

Vol. 5 / Issue 11 / 2020

# Disease Alert

## प्रकोप चेतावनी

**Monthly Surveillance Report**  
**From**  
**Integrated Disease Surveillance Programme**  
**National Health Mission**

### In This Issue:

---

**Leptospirosis Outbreak, Sindhudurg, Maharashtra**

02

**Surveillance Data (Maps & Charts)**

05

**Action from the Field**

20

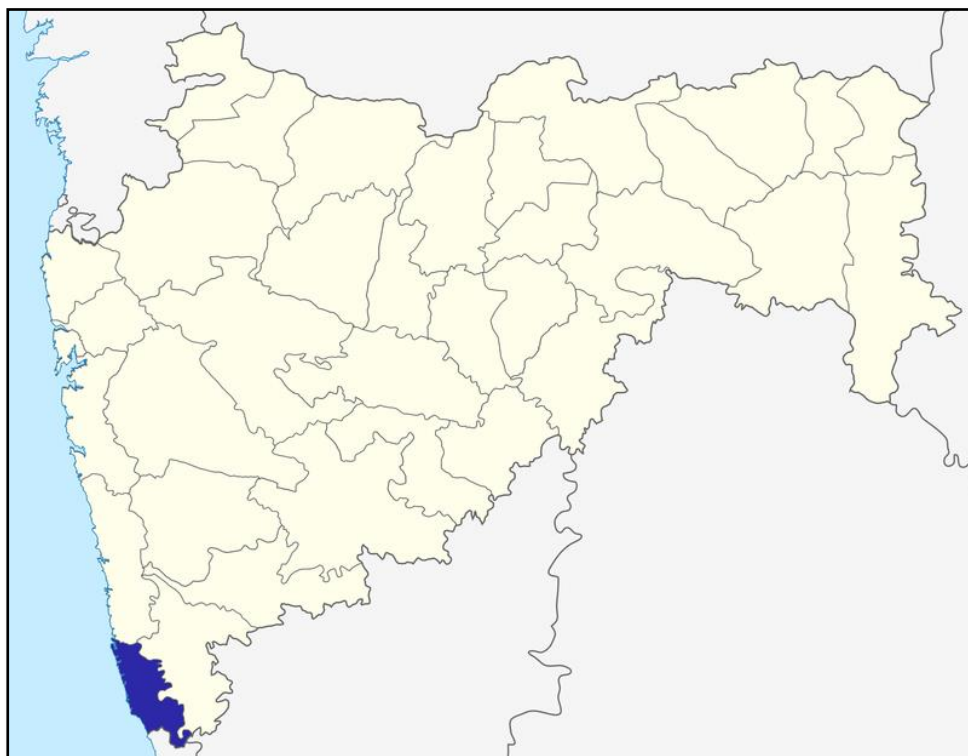
**Glossary**

20

**LEPTOSPIROSIS OUTBREAK INVESTIGATION**  
**SINDHUDURG DISTRICT, MAHARASTRA**

**BACKGROUND:**

Sindhudurg is an administrative district in the state of Maharashtra in India, which was carved out of the erstwhile Ratnagiri district. The district headquarters are located at Oros. The district occupies an area of 5,207 km<sup>2</sup> and has a population of 849,651 of which 12.59% were urban (as of 2011). Sindhudurg is known for endemic transmission of Leptospirosis.

**DETAILS OF INVESTIGATION:**

It was reported on 15/11/2020 that one patient suspected of Leptospirosis was admitted in Adhar Hospital, Kolhapur. On getting this news from local health facility, District RRT visited the area and started investigating the situation on 19th Nov, 2020 in THO (Taluka Health Office), Vaibhavwadi.

It came to light that the case had symptoms from 12th Nov, 2020 onwards. The patient was a 38 y/o female, resident of Vaibhavwadi, Gopalnagar, who had symptoms of fever, headache and bodyache from aforementioned date.

On Second day of her illness, the blood samples were withdrawn at District Hospital, Sindhudurg for pyrexia of unknown origin and the results were awaited. After three days of her illness, when the patient deteriorated further, she was taken to subdistrict hospital, Kankavali. Later she was shifted to Adhar Hospital, Kolhapur at night.

However, she succumbed to the illness a few hours after the admission. The cause of death was labelled as 'Fever with Sepsis with Multiorgan dysfunction and Leptospirosis'

On survey, it was gauged that total population of the affected area was 2472. There was only one case and the subsequent death reported from the given set of population from 16th November to 22nd November, 2020.

#### LABORATORY DIAGNOSIS:

The blood sample was withdrawn from the suspected case for testing for Leptospirosis. Sample for tested through IgM ELISA.

*Fig. 1: ELISA kits used for testing*



## INTERPRETATION

The IgM titre for Leptospirosis for the suspected patient turned out positive, thereby confirming the diagnosis.

## CONTROL MEASURES

The following control measures were instituted by RRT —

1. Anti-rodent measures along was undertaken in the affected areas.
2. Anti- larval measures were undertaken in affected areas.
3. IEC was given to community and they were told not to allow their children to play in areas with standing water
4. People were told to wear long sleeved clothes and long shoes when venturing outside.
5. People as well as local healthcare workers were informed about the spread of Leptospirosis. They were told to avoid such areas.
6. Doxycycline chemoprophylaxis was also given to some of the cohorts.

## CONCLUSION:

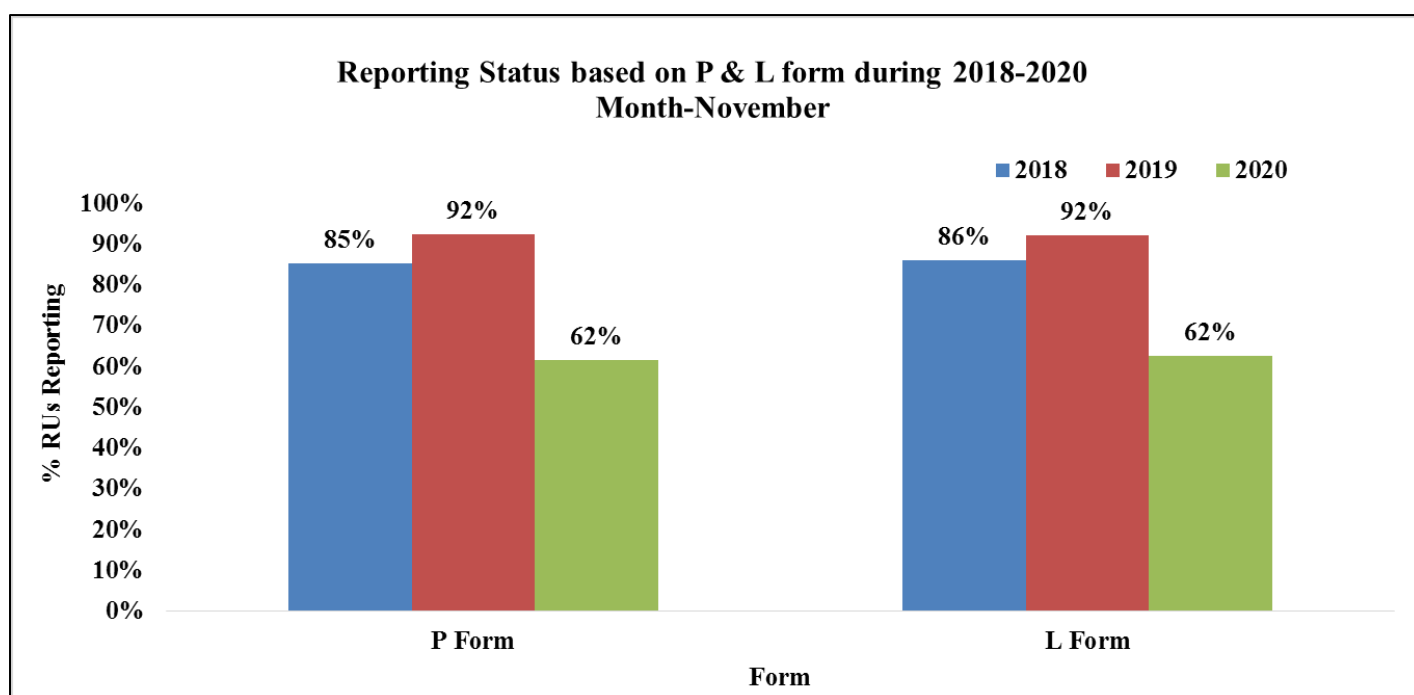
Based on epidemiological investigation and laboratory findings, it was concluded that outbreak in Sindhudurg was that of Leptospirosis.

Leptospirosis is caused by spirochaete bacteria that belong to genus *Leptospira*. In humans, it can cause wide range of symptoms, some of them may be mistaken for other diseases.

Therefore, it is mostly investigated as one of the differential diagnosis of Pyrexia of unknown origin.

Surveillance data of Enteric Fever, Acute Diarrhoeal Disease, Viral Hepatitis A & E,  
Dengue Leptospirosis, Dengue, Chikungunya, Leptospirosis and Seasonal Influenza A  
(H1N1) During August 2018 - 2020\*

*Fig. 2: RU-wise reporting based on P & L forms during November 2020*



As shown in Fig. 2, in November 2018, 2019 and 2020, the 'P' form reporting percentage (i.e. % RU reporting out of total in P form) was 85%, 92% and 62% respectively across India, for all disease conditions reported under IDSP in P form. Similarly, L form reporting percentage was 86%, 92% and 62% 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 decreased in November 2020 compared to the same month in previous years for both P and L forms, thereby compromising on the quality of surveillance data.

