

PUBLIC HEALTH WIRE

NATIONAL

NEWSLETTER OF GLOBAL INSTITUTE OF PUBLIC HEALTH

Healthcare Costs Surge in India: Report Highlights Rising Expenses and Insurance Gaps

India's healthcare costs increased by 14% annually, according to the ACKO India Health Insurance Index 2024. The report highlighted the financial burden on families, with 62% of healthcare expenses paid out-of-pocket and 23% funded through borrowings.

The report highlighted the highest health insurance claims for kidney-related illnesses in Delhi, with the highest claim bill reaching Rs 24,73,894 for an average 47 years old man, followed by Kochi, Secunderabad, Bengaluru, and Jaipur. Heart disease claims were highest in Kolkata and Mumbai, especially among the 31-50 age group. The report also forecasts a 13% rise in cancer cases by 2025.

The Union Cabinet sanctioned health coverage under Ayushman Bharat PM-JAY for senior citizens aged 70 and above, providing Rs 5 lakh per family annually for hospitalization. Recognized as the world's largest publicly funded health scheme, it aimed to ease the growing healthcare burden of its citizens.

Ayushman Bharat Vay Vandana Card: Transforming Senior Healthcare with Free Hospital Treatment

Launched on October 29, 2024, by Prime Minister Narendra Modi, the Ayushman Bharat Vay Vandana Card offers free hospital treatment to senior citizens aged 70 and above under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana. Over 10 lakh seniors enrolled within weeks, with treatments worth Rs 9 crore already authorized.

Key Features of the Vay Vandana Card

- Universal Access:** Available to all senior citizens aged 70+, regardless of income.
- Comprehensive Coverage:** Covers pre-existing conditions from day one.
- Cost Reduction:** Fully covers hospitalization costs, easing financial burdens.
- Broad Impact:** Covers procedures like angioplasty, cataract surgery, and hip replacements.
- Gender Inclusivity:** 40% of enrollees are women.

Achievements of AB PM-JAY

- Financial Protection:** Rs 5 lakh annual coverage per family.
- Wide Scope:** Covers consultations, diagnostics, surgeries, and pre/post-hospitalization.
- Inclusivity:** No age or family size cap.
- Network Strength:** 30,745 hospitals empanelled.
- Extensive Reach:** 35 crore cards issued, 6.5 crore hospital admissions, Rs 81,979 crore authorized.

The Vay Vandana Card addresses healthcare gaps for India's elderly, offering financial security, improved quality of life, and healthcare equity. With nearly 6 crore eligible seniors, it highlights the government's commitment to inclusive development.



CDC Issues Alert on Chikungunya

Cases Among Travelers from Telangana, India

The U.S. Centers for Disease Control and Prevention (CDC) issued a 'Level 2' travel advisory for travellers returning from Telangana, India, on November 8, due to a rise in chikungunya cases. The advisory highlights an unusually high number of cases among U.S. travellers from the region, urging heightened precautions. This marks the second travel advisory for India in 2024, following a previous alert in August about a Zika virus outbreak in Maharashtra.



Delhi Air Quality Plunges to Hazardous; GRAP Stage-4 Restrictions Imposed

On November 17, 2024, Delhi recorded its most polluted day of the year, with AQI levels reaching 1000-1200 in various areas. In response, the former Chief Minister announced GRAP-4 measures, after GRAP-3 failed to improve air quality. With AQI levels remaining in the 'Hazardous' category for 48 hours, GRAP-4 restrictions were implemented, including a ban on non-essential construction and truck entry to reduce emissions. Residents are experiencing toxic air conditions, with symptoms like burning eyes and breathing discomfort. Authorities have advised limiting outdoor activities and wearing masks. The crucial question remains: Will these measures bring relief to Delhi's toxic air?

Implementation Hurdles Leave Kerala's Elderly Without Ayushman Bharat Benefits

Elderly citizens in Kerala are struggling to access free healthcare under the Ayushman Bharat scheme due to implementation challenges and poor communication. Despite the scheme's promise of free treatment for those over 70, many hospitals have turned away eligible patients, citing unclear directives and outdated information.

