Disease Alert

प्रकोप चेतावनी

A Monthly Surveillance Report

From

Integrated Disease Surveillance Programme

National Health Mission

In This Issue:

> ***MUMPS OUTBREAK,***
>
> ***DADWALA KALLAN BLOCK, DISTRICT FAZILKA, PUNJAB***

BACKGROUND:

Regarding Mumps: Mumps is an acute viral disease which remains an important cause of aseptic meningitis and sensorineural deafness of childhood in unvaccinated poupualtions.

Mumps virus is a *Paramyxovirus* in the same group as Para influenza and Newcastle disease viruses.

Mumps is a disease of childhood; the highest incidence occurs in children between 5 - 9 years of age. About one-third of cases are without symptoms. Cases usually occur in winter and spring. Symptomatic cases are characterized by swelling and tenderness of one or more of the salivary glands, usually the parotid and occasionally the sublingual or sub maxillary glands.

Transmission of Disease: Transmission occurs through via respiratory aerosols and respiratory droplet spread or by direct contact with contaminated saliva.

Incubation Period (IP): It ranges from 14 to 25 days. It is commonly 15–18 days.

Reservoir: Mumps is exclusively a human disease. Although persons with asymptomatic or non-classical infection can transmit the virus, no carrier state is known to exist.

Lab diagnosis: The diagnosis is confirmed serologically by the detection of Mumps specific IgM antibody, or a significant rise in mumps IgG antibody in acute and convalescent sera. Mumps virus can also be cultured from swabs of the buccal mucosa and from urine.

Complications of Mumps: Some of the important complications of Mumps are – Meningitis, Encephalitis, Orchitis, Pancreatitis and Arthralgia.

Treatment: No specific treatment is available for mumps, Patients are treated symptomatically.

OUTBREAK OF MUMPS IN DISTRICT FAZILKA, PUNJAB:

Background of Outbreak:

On dated 13th November, DSU, Fazilka received information from MPHW (Male Public Health worker), Asif Wala regarding 09 suspected cases of Mumps from Govt. Primary School, Noor Muhammad, SC Asif Wala, Block Dabwala Kallan. Village population was 250 and strength of affected school was 21.

After getting this information District. RRT team visited the area. The team comprised of District Epidemiologist, Medical Officer of concerned PHC, Lab technician visited Village Noor Muhammad, Govt. Primary School and investigated the situation. During the investigation 09 suspected cases of Mumps were examined. The suspected children were given symptomatic treatment and all school students were also screened for active case search of Mumps.

Blood samples of 06 suspected cases were taken and sent to Microbiology Lab, Civil Hospital, Fazilka. State Surveillance Unit, Punjab was immediately informed about the outbreak.

House to house survey was conducted and no suspected cases of fever and parotid swelling were reported.

Case Definition:

The RRT started by preparing a Clinical Case Definition: It was –

"Acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland, lasting for two or more days and without other apparent cause".

Laboratory Criteria for Diagnosis: RRT also made a definition for lab diagnosis. It included -

Isolation of mumps virus from an appropriate clinical specimen.

> *OR*

Seroconversion or significant (at least fourfold) rise in serum mumps IgG titer as determined by any standard serological assay.

> *OR*

Positive serological test for mumps-specific IgM antibodies.

Case Classification:

Case classification used by RRT for surveillance included -

- **Suspected:** A case with clinically compatible illness or that meets the clinical case definition without laboratory testing or a case with laboratory tests suggestive of mumps without clinical information.
- **Probable:** A case that meets the clinical case definition without laboratory confirmation and is epidemiologically linked to a clinically compatible case.
- **Confirmed:** A case that:

  - Meets the clinical case definition or has clinically compatible illness, and
  - Is either laboratory confirmed or is epidemiologically linked to a confirmed case.

LABORATORY DIAGNOSIS:

6 Blood Samples sent to Microbiology Lab, Civil Hospital, Fazilka. All were found positive for Mumps by ELISA.

DESCRIPTIVE EPIDEMIOLOGY:

The age and sex of 6 lab confirmed cases was: 10/F, 9/F, 9/M, 4.5/M, 7/F and 36/F. The age groups of 9 cases (confirmed & suspected) were -

Age (years)	Cases
0-5	1 (Male)
6-10	7 (4 Male and 3 Female)
36-40	1 (Female)
Total	9 (5 Male and 4 Female)

Interpretation: Most of the cases are in age bracket 6-10 years.

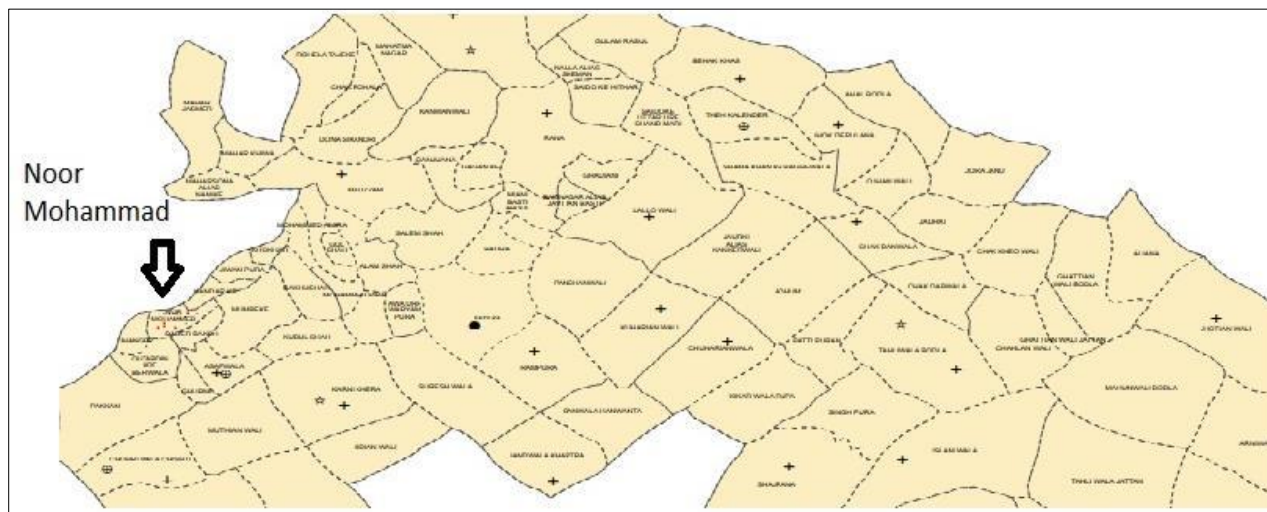**Location map of the area:** Location of Noor Mohammad in Fazilka district is -

Fig. 1

CONTROL MEASURES UNDERTAKEN:

1. Camps were organized in the schools of the affected and adjoining village regarding prevention from Mumps.
2. Affected children were isolated and school principal was instructed to give them medical leave.
3. Personal hygiene measures were emphasized.
4. School staffs, students and their parents were sensitized about the symptoms of mumps, its transmission, prevention and control.
5. Health education given to all school staff and students.
6. ANM, MPHW, ASHA workers were instructed for regular follow up.

RECOMMENDATIONS (To prevent similar situation in future):

1. School Principal should improve cleanliness of school campus.
2. All school teachers should be sensitized to immediately report suspected cases.
3. All Schools should stress on personal hygiene measures of all school children.

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

Data extracted from IDSP Portal (www.idsp.nic.in) as on May 3rd, 2020.

