सत्यमेव जयते
Department of Health Research
Ministry of Health and Family Welfare
Government of India

INDIAN COUNCIL OF MEDICAL RESEARCH
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VIRUS RESEARCH AND DIAGNOSTIC LABORATORY NETWORK (VRDLN)

QUARTERLY BULLETIN
APRIL - JUNE 2025

जगत प्रकाश नड्डा
JAGAT PRAKASH NADDA

सत्यमेव जयते

मंत्री
स्वास्थ्य एवं परिवार कल्याण
व रसायन एवं उर्वरक
भारत सरकार
Minister
Health & Family Welfare
and Chemicals & Fertilizers
Government of India

MESSAGE

It gives me immense pleasure to launch the VRDLN Bulletin. This initiative reflects our nation's commitment to transparency, collaboration and evidence-driven action in public health. The VRDL network has emerged as a pillar of India's health security architecture. It has enabled timely response to outbreaks; provided essential diagnostic services for various viral infections, including high-risk pathogens and strengthened our ability to respond to emerging and re-emerging viral threats. Government of India's investment in establishment and expansion of this infrastructure underscores the importance of sustained investment in health research for protecting health of our citizen.

I am confident that the VRDLN Bulletin will serve as an important platform for knowledge sharing, showcasing India's strengths in public health response and inspiring further collaboration across institutions and regions. I congratulate the Department of Health Research, Indian Council of Medical Research and all the laboratories of VRDL network for their contribution in advancing nation's strength in managing viral outbreaks and preparedness against future epidemics/pandemics.

(Jagat Prakash Nadda)

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Preface

Over the past decade, the Viral Research and Diagnostic Laboratory Network (VRDLN) has become a cornerstone of India's public health response to infectious diseases. By enabling timely confirmation of viral infections, supporting outbreak investigations, and generating evidence that guides preparedness and policy, the network has proven to be an invaluable national asset. The tiered framework of Regional, State, and Medical College laboratories has expanded diagnostic capacity, built scientific partnerships, and developed skilled manpower for virus diagnosis and research across the country.

The release of the VRDLN Bulletin marks an important step in strengthening scientific communication and data-sharing. Conceived as a quarterly publication, it will provide a platform for presenting insights on surveillance, diagnostic contributions, outbreak investigations, and scientific advances from the VRDLs.

Each issue will feature quarterly data on viral infections, highlight trends across regions, and summarize important outbreak investigations. The bulletin will also showcase innovative practices and capacity-building initiatives that continue to enhance India's health security.

By documenting and disseminating the collective work of the network, this initiative aspires to foster greater collaboration and awareness towards trends of prevailing viral infections, and to strengthen India's preparedness and response to current and emerging viral threats.

Rajiv Bahl

Dr. Rajiv Bahl
Secretary, Department of Health Research &
Director General, Indian Council of Medical Research
Ministry of Health & Family Welfare, Government of India

Message from the Joint Secretary, Department of Health Research

It gives me great satisfaction to witness the launch of the VRDLN Bulletin, which will serve as a platform to highlight the collective efforts and achievements of the VRDL network.

Over the years, the VRDLs have become integral to India's public health system. By generating reliable laboratory data, enabling outbreak investigations, and strengthening diagnostic capacity at multiple levels, they have provided a solid foundation for informed health interventions. The network also works in close synergy with the Integrated Disease Surveillance Programme (IDSP), the National Vector Borne Disease Control Programme (NVBDCP), and State Health Departments. The reports generated by VRDLs are regularly shared with State Health Authorities and IDSP, thereby helping in monitoring the trends of infections in communities and ensuring timely public health action.

The VRDL Bulletin will capture and disseminate quarterly data, outbreak reports, and innovative practices emerging from the network. By doing so, it will not only document the progress made but also inspire further collaboration, innovation, and continuous improvement in diagnostic practices.

I take this opportunity to acknowledge the contributions of scientists, technical staff, and partner institutions whose dedication has made the VRDL network a success. I am confident that this bulletin will further strengthen the visibility and impact of the scheme in advancing the nation's health security.

Anu Nagar
Joint Secretary
Department of Health Research
Ministry of Health and Family Welfare, Government of India

Message from the Head, Communicable Diseases Division, ICMR

I feel extremely fortunate to be a part of the VRDL network and witness its evolution from a handful labs in few states to its presence across the entire country. In its present shape and form, the network is fully equipped to shield the country from any viral epidemic. Since its inception, the VRDLs have demonstrated how strategic investment in early detection of diseases and developing newer detection tools & methods translates into stronger preparedness and resilience. Over time, VRDL Network has established successful linkages with Central and State Health Departments, Integrated Disease Surveillance Program (IDSP), which has strengthened the public health system of India.

Launch of the quarterly bulletin is a milestone achievement and will depict the trends of viral infections in the country along with the dominant syndromes and associated pathogens. As a quarterly publication, the VRDLN Bulletin will provide systematic insights into emerging threats, outbreak response and research & innovations across the network. I express my sincere appreciation and gratitude for every member of each VRDL for their exemplary commitment and support to build a pandemic resilient nation. The role of VRDLs during the COVID-19 pandemic has left an indelible mark and has positioned this network as an integral part of India's public health response framework. I sincerely wish that the network grows stronger day by day and continues to augment its contributions to national biosecurity.

(Dr. Nivedita Gupta)
Head, Division of Communicable Diseases,
Indian Council of Medical Research

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Abbreviations

CCHF- Crimean-Congo haemorrhagic fever
CHIKV- Chikungunya
CMV- Cytomegalovirus
DENV- Dengue
EBV- Epstein–Barr virus
HAV- Hepatitis A
HBV- Hepatitis B
HCV- Hepatitis C
HEV- Hepatitis E
HSV- Herpes simplex virus
Inf A- Influenza A
JE- Japanese encephalitis
KFD- Kyasanur Forest Disease
RSV- Respiratory syncytial virus
ST- Scrub typhus
VZV- Varicella zoster virus
WNV- West Nile virus
ADD- Acute Diarrhoeal Disease
AES- Acute Encephalitis Syndrome
ARI- Acute Respiratory Infection
DHR- Department of Health Research
EQA- External Quality Assurance
ICMR- Indian Council of Medical Research
ICMR-NIE- National Institute of Epidemiology
ICMR-NIE- National Institute of Virology
IHIP- Integrated Health Information Platform
SARI- Severe Acute Respiratory Infection
UT- Union Territory

About the Scheme

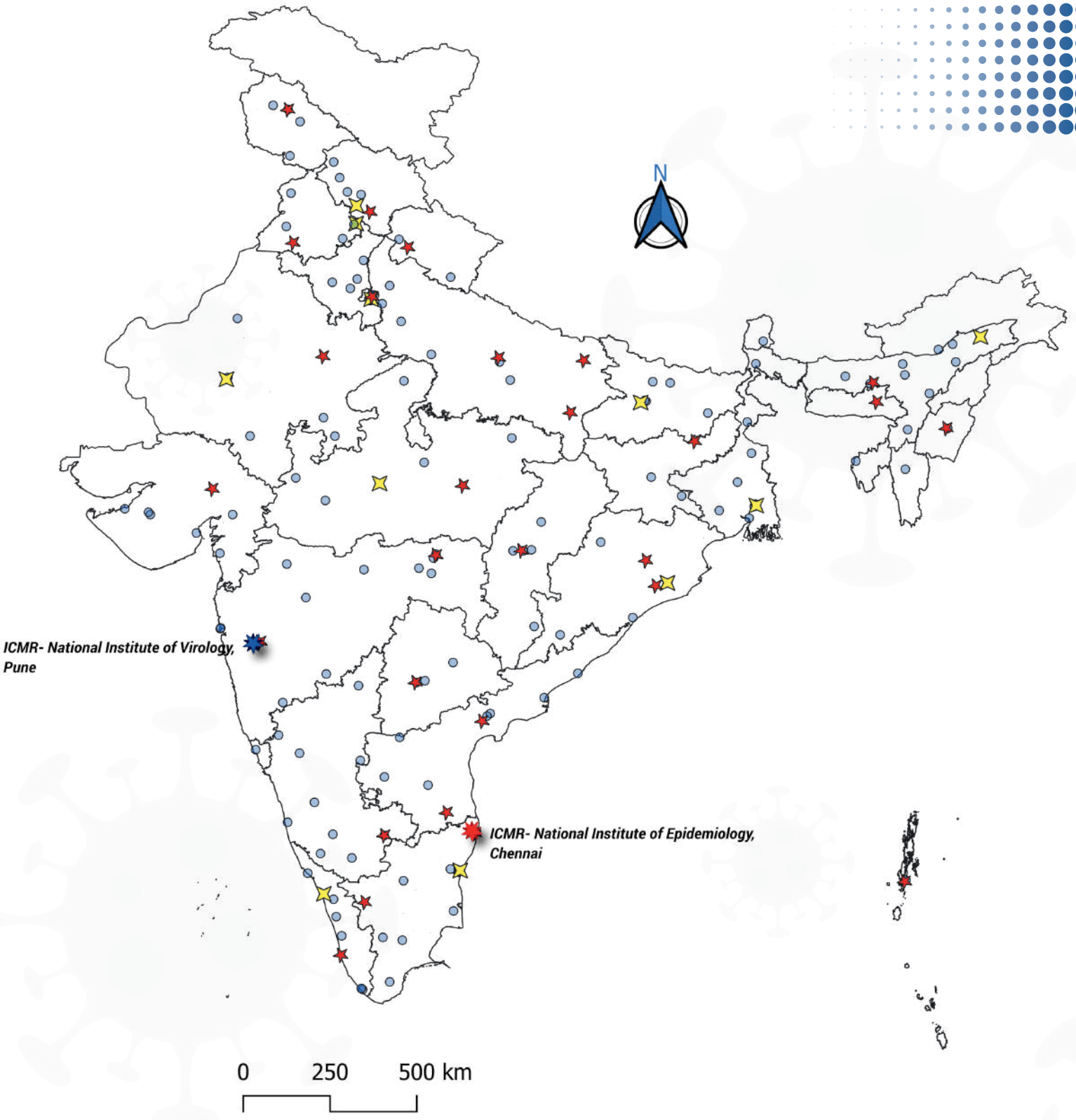
India has experienced multiple outbreaks of emerging and re-emerging viral infections along with annual epidemics of diseases such as dengue, chikungunya, influenza, rotavirus, measles-rubella, and Japanese encephalitis. Over the past two decades, India has faced the risk of new or exotic viruses, including the Nipah virus (in 2001, 2007, 2018, 2019, 2021, and 2023, 2025), SARS-CoV (2003), Avian Influenza H5N1 (2006), the ECSA strain of chikungunya (2006), pandemic influenza (2009), Zika virus (2016, 2018, 2021), SARS-CoV-2 pandemic (2020) and Monkey pox (2022, 2024). Other significant threats include Ebola, Yellow Fever, and MERS-CoV (Middle East Respiratory Syndrome coronavirus), which may pose serious challenges to public health in India.

Recognizing the significant threat posed by emerging and re-emerging viral infections, the Department of Health Research (DHR) and the Indian Council of Medical Research (ICMR) made a strategic decision to strengthen the nation's ability to quickly identify and diagnose viral infections of public health significance. This initiative led to the approval and launch of the VRDL Scheme entitled “Setting up a network of laboratories for managing epidemics and national calamities” by the Union Cabinet. Launched as a Central Sector Scheme during the twelfth Five-Year Plan, the VRDLN (Virus Research and Diagnostic Laboratory Network) was inaugurated in 2013–14 with the goal of establishing a three-tiered network of laboratories—regional, state, and medical college levels. Currently, a total of 165 laboratories comprising of 11 Regional level, 27 State level and 127 medical college level VRDLs, covering 31 States and Union Territories of India are functioning under the umbrella of DHR/ ICMR.

Objectives

1. Creating infrastructure for the timely identification of viruses and other agents causing morbidity and mortality with special reference to agents causing epidemics/pandemics and/ or potential agents of bio-terrorism.
2. Generate data on viral diseases for facilitating quick deployment of resources and measures to save human lives.
3. Develop capacity for identification of novel and unknown viruses and other organisms and emerging/ re-emerging viral strains and develop diagnostic kits.
4. To undertake research to enhance laboratory capacity for quick identification of emerging and newer genetically active/ modified agents

The Network of VRDLs



*10 VRDLs have been upgraded to IRDLs

EVOLUTION OF DATA CAPTURE SOFTWARE

2014 The Data Mining Centre established the VRDLN 1.2 system

2015 Offline system for data capture developed for remote areas

2023 API integration with IHIP portal began

2024 Launched VRDLN 2.0 and completed integration with IHIP

2025 Planned launch of IRDLN 1.0

Summary of the Report

Network Expansion (2014-2025)

- The VRDLN expanded from **27** laboratories in 2014 to **165** laboratories across 31 States/UTs by 2025

Cumulative Achievements (2014–2024)

- More than **40 lakh** samples tested with pathogen identified in **18.8%**
- Etiological diagnosis provided for **2,534** disease clusters investigated across the country

Quarterly Highlights (April–June 2025)

- **2,26,095** samples tested with pathogens identified in **11.5**%
- Etiological diagnosis provided for **191** disease clusters
- Key pathogens detected
  - **Influenza A** in ARI/SARI cases
  - **Dengue virus** in acute fever and haemorrhagic fever cases
  - **Hepatitis A** in jaundice cases
  - **Norovirus** in ADD cases
  - **Herpes simplex virus** (HSV) in AES cases

Data and Digital Innovations

- Integration with the Integrated Health Information Platform (IHIP) completed in 2024.
- Launch of **IRDLN 1.0** planned in **2025** for improved surveillance

Capacity Building (2014-2025)

- ICMR-NIE, Chennai: **21** trainings, **1,703** staff trained, **10,000** technical queries resolved, **70** monitoring visits conducted
- ICMR-NIV, Pune: **196** trainings, **5,147** staff trained, 154 laboratories completed EQA with >**95**% concordance

