Issue - 4 Vol. 2

मासिक आई डी एस पी निगरानी विवरणी

Monthly IDSP Surveillance Report

A monthly Surveillance Report from Integrated Disease Surveillance Programme
National Health Mission

April 2017

Inside

Outbreak Investigation of Food Poisoning Outbreak at Thakurpukur Mahestala(TM) Block, South 24 Parganas, West Bengal

Introduction

BMOH Bishnupur-II reported a suspected food poisoning outbreak to the Chief Medical Officer of Health, South 24 Parganas. Some patients were admitted at adjacent PHC at Bishnupur-II BPHC though majority of the affected cases were from TM block.

Area Affected

Village Nawbad, Sub Centre Banagram, Gram Panchayat Rasapunja, Block TM Method

Population at Risk

500 (Approx.)

Total no. of cases:

222

Total no. of Hospitalization

12

Place of Hospitalization:

Bishnupur-II BPHC.

Background

Around 500 people of Nawbad (TM Block) village and other adjacent village Kadamtala, Samali Ghosh Para, Bojheria etc of Bishnupur-II Block reported to be suffering from pain in abdomen, loose motion & vomiting, probably, after consumption of Prasad (made with chira (Flattened rice), murki (Popped Rice mixed with Jaggery syrup), boiled milk, whipped curd, dry fruit etc.) of Vaishnav Puja held in Nawbad village.

Epidemiological Investigation

Block RRT along with District RRT visited the affected area. The details of the team member is as below:

District-

i. Dr. Asim Das Malakar, CMOH, South 24 Paraganas
ii. Mrs. Moumita Roy Chakrabarty, Epidemiologist, IDSP, South 24 Paraganas.

Block

i. Dr. Kamalika Majumder, BMOH-TM Block & team
ii. Dr. Anjan Roy, BMOH-Bishnupur II Block & team.

- As per the information, the cases consumed the Maha-prasad on 03.04.17 (around 8 am) & symptoms started at around 11.45 am on the same day.
- Out of this, about 12 patients were admitted in Bishnupur-II Hospital.
- 150 patients were locally treated at medical camp organized by TM Block.
- 72 patients were treated at Bishnupur II BPHC.
- No new cases found since 03.04.17 night (i.e. after 8 pm).
- All hospitalized patients were discharged and were in stable condition

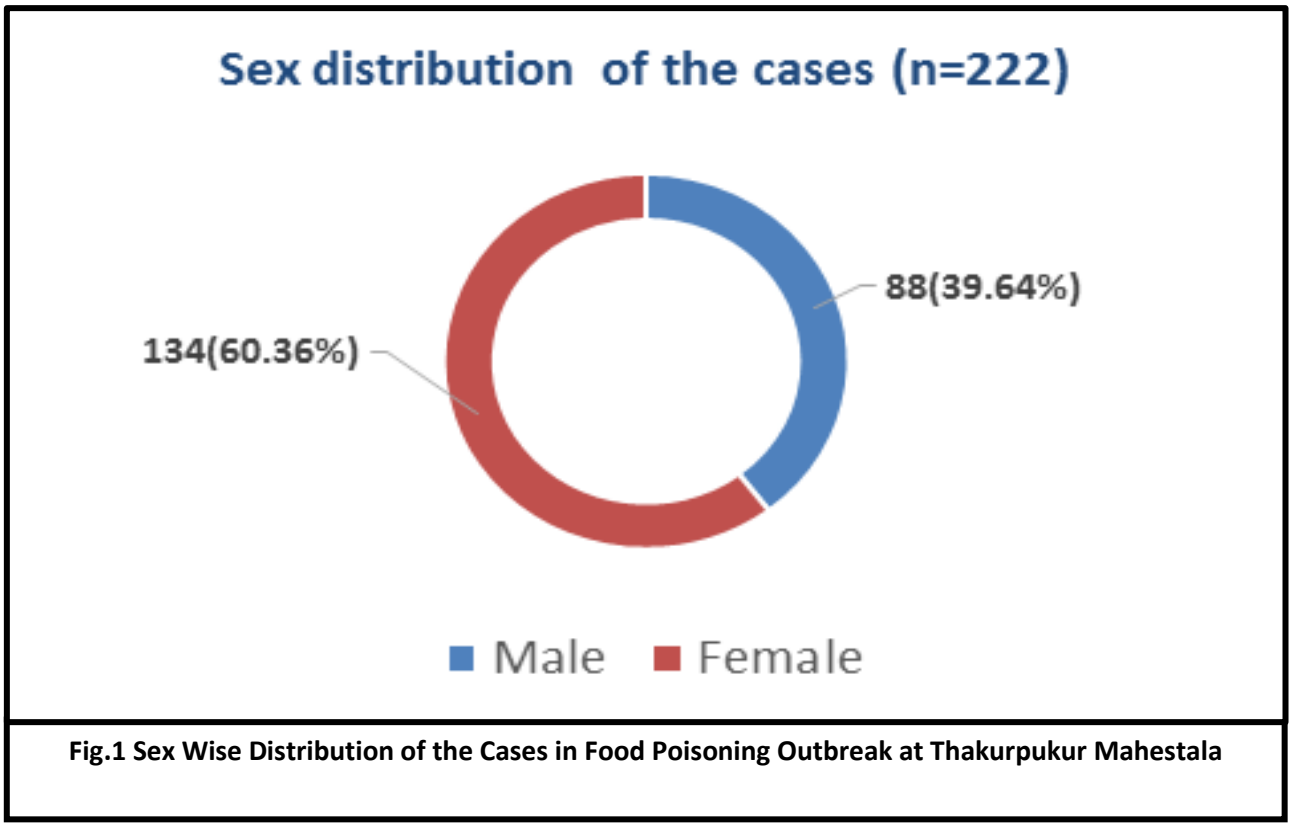


Fig.1 Sex Wise Distribution of the Cases in Food Poisoning Outbreak at Thakurpukur Mahestala

- **Female patients are much more affected.**
- 60.36% of cases are females & 39.64% of cases are males.

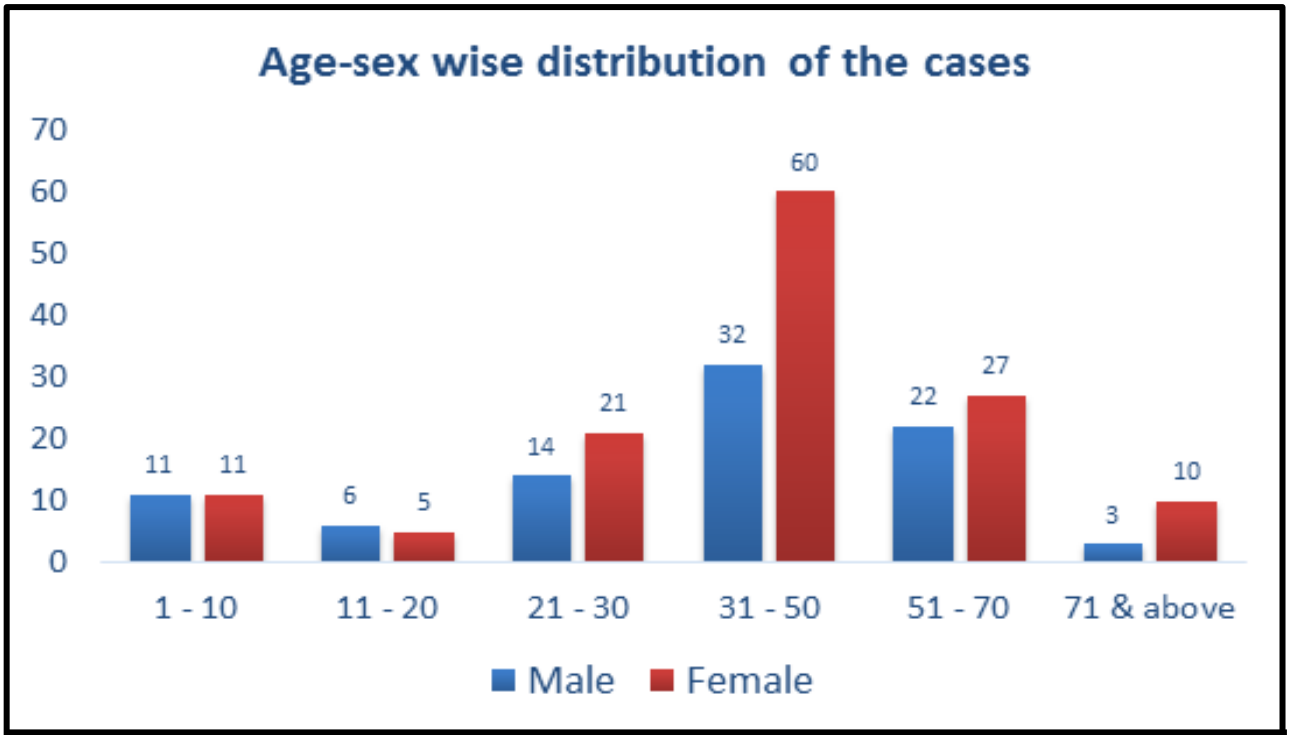


Fig.2 Age & Sex Wise Distribution of the Cases in Food Poisoning Outbreak at Thakurpukur Mahestala

- **In the age group of 31-50 yrs. and 71 yrs. & above females are mostly affected than that of male**

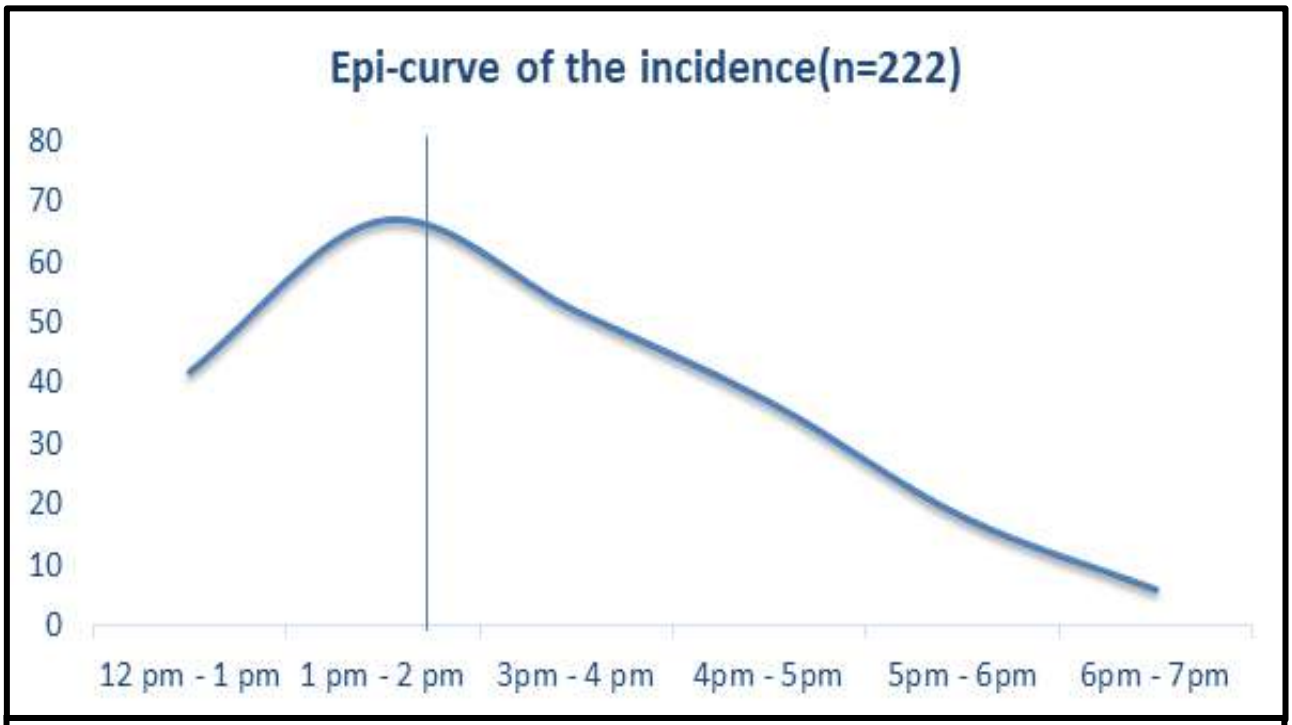


Fig.3 Epi-Curve of the Cases in Food Poisoning Outbreak at Thakurpukur Mahestala

Timely intervention by organizing a medical Camp by the BMOH of the TM Block was done and the patients were treated symptomatically. Some patients were treated at Bishnupur-II BPHC which was adjacent to the place of the incidence. Active case search was done by visiting houses. After getting the food samples results, for further reinforcement, again a camp was organized to sensitize people of that locality & a meeting was held with the Panchayat Member of the locality to prevent further food poisoning outbreak(s).

