Issue - 10 Vol. 1

Disease Alert
प्रकोप चेतावनी

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

October 2016

Inside

Viral Hepatitis Outbreak Chandgam Block/District Pulwama Jammu & Kashmir October 2016

Background

An outbreak of Viral Hepatitis was reported to District Surveillance Unit, Pulwama, Jammu Kashmir, from BMO Pulwama on 25.10.2016. In response to the Viral Hepatitis outbreak, a visit was made by a team of officials on 25.10.2016. The team comprising Gh. Nabi Hurra (Health Inspector), Mushtaq Ahmad (Health Educator DHQ Pulwama) and Bashir Ahmad (Basic Health Worker) along with the local health staff made a door to door survey and found 07 cases of jaundice with raised serum bilirubin. All cases were already provided necessary treatment by the team of doctors deputed from PHC Tahab Block Pulwama.

District Pulwama comprises three Medical Blocks viz Pulwama, Pampore & Tral with one (01) District Hospital, Two (02) Sub District Hospital, One (01) CHC, One (01) TB Clinic, Nineteen (19) PHCs, Twenty-nine (29) New Type PHCs and Ninety six (96) Sub Centers. There are 331 villages with four (4) CD Blocks. The population of District Pulwama is 5.70 lacs as per 2011 census. The total literacy rate of the district is 65.00%. It is 75.41% in respect of males and 53.81% in respect of females.

The affected village Chandgam is located in Block Pulwama 15 KMs away from District Head quarter (CMO Office). The said village is having a health facility in the form of S/C Chandgam. The population of the village Chandgam is 3165.

Fig. 1: Location map of affected area, Jammu & Kashmir

District Head Quarter (CMO Office)

Affected village

Methods

Epidemiological Methods: (IDSP case def. was used)

a. Cases with chief complaints of acute illness typically including Acute Jaundices, Dark Urine, Anorexia, Malaise, Extreme Fatigue & Right Upper quadrant tenderness were searched by door to door visits.
b. Outbreak was described with respect to time place and person

Lab Investigations:

Four (04) blood samples were collected and sent to PHL Barzalla Srinagar for analysis.

Environmental Methods:

The team examined the water source of the village and enquired about the habits of affected. Two (02) Tap water samples were taken and sent to Public Health Lab Barzalla Srinagar to test for any fecal contamination.

Investigation findings:

Epidemiological Methods:

a. Rates of jaundice cases were in excess of the background. The current attack rates (0.2%) of cases were compared with the background (0%) by reviewing weekly IDSP data for the year 2015 and 2016.
b. The team identified 07 cases and no death.
c. First case was reported on 19 October 2016 followed by clustering of cases from 21 October 2016. During 19 -25 October total seven (07) cases reported between the age group from 8 to 24 years out of which 14.2% were female. (Fig. 1)
d. None of the pregnant ladies were affected.

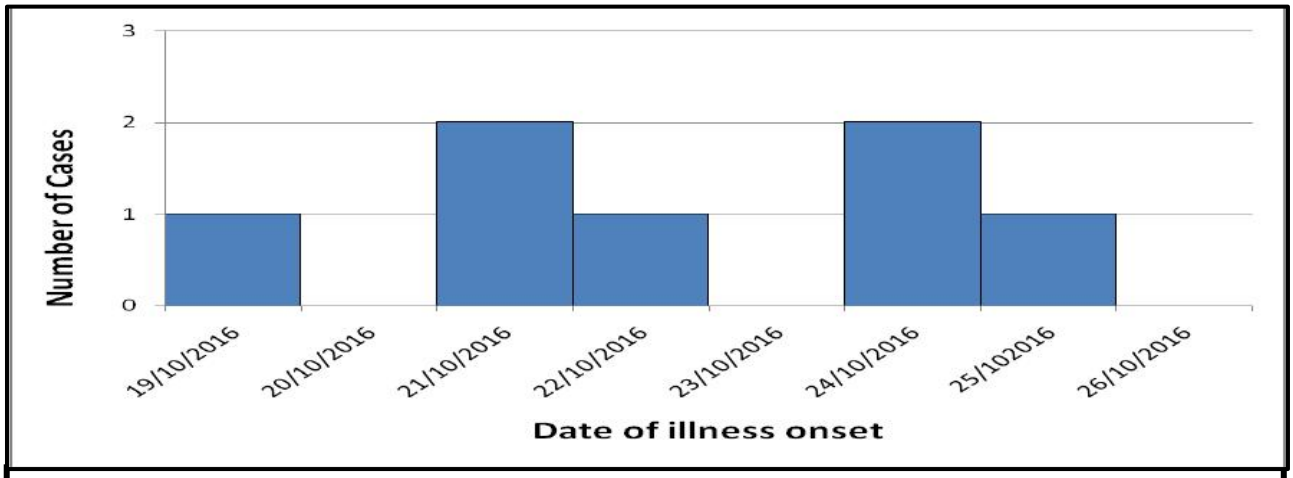


Fig. 2: Date wise Cases of Viral Hepatitis Chandgam Block/District Pulwama Jammu & Kashmir

1. **Lab Result:**
   Out of 4 blood samples collected, 1 sample was found positive for IgM for HAV.

2. **Environmental Methods:**
   a. Drinking water to Chandgam village is supplied through two overhead water tanks which get supply from a spring and a bore well located in the outskirts of the village. The spring water source was not properly maintained. It was being used by the inhabitants for washing utensils and cloths. (Fig: 2)

Fig. 3: Water source of Village Chandgam, Pulwama, J&K

The team also observed unhygienic practices among inhabitants.

Both the water samples analyzed at Public Health Lab Barzalla Srinagar were found unsatisfactory (MPN) for drinking purposes with Coliform count/100ml of 92 & 54 respectively:

Conclusion:

There was Viral Hepatitis outbreak in village Chandgam Block Pulwama, District Pulwama, J&K, India due to consumption of contaminated water and unhygienic living conditions of inhabitants. The surveillance was carried out by the team from Block Medical Officer Pulwama and no new case was reported from 26th October 2016.

Actions taken:

- Medical team from PHC Tahab provided standard case management to the patients.
- Health education to the population about the disease and its preventive measures was imparted and health advisory in the form of Pamphlets were distributed among the inhabitants and also pasted on walls at public places.
- Examined the antenatal case and advised medical team to provide special attention to them.
- Advised people to use properly boiled water for drinking purpose.

Surveillance data of Enteric Fever, Acute Diarrhoeal Disease, Viral Hepatitis A & E, Dengue Leptospirosis and Chikungunya During October 2014-2016*

* Data extracted from IDSP Portal (www.idsp.nic.in) as on 20 February, 2017.

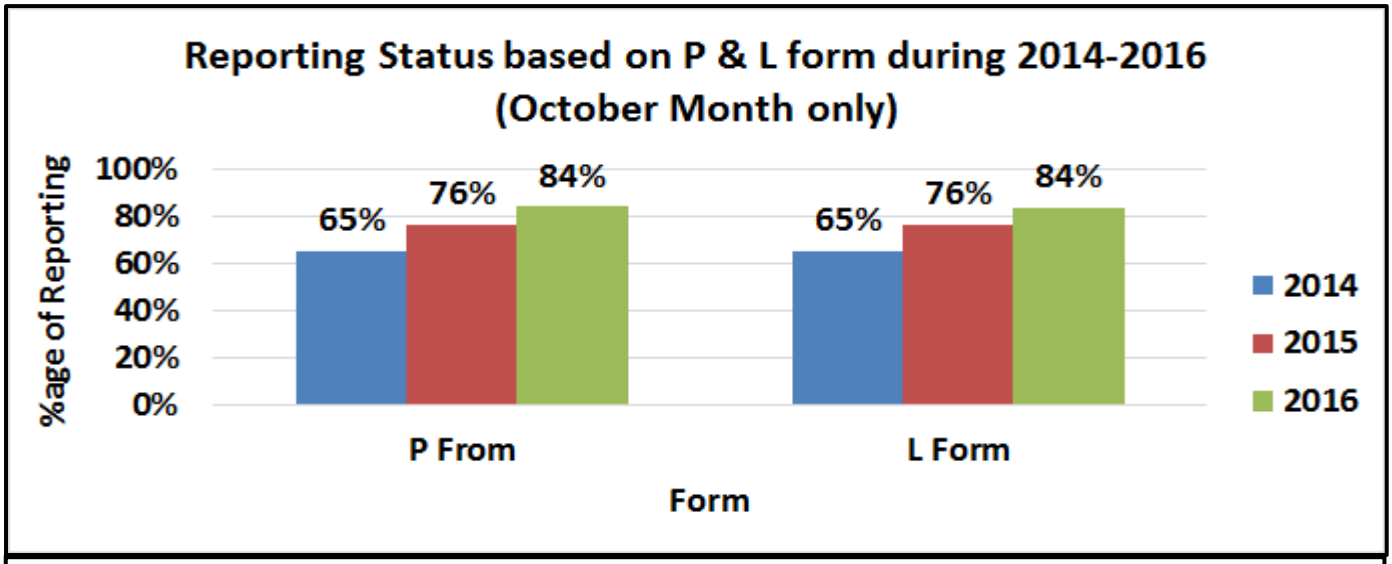


Fig. 4: Reporting Status based on P & L form during October 2014-2016

As shown in fig 4, in October 2014, 2015 and 2016, the 'P' form reporting percentage (i.e. % RU reporting out of total in P form) was 65 %, 76% and 84% respectively across India, for all disease conditions reported under IDSP in P form. Similarly, L form reporting percentage was 65%, 76% and 84% 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.