Fig. 3: State/UT wise P form completeness % for November 2020

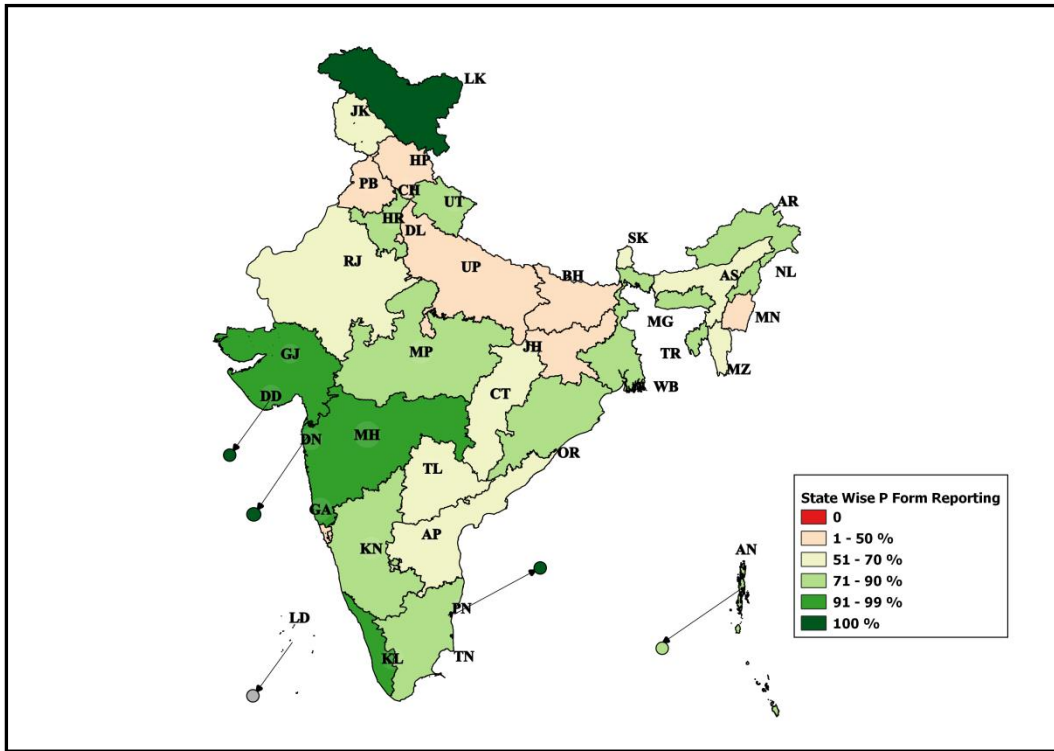


Fig. 4: State/UT wise L form completeness % for November 2020

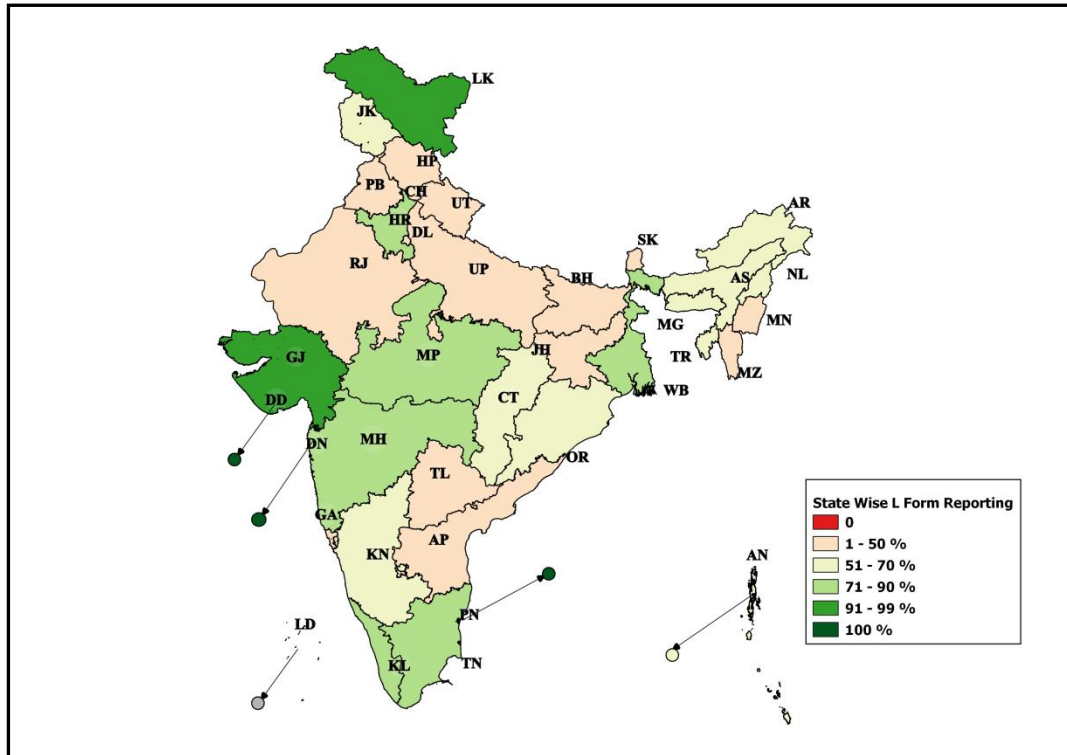
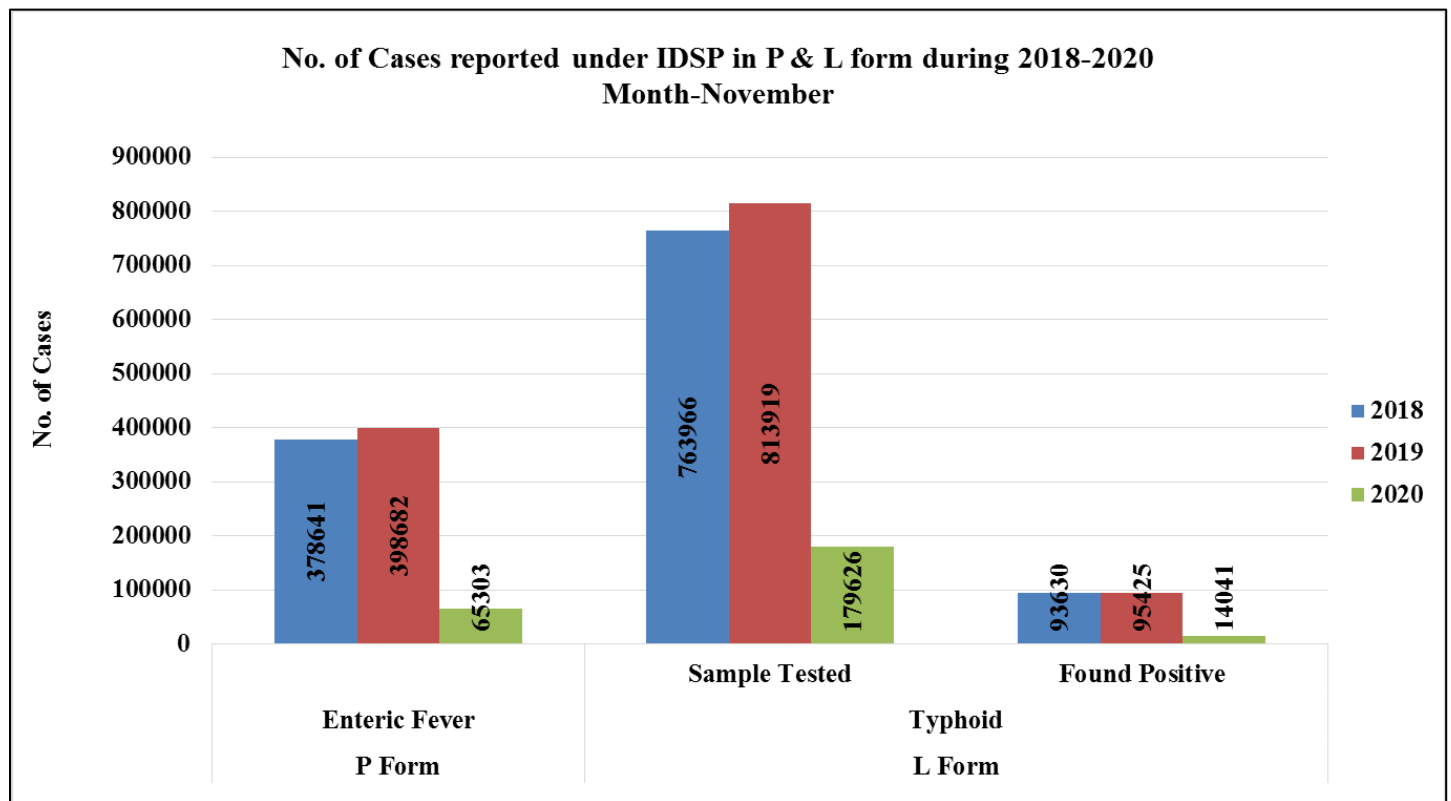


Fig. 5: No. of Enteric Fever Cases reported under P & L form during November 2018 - 2020



As shown in Fig. 5, number of presumptive enteric fever cases, as reported by States/UTs in 'P' form was 378641 in November 2018; 398682 in November 2019 and 65303 in November 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in November 2018; 763966 samples were tested for Typhoid, out of which 93630 were found positive. In November 2019; out of 813919 samples, 95425 were found to be positive and in November 2020, out of 179626 samples, 14041 were found to be positive.

