Issue - 3 Vol. 3

Disease Alert
प्रकोप चेतावनी

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

March 2018

Inside

Investigation of Measles in Kagtok Nes Area, PHC-Pipartoda, Block Lalpur, Dist. Jamnagar, Gujarat

Introduction

It was reported to DSU, Jamnagar on 13/3/2018 that cases of fever with rash are being reported from Kagtok Nes Area, Village Raka, PHC-Pipartoda, Block Lalpur, District Jamnagar, Gujarat.

The total population of village was 992 and of affected area was 140.

Investigation By RRT

The Rapid Response Team consisted of:-

1. Dr. Vinay Kumar, Senior Medical Officer - Jamnagar
2. Vijay Joshi, District Supervisor - Jamnagar
3. Dr. P. M. Khandhar, Medical Officer, PHC Pipartoda

Active house to house search was done by health staff.

Based on analysis of hospital records and active case search, total of 16 cases were identified.

Course of Investigation

It was found that first cases of suspected measles occurred on 25-2-18, peak of outbreak was during week 9. Last Case occurred on 28-3-18 in week number 13 and there was no case reported in week no 14.

The epi-curve of number of cases is as follows.

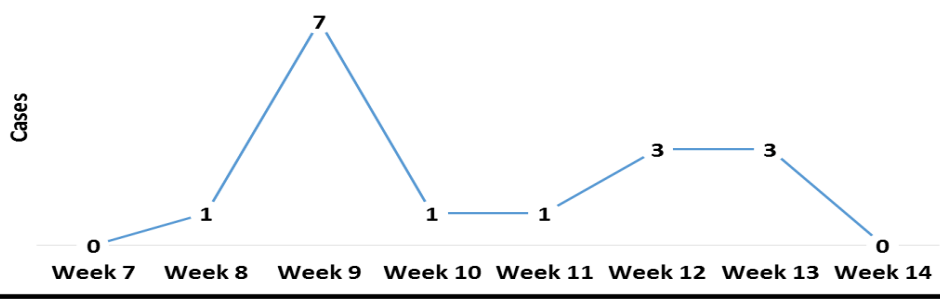

Fig. 1: Date wise distribution of Measles cases from Kagtok Nes Area, PHC-Pipartoda, Block Lalpur, Dist. Jamnagar, Gujarat

Age Group affected

The cases belonged to local population and migration history was not found. Primarily inadequate coverage by measles vaccine was found. 6 to 15 year age group was most affected.

Fever with rash was found in Children. Some had cough/cold in the affected area. Vaccination status of measles was not known in children who were more than 5 year old.

Age group and sex wise Cases of Measles in Kagtok Nes Vill.Raka of PHC Pipartoda, Ta-Lalpur, Dist-Jamnagar, Gujarat, Feb-Mar-2018

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Table 1: Age & Sex Wise distribution of Measles cases in Kagtok Nes Area, PHC-Pipartoda, Block Lalpur, Dist. Jamnagar, Gujarat

Age Group	Male	Female	Total
0-1	0	1	1 (6.25%)
1-2	0	0	0 (0%)
3-5	1	0	1 (6.25%)
6–15	3	11	14 (87.50%)
>=16	0	0	0 (0%)
Total	**4**	**12**	**16**