Impact

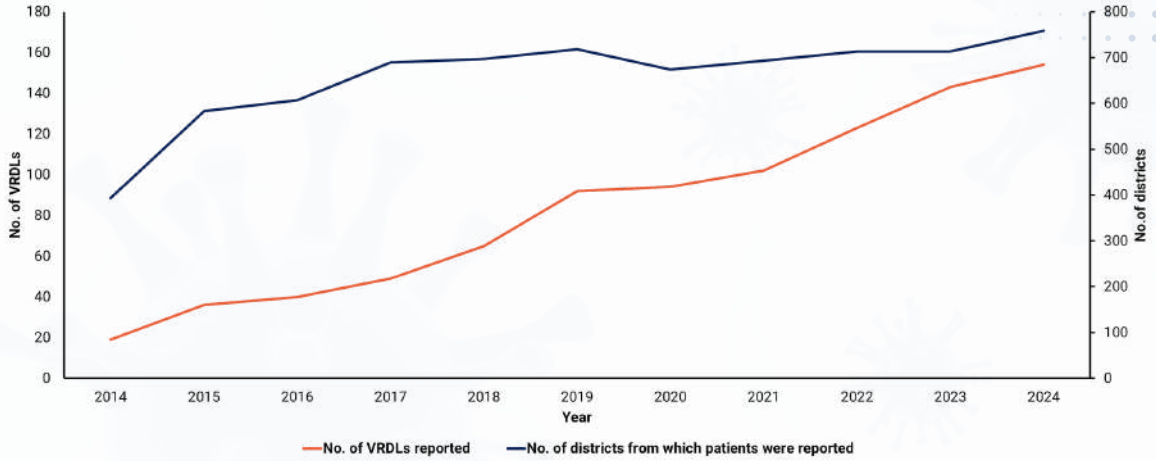
- The VRDLN remains a cornerstone of India's health security architecture, providing timely diagnosis, outbreak investigation support, and robust evidence for public health decision-making

Cumulative Report (2014 - 2024)

Total patients tested
40,26,040

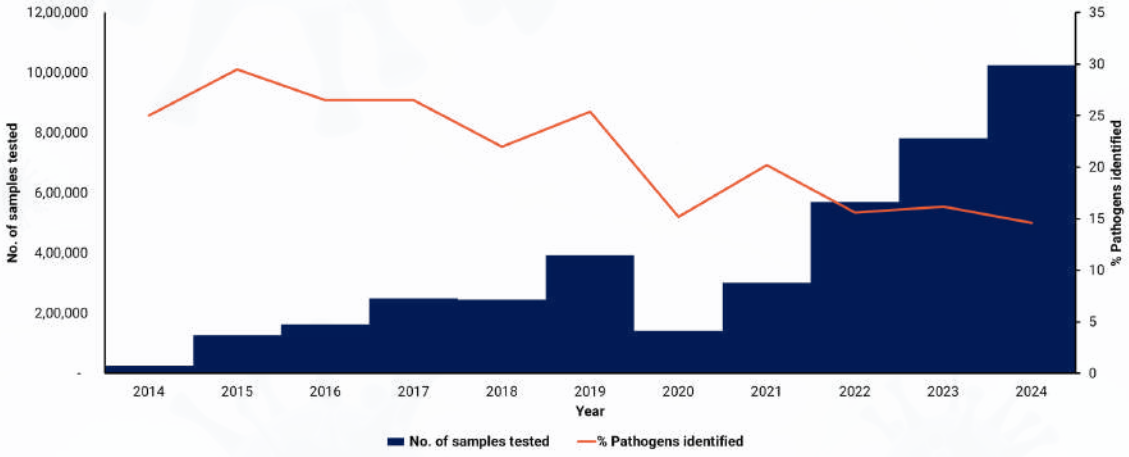
Pathogens identifed (%)
7,55,873 (18.8)

Expansion of the VRDL network and geographic coverage by districts



From 2014 to 2024, the number of labs actively reporting in the network increased from 19 to 154, and the number of districts from which patients have reported increased from 393 to 758

Number of samples tested and % pathogens identified by year

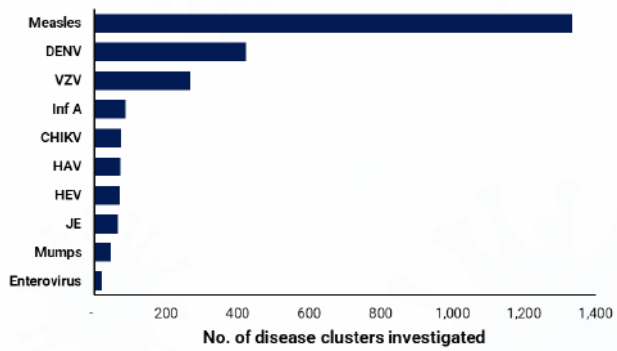


The Network's testing capacity increased from ~25,000 per year in 2014 to >10 lakh per year in 2024

No. of disease clusters investigated

2,534

Major etiologies detected in these disease clusters

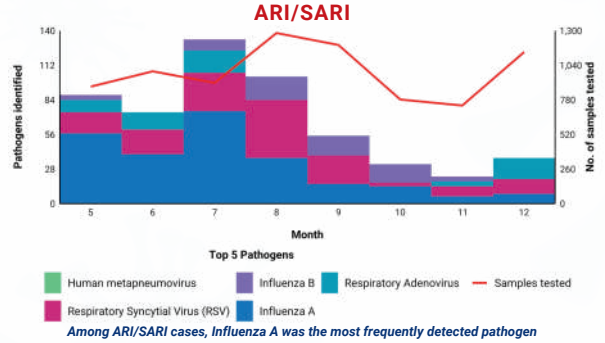


Total patients tested
25,493

Pathogens identifed (%)
6,371 (25)

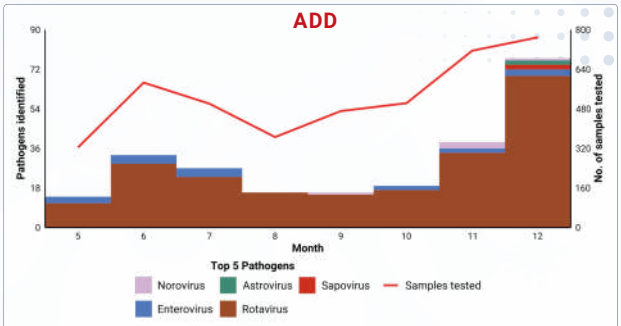
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



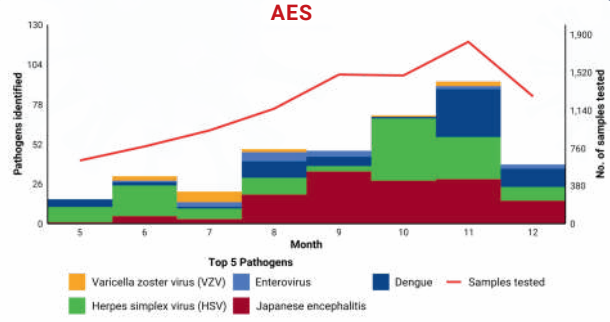
Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

ADD



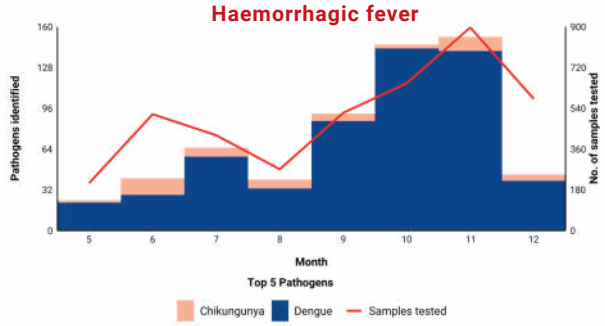
Among ADD cases, Rotavirus was the most frequently detected pathogen

AES



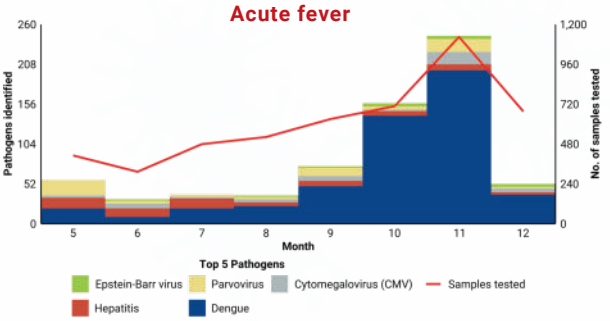
Among AES cases, JE was the most frequently detected pathogen

Haemorrhagic fever



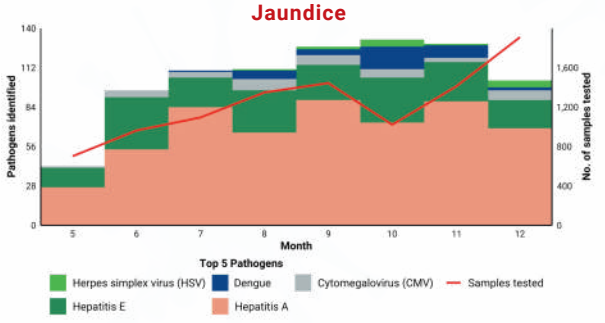
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

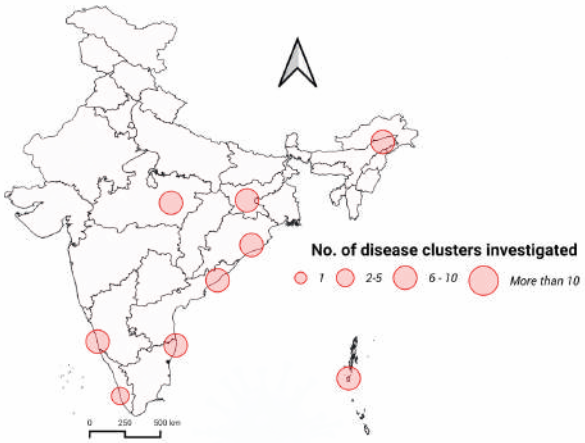
Jaundice



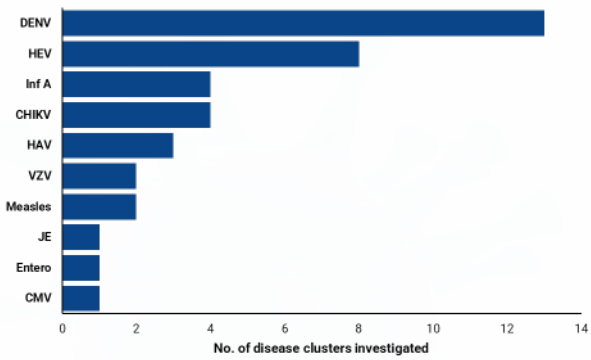
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Number of disease clusters investigated = 39



Major etiologies detected in these disease clusters

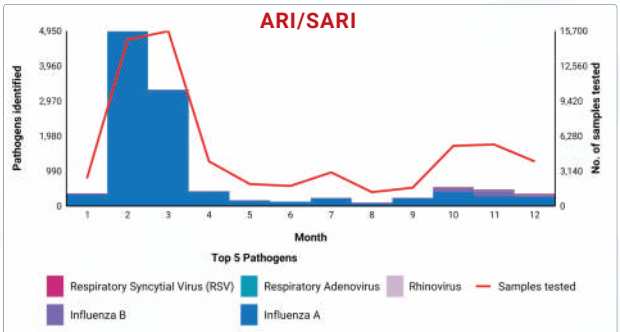


Total patients tested
1,27,483

Pathogens identifed (%)
37,588 (29.5)

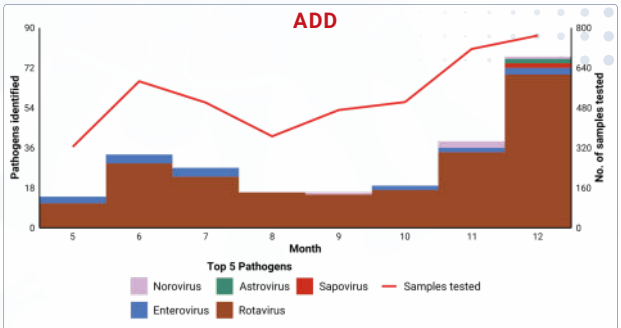
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



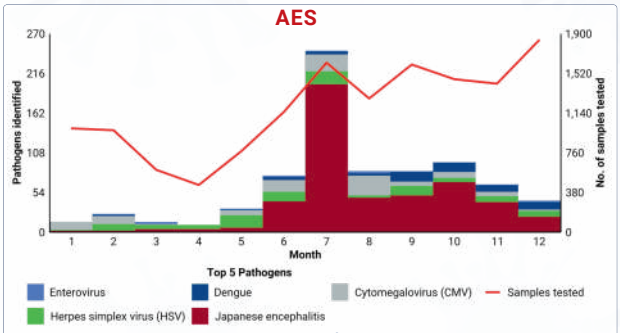
Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

ADD



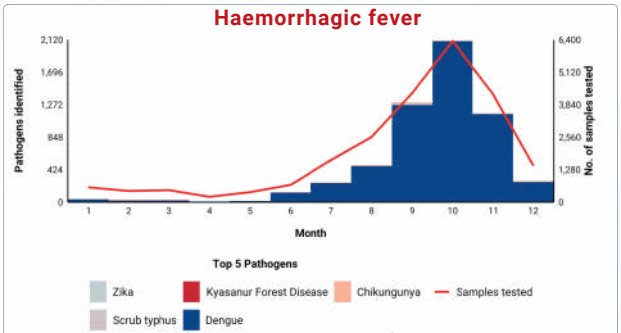
Among ADD cases, Rotavirus was the most frequently detected pathogen

AES



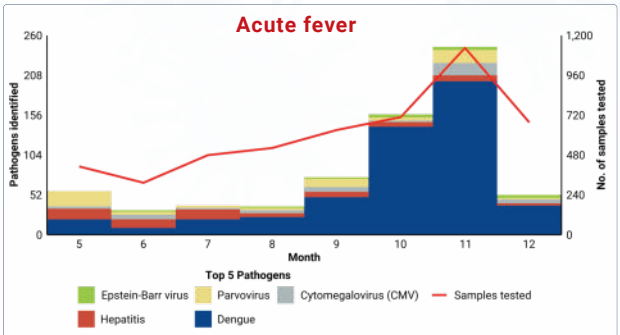
Among AES cases, JE was the most frequently detected pathogen