Fig 2: RU wise reporting based on P & L form during January 2018 - 2020
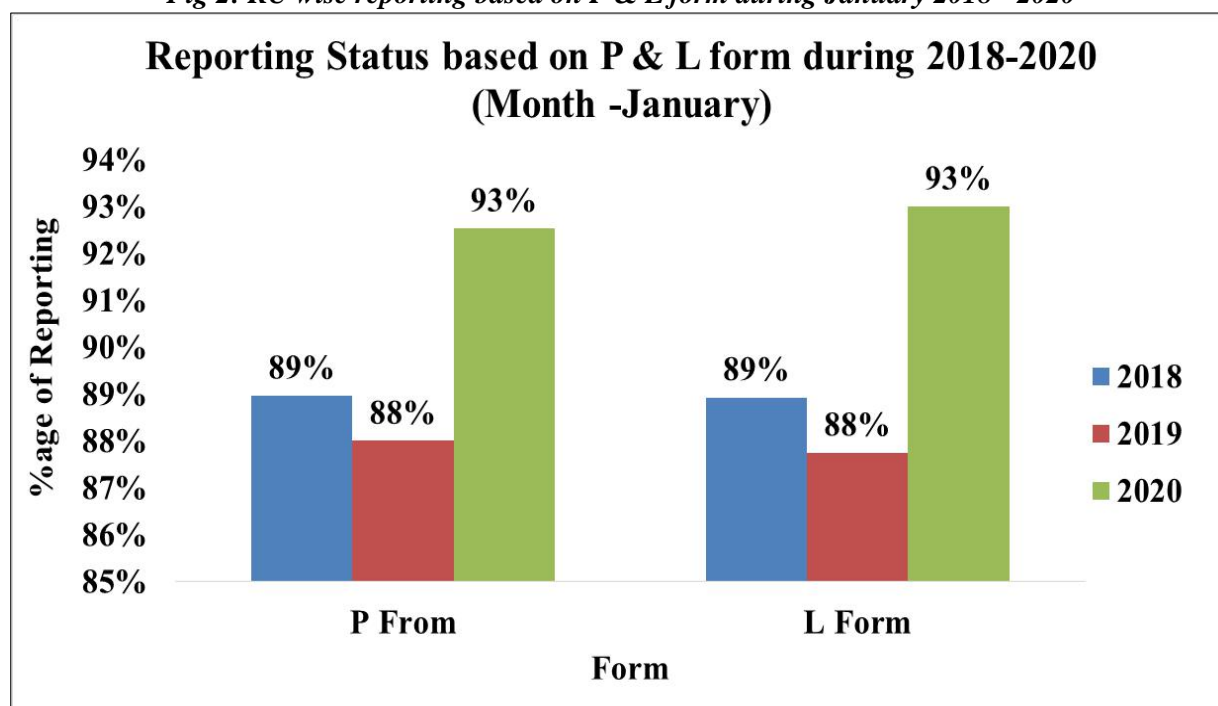
As shown in Fig 2, in January 2018, 2019 and 2020, the 'P' form reporting percentage (i.e. % RU reporting out of total in P form) was 89%, 88% and 93% respectively across India, for all disease conditions reported under IDSP in P form. Similarly, L form reporting percentage was 89%, 88% and 93% respectively 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 3: State/UT wise P form completeness % for January 2020
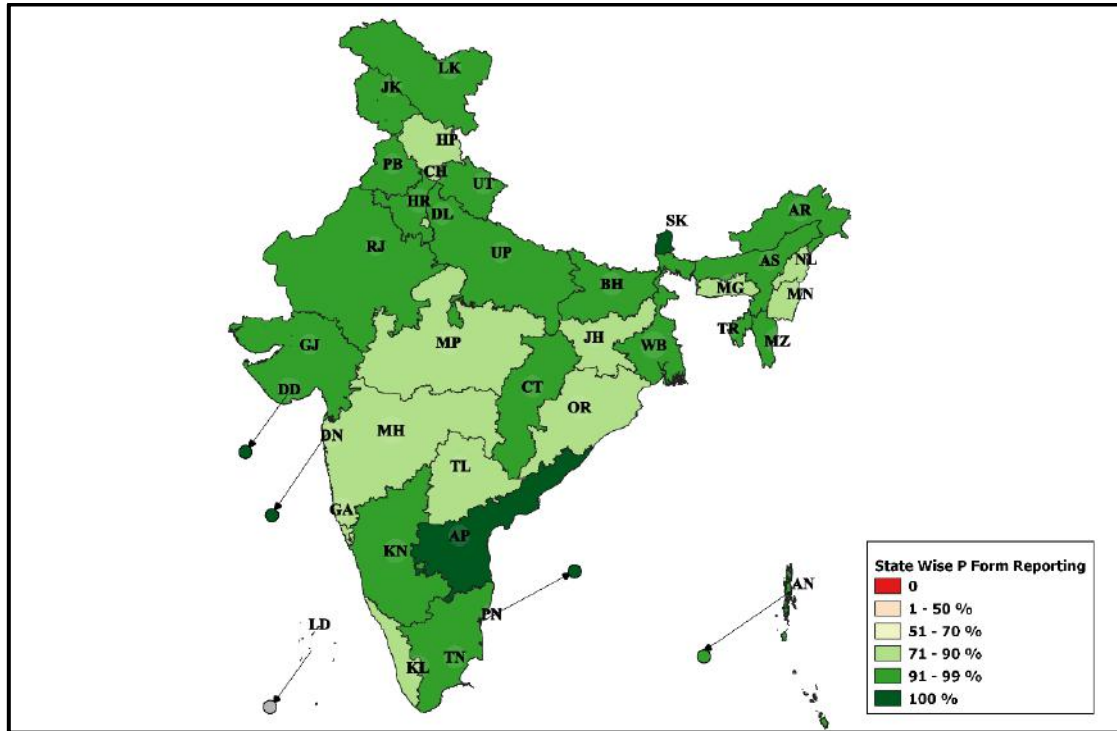
Fig 4: State/UT wise L form completeness % for January 2020

No of Cases reported under IDSP in P & L form during 2018-2020 (Month - January)
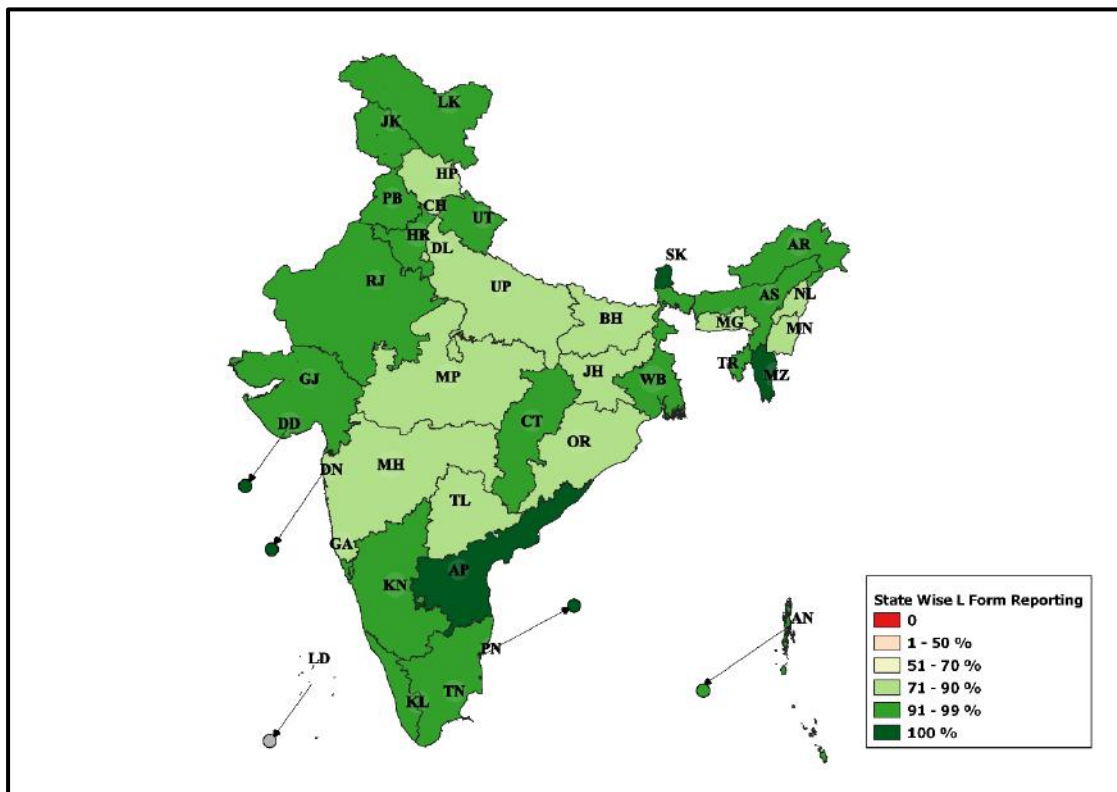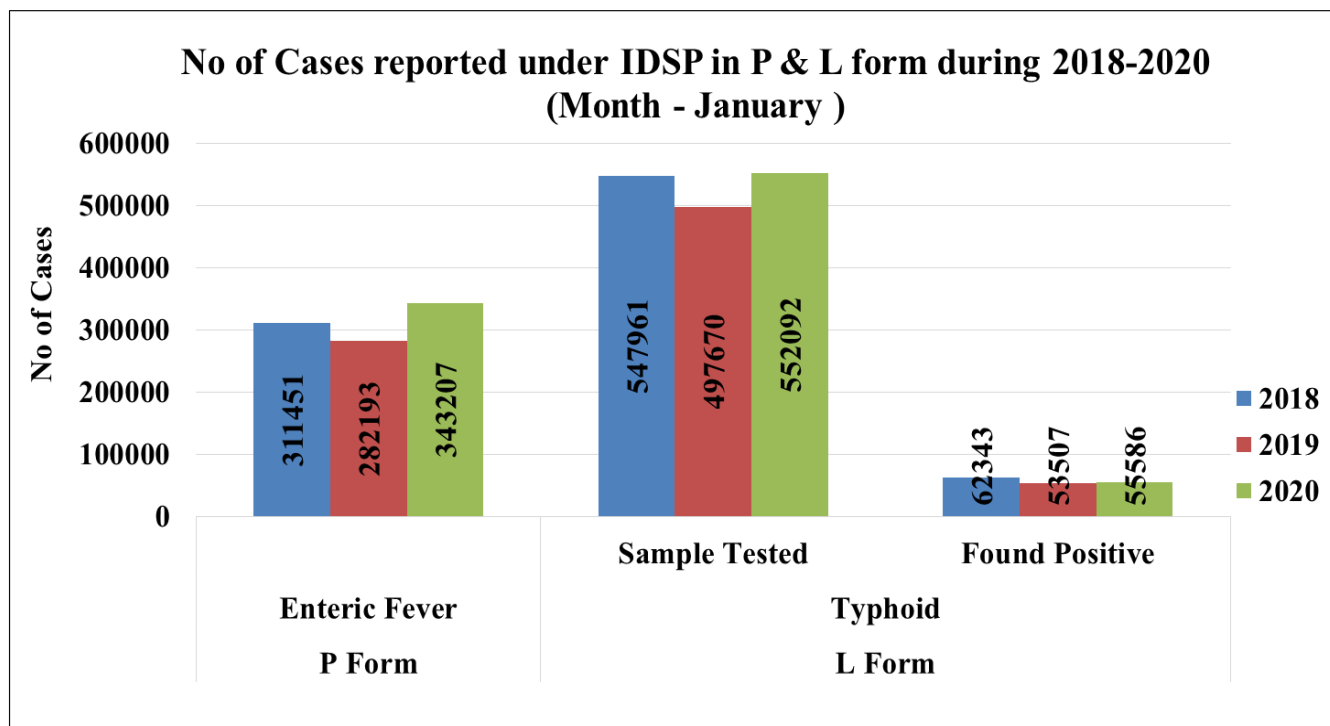
Fig 5: No. of Enteric Fever Cases reported under P & L form during January 2018 - 2020

