

# Disease Alert प्रकोप चेतावनी

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

March 2019

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## Food Poisoning Outbreak Report of West Singhbhum District, Jharkhand

### Background

Increased number of cases were reported from Village Nandpur, Tola Daud, HSC Nandpur from Manoharpur area of West Singhbhum District, Jharkhand.

In response, State and District RRT conducted outbreak investigations in the affected areas. It was carried out to determine the cause and suggest containment measures. Epidemiological, and environmental investigations were undertaken.

### Objectives of Investigation

The village has a population of about 600. The objectives were –

1. Entomological investigation of affected area
2. Identification of vector species
3. Epidemiological investigation of the outbreak
4. To give necessary recommendations for control & prevention of outbreak

### Case Definition adopted by RRT

It was defined as: “Patient with history of food consumption who is suffering from vomiting and dehydration and who is a resident of Village Nandpur, Tola Daud, HSC Nandpur from Manoharpur area”..

### Details of Investigation

The RRT first visited CHC, Manoharpur to interview the medical officers and check OPD and IPD. The team found 5 patients of food poisoning from Village Nandpur, Tola Daud, HSC Nandpur from Manoharpur area admitted in the facility.

Following are the details of interaction.

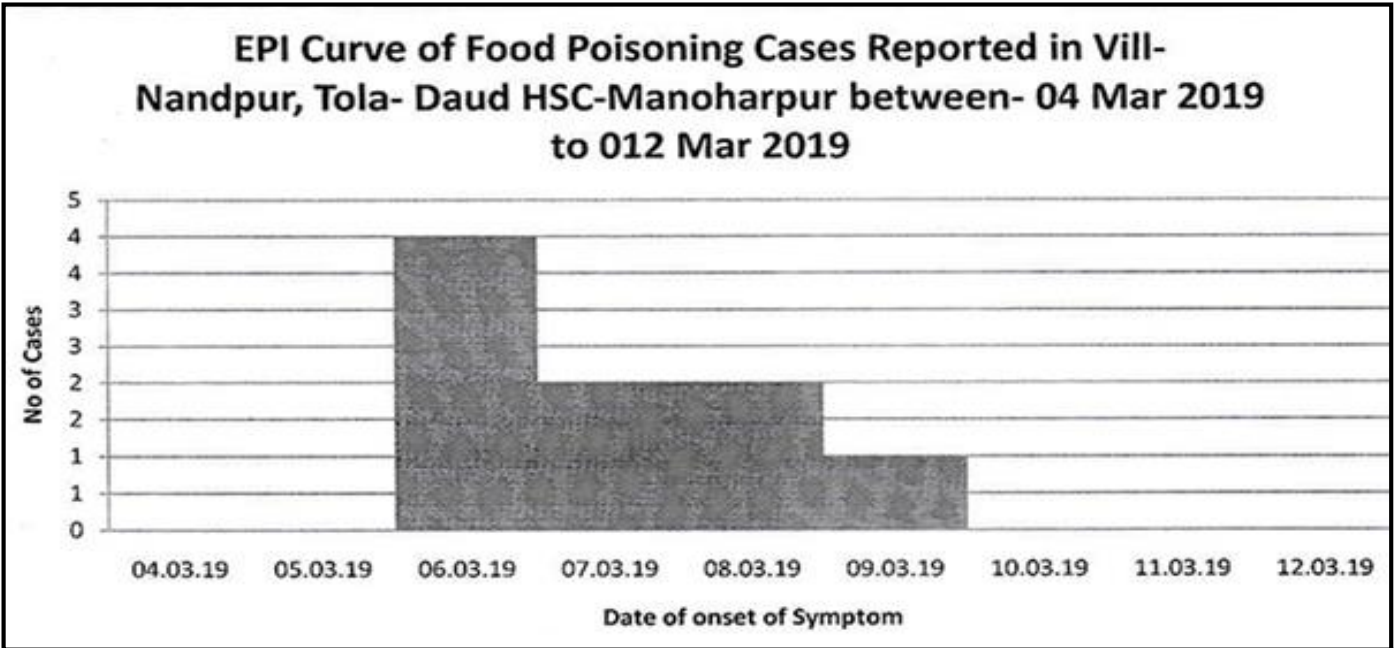
1. RRT interviewed Dr. Narendra Sumbroi, MO-IC regarding the patients admitted.
2. While interviewing the patients, it was told that all had taken Masroom and Rice at a dinner on 8<sup>th</sup> March’ 2019. After 3-4 hours, some patients who are students of Ical school suffered from loose motions and vomiting

3. There are 2 hand pumps in the village that are used for drinking water

The RRT members subsequently visited the affected area. They instituted preventive and control measures in affected areas. The following were their observations & action points:-

1. It appeared that sanitation and hygiene in are poor in general
2. No proper sanitation or waste disposal was noticed in the village
3. Health workers organized a health camp in school which was continued for 3 days.

**Descriptive Epidemiology**



**Fig. 1: EPI Curve of Food Poisoning Outbreak Report of West Singhbhum District, Jharkhand**

Age group	Male	Female	Total	Population	Attack rate
0-10	0	1	1	68	1.4
11-20	0	2	2	82	2.4
21-30	1	3	4	106	3.7
31-40	0	1	1	101	0.9
41-50	0	0	0	103	0
51-60	1	0	1	90	1.2
61 and above	0	0	0	50	0
Total	02	07	9	600	1.5

**Fig. 2: Age & Sex wise distribution of Food Poisoning Cases at West Singhbhum District, Jharkhand**

**Details of Laboratory Investigations**

Four stool samples sent to DPHL, Sadar, West Singhbhum District.

Culture & Sensitivity testing was done. One sample tested positive for Shigella spp. While 3 tested negative.

### **Control Measures Taken**

1. Health education was given to students. They were told about early reporting to ensure prompt treatment, hygienic food habits and eating practices, hand washing before and after eating and taking of safe drinking water.
2. Health camp organized.
3. ORS packets distributed.
4. IEC and BCC activities done

### **Conclusions**

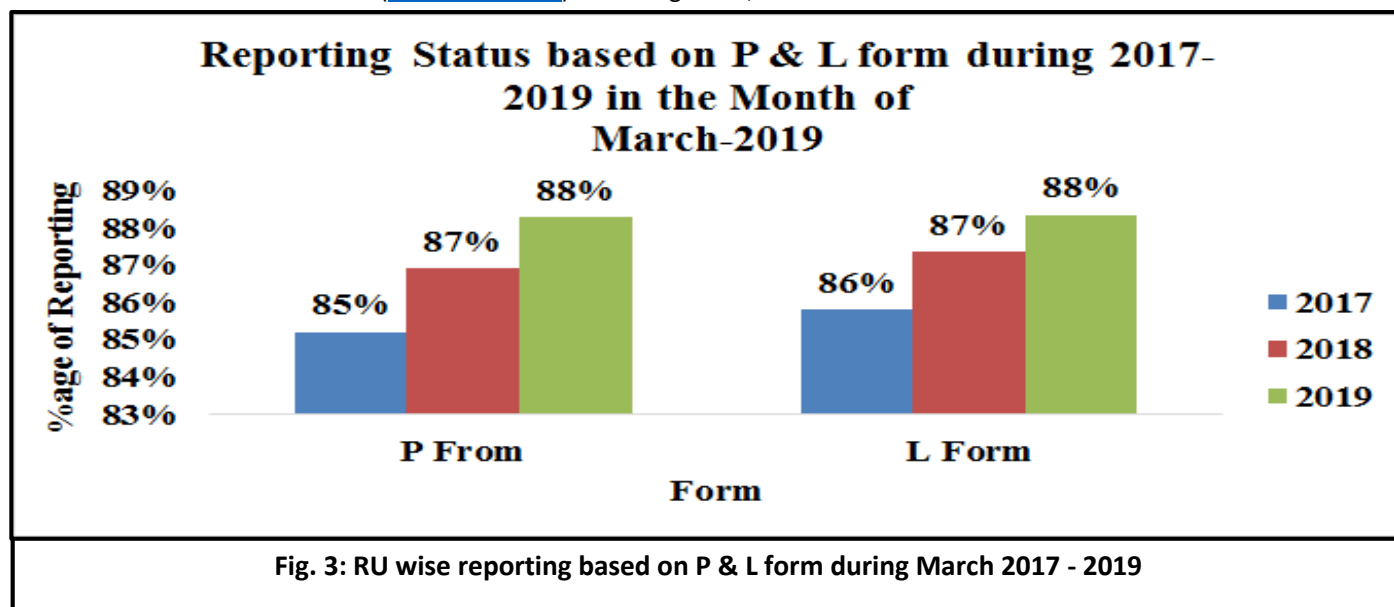
It is clear that all cases had developed symptoms following consumption of masrooms in dinner. All had taken meal on 08.03.2019 and vomiting and diarrhea developed 3 to 4 hours after taking meal. Factors which contributed to outbreak were unprotected selection of food and poor hygiene.

