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Beyond Surveillance: Asia-Pacificâ??s Next Battle Against AMR

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As the world observes World AMR Awareness Week (WAAW) from November 18 to 24, 2026, the focus is increasingly shifting towards translating scientific advances and policy commitments into effective interventions. Across Asia-Pacific, progress in genomic surveillance, laboratory capacity and alternative therapeutic approaches is creating new opportunities to combat drug-resistant infections. However, funding constraints, implementation gaps and limited evidence of improved clinical outcomes continue to challenge the region. What will it take to bridge the gap between scientific progress and patient impact?



Asia-Pacific carries a disproportionate burden of drug-resistant infections. The World Health Organization's (WHO) 2025 global surveillance report highlighted the scale of the problem, estimating that approximately one in three reported bacterial infections in the WHO South-East Asia Region were resistant to antibiotics. In 2019, an estimated 2.6 million deaths across Asia-Pacific were associated with antimicrobial resistance (AMR), of which more than 680,000 were directly attributable to it. In the WHO Western Pacific Region, AMR is projected to cause more than five million deaths and cost up to $148 billion between 2020 and 2030.

Strengthening the Regional Response

Asia-Pacific remains at the centre of the global AMR challenge, both because of its substantial burden of drug-resistant infections and its growing role in developing solutions.

The 2024 United Nations General Assembly High-Level Meeting on AMR marked an important milestone in the global response. Its Political Declaration established a target of reducing global deaths associated with bacterial AMR by 10 per cent by 2030, compared with 2019 levels. In May 2026, the World Health Assembly adopted an updated Global Action Plan on AMR for 2026–2036.

At the regional level, the WHO Regional Office for South-East Asia facilitated the endorsement of a roadmap to accelerate action against AMR in the human health sector for 2025–2030. Member States have also adopted a regional resolution to strengthen their commitment to tackling AMR. Across the wider region, countries continued to update their national action plans, with 19 implementing their second national plans and two their third in 2025.

India and Singapore have also strengthened their national responses. India launched its second National Action Plan on AMR (NAP-AMR 2.0) in November 2025, focusing on awareness, laboratory capacity, infection prevention and control, and

intersectoral coordination. Singapore launched its second National Strategic Action Plan on AMR (NSAPv2) in November 2025, building on its One Health approach across human health, animals, food and the environment.

“In recent times, some of the most significant developments have included the WHO South-East Asia Region's 2025–2030 AMR roadmap, continued investments in surveillance and laboratory capacity, and increasing efforts to turn national action plans into practical, funded interventions. These are important steps, but they also highlight a broader reality: progress against AMR depends on connecting surveillance, research, innovation, and access,” said **Dr Richard Alm, Chief of Research and Development at CARB-X,** (Combating Antibiotic-Resistant Bacteria Biopharmaceutical Accelerator), a global non-profit partnership that accelerates early-stage research and development of new antibiotics, vaccines and rapid diagnostics to combat drug-resistant bacteria.

Genomic Surveillance and New Therapeutic Approaches

Alongside policy initiatives, countries across Asia-Pacific are strengthening genomic surveillance and laboratory capacity, enabling researchers to better understand how resistant bacteria emerge, evolve and spread.

“Over the past two years, we have continued to make substantial progress in genomic surveillance, laboratory capacity and our understanding of how resistant bacteria emerge and spread. We can now characterise bacterial populations and resistance mechanisms at a level of detail that would have been unimaginable a decade ago. This is a staggering achievement, particularly given the complexity and diversity of healthcare systems across the region,” said **Prof. Stephen Baker, AMR Domain Lead and Senior Principal Investigator at A*STAR Infectious Diseases Labs (A*STAR IDL), Singapore**, which focuses on drug-resistant Gram-negative bacteria, seeking to translate scientific insights into preventive strategies and new therapeutics.

Beyond surveillance, regional collaboration and political commitment are creating opportunities to advance research and develop new interventions. These include approaches that could complement conventional antibiotics, particularly against pathogens for which treatment options are increasingly limited.

