STATE AEFI TECHNICAL COLLABORATION CENTRE
DEPARTMENT OF COMMUNITY MEDICINE
MAULANA AZAD MEDICAL COLLEGE, DELHI

E-NEWSLETTER

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FROM THE EDITOR'S DESK: WINTER WATCH – STRENGTHENING IMMUNIZATION & SURVEILLANCE IN 2025

Dear Readers,

As winter sets in, it brings with it a time for reflection, resilience, and renewed vigilance in safeguarding public health. Our November 2025 Edition captures the spirit of preparedness—highlighting key developments in surveillance, immunization, and scientific innovation shaping the season ahead.

In this issue, we bring you national and international outbreak alerts on vaccine-preventable diseases, underscoring the need for continued alertness and timely action. The "Stay Up to Date" section features insightful articles on Nanotechnology: A Revolutionary Game Changer, The Need for Climate-Resilient Immunization in a Warming World, and HPV Vaccination—Early Intervention, Greater Prevention.

Our "Rendezvous with Research" segment examines the Immunization Agenda 2030 Strategy and its global push to reach zero-dose children in low- and middle-income countries. Meanwhile, the "Celebrating Creativity" section proudly presents the winners of our World Immunization Week Poster Contest, showcasing the creativity and advocacy of young minds across the nation.

As we move into the close of the year, let's strengthen our collective resolve to advance vaccine safety, equity, and research. Together, we can ensure that every child—and every community—stays protected, informed, and inspired through the season and beyond.

Wishing you a season filled with good health, gratitude, and renewed commitment to public health excellence!!

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OUTBREAK ALERTS

National and International Round-up of Vaccine Preventable Outbreaks

Cholera Alert: Vaccine-Preventable Crisis Intensifies Across Multiple Countries

The global situation for this vaccine-preventable disease continues to worsen, with more than 400,000 cholera/acute watery diarrhoea cases and nearly 4,800 deaths reported across over 30 countries from January to mid-August 2025. Countries such as Chad and the Republic of the Congo—once largely free of major outbreaks—are now seeing fresh surges, while the Democratic Republic of the Congo, South Sudan and Sudan watch outbreaks from 2024 expand further. Conflict, mass displacement, and flooding have disrupted water and sanitation systems, making remote and rural populations especially vulnerable. In response, World Health Organization and partners are strongly emphasising the role of oral cholera vaccination (OCV), paired with improved surveillance, case-management and WASH (water, sanitation & hygiene) interventions, to prevent the spread and reduce fatalities.

Source: WHO-Disease Outbreak News

Polio Resurfaces in Israel: Vaccine-Derived Strain Detected in Environmental Samples

In early August 2025, Israel reported a circulating vaccine-derived poliovirus type 1 (cVDPV1) outbreak to the World Health Organization. The virus was detected between February and July 2025 in multiple environmental samples from Jerusalem and nearby regions, though no human paralysis cases have been reported. This marks the first detection since Israel discontinued the use of oral polio vaccine earlier in 2025, continuing instead with inactivated polio vaccine (IPV) in its national schedule. Health authorities attribute the emergence to pockets of under-vaccinated and vaccine-hesitant communities, where immunity gaps allow viral circulation. WHO and the Global Polio Eradication Initiative are assisting with intensified surveillance and targeted IPV campaigns to boost immunity and limit spread.

Despite Israel's strong overall vaccination coverage and robust response system, experts warn that sustained community transmission remains possible in low-coverage areas. WHO currently assesses the risk of international spread as low, but emphasizes the need to maintain high routine vaccination and vigilance to prevent resurgence of this vaccine-preventable disease.

Source: WHO News Section

Contributed By: Dr Madhvi Dhamania (Assistant Professor, PSM)

Global Surge in Chikungunya Cases (Jan–Sept 2025)

Between 1 January and 30 September 2025, over 4.45 lakh suspected and confirmed chikungunya cases and 155 deaths were reported from 40 countries worldwide. The Region of the Americas recorded the highest number of cases, followed by the European Region—with major outbreaks in La Réunion (France) and Brazil. Increased transmission was also observed in India, Bangladesh, Kenya, Mauritius, and China (Guangdong Province).