### **Recommendations**

1. There should be no standing of water in or around houses.
2. Water should be stored in narrow-mouthed, closed containers.
3. Health education must be imparted on importance of eating cooked, hot food and proper individual food handling techniques.
4. Boiled & filtered water should be used for drinking purposes.

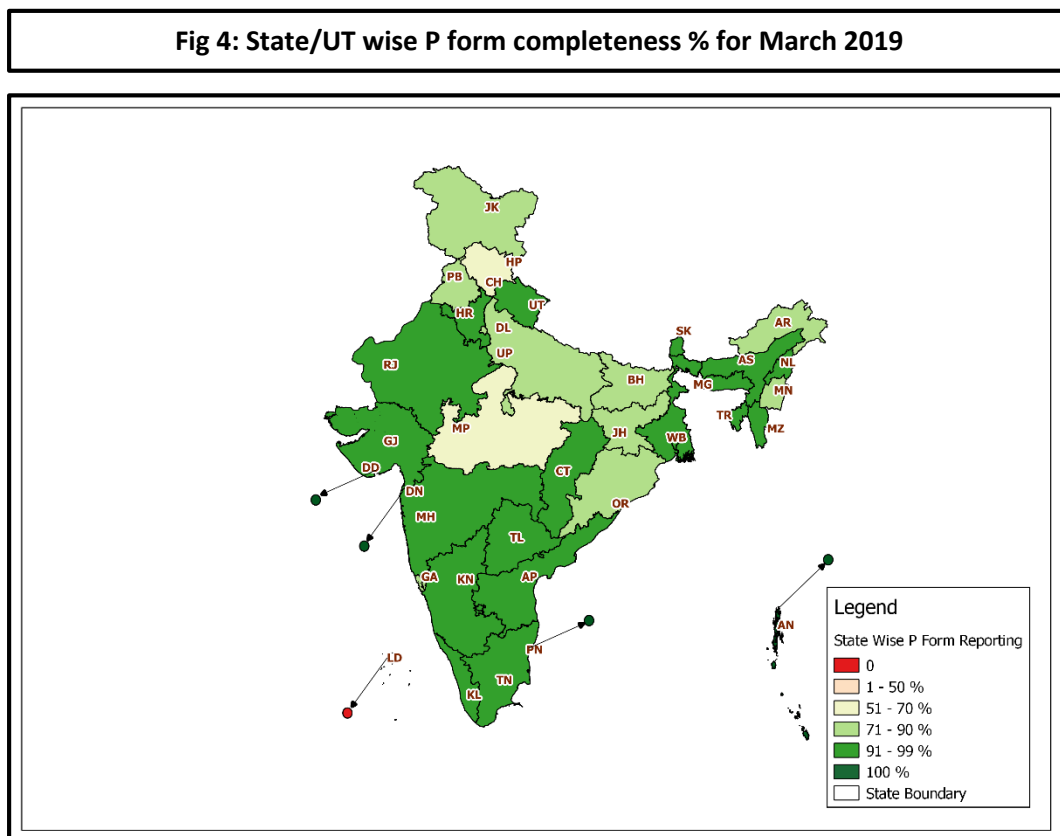
**Surveillance data of Enteric Fever, Acute Diarrhoeal Disease, Viral Hepatitis A & E, Dengue Leptospirosis, Dengue, Chikungunya, Leptospirosis and Seasonal Influenza A (H1N1) During March 2017 - 2019\***

\* Data extracted from IDSP Portal ([www.idsp.nic.in](http://www.idsp.nic.in)) as on August 06, 2019.

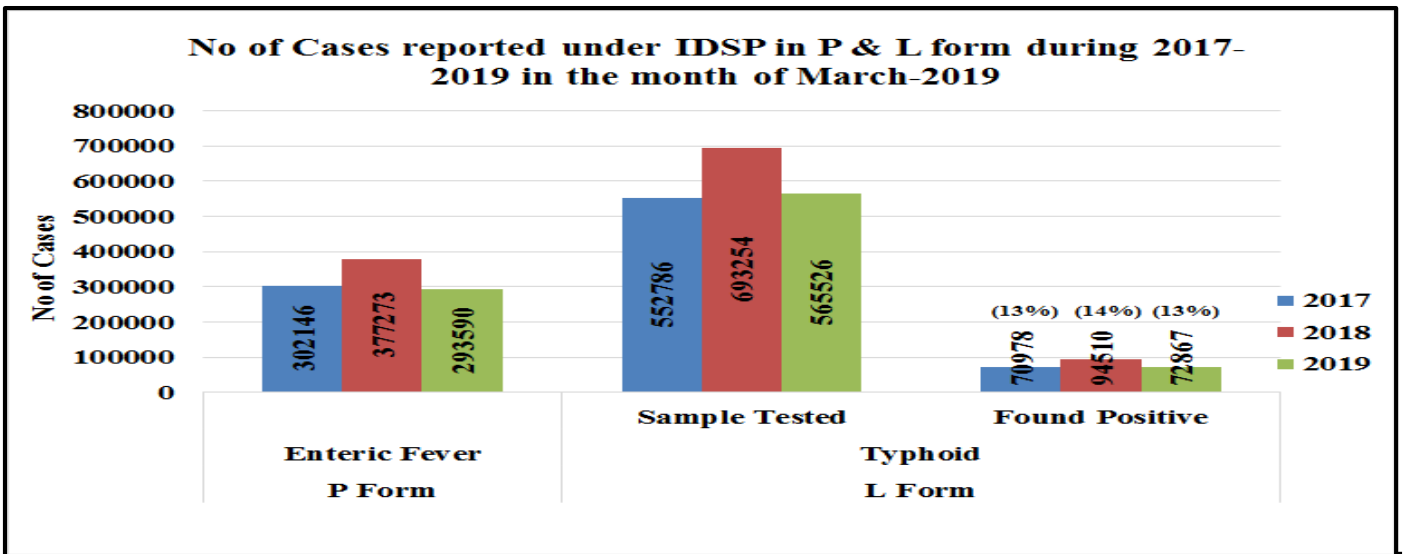
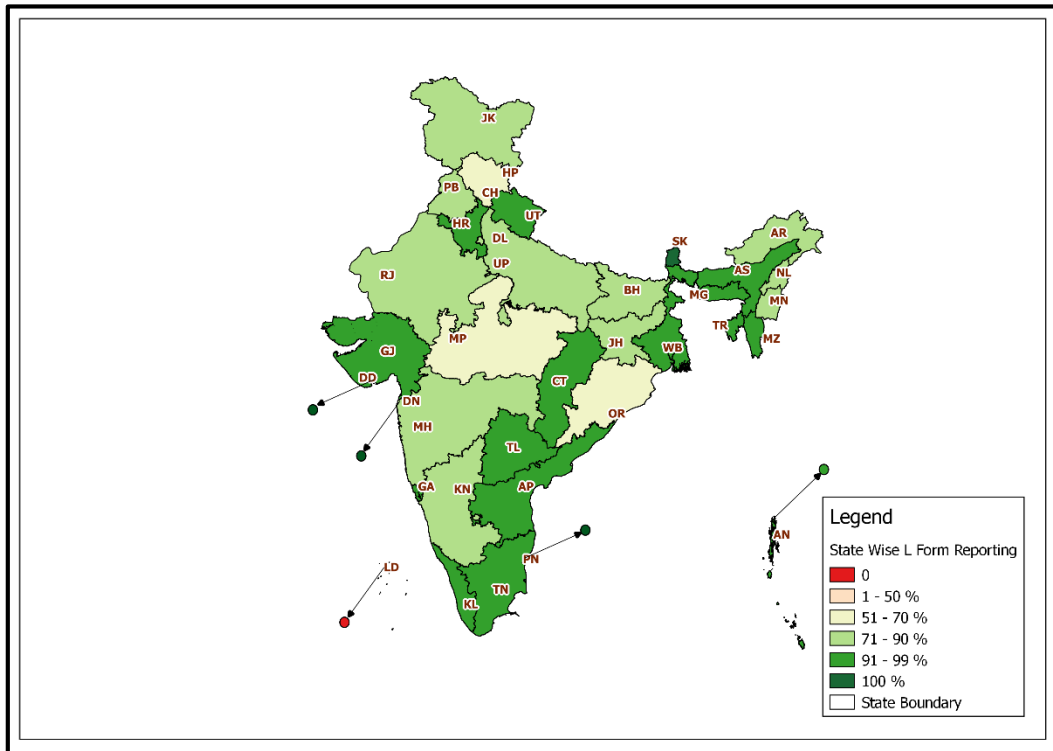


As shown in Fig 3, in March 2017, 2018 and 2019, the 'P' form reporting percentage (i.e. % RU reporting out of total in P form) was 85%, 87% and 88% respectively across India, for all disease conditions reported under IDSP in P form. Similarly, L form reporting percentage was 86%, 87% and 88% respectively 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 increased over the years in both P and L form, thereby improving the quality of surveillance data.