Sample positivity has been 12.26%, 11.75% and 7.82% in November month of 2018, 2019 & 2020 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: State/UT wise Presumptive Enteric fever cases & outbreaks for November 2020

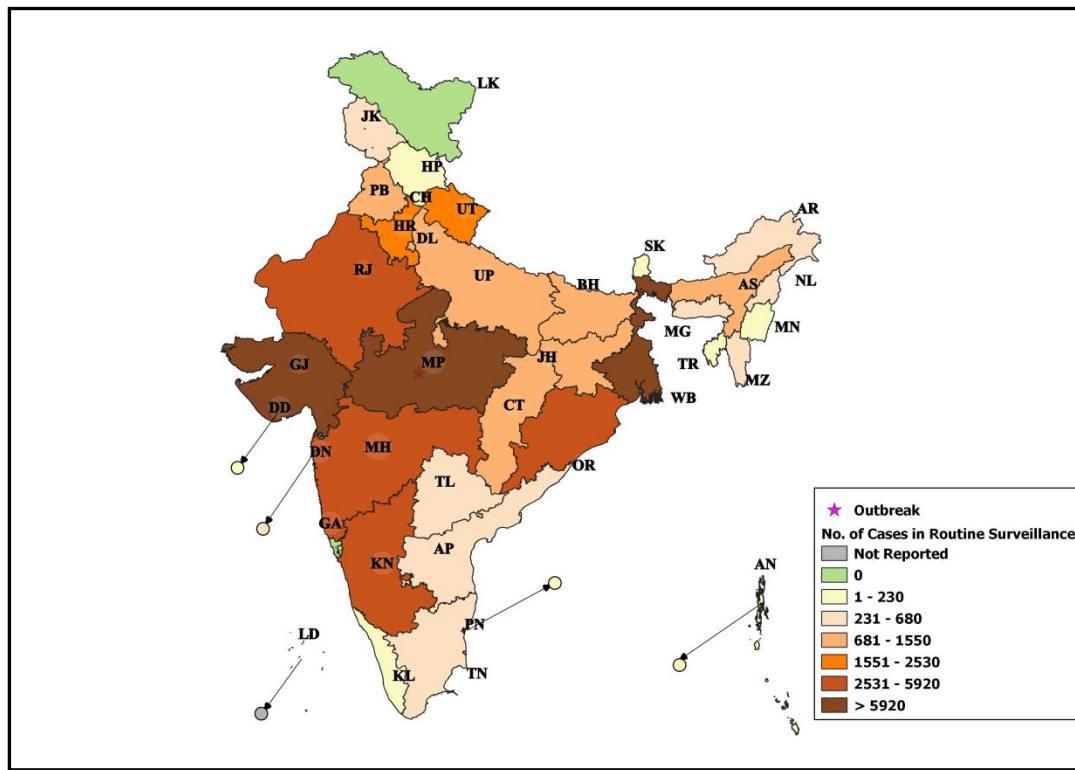
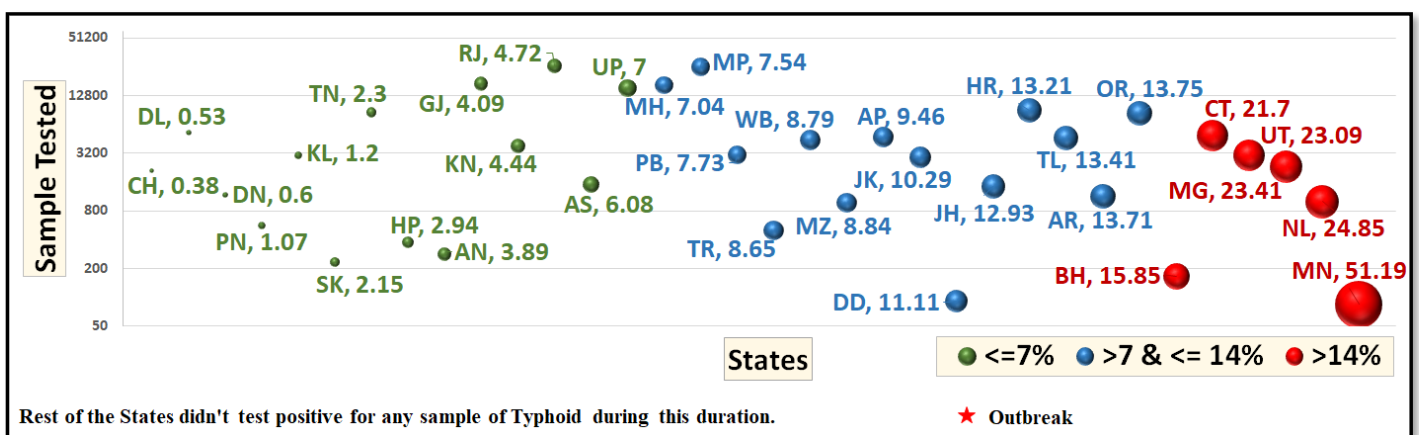
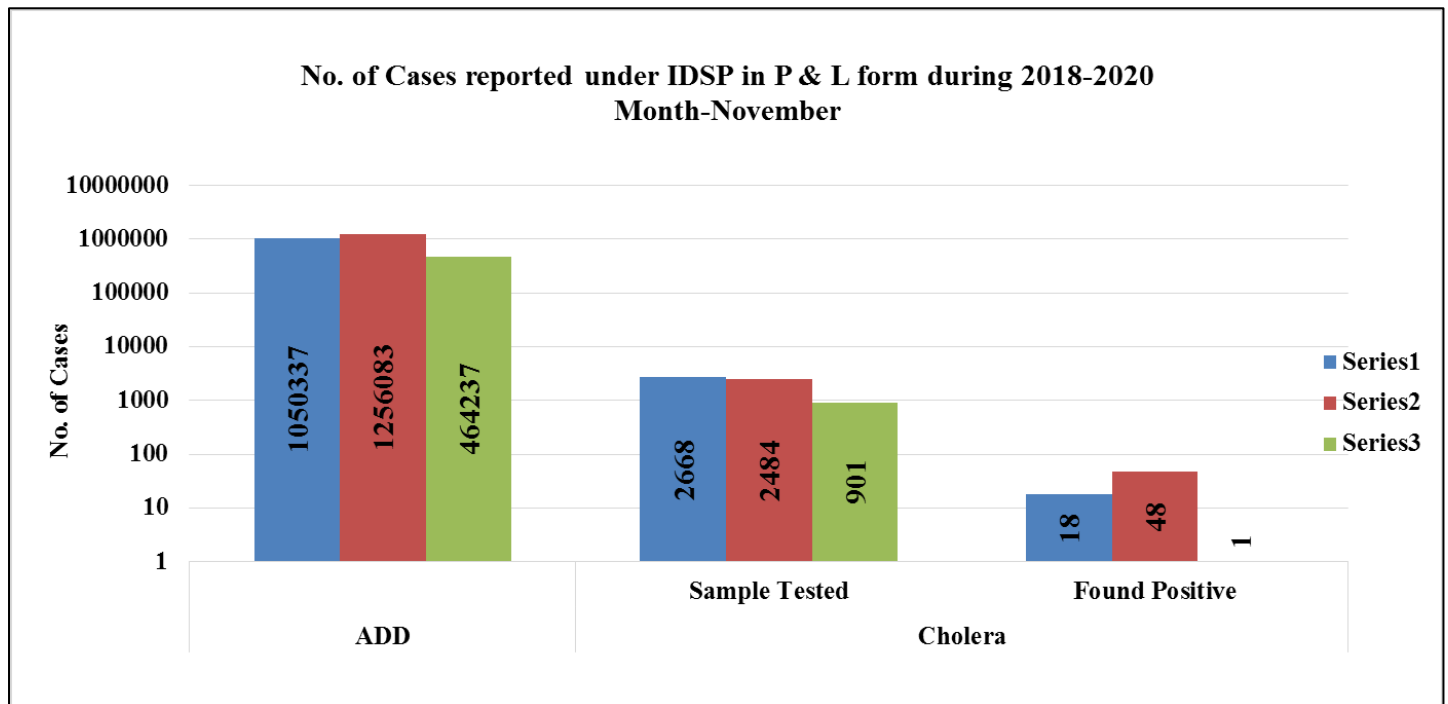


Fig. 7: State/UT wise Lab Confirmed Typhoid cases and outbreaks for November 2020





**Fig. 8: No. of ADD Cases reported under IDSP in P Form & Lab confirmed Cholera cases in L form during November 2018 - 2020**



As shown in Fig. 8, number of Acute Diarrhoeal Disease cases, as reported by States/UTs in 'P' form was 1050337 in November 2018; 1256083 in November 2019 and 464237 in November 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in November 2018, 2668 samples were tested for Cholera out of which 18 tested positive; in November 2019, out of 2484 samples, 48 tested positive for Cholera and in November 2020, out of 901 samples, 01 tested positive.

Sample positivity of samples tested for Cholera has been 0.67%, 1.93% and 0.11% in November month of 2018, 2019 & 2020 respectively.