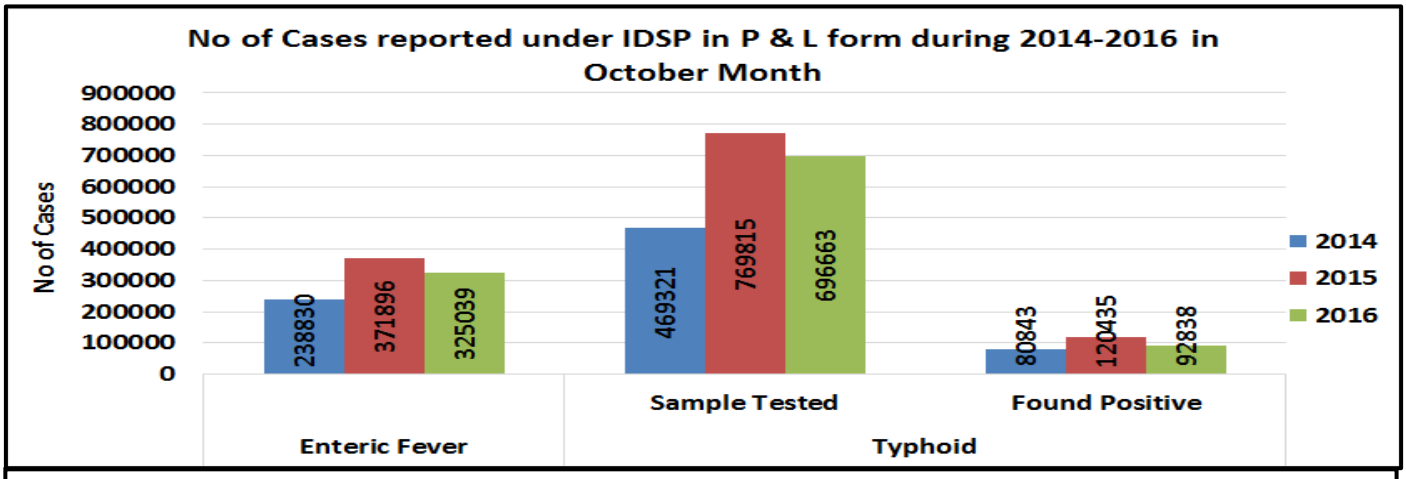


Fig. 5: No. of Enteric Fever Cases reported under P & L form during October 2014-2016

As shown in fig 5, number of presumptive enteric fever cases, as reported by States/UTs in 'P' form was 238830 in October 2014; 371896 in October 2015 and 325309 in October 2016. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in October 2014; 469321 samples were tested for Enteric fever, out of which 80843 were found positive. In October 2015; out of 769815 samples, 120435 were found to be positive and in October 2016, out of 696663 samples, 92838 were found to be positive.

Sample positivity has been 17.2%, 15.6% and 13.3% in October month of 2014, 2015 & 2016 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.

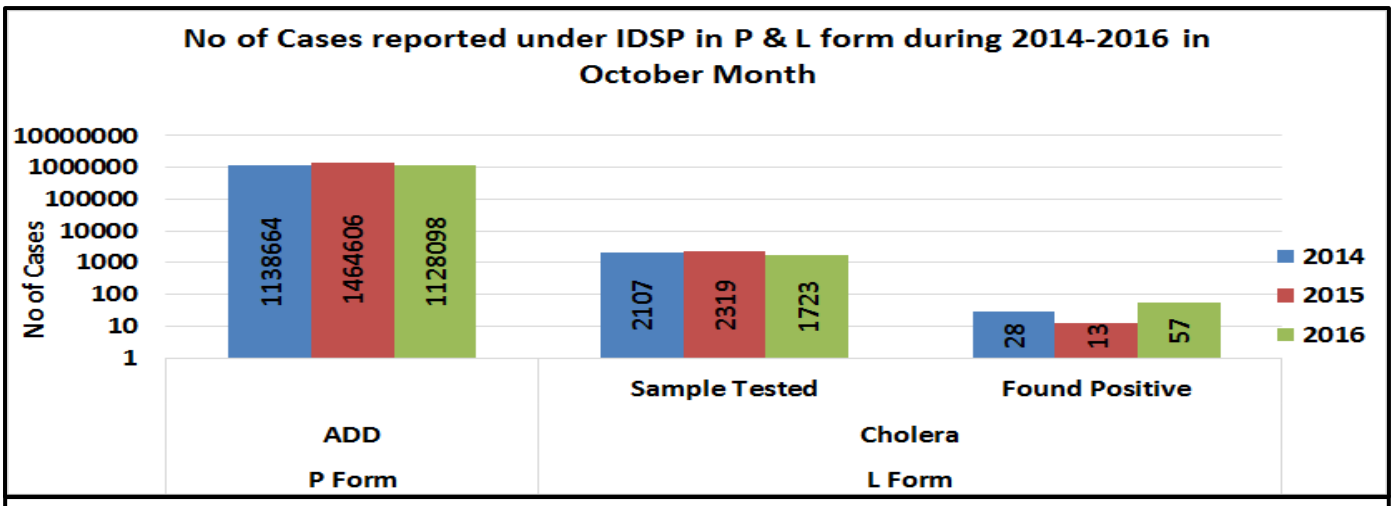


Fig. 6: No. of ADD Cases reported under IDSP in P form & Lab confirmed Cholera cases in L form during October 2014-2016

As shown in fig 6, number of Acute Diarrhoeal Disease cases, as reported by States/UTs in 'P' form was 1138664 in October 2014; 1464606 in October 2015 and 1128098 in October 2016. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in October 2014, 2107 samples were tested for Cholera out of which 28 tested positive; in October 2015, out of 2319 samples, 13 tested positive for Cholera and in October 2016, out of 1723 samples, 57 tested positive.

Sample positivity of samples tested for Cholera has been 1.3%, 0.6% and 3.3% in October month of 2014, 2015 & 2016 respectively.

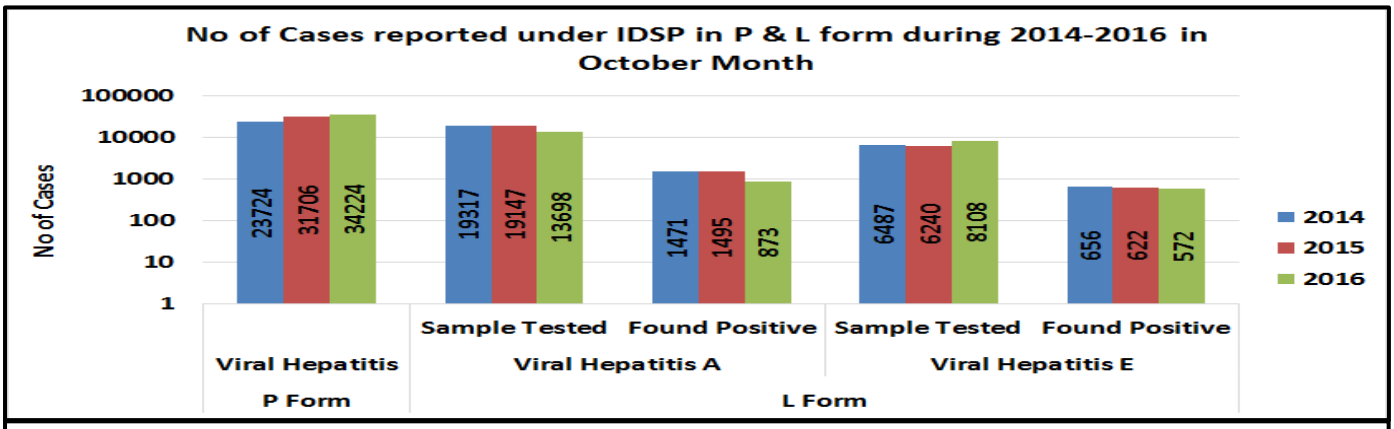


Fig. 7: No of Viral Hepatitis Cases reported under IDSP in P form & Viral Hepatitis A & E cases reported under L form during October 2014-2016

As shown in fig 7, the number of presumptive Viral Hepatitis cases was 34224 in October 2014, 23724 in October 2015 and 31706 in October 2016. These presumptive cases were diagnosed on the basis of case definitions provided under IDSP.

As reported in L form for Viral Hepatitis A, in October 2014; 19317 samples were tested out of which 1471 were found positive. In October 2015; out of 19147 samples, 1495 were found to be positive and in October 2016, out of 13698 samples, 873 were found to be positive.

Sample positivity of samples tested for Hepatitis A has been 7.6%, 7.8% and 6.4% in October month of 2014, 2015 & 2016 respectively.

As reported in L form for Viral Hepatitis E, in October 2014; 6487 samples were tested out of which 656 were found positive. In October 2015; out of 6240 samples, 622 were found to be positive and in October 2016, out of 8108 samples, 572 were found to be positive.

Sample positivity of samples tested for Hepatitis E has been 10.1%, 10.0% and 7.1% in October month of 2014, 2015 & 2016 respectively.