**Fig 5: State/UT wise L form completeness % for March 2019**



**Fig. 6 No. of Enteric Fever Cases reported under P & L form during March 2017 - 2019**

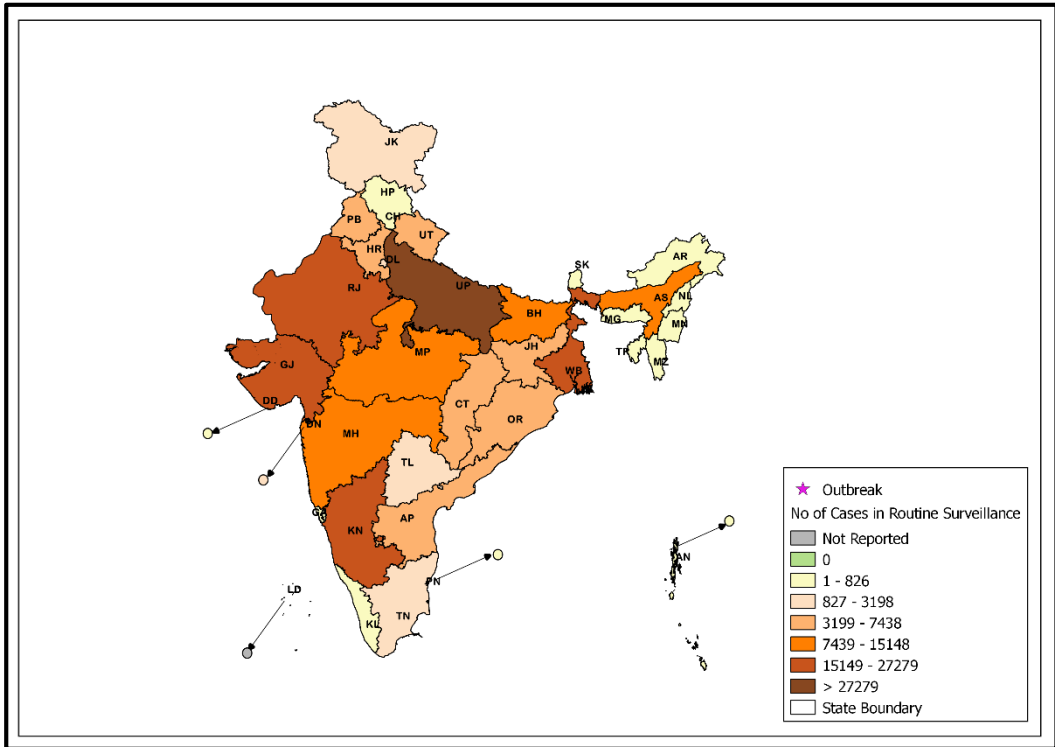
As shown in Fig 6, number of presumptive enteric fever cases, as reported by States/UTs in 'P' form was 302146 in March 2017; 377273 in March 2018 and 293590 in March 2019. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in March 2017; 552786 samples were tested for Typhoid, out of which 70978 were found positive. In March 2018; out of 693254 samples, 94510 were found to be positive and in March 2019, out of 565526 samples, 72867 were found to be positive.

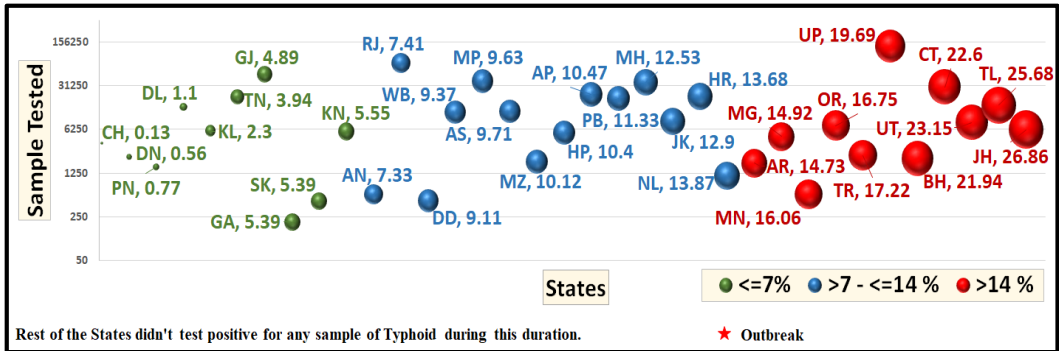
Sample positivity has been 12.84%, 13.63% and 12.88% in March month of 2017, 2018 & 2019 respectively.

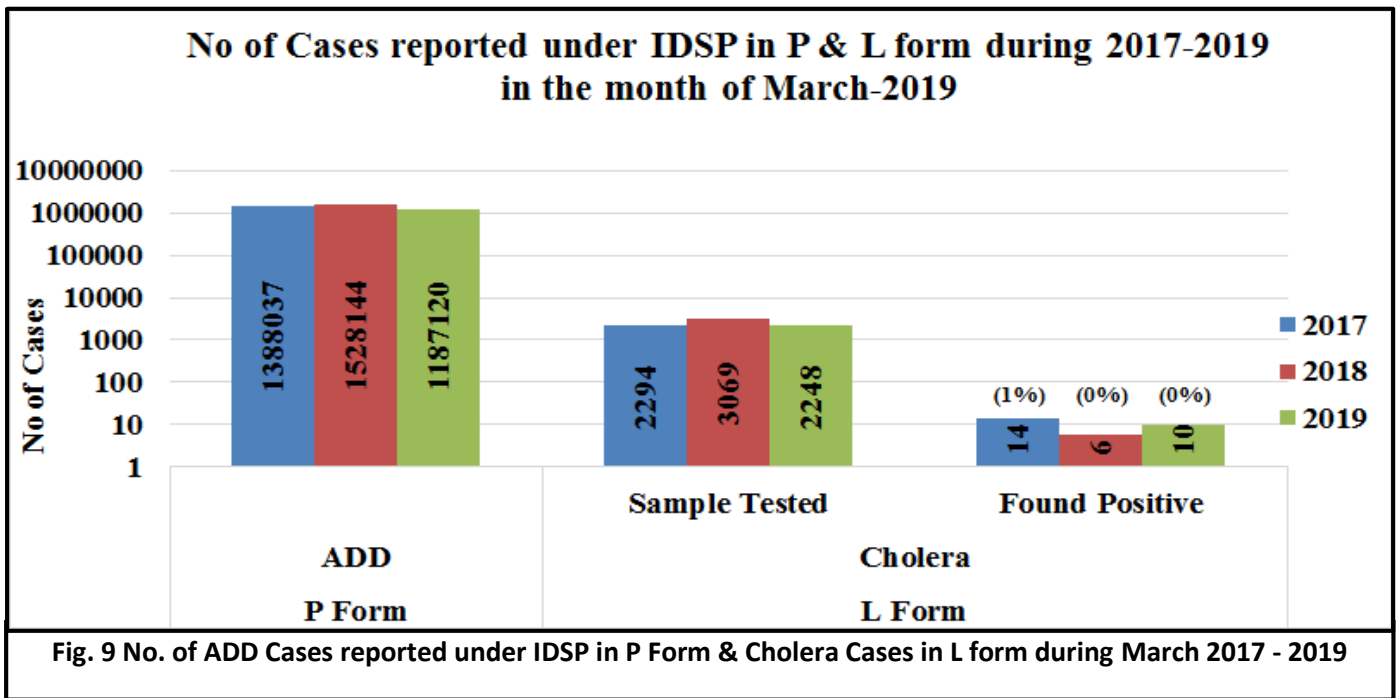
**Limitation:** The test by which above mentioned samples were tested could not be ascertained, as currently there is no such provision in L form.