Fig. 9: State/UT wise Presumptive ADD cases and outbreaks for November 2020

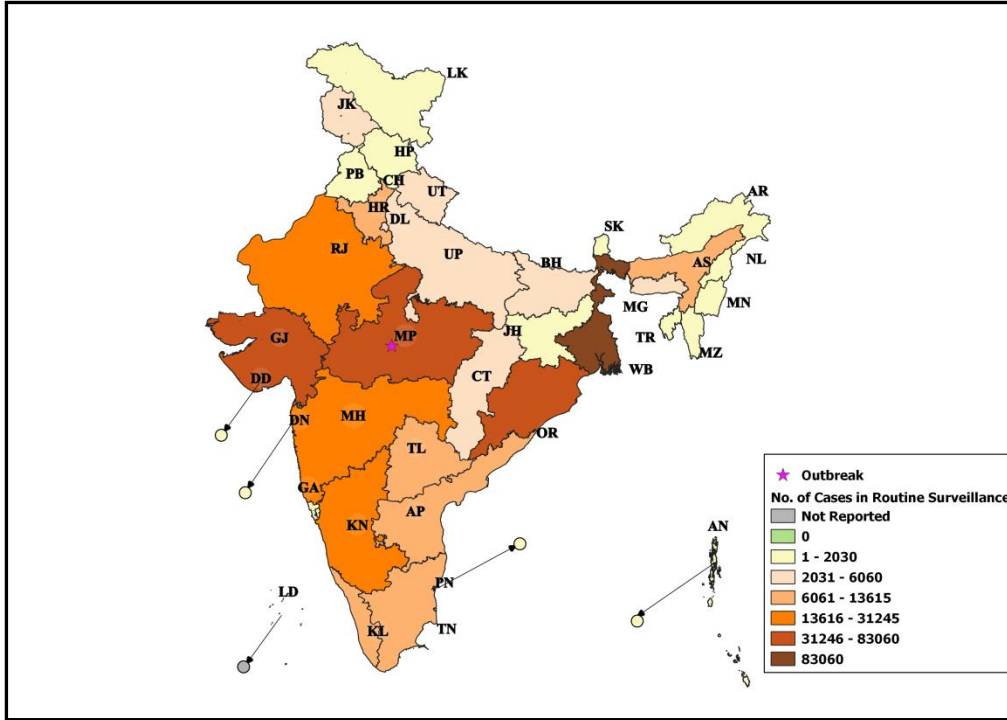
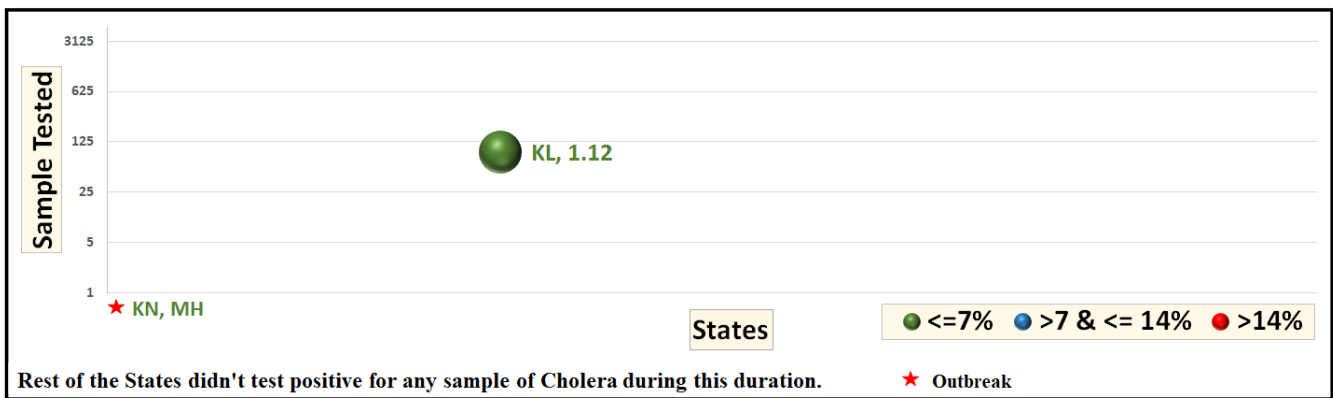
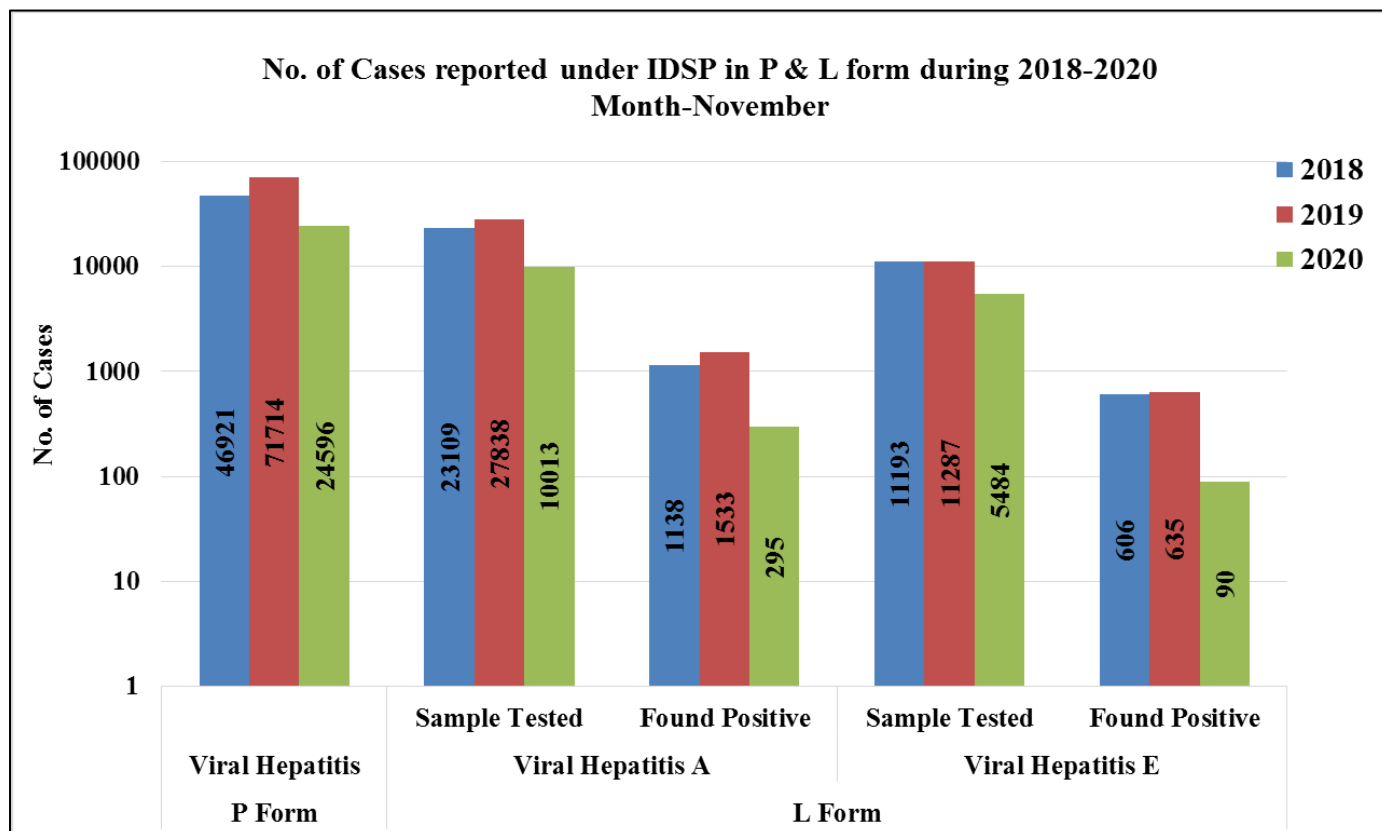


Fig. 10: State/UT wise Lab Confirmed Cholera cases and outbreaks for November 2020



**Fig. 11: No. of Viral Hepatitis Cases reported under IDSP in P form & Viral Hepatitis A & E cases reported under L form during November 2018 - 2020**



As shown in Fig. 11, the number of presumptive Viral Hepatitis cases was 46921 in November 2018, 71714 in November 2019 and 24596 in November 2020. These presumptive cases were diagnosed on the basis of case definitions provided under IDSP.

As reported in L form for Viral Hepatitis A, in November 2018; 23109 samples were tested out of which 1138 were found positive. In November 2019 out of 27838 samples, 1533 were found to be positive and in November 2020, out of 10013 samples, 295 were found to be positive.

Sample positivity of samples tested for Hepatitis A has been 4.92%, 5.51% and 2.95% in November month of 2018, 2019 & 2020 respectively.

As reported in L form for Viral Hepatitis E, in November 2018; 11193 samples were tested out of which 606 were found positive. In November 2019; out of 11287 samples, 635 were found to be positive and in November 2020, out of 5484 samples, 90 were found to be positive.

Sample positivity of samples tested for Hepatitis E has been 5.41%, 5.63% and 1.64% in November month of 2018, 2019 & 2020 respectively.