Lab Investigation:

10 (ten) food samples collected and sent it to Public Health Laboratory on 04.03.17, 2 (two) vomitus samples collected & sent it to School of Tropical Medicine, Kolkata on 04.03.17 & 3 (three) stool samples (Rectal Swab) collected on 03.04.17 & sent it to IPGME&R, Kolkata on 04.03.17.

Results

- All 3 (Three) stool samples results showed no growth of pathogens (bacterial).
- Out of two Vomitus sample, one sample result showed growth of *Staphylococcus aureus*.
- Food samples results indicative of serious food safety concern (yeast & mould, Salmonella & Shigella, *Escherichia coli*, *Vibrio Cholerae*, *Staphylococcus aureus* & a plenty of coliform found in all 10 (ten) food samples.)

Recommendations:

Short Term Recommendation

- Washing hands before taking food or cooking.
- Drinking water should be boiled or should be taken by using halogen tab.
- Patient should be hospitalized if symptoms persists.

Long Term Recommendation

Social conglomeration may be avoided if certain level of necessary precautionary measures such as

a) Processing of food in hygienic manner.

b) Maintaining proper self-hygiene of the volunteers.

c) Proper storage of left-over food materials (such as Prasad) for further distribution

Good Practice:

Same kind of Pujas were going on in the same localities after few days of the above incidence. The Police Department confiscated the food materials used as Prasad and ensured that these events won't take place in those localities any further.

Chickenpox Situational Update, District Maharajganj, Uttar Pradesh

Introduction

Varicella is a highly contagious disease caused by Human Herpes virus 3 also known as Varicella Zoster virus (VZV). The disease is usually benign in immunocompetent children but can be life-threatening in adults and immunocompromised individuals, with an attack rate approaching >85% after exposure. Humans are the only known hosts for this virus. Transmission occur by person to person. Viral shedding occurs from the nasopharynx via droplets and aerosols and also from the skin lesions. The incubation period of the disease is usually 14-16 (range 10-21 days). The contagious period starts 1-2 days before the appearance of the rash and lasts till all the vesicles have crusted, usually within 5-7 days.

The incidence of Varicella in temperate climates is 13-16 cases per 1000 people per year, and is highest in children aged 1-9 years old, although an increased incidence has been observed in children younger than 5 years. In both temperate and most tropical climates, the incidence of Varicella shows pronounced seasonality, with peaks occurring in the cooler months during winter or spring. In temperate climates, epidemics of Varicella have been reported to occur every 2-5 years. The overall case fatality rate in developed countries is 2-4 per 100,000 cases, with the risk of death being highest at the extremes of age. The rate of hospital admission for all ages is 2-6 per 100,000 population, with most admissions occurring in children.

Team Members

1. Dr Saurabh Goel (AD, IDSP, NCDC)
2. Dr Purva Pankaj Sarkate (AD, Microbiology, NCDC)
3. Accompanied by Dr Rajesh (State Epidemiologist, Uttar Pradesh)

Map of Area Affected

Fig.4 Map of Chickenpox Situational Update, District Maharajganj, Uttar Pradesh

Methods

Three teams were formed to visit three areas

a) Village Ganeshpur, Block Ghughuli
b) Village Mishraulia Khas, CHC Ratanpur and
c) Ward No 1

A house to house survey was done to find out any case of fever with rash and all cases occurring since January 2017 were included in the survey.

Observations

Table 1. Area wise number of cases

S. No	Name of area	Total no of cases since Jan 2017	Death	Complications
1	Village Ganeshpur	77	0	Nil
2	Village Mishraulia Khas	12	0	Nil
3	Ward No 1	5	0	Nil
	Total	***94***	***0***	***0***

A total of 94 cases with typical symptoms of chicken pox were line listed in this survey that have occurred since Jan 2017 till 27th April 2017, out of which 86 cases have recovered and 8 cases were in active phase of disease. None of the cases had developed any complication and no death was reported from Chicken pox.

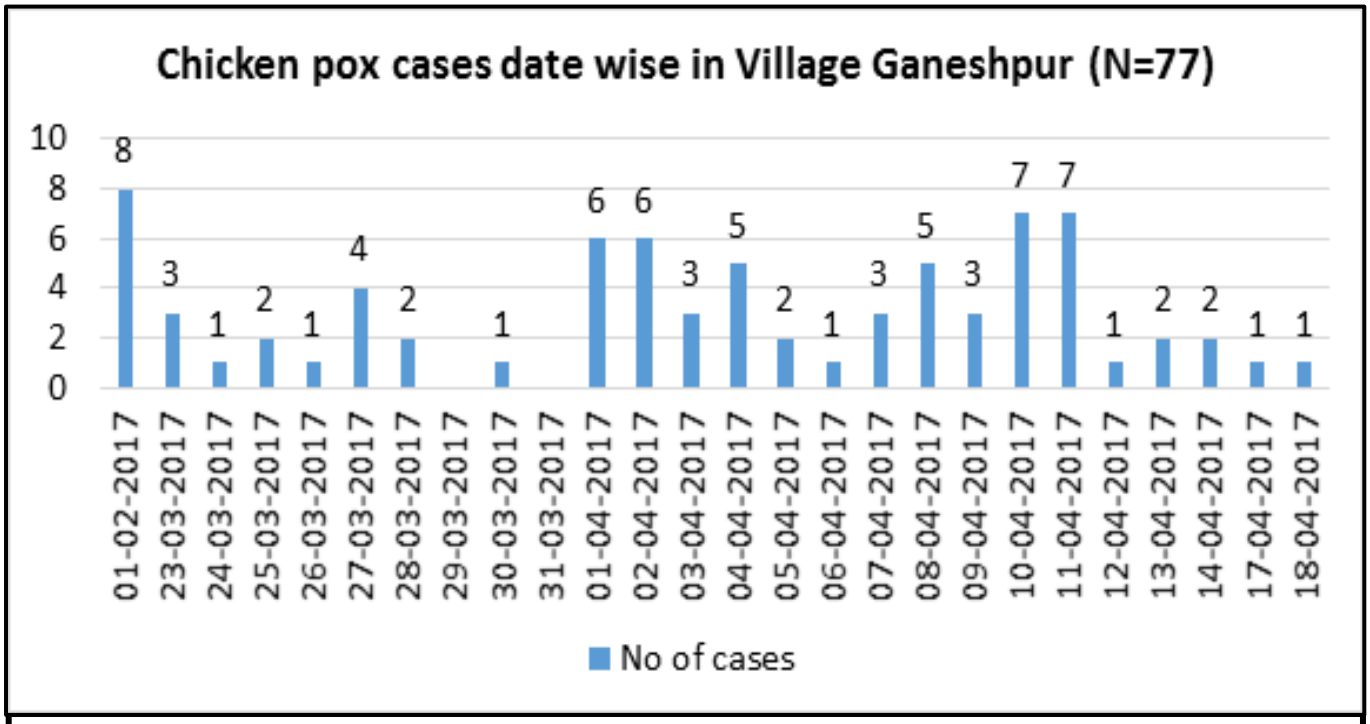


Figure 5. Epi-curve for village Ganeshpur

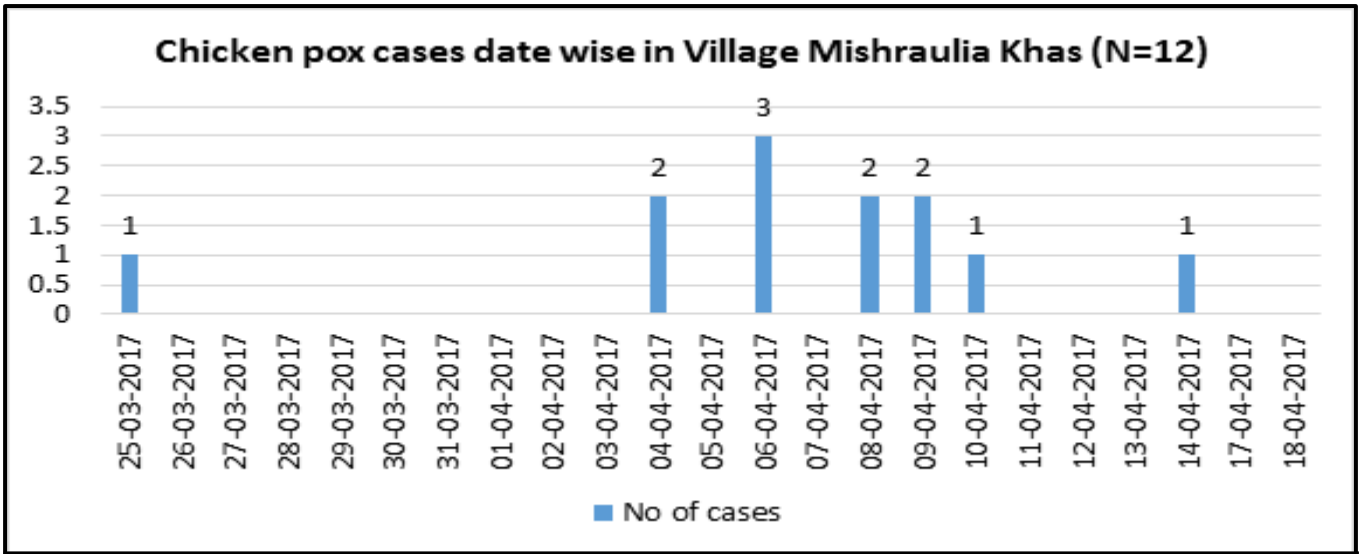


Figure 6. Epi-curve for Mishraulia Khas

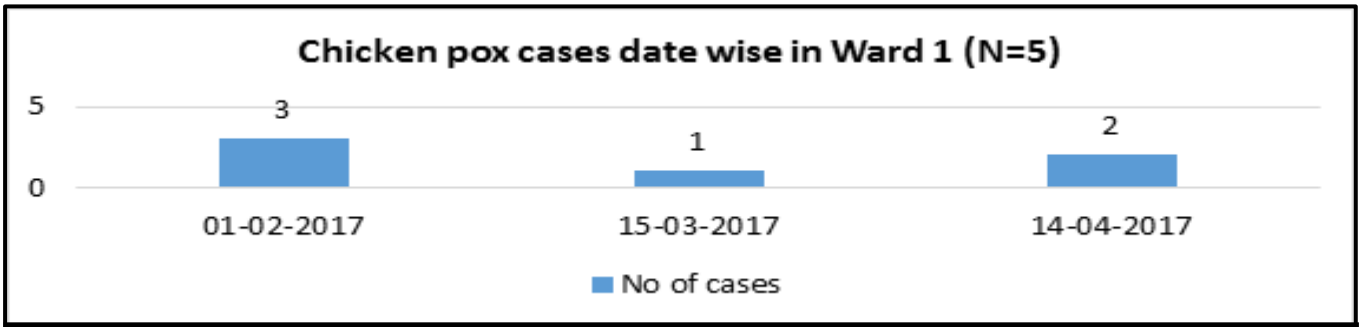


Figure 7. Epi-curve for Ward no 1

From these figures it is evident that maximum cases were found in first half of April 17 in all these surveyed areas. Initial cases of chicken pox have occurred in Feb 2017 although exact dates could not be identified and index case could not be identified

Table 2. Sex Distribution of all cases of Chicken Pox

Place	Male	Female
Ganeshpur	45	32
Mishraulia Khas	6	6
Ward No 1	4	1
Total	***55***	***39***

Of all cases males (58.5%) were more affected than females (41.5%).

Table 3. Age wise Distribution of all cases of Chicken Pox

Age group	No of cases
<=5	19
6-10	45
11-15	17
16-20	7
>20	5
Total	**93**

Apparently maximum number of cases were reported in age group between 6-15 years of age.

Laboratory investigations

Five blood samples were sent to SGPGI Lucknow for IgM ELISA investigation out of which four samples were tested positive for chicken pox and one sample is taken by NCDC team and its result is positive by Ig M ELISA for Chicken Pox.

