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Disease Alert

प्रकोप चेतावनी

Monthly Surveillance Report

From

Integrated Disease Surveillance Programme

National Health Mission

In This Issue:

2199437/2021/O/O NCDC
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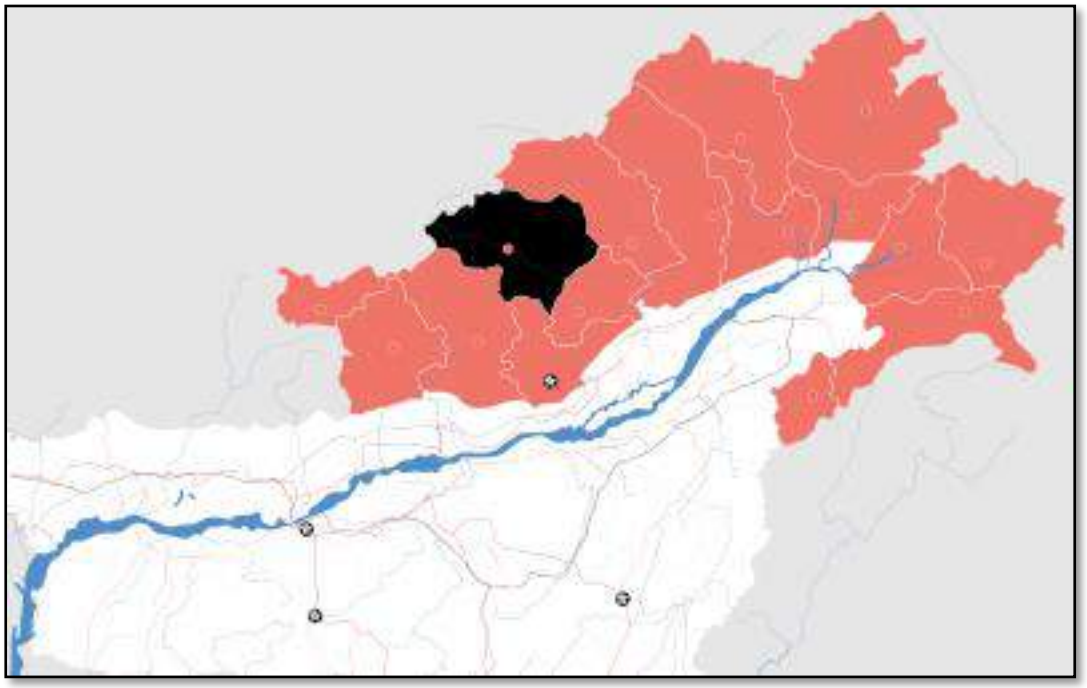
SCRUB TYPHUS OUTBREAK INVESTIGATION
KURUNG KUMEY DISTRICT, ARUNACHAL PRADESH

BACKGROUND:

Kurung Kumey is a district located on Northern border of Arunachal Pradesh and shares border with Tibet, China. As per official website, the population of district is 45,372 and is quite sparsely populated. Location is as illustrated in the map below –



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DETAILS OF INVESTIGATION:

It was reported on 01 August that some patients suspected of Scrub Typhus are admitted in Chera Talo District Hospital. On getting this news from local health facility, District RRT visited the area and started investigating the situation.

The RRT started by formalizing a case definition to enable effective surveillance and identify all the affected. The definition was as follows –

"Acute undifferentiated fabrile illness of 5 days or more with or without Eschar should be suspected as case (If Eschar is present, fever of less than 5 days duration should be considered as Scrub Typhus)".

It came to light that first suspected cases were reported on 03 July. On that day, a death in a seven year old male child from suspected Scrub Typhus was reported from Koloriang Block.

Fig. 1: Eschar on leg of one of the patients

Afterwards, children with severe illness & complications were presented in health facilities. At the time of teams visit, three children were admitted in Chera Talo District Hospital. During investigation, it was also reported by localities that few deaths in children have occurred. However, the same could not be substantiated. Overall, 2 deaths could be confirmed due to Scrub Typhus.

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The team visited affected area which they realized was covered with thick forest and infested with rodents. It environment appeared to favourable for rickettsial infections. On survey, it was found that Koloriang area which contains the district headquarters had maximum cases at 11 (52.38%) followed by Parsi Parlo area at six cases (28.57%). Sporadic cases were also reported from other areas like Sarli, Nyapin, Damin, and Nangram village.

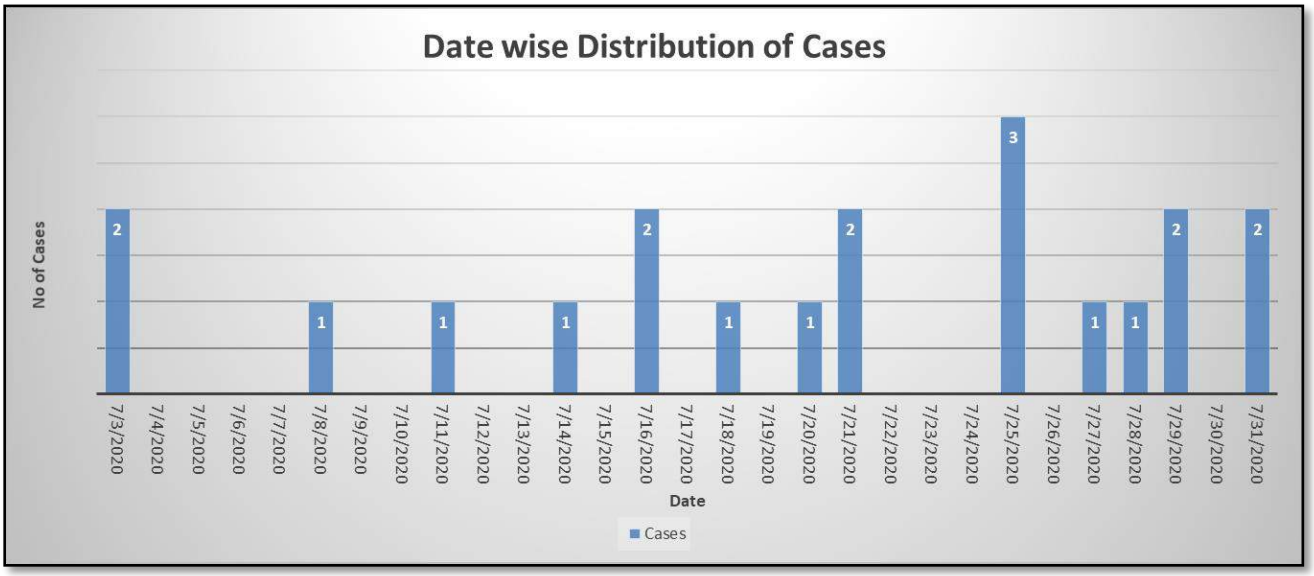
While interviewing localities it was realized that there is general lack of knowledge and people were administrating paracetamol and other symptomatic treatment to their children without taking them to health authorities.

DESCRIPTIVE EPIDEMIOLOGY:

Following were the main points of descriptive analysis –

Cases were reported from 3rd till 31st July. Although overall distribution was sporadic, a maximum of three cases were reported on 25 July.