Fig. 12: State/UT wise Presumptive Viral Hepatitis cases and outbreaks for November 2020

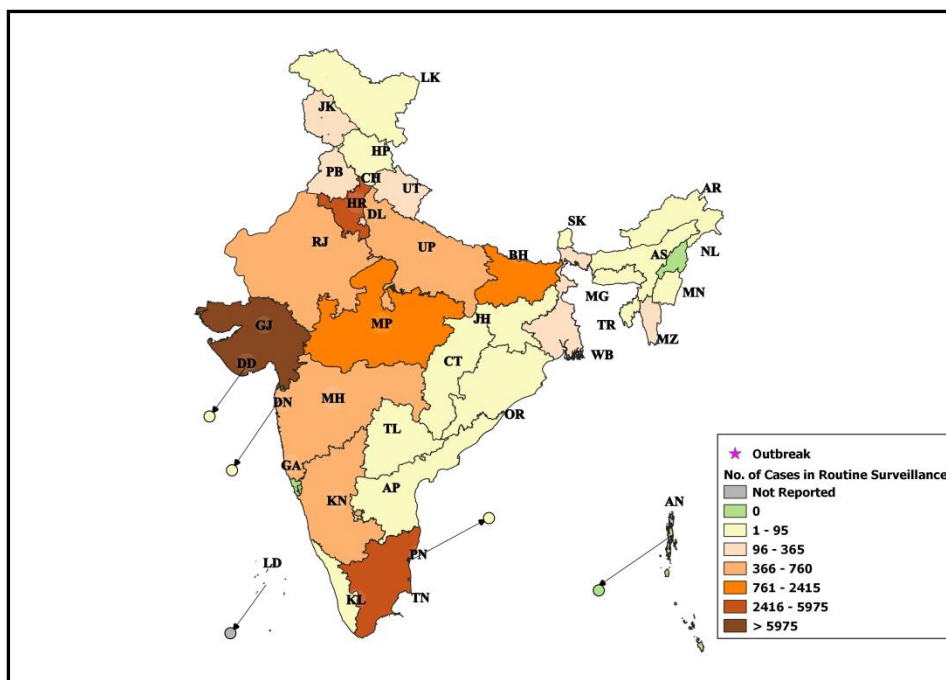


Fig. 13: State/UT wise Lab Confirmed Viral Hepatitis A cases and outbreaks for November 2020

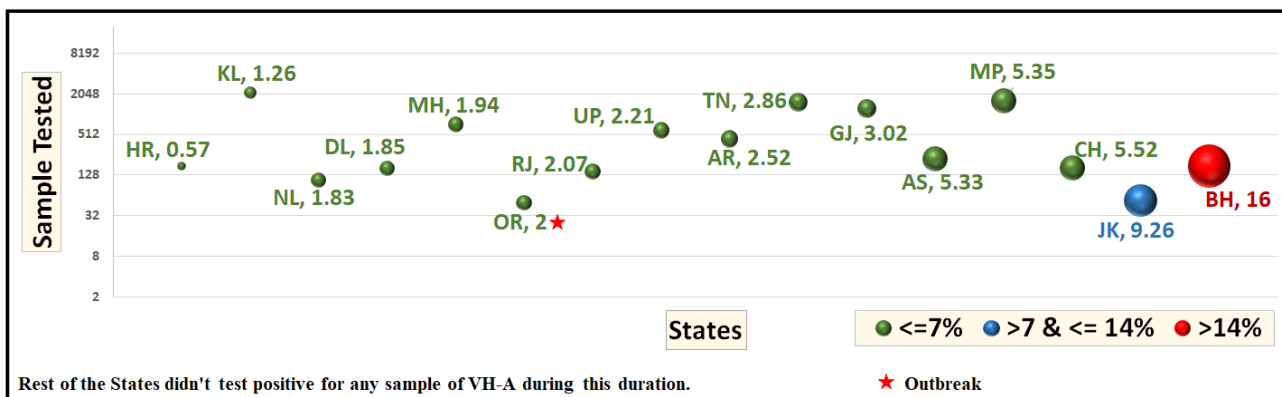
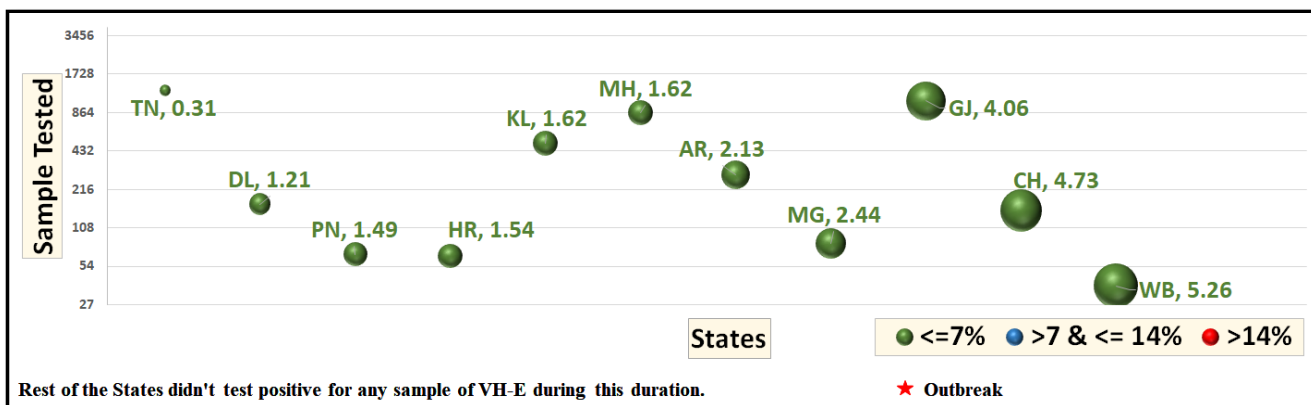
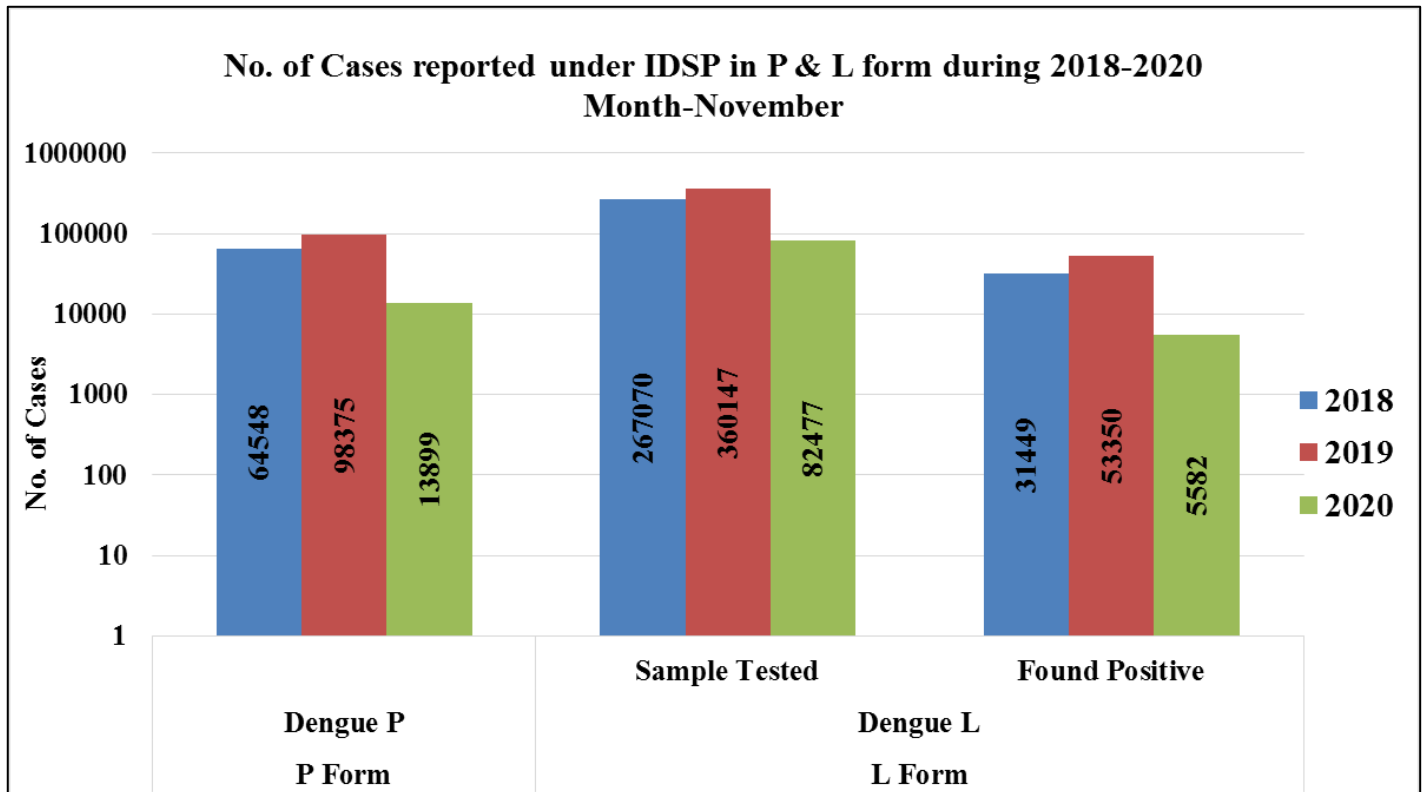


Fig. 14: State/UT wise Lab Confirmed Viral Hepatitis E cases and outbreaks for November 2020



*Fig. 15: No. of Dengue cases reported under IDSP in P & L form during November 2020*



As shown in Fig. 15, number of presumptive Dengue cases, as reported by States/UTs in 'P' form was 64548 in November 2018; 98375 in November 2019 and 13899 in November 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in November 2018; 267070 samples were tested for Dengue, out of which 31449 were found positive. In November 2019; out of 360147 samples, 53350 were found to be positive and in November 2020, out of 82477 samples, 5582 were found to be positive.

Sample positivity of samples tested for Dengue has been 11.78%, 14.81% and 6.77% in November month of 2018, 2019 & 2020 respectively.