Haemorrhagic fever



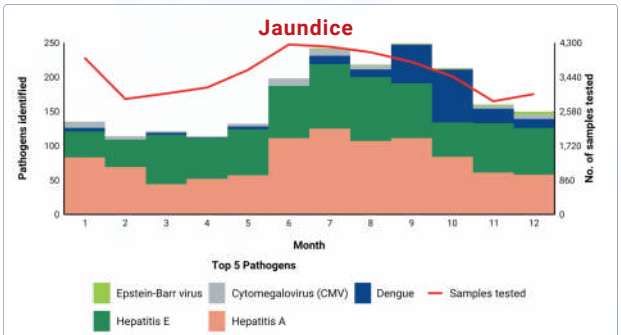
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

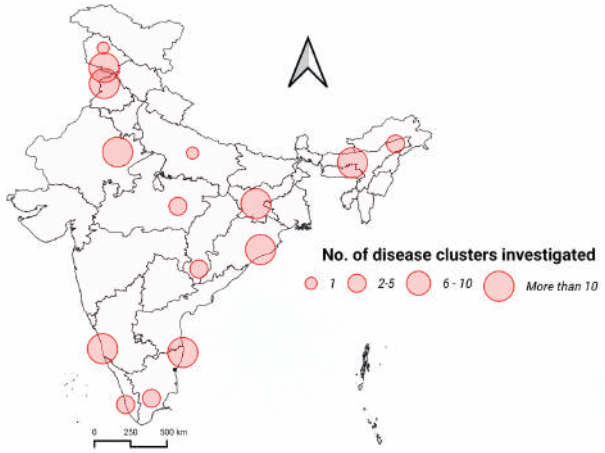
Jaundice



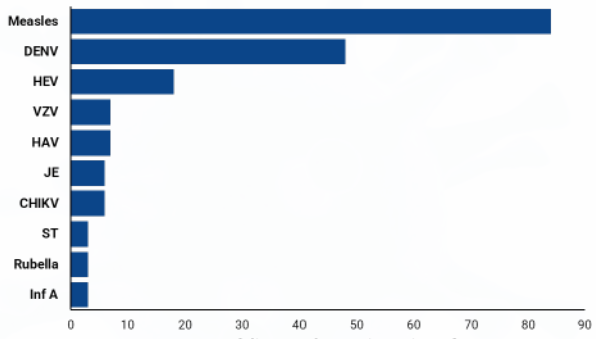
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Number of disease clusters investigated = 190



Major etiologies detected in these disease clusters

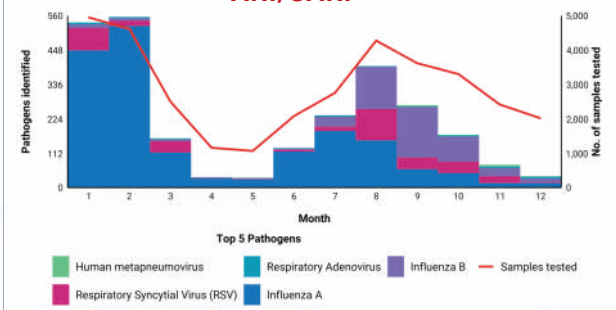


Total patients tested
1,63,026

Pathogens identifed (%)
43,157 (26.5)

TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

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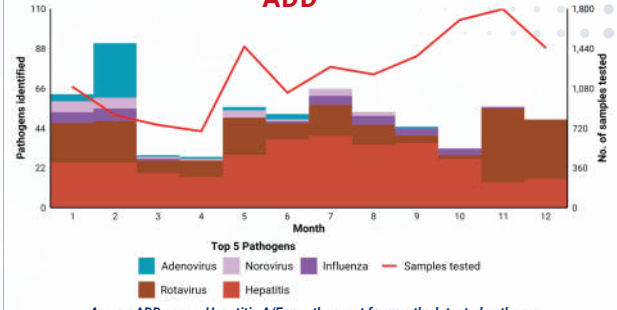
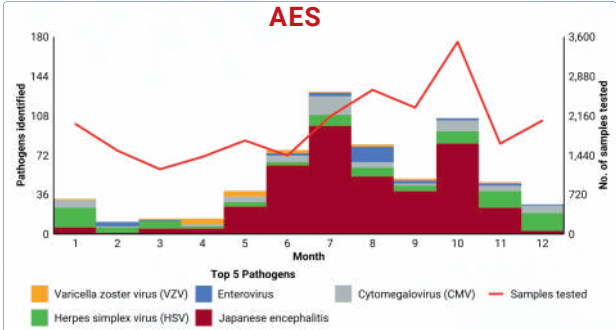


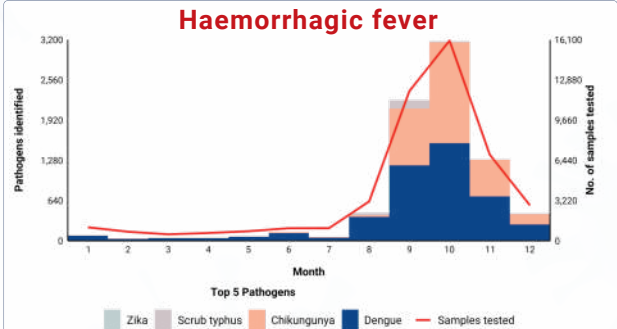
Among ADD cases, Hepatitis A/E was the most frequently detected pathogen

AES



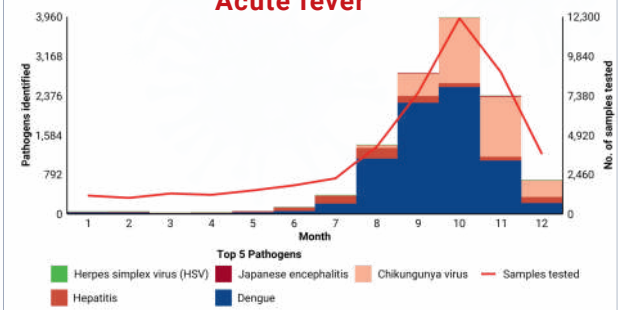
Among AES cases, Japanese encephalitis was the most frequently detected pathogen

Haemorrhagic fever



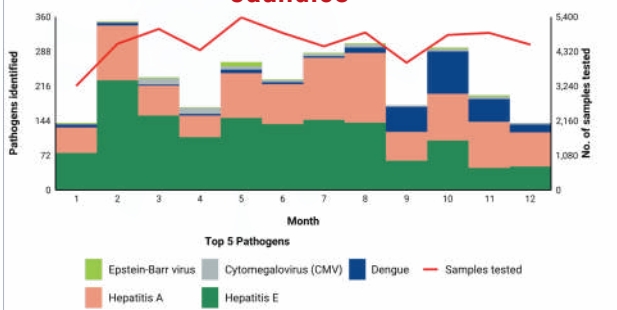
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

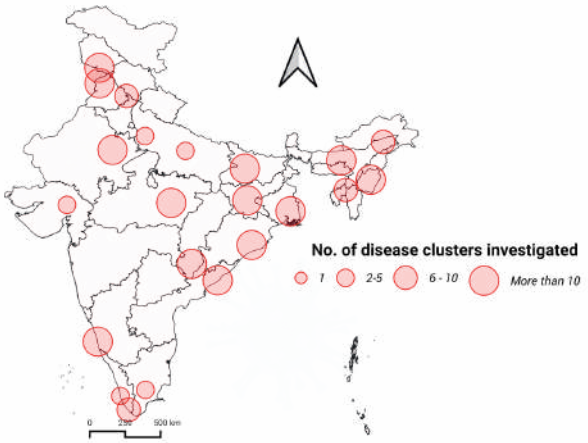
Jaundice



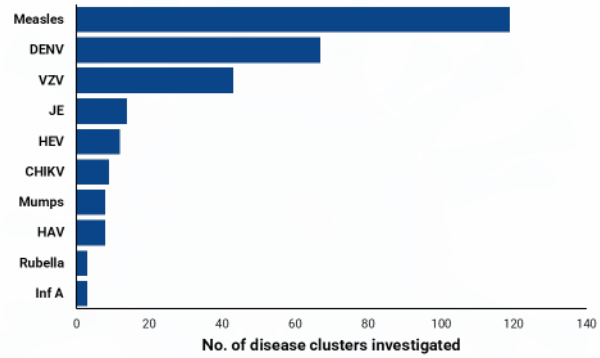
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Number of disease clusters investigated = 291



Major etiologies detected in these disease clusters

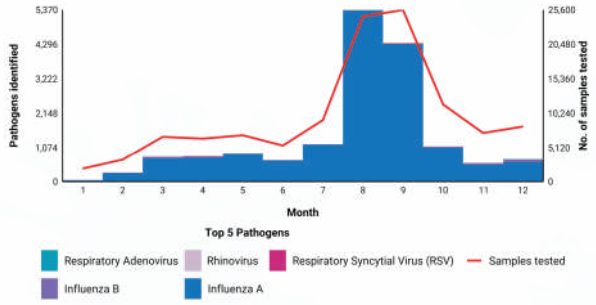


Total patients tested
2,49,755

Pathogens identifed (%)
66,217 (26.5)

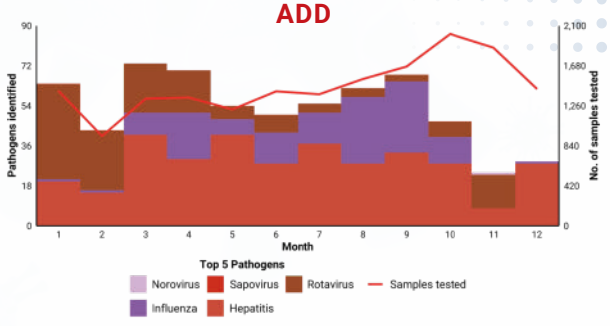
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



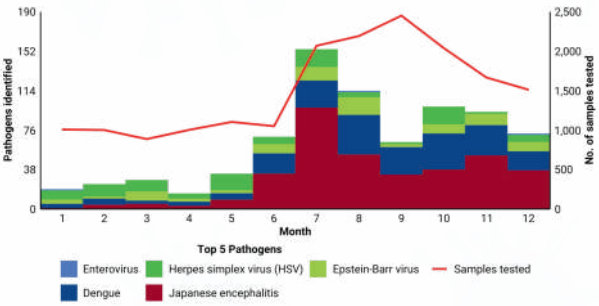
Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

ADD



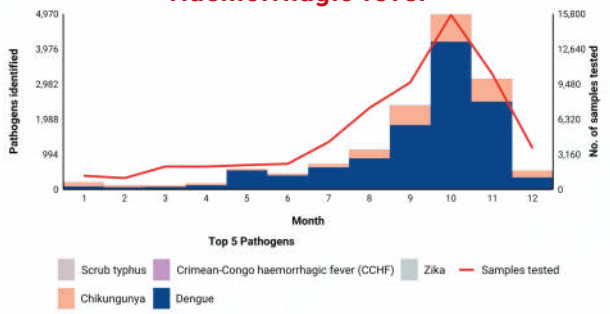
Among ADD cases, Hepatitis A/E was the most frequently detected pathogen

AES



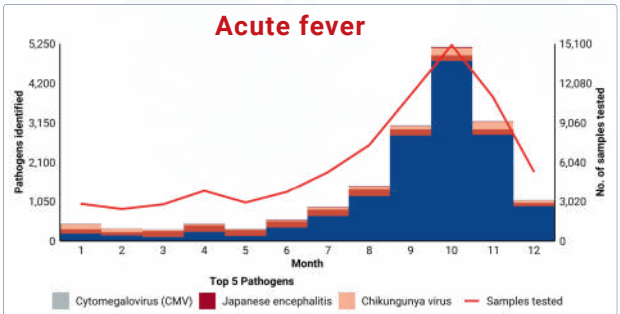
Among AES cases, Japanese encephalitis was the most frequently detected pathogen

Haemorrhagic fever



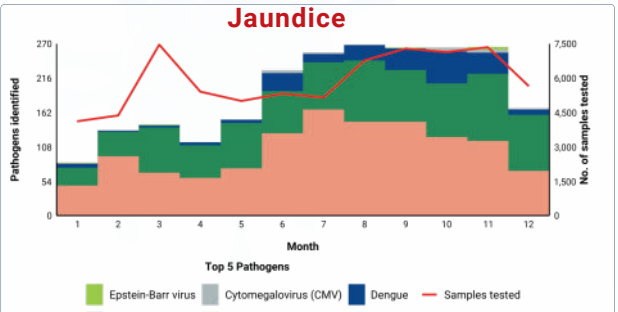
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

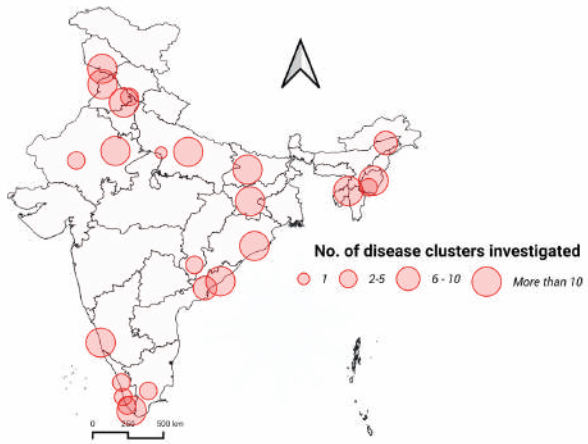
Jaundice



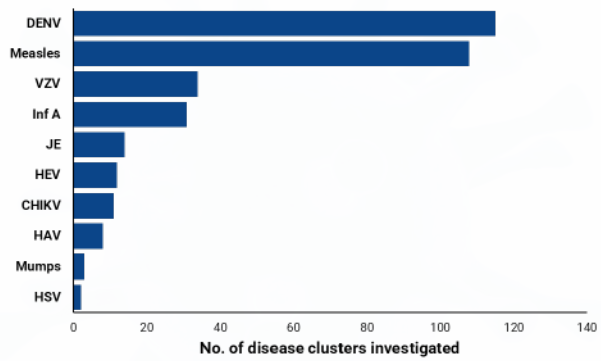
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Number of disease clusters investigated = 344