Fig. 2: Date-wise distribution of cases



CFR = (No. of deaths among affected/No. of affected) * 100
= (2/21)*100
= 9.5%

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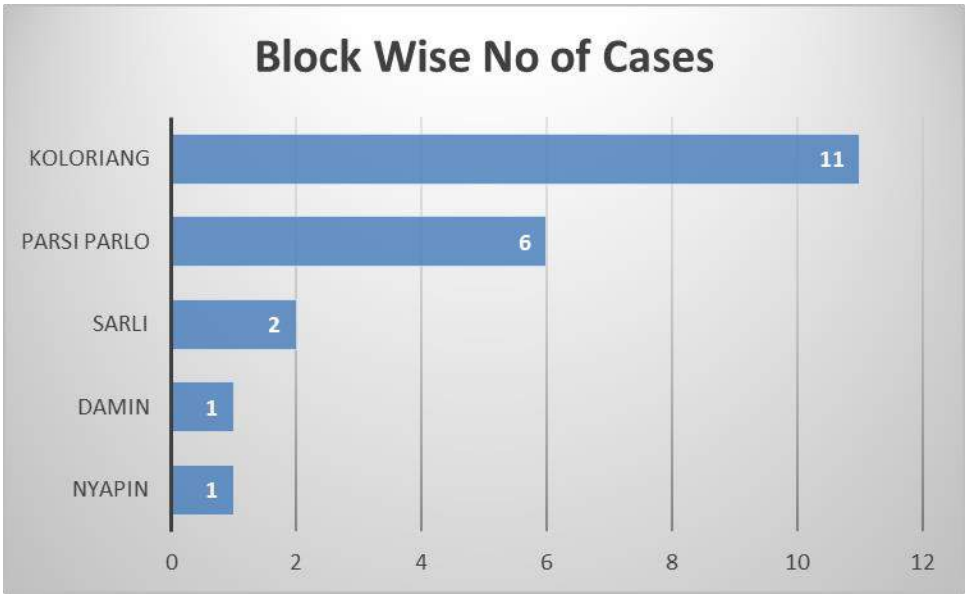
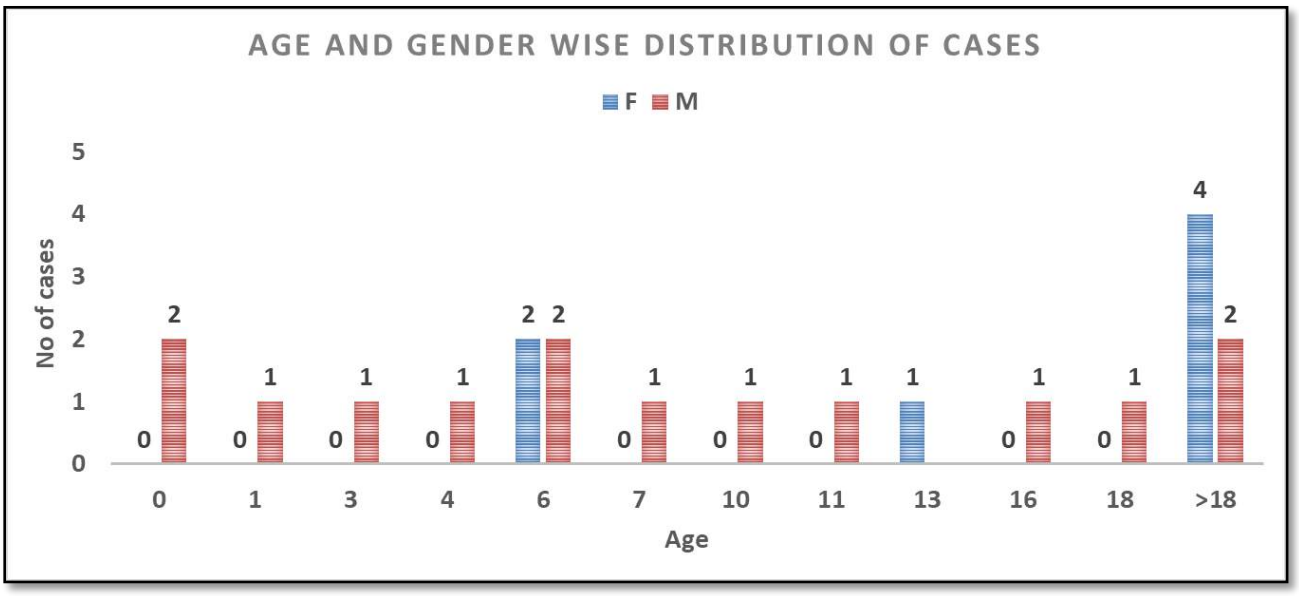
Fig. 3: Block-wise distribution of cases



Among gender, more cases were reported in males (N=14, 66%) then female (N=7, 33%). Among age distribution, maximum cases were in >18 years group, followed by age group of 6 years.

Fig. 4: Age-wise & Gender -wise distribution of cases



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LABORATORY DIAGNOSIS:

All suspected Cases were tested using Rapid Testing Kit. 22 cases were finally confirmed positive.

Fig. 5: Rapid diagnostic kits used

CONTROL MEASURES:

The following control measures were instituted by RRT –

1. Anti-rodent measures along with insecticide spray were undertaken in the affected areas.
2. IEC was given to community and they were told not to allow their children to play in areas with vegetation or in wooded areas.
3. People were told to wear long sleeved clothes and long shoes when venturing outside.
4. People as well as local healthcare workers were informed that Scrub Typhus is transmitted by mite vectors and they are usually found in distinct Typhus Islands. They were told to avoid such areas.

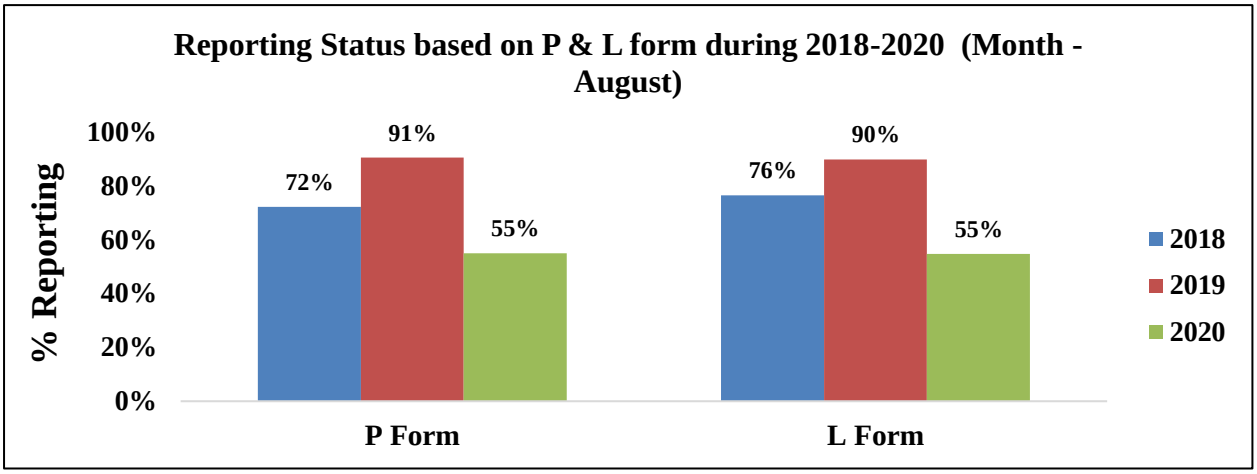
5. Rodents act as reservoirs and help in spread of transmission. With the help of local authorities anti-rodent measures were undertaken.
6. Health camp was organized and all the symptomatic individuals were treated with Doxycycline (200mg).
7. Doxycycline chemoprophylaxis was also given to some of the cohorts who had been recently exposed.

CONCLUSIONS:

Based on epidemiological investigation and laboratory findings, it was concluded that outbreak in Kurung Kumey was that of Scrub Typhus. This Rickettsial infection (also called as Chigger borne typhus or Tsutsugamushi fever) is caused by *Orientia tsutsugamushi*.

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. 6: RU-wise reporting based on P & L forms during



As shown in Fig. 6, in August 2018, 2019 and 2020, the 'P' form reporting percentage (i.e. % RU reporting out of total in P form) was 72%, 91% and 55% respectively across India, for all disease conditions reported under IDSP in P form. Similarly, L form reporting percentage was 76%, 90% and 55% 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 drastically decreased in August 2020 compared to the same month in previous years for both P and L forms, thereby compromising on the quality of surveillance data.

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Fig. 7: State/UT wise P form completeness % for August 2020