Results

The team was able to identify 94 cases of chickenpox in the village Ganeshpur, Mishraulia Khas, Ward No 1 while no death was reported from these areas. Males constituted 55 (58.5%) of cases. Majority of cases were reported in first 15 days of April. Maximum affected age group was 6-15 years of age. Total of 6 samples were collected for IgM ELISA for varicella out of which 4 tested positive at SGPGI Lucknow, result of one sample was negative and sample tested at NCDC also tested positive by Ig M ELISA.

Recommendations

1. The District should ensure active case surveillance till the end of outbreak. Concerned Medical officers of PHCs, CHCs and District Hospitals should ensure routine surveillance of community for the occurrence of new cases through peripheral health workers (ASHA, ANMs and similar staff).
2. All identified new cases and existing cases should be treated as per treatment guidelines.
3. All cases and in case of children parents should be counselled to maintain strict isolation of cases from unaffected family members. Family should be counselled to maintain good sanitation of house and their personal hygiene.
4. Children attending school should be advised not to attend school till crusting of all rashes have occurred.
5. State and District Surveillance officer should ensure that all ASHAs, ANMs, Peripheral Health workers, nurses, Medical officers, Physicians and Pediatricians should be sensitized and adequately trained to generate timely S,P and L formats for all diseases under surveillance.
6. District Epidemiologist should ensure complete listing of Reporting units in District Maharajganj, collection of S, P and L forms from all RU, timely data entry and analysis, collection and transportation of adequate samples to appropriate labs.

Surveillance data of Enteric Fever, Acute Diarrhoeal Disease, Viral Hepatitis A & E, Dengue Leptospirosis and Chikungunya During March 2015-2017*

* Data extracted from IDSP Portal (www.idsp.nic.in) as on 24 July, 2017.

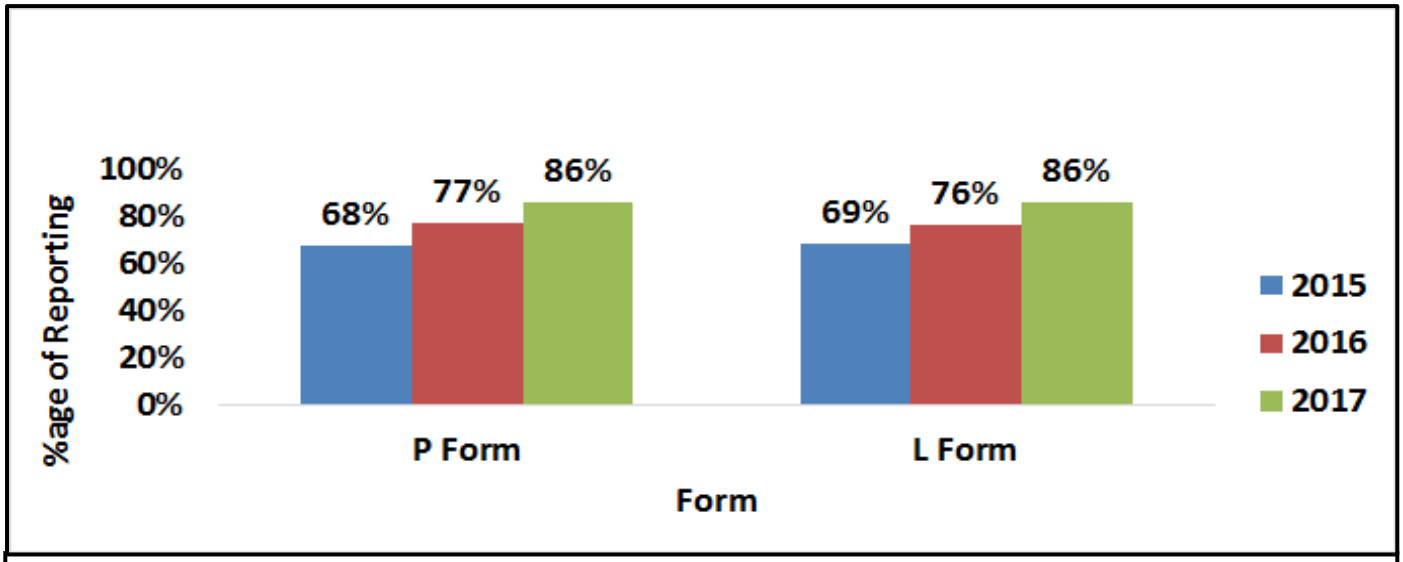


Fig. 8: RU wise Reporting Status based on P & L form during April 2015 - 2017

As shown in fig 8, in April 2015, 2016 and 2017, the 'P' form reporting percentage (i.e. % RU reporting out of total in P form) was 68 %, 77% and 86% respectively across India, for all disease conditions reported under IDSP in P form. Similarly, L form reporting percentage was 69%, 76% and 86% respectively across India for all disease conditions, during the same month for all disease conditions reported under IDSP in L form. The completeness of reporting has significantly increased over the years in both P and L form, thereby improving the quality of surveillance data.

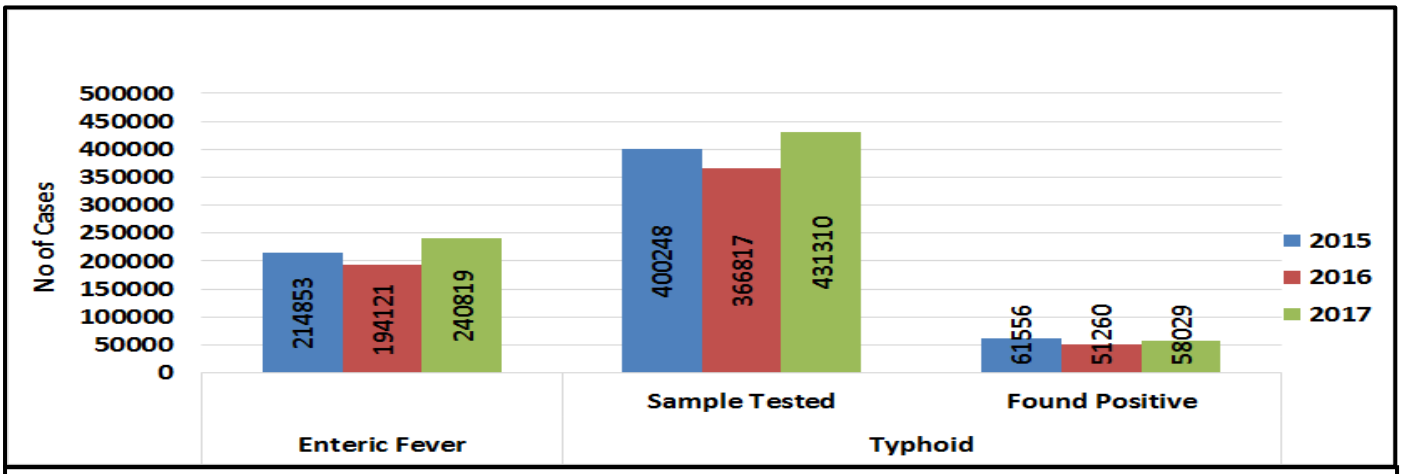


Fig. 9 No. of Enteric Fever Cases reported under P & L form during April 2015 - 2017

As shown in fig 9, number of presumptive enteric fever cases, as reported by States/UTs in 'P' form was 214853 in April 2015; 194121 in April 2016 and 240819 in April 2017. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in April 2015; 400248 samples were tested for Enteric fever, out of which 61556 were found positive. In April 2016; out of 366817 samples, 51260 were found to be positive and in April 2017, out of 431310 samples, 58029 were found to be positive.

Sample positivity has been 15.4%, 14.0% and 13.5% in April month of 2015, 2016 & 2017 respectively.

Limitation: The test by which above mentioned samples were tested could not be ascertained, as currently there is no such provision in L form.

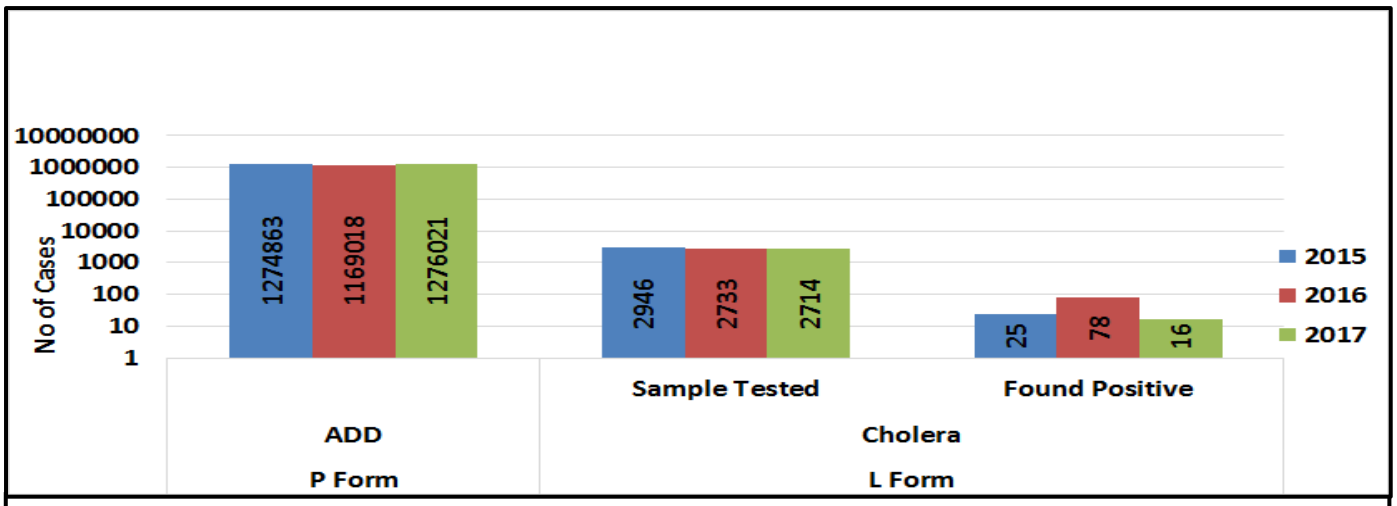


Fig. 10: No. of ADD Cases reported under IDSP in P form & Lab confirmed Cholera cases in L form during April 2015 - 2017

As shown in fig 10, number of Acute Diarrhoeal Disease cases, as reported by States/UTs in 'P' form was 1274863 in April 2015; 1169018 in April 2016 and 1276021 in April 2017. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in April 2015, 2946 samples were tested for Cholera out of which 25 tested positive; in April 2016, out of 2733 samples, 78 tested positive for Cholera and in April 2017, out of 2714 samples, 16 tested positive.

Sample positivity of samples tested for Cholera has been 0.8%, 2.9% and 0.6% in April month of 2015, 2016 & 2017 respectively.

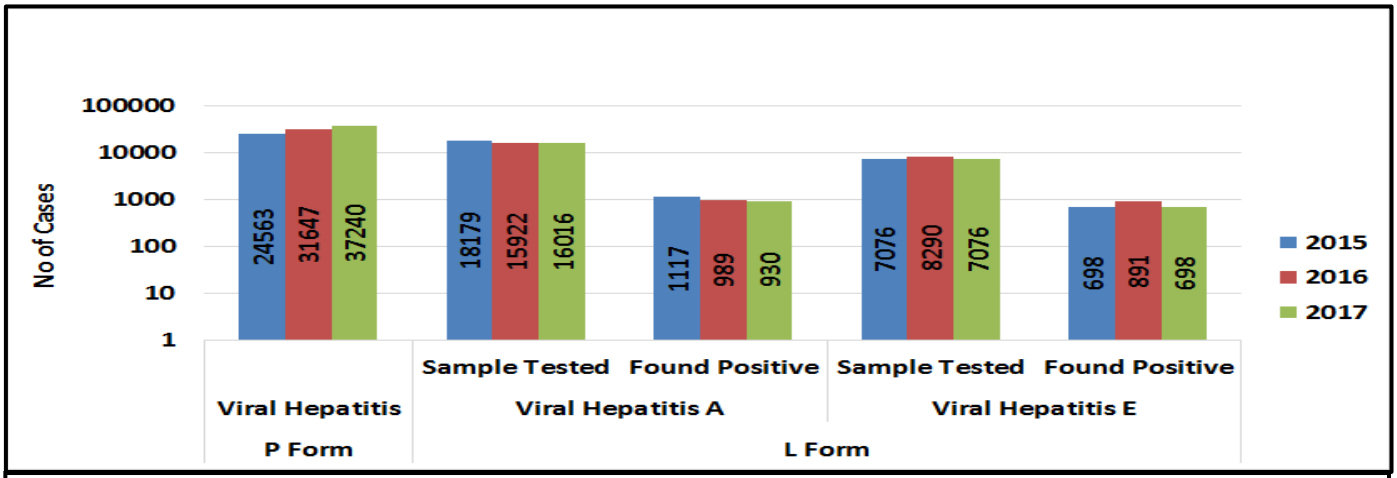


Fig.11: No of Viral Hepatitis Cases reported under IDSP in P form & Viral Hepatitis A & E cases reported under L form during April 2015 - 2017

As shown in fig 11, the number of presumptive Viral Hepatitis cases was 24563 in April 2015, 31647 in April 2016 and 37240 in April 2017. These presumptive cases were diagnosed on the basis of case definitions provided under IDSP.