“There are encouraging signs that this is changing. We are seeing increasing interest and research investment in vaccines, monoclonal antibodies, bacteriophages and other alternatives or complements to conventional antibiotics. These approaches are particularly important for pathogens where antibiotic resistance is widespread and the therapeutic pipeline remains limited,” said Prof. Baker.

In May 2026, researchers from Singapore's A*STAR IDL, Nanyang Technological University and the National University of Singapore reported findings that could help improve bacteriophage therapy against *Mycobacterium abscessus*, a bacterium that can cause difficult-to-treat lung infections.

However, generating scientific evidence is only part of the challenge. The ability to produce data has advanced more rapidly than the capacity to translate findings into clinical action. Surveillance can identify resistance patterns, but its value ultimately depends on whether the findings inform clinical decisions, strengthen infection prevention and guide the development of new treatments.

“While advances in surveillance and diagnostics are improving our understanding of drug-resistant infections, translating those advances into better patient outcomes requires a strong innovation ecosystem. New antibiotics, diagnostics, and preventatives must move successfully through development, clinical evaluation, regulatory pathways, and ultimately reach the patients who need them most,” said Prof. Baker.

From Policy to Practice

Despite growing political commitment and scientific progress, implementation remains a major challenge. A study published in *BMJ Public Health* in October 2026 found that, although Asia-Pacific countries had made progress in developing national action plans to tackle AMR, significant gaps in funding and implementation persisted. Of the 28 countries assessed, 27 had endorsed at least one multisectoral AMR action plan, but only 11 had included numerical targets. The findings underscore the need for greater domestic financing and measurable goals to translate policy commitments into tangible action.

The gap between scientific advances and real-world outcomes remains a concern. As Prof. Baker observed, “I think we need to be realistic about the impact to date. Scientific and technological progress has been impressive, but the evidence that these advances are consistently translating into better clinical outcomes remains fairly limited.”

Bridging this gap requires more than research and collaboration. Sustained funding, product development expertise and clear pathways from early-stage research to clinical application are essential to ensure promising interventions reach patients.

These remain significant challenges for the region, despite its scientific capabilities and established clinical research networks.

Initiatives that support early-stage innovation offer one way to address this disconnect. CARB-X, which funds the development of products to prevent, diagnose and treat drug-resistant infections, is opening its second funding cycle of 2026 on November 10.

“Ultimately, success against AMR will depend not only on stronger surveillance and policies, but also on sustained investment in innovation and the organizations that help translate promising science into products for patients. We believe Asia-Pacific has significant potential to contribute to the next generation of AMR solutions, and CARB-X is keen to support more innovators from the region.

“As part of our second 2026 funding cycle, opening on November 10, CARB-X will seek applications focused on direct-acting therapeutics for Gram-negative infections, novel antibacterial approaches through the CARB-X Novel Chemistry for AMR Challenge, non-vaccine approaches to prevent neonatal sepsis, and diagnostics for neonatal sepsis. By connecting promising innovators with funding, expertise, and development support, we hope to help advance urgently needed tools to prevent, diagnose, and treat drug-resistant infections in Asia-Pacific and around the world,” said Dr Alm.

Prevention as a Strategic Priority

While developing new antibiotics remains important, preventing infections in the first place is equally critical to reducing the need for antibiotic treatment and slowing the emergence and spread of resistance. Vaccines, monoclonal antibodies and other targeted interventions could play a significant role in protecting vulnerable populations and reducing antibiotic consumption.

“The most pragmatic route is to focus more on preventing bacterial infections rather than treating them. Vaccines, monoclonal antibodies and other targeted interventions offer the potential to protect vulnerable populations, including newborn infants and critically ill patients, before they develop severe infections. Preventing an infection not only avoids the need for treatment but also reduces antibiotic consumption and opportunities for resistant organisms to spread,” said Prof. Baker.

Asia-Pacific has the scientific expertise, research institutions and clinical networks to make a substantial contribution to the global AMR response. The priority now is to connect these strengths with sustained financing, measurable implementation targets and effective pathways to clinical adoption. As the region marks World AMR Awareness Week 2026, the test of progress will be whether advances in surveillance, diagnostics and therapeutic research translate into accessible interventions, stronger infection prevention and better outcomes for patients.

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