Volume 11, Issue 2 Apr'22 to Jun'22

ISSN 2583-0163

NCDC Newsletter

Quarterly Newsletter from National Centre for Disease Control (NCDC)






Director's Desk

The Government of India started India Epidemic Intelligence Service (EIS) programme to fulfil the shortage of skilled public health work force through capacity building which will provide us future leaders in Epidemiology and public health practice. This issue captures the achievements of 10 years of India EIS programme.

This issue also reports two outbreak investigations carried out by EIS Officers in Rajasthan, one was on Acute Encephalopathy Syndrome (AES) from Sirohi and another was on Measles from Alwar. AES surveillance system was established in Sirohi and gaps in immunization service delivery were identified and health department was guided accordingly.

NCDC news section highlights various important meetings held in the quarter which includes meeting held on joint-ministerial declaration for One Health, National Review meeting of Integrated Disease Surveillance Programme (IDSP). NCDC also observed International Yoga Day and World Blood Donor Day. Surveillance section captures trends of COVID-19 and Leptospirosis, and surveillance of Heat-Related Illness. I hope you enjoy going through the newsletter and look forward to any feedback from you.

Lead Story

Ten Years of India EIS Programme

Creation of a pool of specialized Public Health Specialists in India is of utmost importance for managing health care needs and monitoring diseases of 1.3 billion Indians. Effective health care for the population is dependent on availability of adequate number of public health human resources with suitable set of skills and their appropriate deployment at different levels of institutions of health system.

The importance of skilled public health workforce including epidemiologists was underscored in National Health Policy 2002 and 2017. To augment the availability of skilled epidemiologists at National, State and Local levels, the MoHFW launched the 'India Epidemic Intelligence Service (EIS) Programme in October 2012 in technical and financial collaboration with US CDC (Centers for Disease Control) through the Global Disease Detection (GDD) and Global Health Security Agenda (GHSA) programme.

The India Epidemic Intelligence Service (EIS) training is a 2-year programme in applied epidemiology based at the National Centre for

Highlights in this issue

Disease Control (NCDC), Delhi. The programme is modelled after the EIS program at the US Centre for Disease Control and Prevention (CDC) and is implemented in collaboration with CDC.

The programme focuses on hands-on training in epidemiologic service for public health professionals. Currently, India EIS has additional hubs in Chennai (in collaboration with the National Institute of Epidemiology) and at the World Health Organization India office in Delhi. Currently in 2022 the two-Year EIS training Programme has been linked to Master's in Applied Epidemiology. In this regard NCDC has collaborated with the Hemwati Nandan Bahuguna (HNB) Uttarakhand Medical Education University to conduct Masters in Applied Epidemiology (MAE) to provide degree to the NCDC EIS officers.

Training Methods:

It is a high quality, mentor-based field epidemiology training and focuses on hands-on training in epidemiologic service for public health professionals. It includes various training methods like experiential on-the-job training, classroom courses, weekly seminars, mentoring and skill enhancing workshops on surveillance, scientific writing, leadership, management, communication etc. Trainees, called EIS Officers, are assigned to a state/central public health agency for two years under the guidance of a mentor and supervisor. They are required to complete prescribed set of public health activities called as the Core Activities of Learning (CALs) – to acquire the needed skills of a practicing field epidemiologist. The CALs include analysis and evaluation of surveillance data, field investigations, epidemiologic data analysis, both oral and written scientific communication, and service to the organization where the officer is placed. Completion of all of the CALs is required for successful completion of the programme.

1. Field investigation
2. Epidemiological analysis
3. Surveillance analysis, evaluation
4. Oral scientific presentation — long/ brief
5. Scientific manuscript for a peer-reviewed journal
6. Public health update — concise and timely
7. Scientific abstract(s)
8. Presentation(s) to non-scientific audience, media
9. Other services to agency

Fig1: First Batch of EIS Officers (EISO cohort 1) with leadership of NCDC, MoHFW and CDC

CAL	Activity
CAL-1	a. Surveillance system assessment b. Surveillance data analysis
CAL-2	Outbreak/Field investigation a. Descriptive b. Analytical
CAL-3	Planned epidemiological study
CAL-4	Abstract for scientific conference
CAL-5	Presentation at a scientific conference (Oral/Poster) including TAS
CAL-6	Scientific Manuscript
CAL-7	Other services to agency including Public Health update — concise and timely

Table1: Core activities of learning under India EIS training

During their two-year training officers engage in outbreak investigations, design and analyses of epidemiological studies, analysis and evaluation of surveillance data, scientific communication, and other activities in preparation for their careers as field epidemiologists.

They acquire a broad working knowledge in biostatistics, public health ethics and law, and other public health topics. They also acquire skills in communication and presentation as they often have to communicate their findings to state health departments, Ministry of Heath and Family Welfare (MoHFW) and various important health agencies like Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET), South Asia Field Epidemiology and Technology Network (SAFETYNET).

Future career path and opportunities after EIS: India EIS graduates become highly competitive candidates for public health positions with state, national, and international institutions in India. EIS alumni currently serve in public health leadership positions in state governments, municipal corporations, WHO, CDC, and NGO. EIS alumni also continue to contribute to the India EIS Programme as mentors to future officers. Their technical expertise and skills have a direct impact on domestic and global population health and well-being. Sponsoring states or programmes decide on appropriate placements for their returning officers. Once the officers complete their training, they are typically placed in positions within their institutions to best utilize their applied epidemiology skills. After training completion, they often join in Ministry of Health and Family Welfare, various National Programmes, State Health Department, WHO, CDC, and NGO at senior positions such as Public Health Specialist, Consultants, Surveillance Medical Officers, Joint Directors etc.

Cohort	Year	No of EIS officers
Cohort 1	2012-2014	07
Cohort 2	2013- 2015	06
Cohort 3	2014- 2016	11
Cohort 4	2015- 2017	09
Cohort 5	2016- 2018	13
Cohort 6	2017- 2019	06
Cohort 7	2020- 2022	09
Cohort 8	2021- 2023	12

Table2: Cohort wise breakup of EIS officers

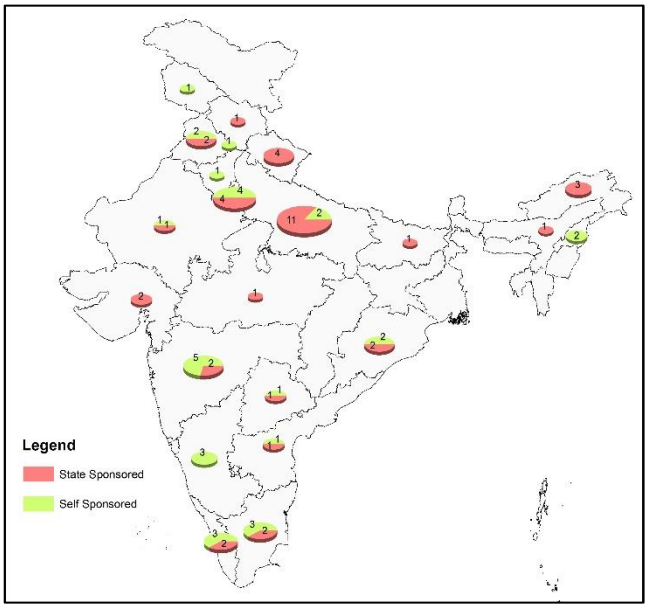


Fig 2: State wise breakup of EIS trainees

Category	Count
Acute Encephalitis Syndrome	6
Influenza: H1N1, H5N1	8
Chemical Leak Incidents	2
COVID-19: Clusters, Casualties	17
Post Disaster: Rapid Need Assessment	3
Outbreaks due to drug resistant organisms	2
Melioidosis	1
Febrile Illness	1
Foodborne	5
Hepatitis C	1
Nosocomial	1
VPDs: Diphtheria, Measles, Mumps, Rubella, Hepatitis A, Chicken Pox	30
Vector Borne: JE, WNF, Dengue, Malaria	25
Waterborne: Typhoid, Cholera, ADD	49
Zoonotic: Anthrax, KFD etc.	14
Grand Total	**165**

Table3: Field Investigations carried out by EIS officers

Achievements of India EIS Programme:

The importance and critical role of EIS Officers can be gauged from the facts;

- EIS Officers have responded in more than 130 infectious disease outbreaks in 23 states and emergency situations including natural and manmade disasters.
- They have evaluated 40 disease surveillance systems of major programmes including RNTCP, NVBDCP, NLEP, IDSP, NACO, RCH, injury etc. at state and district level leading to the improvement of the systems through actionable recommendations.
- They assisted in establishing and supporting disease surveillance system in Haridwar (2021), Prayagraj Kumbh (2019), and Ujjain Kumbh (2016). Together in these two surveillance systems more than 15 lakh people were covered for health-related events.
- More than 45 candidates have graduated from the EIS training at NCDC thus far and are holding positions at National, state and local level where they can apply epidemiological skills in Public Health.
- Total 65 Publications in last 4 years in renowned journals on studies ranging from Surveillance System Evaluation, Outbreak Investigation and Health Programme Assessment.