As reported in L form for Viral Hepatitis A, in April 2015; 18179 samples were tested out of which 1117 were found positive. In April 2016 out of 15922 samples, 989 were found to be positive and in April 2017, out of 16016 samples, 930 were found to be positive.

Sample positivity of samples tested for Hepatitis A has been 6.1%, 6.2% and 5.8% in April month of 2015, 2016 & 2017 respectively.

As reported in L form for Viral Hepatitis E, in April 2015; 5475 samples were tested out of which 493 were found positive. In April 2016; out of 8290 samples, 891 were found to be positive and in April 2017, out of 7076 samples, 698 were found to be positive.

Sample positivity of samples tested for Hepatitis E has been 9.0 %, 10.7% and 9.9% in April month of 2015, 2016 & 2017 respectively.

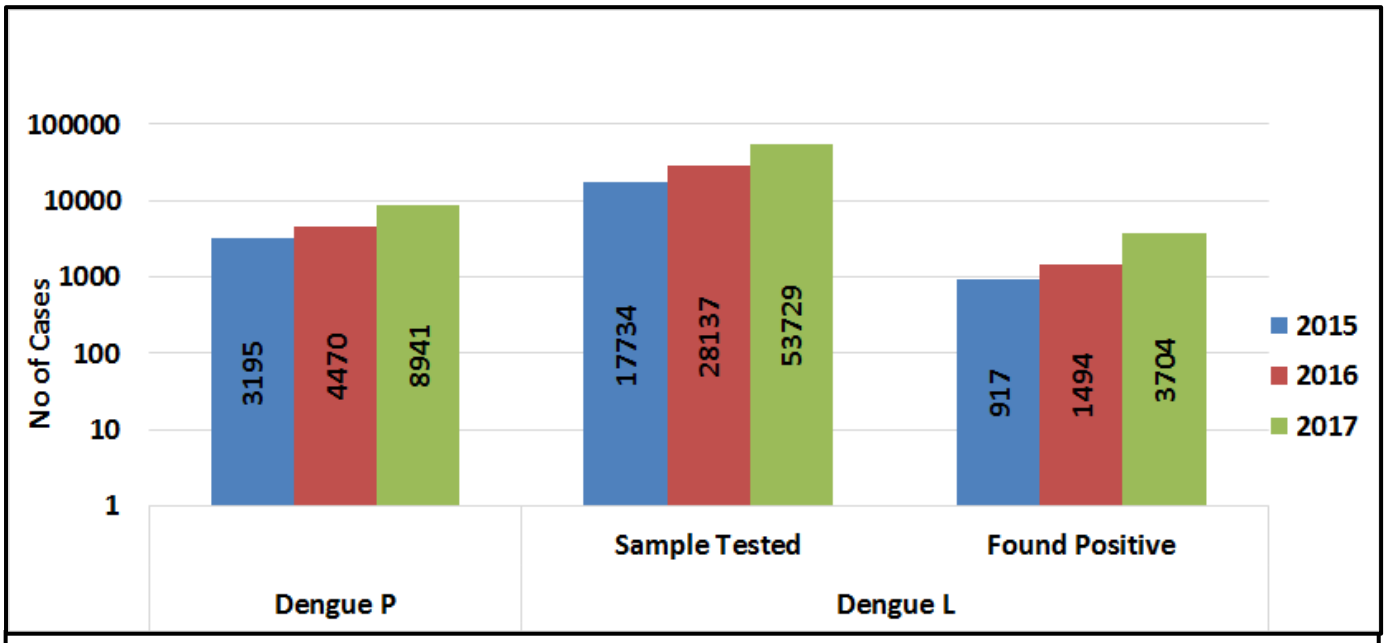


Fig. 12: No. of Dengue Cases reported under IDSP in P & L form during April 2015 - 2017

As shown in fig 12, number of presumptive Dengue cases, as reported by States/UTs in 'P' form was 3195 in April 2015; 4470 in April 2016 and 8941 in April 2017. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in April 2015; 17734 samples were tested for Dengue, out of which 917 were found positive. In April 2016; out of 28137 samples, 1494 were found to be positive and in April 2017, out of 53729 samples, 3704 were found to be positive.

Sample positivity of samples tested for Dengue has been 5.2%, 5.3% and 6.9% in April month of 2015, 2016 & 2017 respectively.

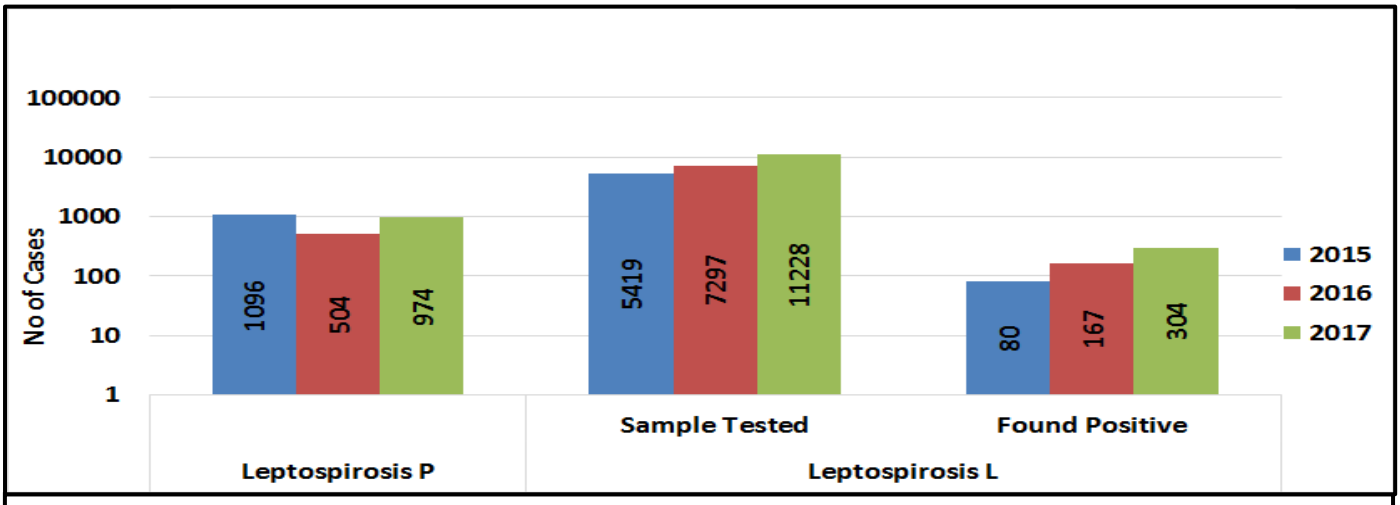


Fig. 13: No. of Leptospirosis Cases reported under IDSP in P & L form during April 2015 - 2017

As shown in fig 13, number of presumptive Leptospirosis cases, as reported by States/UTs in 'P' form was 1096 in April 2015; 504 in April 2016 and 974 in April 2017. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in April 2015; 5419 samples were tested for Leptospirosis, out of which 80 were found positive. In April 2016; out of 7297 samples, 167 were found to be positive and in April 2017, out of 11228 samples, 304 were found to be positive.

Sample positivity of samples tested for Dengue has been 1.5%, 2.3% and 2.7% in April month of 2015, 2016 & 2017 respectively.

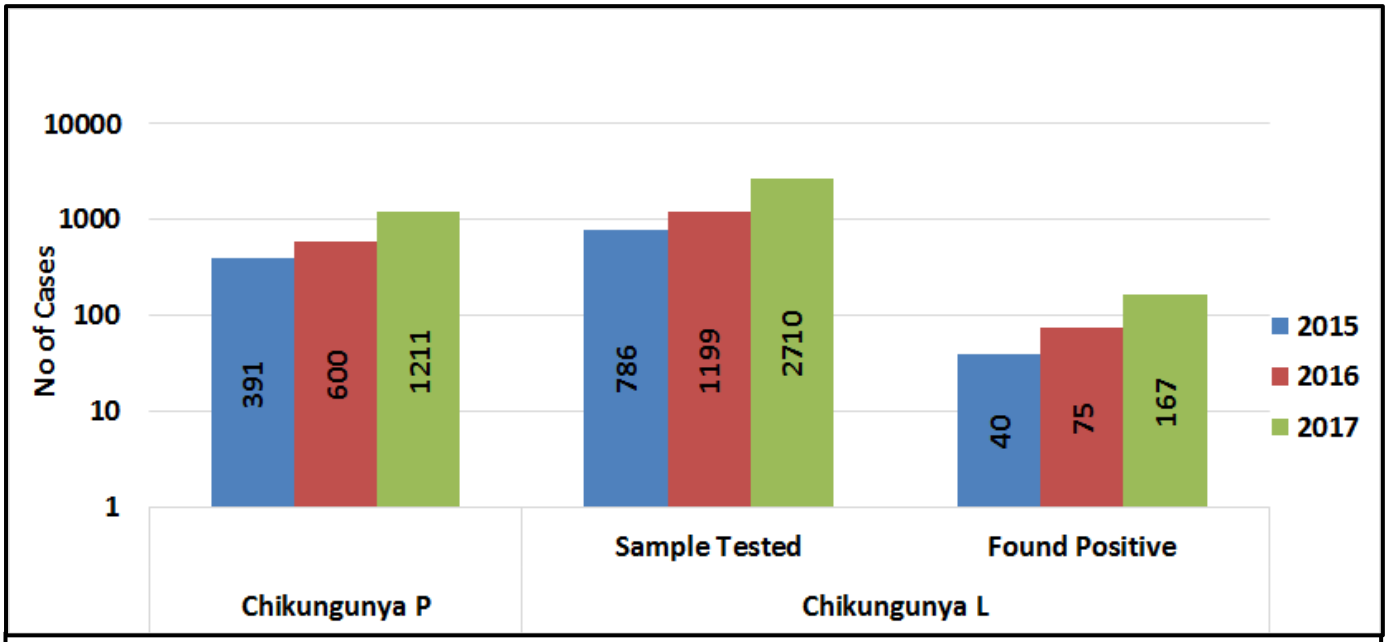


Fig. 14: No. of Chikungunya Cases reported under IDSP in P & L form during April 2015 - 2017

As shown in fig 14, number of presumptive Chikungunya cases, as reported by States/UTs in 'P' form was 391 in April 2015; 600 in April 2016 and 1211 in April 2017. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in April 2015; 786 samples were tested for Chikungunya, out of which 40 were found positive. In April 2016; out of 1199 samples, 75 were found to be positive and in April 2017, out of 2710 samples, 167 were found to be positive.

Sample positivity of samples tested for Chikungunya has been 5.1%, 6.3% and 6.2 % in April month of 2015, 2016 & 2017 respectively.