Resurgence has been linked to Aedes mosquito proliferation, climate shifts, and low immunity in new regions. Countries are scaling up vector control, surveillance, and community awareness under the WHO Global Arbovirus Initiative. Promising chikungunya vaccines are under advanced trial phases, expected to strengthen global prevention efforts.

Source: WHO News Section

"STAY IN THE LOOP: STAY INFORMED!"

Up-to-Date With Events and Recent Advances

NANOTECH: A REVOLUTIONARY GAME CHANGER

Nanotechnology has emerged as a huge revolution in the world of vaccine development, addressing the traditional limitations of vaccines such as instability, sub-optimal immune response and the delivery of vaccines. Nano-vaccines not only improved the antigen presentation but also aided in sustained and controlled release of the vaccine, while minimizing side effects and maximizing the protection. It also facilitates targeted delivery to immune cells and enhances immune activation by sustained release of the vaccine. Nanoparticle-based vaccines include lipid nanoparticles, virus-like particles and polymeric carriers. While challenges like manufacturing scalability and cost remained, there is an enormous potential in nanotechnology to address current and future infectious diseases and cancers, offering safer and more effective immunization.

Examples of Nanotechnology-Based Vaccines in Clinical Trials:

Vaccine Type	Target Disease	Nanocarrier	Trial Phase (Year)
mRNA Vaccine (AFN18)	Solid Tumors	Lipid Nanoparticle	Phase 1 (2024)
Recombinant Adenovirus Vaccine	HPV-Positive Oral Cancer	Viral Vector	Phase 1 (2024)
Neoantigen mRNA Vaccine	Pancreatic and Hepatocellular Carcinoma	Lipid Nanoparticle	Phase 1 (2023-2024)

Scope Beyond Injections:

Nanotechnology-based vaccines are paving the way for alternative delivery methods beyond traditional injections, including mucosal vaccination (e.g., nasal sprays), offering more versatile and potentially more accessible vaccination options.

Reference:

Kumar A, Ahmad F, Sah BK, Aljabali AAA, Mishra Y, Mishra V. Advancements in viral vaccine development: from traditional to modern approaches. Explor Immunol. 2025;5:1003203

Contributed by:
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"STAY IN THE LOOP: STAY INFORMED!"

Up-to-Date With Events and Recent Advances

Need for Climate-Resilient VPD Immunisation in a Warming World

Vaccination remains one of modern medicine's greatest achievements, preventing millions of deaths. Yet rising global temperatures and climate instability now threaten these gains. Climate change is reshaping infectious disease patterns and straining immunisation systems worldwide.

The WHO warned in June 2025 that warmer environments are enabling mosquito- and tick-borne infections to expand into new regions, increasing risks of Japanese Encephalitis and Yellow Fever outbreaks. Floods and poor sanitation are driving transmission of cholera, typhoid, and hepatitis A, underscoring the need for stronger immunisation and surveillance. Extreme weather also disrupts vaccine delivery—heatwaves, power outages, and floods cause cold-chain failures and damage vaccine stores across South-East Asia. A study from Pakistan analysing 132 million doses found vaccine delivery dropped by 14–21% on days exceeding 33 °C.

Climate-driven migration and displacement further create pockets of under-immunised children. In August 2025, WHO called for migrant-inclusive, climate-resilient health systems, noting displaced populations often lose access to vaccination. Current data highlight growing risks: in April 2025, WHO, UNICEF, and Gavi reported measles cases in 138 countries and large outbreaks in 61—the highest since 2019. By July 2025, over 14 million infants remained unvaccinated, despite 89% DTP1 coverage. The WHO Western Pacific Office also warned in May 2025 of resurgent measles and polio in East Asia and the Pacific, linked to climate emergencies and post-pandemic disruption.

To ensure continuity, countries must build climate-resilient immunisation systems—adopting solar-powered cold chains, mobile vaccination teams, and climate-informed microplanning. Reaching zero-dose children in vulnerable coastal, slum, and tribal communities should guide national programmes.