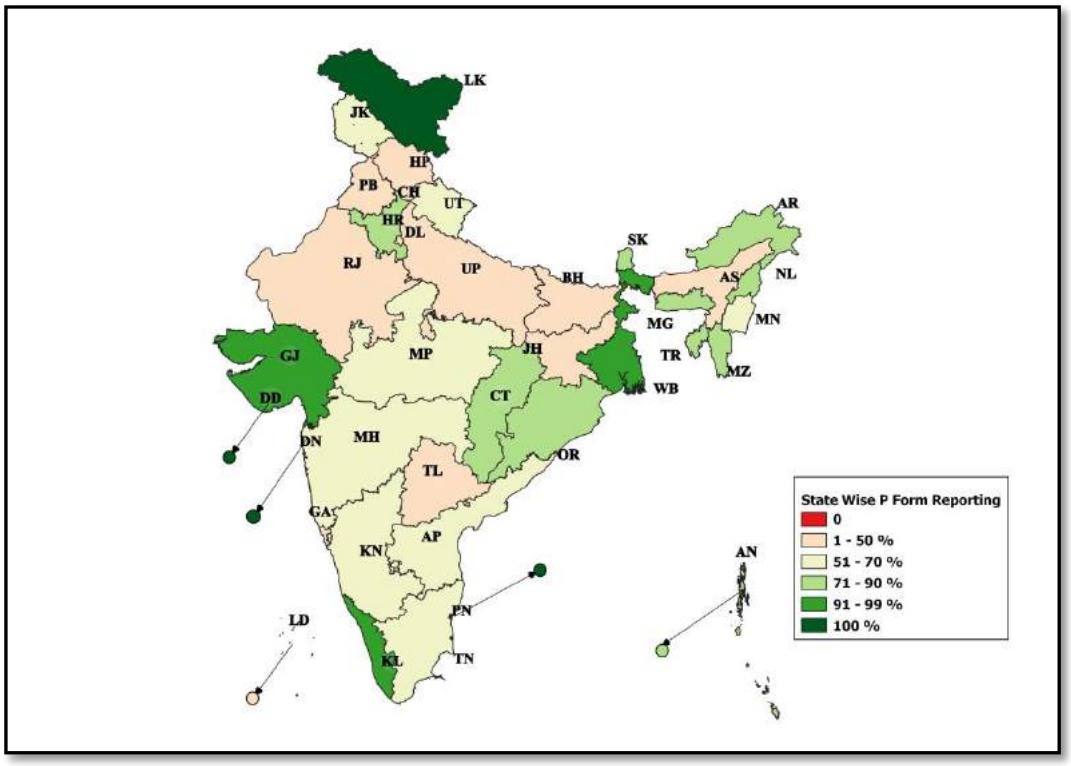

Fig. 8: State/UT wise L form completeness % for August 2020

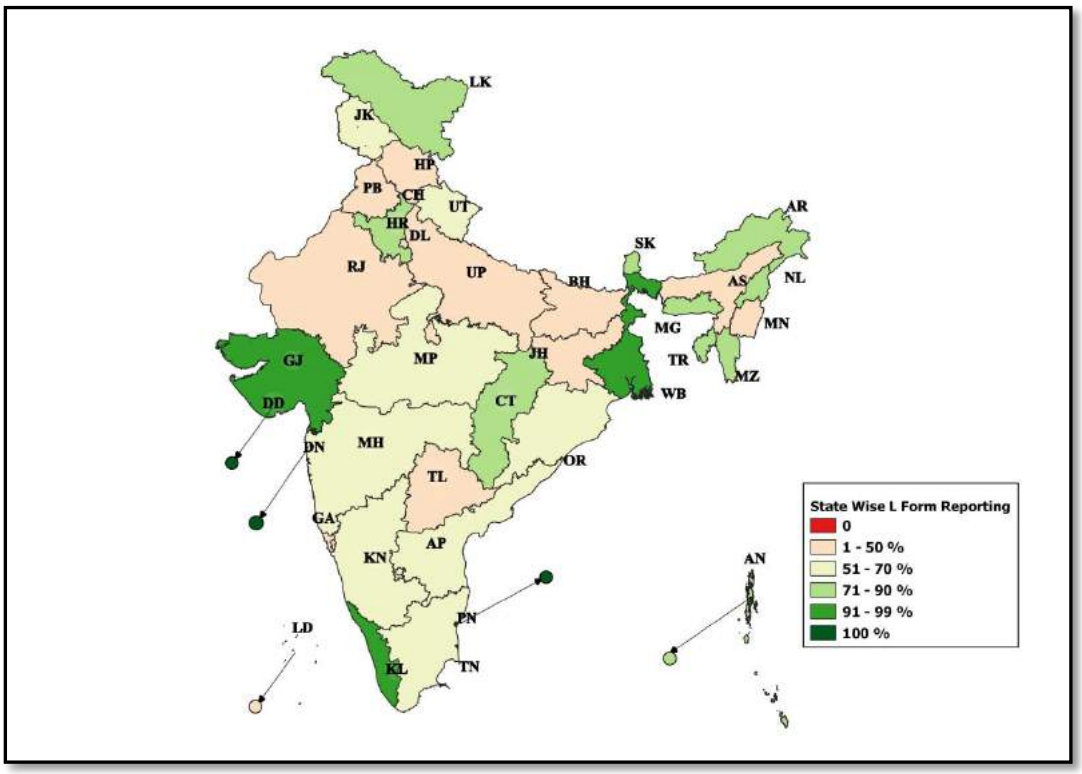

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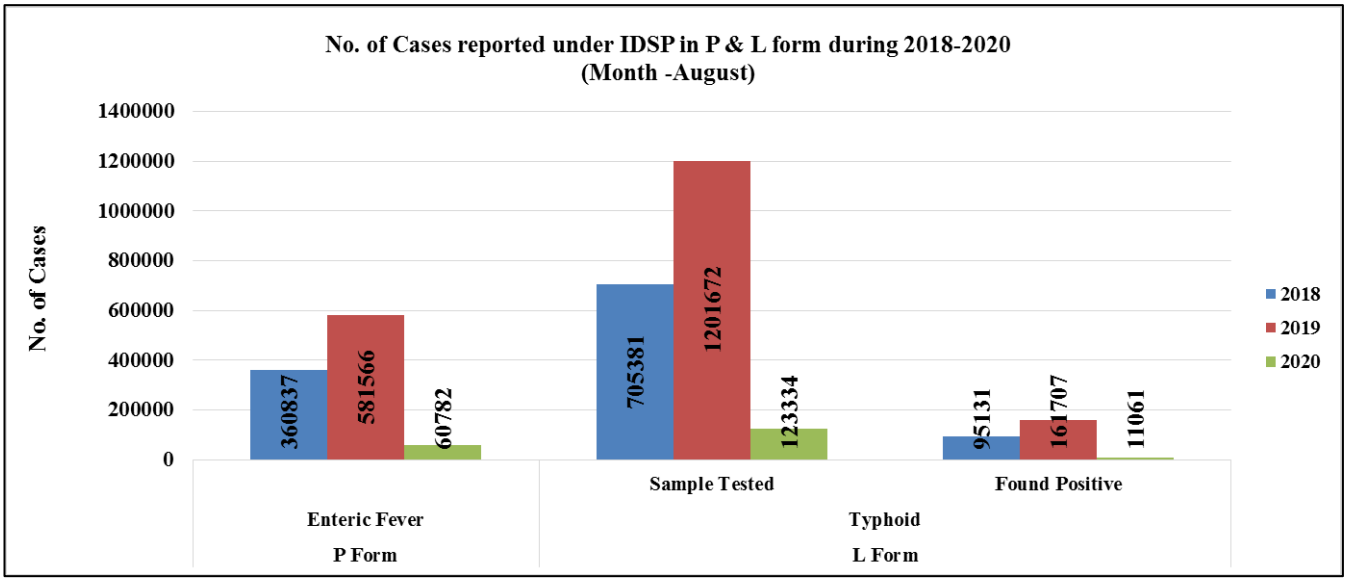
Fig. 9: No. of Enteric Fever Cases reported under P & L form during August 2018 - 2020



As shown in Fig. 9, number of presumptive enteric fever cases, as reported by States/UTs in 'P' form was 360837 in August 2018; 581566 in August 2019 and 60782 in August 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in August 2018; 705381 samples were tested for Typhoid, out of which 95131 were found positive. In August 2019; out of 1201672 samples, 161707 were found to be positive and in August 2020, out of 123334 samples, 11061 were found to be positive.

Sample positivity has been 13%, 13% and 9% in August month of 2019, 2018 & 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.

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Fig. 10: State/UT wise Presumptive Enteric fever cases & outbreaks for August 2020