Fig 15: State/UT wise P form completeness % for April 2017

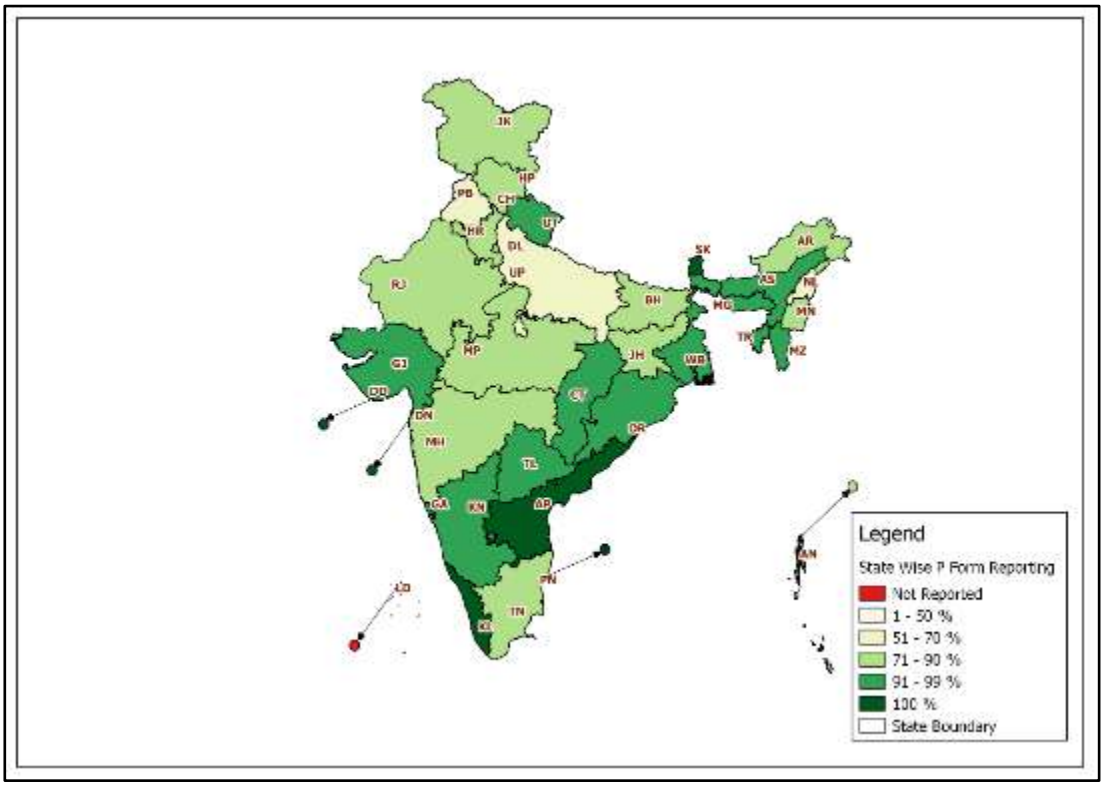


Fig 16: State/UT wise L form completeness % for April 2017

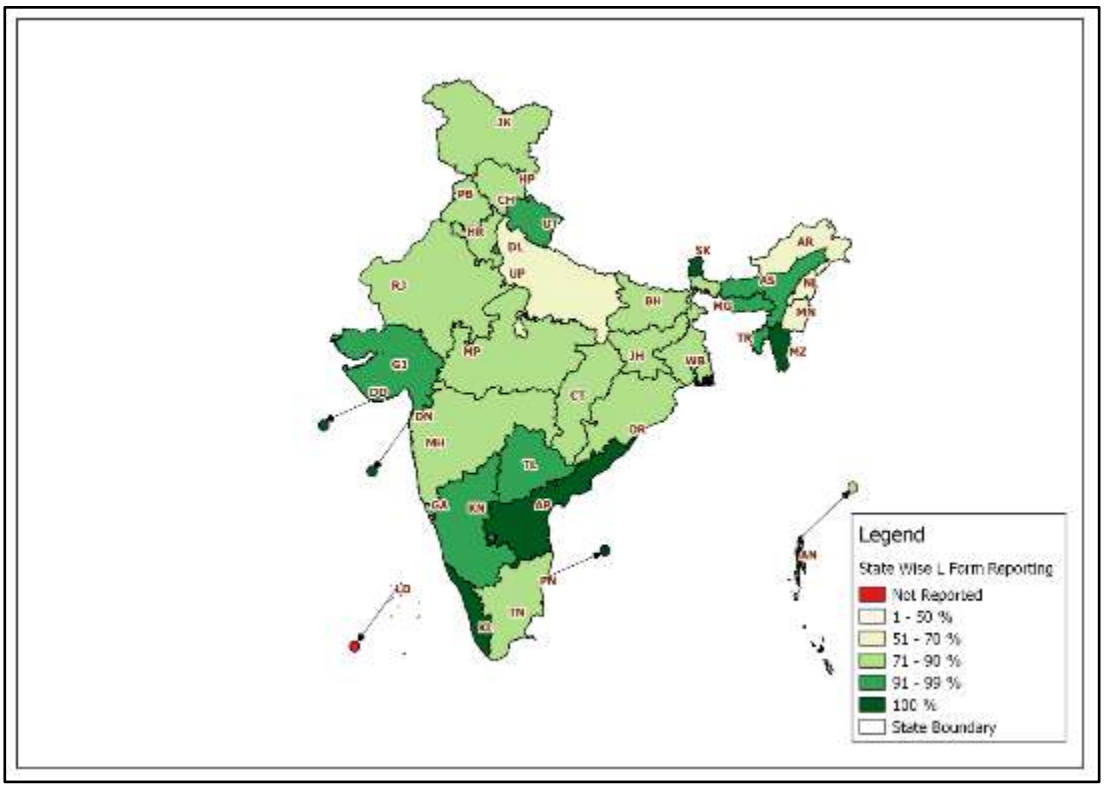


Fig 17: State/UT wise Presumptive Enteric fever cases and outbreaks for April 2017

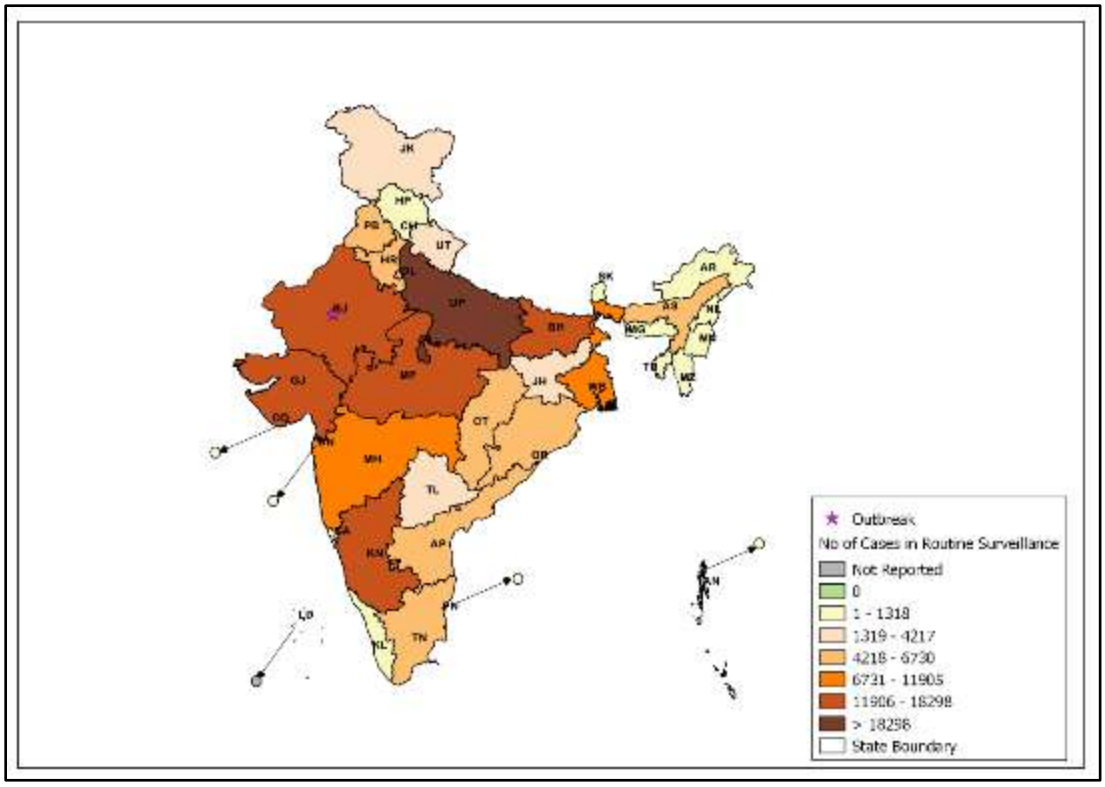


Fig 18: State/UT wise Lab Confirmed Enteric Fever cases and outbreaks for April 2017