As shown in Fig 5, number of presumptive enteric fever cases, as reported by States/UTs in 'P' form was 311451 in January 2018; 282193 in January 2019 and 343207 in January 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in January 2018; 547961 samples were tested for Typhoid, out of which 62343 were found positive. In January 2019; out of 497670 samples, 53507 were found to be positive and in January 2020, out of 552092 samples, 55586 were found to be positive.

Sample positivity has been 11%, 11% and 10% in January 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.

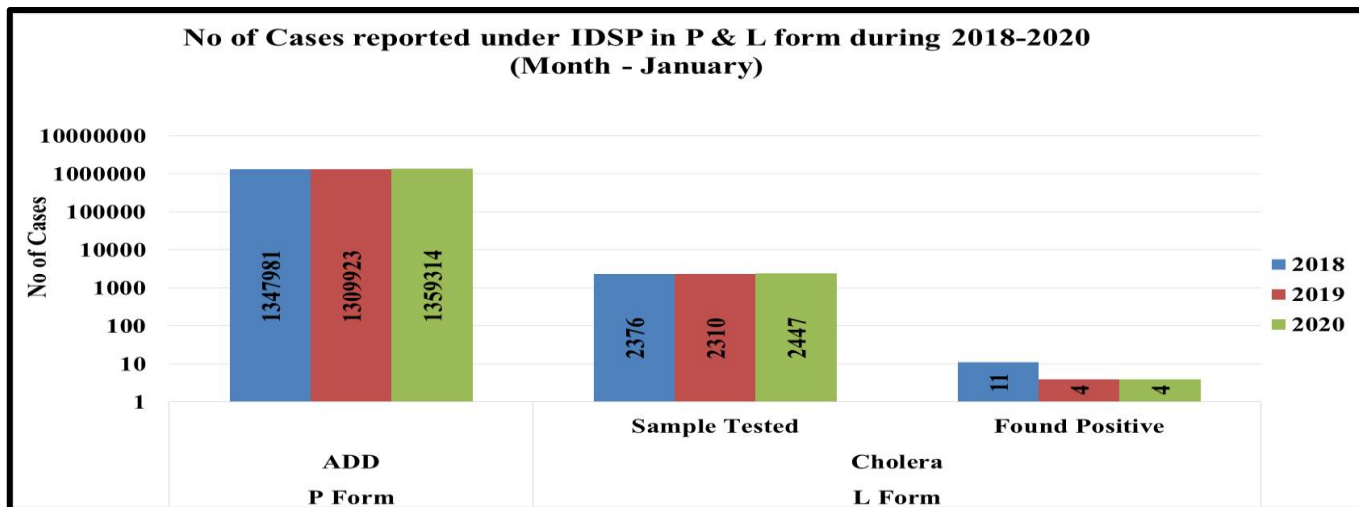*Fig 6: State/UT wise Presumptive Enteric fever cases and outbreaks for January 2020*
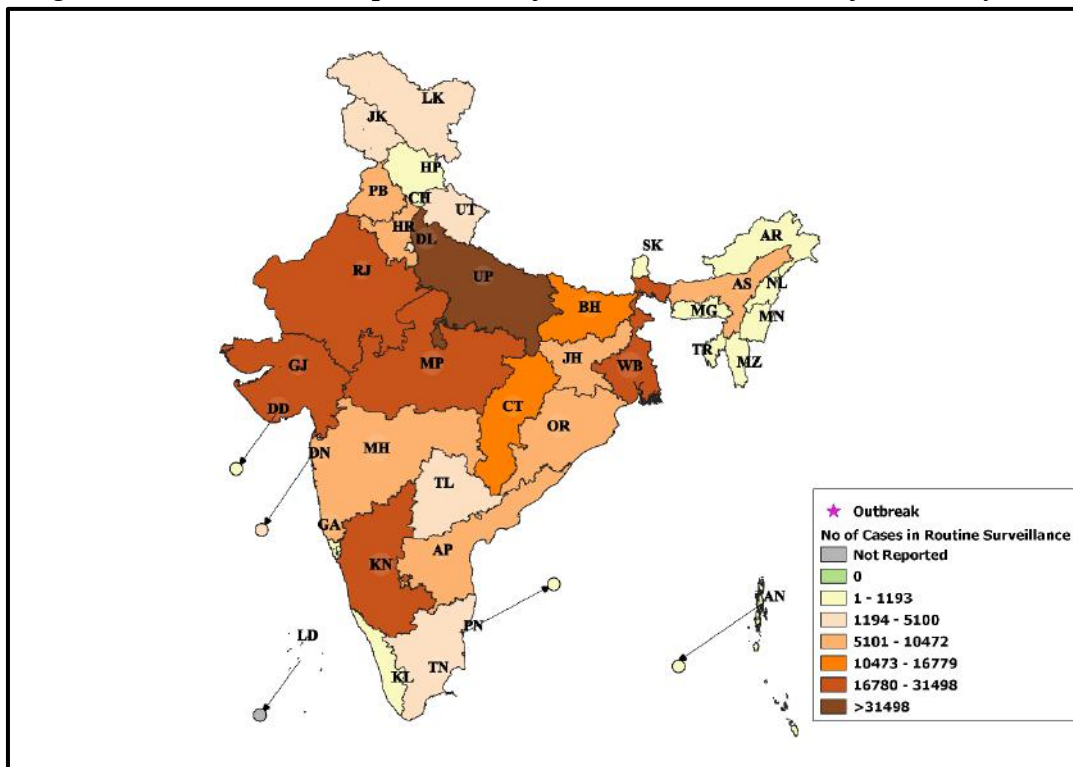
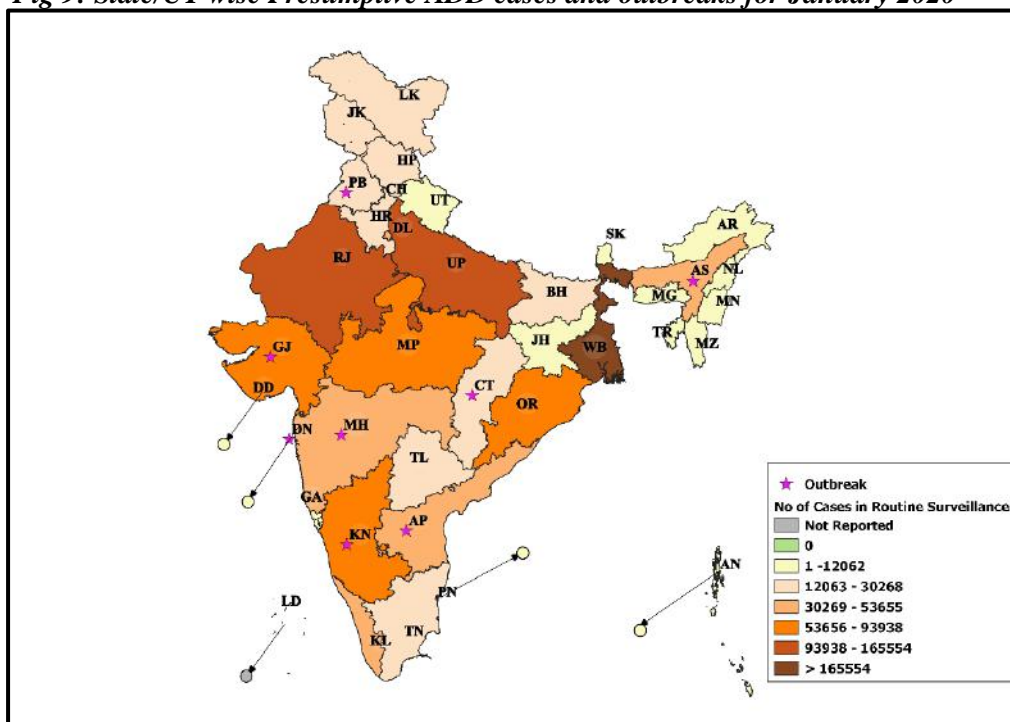*Fig 7: State/UT wise Lab Confirmed Typhoid cases and outbreaks for January 2020*
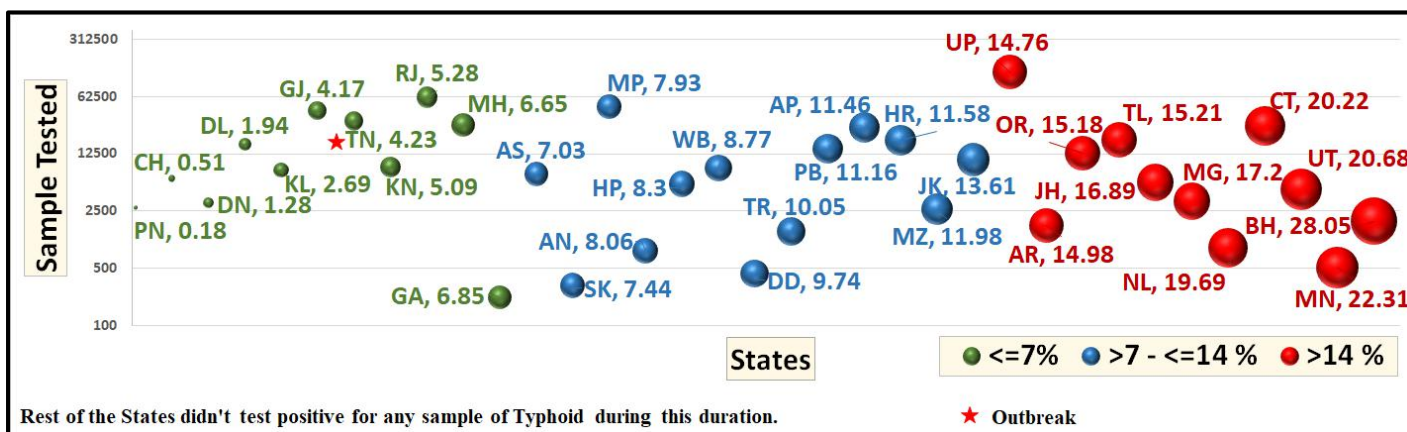
Fig. 8: No. of ADD Cases reported under IDSP in P Form & Cholera Cases in L form during January 2018 - 2020