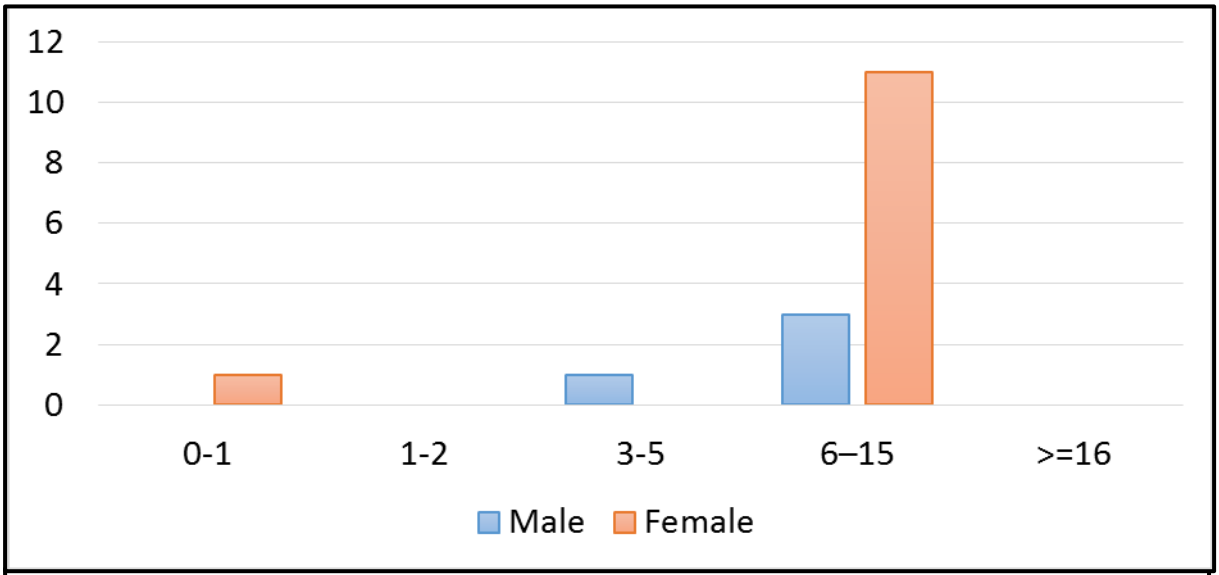


Fig. 2: Age group and sex wise Cases of Measles in Kagtok Nes Vill.Raka of PHC Pipartoda, Ta-Lalpur, Dist-Jamnagar, Gujarat, Feb-Mar-2018

NFHS Survey (2015-16):

According to NFHS Survey (2015-16), the percentage coverage regarding key parameters for State of Gujarat is as follows:

Table 2: Percentage Coverage regarding Key Parameters for the State of Gujarat

Child Immunizations and Vitamin-A Supplementation	Urban	Rural	Total
Children age 12-23 months fully immunized (BCG, measles, and 3 doses each of polio and DPT) (%)	50.4	50.4	50.4
Children age 12-23 months who have received measles vaccine (%)	76.7	73.7	75.0
Children age 9-59 months who received a vitamin A dose in last 6 months (%)	69.9	72.2	71.2

Coverage for relevant parameters for district is as follows:-

Table 3: Coverage of relative parameters for District Jamnagar, Gujarat

District:- Jamnagar			
Details	Year-2017-18 (April to March)		
	Target	Achievement	% Achievement
Measles	18500	17994	97.26
Fully Immunization	18500	17971	97.14
Vitamin A	18500	18233	98.56

Affected Area

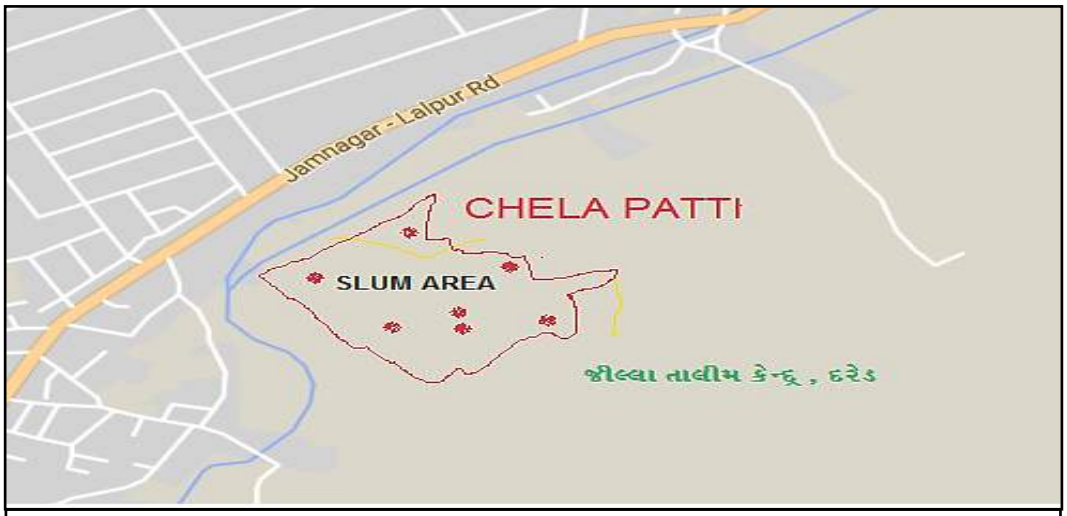


Fig. 3: Map showing affected area Kagtok Nes of PHC Pipartoda, Ta-Lalpur, Dist. Jamnagar, Gujarat, Feb-Mar-2018

Lab Results: 5 blood Samples collected and sent to BJMC, Ahmedabad, a WHO accredited lab out of which 4 samples found to be positive for Measles. Reverse cold chain was used to transport the samples.