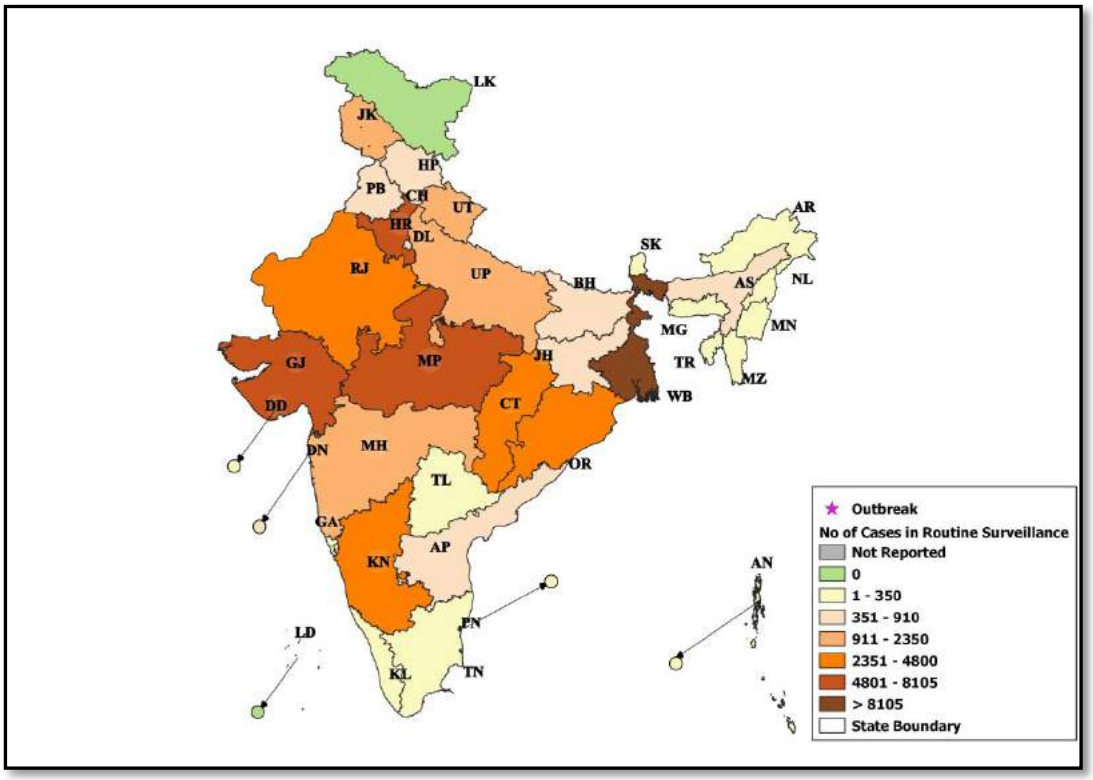


Fig. 11: State/UT wise Lab Confirmed Typhoid cases and outbreaks for August 2020

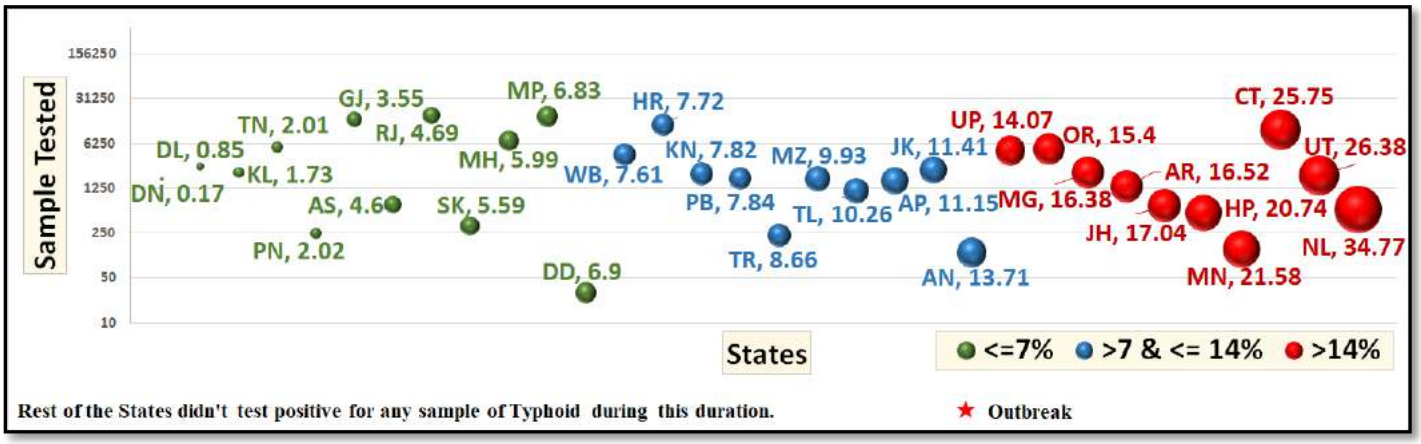
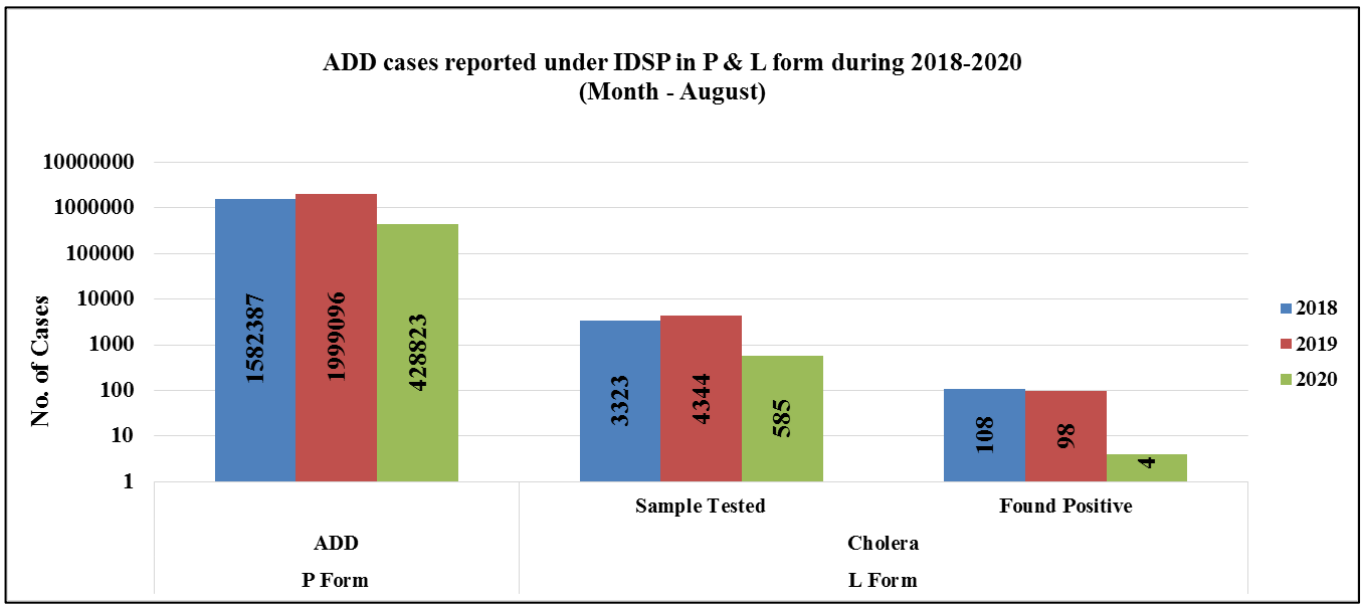


Fig. 12: No. of ADD Cases reported under IDSP in P Form during August 2018 - 2020



As shown in Fig. 12, number of Acute Diarrhoeal Disease cases, as reported by States/UTs in 'P' form was 1582387 in August 2018; 1999096 in August 2019 and 428823 in August 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in August 2018, 3323 samples were tested for Cholera out of which 108 tested positive; in August 2019, out of 4344 samples, 98 tested positive for Cholera and in August 2020, out of 585 samples, 04 tested positive.

Sample positivity of samples tested for Cholera has been 3.0%, 2.0% and 1.0% in August month of 2018, 2019 & 2020 respectively.

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Fig. 13: State/UT wise Presumptive ADD cases and outbreaks for August 2020

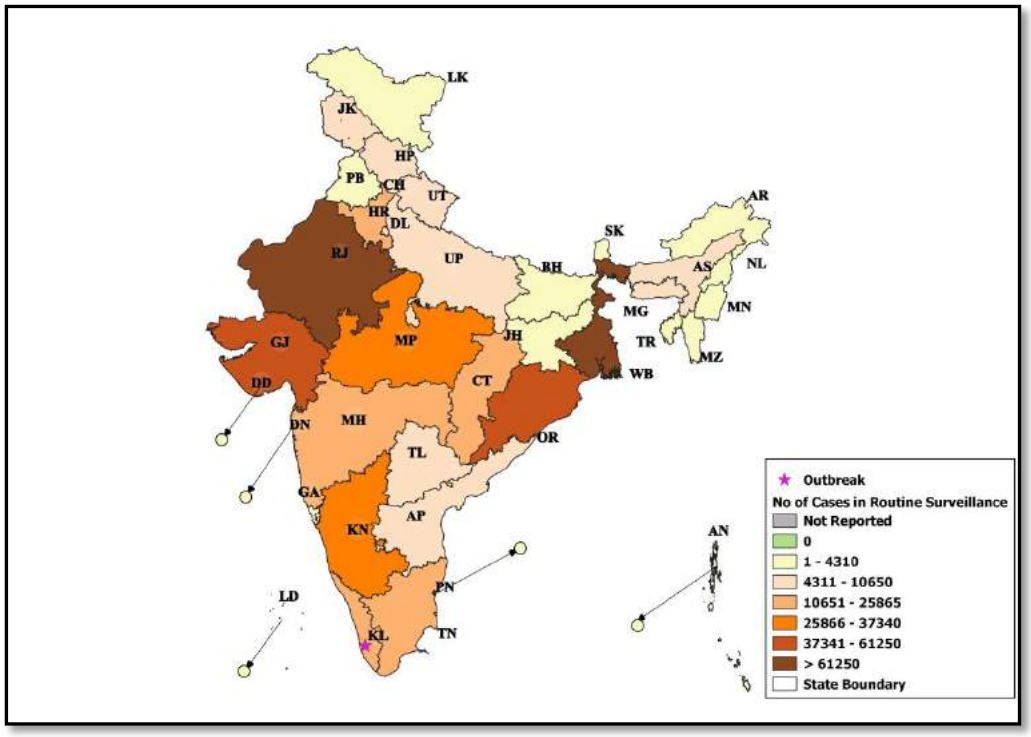


Fig. 14: State/UT wise Lab Confirmed Cholera cases and outbreaks for August 2020

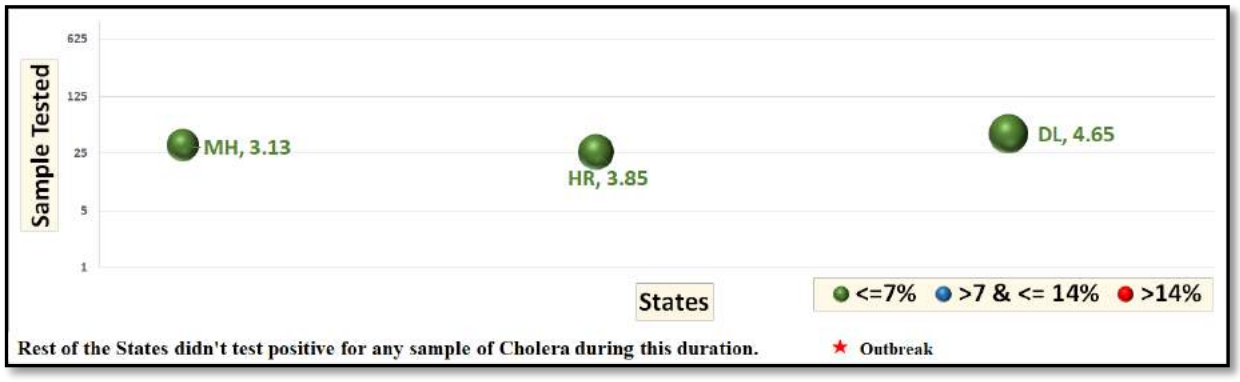
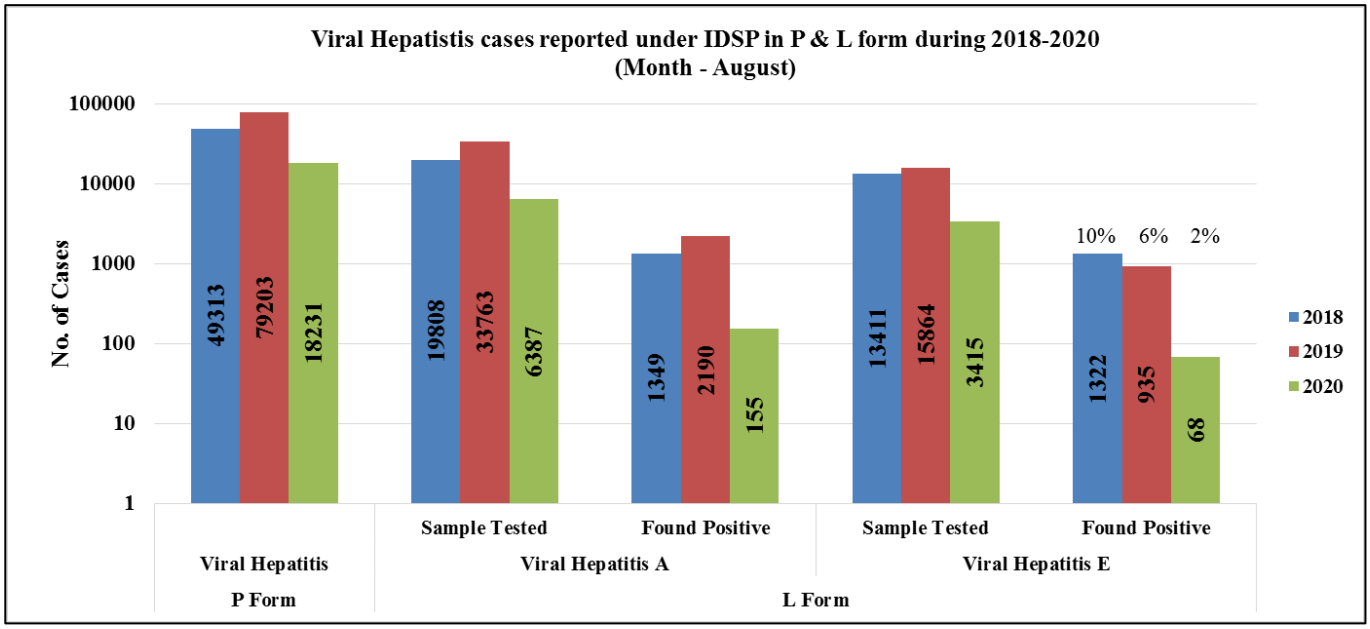


