2.0

The need for an updated version (2.0) arises from several critical factors

Addressing Past Gaps – It seeks to plug the implementation loopholes identified in the first National Action Plan (2017–2021).

Global Alignment – The plan aligns India's strategy with the WHO Global Action Plan on AMR.

Rising Threat Level – Rapid proliferation of AMR across multiple sectors.

Emergence of High-Risk Superbugs (multi-drug resistant organisms). Growing scientific evidence of environmental contamination (pharmaceutical effluents) contributing to resistance.

4. Key Features of NAP-AMR 2.0

Building Bureaucrats Since 2006

The "One Health" Framework. The core philosophy of NAP-AMR 2.0 is the integration of multiple sectors to fight resistance. It recognizes that human health is connected to animals and the environment.

Human Health – Rational use of medicines in hospitals.

Animal Health – Controlling antibiotic use in livestock/poultry.

Agriculture – Managing pesticide and antimicrobial use in crops.

Environment – Monitoring waste from pharma industries and hospitals.

B. Governance & Participation

Multi-Ministry Participation – Unlike a siloed approach, this plan includes specific action plans for every key stakeholder ministry and department.

Budget & Accountability – It mandates dedicated budgets and specific timelines to ensure effective monitoring and implementation.

C. Education & Training

Public Awareness – Focus on educating citizens about the dangers of self-medication.

Professional Sensitisation – Mandatory training on AMR for

1. Doctors (Prescribers)
2. Veterinarians
3. Pharmacists
4. Community Health Workers (ASHA/ANMs)

D. Infrastructure Strengthening

Laboratory Expansion – Scaling up microbiology laboratories to detect resistant strains early.

Surveillance Networks – Upgrading Infection Prevention and Control (IPC) systems in both public and private hospitals to track infection trends.

E. Stakeholder Engagement

Private Sector Inclusion – Active involvement of private healthcare providers, diagnostic chains, and the pharmaceutical industry.

Community & NGOs – Engaging cooperatives, NGOs, and international partners for grassroots implementation.

5. Comparison – NAP-AMR 1.0 vs NAP-AMR 2.0

Feature	NAP-AMR 1.0 (2017-2021)	NAP-AMR 2.0 (2025-2029)
Scope	Focus on initiating AMR containment.	Focus on strengthening and scaling existing systems.

Feature	NAP-AMR 1.0 (2017-2021)	NAP-AMR 2.0 (2025-2029)
Approach	Primarily Health-sector driven.	Comprehensive One Health (Human, Animal, Agri, Env).
Coordination	Limited inter-ministerial coordination.	Multi-ministry participation with specific budgets/timelines.
Surveillance	Basic surveillance network established.	Advanced surveillance with upgraded labs and private sector integration.

6. Related Government Initiatives

Regulatory Interventions

Prescription Audits - Promoting stewardship to ensure doctors prescribe antibiotics only when necessary.

OTC Bans - States like Kerala and Gujarat have successfully implemented bans on Over-The-Counter (OTC) sales of certain antibiotics to reduce misuse.

Agricultural Controls - Bans on select antimicrobials and pesticides are being enforced to curb the spread of resistance through the food chain.

R&D Support

India AMR Innovation Hub - A dedicated platform to support Research & Development, facilitate collaboration for new technologies, and mobilize resources for fighting AMR.

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