As shown in Fig 2, number of Acute Diarrhoeal Disease cases, as reported by States/UTs in 'P' form was 1347981 in January 2018; 1309923 in January 2019 and 1359314 in January 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in January 2018, 2376 samples were tested for Cholera out of which 11 tested positive; in January 2019, out of 2310 samples, 04 tested positive for Cholera and in January 2020, out of 2447 samples, 04 tested positive.

Sample positivity of samples tested for Cholera has been 0.46%, 0.17% and 0.16% in January month of 2018, 2019 & 2020 respectively.

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

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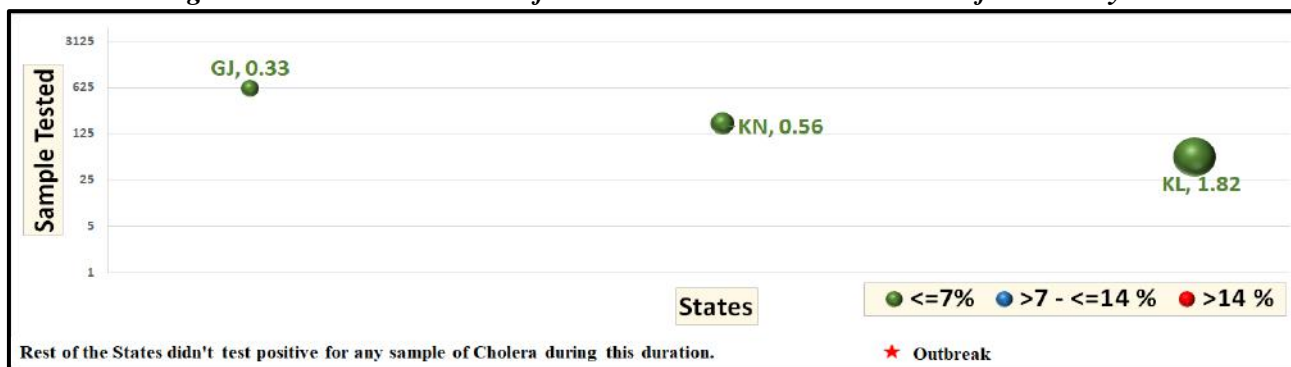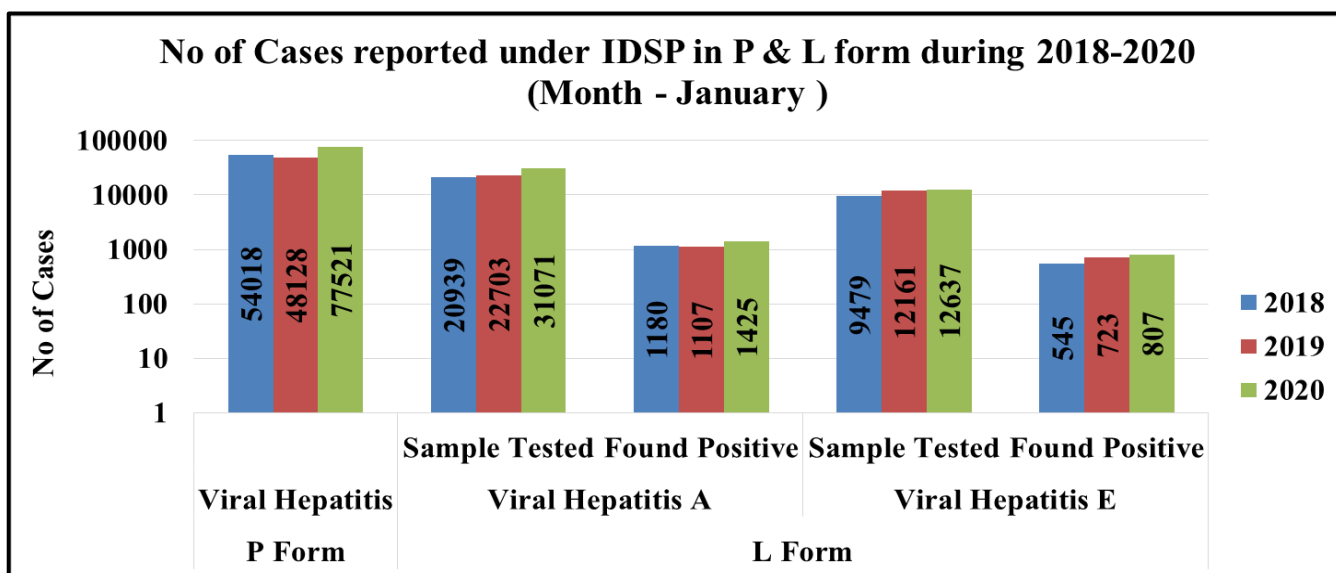

Fig 11: No of Viral Hepatitis Cases reported under IDSP in P form & Viral Hepatitis A & E cases reported under L form during January 2018 - 2020

As shown in Fig 4, the number of presumptive Viral Hepatitis cases was 54018 in January 2018, 48128 in January 2019 and 77521 in January 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 January 2018; 20939 samples were tested out of which 1180 were found positive. In January 2019 out of 22703 samples, 1107 were found to be positive and in January 2020, out of 31071 samples, 1425 were found to be positive.