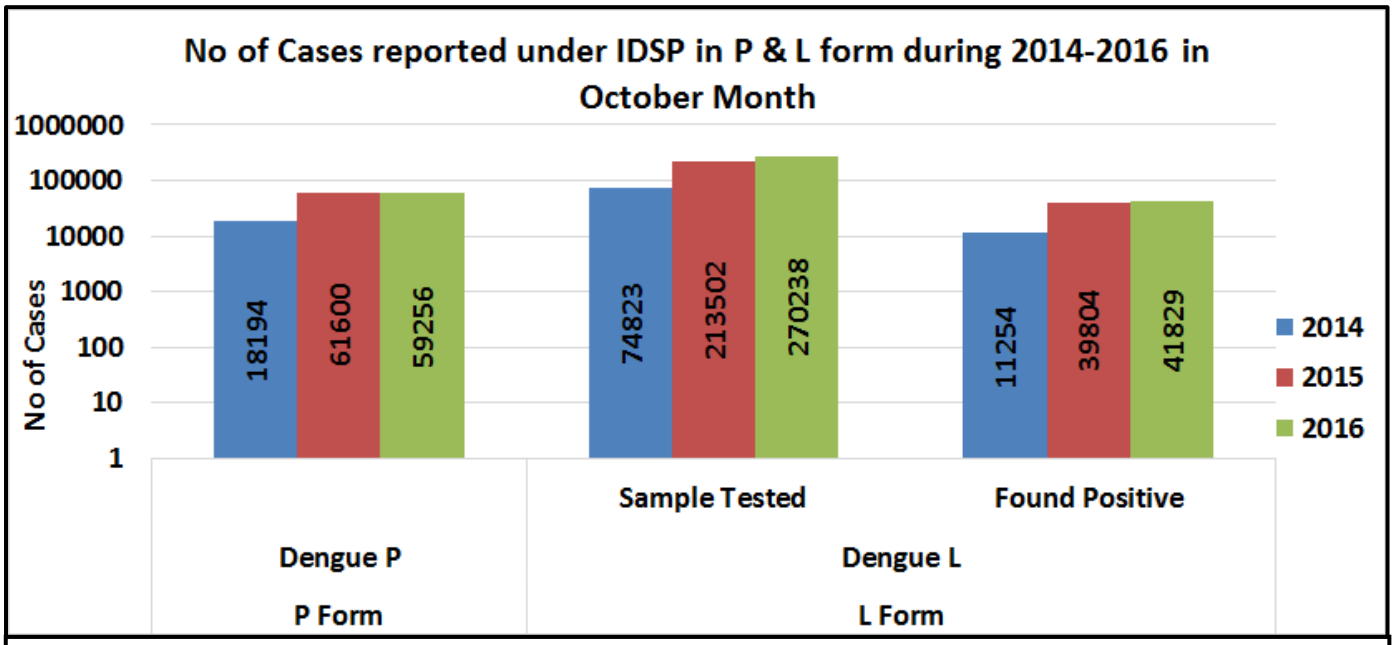


Fig. 8: No. of Dengue Cases reported under IDSP in P & L form during October 2014-2016

As shown in fig 8, number of presumptive Dengue cases, as reported by States/UTs in 'P' form was 18194 in October 2014; 61600 in October 2015 and 59256 in October 2016. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in October 2014; 74823 samples were tested for Dengue, out of which 11254 were found positive. In October 2015; out of 213502 samples, 39804 were found to be positive and in October 2016, out of 270238 samples, 41829 were found to be positive.

Sample positivity of samples tested for Dengue has been 15.0%, 18.6% and 15.5% in October month of 2014, 2015 & 2016 respectively.

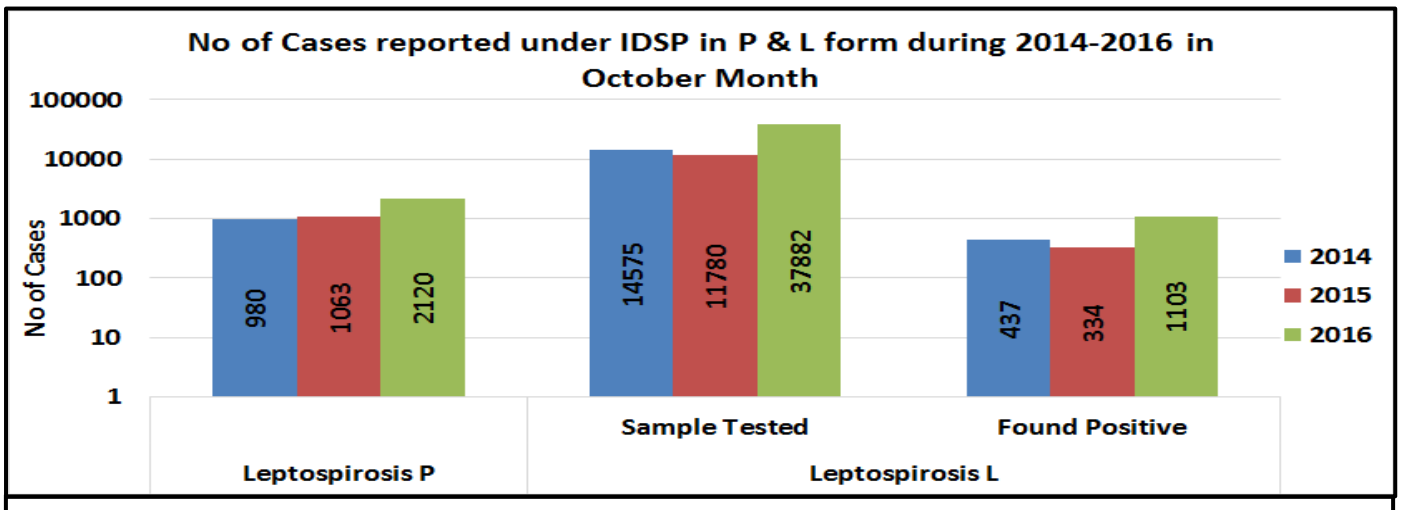


Fig. 9: No. of Leptospirosis Cases reported under IDSP in P & L form during October 2014-2016

As shown in fig 9, number of presumptive Leptospirosis cases, as reported by States/UTs in 'P' form was 980 in October 2014; 1063 in October 2015 and 2120 in October 2016. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in October 2014; 14575 samples were tested for Leptospirosis, out of which 437 were found positive. In October 2015; out of 11780 samples, 334 were found to be positive and in October 2016, out of 37882 samples, 1103 were found to be positive.

Sample positivity of samples tested for Dengue has been 3.0%, 2.8% and 2.9% in October month of 2014, 2015 & 2016 respectively.

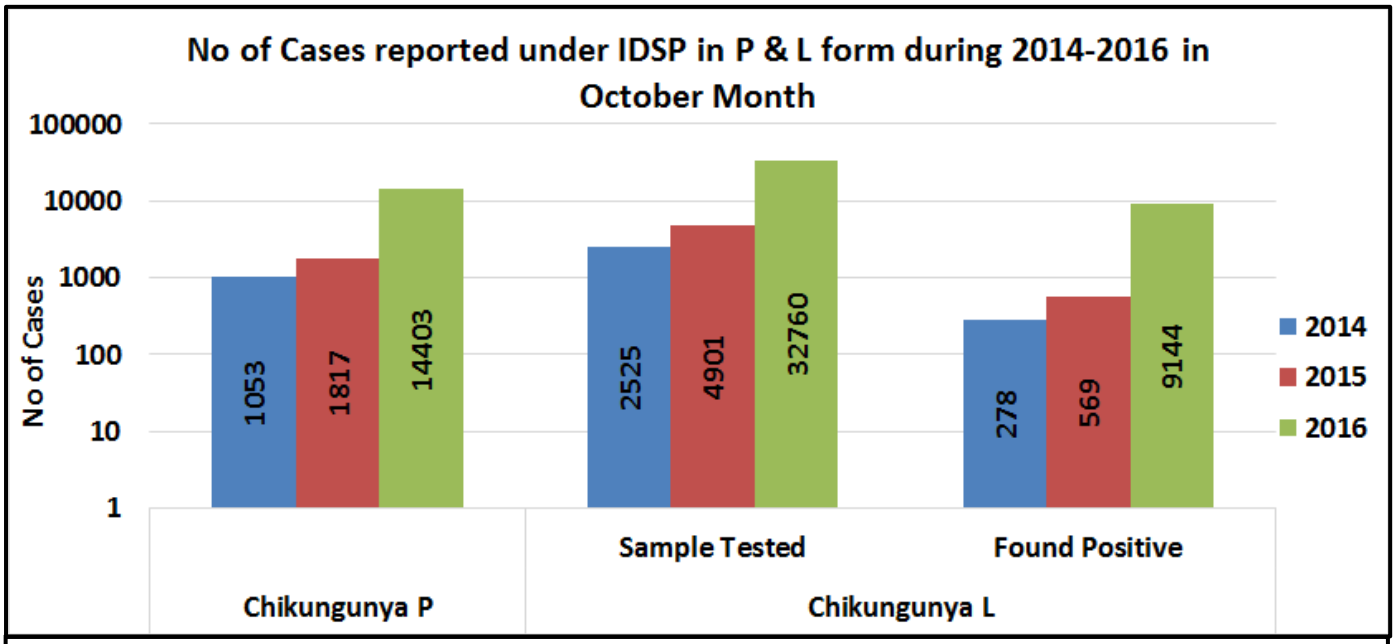


Fig. 10: No. of Chikungunya Cases reported under IDSP in P & L form during October 2014-2016

As shown in fig 10, number of presumptive Chikungunya cases, as reported by States/UTs in 'P' form was 1053 in October 2014; 1817 in October 2015 and 14403 in October 2016. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in October 2014; 2525 samples were tested for Chikungunya, out of which 278 were found positive. In October 2015; out of 4901 samples, 569 were found to be positive and in October 2016, out of 32760 samples, 9144 were found to be positive.

Sample positivity of samples tested for Chikungunya has been 11.0%, 11.6% and 27.9% in October month of 2014, 2015 & 2016 respectively.