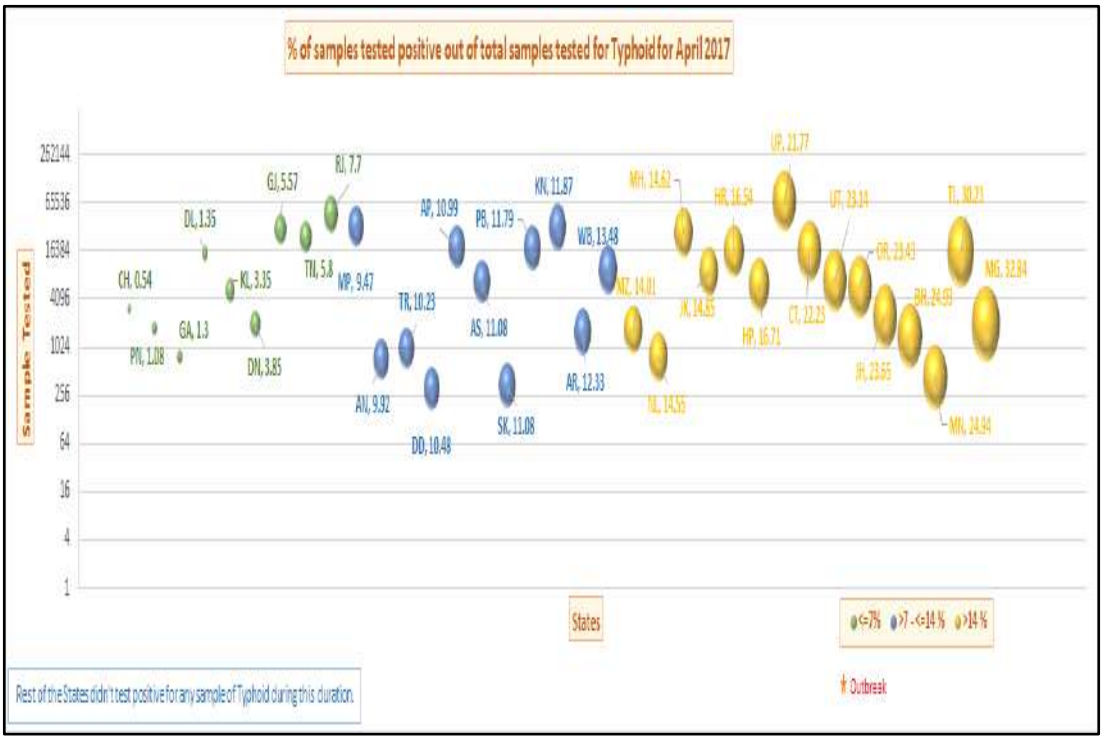


Fig 19: State/UT wise Presumptive ADD cases and outbreaks for April 2017

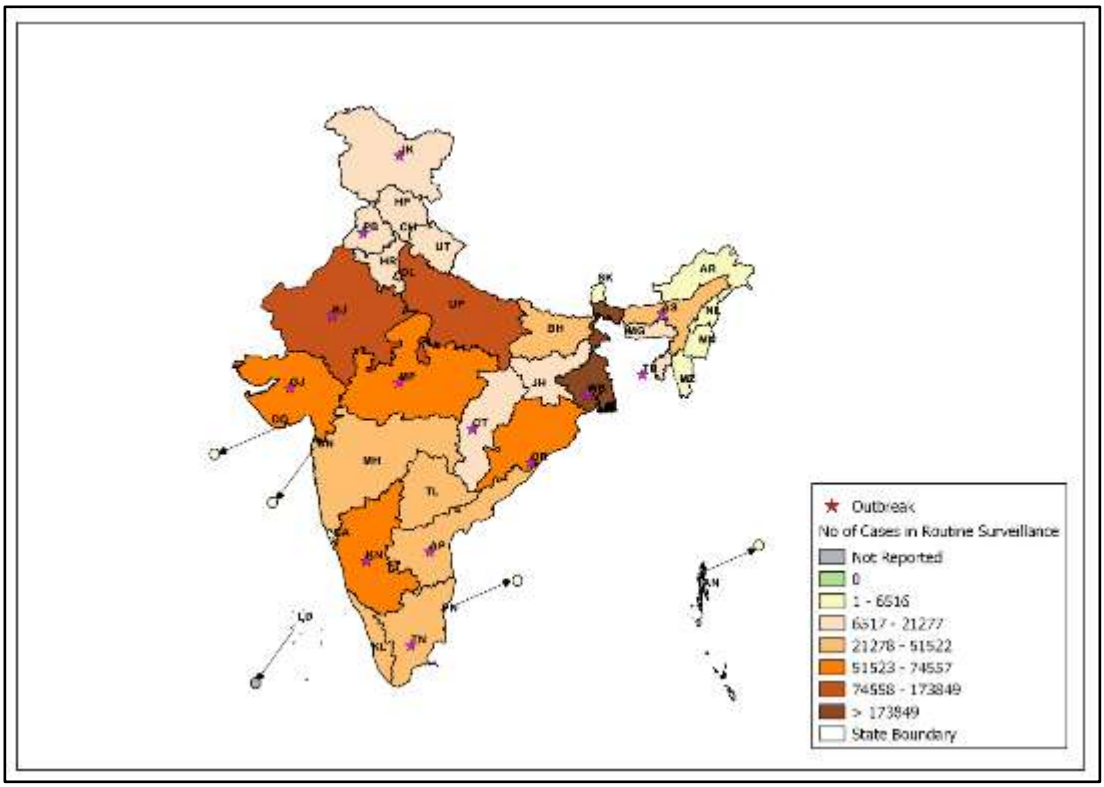


Fig 20: State/UT wise Lab Confirmed Cholera cases and outbreaks for April 2017

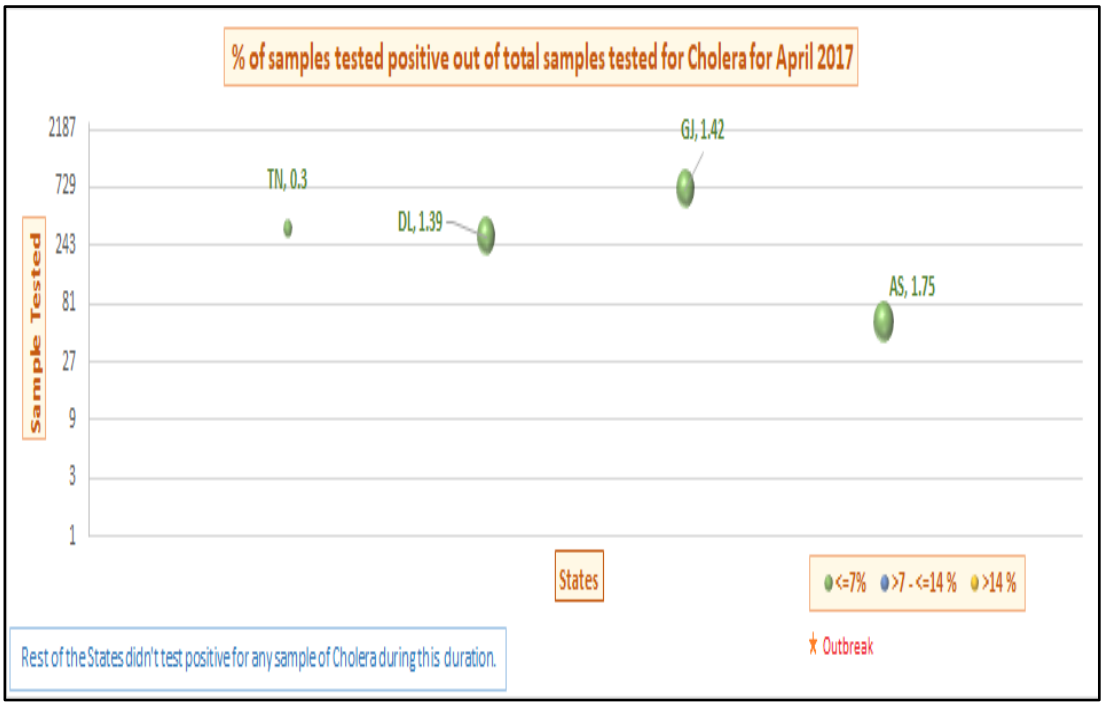


Fig 21: State/UT wise Presumptive Viral Hepatitis cases and outbreaks for April 2017

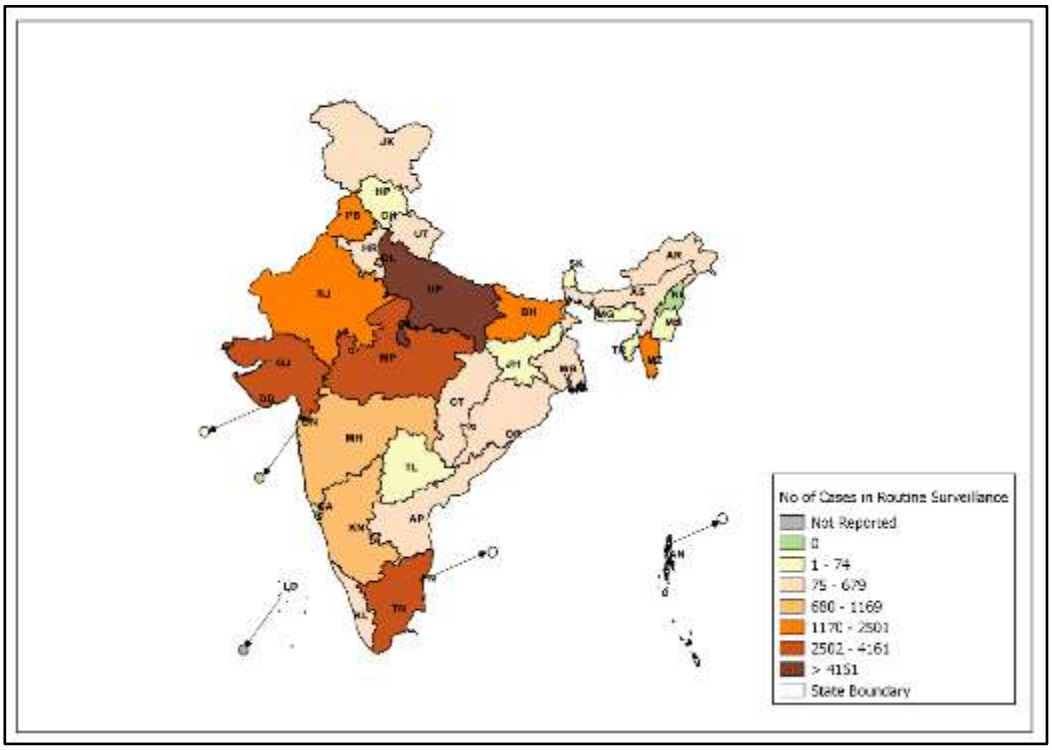


Fig 22: State/UT wise Lab confirmed Viral Hepatitis A cases and outbreaks for April 2017