Sample positivity of samples tested for Hepatitis A has been 6%, 5% and 5% in January month of 2018, 2019 & 2020 respectively.

As reported in L form for Viral Hepatitis E, in January 2018; 9479 samples were tested out of which 545 were found positive. In January 2019; out of 12161 samples, 723 were found to be positive and in January 2020, out of 12637 samples, 807 were found to be positive.

Sample positivity of samples tested for Hepatitis E has been 6%, 6% and 6% in January month of 2018, 2019 & 2020 respectively.
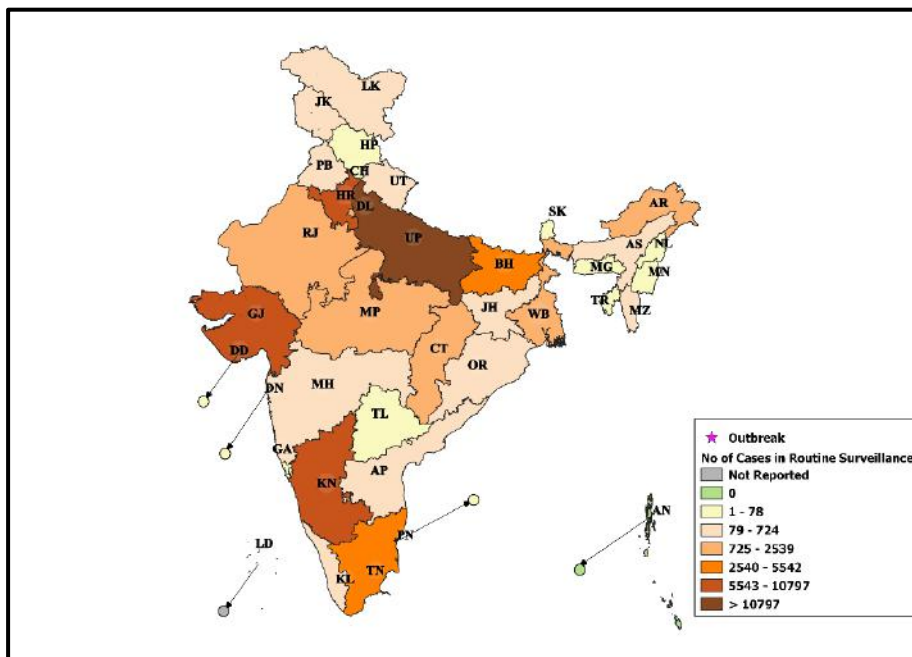
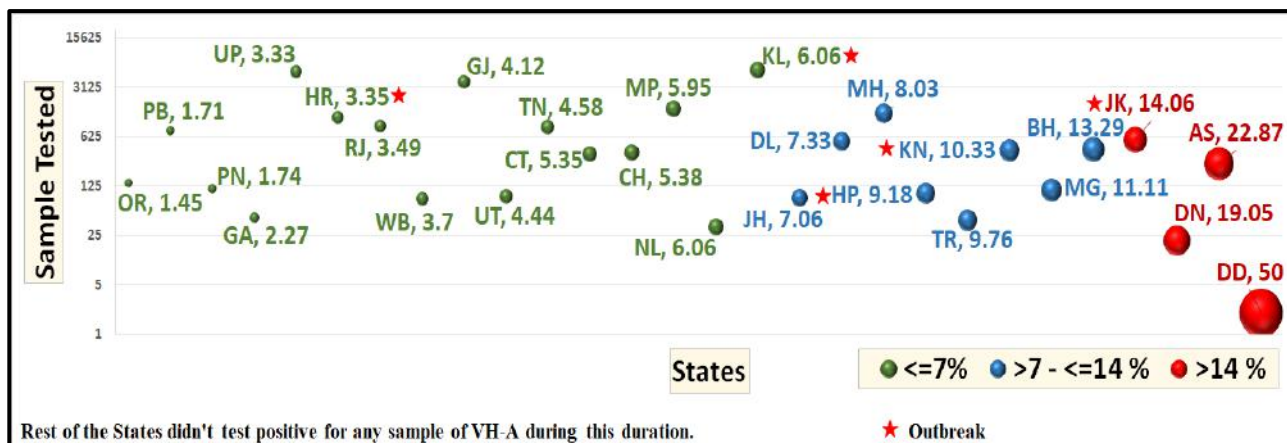*Fig 12: State/UT wise Presumptive Viral Hepatitis cases and outbreaks for January 2020*

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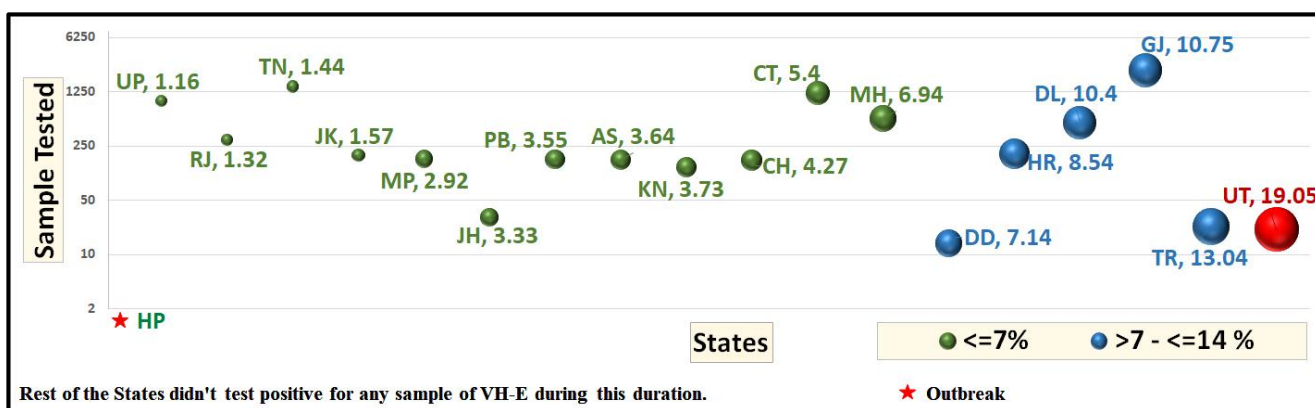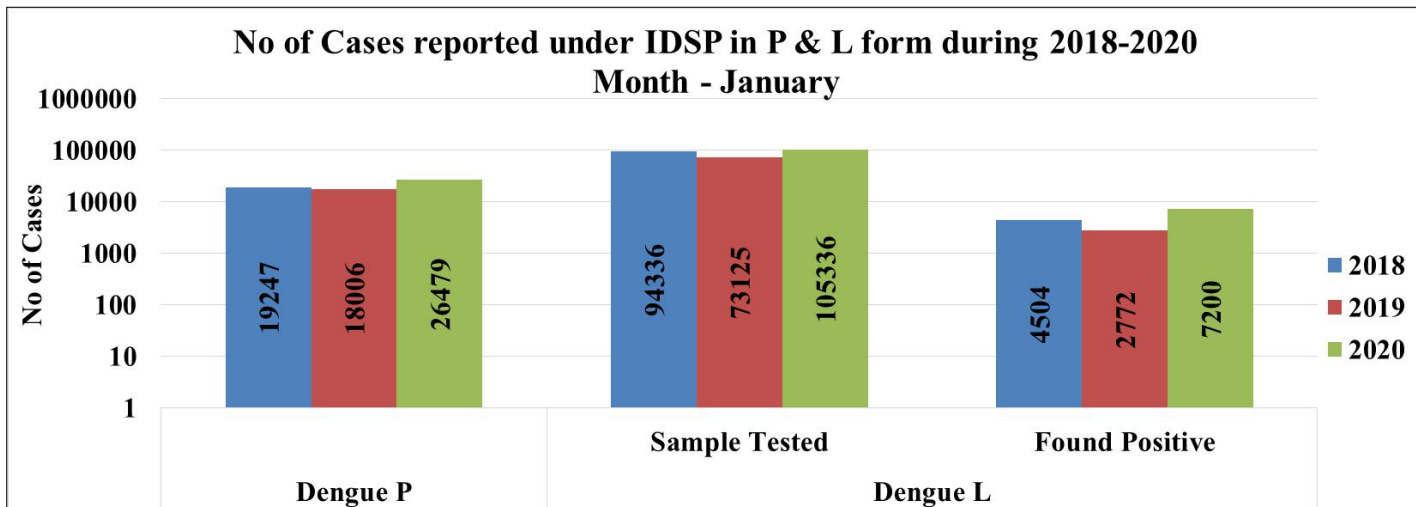

Fig 14: State/UT wise Lab Confirmed Viral Hepatitis E cases and outbreaks for January 2020

Fig 15: No. of Dengue Cases reported under IDSP in P & L form during January 2018 - 2020

As shown in Fig 5, number of presumptive Dengue cases, as reported by States/UTs in 'P' form was 19247 in January 2018; 18006 in January 2019 and 26479 in January 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in January 2018; 94336 samples were tested for Dengue, out of which 4504 were found positive. In January 2019; out of 73125 samples, 2772 were found to be positive and in January 2020, out of 105336 samples, 7200 were found to be positive.