Fig 11: State/UT wise P form completeness % for October 2016

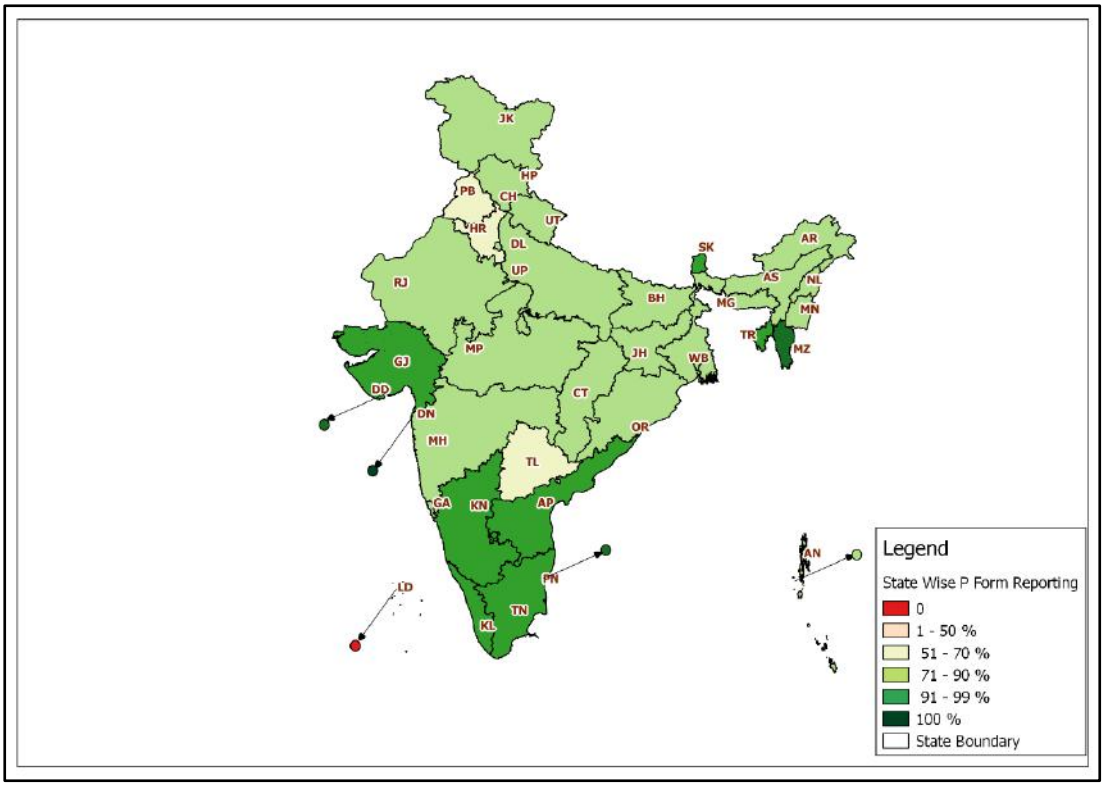


Fig 12: State/UT wise L form completeness % for October 2016

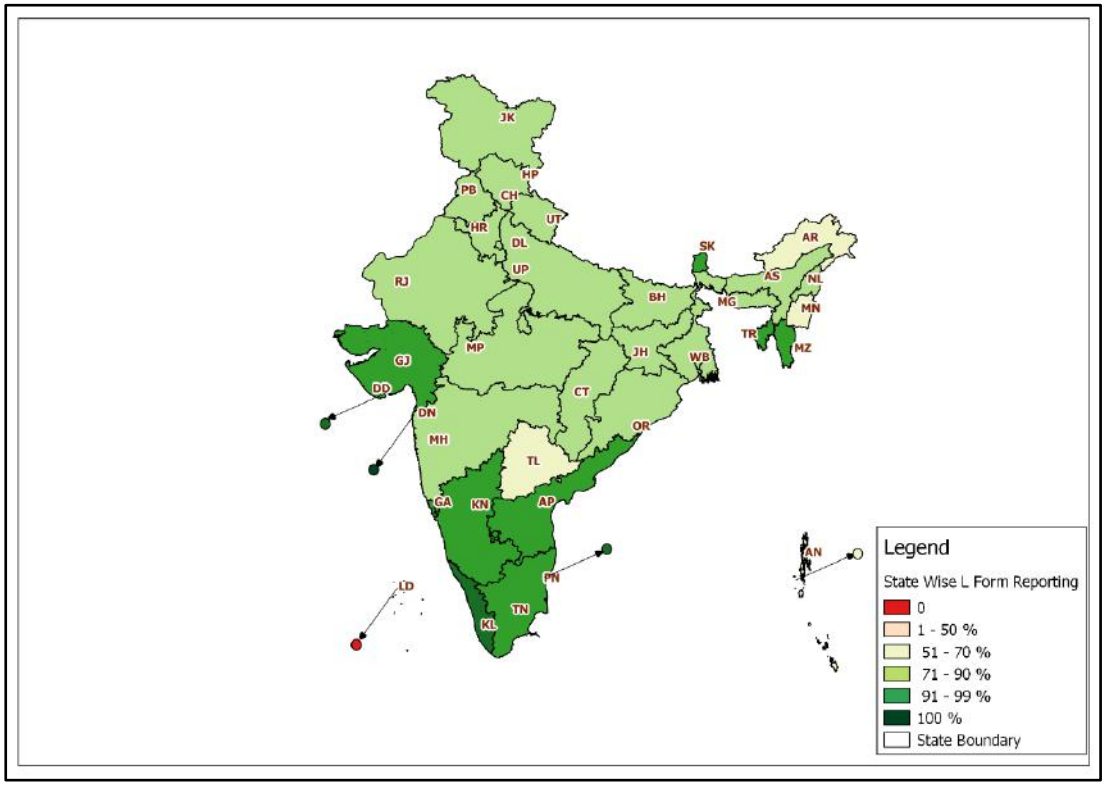


Fig 13: State/UT wise Presumptive Enteric fever cases and outbreaks for October 2016

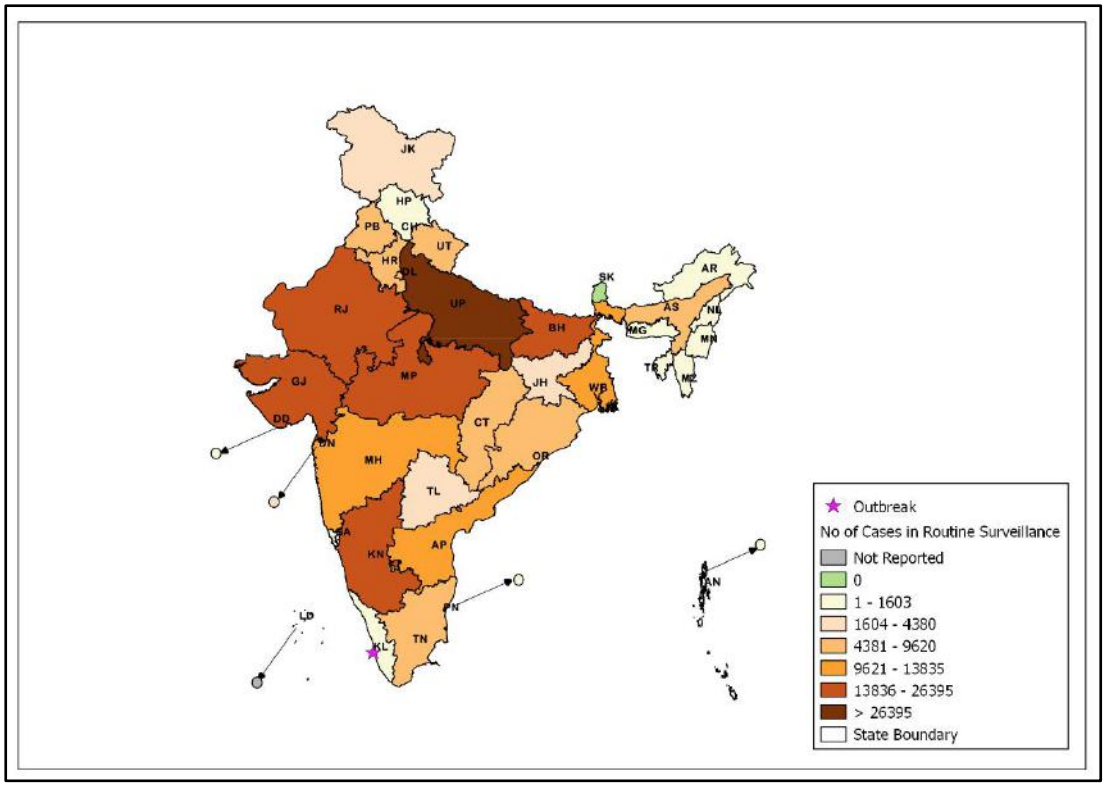


Fig 14: State/UT wise Lab Confirmed Enteric Fever cases and outbreaks for October 2016