Fig. 15: No. of Viral Hepatitis Cases reported under IDSP in P form & Viral Hepatitis A & E cases reported under L form during August 2018 - 2020



As shown in Fig. 15, the number of presumptive Viral Hepatitis cases was 49313 in August 2018, 79203 in August 2019 and 18231 in August 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 August 2018; 19808 samples were tested out of which 1349 were found positive. In August 2019 out of 33763 samples, 2190 were found to be positive and in August 2020, out of 6387 samples, 155 were found to be positive.

Sample positivity of samples tested for Hepatitis A has been 7%, 6% and 2% in August month of 2018, 2019 & 2020 respectively.

As reported in L form for Viral Hepatitis E, in August 2018; 13411 samples were tested out of which 1322 were found positive. In August 2019; out of 15864 samples, 935 were found to be positive and in August 2020, out of 3415 samples, 68 were found to be positive.

Sample positivity of samples tested for Hepatitis E has been 10%, 6% and 2% in August month of 2018, 2019 & 2020 respectively.

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Fig. 16: State/UT wise Presumptive Viral Hepatitis cases and outbreaks for August 2020

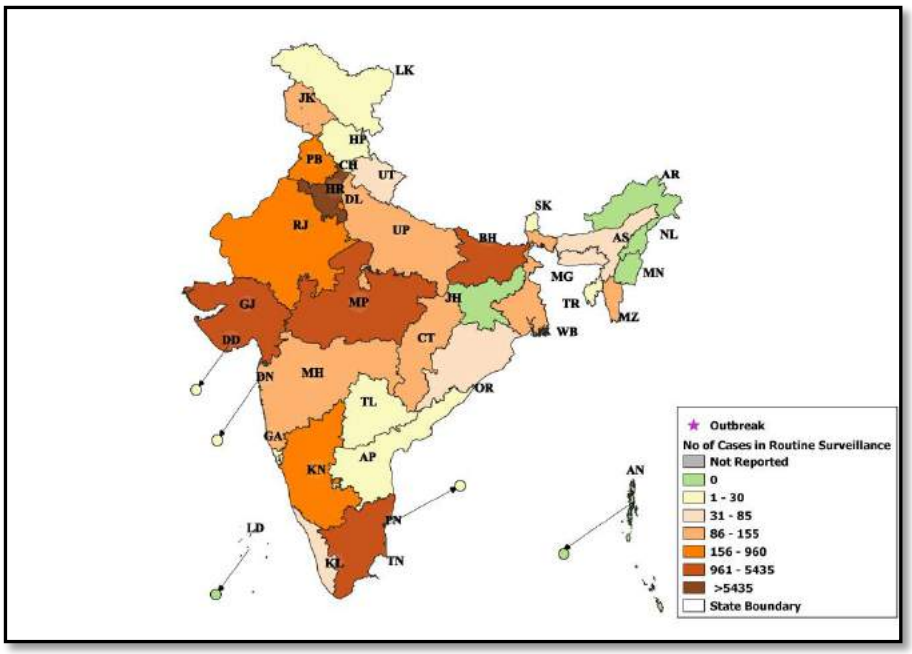


Fig. 17: State/UT wise Lab Confirmed Viral Hepatitis A cases and outbreaks for August 2020

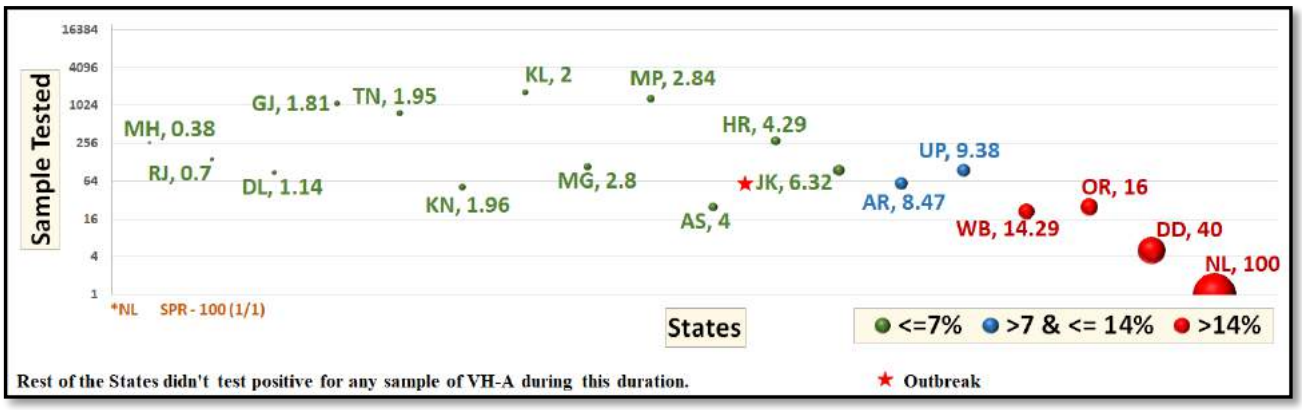


Fig. 18: State/UT wise Lab Confirmed Viral Hepatitis E cases and outbreaks for August 2020

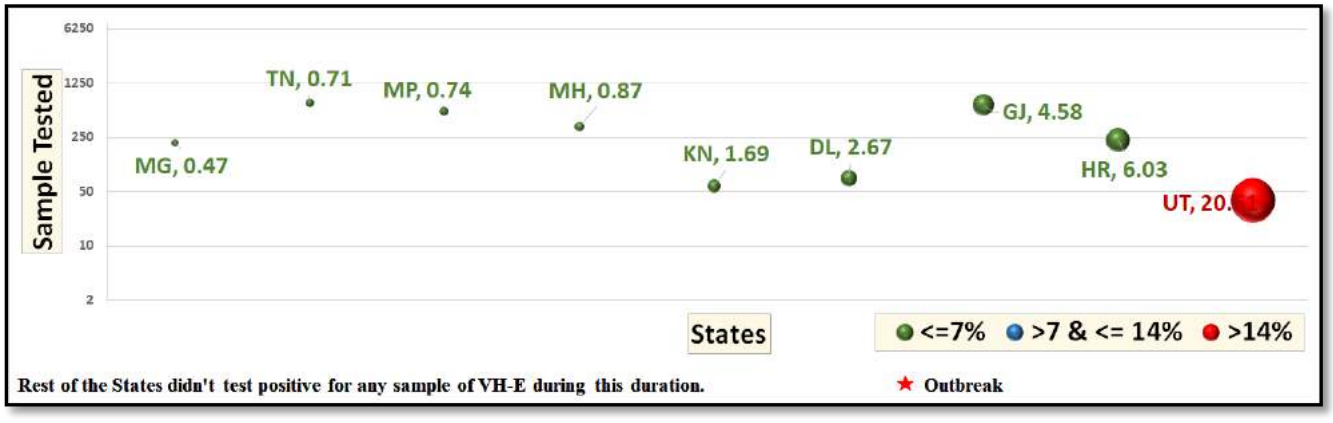
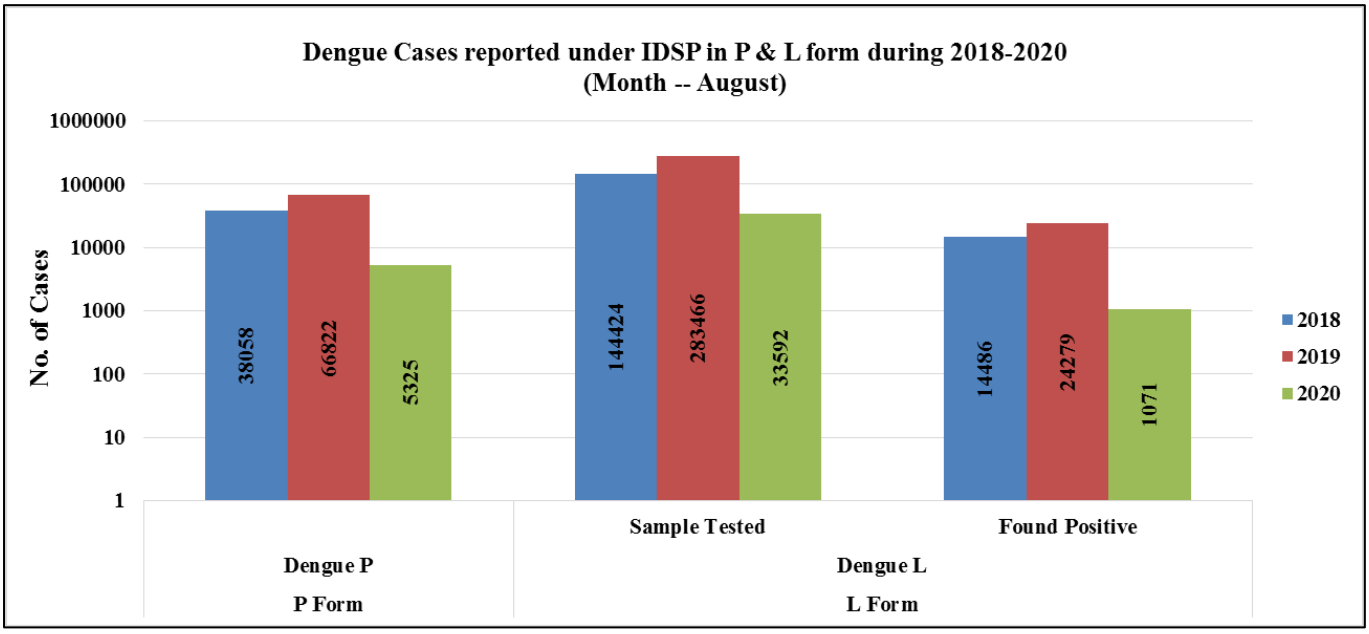