Sample positivity of samples tested for Dengue has been 5%, 4% and 7% in January month of 2018, 2019 & 2020 respectively.

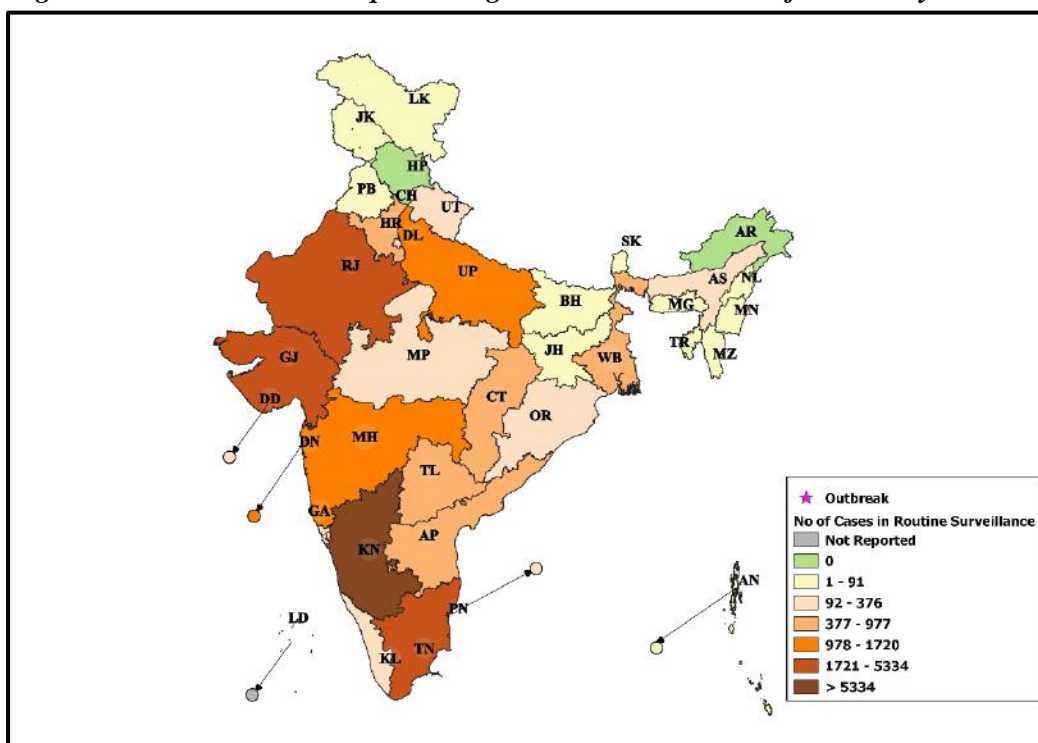*Fig 16: State/UT wise Presumptive Dengue cases and outbreaks for January 2020*

Fig 17: State/UT wise Lab Confirmed Dengue cases and outbreaks for January 2020
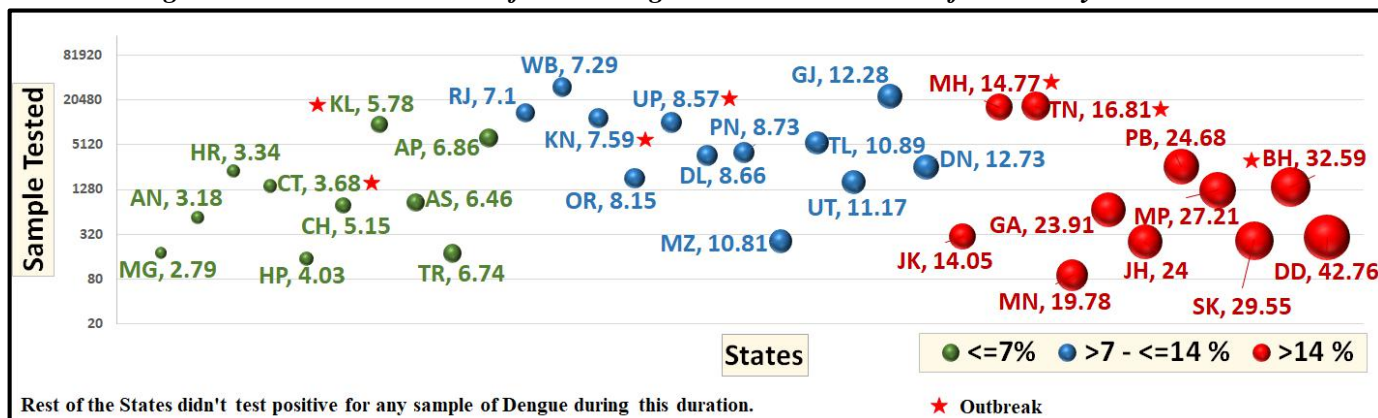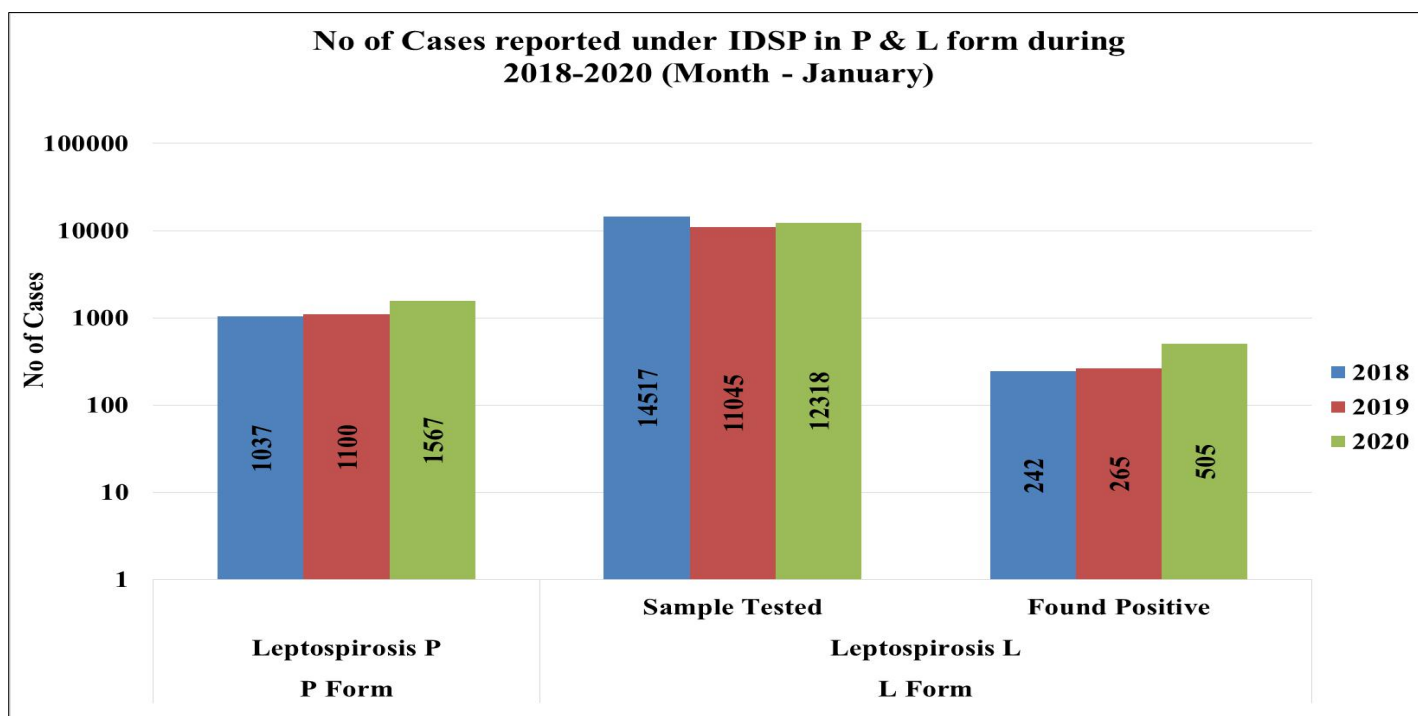

Fig 18: No. of Leptospirosis Cases reported under IDSP in P & L form during January 2018 – 2020

As shown in Fig 6, number of presumptive Leptospirosis cases, as reported by States/UTs in 'P' form was 1037 in January 2018; 1100 in January 2019 and 1567 in January 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in January 2018; 14517 samples were tested for Leptospirosis, out of which 242 were found positive. In January 2019; out of 11045 samples, 265 were found to be positive and in January 2020, out of 12318 samples, 505 were found to be positive.