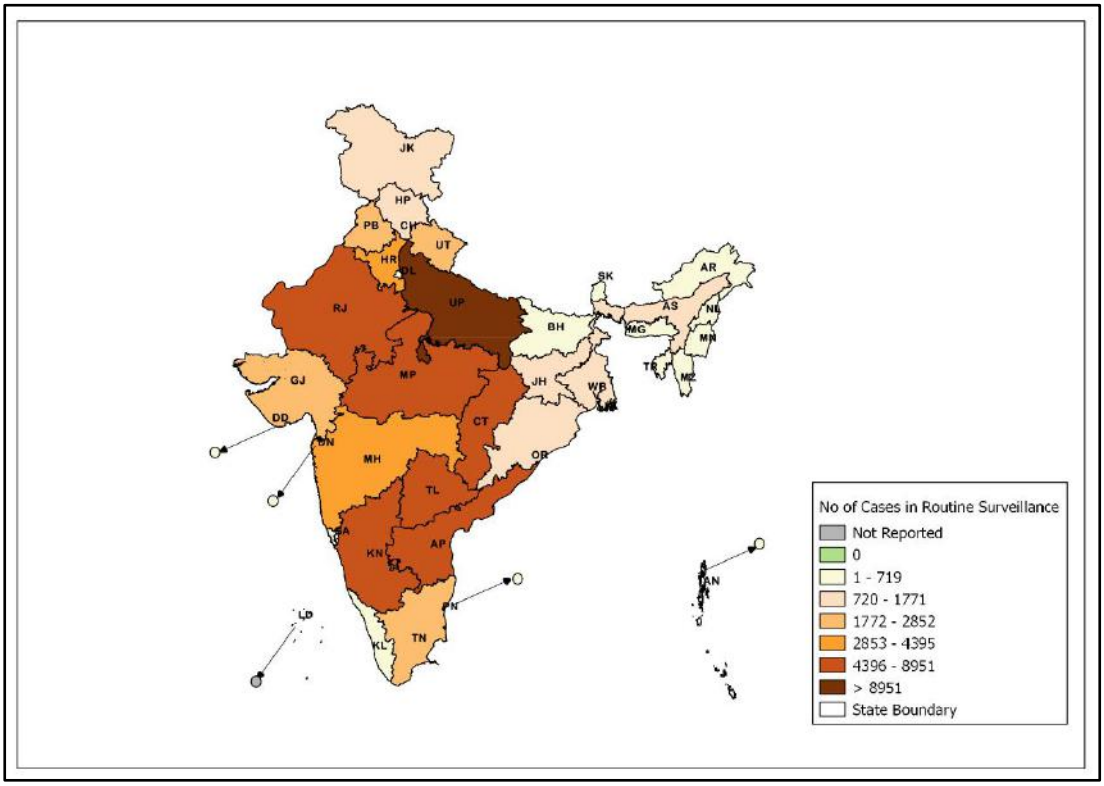


Fig 15: State/UT wise Presumptive ADD cases and outbreaks for October 2016

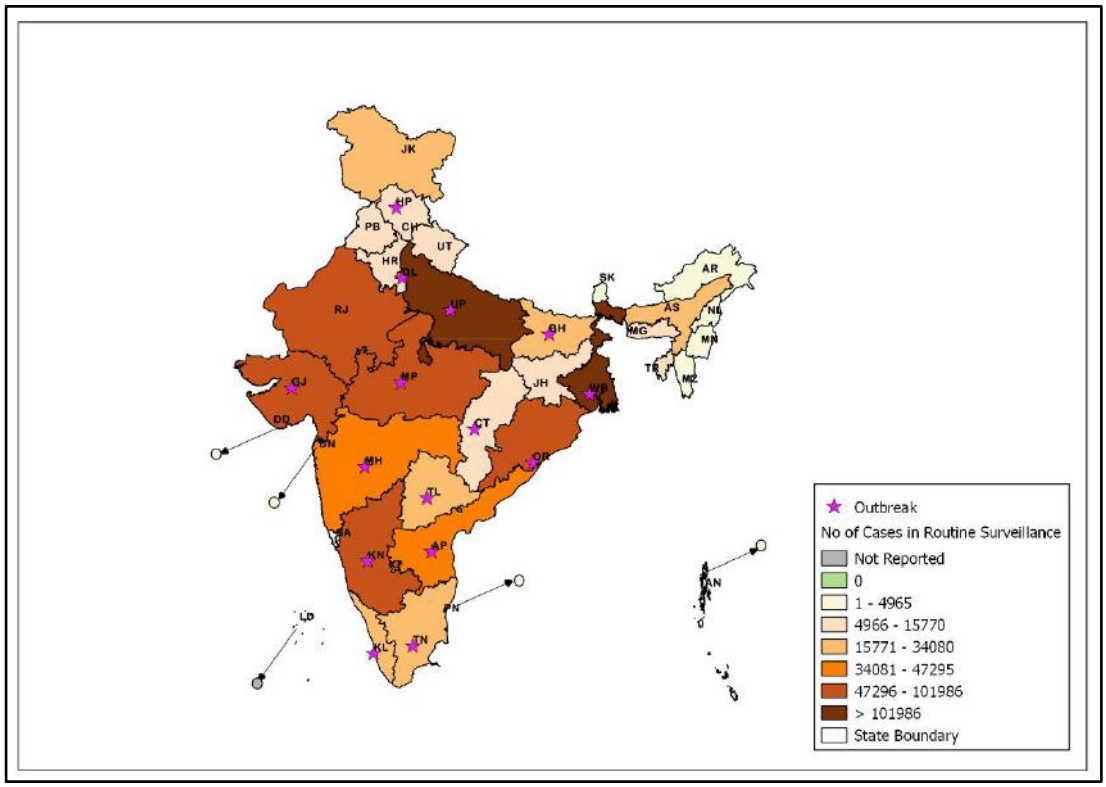


Fig 16: State/UT wise Lab Confirmed Cholera cases and outbreaks for October 2016

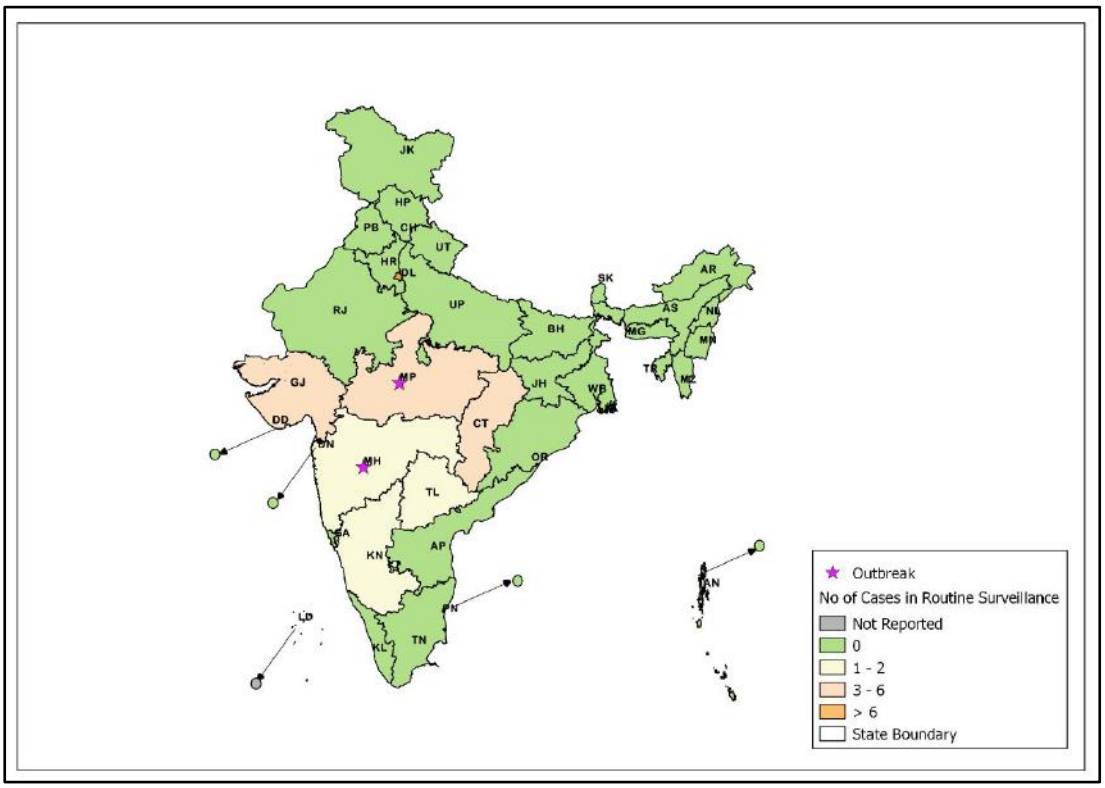


Fig 17: State/UT wise Presumptive Viral Hepatitis cases and outbreaks for October 2016