Awards won at National /International conferences by EIS officers

- Best Oral Presentation at the National Conference of Indian Association of Preventive & Social Medicine PGI (2021)
- Best Oral Presentation at the Indian Association of Public Health National Conference JIPMER (2021)
- Best oral presentation at the 65th Annual National Conference of Indian Public Health Association IPHACON (2021)
- 3rd Prize winner in Oral Presentation at National Conference of Indian Association of Preventive & Social Medicine PGI, Chandigarh (2021)
- Second prize in oral presentation at the 48th Annual National Conference of Indian Association of Preventive and Social Medicine- IAPSMCON (2021)

Field Photograph selected for Cover page International Nights 2021 abstract book (2021)

- Third best oral presentation award at 9th Bi-regional TEPHINET Global Conference in Lao-PDR (2018)
- William H. Foege award for best oral presentation at the 67th Annual Epidemic Intelligence Service Conference at Atlanta, US (2017)
- Best oral presentation award in ISMOCD in Pune, Maharashtra, (2017)
- Best poster presentation award in sub theme, one health, IPHACON in Jodhpur, Rajasthan, (2017)
- Best oral presentation award in ISMOCD in Pune, Maharashtra, (2017)
- William H. Foege award for best oral presentation at the 66th Annual Epidemic Intelligence Service Conference at Atlanta, US (2016)
- Best poster presentation at the 8th TEPHINET Global Conference in Mexico City, Mexico (2015)
- Third prize for oral presentation at the 8th TEPHINET Global Conference in Mexico City, Mexico (2015)
- Total 4 EISO have received mini-grants for their studies

Way forward

1. EIS Hubs for scale-up with public health institutions having epi capacity and close coordination with public health departments to enhance the skills of the officers and also provide quality, timely and valuable services to the respective public health departments including public health updates that are concise and timely

   Institutionalization of the training e.g. two-year tenure-based residency sponsored by central government, post MD. From 2022, the two-Year EIS training Programme has been linked to Master's in Applied Epidemiology. In this regard NCDC has collaborated with the H.N.B. Uttarakhand Medical Education University to conduct Master's in Applied Epidemiology (MAE) to provide degree to the NCDC EIS Programme trainees officers. The trainees will acquire a degree after successfully completing the training programme.

2. Carrier path- Recognition towards experience in CHS by UPSC/ State service commissions.

After EIS various career options and opportunities are available to EIS officers after they graduate. They can choose to work in public health at local, state or national levels. Various career opportunities include:

- State and national level epidemiologist.
- State health officials
- Public health and medical institutions faculty
- Teaching Faculty in Field and applied Epidemiology
- Tephinet, SAFETYNET, FETP and CDC organizations
- Health and medical editors, reporters and writers
- Non -governmental organizations

  Pharmaceutical and insurance industries

Fig 4. India EIS officers in Field

Contribited By: Dr Arti Bahl, Tanzin Dikid, Suneet Kaur, Ramesh Chandra, Ananta Verma and Mr Abhishek

Outbreak Section

Outbreak Investigation of Acute Encephalopathy Syndrome cases in Sirohi, Rajasthan

Acute Encephalopathy Syndrome (AES) is defined by WHO as "a person of any age, at any time of year, with an acute onset of fever and a change in mental status (including symptoms such as confusion, disorientation, coma, or inability to talk) and /or a new onset of seizures (excluding simple febrile seizures)". A total of seven deaths of children from 2 to 15 years were reported from 2 villages, named Phulabai Kheda and Verafalli in Pindwada block of Sirohi district of Rajasthan. All the patients presented with similar symptoms of seizure with vomiting, and the progression of symptoms was very quick with the time between onset and symptoms and death ranged from only few hours to 2 days. The symptoms of illness mimicked AES, which was initially suspected to be a condition mimicking AES. EIS officer started the investigation on 14th of April.

Methodology: We confirmed the outbreak by studying the data on related illnesses from the concerned PHC and district hospital for the last 1 year. The concerned PHC (Bharja) did not report any cases or deaths due to seizures or heat stroke in the last one year (2021-22). The district hospital also reported a very low case load of seizures per month, and therefore, finding was similar to the PHC. Data of heat stroke collected from the District Hospital (DH) and Primary healthcare Center (PHC) for the last five years showed no deaths. **Case finding**: We defined suspect as acute onset of seizure with or without vomiting from 1/04/2022 till date, a resident of Sirohi district and **probable case** as Acute onset of seizure or altered sensorium or vomiting in a person less than 18 years of age in a resident of Sirohi district and negative test results for dengue, JE and Malaria. The cases were searched by house-to-house survey as well as the from the data of private and government facilities. Details were taken of every suspect and deceased. Blood, serum and CSF samples were sent to NIV Pune. Environmental investigation was done, and tick samples were sent to National Institute of Virology (NIV) Pune, food samples were sent to Sawai Man Singh (SMS) Medical College.

Results: We identified 12 cases out of which seven were the initial death cases. The confirmed diagnosis of the cause cannot be ascertained. The median age was 7 years (range: 2-16 yrs), males constituted. 67% (8) of the cases. All the cases were reported from 2 villages (Verafali and Phulabai Kheda) under Bharja PHC. All the samples sent for testing came negative for Japanese Encephalitis, Malaria, Chandipura, and other usual bacterial and viral markers. The median time period between the onset of symptoms and death was 9 hours while the mean duration was 19±9 hrs. The major symptoms among the hospitalized cases were hepatoencephalopathy with severe hypoglycemia. There was history of "chuski" consumption was present in 3 cases.

Limitations: The outbreak was reported after the 7th death and thus there was a paucity of samples for investigations.

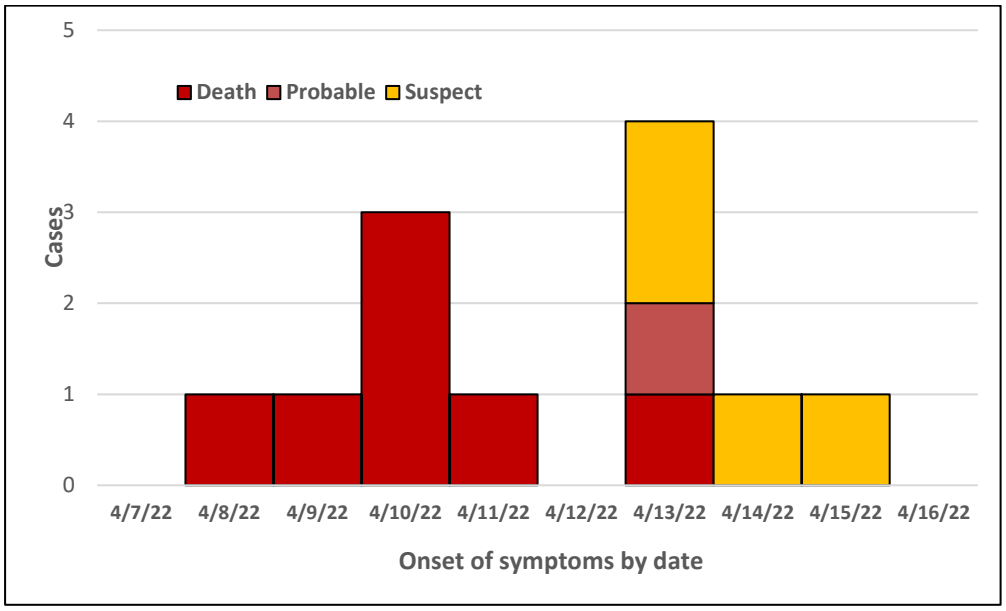
Public Health actions: AES surveillance was initiated in the Sirohi and neighboring districts. Since the time between onset and symptoms was very low, ambulance was placed in the villages where cases were reported.