Major etiologies detected in these disease clusters

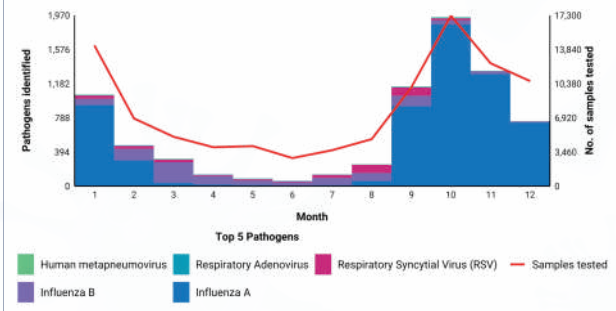


Total patients tested
2,45,808

Pathogens identifed (%)
54,158 (22)

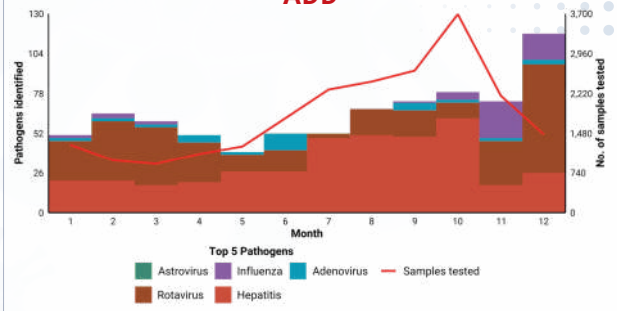
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



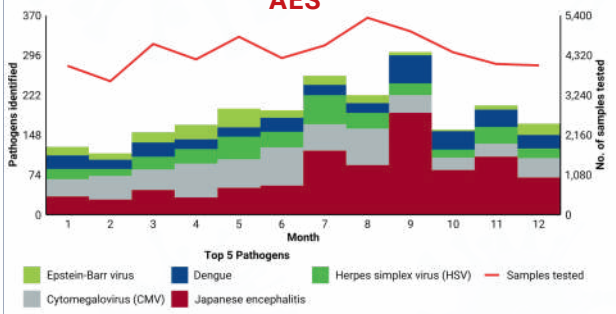
Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

ADD



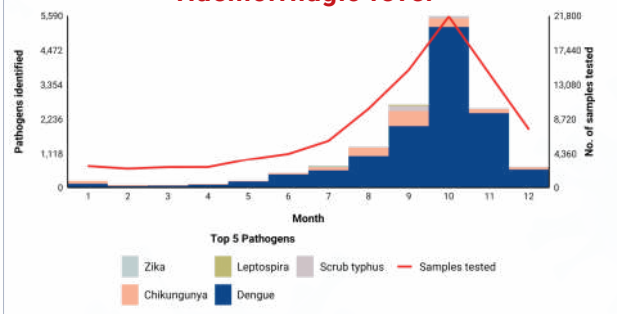
Among ADD cases, Hepatitis A/E was the most frequently detected pathogen

AES



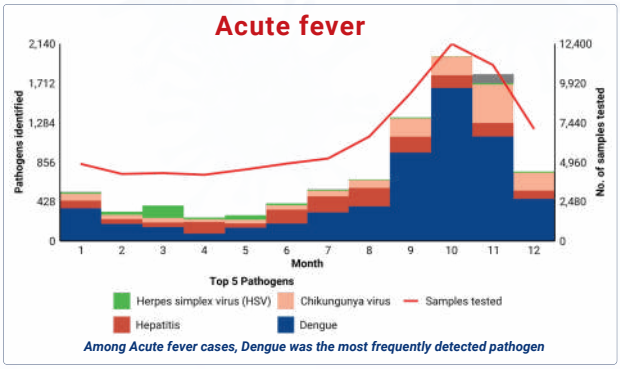
Among AES cases, Japanese encephalitis was the most frequently detected pathogen

Haemorrhagic fever



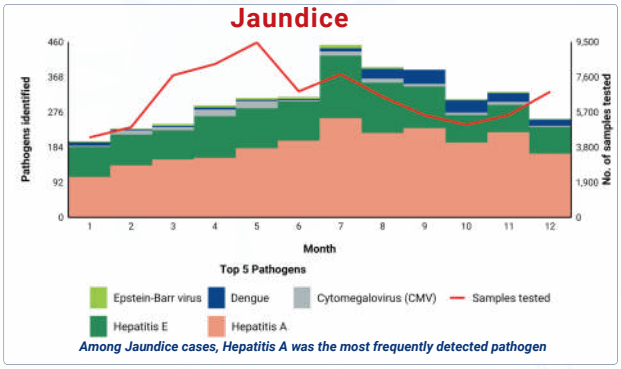
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

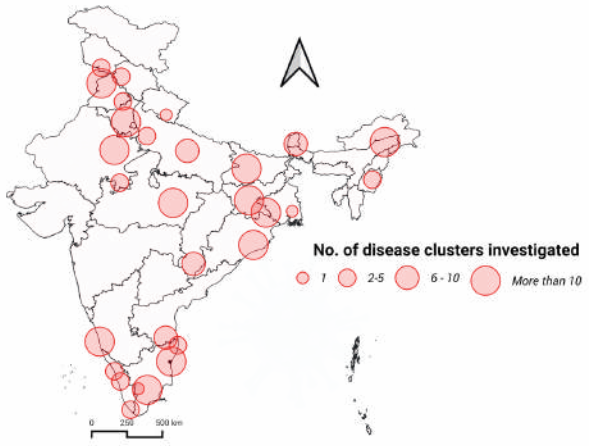
Jaundice



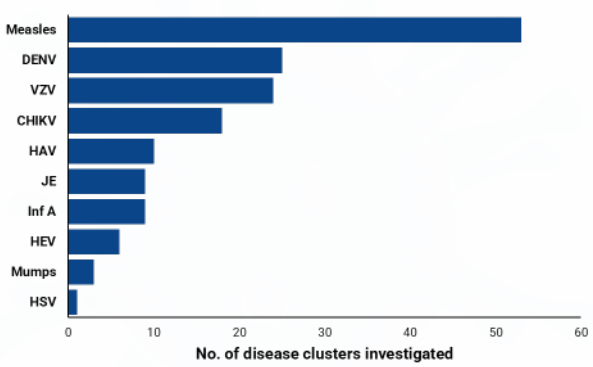
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Number of disease clusters investigated = 163



Major etiologies detected in these disease clusters

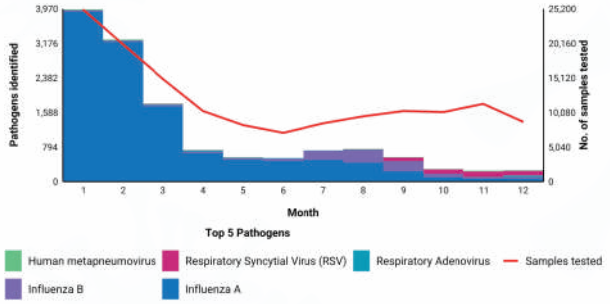


Total patients tested
3,93,263

Pathogens identifed (%)
99,878 (25.4)

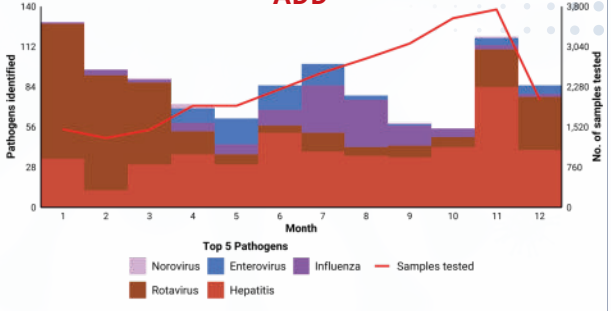
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



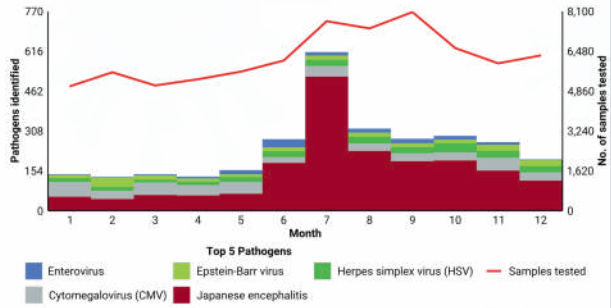
Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

ADD



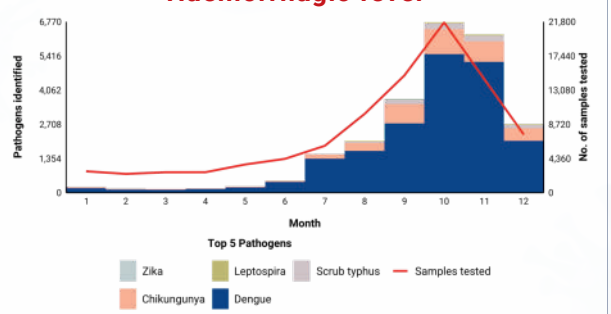
Among ADD cases, Hepatitis A/E was the most frequently detected pathogen

AES



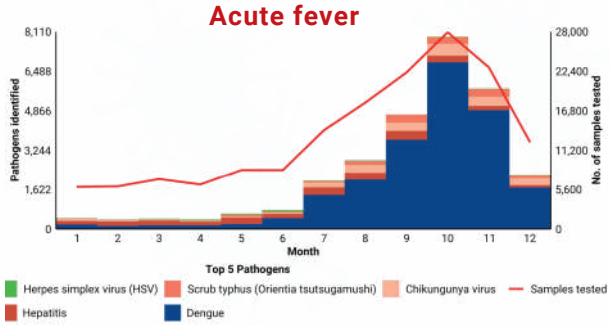
Among AES cases, Japanese encephalitis was the most frequently detected pathogen

Haemorrhagic fever



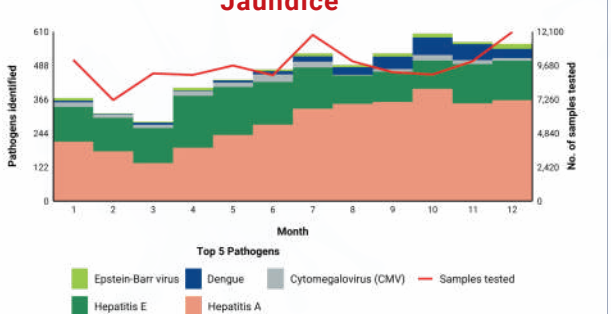
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

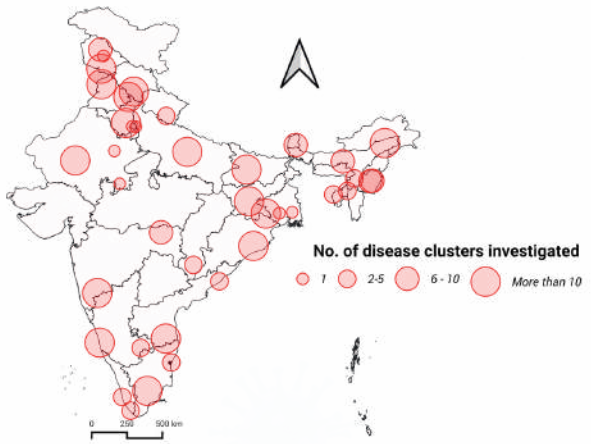
Jaundice



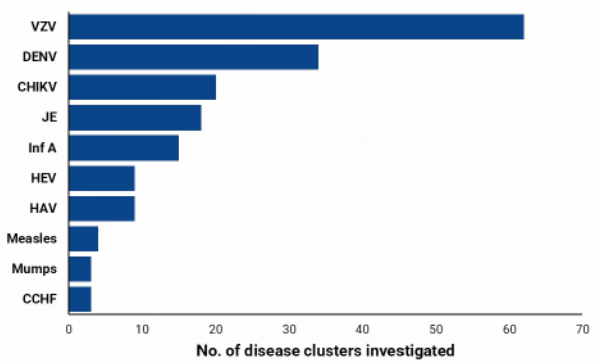
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Number of disease clusters investigated = 182



Major etiologies detected in these disease clusters

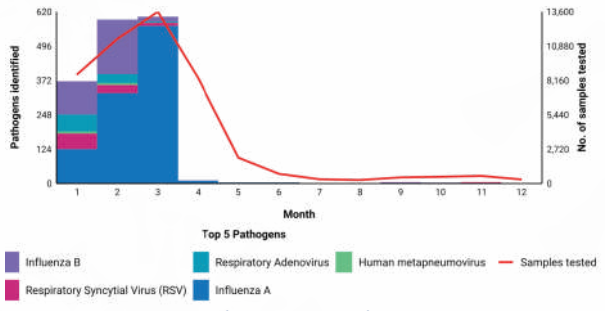


Total patients tested
1,41,719

Pathogens identifed (%)
21,604 (15.2)

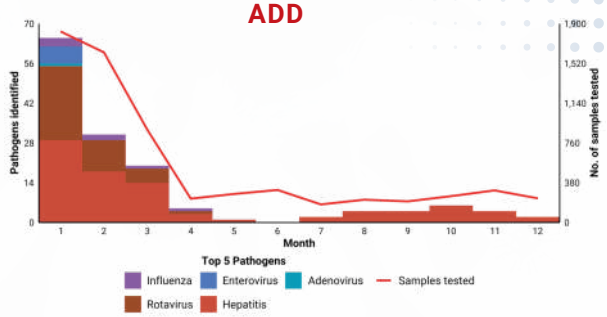
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