**Fig 7: State/UT wise Presumptive Enteric fever cases and outbreaks for March 2019**



**Fig 8: State/UT wise Lab Confirmed Typhoid cases and outbreaks for March 2019**



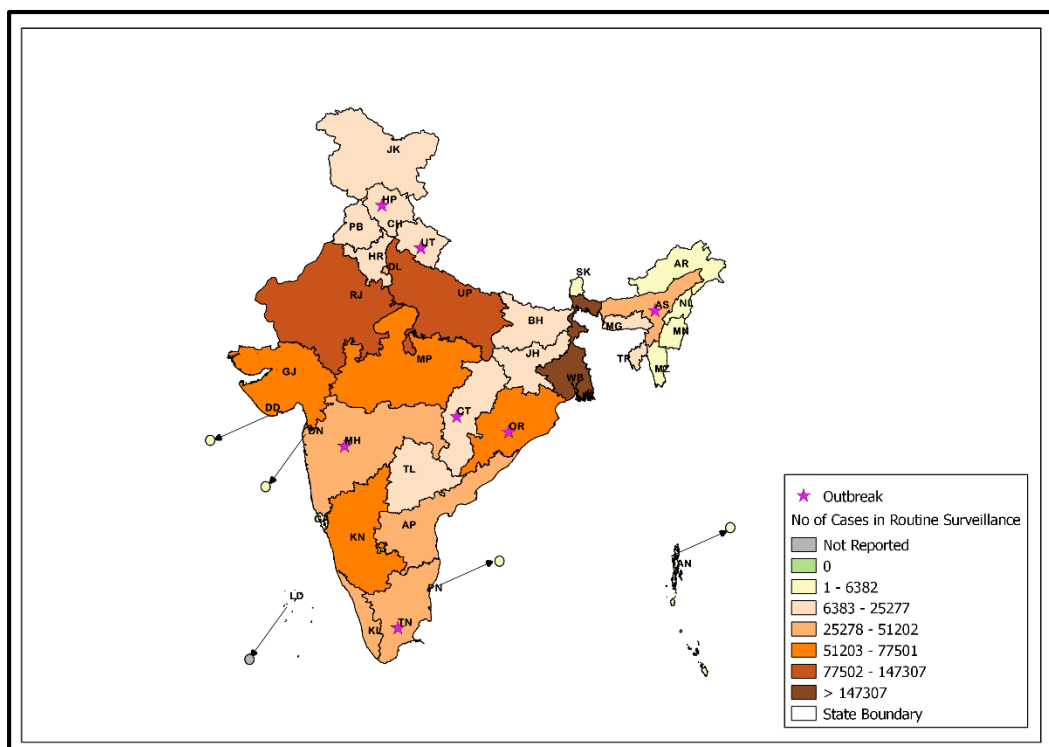


As shown in Fig 9, number of Acute Diarrhoeal Disease cases, as reported by States/UTs in 'P' form was 1388037 in March 2017; 1528144 in March 2018 and 1187120 in March 2019. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

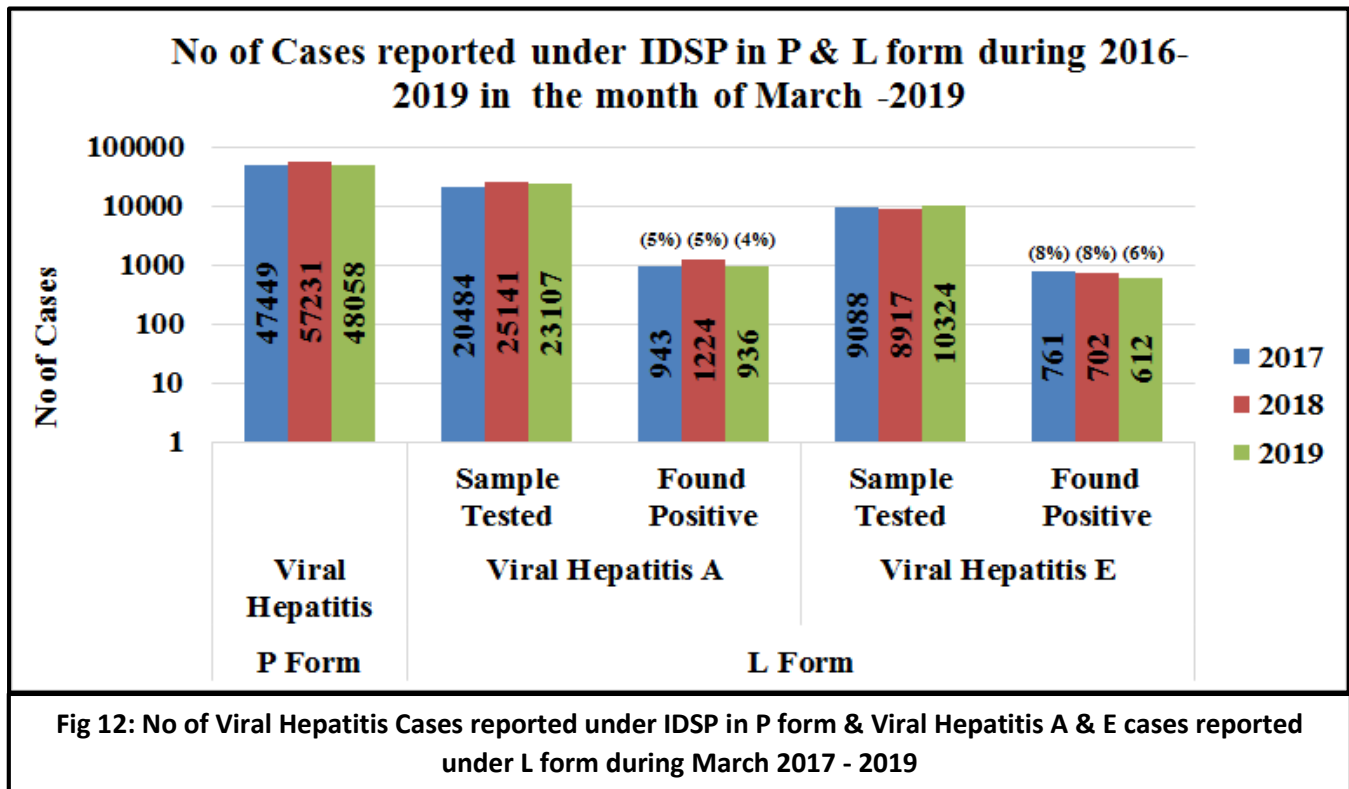
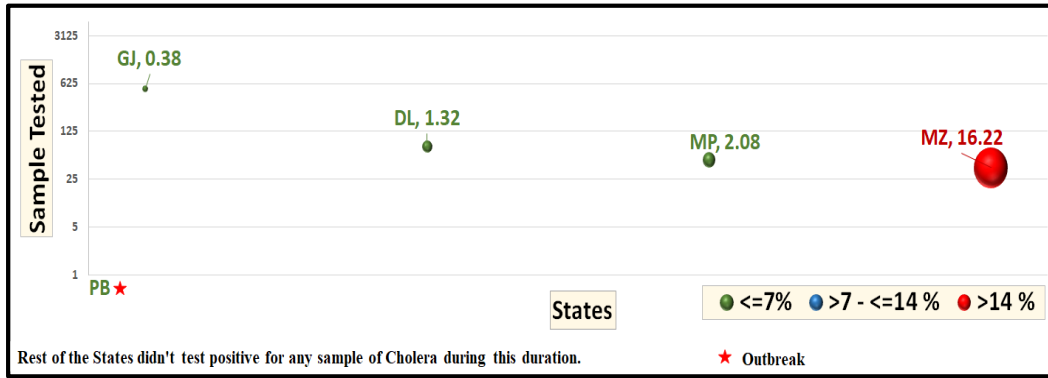
As reported in L form, in March 2017, 2294 samples were tested for Cholera out of which 14 tested positive; in March 2018, out of 3069 samples, 6 tested positive for Cholera and in March 2019, out of 2248 samples, 10 tested positive.

Sample positivity of samples tested for Cholera has been 0.61%, 0.19% and 0.44% in March month of 2017, 2018 & 2019 respectively.

**Fig 10: State/UT wise Presumptive ADD cases and outbreaks for March 2019**



**Fig 11: State/UT wise Lab Confirmed Cholera cases and outbreaks for March 2019**



**Fig 12: No of Viral Hepatitis Cases reported under IDSP in P form & Viral Hepatitis A & E cases reported under L form during March 2017 - 2019**

As shown in Fig 12, the number of presumptive Viral Hepatitis cases was 47449 in March 2017, 57231 in March 2018 and 48058 in March 2019. These presumptive cases were diagnosed on the basis of case definitions provided under IDSP.

As reported in L form for Viral Hepatitis A, in March 2017; 20484 samples were tested out of which 943 were found positive. In March 2018 out of 25141 samples, 1224 were found to be positive and in March 2019, out of 23107 samples, 936 were found to be positive.