Recommendations:

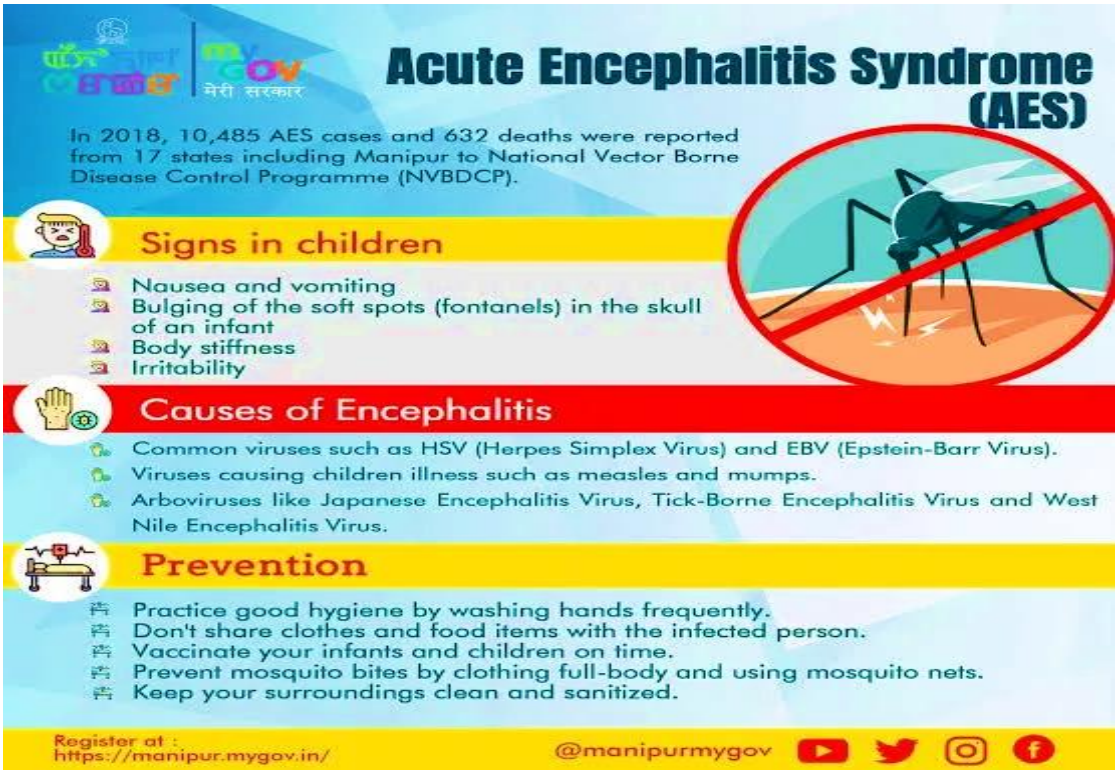
1. Adequate provision of ambulances to be ensured for rapid transport of cases as per need (District authority)
2. Prohibition of the sale of "Chuski" until conclusive test results are shown from the samples taken.
3. To initiate and continue house to house surveillance for the suspect cases as per case definition (CMHO).
4. All the Medical Officers (MO I/C to be provided with Case Investigation Form to capture details of the suspect cases and share with District IDSP unit (CMHO).
5. All Medical officers to be oriented for checking blood glucose and initiating glucose infusion if required before shifting patient to higher facility. (CMHO)
6. To involve Animal Husbandry department to identify any disease in live-stock especially from the areas where deaths have been reported. (District Animal Husbandry department)

7. Information, Education and Communication (IEC): An IEC material with common findings in the case of AES be displayed at the subcentre level, which will be helpful for the ANM to quickly identify and refer the case.
8. Vector surveillance and control measures to be intensified in the affected areas (state and district health authorities).
9. Establishing AES surveillance and strengthening IHIP case reporting by capacity building of the health care staff.

Taking case history from house of deceased



Contribited by: Drs Anurag Dhoundiyal, Sushma Choudhary



Outbreak Investigation of Measles cases in Alwar, Rajasthan- June 2022

A cluster of fever with rash cases were reported from the villages of Bhagore PHC in Alwar district of Rajasthan starting from 19th of April 2022. Outbreak was declared on May 19th 2022, and investigation was started on 4th of June 2022 to ascertain the cause of outbreak.

A house-to-house case search was started according to the case definition: **Suspected Case** as any person who is a resident of villages in Bhagore sector and presented with new onset of fever and rash from 1st March 2022 to 17th June 2022; **Confirmed Case** was defined as a suspect case with the detection of measles-specific immunoglobulin M (IgM) antibodies by enzyme-linked immunosorbent assay (ELISA) or measles virus by Polymerase Chain Reaction (PCR), Local practitioners were also reached for any cases reported to them, and detail case history was elicited from suspected cases found in the survey. Immunization coverage data was accessed from PCTS (Pregnancy, Child Tracking & Health Services Management System), cold chain point, and of routine immunization from the concerned PHC.

Results:

We identified 11 suspect cases and no deaths from the Bhagore sector, of which five cases were from the Hasanpur village, three cases from the Palasali and three cases from Bhagore village. Median age of cases was 7 years (range: 7 months-13 years), 9 were males and 60%(6/10) had received both the measles vaccine and only 40%(4/10) of the cases had received at least 2 doses of Vitamin A after the appearance of rash. The overall attack rate was 1.1 per 1000 for 0-15 years age group, the highest attack rate was seen in Hasanpura Mafi village (2.23 per 1000) followed by Palasali (1.96) and Bhagore (0.7). overall 42% (138/329) of the immunisation session were conducted on the unscheduled day due to vacant ANMs position, highest proportion of unscheduled session were conducted in Hasanpura Mafi village 86% (60/70). The coverage of MCV 1 and MCV 2 as per cold chain point data were 90.6% and 89.3% respectively. A total of two of the five blood samples sent were tested positive for measles IgM.

A laboratory-confirmed outbreak of measles in villages of Bhagore sector with high administrative vaccination coverage and low vaccination coverage among cases suggest the possibility of missing vaccinations due to unscheduled immunization sessions. We recommend monitoring immunization sessions to ensure they occur as per schedule and to assess the reported immunization coverage.

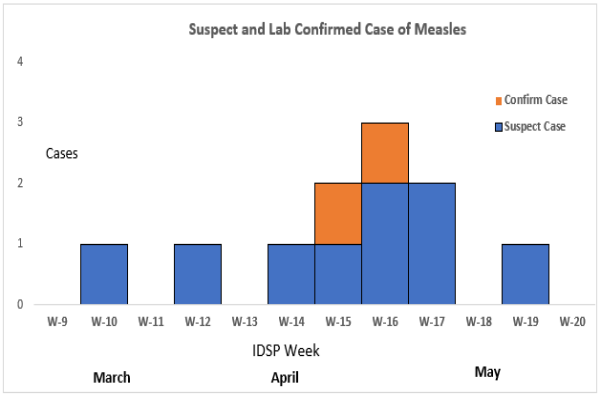


Fig1: Suspected and Lab Confirmed Cases of Measles in Bhagor sector through active case search

Data collection at house of a suspect case in Hasanpura Mafi

Data collection at house of a suspect case in Palasali

Contributed by: Drs Anurag Dhoundiyal, Sushma Choudhary, Mohan Kumar, Ramesh Chnadra

National Review Meeting of Integrated Disease Surveillance Programme

National Review Meeting of Integrated Disease Surveillance Programme (IDSP) was organised in Delhi on 21st and 22nd June 2022. The meeting was inaugurated by Shri Rajesh Bhushan, Sec. (H). The occasion was also graced by Prof. Dr. Atul Goel (DGHS), Shri S Gopalkrishnan Addl. Sec (H), Dr Roderico Ofrin (WR India), Shri Lav Agarwal JS(PH), Dr Sujeet Singh (Director NCDC) and Dr Himanshu Chauhan (OIC, IDSP). Delegates from 35 states/UTs attended the meeting.

During inaugural session, Dr Sujeet Singh, Director NCDC, delivered the welcome address and highlighted the major achievements of the IDSP. Shri Lav Agarwal, JS (PH) requested the States/UTs to rededicate themselves to the cause of Public Health and drew attention towards Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PM-ABHIM) components such as Metropolitan Surveillance Units & EOCs that are coming up. Dr Roderico Ofrin, (WR India) re-iterated the continued support and cooperation of WHO to Ministry of Health and Family Welfare. Shri S Gopalakrishnan, Addl. Sec (H) emphasized the role of Public Health and Surveillance and highlighted the critical role of IDSP and NCDC in the same.

Thereafter, all State Surveillance Units (SSUs) were felicitated for their role in COVID response by the dignitaries. Central Surveillance Unit (CSU), IDSP was felicitated by Health Sectary Sec. (Health) for its contribution towards management of COVID-19 and assistance to States during pandemic.

Review of PM-ABHIM components of all States/UTs were held under the chairpersonship of Addl. Sec (Health) Shri S Gopalakrishnan, in which:

- Deliberations were made on establishment of 5 regional NCDC branches across India.
- Discussions regarding establishment of 20 Metropolitan Surveillance Units across India.
- Establishment of 10 Bio Safety Levels (BSL) and 3 labs. State Surveillance Officers (SSOs) were asked to recognise the nodal officers for these activities.