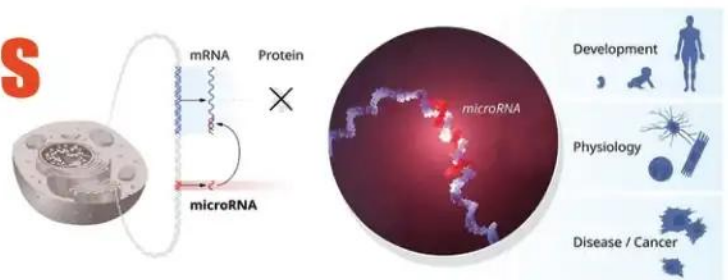
While Kerala has 588 designated hospitals, confusion over updated lists and financial strain has led to hospitals demanding payments from patients. State Health Agency officials are awaiting central government instructions, further delaying access to care. Additionally, financial pressures from unpaid bills under the Karunya Arogya Suraksha Scheme, now integrated with Ayushman Bharat, have strained government hospitals.

At Alappuzha General Hospital, outdated contact details for the scheme's nodal officer have further hindered patient assistance. The ongoing delays highlight significant gaps in coordination, leaving Kerala's elderly without the promised healthcare services.

INTERNATIONAL

2024 Nobel Prizes

in Physiology and Chemistry : Transformative Discoveries in Gene Regulation and Protein Structure



*The discovery of microRNAs has led to a new understanding of gene regulation.
© The Nobel Committee for Physiology or Medicine.*

The Nobel Prizes in Physiology or Medicine, and Chemistry for 2024 honour breakthrough discoveries that had revolutionized molecular biology. Victor Ambros and Gary Ruvkun jointly received the Physiology or Medicine Nobel Prize for discovering microRNA (miRNA) and its critical role in gene regulation. Their pioneering work on the tiny roundworm *Caenorhabditis elegans* revealed how miRNA silences messenger RNA (mRNA) to control protein production, a process essential for multicellular life. Their findings highlight miRNA's role in diseases like cancer and genetic disorders.

David Baker, Demis Hassabis, and John Jumper received the Chemistry Nobel for breakthrough in protein structure prediction and design. Baker's 'Rosetta' enabled novel protein design with pharmaceutical applications, while Hassabis and Jumper's 'AlphaFold2' accurately mapped nearly all known protein structures, advancing research in areas like antibiotic resistance and plastic degradation. Their work exemplifies how foundational science drives transformative progress in medicine and biotechnology.

G20 Summit Prioritizes 'One Health' to Tackle Global Health Crises

The G20 High-Level Meeting on One Health, held on October 30, 2024, in collaboration with Brazil's Ministry of Health, Food and Agriculture Organization (FAO), UN Environment Programme (UNEP), World Health Organization (WHO), and World Organisation for Animal Health (WOAH) emphasized the urgent need for a unified approach to health challenges impacting humans, animals, plants, and the environment.

The event, themed "Creating an Enabling Environment for One Health Implementation," aimed to strengthen the global commitment to the One Health approach, addressing interconnected issues like zoonotic diseases, climate change, and food security.

WHO's Deputy Director-General Dr. Michael Ryan reinforced WHO's commitment to "prevention, preparedness, and resilience," positioning One Health as essential to global health security. The meeting's outcomes align with the G20 Health Ministerial Declaration on Climate Change, Health, and Equity, promoting the One Health Joint Plan of Action (2022-2026) as a roadmap for resilient global health systems.

INTERNATIONAL

Enhanced Vaccine Use Could Reduce Global Antibiotic Use by 2.5 billion Doses Annually: WHO report

The World Health Organization (WHO) reports that improved vaccine coverage for 23 pathogens (excluding gonorrhea) could cut global antibiotic use by 2.5 billion doses annually, subsequently reducing antimicrobial resistance (AMR) and associated health-care costs. Vaccines for *Streptococcus pneumoniae*, *Haemophilus influenzae* type B, and *Salmonella typhi* could save millions of antibiotic doses yearly if widely implemented. Future vaccines for tuberculosis and *Klebsiella pneumoniae* hold further potential, with TB vaccines projected to save up to 1.9 billion doses. Globally, widespread vaccination could also reduce the \$730 billion spent annually on AMR-related hospital costs by one-third.