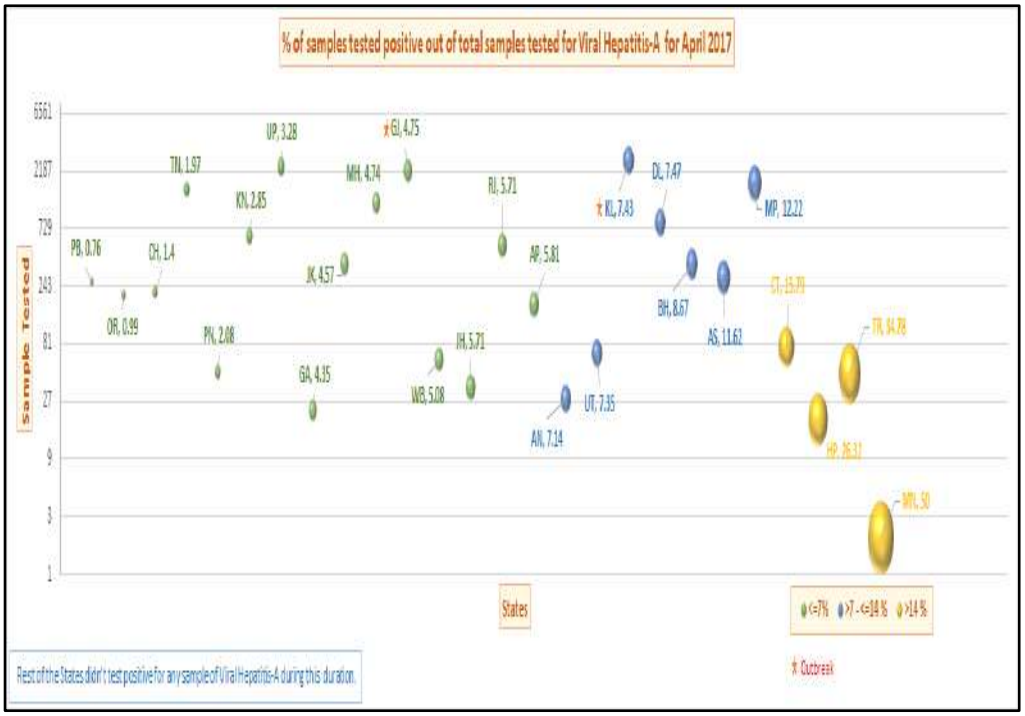


Fig 23: State/UT wise Lab confirmed Viral Hepatitis E cases for April 2017

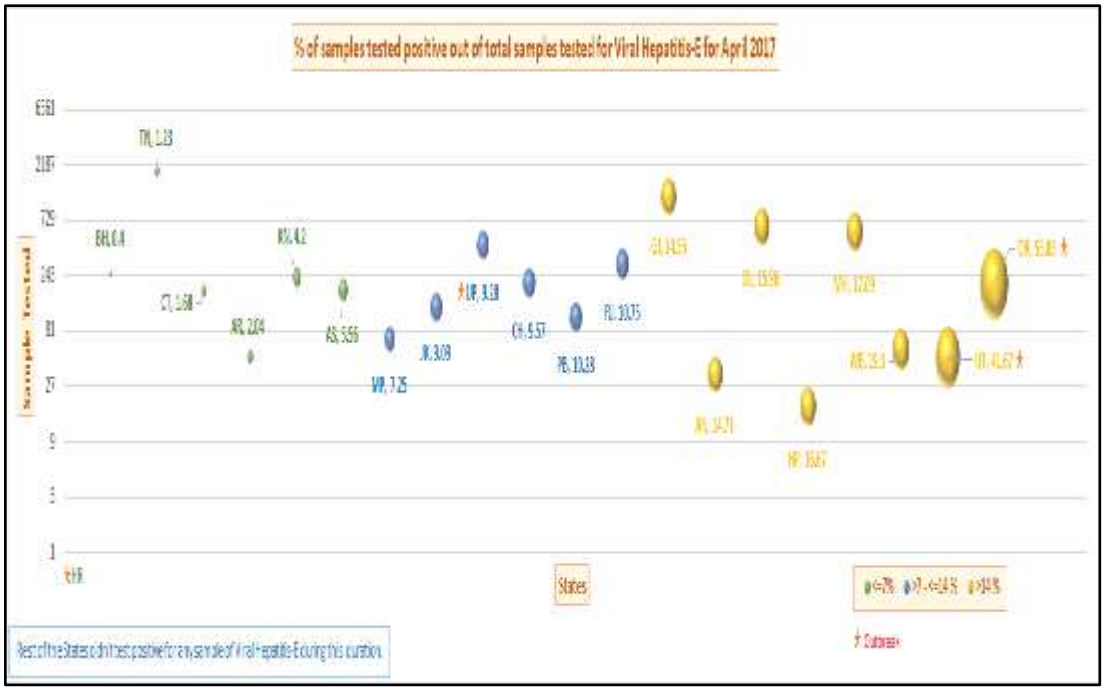


Fig 24: State/UT wise Presumptive Dengue cases & outbreaks for April 2017

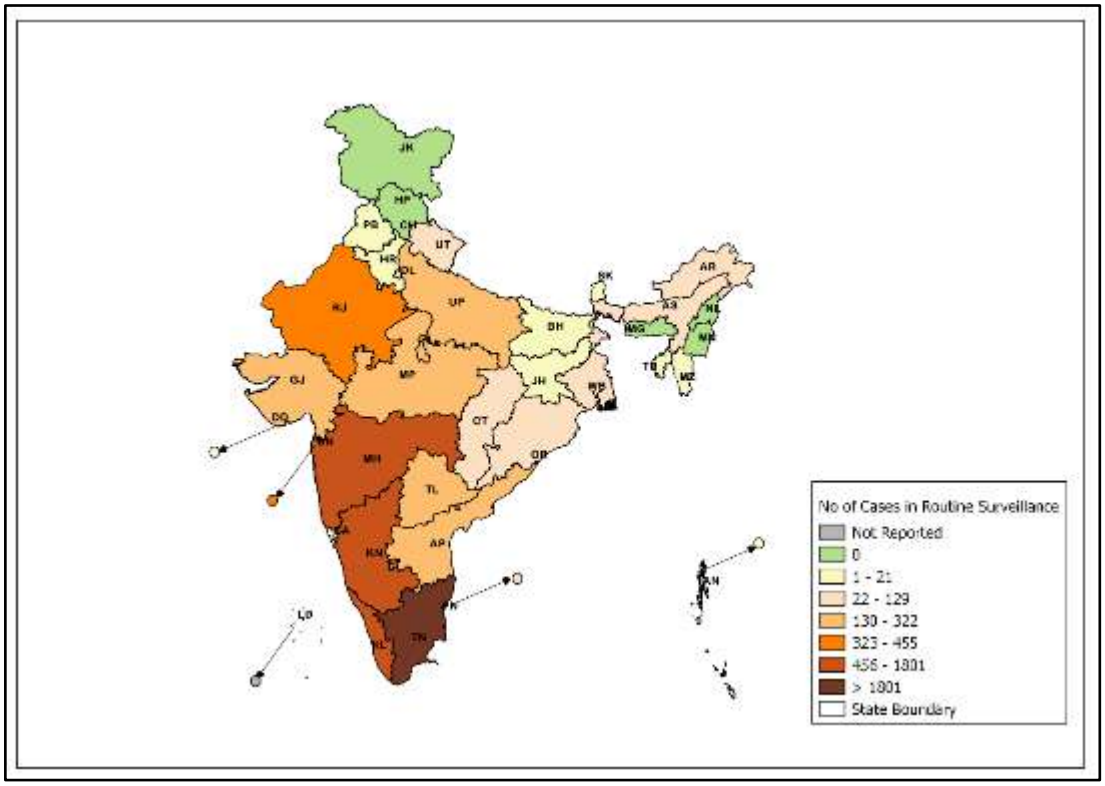


Fig 25: State/UT wise Lab confirmed Dengue cases & outbreaks for April 2017

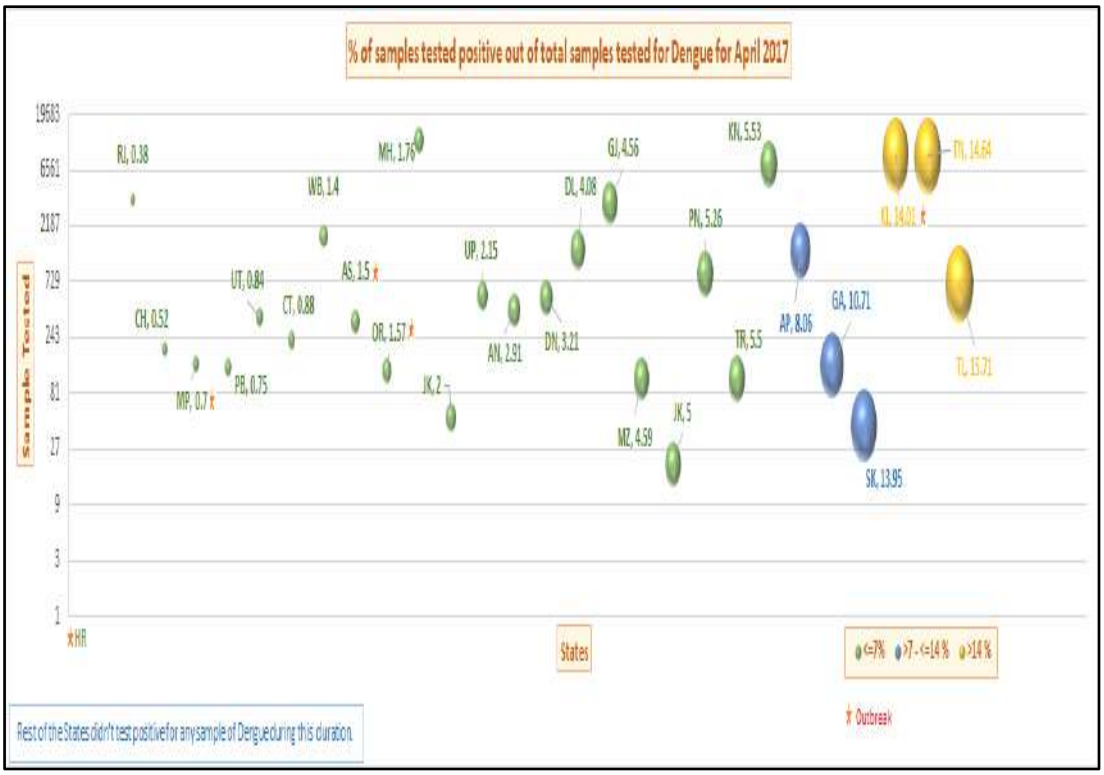


Fig 26: State/UT wise Presumptive Leptospirosis cases for April 2017

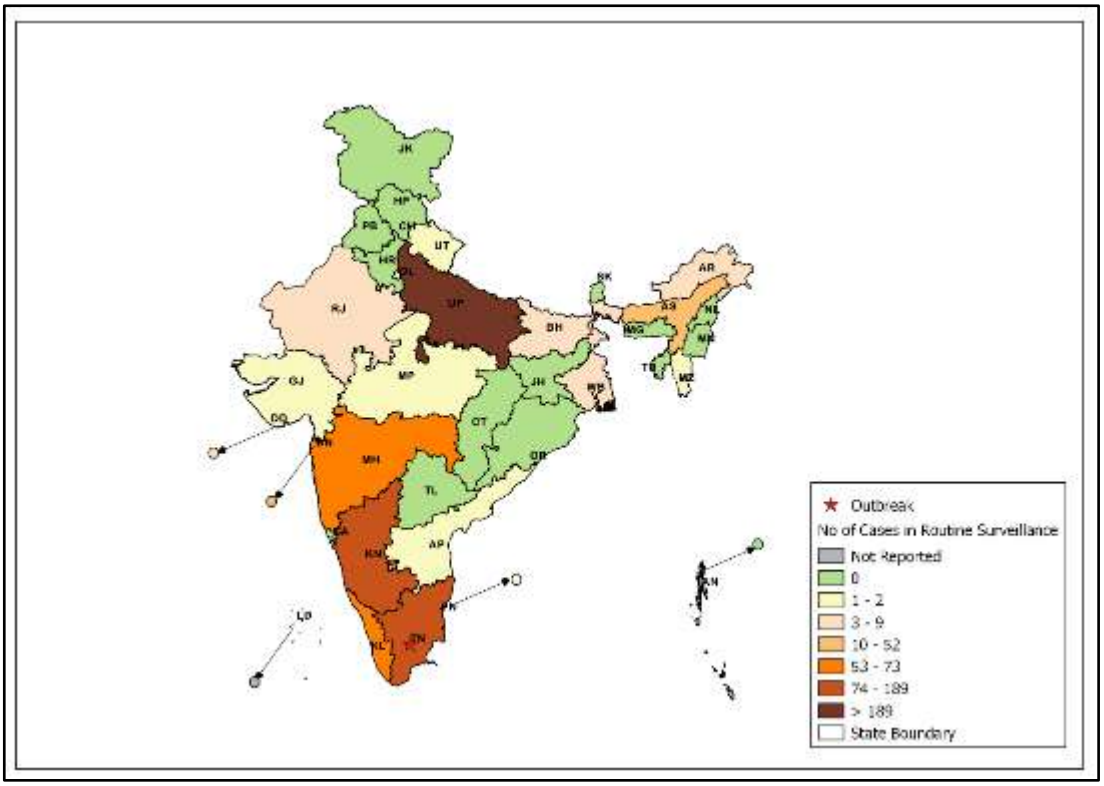


Fig 27: State/UT wise Lab Confirmed Leptospirosis cases & outbreaks for April 2017