Every degree of warming risks undoing decades of vaccine progress—climate action is health action.

Contributed By: Dr Irena Mandal, Postgraduate student
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HPV Vaccination — Early Intervention, Greater Prevention

Human papillomavirus (HPV) causes nearly all cervical cancers and contributes to other anogenital and oropharyngeal cancers, along with genital warts. Infection occurs soon after sexual activity begins, but cancers can appear decades later. Vaccinating adolescents aged 9–14 offers durable protection and is one of the most effective cancer prevention measures. Bivalent, quadrivalent, and nonavalent HPV vaccines target high-risk strains linked to cervical cancer and have significantly reduced infections and precancerous lesions in countries such as Canada, Australia, New Zealand, and the United States. In India, where cervical cancer remains a leading cause of death among women, increasing HPV vaccine coverage is vital. The vaccine is given in two doses before age 14 and three doses up to age 26. Males should also be vaccinated, as HPV can cause penile and base-of-tongue cancers.

Recognizing this need, Finance Minister Nirmala Sitharaman announced in the Interim Budget 2024 a plan to scale up vaccination for girls aged 9–14. Acting on it, the Tamil Nadu Government launched its programme in June 2025 for 14-year-old girls in government and aided schools. "Prior to vaccination, we will start creating awareness among children and their family members," said Dr. T. S. Selvavinayagam, Director of Public Health and Preventive Medicine, Tamil Nadu.

Early protection ensures lasting prevention and advances India's efforts toward cervical cancer elimination.

Contributed By: Dr Srishty, Postgraduate student
Dept of Community Medicine, MAMC

RENDEZVOUS WITH RESEARCH

The Immunization Agenda 2030 Strategy to reach zero-dose children in low-income and middle-income countries: a scoping review

Background

Intensified efforts are needed to achieve the Immunization Agenda 2030 (IA2030) target to halve the number of children not reached by routine vaccination ('zero-dose' (ZD) children) by 2030. This scoping review maps and synthesises the scientific literature on ZD children in low-income and middle-income countries since the IA2030 launch.

Methods:

Our protocol, developed per the PRISMA-ScR (Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews) guidelines, was registered on the Open Science Framework prior to execution, and our search strategies were designed by a research librarian. We searched MEDLINE (Ovid), CINAHL Complete (EBSCOhost), EBM Reviews (Ovid), EMBASE (Ovid), LILACS and Google Scholar for peer-reviewed studies with quantitative evidence on ZD children published between January 2020 and January 2024. Using Covidence, we screened citations in a two-stage process by two independent reviewers and conducted data charting using a pretested form. Disagreements were resolved by consensus or consultation with a senior reviewer.

Results

Of the 82 articles included, 73 provided evidence on prevalence, and/or distribution, 24 on barriers to vaccination services and 44 on deprivations faced by ZD children, their households and communities, with the risk of deprivations varying importantly across contexts. The barriers to vaccination most reported related to the intent to vaccinate (n=20), followed by community access (n=10). Deprivations mainly concerned access to health services, such as low utilisation of maternal health services (n=22), and other key development indicators, such as low socioeconomic status (n=29) and poor maternal education/literacy (n=28). We found no studies (n=0) on interventions focused on reaching ZD children with routine immunisation services.

Conclusion

Our findings highlight the imperative to generate evidence on interventions delivering routine immunisation to ZD children and missed communities. Results also underscore the need for transformative approaches that address multiple deprivations using carefully selected, integrated