This was followed by technical sessions interspersed with State presentations for the next one and half day.

I. Discussion held on Integrated Health Information Platform (IHIP). CSU highlighted following points:

a. States with weekly reporting between 90 - 100% on the IHIP portal, were requested to focus on following points to improve data quality.
   i. Daily reporting from Reporting Units (RUs) to be monitored henceforth with a special focus on the non-reporting RUs.
   ii. Increasing the number of average cases reported per reporting unit (especially on P and L forms).

b. States with low reporting (<50%) on the IDSP-IHIP portal to look into the issues such as training of staff, availability of essential logistics etc.

II. Following technical sessions were held during the meeting.

a. Session on revised surveillance strategy for COVID-19 and Whole Genome Sequencing (WGS) was taken by Dr Pranay Verma, JD IDSP.
b. Session on outbreak module of IDSP-IHIP was taken by Dr Saurabh Goel, JD IDSP & Dr Shyam Singhal, WHO IHIP Team
c. Session on IT issues of IDSP-IHIP was taken by Dr Devang Jhariwala, WHO IHIP Team
d. Session on Special Surveillance was taken by Dr Sanket Kulkarni, JD IDSP
e. Session on Laboratory Strengthening under IDSP was taken by Dr Dhara Shah, AD IDSP

Contributed by: Drs. Himanshu Chauhan, Pranay Verma, Harshima Sawlani

NCDC observes 8th International Day of Yoga

Demonstration of Yogasanas

Division of Non-Communicable Diseases (NCD) & Biochemistry, NCDC organized "8th International Day of Yoga" on 16th June 2022 in collaboration with National Center for Vector Borne Disease Control (NCVBDC). The theme of the event was "Yoga for Humanity" which was attended by officers and officials of NCDC, Delhi.

Dr Nupur Roy, Sr. CMO HAG delivered the inaugural speech and highlighted the health benefits of Yoga in day-to-day life. In her address, Dr Bina Sawhney, Sr. CMO HAG emphasized that Yoga brings individual consciousness into alignment with universal consciousness.

Dr. S. Venkatesh, Principal Advisor stated that the International Yoga Day has been playing a significant role in boosting awareness about the benefits of Yoga among people around the world.

Dr Manju Bala, Addl. Dir. & Head, Microbiology, CA&RD & CAZD and Acting Director stressed on the fact that Yoga is one of the best practices, which can be adopted for both physical and mental wellbeing.

Mr Bhupnesh, Yoga Instructor and Ms. Richa, Yoga demonstrator from Morarji Desai National Institute of Yoga, New Delhi explained the benefits of Yoga, and motivated the audience to practice yoga every day. They demonstrated certain Yogasanas, and involved the audience by making them perform yogasanas. Dr. Anshu Sharma, Ex Addl. Director, NCDC spoke on "Yoga & Healthy Living", and she mentioned that yoga along with nutritious diet can boost energy levels, concentration, purify internal organs, maintain body weight and improve posture with regular practice. She also addressed that a combination of yoga and meditation can calm the mind and enhance overall mental health.

Vote of thanks was proposed by Dr Jaikaran, Advisor (PH), Centre for NCD & Biochemistry, NCDC.

Contributed by: Drs. Meera Dhuria, Jaikaran, Garima Srivastava, Mr. Anabarasan, Lalit Kr Tyagi, Vedprakash, Kuldeep Singh, Nitin Kumar, Rajendra Kumar, Amit Kumar Tejania, Sarvendra Yadav, Ms. Reena

Joint Inter-ministerial Declaration on One Health: NCDC leads the way

NCDC is the nodal agency for implementing National One Health Program for Prevention and Control of Zoonoses (NOHP-PCZ). The program has been approved as part of the umbrella scheme of NCDC for the next 5 years i.e., from FY 2021-22 to FY 2025-26. The key components include: institutionalization of One Health mechanism at all levels, integrated capacity building programs of medical, veterinary and wild life work-force on zoonoses, strengthening surveillance of zoonotic diseases, integrated community outreach program, advocacy and risk communication and operational research.

The programme is now being expanded to improve intersectoral collaboration by establishing sentinel surveillance sites for zoonoses to bridge the gaps in existing surveillance mechanism of Zoonoses, developing integrated community outreach model of One Health at the grassroots and conducting Operational and applied research activities on Zoonoses.

There are many national programs currently running which have well defined subject specific objectives and strategies, and identified institutional mechanism for operationalization of program activities at all levels with One Health Approach. However, the gap still prevails in the implementation of the approach as implementing the concept seems impractical

due to many challenges such as sectorial silos, lack of Standard Operating Procedures (SOPs) for systematic communication, etc.

Therefore, it is envisaged to address the commonalities of these programmes in India by shared vision and creating a unified system of mutual agreement among key stakeholders who have national level representativeness and are empowered enough to make critical decisions and allocate resources as per priorities and in emergencies.

Keeping above factors in mind, the Division of Zoonotic Diseases Programme at NCDC drafted a Memorandum of Understanding (MoU) to institutionalize the "One Health Concept" in India for combating health risks at the Human-Animal Ecosystem Interface, for prevention and control of zoonotic diseases, Antimicrobial Resistance (AMR), and Climate Change aspects.

To achieve the above goal, a meeting was held on 7th June'2022 under the chairmanship of Shri. Lav Aggarwal, JS(PH), Ministry of Health & Family Welfare, Government of India (MoH&FW), to discuss the proposed formal mechanism for institutionalizing One Health in India and to deliberate on the activities being undertaken by various Ministries that require intersectoral coordination.

The Inter-ministerial declaration on One Health is proposed to institutionalize the co-operation and coordination mechanisms among all the stakeholders for the effective prevention and control of endemic, emerging and re-emerging zoonotic diseases, food safety and security, AMR and Climate change related human health challenges in India.

Dr. Sujeet Singh, Director, NCDC highlighted the importance of "One Health" in view of the current epidemiological situation in India with respect to zoonoses, AMR, climate change and the ongoing COVID-19 pandemic.

Shri. Lav Agarwal, Joint Secretary (PH), MoH&FW outlined the objectives of the meeting and encouraged participants to lead the discussion around building of consensus on Joint Inter-ministerial declaration on "One Health" and to pave pathway to facilitate and strengthen coordination at highest level by establishment of "One Health Cell" in each ministry/department and constitution of "National Steering Committee" on One Health.

Representatives from participating ministries/institutes viz. Department of Animal Husbandry & Dairying, Ministry of Earth Sciences, National Disaster Management Authority, Department of Biotechnology, Central Pollution Control Board, NITI Aayog, Department of Science and Technology, informed the participants about ongoing activates at their respective institutions under "One Health" initiative and their future plan of action to further strengthen the One Health approach. They also gave their valuable inputs to achieve inter-sectorial coordination for "One Health" approach.

Glimpses of Meeting on Inter-ministerial Declaration on One Health

Action points of the meeting include sharing the One Health Inter-Ministerial Declaration with all stakeholder ministries/ departments and constitution of Joint Working Group (JWG) on One Health to monitor ongoing activities on One Health, institutional and administrative mechanisms, existing IT platforms for data collection available at all stakeholder ministries/departments and analyzing systemic to suggest policy actions.

Contributed by: Drs. Simmi Tiwari, Ajit Shewale, Tushar N. Nale, Dipti Mishra, Aastha Singh

NCDC celebrates World Blood Donor Day

Participants pledging for Voluntary Blood Donation

Every year on 14 June, World Blood Donor is observed. The theme for World Blood Donor Day 2022 was "Donating blood is an act of solidarity. Join the effort and save lives". The event was organized by Centre for NCD & Biochemistry Division, NCDC in collaboration with NCVBDC on 14th June 2022 with a function attended by all officers, scientists, scholars and staff.

Dr. Tanu Jain, Director, NCVBDC welcomed the dignitaries, officers and officials of NCDC and NCVBDC. Dr Manju Bala, Additional Director, & HoD Microbiology, CA&RD & CAZD and Acting Director, NCDC gave opening remarks. The keynote address on the occasion was given by Dr. S. Venkatesh, Principal Advisor, NCDC. He stated that the World Blood Donor Day commemorates the birth anniversary of Karl Landsteiner, who was born on 14 June 1868 and won the Nobel Prize for discovering the ABO blood group system. Dr. Sunil Gupta, Principal Consultant, NCDC elucidated that there are 3500 blood banks across the country, out of which 1131 are supported by Dte.GHS and National Aids Control Organization (NACO). He also highlighted the fact that nearly 70% of blood is currently being collected through voluntary blood donation, which needs to be scaled up to at least 80 - 90 %.