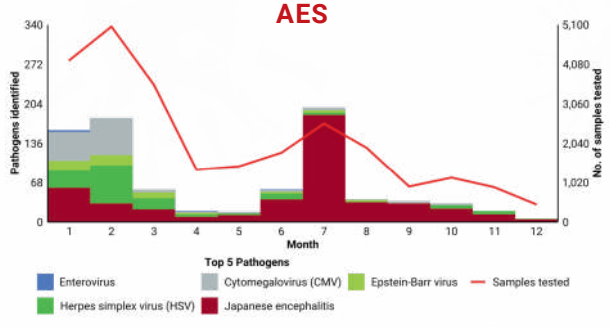
Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

ADD



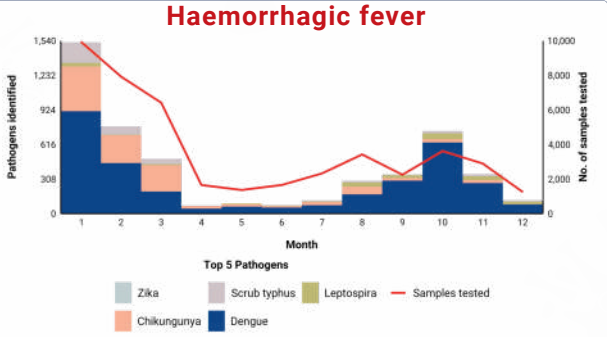
Among ADD cases, Hepatitis A/E was the most frequently detected pathogen

AES



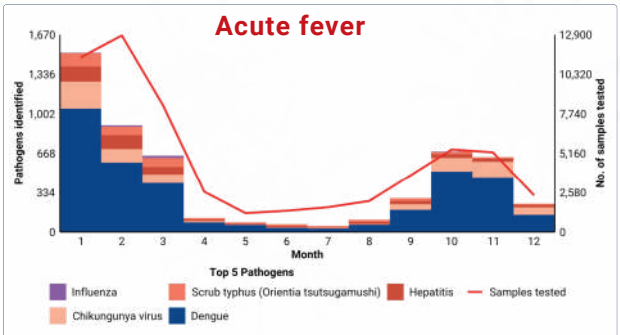
Among AES cases, Japanese encephalitis was the most frequently detected pathogen

Haemorrhagic fever



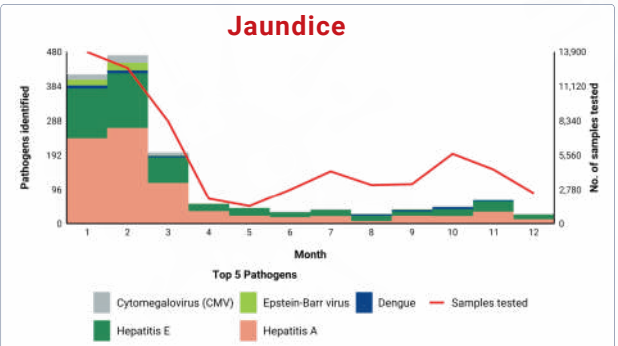
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

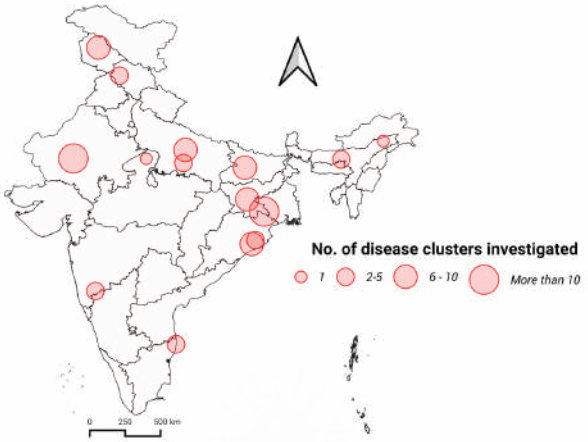
Jaundice



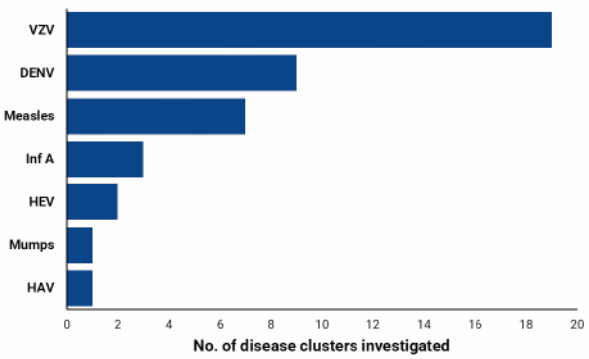
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Number of disease clusters investigated = 42



Major etiologies detected in these disease clusters



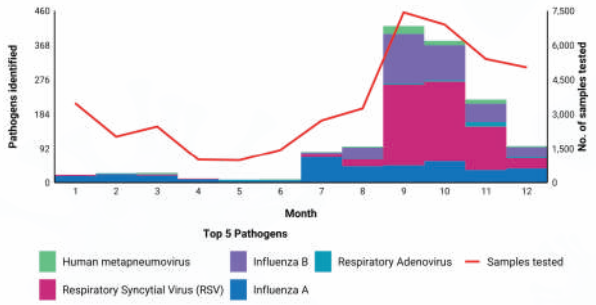
This data doesn't include COVID-19

Total patients tested
3,01,449

Pathogens identifed (%)
60,996 (20.2)

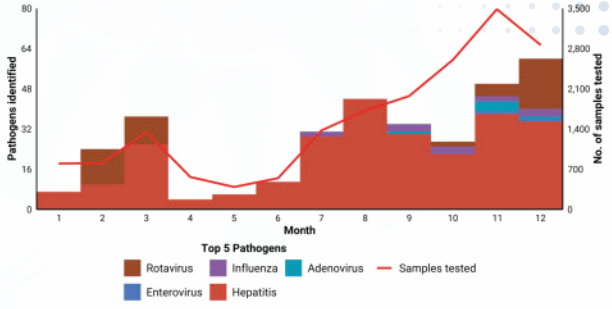
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



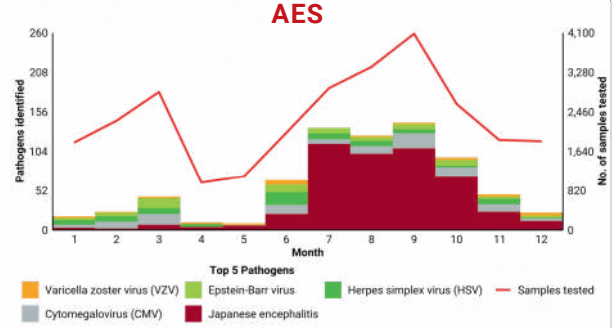
Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

ADD



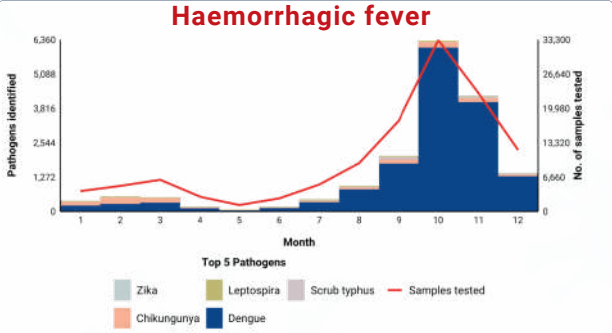
Among ADD cases, Hepatitis A/E was the most frequently detected pathogen

AES



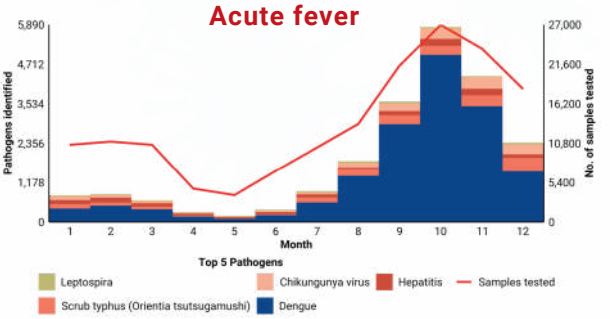
Among AES cases, Japanese encephalitis was the most frequently detected pathogen

Haemorrhagic fever



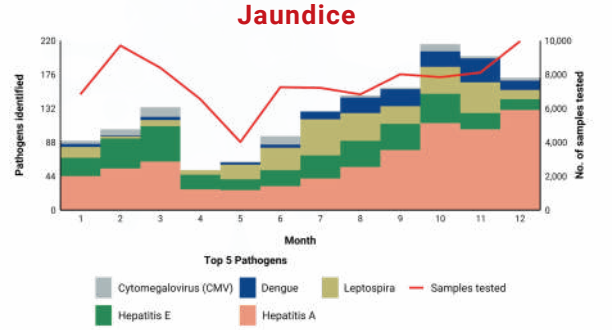
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

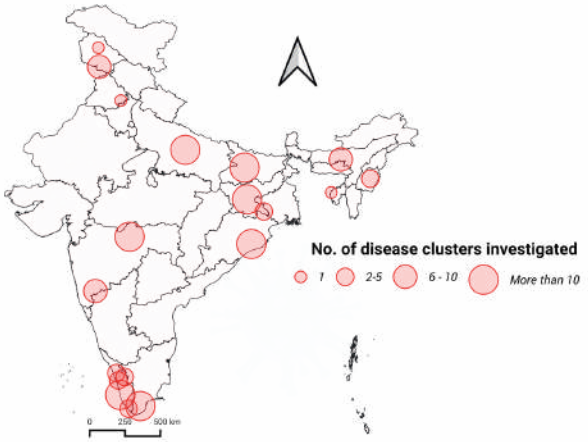
Jaundice



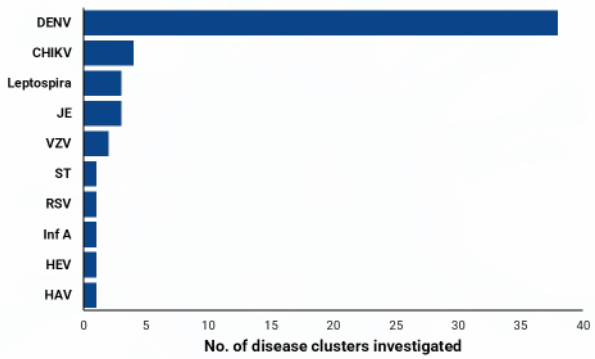
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Number of disease clusters investigated = 57



Major etiologies detected in these disease clusters



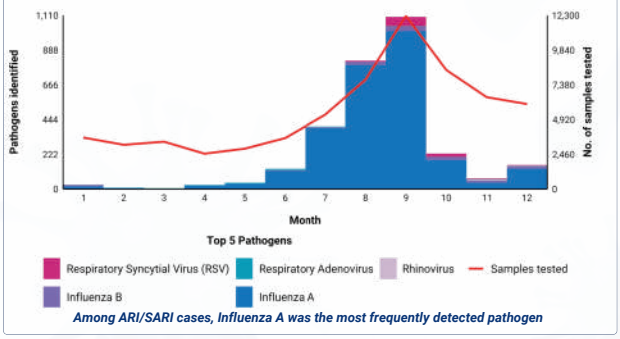
This data doesn't include COVID-19

Total patients tested
5,70,187

Pathogens identifed (%)
88,994 (15.6)

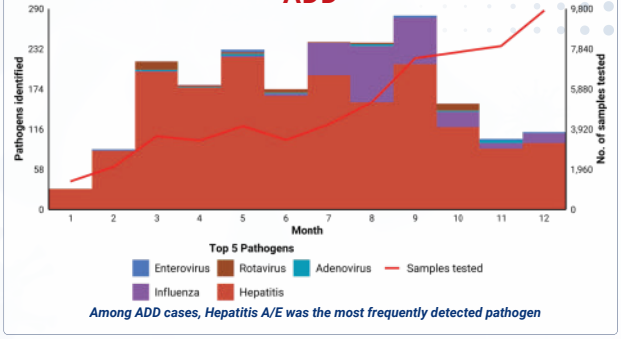
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



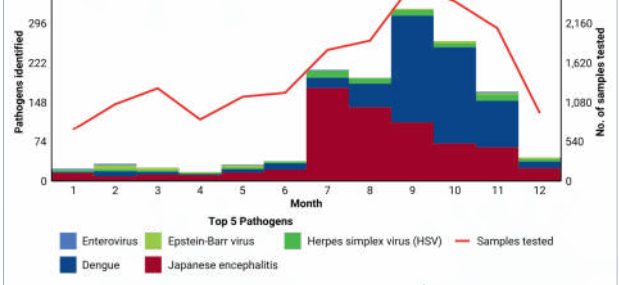
Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

ADD



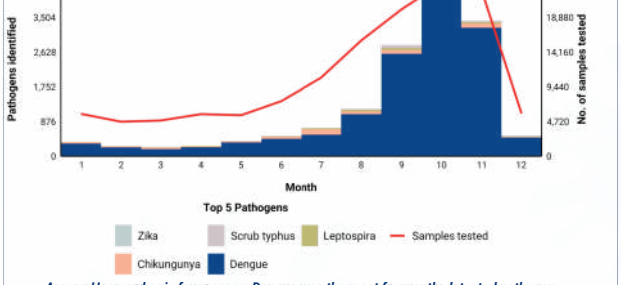
Among ADD cases, Hepatitis A/E was the most frequently detected pathogen

AES



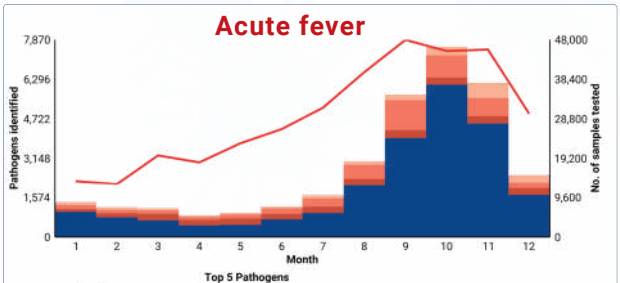
Among AES cases, Japanese encephalitis was the most frequently detected pathogen