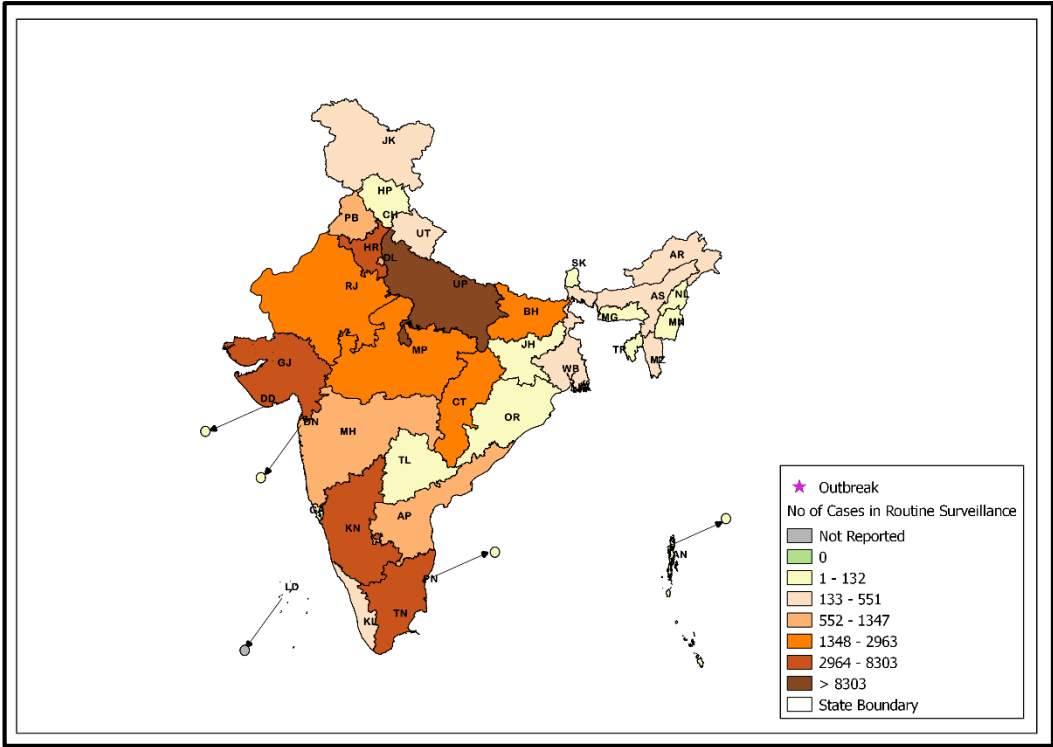
Sample positivity of samples tested for Hepatitis A has been 4.60%, 4.86% and 4.05% in March month of 2017, 2018 & 2019 respectively.

As reported in L form for Viral Hepatitis E, in March 2017; 9088 samples were tested out of which 761 were found positive. In March 2018; out of 8917 samples, 702 were found to be positive and in March 2019, out of 10324 samples, 612 were found to be positive.

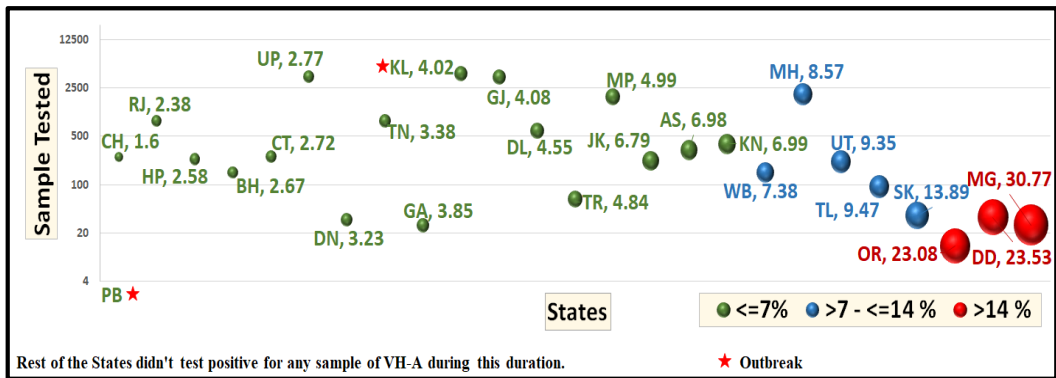
Sample positivity of samples tested for Hepatitis E has been 8.37%, 7.87% and 5.93% in March month of 2017, 2018 & 2019 respectively.



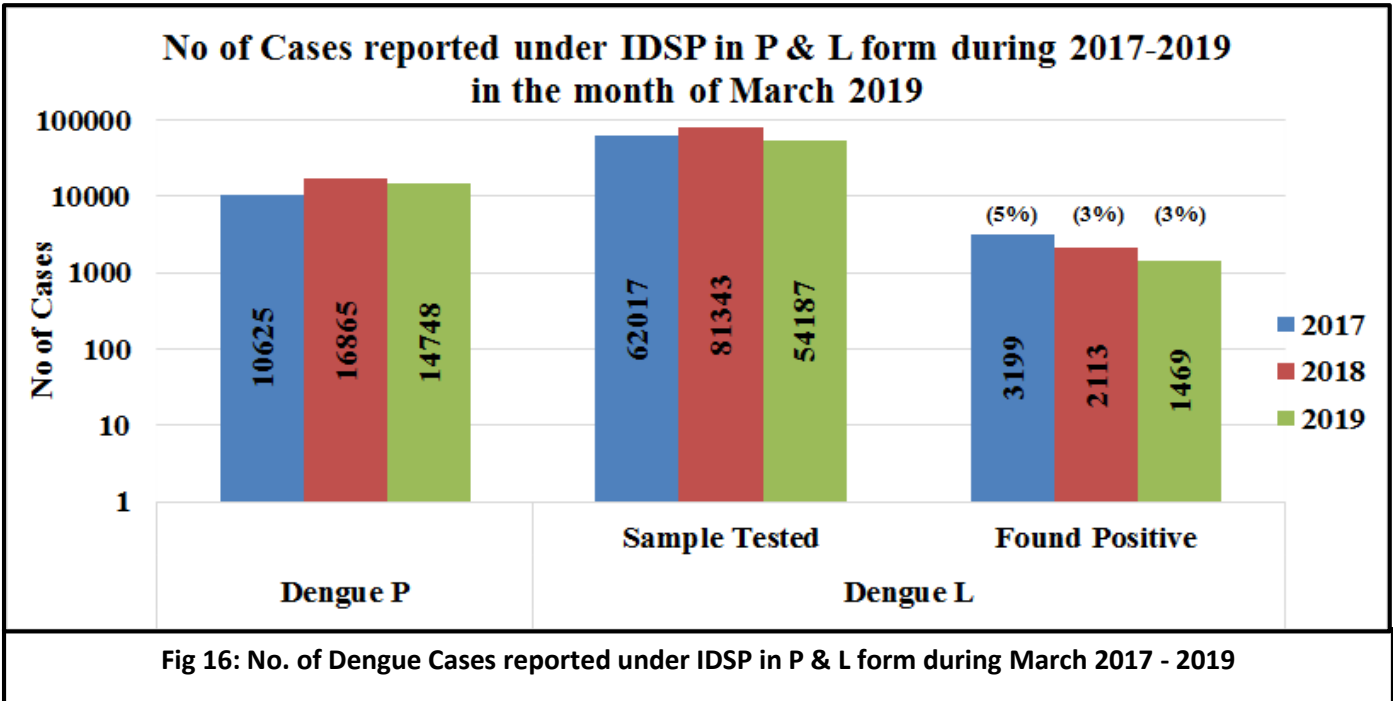
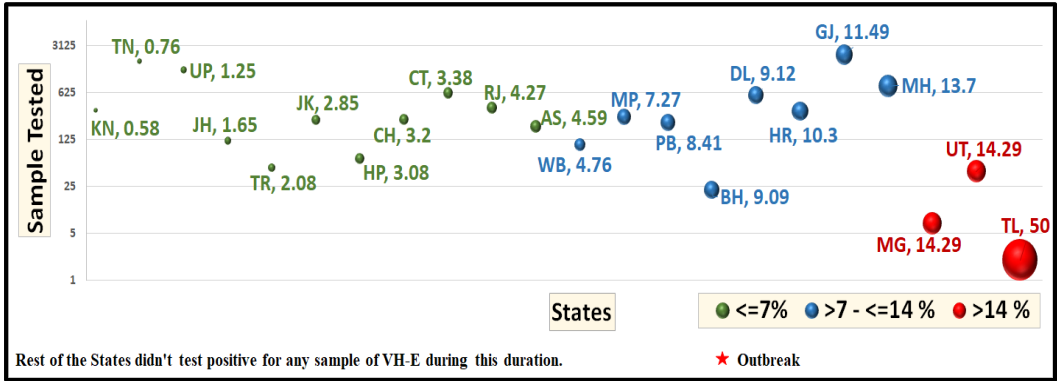
**Fig 13: State/UT wise Presumptive Viral Hepatitis cases and outbreaks for March 2019**