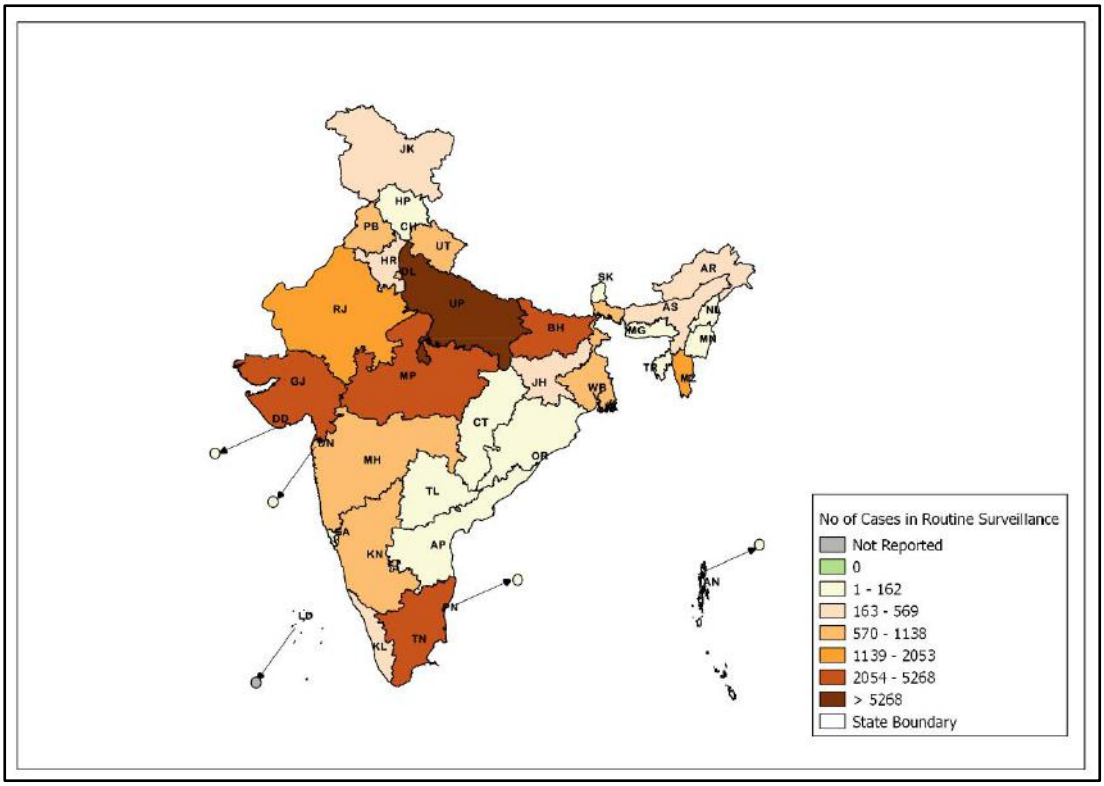


Fig 18: State/UT wise Lab confirmed Viral Hepatitis A cases for October 2016

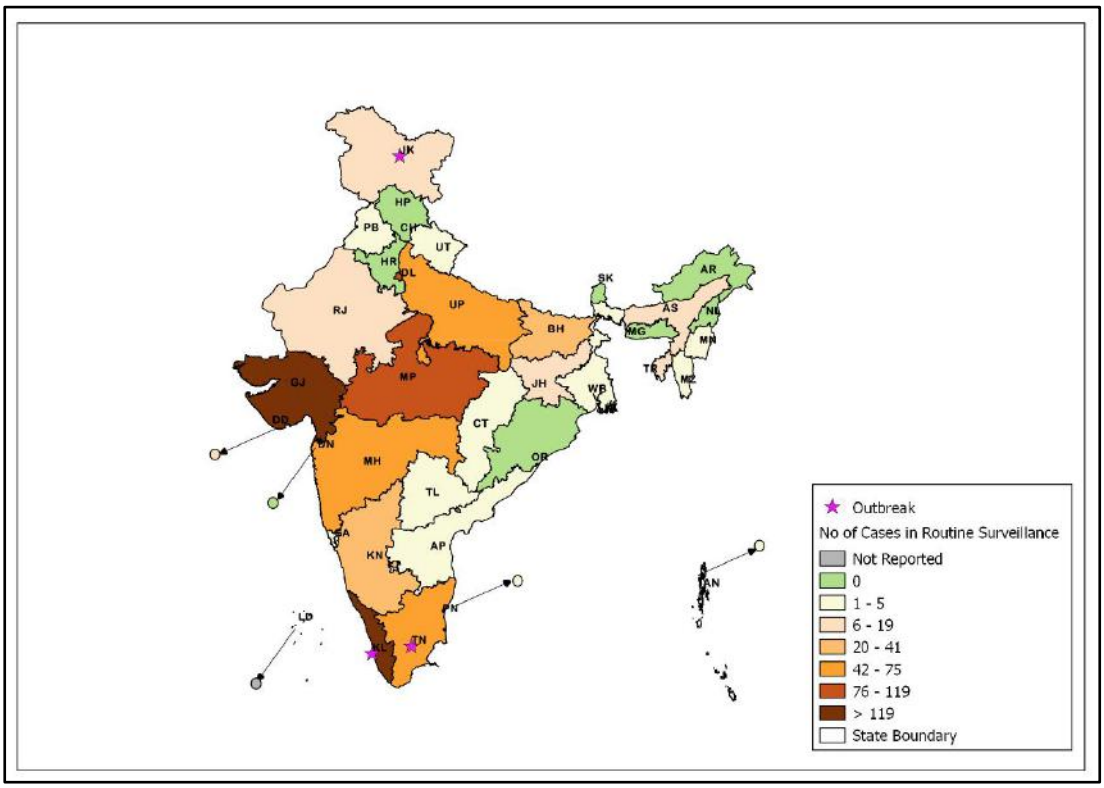


Fig 19: State/UT wise Lab confirmed Viral Hepatitis E cases for October 2016

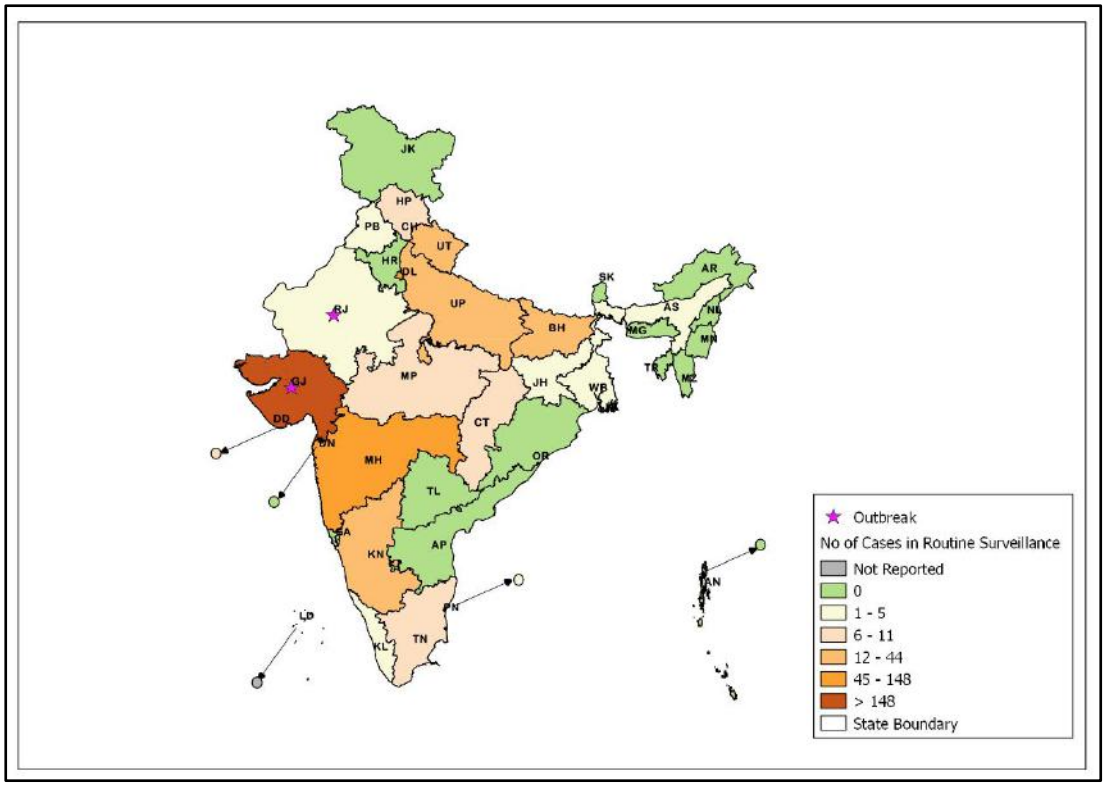


Fig 20: State/UT wise Presumptive Dengue cases & outbreaks for October 2016