Fig. 19: No. of Dengue Cases reported under IDSP in P & L form during August 2018 - 2020



As shown in Fig. 19, number of presumptive Dengue cases, as reported by States/UTs in 'P' form was 38058 in August 2018; 66822 in August 2019 and 5325 in August 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in August 2018; 144424 samples were tested for Dengue, out of which 14486 were found positive. In August 2019; out of 283466 samples, 24279 were found to be positive and in August 2020, out of 33592 samples, 1071 were found to be positive.

Sample positivity of samples tested for Dengue has been 10%, 9% and 3% in August month of 2018, 2019 & 2020 respectively.

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Fig. 20: State/UT wise Presumptive Dengue cases and outbreaks for August 2020

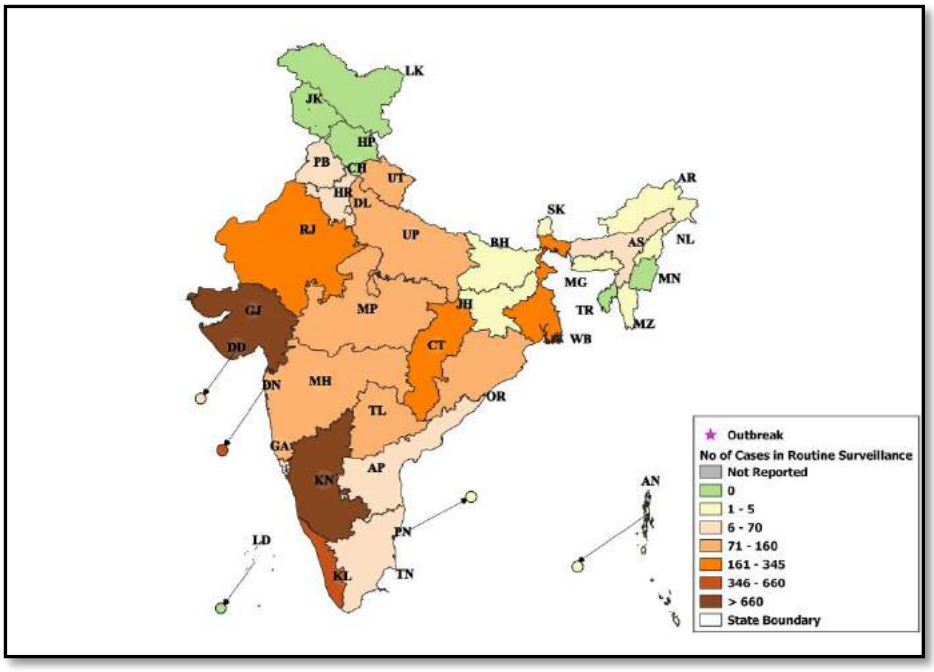


Fig. 21: State/UT wise Lab Confirmed Dengue cases and outbreaks for August 2020

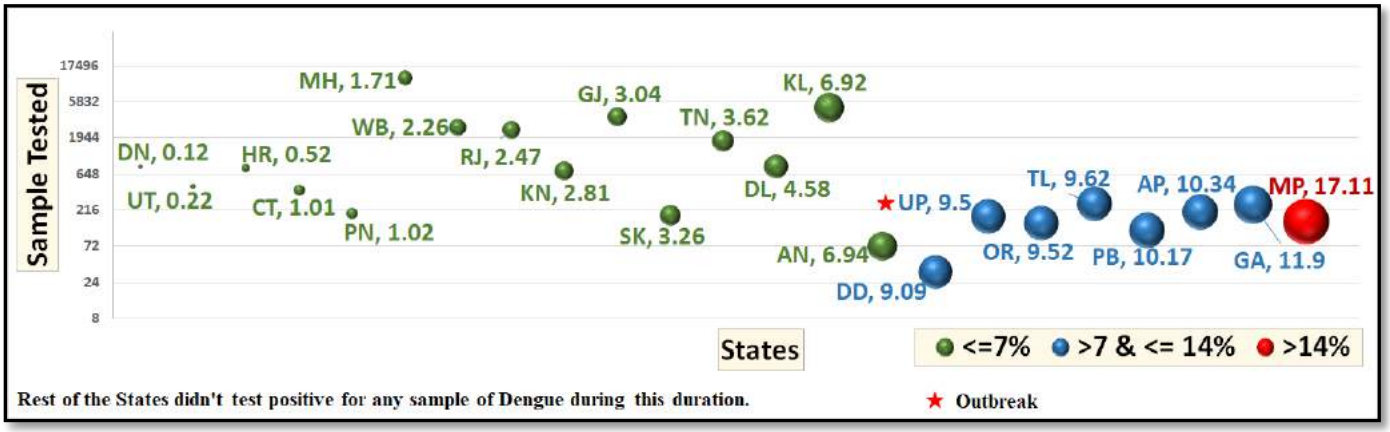
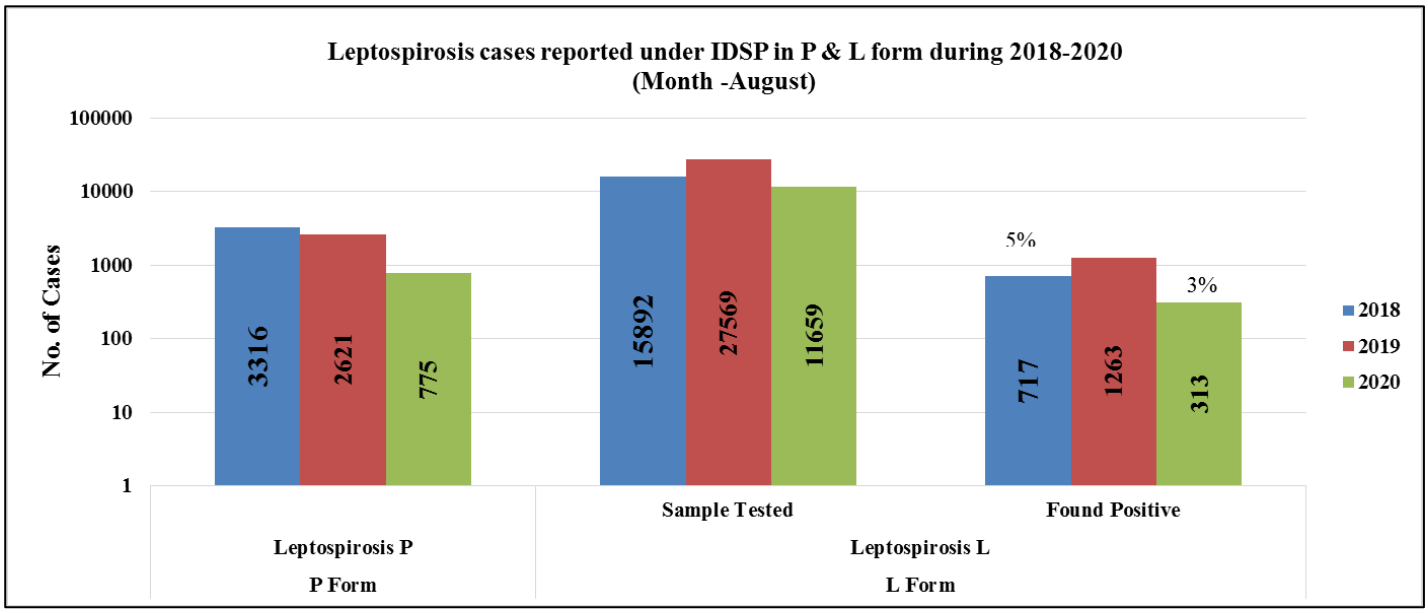


Fig. 22: No. of Leptospirosis Cases reported under IDSP in P & L form during August 2018 – 2020



As shown in Fig. 22, number of presumptive Leptospirosis cases, as reported by States/UTs in 'P' form was 3316 in August 2018; 2621 in August 2019 and 775 in August 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in August 2018; 15892 samples were tested for Leptospirosis, out of which 717 were found positive. In August 2019; out of 27569 samples, 1263 were found to be positive and in August 2020, out of 11659 samples, 313 were found to be positive.