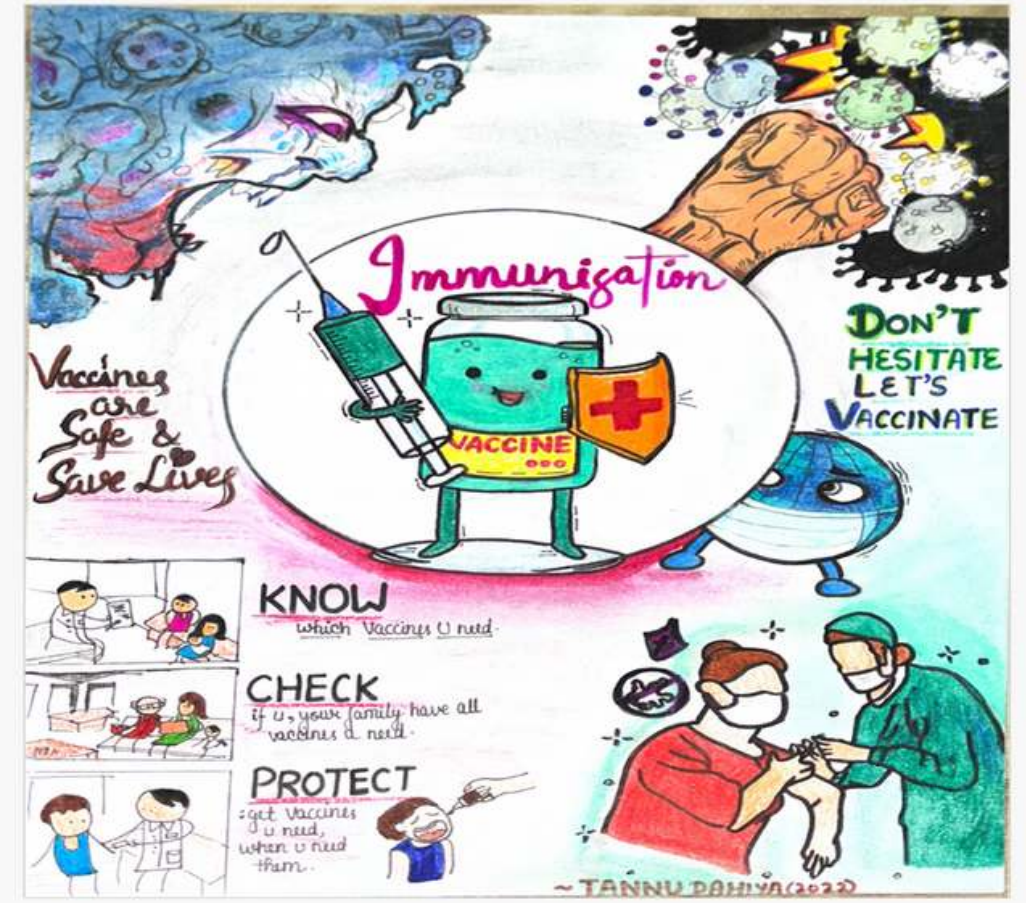
Source: Beaulieu A, Ducharme J, Thibeault C, Akani BC, Ziegler D, Hogan D, Corrêa GC, Reynolds HW, Johri M. The Immunization Agenda 2030 Strategy to reach zero-dose children in low-income and middle-income countries: a scoping review. BMJ Global Health. 2025 Aug 5;10(8).

World Immunization Week 2025: Winning Entries in the Poster Competition

First Prize:

Simra Mahin

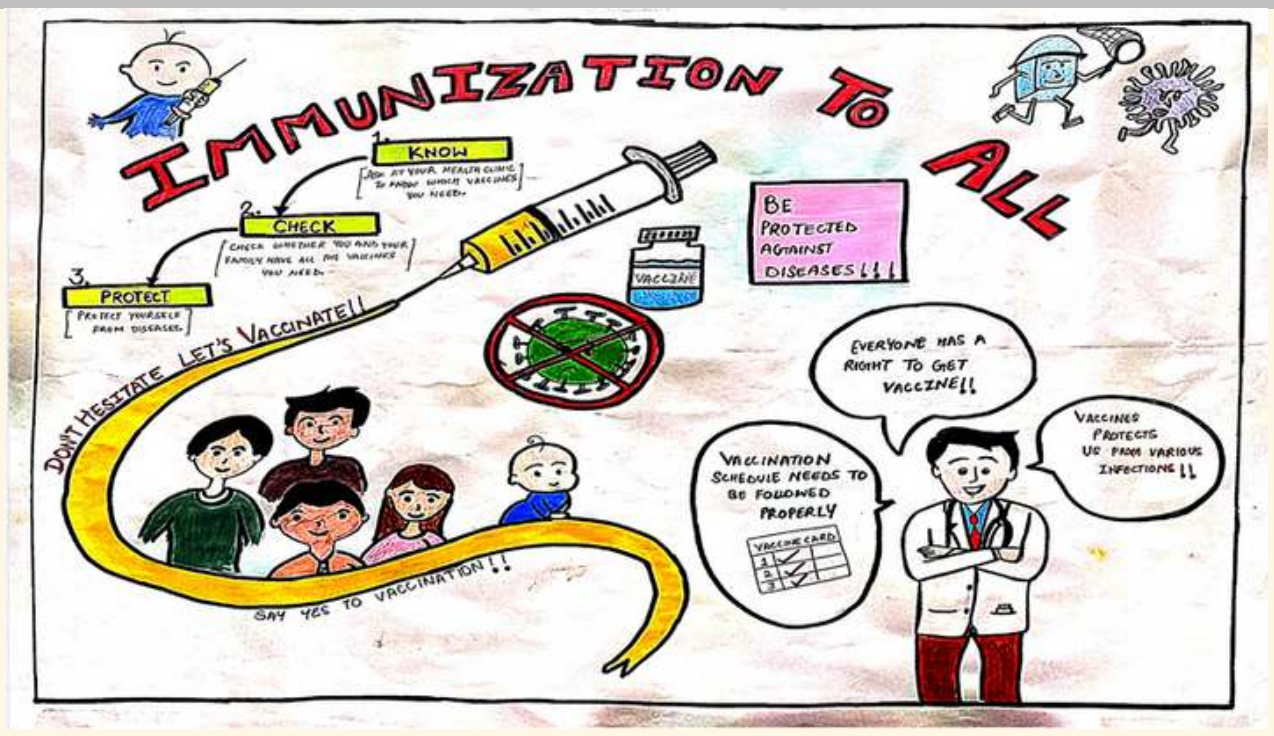
Shadan Institute of Medical Sciences, Hapur



Second Prize:

Kriti Rana

Pt. Jawaharlal Nehru Government Medical College And Hospital, Chamba



World Immunization Week 2025: Winning Entries in the Poster Competition

Third Prize:
Ajay
Maulana Azad Medical College, New Delhi

Upcoming Events: Mark Your Calendar!!

National Events:

1. Nov 7-9, 2025 - Bodh Gaya, Bihar, India - Asian Congress & 25th National Conference of Community Pediatrics (IAP NCCPC).
2. Nov 19-22, 2025 - Prayagraj - ImmunoCON 2025 (Indian Immunology Society Annual Conference).
3. Jan 16-20, 2026 - Kolkata, India - PEDICON 2026 (Indian Academy of Pediatrics)
4. Feb 10-11, 2026 - Pune, India - Vaccines World Summit 2026 (IMAPAC).
5. Feb 26 - Mar 1, 2026 - Silvassa (Dadra & Nagar Haveli), India - IAPSMCON 2026

International events

1. Nov 5-6, 2025 - Bangkok, Thailand - Vaccine World Asia Congress 2025.
2. Nov 26-28, 2025 - International Online Conference on Vaccines (IOCV 2025).
3. Dec 8, 2025 – Athens, Greece, International Conference on Vaccines and Immunization research (ICVIR 2025).
4. Dec 8, 2025 – Jakarta, Indonesia, International Conference on Vaccines and Infectious Disease Control (ICVIDC 2025).
5. Jan 24-27, 2026 - Pacific Grove, California, USA - 63rd Midwinter Conference of Immunologists (Asilomar).
6. Feb 23-27, 2026 - (WHO) - IVIR-AC: Immunization and Vaccines-related Implementation Research Advisory Committee.
7. Feb 25-26, 2026 - Atlanta, USA & virtual - CDC ACIP Meeting

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