Fig. 16: State/UT wise Lab Confirmed Dengue cases and outbreaks for November 2020

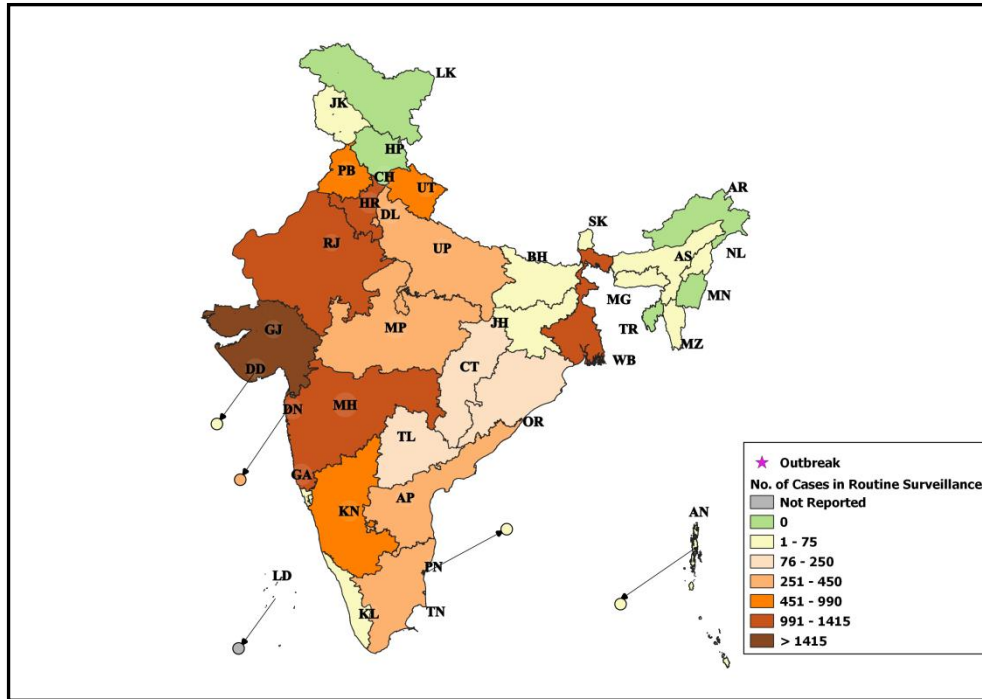
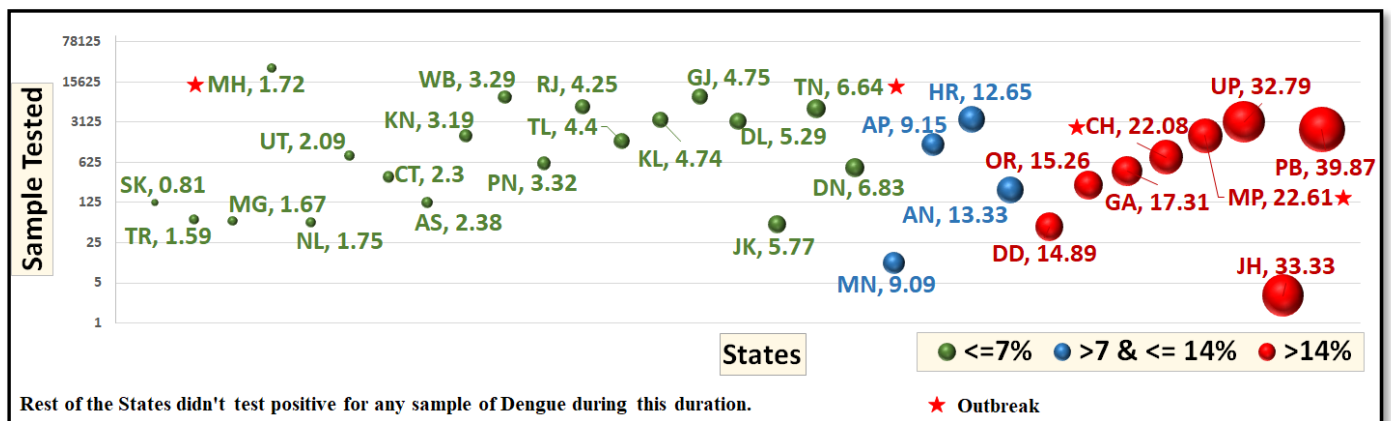
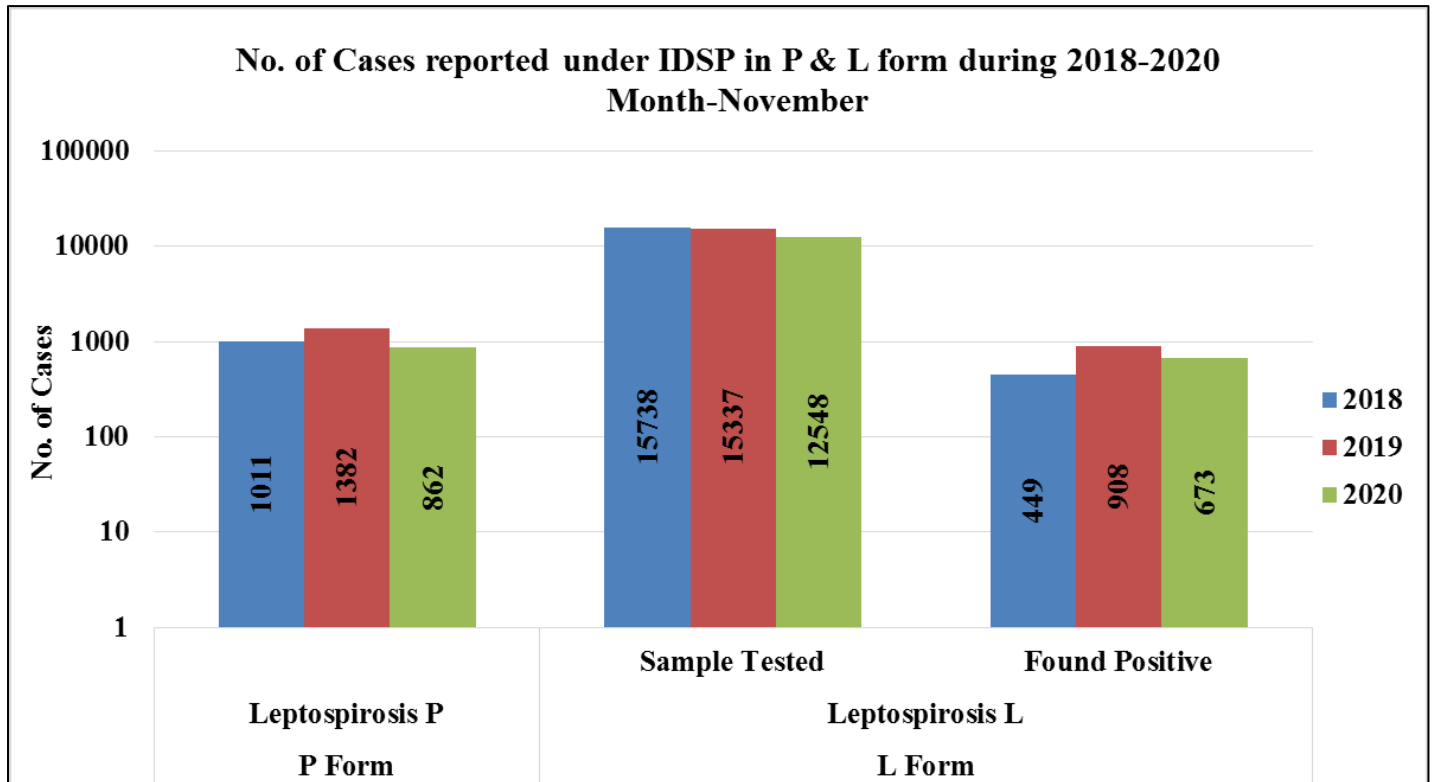


Fig. 17: State/UT wise Presumptive Dengue cases and outbreaks for November 2020



*Fig. 18: No. of Leptospirosis Cases reported under IDSP in P & L form during November 2018 -*



As shown in Fig. 18, number of presumptive Leptospirosis cases, as reported by States/UTs in 'P' form was 1011 in November 2018; 1382 in November 2019 and 862 in November 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in November 2018; 15738 samples were tested for Leptospirosis, out of which 449 were found positive. In November 2019; out of 15337 samples, 908 were found to be positive and in November 2020, out of 12548 samples, 673 were found to be positive.

Sample positivity of samples tested for Dengue has been 2.85%, 5.92% and 5.36% in November month of 2018, 2019 & 2020 respectively.