**Fig 14: State/UT wise Lab Confirmed Viral Hepatitis A cases and outbreaks for March 2019**



**Fig 15: State/UT wise Lab Confirmed Viral Hepatitis E cases and outbreaks for March 2019**



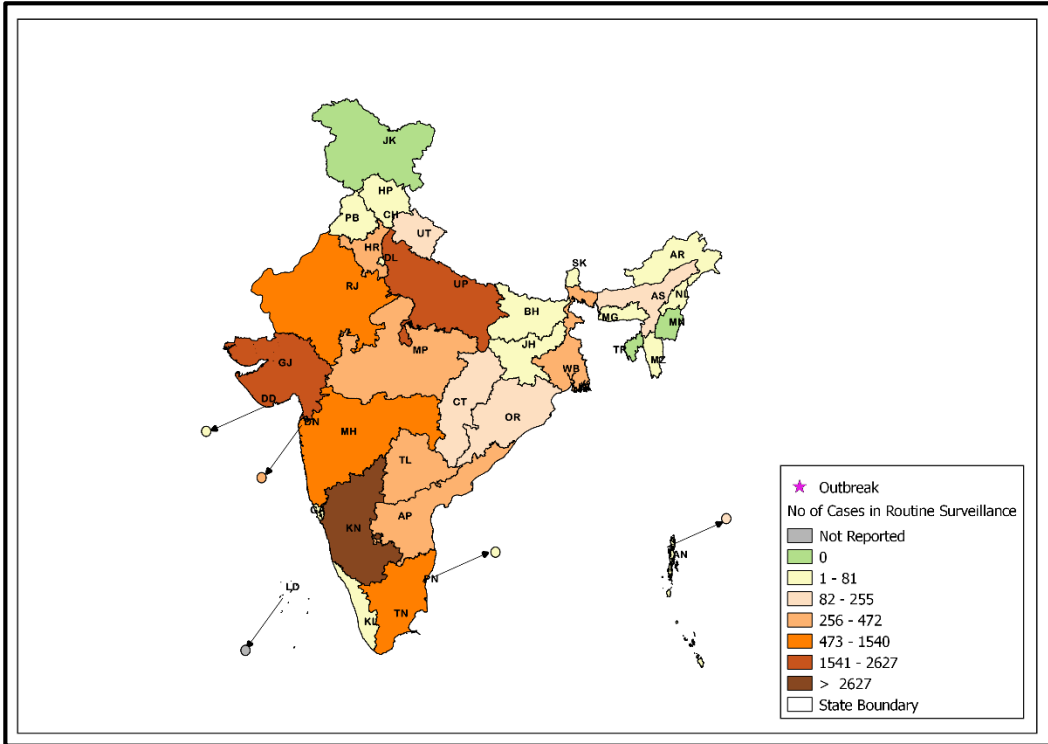
**Fig 16: No. of Dengue Cases reported under IDSP in P & L form during March 2017 - 2019**

As shown in Fig 16, number of presumptive Dengue cases, as reported by States/UTs in 'P' form was 10625 in March 2017; 16865 in March 2018 and 14748 in March 2019. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

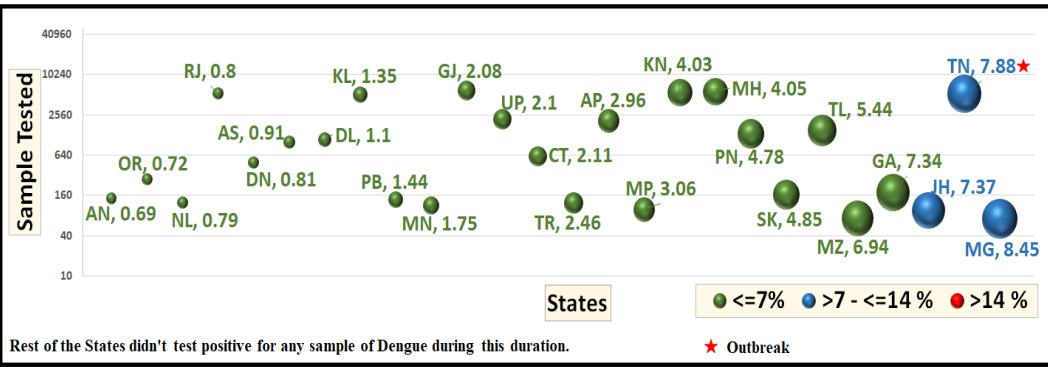
As reported in L form, in March 2017; 62017 samples were tested for Dengue, out of which 3199 were found positive. In March 2018; out of 81343 samples, 2113 were found to be positive and in March 2019, out of 54187 samples, 1469 were found to be positive.

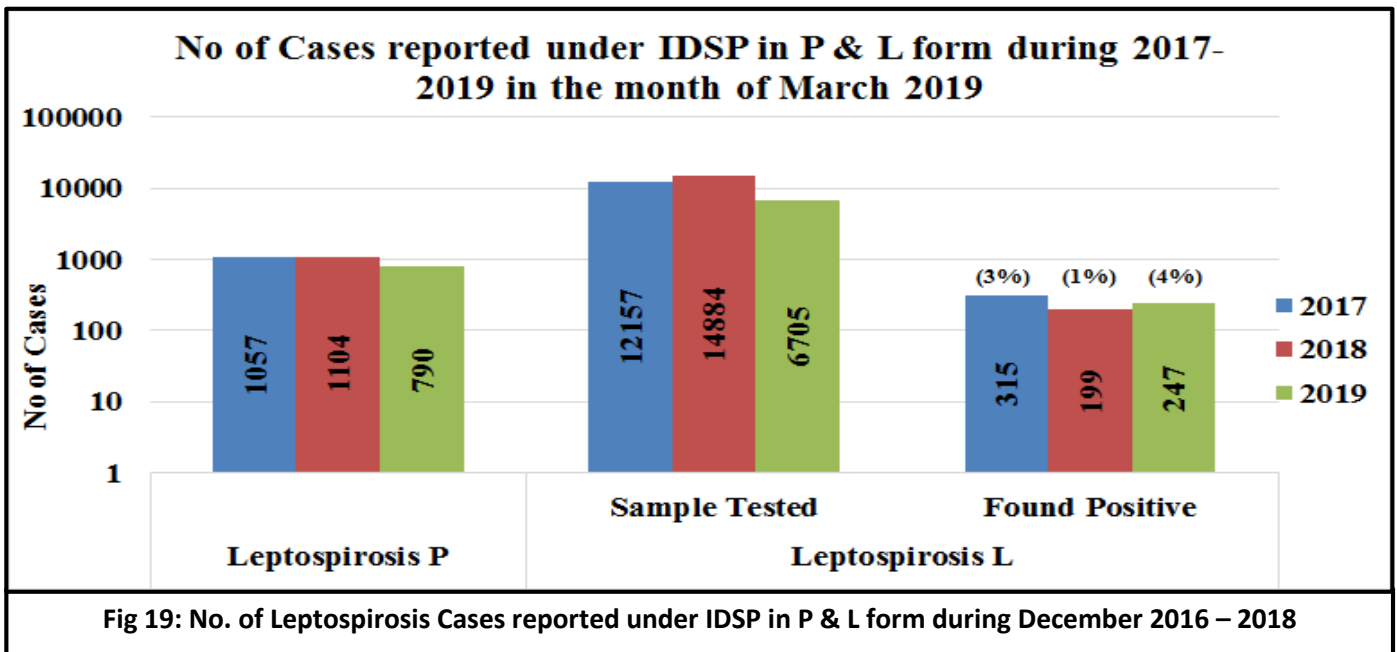
Sample positivity of samples tested for Dengue has been 5.16%, 2.60% and 2.71% in March month of 2017, 2018 & 2019 respectively.