Sample positivity of samples tested for Leptospirosis has been 2%, 2% and 4% in January month of 2018, 2019 & 2020 respectively.
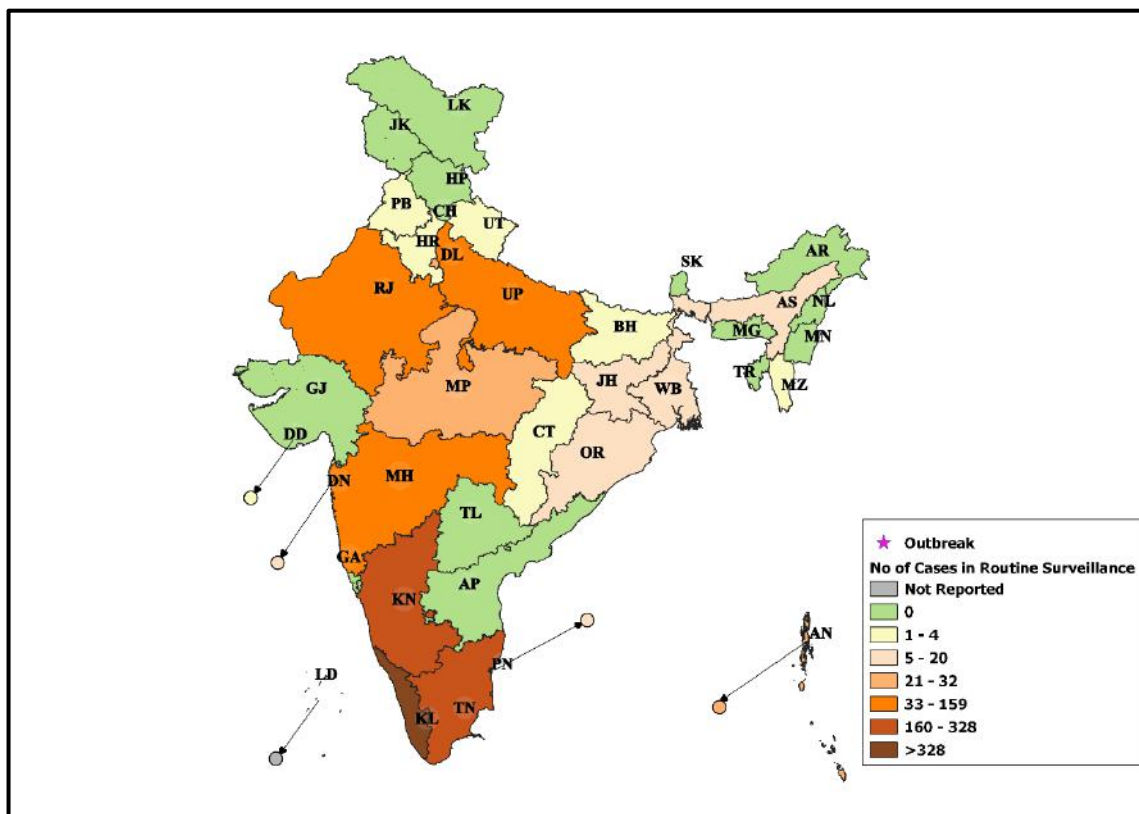
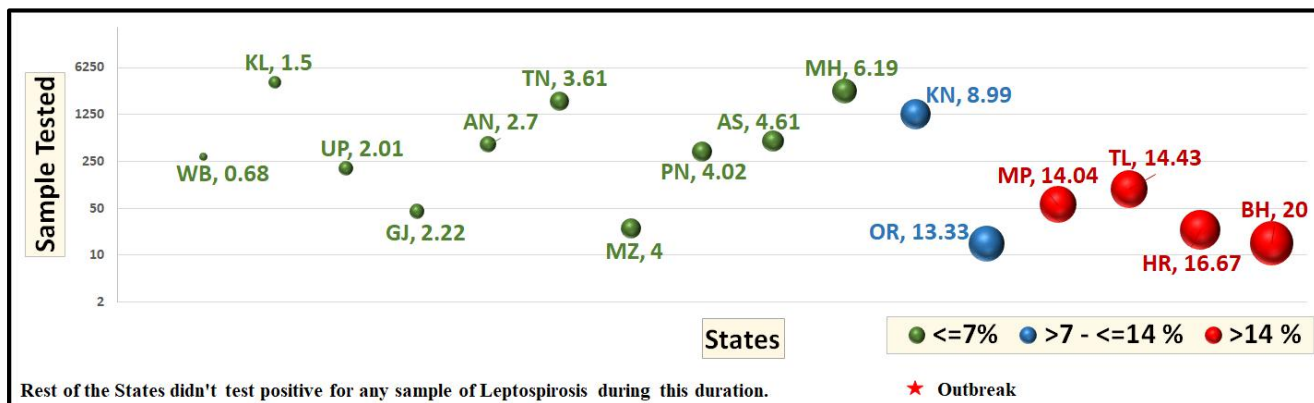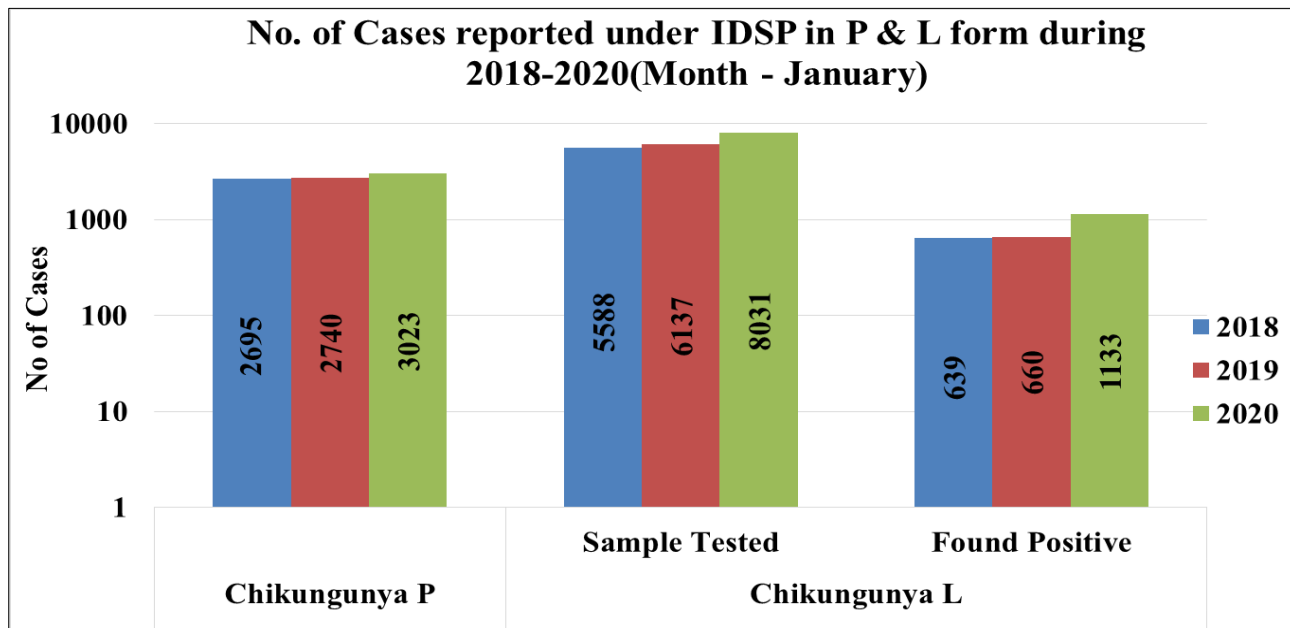*Fig 19: State/UT wise Presumptive Leptospirosis cases and outbreaks for January 2020*

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

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

As shown in Fig 7, number of presumptive Chikungunya cases, as reported by States/UTs in 'P' form was 2695 in January 2018; 2740 in January 2019 and 3023 in January 2020. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in January 2018; 5588 samples were tested for Chikungunya, out of which 639 were found positive. In January 2019; out of 6137 samples, 660 were found to be positive and in January 2020, out of 8031 samples, 1133 were found to be positive.