Egypt Declared Malaria-Free by WHO, Ending Centuries - Old Health Battle

On October 20, the World Health Organization (WHO) certified Egypt as a malaria-free country. This milestone follows nearly a century of efforts to eliminate malaria, a disease present since ancient times. Egypt is now the third country in the WHO Eastern Mediterranean Region to achieve this status, joining the UAE and Morocco. Key to the success were early measures to reduce mosquito contact, intensified efforts during World War II, and regional cooperation with Sudan. Today, Egypt offers free malaria diagnosis and treatment, with trained health professionals nationwide.

'Silent Pandemic' Alert: Scientists Warn Fungal Infections Could Emerge as the Next Health Crisis

The UN high-level meeting on antimicrobial resistance (AMR) has drawn attention to the growing threat of antifungal resistance, which affects 6.5 million people and causes 3.8 million deaths annually. Despite efforts like the WHO's 2022 Fungal Priority Pathogen List, fungal infections remain under-recognized, particularly in low- and middle-income countries where delayed diagnosis and limited diagnostic tools exacerbate the problem. Azole-resistant *Aspergillus fumigatus* and *Candida auris* are among the most concerning pathogens, complicating treatment with only four available antifungal classes. Slow drug development, due to the similarity between fungal and human cells, further limits treatment options. In response, experts call for global action to balance food security with public health, highlighted by India's recent ban on certain agricultural antibiotics.

World AMR Awareness Week

The World Health Organization's World Antimicrobial Resistance Awareness Week (WAAW), held from November 18-24, 2024, aimed to raise awareness about AMR under the theme "Educate. Advocate. Act now." Participants were encouraged to wear light blue, share on social media, organize local events, and promote antimicrobial stewardship to combat the spread of drug-resistant infections.



WHO Global Tuberculosis Report 2024: Progress and Persistent Challenges

The WHO Global Tuberculosis Report 2024 shows TB incidence stabilizing post-COVID disruptions, with 10.8 million cases in 2023, slightly up from 10.7 million in 2022, signaling progress in recovery efforts despite ongoing challenges. Despite a decline in TB-related deaths (1.25 million in 2023 from 1.32 million in 2022), the disease remains the leading infectious cause of death globally.

Key Highlights:

- High-Burden Countries:** 87% of cases in 2023 arose from 30 high-burden nations, with India (26%), Indonesia, China, the Philippines, and Pakistan leading.
- Incidence Decline:** TB incidence dropped by 8.3% (2015–2023), with notable progress in Africa (-24%) and Europe (-27%).
- Treatment Success:** Rates reached 88% for drug-susceptible TB and 68% for MDR/RR-TB.

Gaps and Challenges:

- Diagnostic and Treatment Coverage:** Rapid testing (48%) and treatment (75%) remain below WHO's 2027 targets of 100% and 90%, respectively.
- Financial Hardships:** Half of TB-affected households face catastrophic health costs, far from the zero-financial-burden target.
- Vaccine and Research Funding:** With six vaccines in Phase III trials, TB research funding stands at \$1 billion—far short of the \$5 billion goal.

The report urges intensified investment, healthcare access expansion, and social protection to meet 2027 targets, emphasizing actionable commitments from the 2023 UN High-Level Meeting on TB.

DISEASE OUTBREAK NEWS

Rwanda Nears Declaring End to Marburg Virus Outbreak with No New Cases Since October

Rwanda is set to declare the end of its Marburg virus disease (MVD) outbreak after the 42-day countdown began on November 9, 2024. The last confirmed case tested negative on November 8. The outbreak has seen 66 cases and 15 deaths, with 51 recoveries. No new cases have been reported since October 30, and the last death occurred on October 14. Health authorities continue rigorous surveillance, with 470 contacts being monitored. WHO is assisting in maintaining infection control measures, with the countdown ending on December 20, 2024, if no new cases emerge.