**Fig 17: State/UT wise Presumptive Dengue cases and outbreaks for March 2019**



**Fig 18: State/UT wise Lab Confirmed Dengue cases and outbreaks for March 2019**



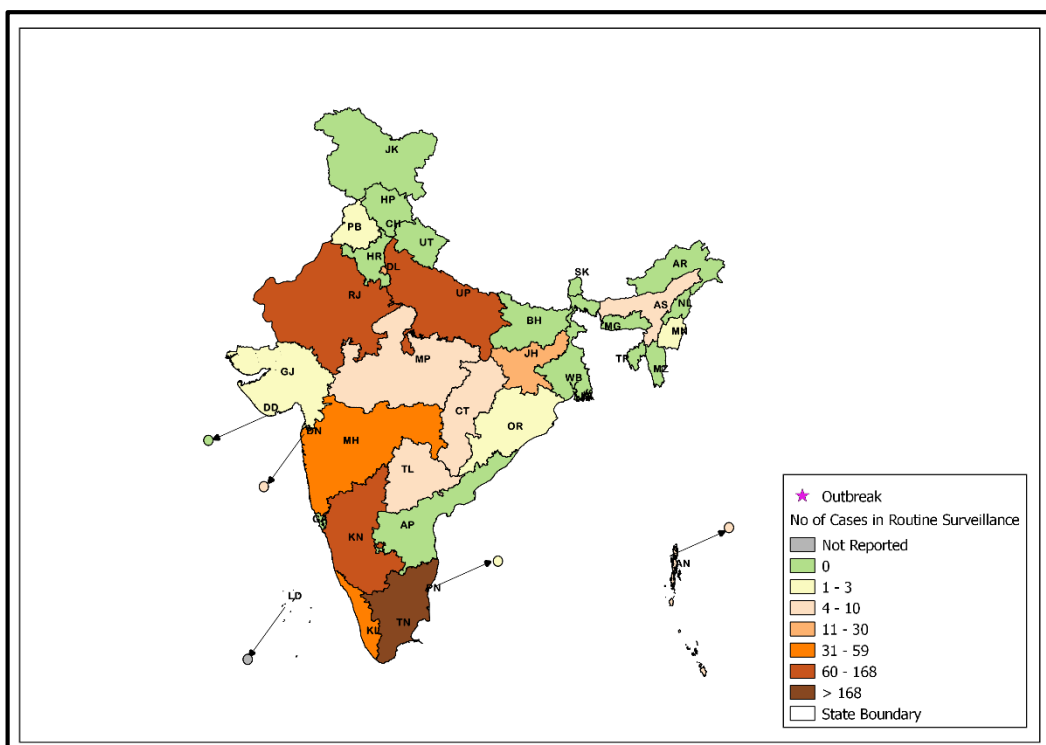


As shown in Fig 19, number of presumptive Leptospirosis cases, as reported by States/UTs in 'P' form was 1057 in March 2017; 1104 in March 2018 and 790 in March 2019. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

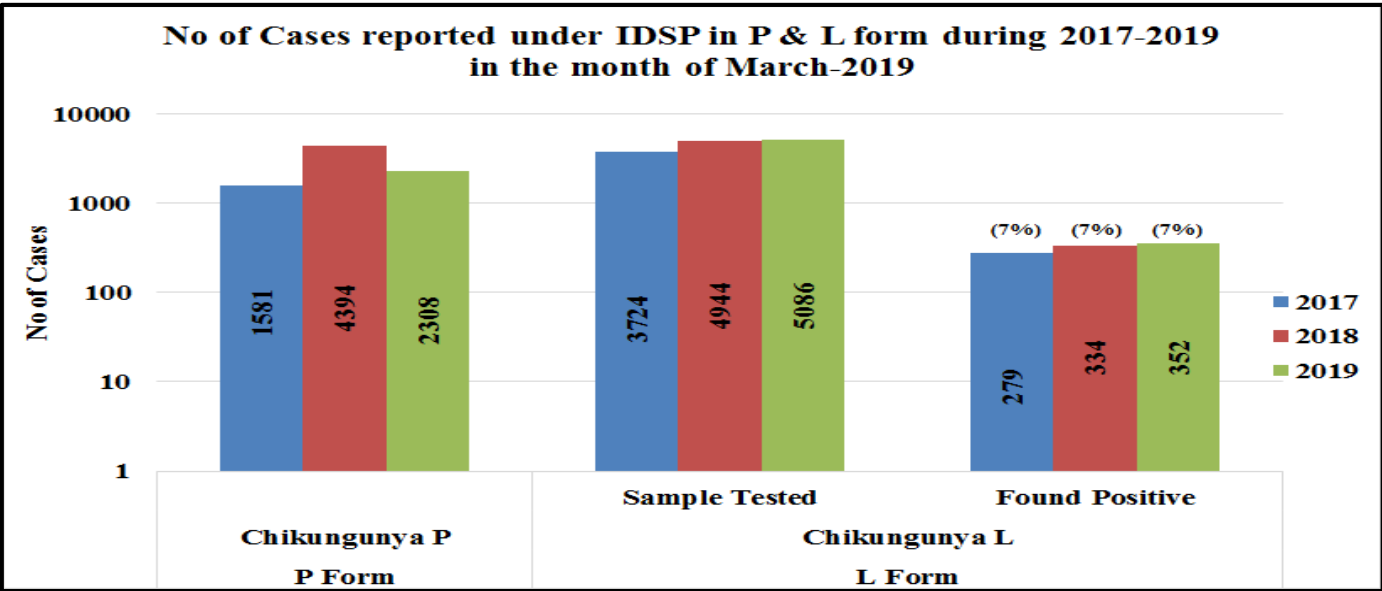
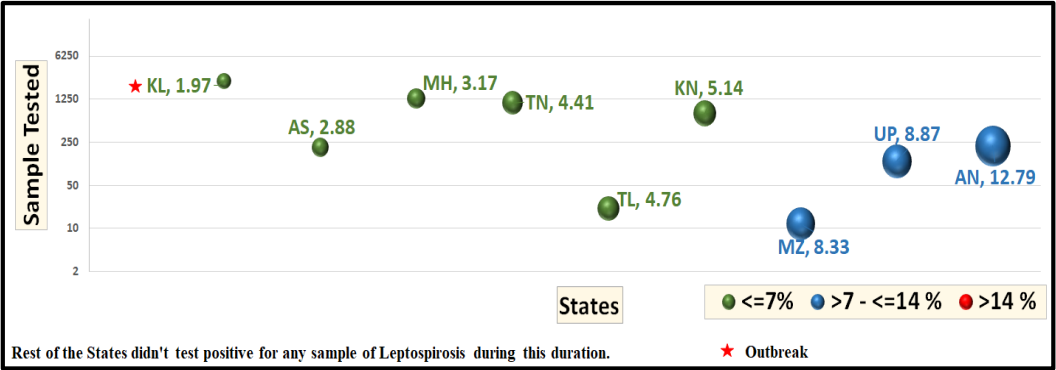
As reported in L form, in March 2017; 12157 samples were tested for Leptospirosis, out of which 315 were found positive. In March 2018; out of 14884 samples, 199 were found to be positive and in March 2019, out of 6705 samples, 247 were found to be positive.

Sample positivity of samples tested for Leptospirosis has been 2.59%, 1.34% and 3.68% in March month of 2017, 2018 & 2019 respectively.

**Fig 20: State/UT wise Presumptive Leptospirosis cases and outbreaks for March 2019**



**Fig 21: State/UT wise Lab Confirmed Leptospirosis cases and outbreaks for March 2019**



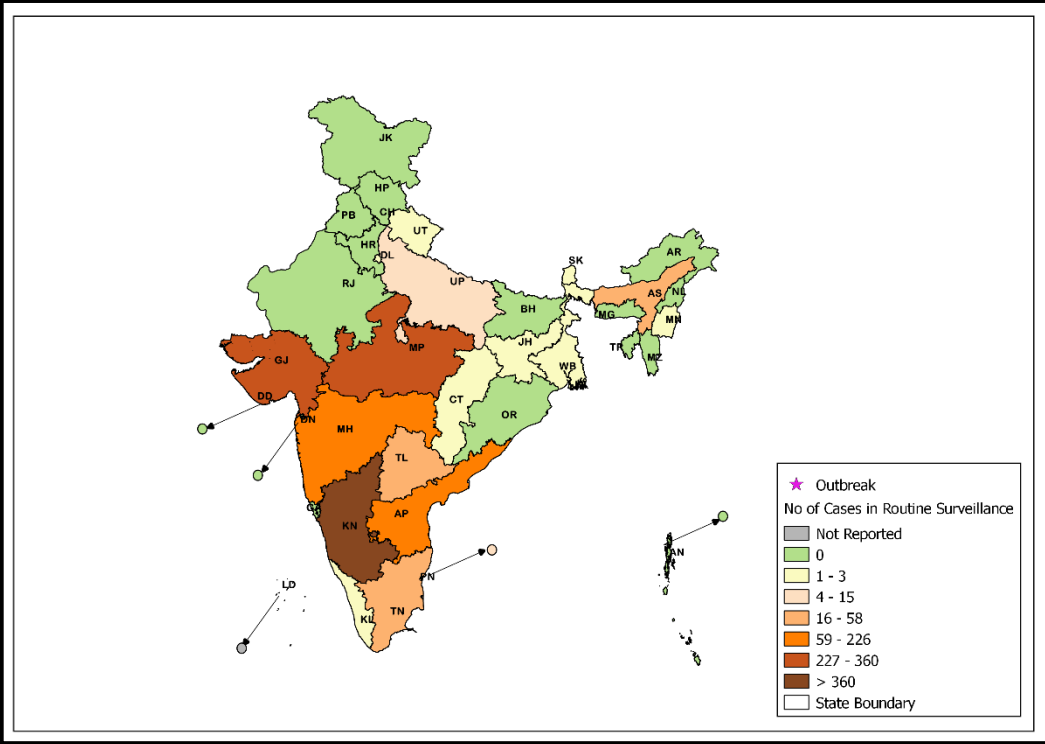
**Fig. 22: No. of Chikungunya Cases reported under IDSP in P & L form during March 2017 - 2019**

As shown in Fig 22, number of presumptive Chikungunya cases, as reported by States/UTs in ‘P’ form was 1581 in March 2017; 4394 in March 2018 and 2308 in March 2019. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