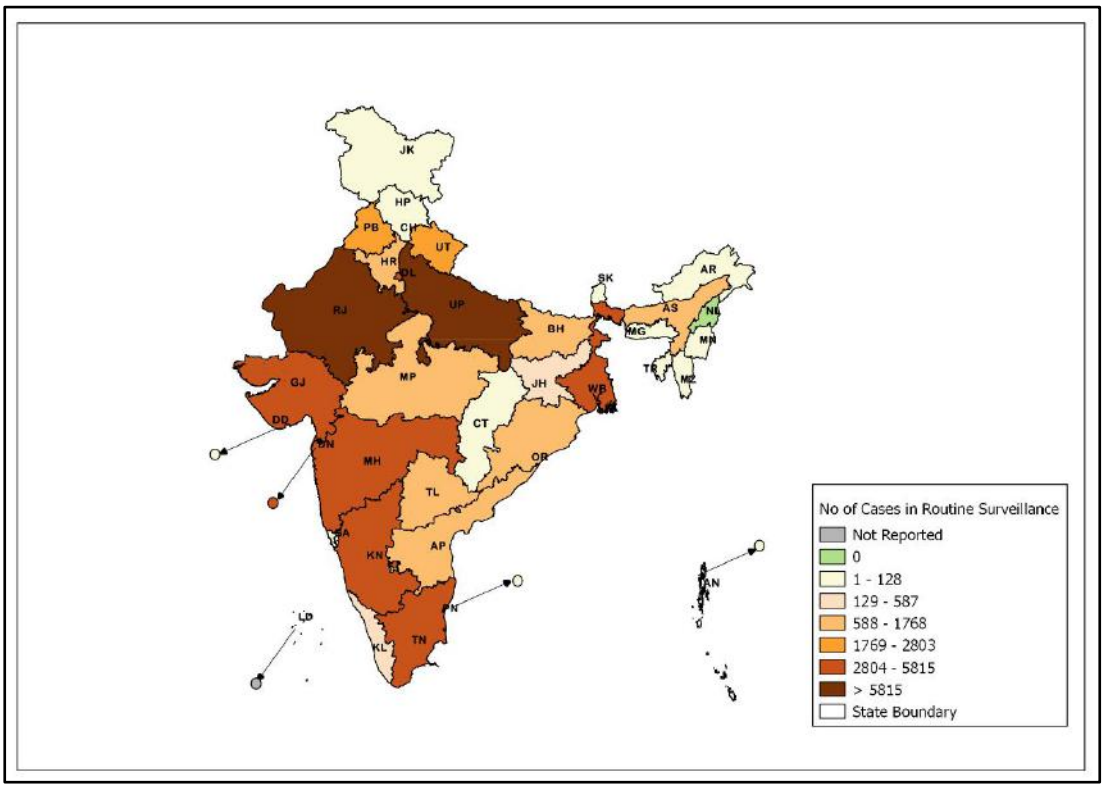


Fig 21: State/UT wise Lab confirmed Dengue cases for October 2016

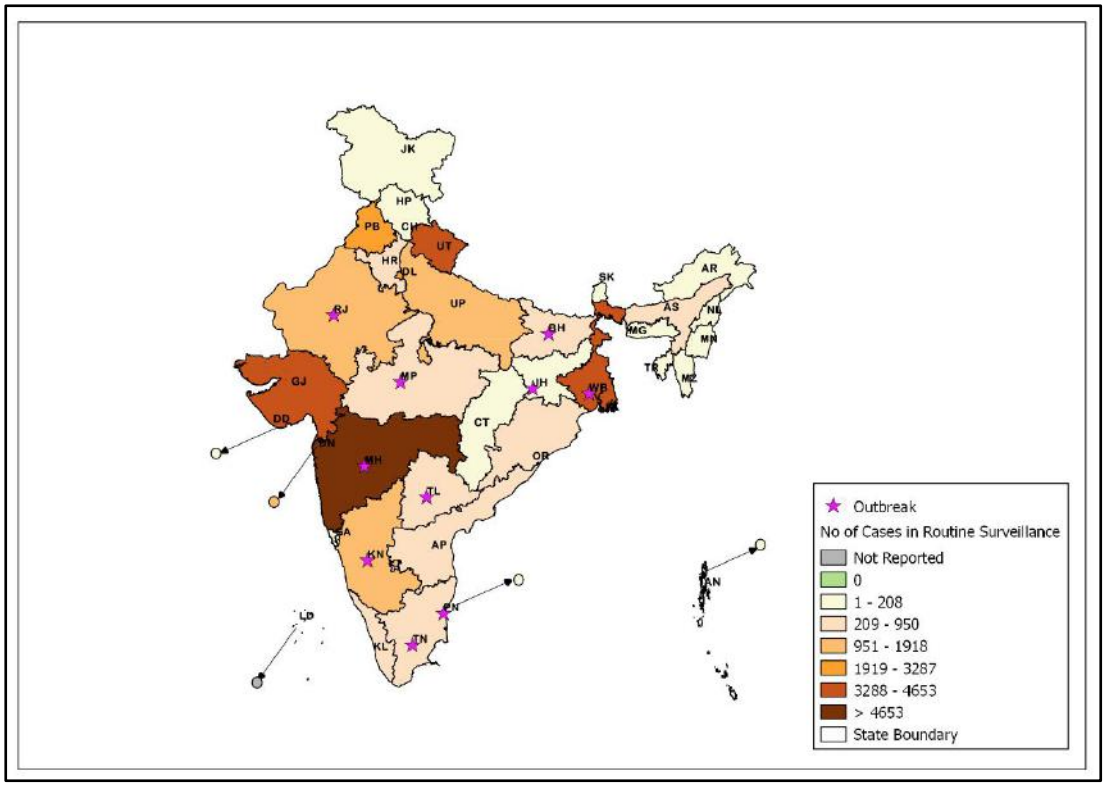


Fig 22: State/UT wise Presumptive Leptospirosis cases for October 2016

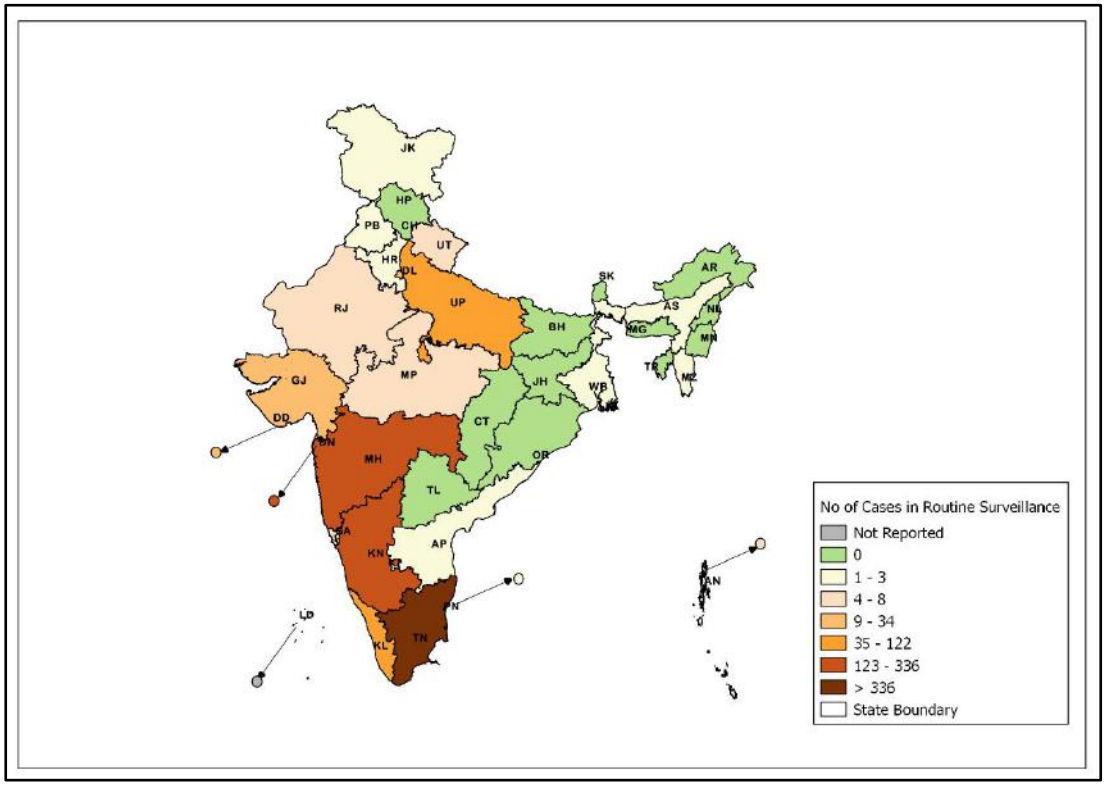


Fig 23: State/UT wise Lab Confirmed Leptospirosis cases & outbreaks for October 2016