Ethiopia Records Unprecedented Malaria Surge: Over 7.3 Million Cases in 2024

Ethiopia faced its worst malaria outbreak in seven years, with over 7.3 million cases and 1,157 deaths reported between January and October 2024. Oromia, Amhara, Southwest, and South Ethiopia Regional States accounted for 81% of cases and 89% of deaths, with children under five and adult males, particularly seasonal migrants, most affected. Outbreaks persisted beyond typical transmission seasons due to factors like conflict, climate change, and the spread of the invasive *Anopheles stephensi* mosquito. Healthcare access was strained in 50 conflict-affected districts. WHO flagged the national risk as high and recommended targeted interventions in 222 high-burden districts.

UK Reports First Mpox Clade Ib Cases Amid Rising Global Concern



The UK Health Security Agency (UKHSA) confirmed four cases of Clade Ib Mpox by November 6, 2024, following the first case reported on October 30. The affected individuals had traveled to Africa, where Mpox outbreaks are ongoing. Three family members also tested positive for infection. UKHSA states the broader public risk remains low, though close contacts of the confirmed cases are at higher risk. Meanwhile, in Ireland, the Health Service Executive (HSE) is monitoring the situation after recording 17 cases of Clade IIb Mpox in 2024. HSE has vaccinated over 5,000 people and is evaluating the need for renewed vaccination efforts due to the emergence of Clade Ib.

RESEARCH

Researchers Identify Potential Biomarker for Parkinson's Disease Progression

A groundbreaking study led by the University of Barcelona has identified ecto-GPR37 as a potential biomarker for tracking Parkinson's disease progression. Published in *NPJ Parkinson's Disease*, the research shows that ecto-GPR37 is significantly elevated in the cerebrospinal fluid of patients with slow-progressing Parkinson's, potentially helping to predict disease progression and guide personalized treatment. The study involved patients with Parkinson's, Alzheimer's, and other neurodegenerative diseases. Researchers are planning a larger European-wide study and have developed a blood test for easier detection, supported by funding from the Michael J. Fox Foundation.

WHO Unveils New Ethical Principles for Human Genomic Data Collection and Sharing



The World Health Organization (WHO) introduced new ethical principles for the use of human genomic data on November 20, 2024. Developed with global expert input, the guidelines prioritize privacy, equity, and responsible collaboration. WHO emphasizes the need for informed consent, data transparency, and privacy protection, especially in low- and middle-income countries. The principles also stress the importance of inclusive representation in genomic research and call for international collaboration and robust governance to ensure equitable and responsible sharing of research benefits.

ENVIRONMENT

COP29: Baku Advances Health-Climate Coalition Amidst Stalled Talks on Developing Nations' Needs

The 29th United Nations Climate Change Conference (COP29) marked a turning point in aligning global health and climate efforts, building on prior commitments and introducing the *Baku COP Presidencies Continuity Coalition for Climate and Health*. This coalition, co-led by Azerbaijan, Brazil, Egypt, the UAE, and the UK, in partnership with the World Health Organization (WHO), aims to integrate health into climate policies.

During this event, COP Presidencies Bringing Health to the Centre of the Climate Agenda, leaders underscored the urgency of turning promises into tangible outcomes. WHO Director-General Dr. Tedros Adhanom Ghebreyesus emphasized, "This coalition underscores a collective will to prioritize climate and health now and for the future."

Discussions at COP29 highlighted progress since COP28, focusing on financing climate-health initiatives, success stories, and global collaboration. Attention now shifts to COP30 in Brazil, where the coalition aims to sustain momentum, bridge financing gaps, and promote deeper collaborations for a healthier, more resilient future.

Developing Nations Voice Concerns

India, representing developing nations, expressed dissatisfaction with the lack of financial and technological support from developed countries. Indian negotiator Neelesh Sah stated, "Our challenges in addressing climate impacts are increasing, yet there is little progress on providing the means to act." India emphasized that developed nations, the largest contributors to emissions, must fulfill their financial commitments to aid mitigation and adaptation efforts. Despite promises of \$100 billion in annual climate finance by 2020, this goal was met only 2 years later in 2022, with most funds provided as loans, increasing financial burdens on low-income countries.