Haemorrhagic fever



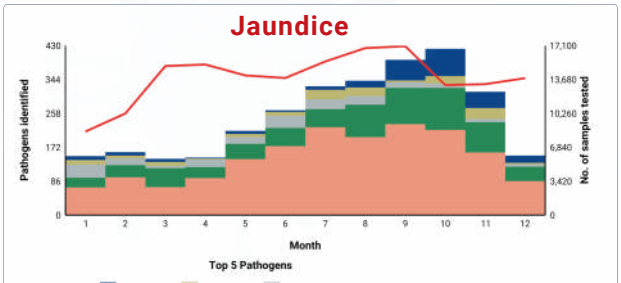
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

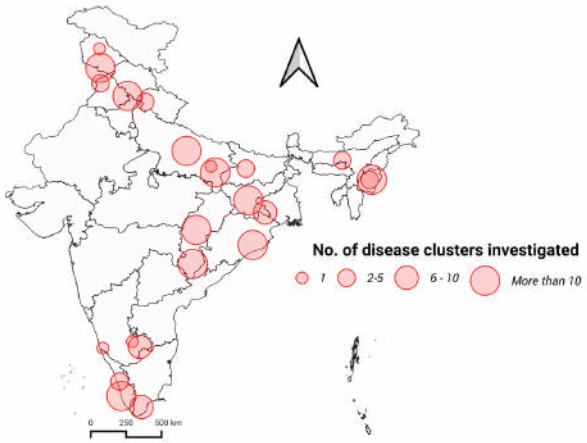
Jaundice



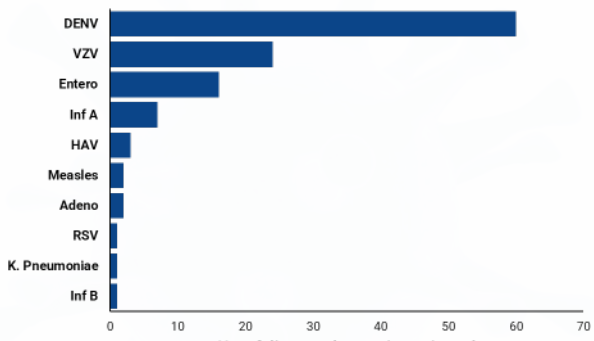
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Number of disease clusters investigated = 120



Major etiologies detected in these disease clusters



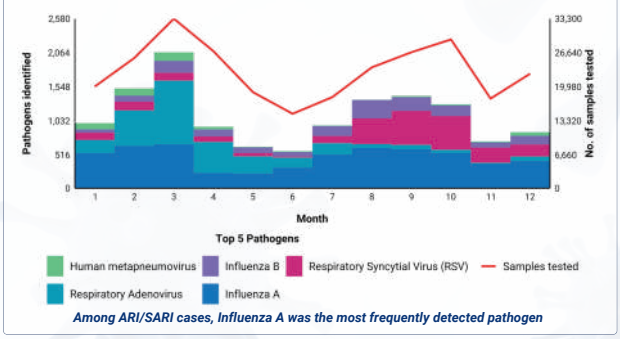
This data doesn't include COVID-19

Total patients tested
7,82,194

Pathogens identifed (%)
1,26,942 (16.2)

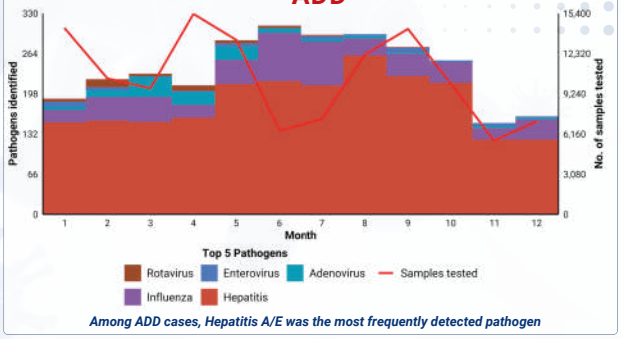
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



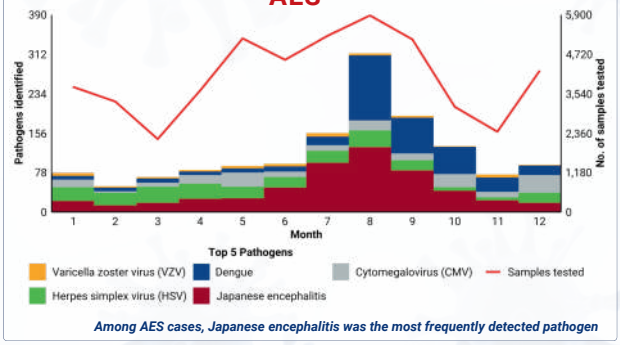
Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

ADD



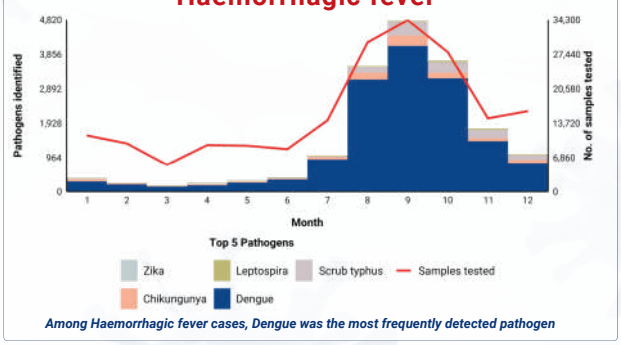
Among ADD cases, Hepatitis A/E was the most frequently detected pathogen

AES



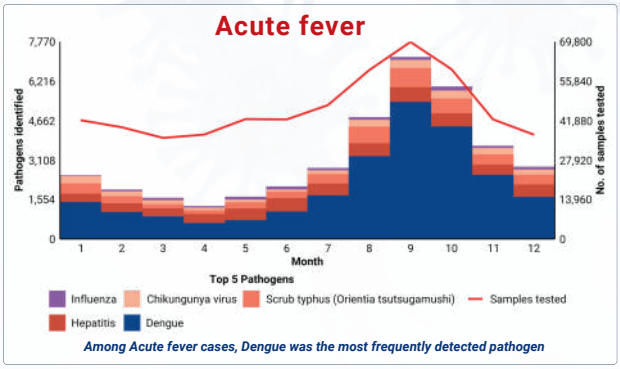
Among AES cases, Japanese encephalitis was the most frequently detected pathogen

Haemorrhagic fever



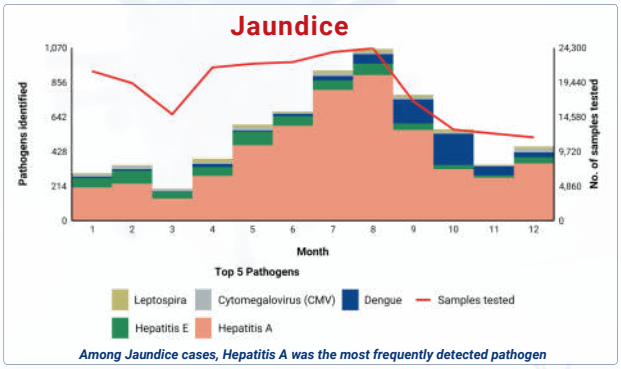
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

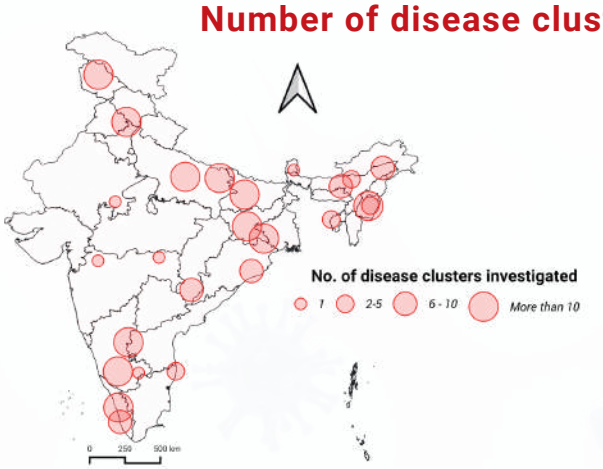
Jaundice



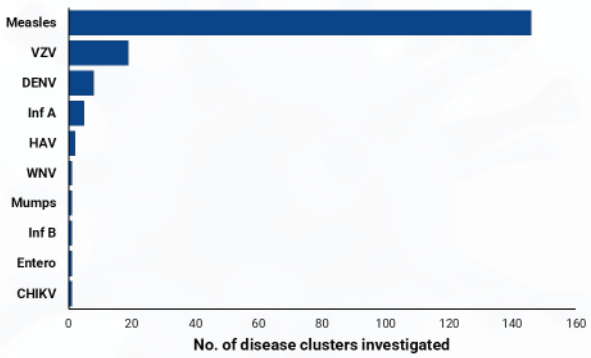
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Number of disease clusters investigated = 186



Major etiologies detected in these disease clusters



This report doesn't include COVID-19

Total patients tested

2,05,365 | 2,28,856

2024 Jan- Mar 2025 Jan- Mar

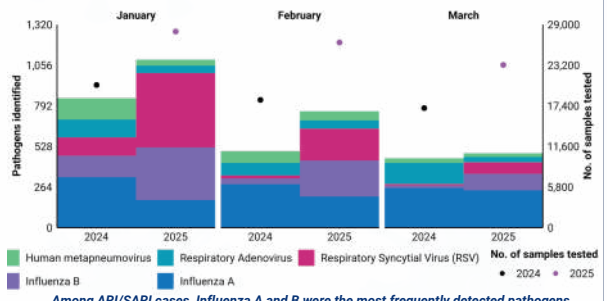
Pathogens identifed (%)

26,901 (13.1) | 24,502 (10.7)

2024 Jan- Mar 2025 Jan- Mar

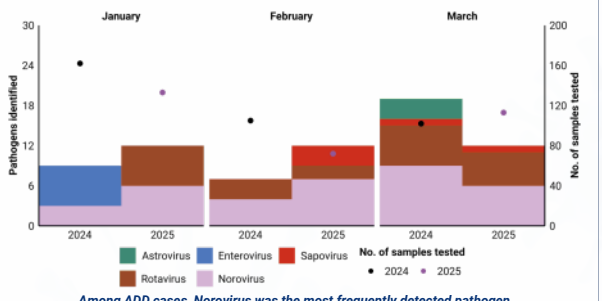
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



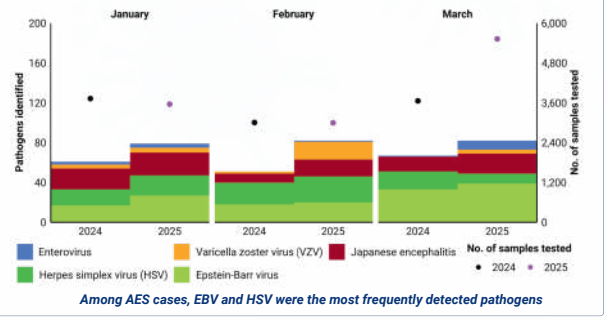
Among ARI/SARI cases, Influenza A and B were the most frequently detected pathogens

ADD



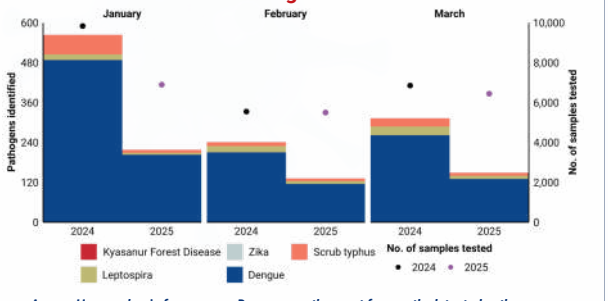
Among ADD cases, Norovirus was the most frequently detected pathogen

AES



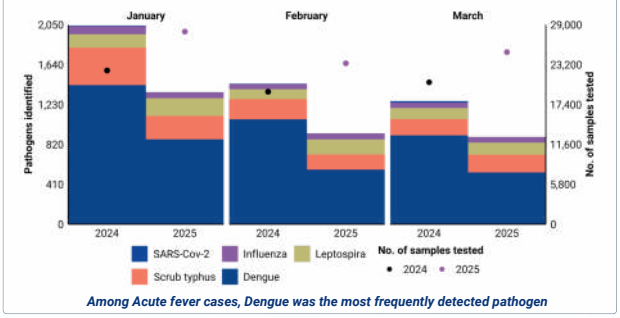
Among AES cases, EBV and HSV were the most frequently detected pathogens

Haemorrhagic fever



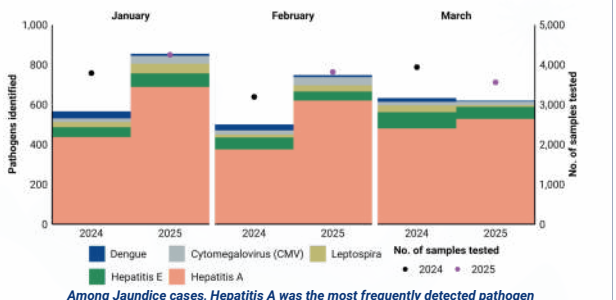
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

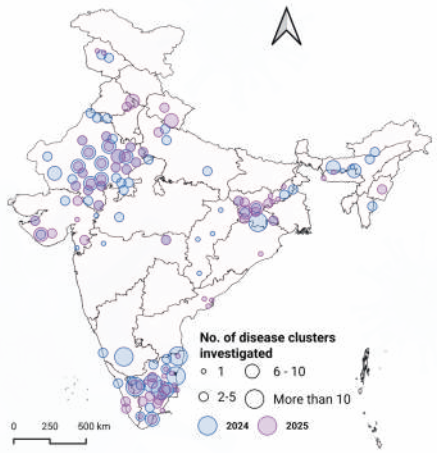
Jaundice



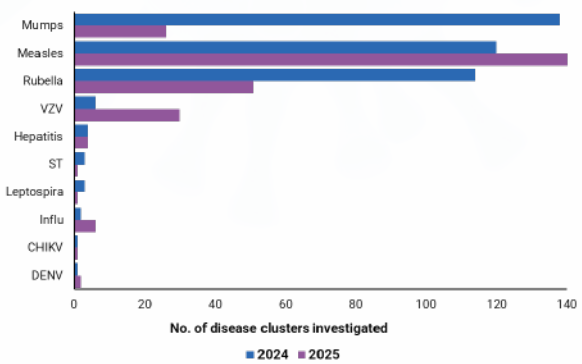
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Total No. of disease clusters investigated = 405 | 389