Guest speaker Dr. Gopal Patidar, Associate Professor, Department of Transfusion Medicine, AIIMS, New Delhi gave a lecture on "Safe Blood Donation Practices". He emphasized on the health benefits of donating blood, and also created awareness that any healthy male or female of the age group of 18-65, with hemoglobin at least 12.5 g/dL and healthy weight (at least 45-50 Kg), is eligible to donate blood.

Dr Meera Dhuria, Joint Director & HoD, Centre for NCD & Biochemistry Division called upon the audience to undertake pledge of solidarity to participate in and support voluntary safe blood donation.

Dr Rinku Sharma, Joint Director, NCVBDC delivered vote of thanks.

Contributed by: Drs. Meera Dhuria, Jaikaran, Garima Srivastava, Mr. Anabarasan, Lalit Kr Tyagi, Vedprakash, Kuldeep Singh, Nitin Kumar, Rajendra Kumar, Amit Kumar Tejania, Sarvendra Yadav, Ms. Reena

NCDC organizes meeting of stakeholders on Integrated Community Outreach Programme for One Health

It is estimated that 60 % of the rural population is still dependent on farming and livestock, this is a most vulnerable section who needs to be educated and informed about the significance of prevention, early diagnoses and control of zoonoses for not only to promote and restore health but also for better care of their livestock and economic security.

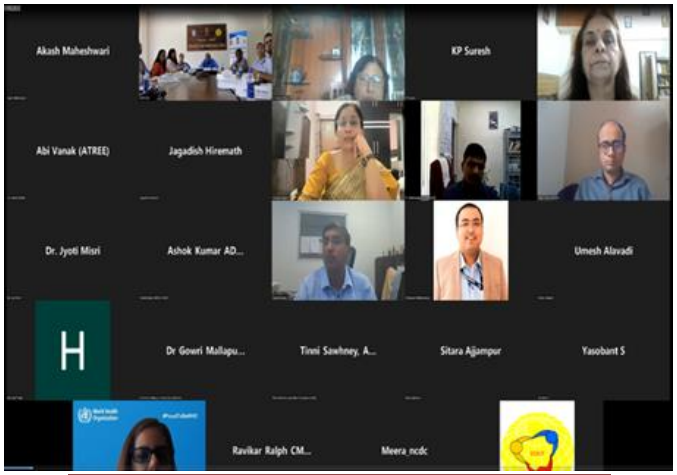
Studies have shown that farmers, animal handlers such as milkers, para-vets, artificial inseminators, pashu-sakhis, pashu-mitra, and forest workers and wild life professionals are classified as High-Risk Groups for being exposed to zoonotic diseases.

Therefore, "National One Health programme for Prevention and control of Zoonotic Diseases" envisages to improve awareness of general community and target audience i.e., animal handlers, agricultural workers etc. on prevention and control of zoonotic diseases. Community awareness on zoonoses may be improved

through community outreach programmes.

The objective of Integrated Community Outreach program on One Health is to foster the One Health concept at block and village level through collaboration with Panchayati Raj Institutions, *Rashtriya Krishi Vikas Yojana* (RKVY), *Pradhan Mantri Krishi Sinchayee Yojana* (PMSKY), Krishi Vigyan Kendra's and other existing outreach programs in the government and private sector.

The Integrated Community Outreach program will be implemented either by the identified Medical/Veterinary College/Institution or through professional organizations/ Protected Health Informations (PHIs)/ Non-Governmental Organizations (NGOs)/ Community Based Organizations (CBOs) and research organizations. This is envisaged to be rolled out on a pilot basis. In this context, each Community Outreach site is expected to serve as Model Public Health Unit using "One Health "Approach at grass root level to address zoonoses at selected sites.



Glimpse of Meeting for Integrated Community Outreach activity

To appraise the stakeholders (Public/Private) about the "Integrated Community Outreach programme" on "One Health" a meeting was organized at NCDC, New Delhi on 2nd June 2022 under the chairpersonship of Dr. S. Venkatesh, Principal Advisor, NCDC, MoH&FW with the objective of appraising the stakeholders (Public/Private) about the program and to identify institutes working in the field on Zoonoses, AMR, and One Health so as to work upon modalities for implementing community outreach models for zoonoses at grass root level. He emphasized the importance of involvement of private sector under "One Health" umbrella for effective implementation of the programme. Meeting co-chairperson Dr. Manju Bala, Additional Director & Head, Microbiology Division, NCDC stressed the importance of multi-sectorial integrated response among medical, veterinary, and related departments for effective prevention and control of zoonotic diseases.

Representative from Ministry of Fisheries, Animal Husbandry and Dairying, Ministry of Agriculture and farmers welfare (ICAR), Central Zoo Authority, National Dairy Research Institute, International Livestock Research Institute also participated in the meeting. The meeting concluded with identification of potential collaborating areas for each participating institute and giving a layout plan for future of actions.

Contributed by: Drs. Simmi Tiwari, Ajit Shewale, Tushar N. Nale, Dipti Mishra, Aastha Singh

NCDC organizes National Symposium on World Environment Day under National Programme on Climate Change and Human Health

The National Programme on Climate Change and Human Health (NPCCHH) organized two-days National Symposium on the World Environment Day on June 9-10, 2022 in Ahmedabad, Gujarat. The theme of this event was "**Health Sector Measures to Mitigate and Adapt to Impact of Extreme Heat".** Ahmedabad developed and implemented South Asia's first heat-health action plan. Efforts of Ahmedabad Municipal Corporation (AMC) under the Ahmedabad Heat Action Plan are well-recognized and serve as a model globally. The event was organized for State Nodal Officers under NPCCHH to get insight from various health-centric measures taken in Ahmedabad city to mitigate health impact of heat with multisectoral coordination.

On day one, a showcase of health facilities and community level measures was organized which included a visit to the Head office of AMC, a tertiary care hospital, a community health centre, a major bus terminus, Ahmedabad Meteorology Centre, GVK Emergency Management and Research Institute.

On day 2, a symposium was held for the state officers under NPCCHH. Welcome address was given by Dr. Sujeet K Singh, Director, NCDC. The other key speakers who welcomed the gathering were Shri. Lav Agarwal, Joint Secretary (Public Health), MoHFW, Mr. Atul Bagai, UNEP (United Nation Environment Programme) India Head, Dr. R. B. Patel, Deputy Director, Epidemics, Health & Family welfare Dept., Gujarat, Prof. Dileep Mavlankar, Director, IIPH, Dr. Chandana Dey, Regional Director, Regional Office of Health & Family Welfare. This was followed by technical sessions on National Action Plan on Heat-Related Illnesses (NAPHRI) by Dr. Purvi Patel, Sr. Consultant, NPCCHH. The states presented posters/PPT on actions taken and planned in health sector to reduce health impacts of heat in their population. This was followed by a panel discussion on heat adaptation and mitigation measures in health facility and community. The key speakers were Ms. Eleni Myrivili, Chief Head Officer, Athens, Greece, Mr. B Gautham Baliga, Indian Society of Heating, Refrigerating and Air Conditioning Engineers and Ms. Bhavna Maheriya, Mahila Housing Trust. Dr. Aakash Shrivastava, Addl. Director and HoD Centre for Environment and Occupational Health, Climate Change and Health, NCDC highlighted lessons learnt and outlined the way forward. Nodal officers from 22 states/UT participated in the workshop. Details of the proceedings are available at https://bit.ly/npcchheat.

Participants of the workshop

Contributed by: Drs. Purvi Patel, Aakash Shrivastava and NPCCHH team

NCDC organizes National Workshop on "Green and Climate Resilient Healthcare Facilities Infrastructures" under National Programme on Climate Change and Human Health

The National Programme on Climate Change and Human Health conducted a "National level workshop on Green and Climate Resilient Health Infrastructure" at Kerala. The workshop was held in collaboration with the State Health Department of Kerala on 12-13th April 2022 and the theme was "Our Planet, Our Health". The workshop was held for 2 days, Day 1 for field visits and Day 2 for symposium. State Nodal Officers NPCCHH and representatives from 22 State/UTs and health officials from Kerala Health Department attended the meeting in person. Day 1 consisted of field visit to the following healthcare facilities:

Family Health Centre, Noolpuzha serves the tribal population and was deemed 98% in the 'Quality Certification' for Primary Health Centers by Govt of India. It has e-health system, tribal antenatal healthcare program, she toilet (e-toilet), electrical auto rickshaw facilities for elderly, Pratheeksha antenatal house for tribal population, geriatric corner, park and garden for children and a fitness centre cum gym apart from the regular facilities at the Primary Health Centre level.