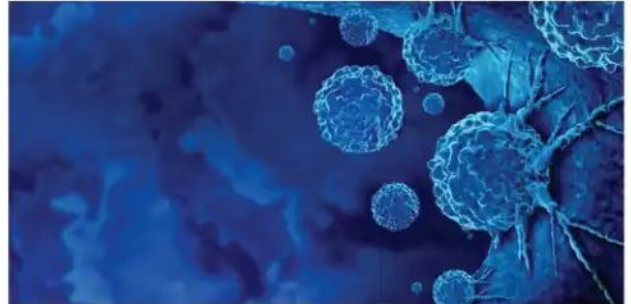


What is Disease X?

Disease X is a hypothetical pathogen used to inspire global preparedness for potential future pandemics. The term encourages proactive thinking about how unknown pathogens might spread, impact human health, and interact with immune systems. This concept aims to boost resilience and preparedness, fostering discussions on preventing and responding to emerging health threats.

HEALTH INNOVATION AND TECHNOLOGY

New Light-AI Tech Offers Early Cancer Diagnosis



The Korea Institute of Materials Science unveiled an innovative, light-AI technology for non-invasive early cancer detection. By analyzing metabolites in bio-fluids (saliva, mucus, urine etc), the system uses plasmonic sensors to amplify signals, enabling precise diagnoses without blood tests or biopsies. Successful trials have diagnosed colorectal and lung cancer, and the technology is now being developed for broader applications and licensed for commercial use, promising to revolutionize cancer diagnostics.

Quantamatrix's Innovative Solutions to Combat Antimicrobial Resistance

Quantamatrix, a leader in clinical microbiology, is transforming the fight against antimicrobial resistance (AMR) with its innovative diagnostic technologies. The company's dRAST™ platform cuts testing time from 60 hours to just 5-7 hours, enabling quicker, more accurate treatment for bacterial infections. By combining microfluidics, bacterial immobilization, advanced imaging, and AI-driven data analysis, dRAST™ helps healthcare providers select the right antimicrobials, reducing AMR risks. In July, Quantamatrix launched uRAST, a rapid testing solution that integrates bacterial identification and antimicrobial susceptibility testing in just 13 hours, enhancing patient outcomes. With global expansion and proven success in reducing mortality and healthcare costs, Quantamatrix is set to make a significant impact on AMR worldwide.

UK Launches World's First Real-Time Early Warning System for Pandemics

The UK is launching the world's first real-time early warning system to monitor and prevent future pandemics in collaboration with Genomics England, UK Biobank, NHS England, and Oxford Nanopore. Utilizing advanced genetic sequencing, the system will swiftly detect emerging pathogens and antimicrobial resistance, building on NHS England's Respiratory Metagenomics programme. Initially rolling out at 10 to 30 NHS sites, the initiative is backed by a £40 million government investment over five years. The project aims to enhance disease detection, reduce hospital visits, and boost economic growth in the life sciences sector.



Who is Dr. Tedros Adhanom Ghebreyesus?

Dr. Tedros Adhanom Ghebreyesus, the first African Director-General of the World Health Organization (WHO), has been a transformative leader in global health since his election in 2017. With a Bachelor's in Biology, an MSc in Immunology, and a PhD in Community Health, Dr. Tedros also holds honorary fellowships and doctorates from prestigious institutions. As Ethiopia's Minister of Health, he implemented reforms that deployed 40,000 health workers and reduced maternal and child mortality by 60%. At WHO, he introduced the "triple billion" strategy, advancing universal health coverage, emergency preparedness, and global well-being.