Sample positivity of samples tested for Dengue has been 5%, 5% and 3% in August month of 2018, 2019 & 2020 respectively.

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Fig. 23: State/UT wise Presumptive Leptospirosis cases and outbreaks for August 2020

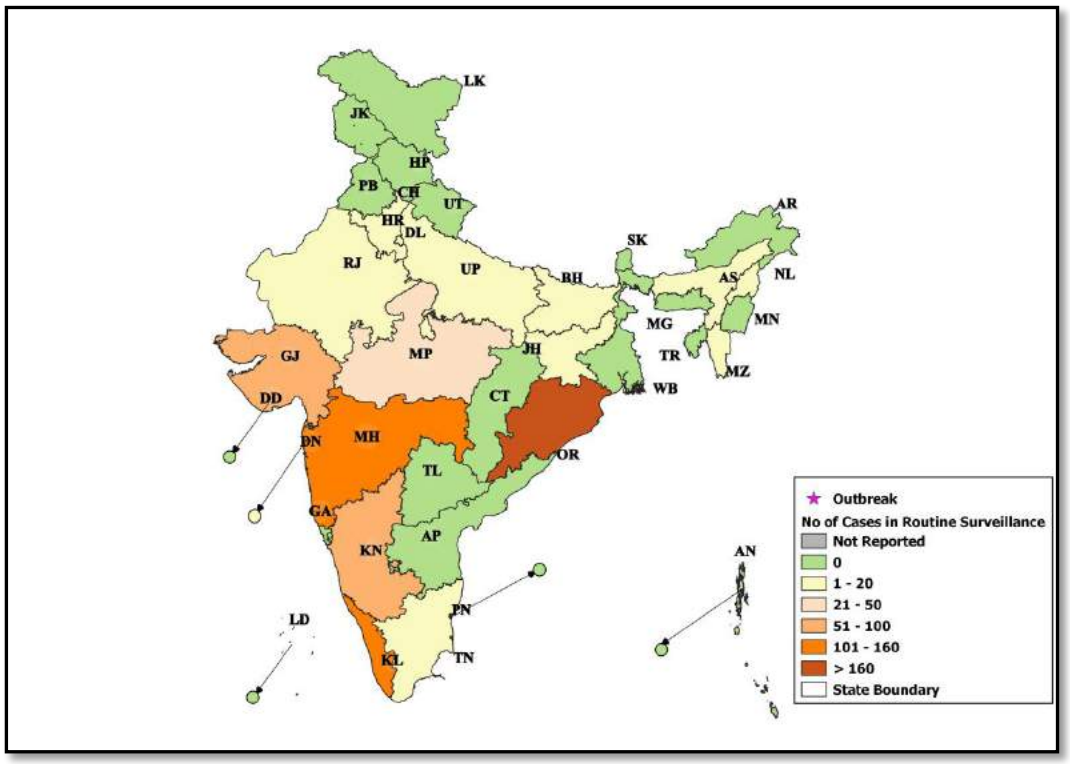


Fig. 24: State/UT wise Lab Confirmed Leptospirosis cases and outbreaks for August 2020

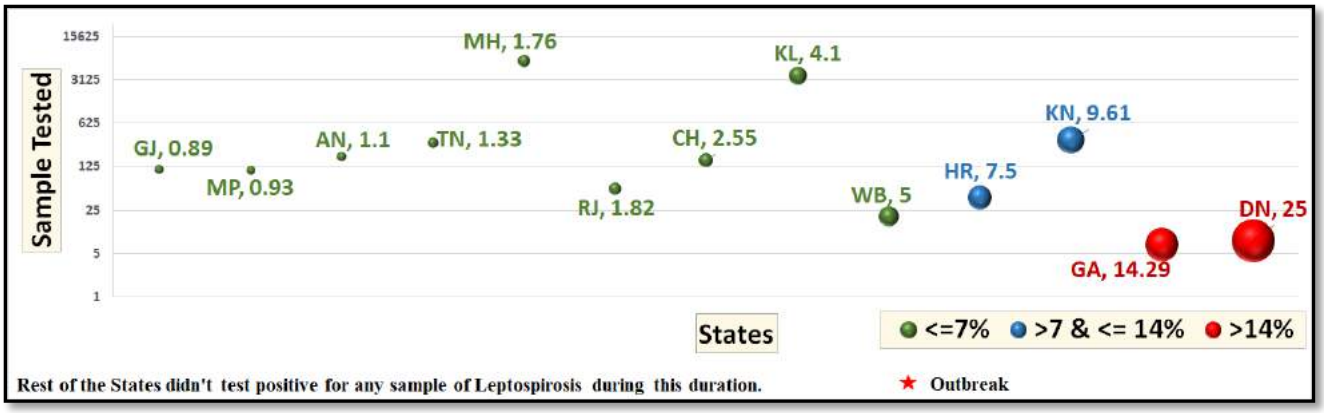
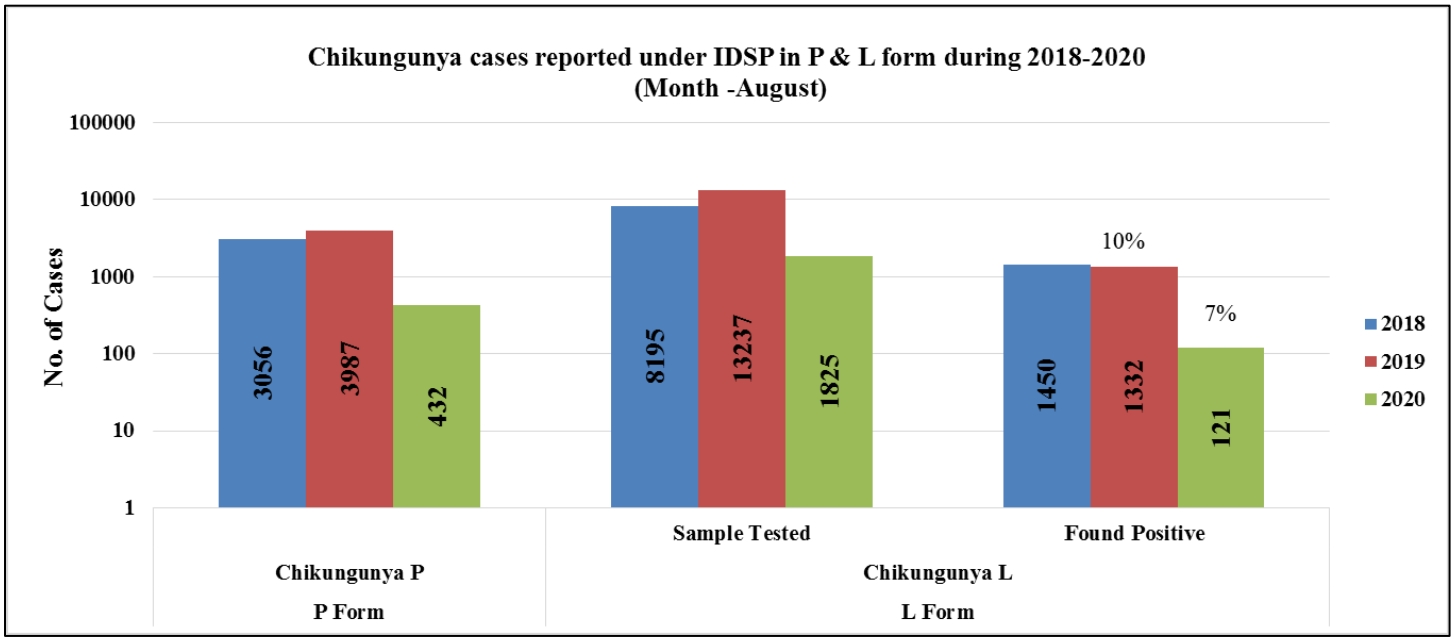


Fig. 25: No. of Chikungunya Cases reported under IDSP in P & L form during August 2018 - 2020



As shown in Fig. 25, number of presumptive Chikungunya cases, as reported by States/UTs in 'P' form was 3056 in August 2018; 3987 in August 2019 and 432 in August 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in August 2018; 8195 samples were tested for Chikungunya, out of which 1450 were found positive. In August 2019; out of 13237 samples, 1332 were found to be positive and in August 2020, out of 1825 samples, 121 were found to be positive.

Sample positivity of samples tested for Chikungunya has been 17.69%, 10.06% and 6.63% in August month of 2018, 2019 & 2020 respectively.