Family Health Centre, Vazhakkad and Pozhuthana were among the worst hit centers during Kerala floods 2018. The centres were rebuilt as flood resilient infrastructures under "Rebuild Kerala Initiative".

Day 2 consisted of address by Shri Lav Agarwal, JS Public Health, MoHFW, Dr Roderico Ofrin, WHO India Representative, Dr Sujeet K. Singh, Director, NCDC, Dr Narasimhaugari T L Reddy, (IAS) DC, Kozhikode, Dr Aakash Srivastava, Head, NPCCHH (HQ) NCDC, Dr Meenakshy V, Additional Director, Public Health, Department of Health Kerala.

The morning session included a session on Green and Climate Resilient Healthcare Infrastructure – scope under NPCCHH/NHM and Feedbacks from the field visits, by Dr. Rameshwar, Deputy Director, NPCCHH with support from the Centre of Excellence (Dr. Poornima Prabhakaran, PHFI).

This was followed by posters and PowerPoints presented on the subject by the states. The afternoon session had sessions on success stories from concerned departments of Kerala

- Carbon Neutrality through Community engagement - Carbon Neutral Meenagadai, Wayanad by Ajith Tomy, Programme Coordinator, Thanal.
- Intersectoral/Interdepartmental collaboration - Energy Audit and Interventions through Energy Management cell, by Sh. Aneesh Rajendran, Energy Technologist, Energy Management Centre, Kerala
- Vulnerability Assessment of Health care facility – findings & lessons learnt from an initial attempt by Dr Manu, State Nodal Officer NPCCHH, Kerala.
- In the final session the states were split into five groups to plan their green and climate resilient health Infrastructure for respective States and present the same for discussion by panel.

The meeting ended on a high note with concluding remarks from officials from NPCCHH (HQ) NCDC

Way forward:

1. State Programme officials NPCCHH are expected to initiate actions in their respective States using lessons learnt on flood resilient healthcare infrastructure from the workshop to
2. State Programme officials NPCCHH are expected to strengthen adoption of green (low carbon emissions) and environment friendly measures in health care facilities of respective States such as installation of solar panels in health facilities etc.

State Health Nodal officers visit FHC Noolpuzha

Contributed by: Drs Rameshwar Sorokhaibam, Nivethitha N Krishnan, Aakash Shrivastava, NPCCHH Team

NCDC organizes EIS Programme Mentors Workshop

A mentors' workshop was arranged by the Epidemiology Division of National Centre for Disease Control (NCDC), Delhi in collaboration with US Centre for Disease Control (CDC) in the city of Bhopal, Madhya Pradesh on 8th and 9th April 2022. The inaugural session was chaired by Dr S.K.Singh- Director NCDC, Dr Meghna Desai- Country Director US CDC, Dr S.K. Jain- Advisor NCDC, Dr Arti Bahl- Additional Director NCDC and Dr Swati Goyal- Associate Professor Gandhi Medical College.

The inaugural session was followed by technical sessions spread over 2 days. The sessions were conducted by experts from US CDC: Mr Christopher Stallard, Mr Tony Rucker and Miss Hayley Moretz. The participants of the workshop comprised of both current and previous supervisors and mentors of the EIS Officers. Additionally, few public health experts of different governmental and non-governmental organization who were identified as potential mentors by the programme were also invited to attend the workshop.

The first day of the workshop began with a round of introduction of the participants followed by an ice breaking session. The participants were then told about the concept of colour spectrum and it was explained with examples and case scenarios how person with each dominant colour trait behaves and responds to different situations. This session gave an insight on how each person reacts differently to the same situation and how one's point of view is influenced by their dominant colour trait. This session was followed by the session on "Qualities of ideal mentor". First day of the workshop also had two PowerPoint presentations by Dr Arti Bahl and Dr Meghna Desai. They spoke on the topics of "India FETPs and EIS program, overview of EIS CALs" and "FETP global perspective (impact, IHR indicator)" respectively.

The second day of the workshop began with presentations by the officers of Epidemiology Division, NCDC. The first presentation was on "SOPs on FETP officer deployments: placement site and public health response" by Dr Ramesh Chandra and the second was on "Role and responsibilities of supervisors/mentors: Opportunities and resources" by Dr Tanzin Dikid. The second day was dedicated to the topics on situational leadership and how to be a better mentor. There was discussion on "Johari Window", effective communication strategies, role of effective mentorship. The workshop was concluded with the topic on Learning Management System (LMS) and the future of India- EIS Programme.

Contributed by: Drs Farah Yesmin, Arti Bahl, Tanzin Dikid, Ramesh Chandra

Group photograph of the participants in the inaugural session

News From Around

World Health Day: "Our Planet, Our Health"

World Health Day is celebrated every year on April 7 to commemorate the foundation day of the World Health Organization (WHO). It was celebrated for the first time on April 7, 1950, which marked the beginning of World Health Day. Each year, the WHO has a theme for this day, which is highlighted in schools, seminars, workshops, and discussion forums. The campaign aims to raise awareness about overall health and well-being across the globe, as well as encourage gratitude for our health and better self-care. A wide range of outdoor activities, as well as charity drives and fundraisers are organized. During World Health Day, public health issues that affect the international community are brought to the forefront. For World Health Day 2022, the theme was **"Our Planet, Our Health"**, which aims to focus global attention on the health of our planet and its inhabitants.

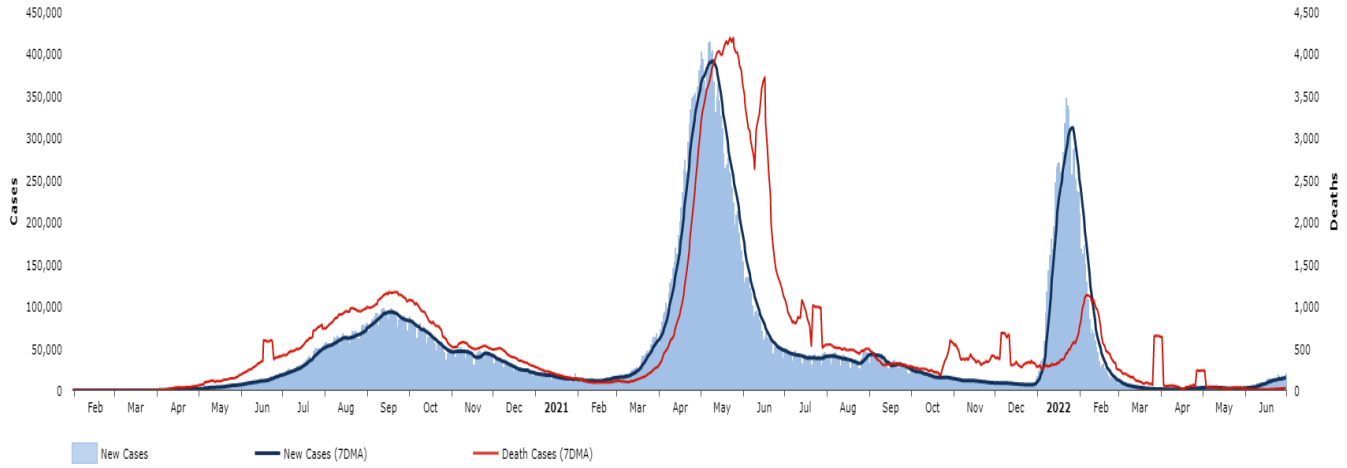
The Government of India is undertaking tireless efforts in this direction to improve the health infrastructure in the country. The focus is on providing citizens with high-quality, affordable health care. In order to achieve this, the Union Government has undertaken the following initiatives to make healthcare more affordable, accountable, and accessible to all citizens;

1. Ayushman Bharat is one of the most ambitious health programs ever proposed in India, with the goal of extending universal coverage of health care to rural and vulnerable communities**.**
2. Aiming to strengthen Medical Education across India, there have been 93% increases in postgraduate seats from 31,185 in 2014 to 60,202 by 2022. From 387 medical colleges in 2014 to 596 in 2022, the number has increased by 54%.
3. The Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) is an initiative launched by the Department of Pharmaceuticals in November 2008 in association with Central
4. Pharma Public Sector Undertakings to provide affordable quality medications to the masses. The number of stores has grown to 8,675 as of 31st January, 2022.
5. Mission Indradhanush (MI) was launched in December 2014 with the goal of increasing full immunization coverage to 90% of children. As of April 06, 2022, 3.86 crore children and 96.8 lakh pregnant women have been vaccinated.
6. eSanjeevani (National Telemedicine Service) is an innovative technology intervention designed, implemented, and operationalized by C-DAC, it enables remote doctor consultations by leveraging information technology.
7. The Government of India aims to have TB Mukt Bharat by 2025. Lakshadweep (UT) and Budgam (J&K) are the first in the country to be declared TB-Free. Integrating with Ayushman Bharat TB preventive treatment has been expanded to include 5+ children. In recognition of World TB Day 2022, the Department of Biotechnology launched "Dare2eraD TB" - data-driven research to eradicate TB.
8. On the 27th of March 2014, India was certified Polio free by the Regional Polio Certification Commission.
9. The Government of India is tackling Covid-19 through a five-tier strategy of test-track-treat-vaccinate and COVID-appropriate behaviour that involves the Whole of Government and Whole of Society approach. As of April 07, 2022, India had vaccinated over 185.20 crore people.