Sample positivity of samples tested for Chikungunya has been 11%, 11% and 14% in January month of 2018, 2019 & 2020 respectively.

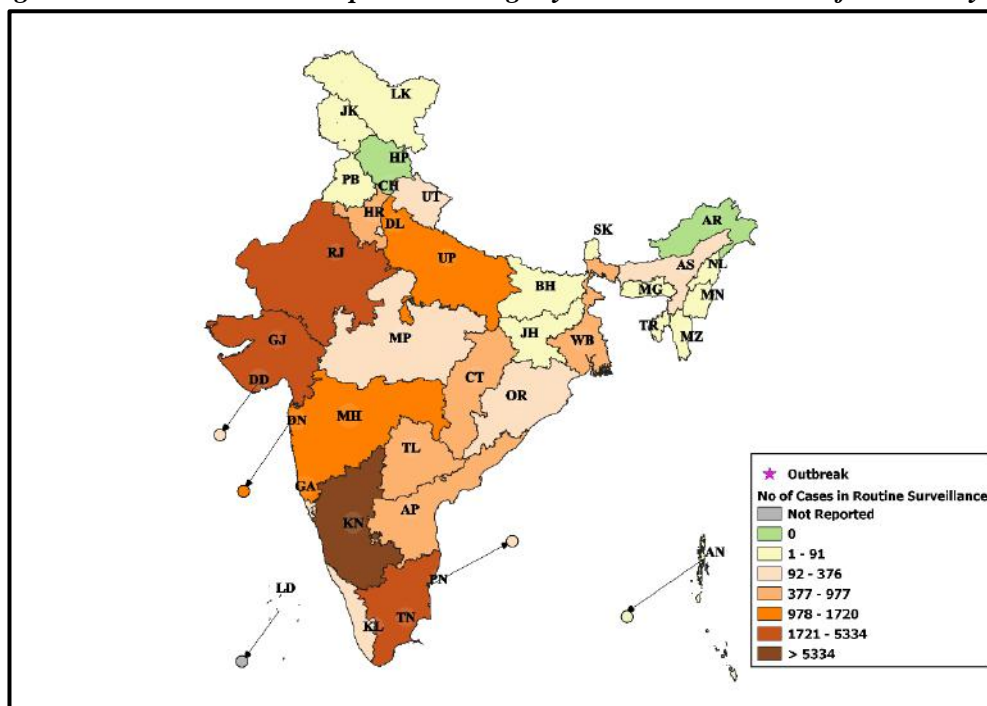*Fig 22: State/UT wise Presumptive Chikungunya cases and outbreaks for January 2020*

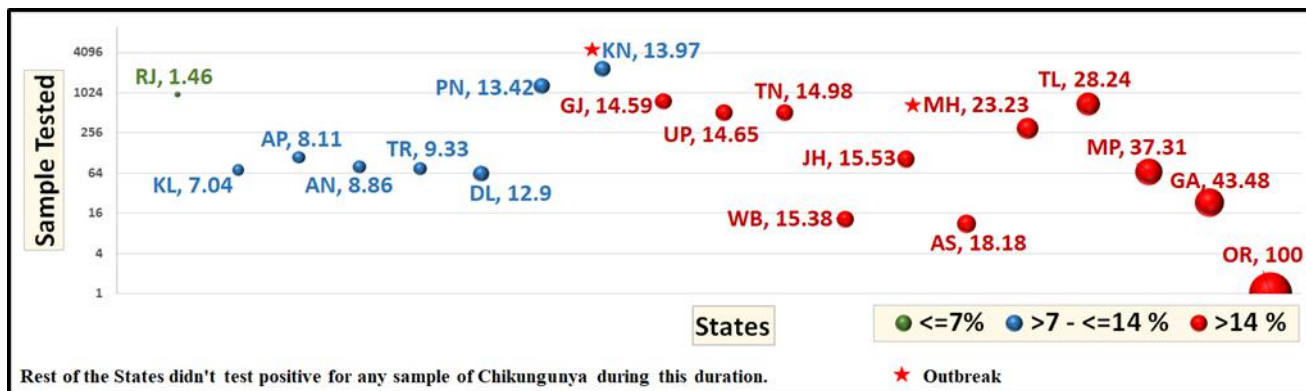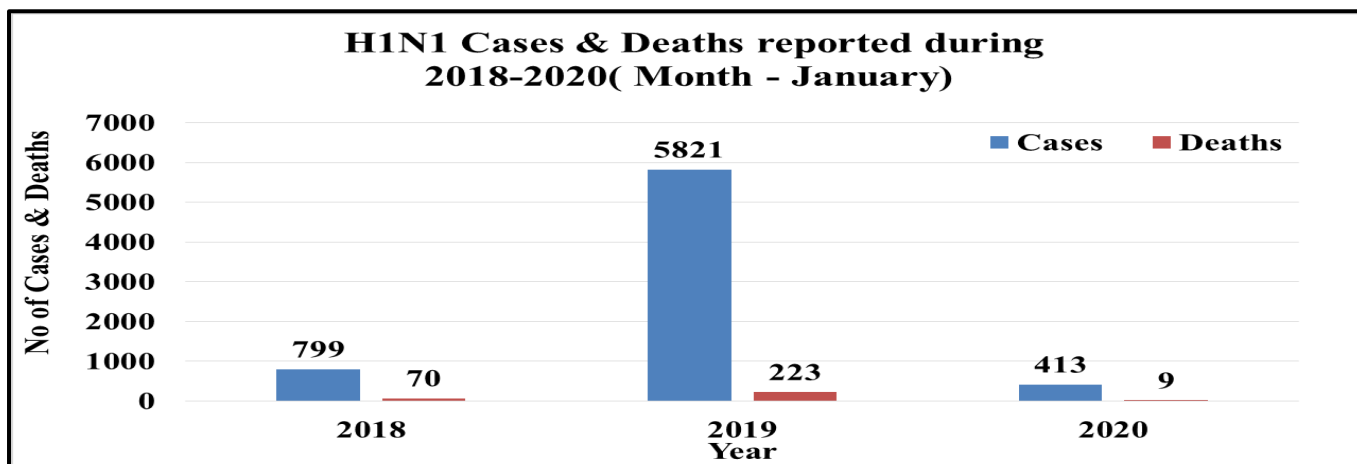*Fig 23: State/UT wise Lab Confirmed Chikungunya cases and outbreaks for January 2020*


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

As reported in L form, in January 2018; there were 565 cases and 75 deaths. In January 2018; there were 2326 cases and 158 deaths and in January 2020, there were 356 cases and 5 deaths.

Case fatality rate for H1N1 were 8.7%, 3.8% and 2.2% in January month of 2018, 2018 & 2020 respectively.

Fig 25: State/UT wise H1N1 cases and outbreaks for January 2020
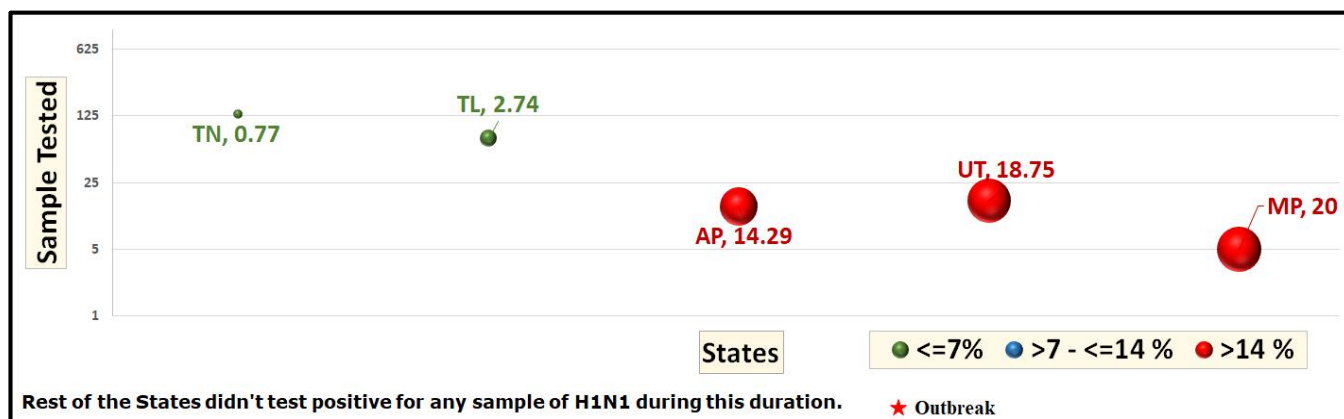
Action from the field

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.

    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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