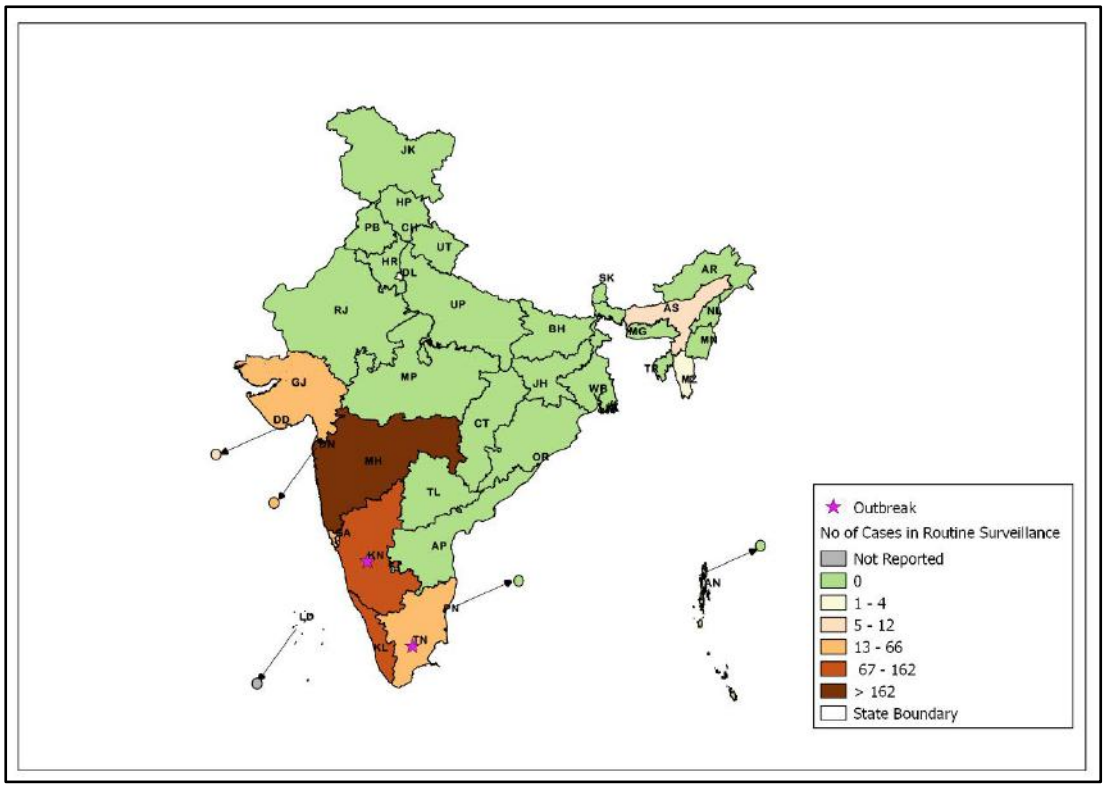


Fig 24: State/UT wise Presumptive Chikungunya cases & outbreaks for October 2016

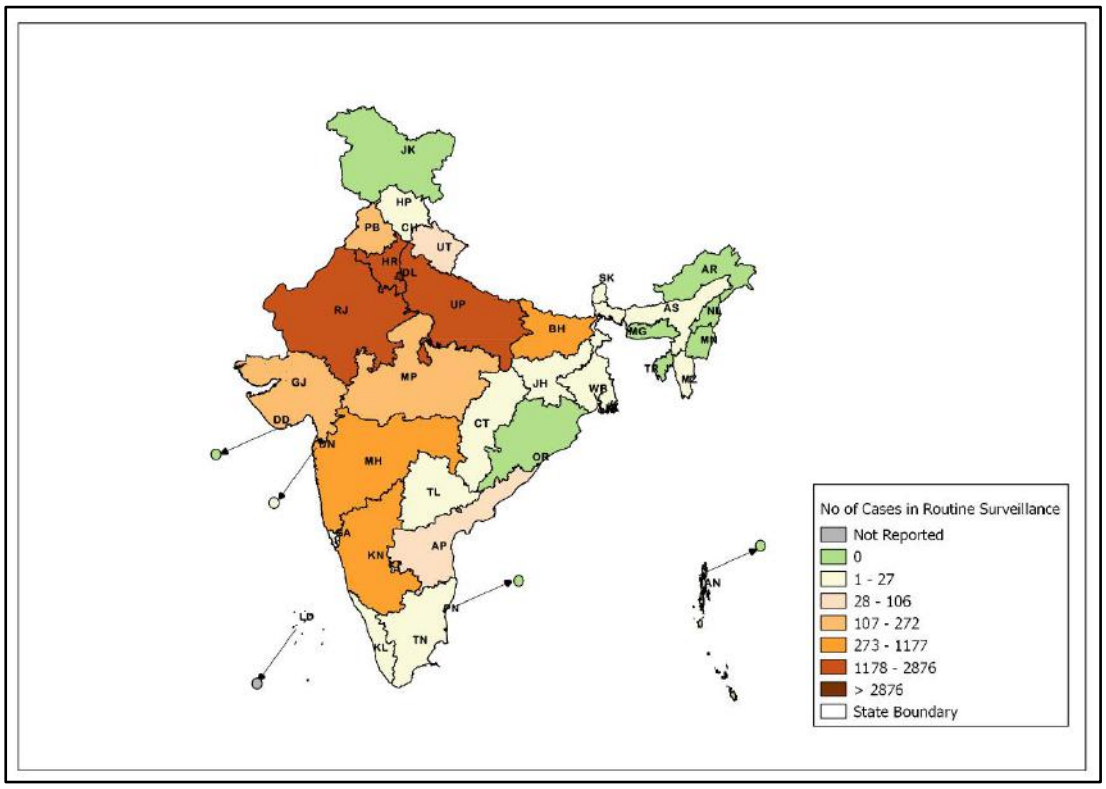


Fig 25: State/UT wise Lab Confirmed Chikungunya cases & outbreak for October 2016

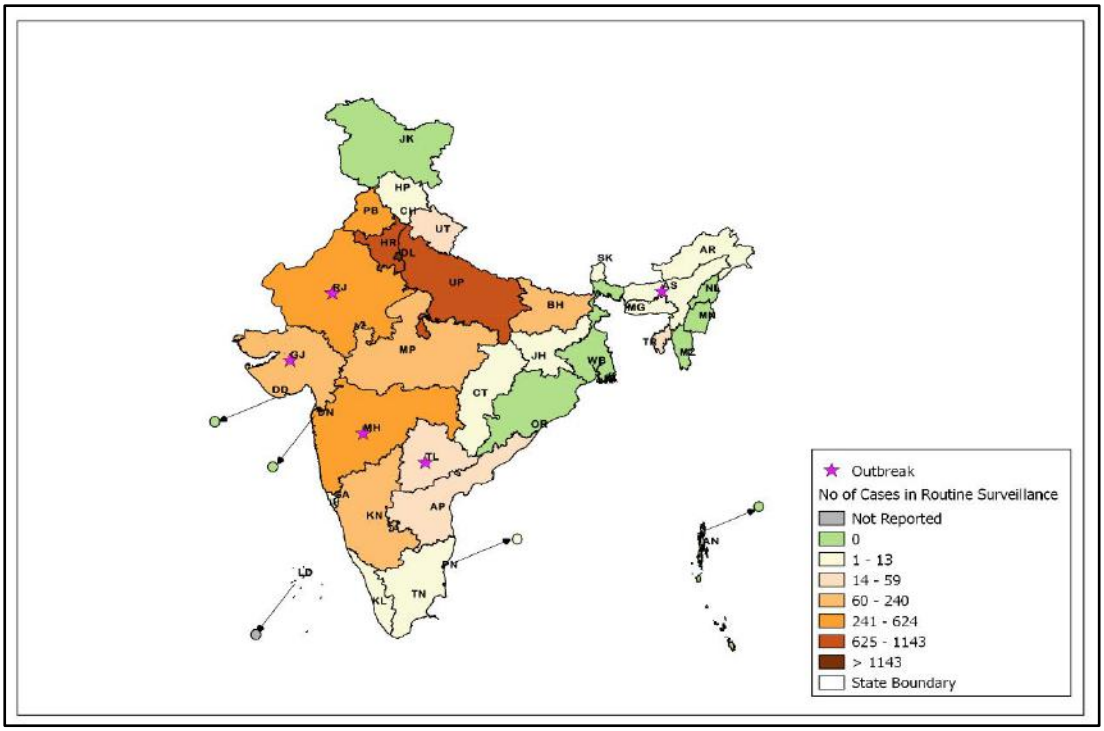
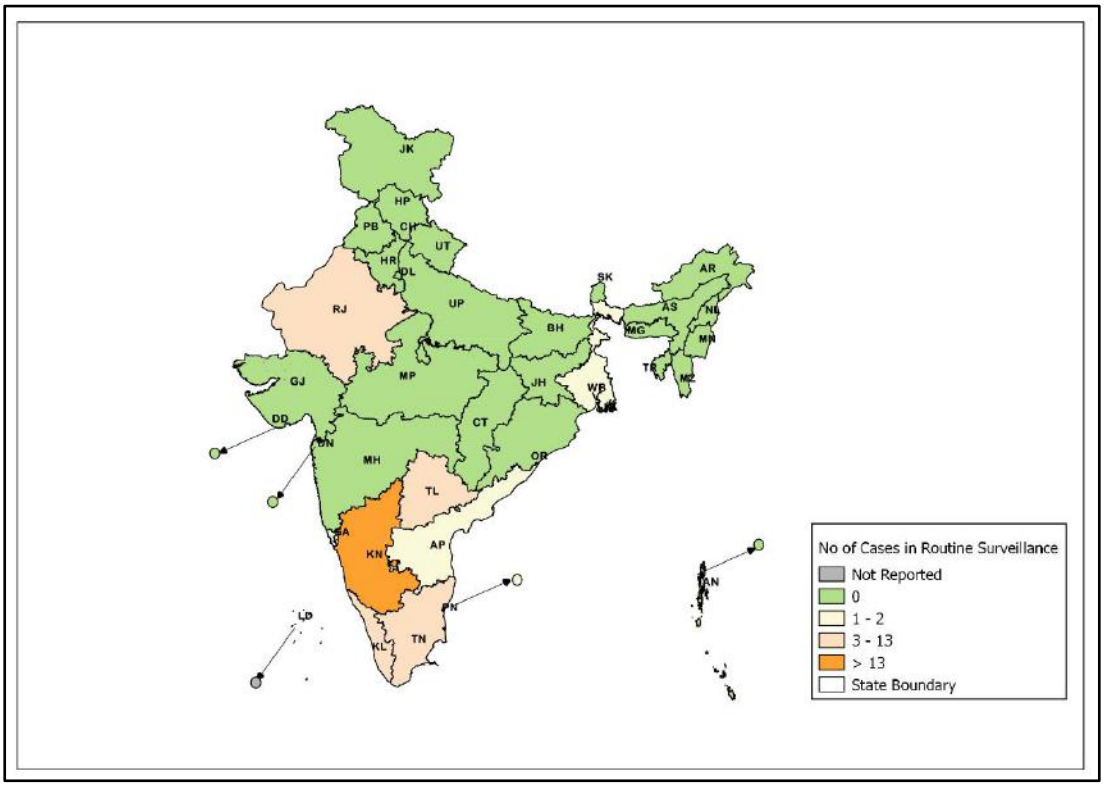


Fig 25: State/UT wise Influenza A (H1N1) cases & outbreak for October 2016



Action from the field

- Dr. Saurabh Goel, Asstt. Director IDSP & Dr Ranjeet Prasad were at Bhopal, Madhya Pradesh for state IDSP review on 05.10.2016.

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.

Acknowledgement:

This Disease Alert from IDSP acknowledges the contribution of Dr. S. Venkatesh Director NCDC, Dr. Pradeep Khasnobis NPO IDSP, and Dr. Jyoti Asstt. Director IDSP, Ms. Ritu Malik Consultant GIS IDSP, Mr. Priyank Pandya Communication Officer IDSP, Mr. Prasun Sharma Statistician-cum-Programmer IDSP & Ms. Sujata Malhotra Data Manager IDSP.

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

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