Contributed by: Dr Priyanka Khuda,
(Extracted from PIB &WHO)

Surveillance Section

Covid trends under IDSP



***Source IHIP portal-** https://ihip.nhp.gov.in/idsp/#!/covid19page1

Fig.1: Time Distribution of COVID-19 cases (new cases and death cases)

IDSP-IHIP is monitoring trends of COVID-19 since the start of pandemic. As on 30th June 2022, a total of 4,34,52,164 confirmed COVID-19 cases with 104,555 active cases and 5,25,116 deaths have been reported on IHIP. India's 1st peak started around 11th April 2020 and the cases peaked on 19th September 2020. Subsequently, the cases declined to reach very low 7-Day Moving Average (7-DMA) on 11th Feb, 2021. 2nd peak started around 26th Feb 2021 and the cases surged on 8th May 2021. 3rd peak started around 29th December 2021 and cases surged on 21st January 2022, thereafter cases started to decline with decreased number of new cases of 7-DMA on 16th April, which subsequently started to rise on 29th May 2022. IDSP consistently monitors and issues timely advisory to the states for containment measures.

Contributed by: Drs. Himanshu Chauhan, Jyoti, Chitrangada Mistry

Leptospirosis surveillance under IDSP

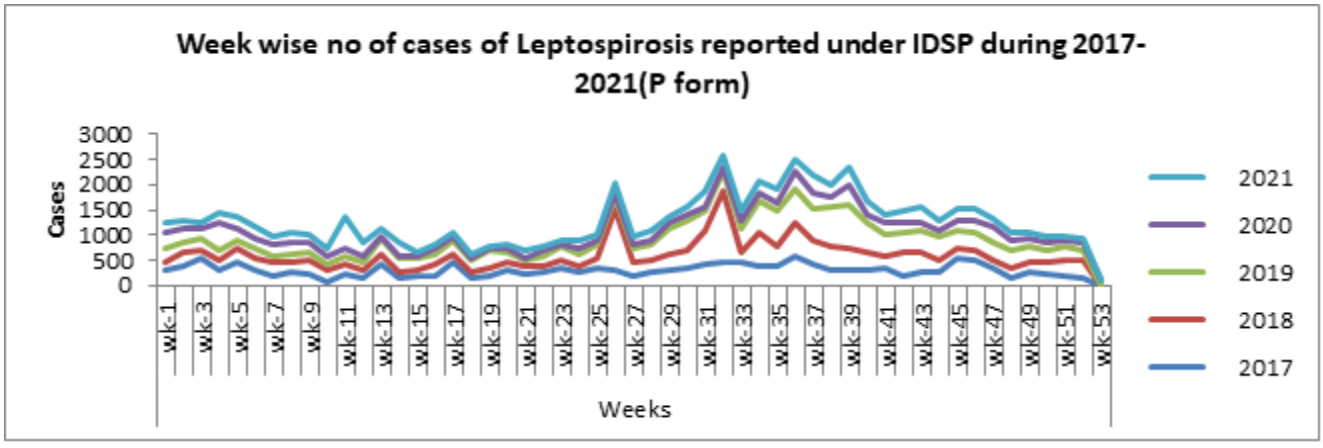


Fig.1: Weekly trend of Leptospirosis cases under IDSP (2017-2021)

IDSP collects and monitor the weekly data on epidemic prone diseases in its surveillance system through P (Probable) & L (Laboratory confirmed cases) forms. The weekly surveillance has helped in early identification of outbreaks and responding to them in a timely manner.

The P form surveillance under IDSP (Fig.1) shows that the cases tend to increase slightly during the second half of the year, which coincides with the monsoon season. Highest case load was reported in the year 2018 (1417 cases) and lowest was reported in the year 2020 (33 cases).

Similar trend is visible in L form surveillance (Fig.2) where laboratory confirmed cases tend to rise during the second half of the year around monsoon season which peaks in September.

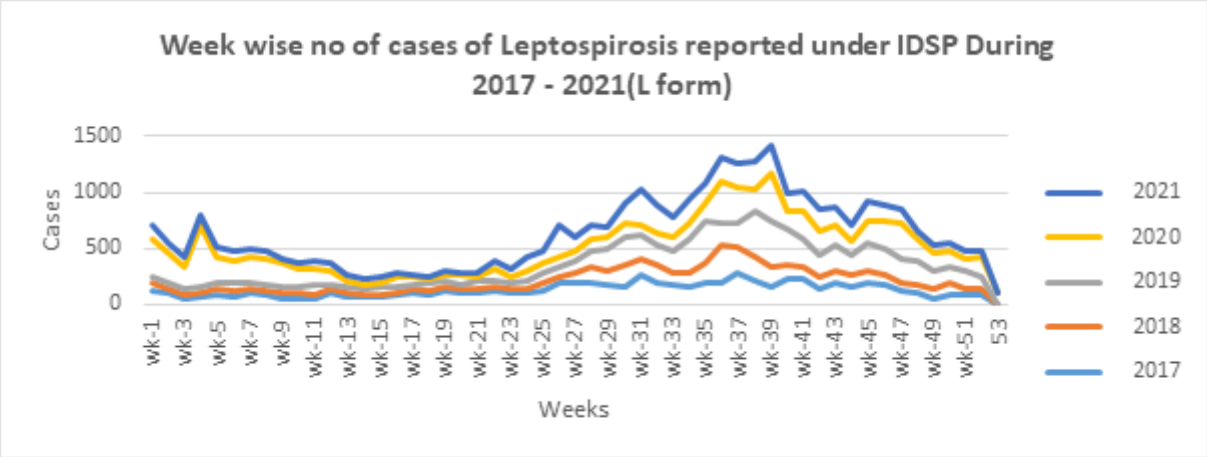


Fig.2: Weekly trend of Leptospirosis cases in L-form under IDSP (2017-2021)

S.no	States name	2017	2018	2019	2020	2021	Grand Total
1	Assam		1		3	11	15
2	Daman & Diu			1			1
3	Haryana					1	1
4	Karnataka	1		1		2	4
5	Kerala		1	3		1	5
6	Madhya Pradesh				4		4
7	Maharashtra	1	1	3	6	6	17
8	Tamil Nadu	3	4	7		2	16
9	Uttar Pradesh					1	1
	Grand Total	**5**	**7**	**15**	**13**	**24**	**64**

State wise number of Leptospirosis outbreaks reported under IDSP (2017-2021)

Majority of outbreaks have been reported from Maharashtra, Tamil Nadu and Assam.

Contributed by: Drs. Himanshu Chauhan, Jyoti, Chitrangada Mistry and Ms Sujata Malhotra

National Heat-Related Illness Surveillance under National Programme on Climate Change and Human Health

Many parts of India experienced multiple heat waves in summer 2022 with hottest March temperatures in recorded history. Long and frequent heat wave alerts were issued across the country. Such concurrent heat waves increased risk of multiple health impacts due to increased power demand, fire hazards and crop damage.

National Heat-Related Illness (HRI) surveillance, a passive, seasonal surveillance of most severe form of HRI from 23 heat-prone states, started on March 1, 2022. Specifically, it entailed daily reporting of suspected heatstroke cases and deaths, and confirmed heatstroke deaths from health facilities primary level (i.e PHC) and above. Reporting of aggregates i.e. daily emergency OPD visits (in casualty, paediatrics and/ medicine units) and all caused deaths were also collected from the health facilities.

Reporting began with four states, submitting reports in March which increased to 20 states by

June. Uttarakhand, Arunachal Pradesh, Maharashtra were some of the states that reported more consistently than other states. Anincrease in suspected heat stroke cases was observed with highest number of cases (1,856) reported in May 2022. Similarly, an increase in total emergency OPD visits was also observed (Table 1). However, it should be taken into consideration that reporting increased by states during those months. Total 4,481 suspected heatstroke cases and 63 suspected heatstroke deaths were reported in 2022. With 173 confirmed cardiovascular disease (CVD) deaths, total deaths reported were 534, which is likely highly under-reported.