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Fig. 26: State/UT wise Presumptive Chikungunya cases and outbreaks for August 2020

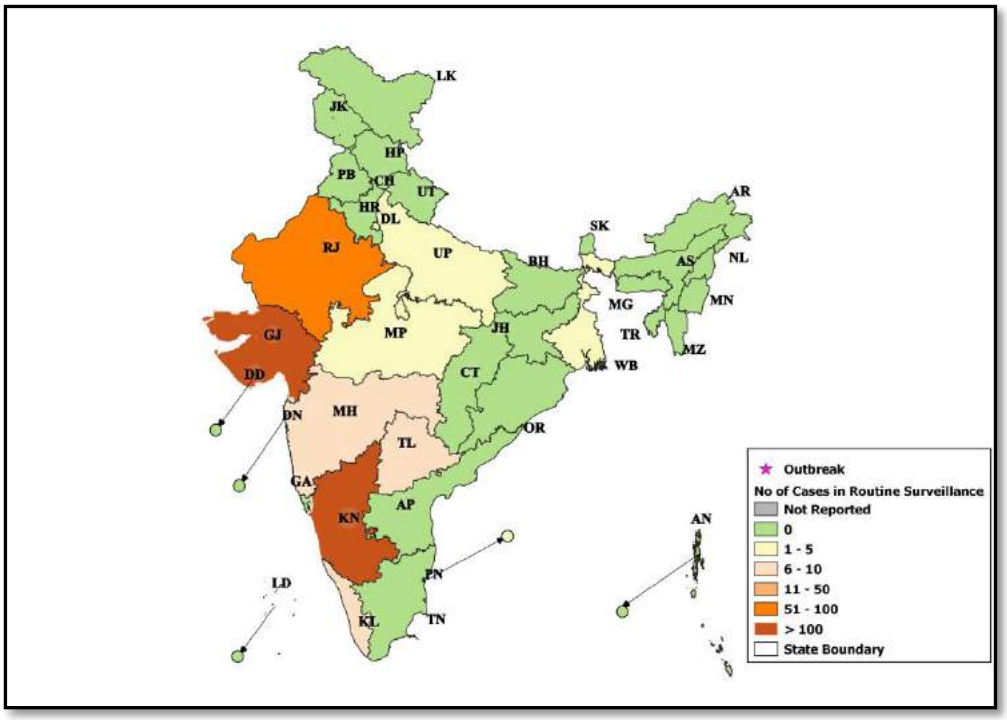


Fig. 27: State/UT wise Lab Confirmed Chikungunya cases and outbreaks for August 2020

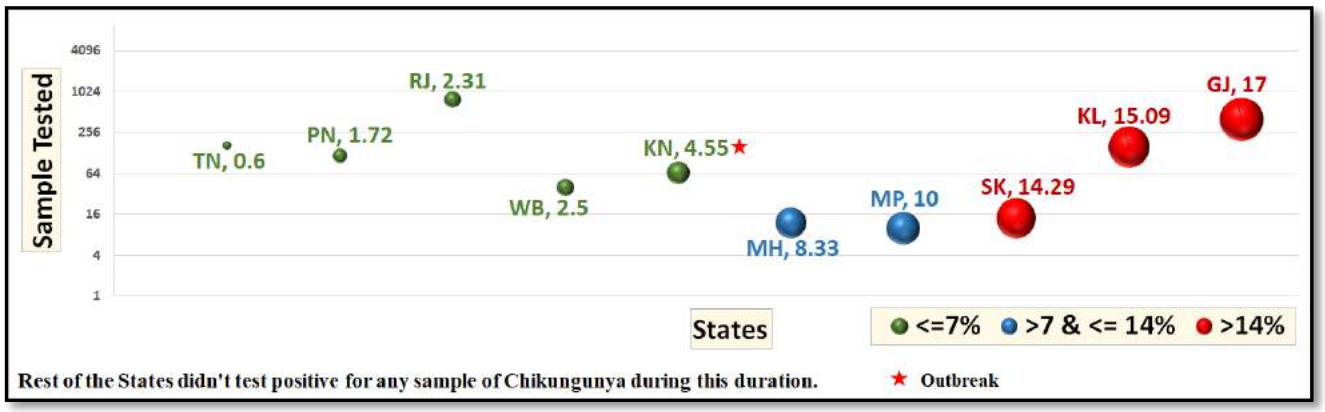


Fig. 28: State/UT wise H1N1 cases and outbreaks for August 2020

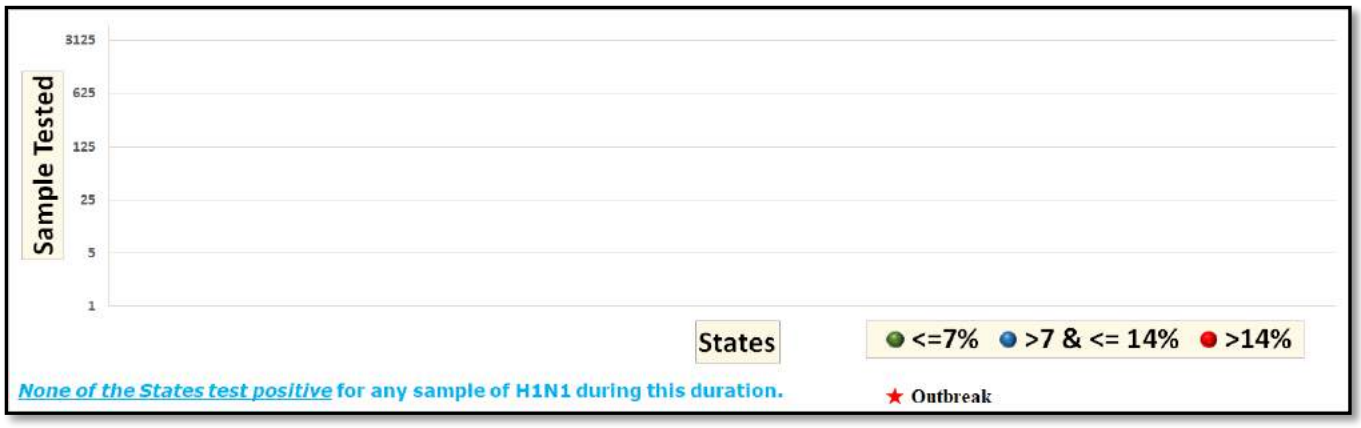
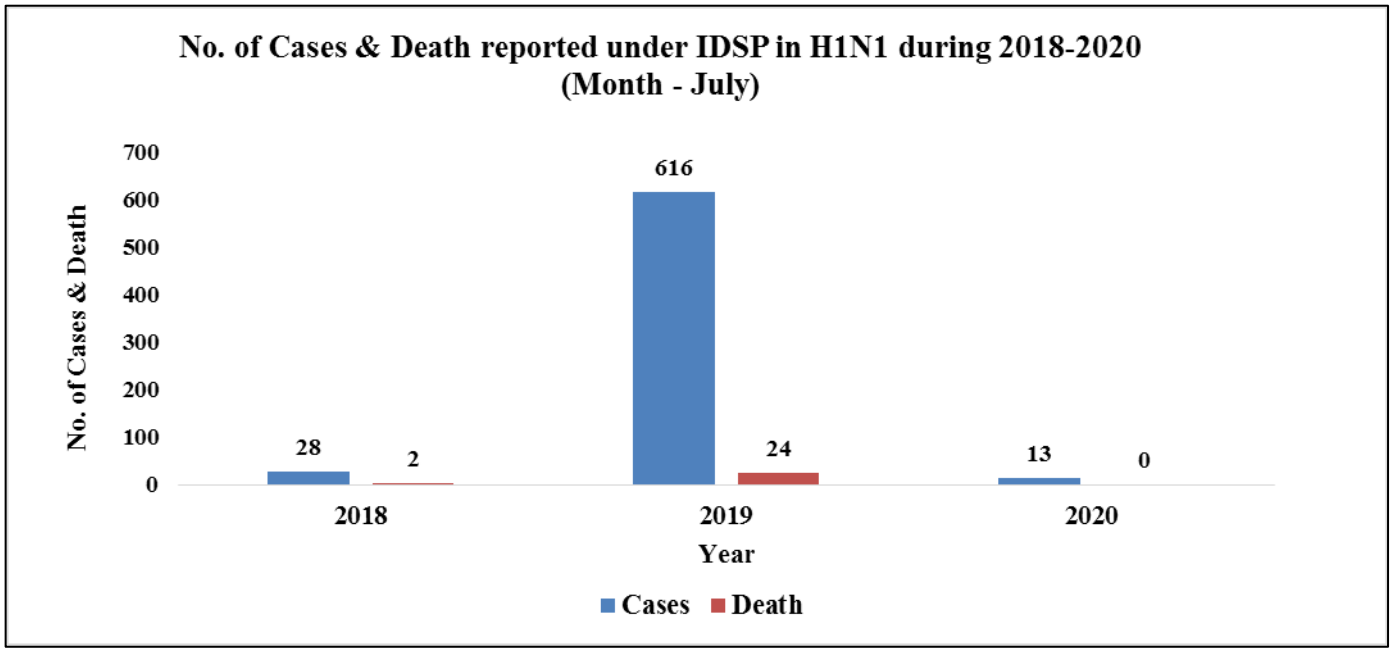


Fig. 29: H1N1 cases reported under IDSP in L Form during 2018-2020 in August 2020



As shown in Fig.29, as reported in L form, in August 2018, there were 255 cases and 30 deaths. In August 2019, there were 485 cases and 26 deaths; and in August 2020, there were 05 cases and 0 deaths.

Case fatality rate for H1N1 were 11.76%, 5.36% and 0% in August month of 2018, 2019 & 2020 respectively.

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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.

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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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