Fig. 19: State/UT wise Presumptive Leptospirosis cases and outbreaks for November 2020

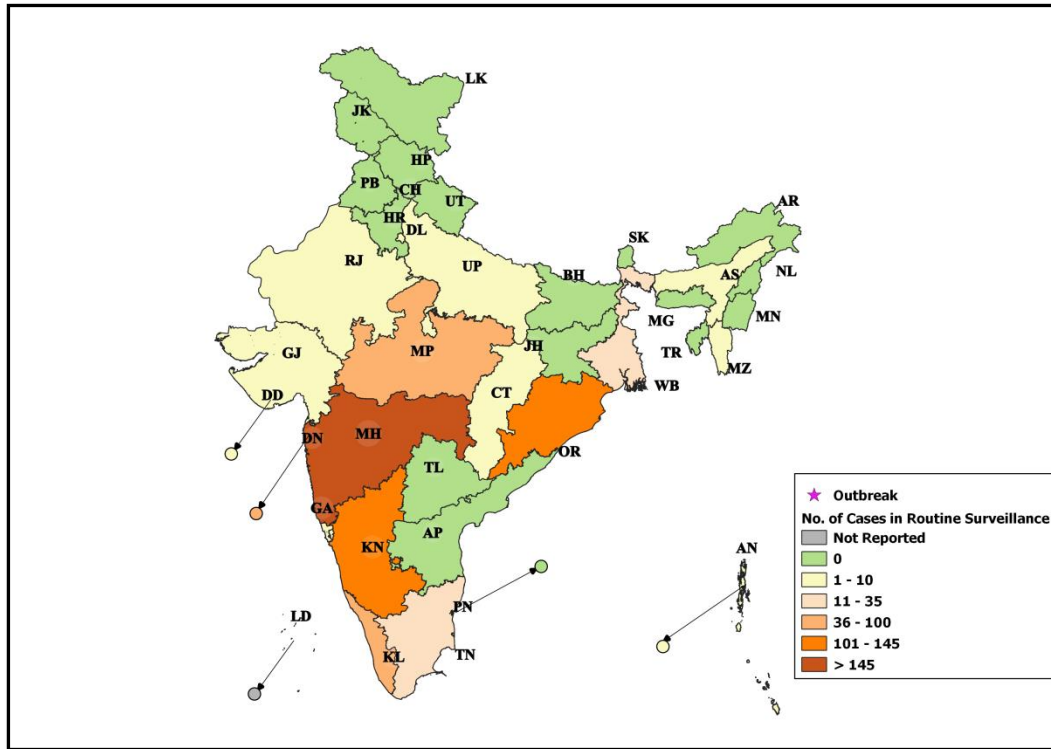
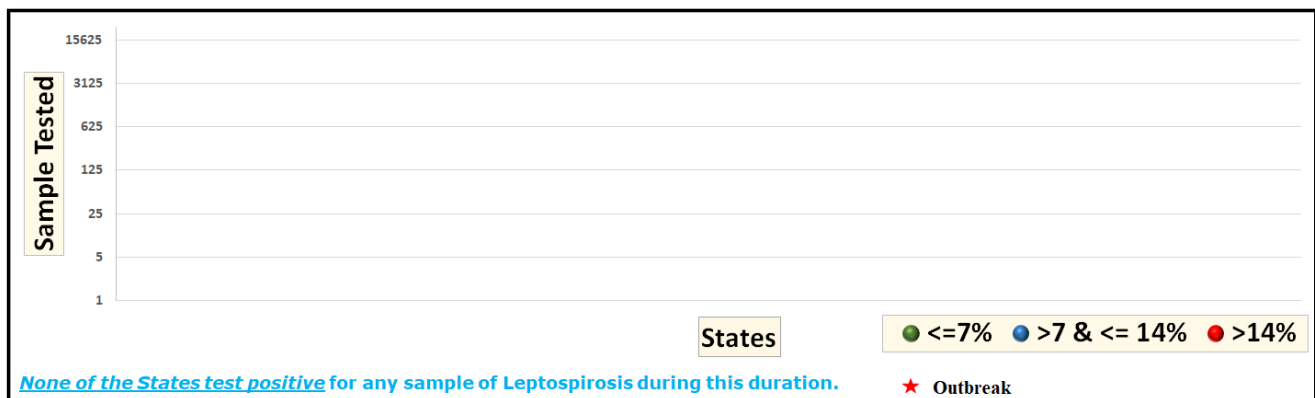
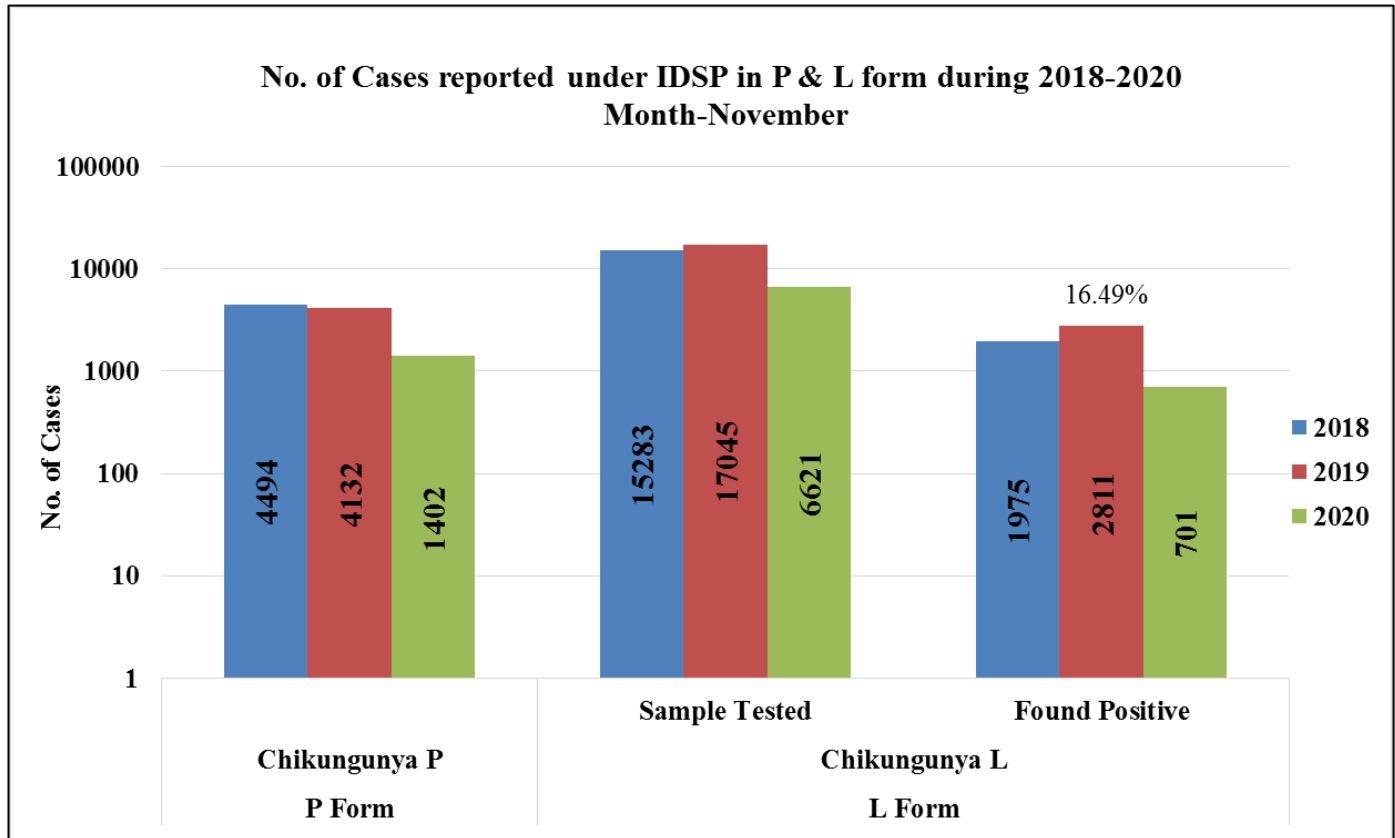


Fig. 20: State/UT wise Lab Confirmed Leptospirosis cases and outbreaks for November 2020





*Fig. 21: No. of Chikungunya Cases reported under IDSP in P & L form during November 2018 - 2020*



As shown in Fig. 21, number of presumptive Chikungunya cases, as reported by States/UTs in 'P' form was 4494 in November 2018; 4132 in November 2019 and 1402 in November 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in November 2018; 15283 samples were tested for Chikungunya, out of which 1975 were found positive. In November 2019; out of 17045 samples, 2811 were found to be positive and in November 2020, out of 6621 samples, 701 were found to be positive.

Sample positivity of samples tested for Chikungunya has been 12.92%, 16.49% and 10.59% in November month of 2018, 2019 & 2020 respectively.

Fig. 22: State/UT wise Presumptive Chikungunya cases and outbreaks for November 2020

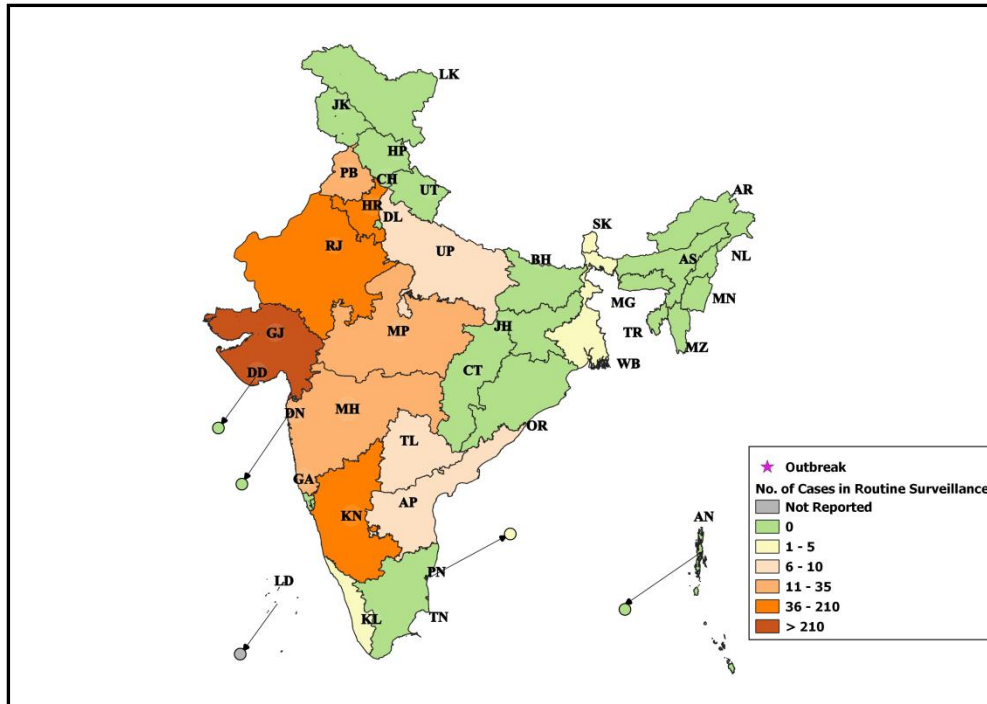


Fig. 23: State/UT wise Lab Confirmed Chikungunya cases and outbreaks for November 2020