Out of 63 suspected heatstroke deaths, 33 could be confirmed as heatstroke deaths. Among of 33, 30 (91%) occurred during April and May.

Geographically, 27 were reported in Maharashtra, 3 in Odisha, 2 in Telangana and 1 in Andhra Pradesh. Data will be further analysed with environmental variables.

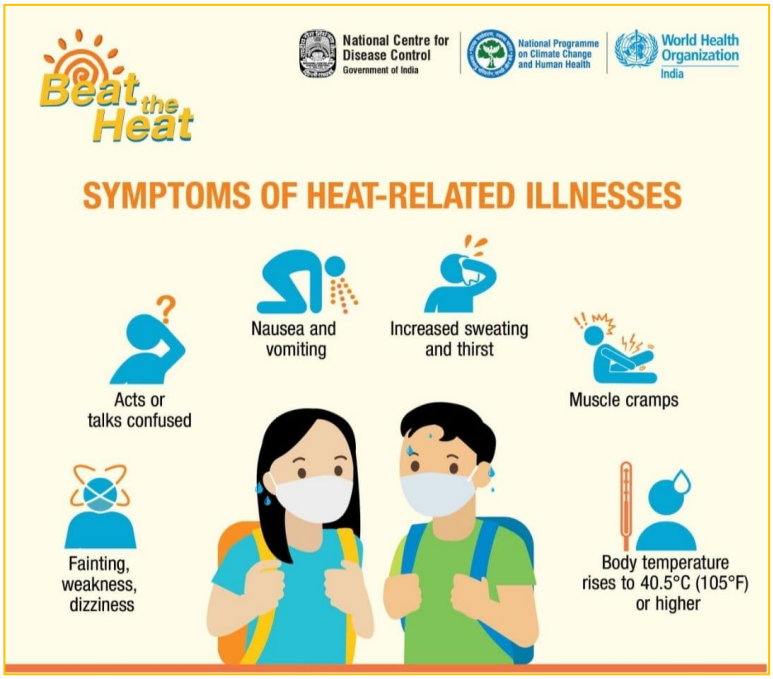
Public Health Action taken

1. Public Health Advisory on Extreme Heat/Heatwave issued by Secretary (H), MoHFW to Chief Secretaries on actionsrequired by states during heat season with guidelines and IEC material.
2. Daily heat wave early warnings by IMD were disseminated to health department and facilities for necessary preparedness.
3. Trainings were conducted on surveillance reporting, clinical aspect of HRI, state heat-health action plans, and monthly surveillance feedbacks were provided to improve reporting.

Month	Total patients of the day (Medicine + Paediatrics + Casualty Emergency)	New cases of Heat-stroke	Cumulative total of Heatstroke cases since 1st March 2022	No of Suspected Heatstroke deaths (a)	No of Confirmed CVD deaths (b)	No of Others including unknown deaths (c)	Total deaths (a+b+c)	New Confirmed Heat-stroke Deaths	Total Cumulative Confirmed Heatstroke Deaths since 1st March, 2022
March	219875	59	59	1	1	36	38	1	1
April	3696882	1,498	1,557	51	13	147	211	16	18
May	4641244	1,856	3,413	9	70	45	124	14	32
June	3778727	1,045	4,458	2	42	31	75	2	33
July	3606976	23	4,481	0	47	39	86	0	33
Total	**1,59,43,704**	**4,481**		**63**	**173**	**298**	**534**	**33**	

Table 1: Month-wise HRI surveillance report, March-July 2022

Contributed by: Drs. Purvi Patel, Aakash Shrivastava and NPCCHH team



Event Calendar NCDC

July – Sep 2022

July 4-8	TOT training under IDSP at AIIHPH, Kolkata
July 28	World Nature Conservation Day observed under NPCCHH across the country along with all the state governments
Aug. 16-19	Scientific Writing Workshop for EIS officers
Aug. 16-21	Water Conservation week observed under NPCCHH across the country along with all the state governments
Sep. 07	National Webinar on "Air Pollution and Health Issues" under NPCCHH in regard to 3rd International day of Clean Air for Blue Skies
Sep. 07-11	International Day of clean air for blue skies observed under NPS ICHH across the country by Allstate governments to spread awareness on air pollution and its impact on health
Sep. 28-29	2-day National level capacity building workshop planned for NPCCHH state nodal officers on air pollution and health concerns at Raipur

Important Health Days

April-7	World Health Day
April-17	World Hemophilia Day
April-19	World Liver Day
April-22	Earth Day
April-25	World Malaria Day
May-6	World Asthma Day
May-8	World Red Cross Day
May-9	World Thalassemia Day
May-12	World Chronic Fatigue Syndrome Awareness Day/International Nurses Day
May-19	World Hepatitis Day
May-22	International Day for Biological Diversity
May-28	International Women's Health Day
May-31	Anti-tobacco Day/World no tobacco Day
June-5	World Environment Day
June-17	World day to Combat Desertification and Drought
June-8	World Brain Tumor Day
June-14	World Blood Donation Day

Dr Sahil Sharma, EIS officer, cohort – 7 has won William H. Foege Award for excellence in oral scientific presentation on an outbreak of "Acute Neurological Illness in Eluru, West Godavari district, Andhra Pradesh, India, 2020" during FETP International Nights 2022

NCDC Buzz

Dr. S. K. Singh @Director_NCDC · Apr 5

Two days physical review meeting of all POEs. APHOs/PHOs/LBHOs and Sr. Regional Directors, ROHFW, MOHFW.
Chandigarh 5th and 6th April 2022. Attended by senior officers of DGHS, Dr Sunil Kumar, Director NCDC, Dr Sujeet Kumar Singh, Director NVBDCP, Dr Tanu Jain

4 18

Dr. S. K. Singh @Director_NCDC · Apr 8

Epidemic Intelligence Services program by NCDC and @US_CDCIndia organised a Mentors Workshop from 8th-9th April 2022 at Bhopal, Madhya Pradesh.

3 16

Dr. S. K. Singh @Director_NCDC · Apr 18

Stakeholders meeting on Public Health Emergency Management (PHEM) on 18-19th April 2022 at Maidens Hotel, Civil Lines; Organized by @US_CDCIndia in collaboration with NCDC. Experts from WHO, NDMA, NIDM, DM cell participated

1 8 23

Dr. S. K. Singh @Director_NCDC · Apr 20

Successfully completed the 1st contact session of 3x3 #EpidemiologyTraining for 2nd batch of #frontlinepublichealthworkforce in Rajasthan 18-20 April
@NhmRJOfficial
@Director_NCDC
#NCDC
@US_CDCIndia #WCOIndia
@WHOSEARO

2 4 20

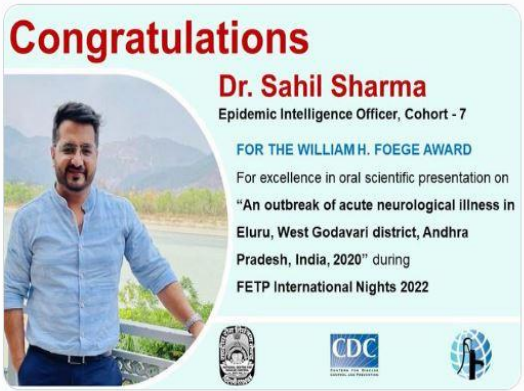
Dr. S. K. Singh @Director_NCDC · May 10

Director NCDC delivering a talk on Public health in India(Past and present) during a 2-day workshop for Integrated Public Health Laboratory and Block Public Health Units at Jaipur, Rajasthan,10th May 2022. CMHOs, Civil engineers, Microbiolosys, Pathologists participated.

2 30

Dr. S. K. Singh @Director_NCDC · May 12

NCDC is proud to announce that, Dr Sahil Sharma, EIS officer from Cohort 7 on winning William H Foege award for excellence in oral scientific presentation in #FETPInternationalNights2022 @DghsIndia @Tephinet @US_CDCIndia #IndiaEIS



1 5 19

For comments and inputs, e-mail ncdcnewsletter21@gmail.com

Address: National Centre for Disease Control, 22-Sham Nath Marg, Delhi — 110 054, India the editorial board does not hold any responsibility for the materials contained in this publication which is based on information available from various sources. Reproduction of material from the NCDC Newsletter, in part or in whole, is encouraged, as long as credits and acknowledgement are given. The article/s may be cited as **Author, Year, Article Title, NCDC Newsletter, Volume (), Issue () Quarter, Page**
Online version of NCDC Newsletter is available at NCDC website www.ncdc.gov.in under Resource/ Digital Library section.