Major etiologies detected in these disease clusters



Total patients tested

1,91,025 | 2,26,095

2024 Apr- June 2025 Apr- June

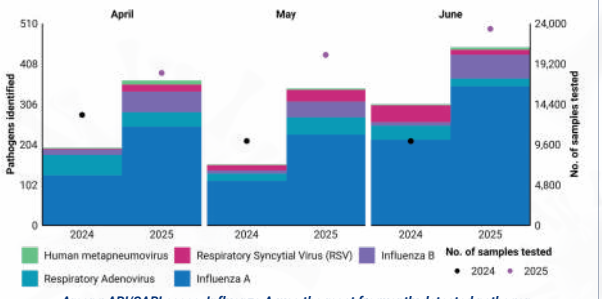
Pathogens identifed (%)

22,969 (12) | 26,055 (11.5)

2024 Apr- June 2025 Apr- June

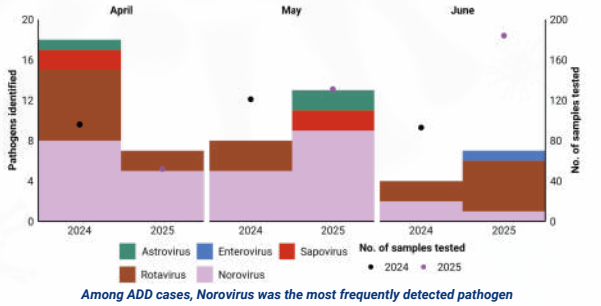
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



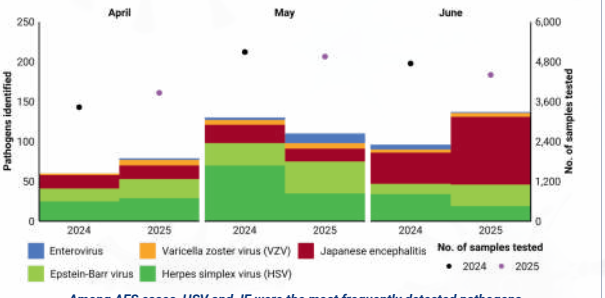
Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

ADD



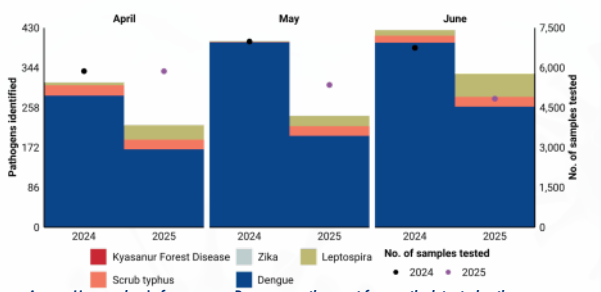
Among ADD cases, Norovirus was the most frequently detected pathogen

AES



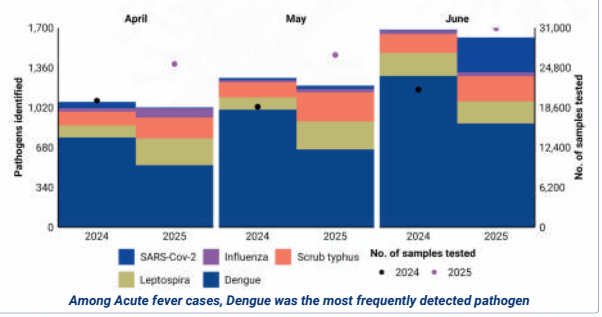
Among AES cases, HSV and JE were the most frequently detected pathogens

Haemorrhagic fever



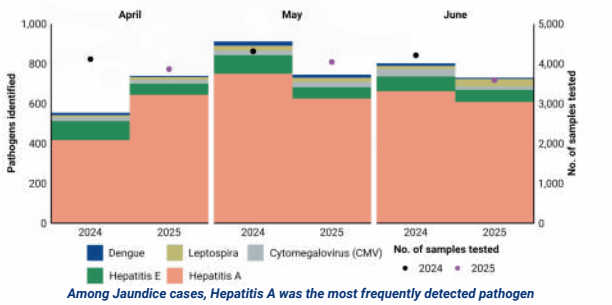
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

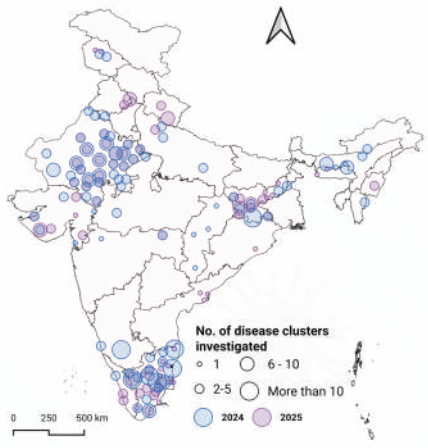
Jaundice



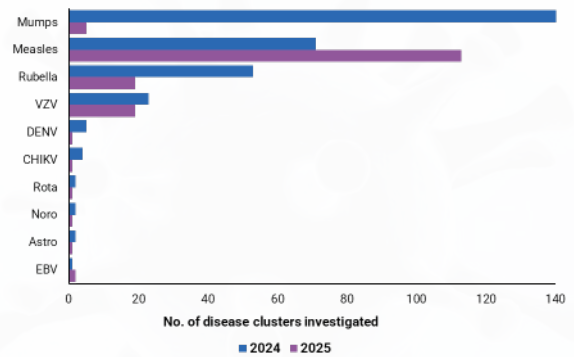
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Total No. of disease clusters investigated = 389 | 191



Major etiologies detected in these disease clusters



Total patients tested

3,31,531 | 2,97,742

July- September October- December

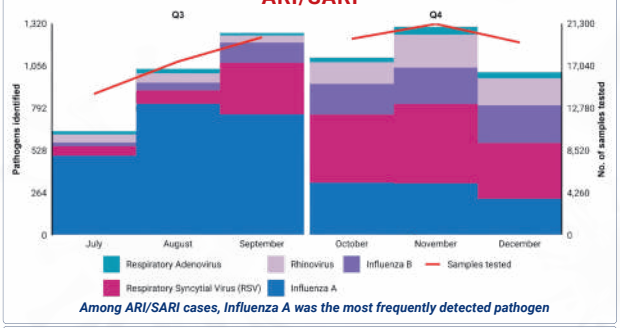
Pathogens identifed (%)

51,386 (15.5) | 48,752 (16.4)

July- September October- December

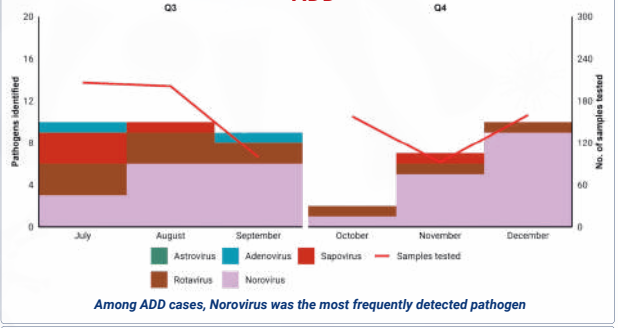
TOP 5 PATHOGENS IDENTIFIED BY MAJOR SYNDROMES

ARI/SARI



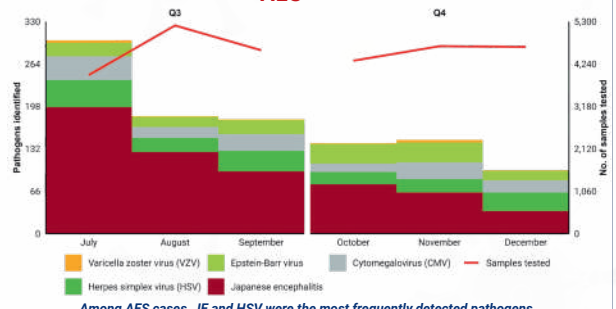
Among ARI/SARI cases, Influenza A was the most frequently detected pathogen

ADD



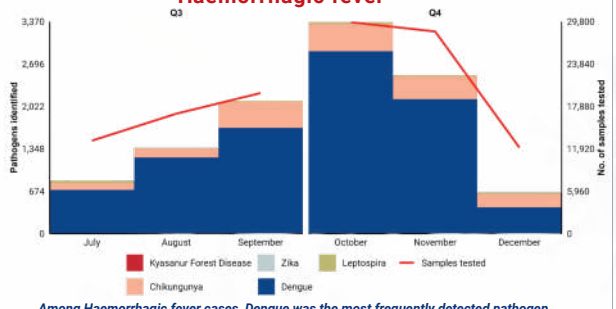
Among ADD cases, Norovirus was the most frequently detected pathogen

AES



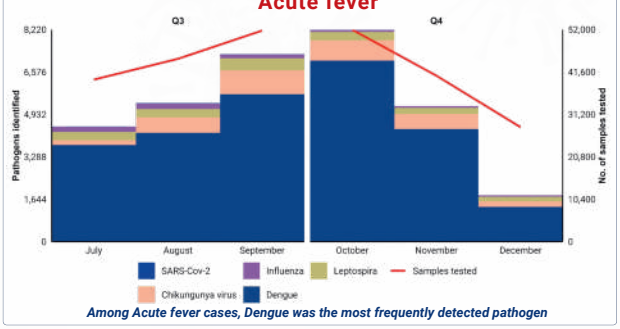
Among AES cases, JE and HSV were the most frequently detected pathogens

Haemorrhagic fever



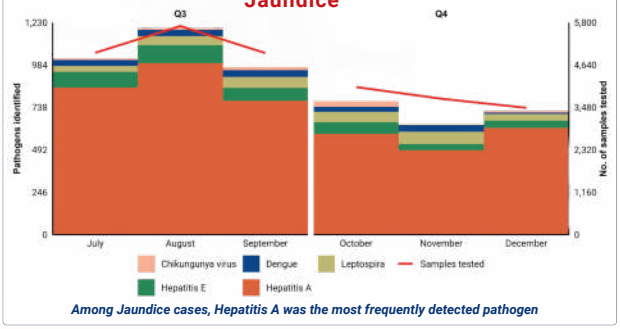
Among Haemorrhagic fever cases, Dengue was the most frequently detected pathogen

Acute fever



Among Acute fever cases, Dengue was the most frequently detected pathogen

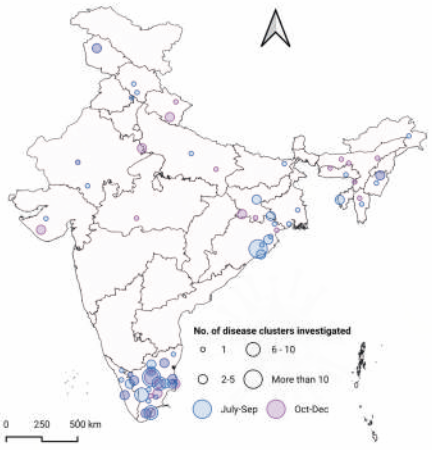
Jaundice



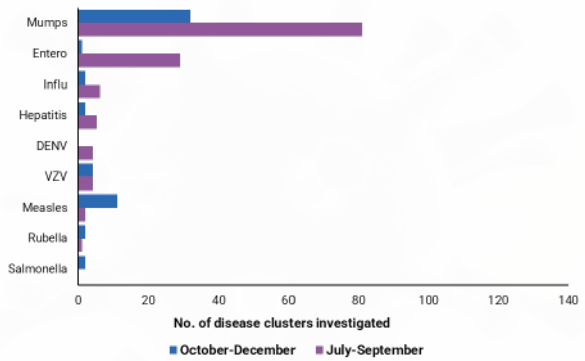
Among Jaundice cases, Hepatitis A was the most frequently detected pathogen

DISTRIBUTION OF DISEASE CLUSTERS INVESTIGATED

Total No. of disease clusters investigated = 139 | 57



Major etiologies detected in these disease clusters



ICMR - National Institute of Epidemiology, Chennai

The ICMR-National Institute of Epidemiology (ICMR-NIE), Chennai, functions as the data mining centre for the Viral Research and Diagnostic Laboratory Network (VRDLN). ICMR-NIE is responsible for the development and maintenance of the data entry portal and server. It ensures safe and secure data storage, firewall protection, and routine data backup.

As part of its capacity building commitments, ICMR-NIE provides online and offline training for data entry personnel and conducts monitoring visits to assess data quality and reporting efficiency. It also supports outbreak investigations and facilitates data sharing with pertinent government agencies and departments for effective public health action. Additionally, ICMR-NIE contributes to several national disease surveillance initiatives such as measles-rubella and KFD, provides inputs for parliamentary questions and matters of national importance, and supports the generation of scientific evidence through periodic data analysis, reports and research publications, which are circulated to key stakeholders.

Capacity Building in Numbers

21
Trainings conducted

1,703+
Staff trained

10,000+
No. of queries resolved

70+
Monitoring visits

ICMR - National Institute of Virology, Pune

The Resource Center for VRDLs (RC-VRDL) at ICMR-National Institute of Virology serves as the apex laboratory of the VRDL network. It has played a key role in strengthening human resources, laboratory capacity and emergency response to emerging and re-emerging viral threats. VRDL staff are provided with comprehensive hands-on training in outbreak response, biosafety, biosecurity, viral diagnostics, and quality practices to enhance preparedness, while need-based training is conducted during emergencies to enable rapid response and contain spread. To date, more than 157 VRDLs have been trained for their functional needs, and many strengthened for program-specific public health requirements.