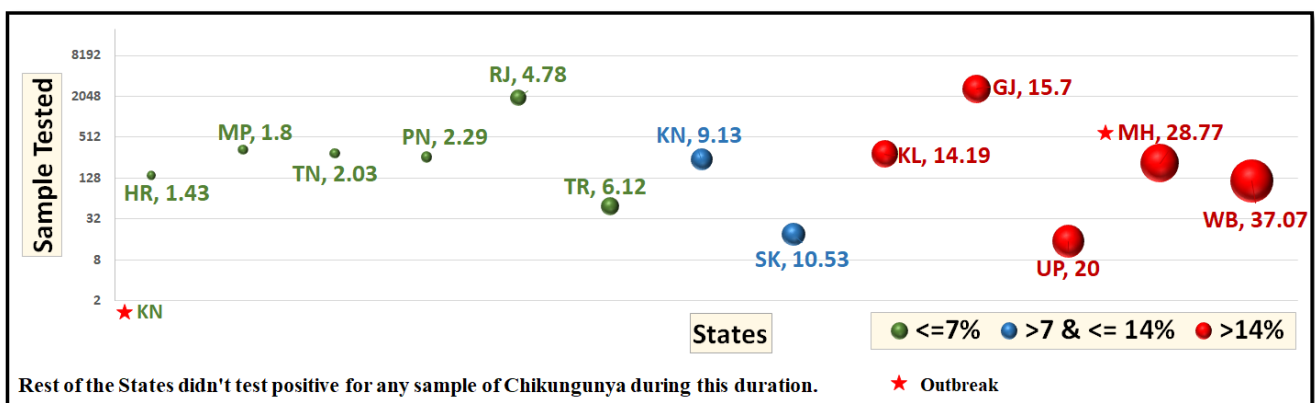
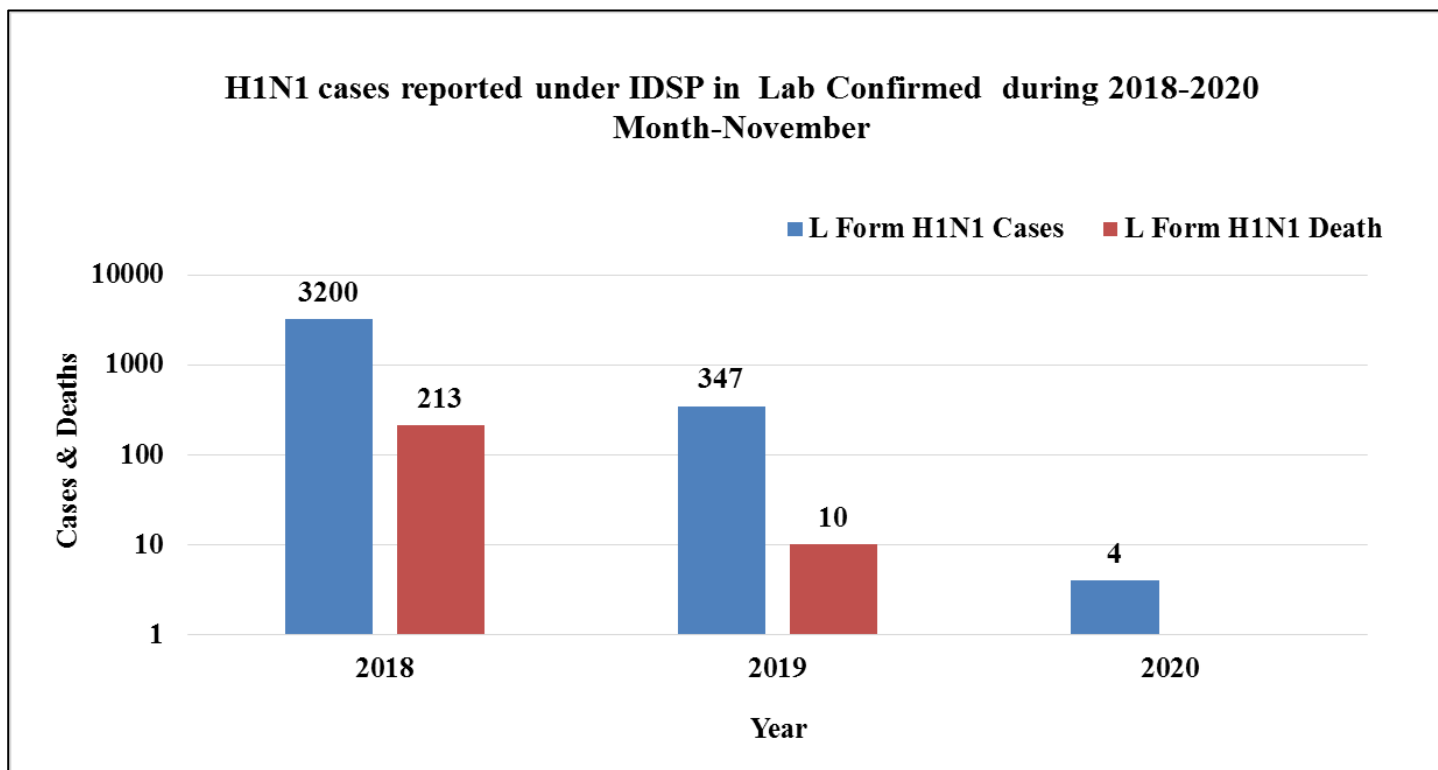


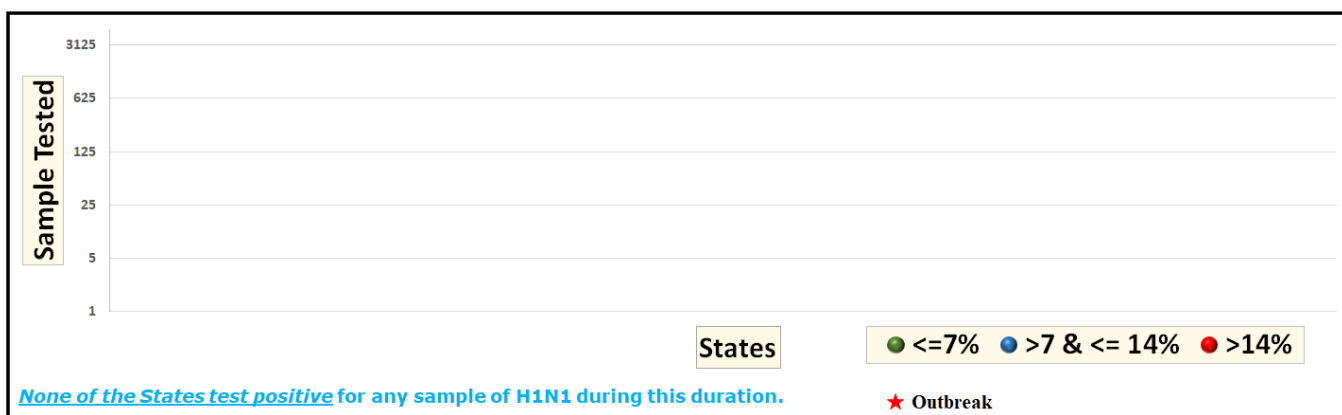
Fig. 24: H1N1 cases reported under IDSP in L Form during 2018-2020 in November 2020



As shown in Fig.24, as reported in L form, in November 2018, there were 3200 cases and 213 deaths. In November 2019, there were 347 cases and 10 deaths; and in November 2020, there were 4 cases and 0 deaths.

Case fatality rates for H1N1 were 6.66%, 2.88% and 0.00% in November month of 2018, 2019 & 2020 respectively.

Fig. 25: State/UT wise H1N1 cases and outbreaks for November 2020



## 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.

### ACKNOWLEDGEMENT

This Disease Alert from IDSP acknowledges the contribution of **Dr. Sujeet K Singh** (NPO, IDSP & Director NCDC), **Dr. Himanshu Chauhan** (Joint Director & Officer In-Charge, IDSP), **Dr. Pranay Verma** (Joint Director, IDSP), **Dr. Supriya Gambhir** (Consultant Microbiologist, IDSP), **Ms. Ritu Malik** (Consultant GIS, IDSP), **Ms. Sujata Malhotra** (Data Manager, IDSP) and **Ms. Surbhi Tiwari** (Communication Officer, 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: [dinricd@nic.in](mailto:dinricd@nic.in) & [idsp-npo@nic.in](mailto:idsp-npo@nic.in)

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