OVERALL PERFORMANCE

COUNTRY RANKING **109** / 167

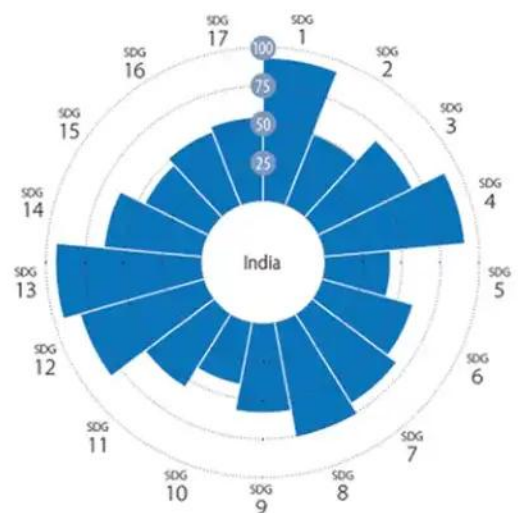
COUNTRY SCORE



Spillover Score



AVERAGE PERFORMANCE BY SDG



■ Major challenges
 ■ Significant challenges
 ■ Challenges remain
 ■ SDG achieved
 ■ Information unavailable

↓ Decreasing
 → Stagnating
 ↗ Moderately improving
 ↑ On track or maintaining SDG achievement
 ● Information unavailable

India's Progress on SDGs: A Closer Look at the Current Trends

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Kochi Joins WHO Global Network for Age-friendly Cities

Kochi has become the first Indian city to join the WHO Global Network for Age-Friendly Cities and Communities, aiming to promote healthy aging through age-friendly environments. With 12.6% of its population over 60, Kerala has one of India's largest elderly populations, projected to reach 22.8% by 2036. The state's policies, such as the Kerala Maintenance and Welfare of Senior Citizens Rules 2008 and State Old Age Policy 2013, focus on enhancing the health and dignity of older individuals.

Current Situation of Road Traffic Accidents in Kerala

Road traffic accidents in Kerala have been increasing, with 48,091 accidents in 2023, causing 4,080 fatalities and 54,320 injuries. Despite efforts to improve safety, the trend continued into 2024 (up to October), with 40,821 accidents, 3,168 deaths, and 45,657 injuries, raising concerns over public safety.



Scan for More Insights !

Explore further readings and resources for each column by scanning the QR code provided.

EDITOR'S NOTE

As we approach the end of another remarkable year, we are excited to present the 3rd edition of The Public Health Wire newsletter. This platform continues to serve as a space for sharing invaluable insights, innovations, and advancements in the field of public health. Our mission is to bridge the gap between knowledge and action, ensuring scholars have access to the latest developments, research, and strategies that are shaping the future of public health, both nationally and globally.

This edition focuses on key aspects of public health, including transformative initiatives, emerging challenges, and policy advancements that are influencing the landscape of health worldwide. We aim to foster critical thinking, inspire new ideas, and encourage proactive engagement with the issues that matter most. For further reading and in-depth exploration, a QR code is provided at the end of this edition, linking you to additional resources and references for each column.

The Public Health Wire is not just a newsletter; it is a tool for empowering the next generation of public health leaders. With every edition, we strive to provide the resources and knowledge needed to address pressing challenges, spark innovation, and lead with purpose.

Thank you for your continued support and involvement. Let's work together to make a lasting impact on the future of public health.
Best Regards,

Dr. Ahzana K Nazarudheen
Chief-Editor
The Public Health Wire



QUIZ

1. What is the primary objective of Sustainable Development Goal (SDG) 3 ?
2. What term describes widespread immunity limiting disease transmission ?
3. In which year was the polio vaccine introduced ?
4. What does the acronym "WASH" represent in the context of public health ?
5. Which public health advancement greatly improved 20th-century life expectancy ?
6. What is the primary method of preventing infection in health care ?
7. What is the term for electronic storage of patient records ?
8. Which Indian program provides free vaccines to children under 5 and pregnant women ?
9. Who was the first director general of WHO ?
10. Which country first achieved "gold tier" status in eliminating hepatitis C ?

Answers

1- To ensure healthy lives and promote well-being for all ages, 2 - Herd immunity, 3 - 1955, 4 - Water, Sanitation, and Hygiene, 5 - The introduction of antibiotics and widespread vaccination programs, 6 - Hand washing, 7 - EMR (Electronic medical record), 8 - Universal Immunisation Program (UIP), 9 - Dr. George Brock Chisholm (appointed on 21 July 1948), 10 - Egypt

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Feedback