During April–June 2025, RC-VRDL conducted 13 training programs for 196 participants from 23 laboratories, supported External Quality Assurance programs for Dengue serotype detection (33 laboratories) and Zika virus detection (31 laboratories) through real-time RT-PCR, and facilitated an inter-laboratory comparison program involving 3,601 samples across 10 serological parameters in 13 VRDLs. In addition, scientific and technical support was provided to 37 VRDLs on diagnostic kit selection, referral testing, equipment procurement, laboratory layout, workflows, and quality improvement.

Capacity Building in Numbers

196
Trainings conducted

5,147
Staff trained

154
No. of labs completed EQA

>95%
Concordance achieved

Strengthening of VRDL Network

Strengthening of the VRDL Network under the Pradhan Mantri–Ayushman Bharat Health Infrastructure Mission (PM-ABHIM)

A. Infectious Diseases Research & Diagnostic Laboratories (IRDLs):

Ten VRDLs have been upgraded into advanced Infectious Diseases Research and Diagnostic Laboratories (IRDLs), expanding their scope beyond virology to include bacteriology, mycology, and parasitology. These laboratories enhance India's capacity for comprehensive infectious disease surveillance and ensure rapid response during outbreaks. Currently, 10 IRDLs are functional, and the establishment of 15 more is in progress.

Functional Infectious Diseases Research & Diagnostic Laboratories (IRDLs)

B. BSL-3 Strengthening:

Five additional VRDLs have been strengthened with Bio Safety Level -3 (BSL-3) facilities, further enhancing the country's preparedness for handling high-risk pathogens.

List of contributors

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Late Dr. Sridharan, Former Prof. & Head, Department of Virology, CMC Vellore
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Prof. Balram Bhargava, Former Secy. DHR & Director General, ICMR
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Dr. Priya Abraham, Former Director, ICMR-National Institute of Virology, Pune

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Ms. Anu Nagar, Joint Secretary

Indian Council of Medical Research

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Technical staff of Diagnostic Virology Group, Maximum Containment Complex, National Influenza Centre

DHR Officials

Deputy Secretary
Under Secretary
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Dr Arpna Shrivastava, Project Scientist-C
Dr Shiwangi Gupta, Project Scientist-C
Satinder Kaur, Project Administrative Officer
Sindhu Kumar Das, Project Finance Manager
VRDL PMIU Staff

***VRDL Network**

*VRDL Network

Regional Level VRDLs

1. Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry
2. All India Institute of Medical Sciences, Bhopal, Madhya Pradesh
3. ICMR-Regional Medical Research Centre, Dibrugarh, Assam
4. ICMR-Regional Medical Research Centre, Bhubaneswar, Odisha
5. ICMR-National Institute for Research in Bacterial Infections Kolkata, West Bengal
6. Post Graduate Institute of Medical Education & Research, Chandigarh
7. All India Institute of Medical Sciences, New Delhi
8. Government Medical College, Kozhikode, Kerala
9. All India Institute of Medical Sciences Patna, Bihar
10. All India Institute of Medical Sciences, Jodhpur, Rajasthan
11. All India Institute of Medical Science, Bilaspur, Himachal Pradesh

State Level VRDLs

1. King George's Medical University, Lucknow, Uttar Pradesh
2. Sawai Man Singh Medical College, Jaipur, Rajasthan
3. Gauhati Medical College, Guwahati, Assam
4. Armed Forces Medical College, Pune, Maharashtra
5. All India Institute of Medical Sciences, Bhubaneswar, Odisha
6. King Institute of Preventive Medicine and Research, Chennai, Tamil Nadu
7. All India Institute of Medical Sciences, Raipur, Chhattisgarh
8. ICMR-National Institute for Research in Tribal Health, Jabalpur, Madhya Pradesh
9. ICMR-Regional Medical Research Center, Gorakhpur, Uttar Pradesh
10. Bangalore Medical College & Research Institute, Bangalore, Karnataka
11. Sher-i-Kashmir Institute of Medical Sciences, Srinagar, Jammu & Kashmir
12. ICMR-National Institute of Virology Kerala Unit, Alappuzha, Kerala
13. B.J. Medical College, Ahmedabad, Gujarat
14. Guntur Medical College, Guntur, Andhra Pradesh
15. Maulana Azad Medical College, New Delhi
16. Government Medical College, Nagpur, Maharashtra
17. Gandhi Medical College, Secunderabad, Hyderabad, Telangana
18. Banaras Hindu University, Varanasi, Uttar Pradesh
19. Sri Venkateswara Institute of Medical Sciences, Tirupati, Andhra Pradesh
20. ICMR-Regional Medical Research Centre, Sri Vijaya Puram, Andaman & Nicobar Islands
21. All India Institute of Medical Sciences, Rishikesh, Uttarakhand
22. North Eastern Indira Gandhi Regional Institute of Health & Medical Sciences, Shillong, Meghalaya
23. Coimbatore Medical College, Coimbatore, Tamil Nadu
24. Srirama Chandra Bhanja Medical College, Cuttack, Odisha
25. Indira Gandhi Medical College, Shimla, Himachal Pradesh
26. All India Institute of Medical Sciences, Deogarh, Jharkhand
27. Regional Institute of Medical Sciences, Imphal, Manipur

VRDL Network

Medical College VRDLs

1. Government Medical College, Amritsar, Punjab
2. ICMR-Rajendra Memorial Research Institute of Medical Sciences, Patna, Bihar
3. Institute of Post Graduate Medical Education & Research, Kolkata, West Bengal
4. Government Mohan Kumaramangalam Medical College, Salem, Tamil Nadu
5. Zoram Medical College, Zoram, Mizoram
6. Government Medical College, Chhatrapati Sambhajinagar, Maharashtra
7. Government Medical College, Surat, Gujarat
8. Shyam Shah Medical College, Rewa, Madhya Pradesh
9. Dr Vaishampayan Memorial Government Medical College, Solapur, Maharashtra
10. Government Medical College, Miraj, Maharashtra
11. Seth Gordhandas Sunderdas (GS) Medical College & King Edward Memorial (KEM) Hospital, Mumbai, Maharashtra
12. Madurai Medical College, Madurai, Tamil Nadu
13. Dr. Ram Manohar Lohia Hospital and Atal Bihari Vajpayee Institute of Medical Sciences, New Delhi
14. Post Graduate Institute of Medical Sciences, Rohtak, Haryana
15. Tirunelveli Medical College, Tirunelveli, Tamil Nadu
16. All India Institute Of Medical Sciences, Nagpur, Maharashtra
17. Siddhartha Medical College, Vijayawada, Andhra Pradesh
18. Kasturba Hospital for Infectious Diseases, Mumbai, Maharashtra
19. Ranga Raya Medical College, Kakinada, Andhra Pradesh
20. Jawaharlal Nehru Institute of Medical Sciences, Imphal, Manipur
21. Shimoga Institute of Medical Sciences, Shivamogga, Karnataka
22. Osmania Medical College, Hyderabad, Telangana
23. All India Institute of Medical Science, Raebareli, Uttar Pradesh
24. Rabindranath Tagore Medical College, Udaipur, Rajasthan
25. Government Medical College, Theni, Tamil Nadu
26. Madras Medical College, Chennai, Tamil Nadu
27. Lady Hardinge Medical College, New Delhi
28. Agartala Government Medical College, Agartala, Tripura
29. Vijayanagar Institute of Medical Science, Bellary, Karnataka
30. Sardar Patel Medical College, Bikaner, Rajasthan
31. Government Medical College, Jammu, Jammu & Kashmir
32. Government Medical College, Srinagar, Jammu & Kashmir
33. University College of Medical Sciences & Guru Teg Bahadur Hospital, New Delhi
34. Rajendra Institute of Medical Sciences, Ranchi, Jharkhand
35. Midnapore Medical College & Hospital, Midnapore, West Bengal
36. Government Medical College & Hospital, Chandigarh
37. Malda Medical College, Malda, West Bengal
38. All India Institute of Medical Sciences, Bibinagar, Telangana
39. Pandit Dindayal Upadhyay Medical College, Rajkot, Gujarat
40. Government Medical College, Patiala, Punjab
41. Diamond Harbour Government Medical College & Hospital, Diamond Harbour, West Bengal
42. All India Institute of Medical Sciences, Kalyani, West Bengal
43. Andhra Medical College, Vishakhapatnam, Andhra Pradesh
44. Late Baliram Kashyap Memorial Government Medical College, Jagdalpur, Chhattisgarh
45. Shri Meghji Pethraj Shah Medical College, Jamnagar, Gujarat
46. Gajra Raja Medical College, Gwalior, Madhya Pradesh
47. Government Medical College, Thrissur, Kerala
48. Government Thiruvarur Medical College, Thiruvarur, Tamil Nadu
49. Mysore Medical College & Research Institute, Mysuru, Karnataka
50. Kakatiya Medical College, Nizampura, Warangal, Telangana
51. Government Medical College, Vadodara, Gujarat
52. Bundelkhand Medical College, Sagar, Madhya Pradesh
53. Karnataka Medical College & Research Institute, Hubballi, Karnataka
54. Government Medical College, Akola, Maharashtra
55. Jorhat Medical College, Jorhat, Assam
56. Government Medical College, Bhavnagar, Gujarat
57. Government Institute of Medical Sciences, Greater Noida, Uttar Pradesh
58. Dr. Rajendra Prasad Government Medical College, Tanda, Himachal Pradesh
59. Silchar Medical College, Silchar, Assam
60. All India Institute of Medical Sciences, Mangalagiri, Andhra Pradesh
61. Hassan Institute of Medical Sciences, Hassan, Karnataka
62. Government Medical College, Thiruvananthapuram, Kerala
63. Indira Gandhi Medical College & Research Institute, Puducherry
64. ICMR-National Institute for Research in Tuberculosis, Chennai, Tamil Nadu

VRDL Network

Medical College VRDLs

65. Indira Gandhi Government Medical College, Nagpur, Maharashtra
66. Patna Medical College, Patna, Bihar
67. Mahatma Gandhi Memorial Medical College, Jamshedpur, Jharkhand
68. Government Medical College, Haldwani, Uttarakhand
69. Jawaharlal Nehru Medical College, Aligarh, Uttar Pradesh
70. Uttar Pradesh University of Medical Sciences, Saifai, Uttar Pradesh
71. Rajiv Gandhi Institute of Medical Sciences, Kadapa, Andhra Pradesh
72. Government Medical College, Kannur, Pariyaram, Kerala
73. Government Doon Medical College, Dehradun, Uttarakhand
74. Andaman & Nicobar Island Institute of Medical Sciences, Sri Vijaya Puram, Andaman & Nicobar Islands
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80. Radha Gobinda Kar Medical College, Kolkata, West Bengal
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82. Jhalawar Medical College, Jhalawar, Rajasthan
83. Government Medical College, Baramulla, Jammu & Kashmir
84. Goa Medical College, Bambolim, Goa
85. Murshidabad Medical College & Hospital, Murshidabad, Berhampore, West Bengal
86. Maharaja Krushna Chandra Gajapati Medical College, Brahmapur, Odisha
87. Government Villupuram Medical College, Villupuram, Tamil Nadu
88. Guru Gobind Singh Medical College, Faridkot, Punjab
89. Tezpur Medical College, Tezpur, Assam
90. Burdwan Medical College, Burdwan, West Bengal
91. Government Medical College, Kota, Rajasthan
92. Bhagat Phool Singh Government Medical College for Women, Sonepat, Haryana
93. Fakhruddin Ali Ahmed Medical College, Barpeta, Assam
94. Darbhanga Medical College, Darbhanga, Bihar
95. Shree Krishna Medical College, Muzaffarpur, Bihar
96. Veer Surendra Sai Institute of Medical Sciences and Research, Sambalpur, Odisha
97. Dr. Sampurnanand Medical College, Jodhpur, Rajasthan
98. Pandit Jawaharlal Nehru Government Medical College, Chamba, Himachal Pradesh
99. Jawahar Lal Nehru Medical College & Hospital, Bhagalpur, Bihar
100. Shri Bhausaheb Hire Government Medical College, Dhule, Maharashtra
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102. All India Institute of Medical Sciences, Rajkot, Gujarat
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107. Kodagu Institute of Medical Sciences, Madikeri, Karnataka
108. Government Medical College Manjeri, Malapuram, Kerala
109. Government Medical College, Ernakulam, Kerala
110. Sree Chitra Tirunal Institute for Medical Sciences & Technology, Thiruvananthapuram, Kerala
111. Dr. Laxmi Narayan Pandey Government Medical College, Ratlam, Madhya Pradesh
112. Military Hospital Jodhpur, Rajasthan
113. Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, Uttar Pradesh
114. Kurnool Medical College, Kurnool, Andhra Pradesh
115. Tomo Riba Institute Health and Medical Sciences, Naharlagun, Arunachal Pradesh
116. Diphu Medical College & Hospital, Diphu, Assam
117. All India Institute of Medical Sciences, Guwahati, Assam
118. Lakhimpur Medical College, Chowkham, Assam
119. Nagaon Medical College & Hospital, Nagaon, Assam
120. Pandit Jawaharlal Nehru Memorial Medical College, Raipur, Chhattisgarh
121. Chhattisgarh Institute of Medical Sciences, Bilaspur, Chhattisgarh
122. Late Shrimati Indira Gandhi Memorial Government Medical College, Kanker, Chhattisgarh
123. Chandulal Chandrakar Memorial Government Medical College, Durg, Chhattisgarh
124. Army Hospital Research and Referral Dhaula Kuan, New Delhi
125. Vallabhbhai Patel Chest Institute, University of Delhi, New Delhi
126. All India Institute of Medical Sciences, Bathinda, Punjab
127. Dr. B.R. Ambedkar State Institute of Medical Sciences, Mohali, Punjab

Sir Thutob Namgyal Memorial, Gangtok, Sikkim (*supported through ICMR separately*)

Resource Centres

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INDIAN COUNCIL OF MEDICAL RESEARCH | NATIONAL INSTITUTE OF VIROLOGY

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