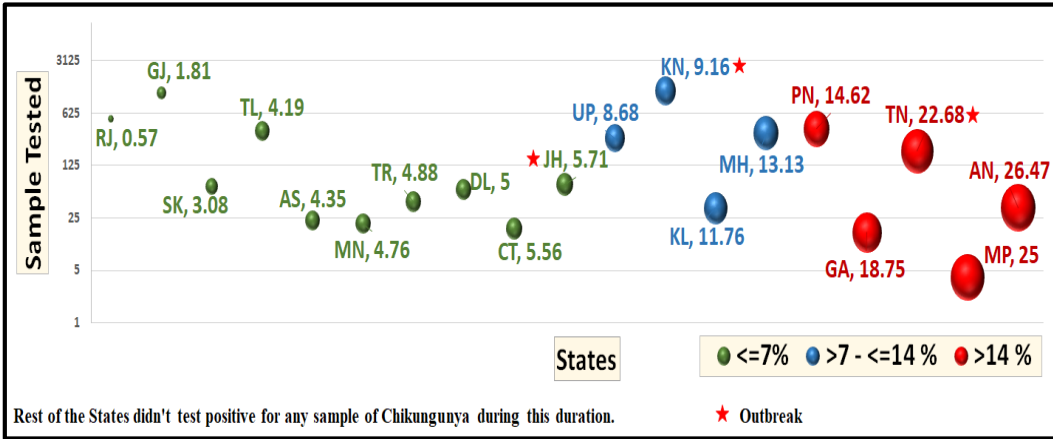
As reported in L form, in March 2017; 3724 samples were tested for Chikungunya, out of which 279 were found positive. In March 2018; out of 4944 samples, 334 were found to be positive and in March 2019, out of 5086 samples, 352 were found to be positive.

Sample positivity of samples tested for Chikungunya has been 7.49%, 6.76% and 6.92% in March month of 2017, 2018 & 2019 respectively.

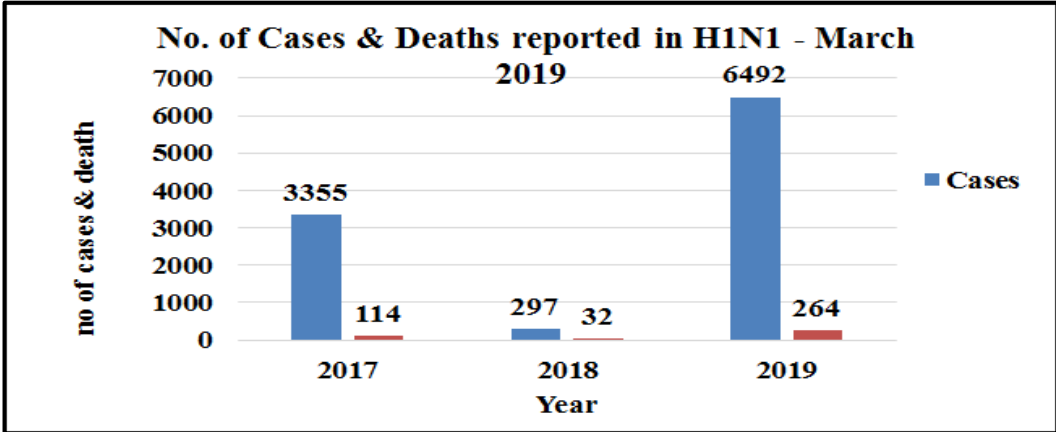
**Fig 23: State/UT wise Presumptive Chikungunya cases and outbreaks for March 2019**



**Fig 24: State/UT wise Lab Confirmed Chikungunya cases and outbreaks for March 2019**



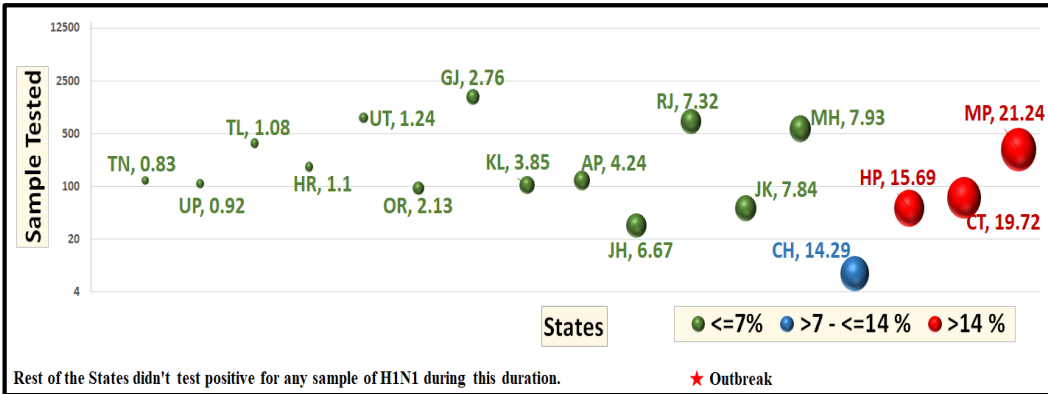
**Fig 25: H1N1 cases reported under IDSP in L Form during 2017-2019 in March 2019**



As reported in L form, in March 2017; there were 2482 cases and 53 deaths. In March 2018; there were 489 cases and 58 deaths and in March 2019, there were 10606 cases and 290 deaths.

Case fatality rate for H1N1 were 2.13%, 11.86% and 2.73% in March month of 2016, 2017 & 2018 respectively

**Fig 23: State/UT wise H1N1 cases and outbreaks for March 2019**



## Action from the field

### 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:** The acute illness characterized by persistent high fever with any of the following clinical features: Headache, nausea, loss of appetite, toxic look, Constipation or sometimes diarrhoea, splenomegaly and/or significant titre in 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 (Including Acute Gastroenteritis): Presumptive:** Passage of 3 or more loose watery stools (with or without vomiting) in the past 24 hours.
- **Confirmed Cholera:** A presumptive Acute Diarrheal case with Culture OR Polymerase chain reaction (PCR) test.
- **Viral Hepatitis: Presumptive:** Any person having clinical evidence of jaundice with signs and symptoms of acute hepatitis like malaise, fever, vomiting and bio-chemical criteria of serum bilirubin of greater than 2.5mg/dl, AND more than tenfold rise in ALT/SGPT.
- **Lab Confirmed Hepatitis A:** A presumptive case with IgM antibodies to hepatitis A(anti HAV IgM) in serum/plasma.
- **Lab Confirmed Hepatitis E:** A presumptive case with IgM antibody to hepatitis E virus (anti HEV IgM) in serum/plasma.
- **Dengue: Presumptive:** Acute febrile illness of 2-7 days with any one of the following:
  - Nausea, vomiting, rash, headache, retro orbital pain, myalgia or arthralgia, or Non-ELISA based NS1 antigen/IgM positive. (RDT reports are considered as probable due to poor sensitivity and specificity of currently available RDTs).
- **Lab Confirmed:** A presumptive case with:
  - Demonstration of dengue virus antigen in serum sample by NS1-ELISA OR
  - Demonstration of IgM antibody titre by ELISA in single serum sample OR
  - IgG seroconversion in paired sera after 2 weeks with four fold increase of IgG titres OR
  - Detection of viral nucleic acid by polymerase chain reaction (PCR) OR
  - Isolation of the virus (Virus culture positive) from serum, plasma or leucocytes.)
- **Leptospirosis Case Definition: Presumptive Leptospirosis:** A person having 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:
  - Calf muscle tenderness
  - Conjunctival suffusion
  - Anuria or oliguria and/or proteinuria



- Jaundice
- Hemorrhagic manifestations
- Meningeal irritation
- Nausea, Vomiting, Abdominal pain, Diarrhoea

**Lab Confirmed Leptospirosis:** A presumptive case with -

- IgM ELISA positive OR
- Isolation of leptospire from clinical specimen OR
- Four fold or greater rise in the MAT titer between acute and convalescent phase serum specimens run in parallel OR
- PCR test

• **Chikungunya case definition: Presumptive Case Definition:** Any person:

- With or without history of travel to or having left a known endemic area 15 days prior to the onset of symptoms AND Meeting the following clinical criteria:
- Acute onset of fever
- Arthralgia / arthritis
- With or without skin rash.

**Lab confirmed:** A presumptive case with

- MAC ELISA- Presence of virus specific IgM antibodies in a single serum sample collected in acute or convalescent stage. Four-fold increase in IgG values in samples collected at least three weeks apart OR
- Virus isolation OR
- Presence of viral RNA by RT-PCR.

**Acknowledgement:**

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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](mailto:dirnicd@nic.in) & [idsp-npo@nic.in](mailto:idsp-npo@nic.in)

**Prepared by: Central Surveillance Unit, IDSP under guidance of Director, NCDC**

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