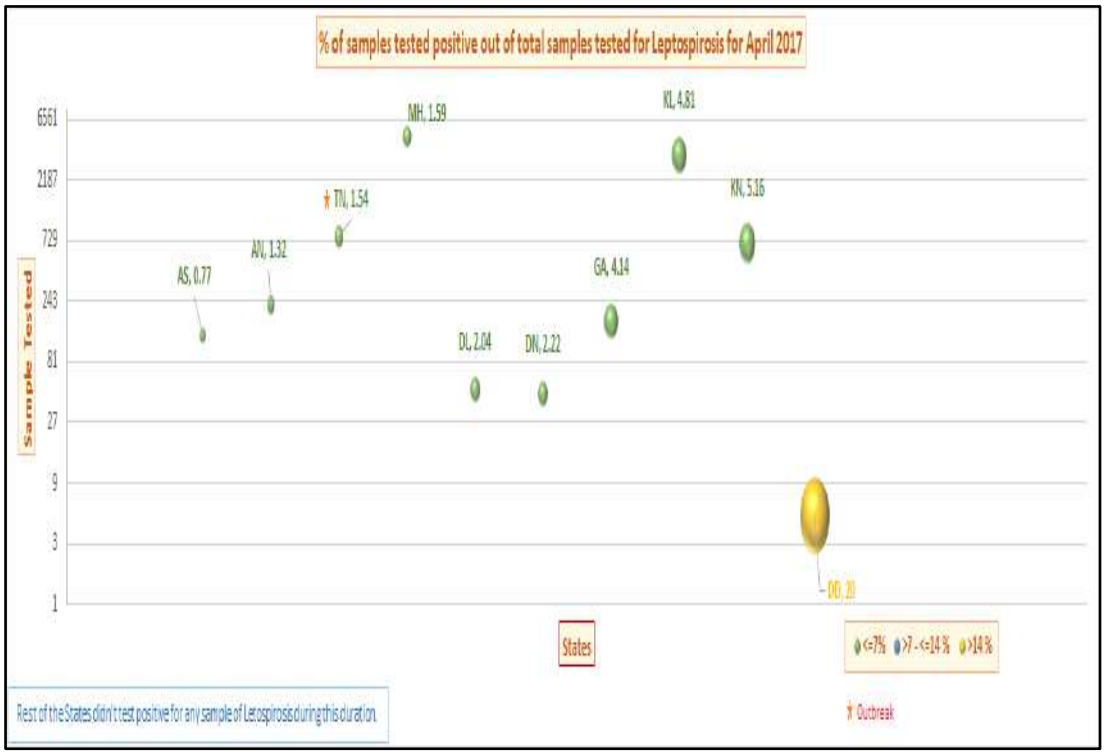


Fig 28: State/UT wise Presumptive Chikungunya cases & outbreaks for April 2017

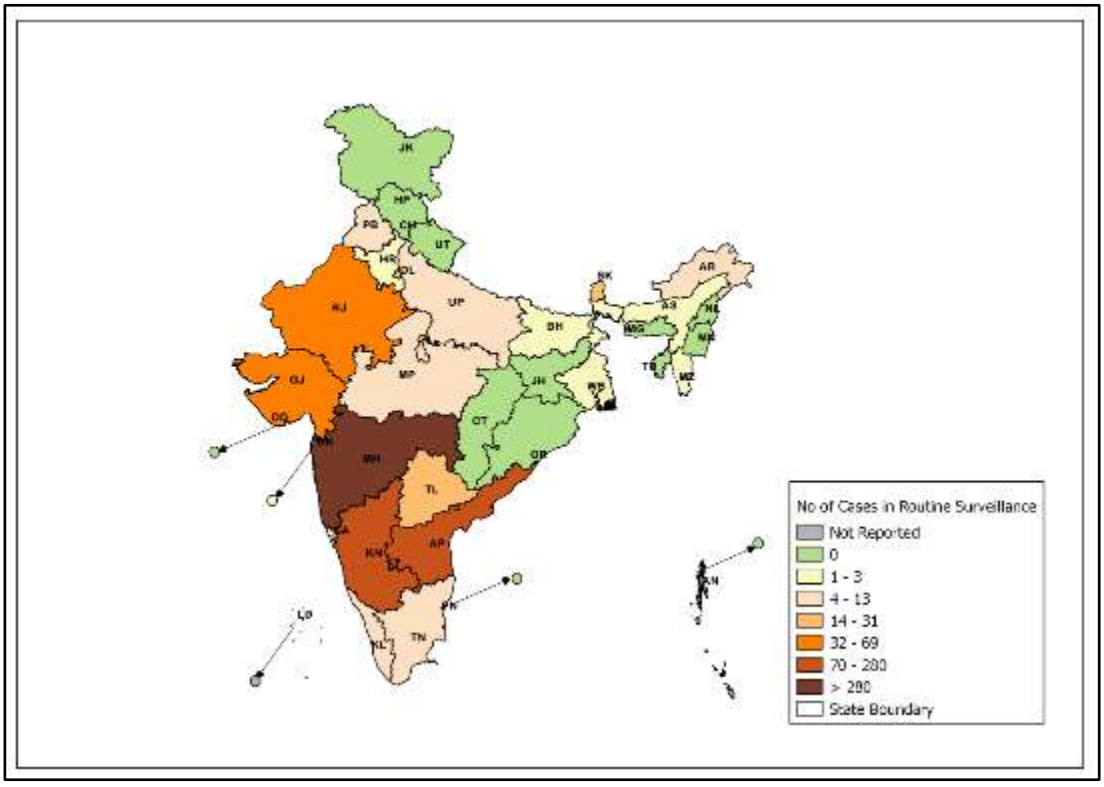


Fig 29: State/UT wise Lab Confirmed Chikungunya cases & outbreak for April 2017

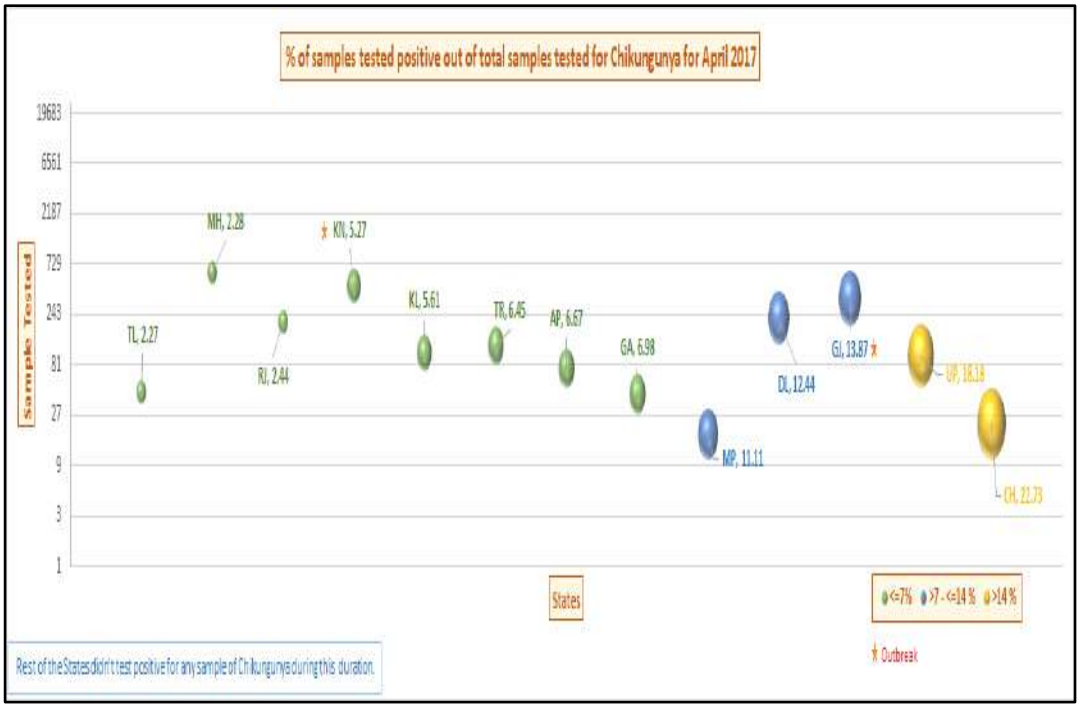
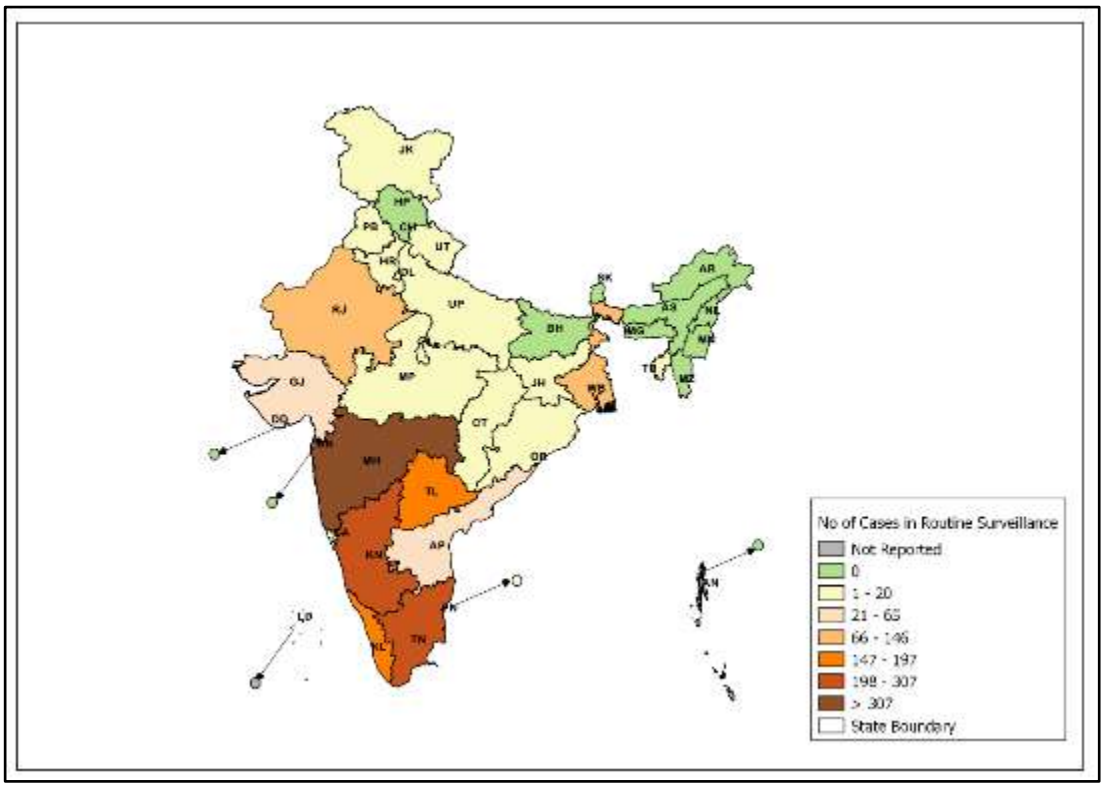


Fig 30: State/UT wise Influenza A (H1N1) cases & outbreak for April 2017



Action from the field

- Dr Kajok, Consultant Epidemiologist visited Assam from 20th April to 21st April 2017 for Inspection of temporary NCDC site at Guwahati, Assam.
- Dr Saurabh Goel, Deputy Director IDSP, visited UP from 17th April to 19th April for Chickenpox outbreak investigation in District Maharajganj Uttar Pradesh.

Glossary:

- **P form:** Presumptive cases form, in which cases are diagnosed and reported based on typical history and clinical examination by Medical Officers.
- **Reporting units under P form:** Additional PHC/ New PHC, CHC/ Rural Hospitals, Infectious Disease Hospital (IDH), Govt. Hospital / Medical College*, Private Health Centre/ Private Practitioners, Private Hospitals*
- **L form:** Lab confirmed form, in which clinical diagnosis is confirmed by an appropriate laboratory tests.
- **Reporting units under L form:** Private Labs, Government Laboratories, Private Hospitals(Lab.), CHC/Rural Hospitals(Lab.),
- HC/ Additional PHC/ New PHC(Lab.), Infectious Disease Hospital (IDH)(Lab.), Govt. Hospital/Medical College(Lab.), Private Health Centre/ Private Practitioners(Lab.)
- **Completeness %:** Completeness of reporting sites refers to the proportion of reporting sites that submitted the surveillance report (P & L Form) irrespective of the time when the report was submitted.

Case definitions:

- **Enteric Fever: Presumptive**: Any patient with fever for more than one week and with any two of the following: Toxic look, Coated tongue, Relative bradycardia, Splenomegaly, Exposure to confirmed case, Clinical presentation with complications e.g. GI bleeding, perforation, etc. AND/OR Positive serodiagnosis (Widal test)
  Confirmed: A case compatible with the clinical description of typhoid fever with confirmed positive culture (blood, bone marrow, stool, urine) of *S. typhi*/ S paratyphi.
  ARI/ ILI**:-**An acute respiratory infection with fever of more than or equal to 38° C and cough; with onset within the last 10 days.
- **Acute Diarrheal Disease: Presumptive Acute Diarrheal Disease (Including Acute Gastroenteritis):** Passage of 3 or more loose watery stools in the past 24 hours. (With or without vomiting).
- **Confirmed Cholera**: A case of acute diarrhoea with isolation and identification of Vibrio cholera serogroup O1 or O139 by culture of a stool specimen.
- **Viral Hepatitis**: **Presumptive**: Acute illness typically including acute jaundice, dark urine, anorexia, malaise, extreme fatigue, and right upper quadrant tenderness.
  Confirmed: Hepatitis A: A case compatible with the clinical description of acute hepatitis with demonstration of anti-HAV IgM in serum sample.
  Confirmed: Hepatitis E: A case compatible with the clinical description of acute hepatitis with demonstration of anti-HEV IgM in serum sample.

- **Dengue**: **Presumptive**: An acute febrile illness of 2-7 days duration with two or more of the mentioned manifestations:
  - Headache, Retro-orbital pain, Myalgia, Arthralgia, Rash, haemorrhagic manifestations, leukopenia, or Non-ELISA based NS1 antigen/IgM positive. (A positive test by RDT will be considered as probable due to poor sensitivity and specificity of currently available RDTs.)

  Confirmed: A case compatible with the clinical description of dengue fever with at least one of the following:

  - Demonstration of dengue virus NS-1 antigen in serum sample by ELISA.
  - Demonstration of IgM antibodies by IgM antibody capture ELISA in single serum sample.
  - IgG seroconversion in paired sera after 2 weeks with fourfold increase of IgG titre.

- Detection of viral nucleic acid by polymerase Chain reaction (PCR).
- Isolation of the dengue virus (virus culture +ve) from serum, plasma, leucocytes.
  (Source – Dengue National guidelines, NVBDCP 2014)

- **Leptospirosis Case Definition**: **Presumptive Leptospirosis**: Acute febrile illness with headache, myalgia and prostration associated with a history of exposure to infected animals or an environment contaminated with animal urine With one or more of the following:
  - Calf muscle tenderness
  - Conjunctival suffusion
  - Oliguria or anuria and/or proteinuria
  - Jaundice
  - Haemorrhagic manifestations (intestines, lung)
  - Meningeal irritation
  - GI symptoms (Nausea/ Vomiting/ Abdominal pain/Diarrhoea)
  - And/or one of the following:-
    - A positive result in IgM based immune- assays, slide agglutination test or latex agglutination test or immunochromatographic test.
    - A Microscopic Agglutination Test (MAT) titre of 100/200/400 or above in single sample based on endemicity.
    - Demonstration of leptospires directly or by staining methods

  Lab Confirmed Leptospirosis: A case compatible with the clinical description of leptospirosis with at least one of the following:
  - Isolation of leptospires from clinical specimen.
  - Four fold or greater rise in the MAT titre between acute and convalescent phase serum specimens run in parallel. (Source: -National Guidelines on Diagnosis, Case Management Prevention and Control of Leptospirosis NCDC 2015).

- **Chikungunya case definition: Presumptive Case Definition**: An acute illness characterised by sudden onset of fever with any of the following symptoms: headache, backache, photophobia, severe arthralgia and rash.
  - Lab confirmed: A case compatible with the clinical description of chikungunya fever with at least one of the following: Demonstration of IgM antibodies by IgM antibody capture ELISA in a single serum sample.
  - Detection of viral nucleic acid by PCR.
  - Isolation of chikungunya virus from clinical specimen. (Source – Mid Term Plan Guidelines, NVBDCP 2013.

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Data shown in this bulletin are provisional, based on weekly reports to IDSP by State Surveillance Unit. Inquiries, comments and feedback regarding the IDSP Surveillance Report, including material to be considered for publication, should be directed to: Director, NCDC 22, Sham Nath Marg, Delhi 110054. Email: dirnicd@nic.in & idsp-npo@nic.in

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