Conclusion

It was concluded by lab tests to be an outbreak of Measles. Possibly, the source of outbreak was indigenous. The mode of transmission was by airborne droplet infection from cases of measles.

In team's opinion, following factor contributed to the outbreak:--

- Higher age group of children with insufficient immunity.
- Inadequate awareness of people about disease and transmission.
- Poverty and illiteracy in people of the local community

Control Measures

Following Control & Preventing Measures were taken:-

- Active house to house surveillance for measles in affected area by health teams.
- Vitamin A to children of 9 month to 5 year age group in affected area.
- Measles vaccine was given to unimmunized children.
- Symptomatic treatment to all measles cases.
- Intensive IEC activities done.

Follow-up visits

1. On Date 13/03/2018 surveillance was done in slum area and given Vitamin A First dose to every suspected Measles cases and also gave symptomatic Treatment and intensive IEC was done.
2. On Date 14/03/2018 for follow up all every suspected measles cases was done and gave Vitamin A second dose and Immunization for unimmunized children was done.

Recommendations

The children of the area should be protected by measles vaccine. Awareness about the disease should be generated in the people of the area by regular IEC activities

Surveillance data of Enteric Fever, Acute Diarrhoeal Disease, Viral Hepatitis A & E, Dengue Leptospirosis and Chikungunya During March 2016 - 2018*

* Data extracted from IDSP Portal (www.idsp.nic.in) as on 21 June, 2018.

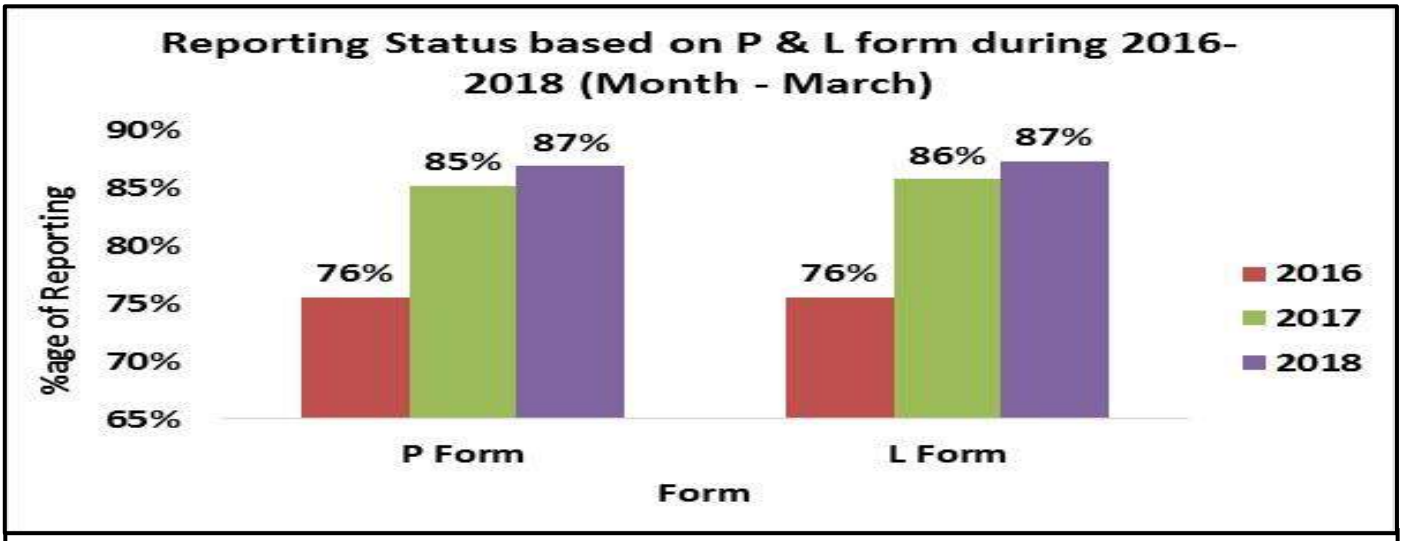


Fig. 4: RU wise reporting based on P & L form during March 2016 - 2018

As shown in Fig 4, in March 2016, 2017 and 2018, the 'P' form reporting percentage (i.e. % RU reporting out of total in P form) was 76%, 85% and 87% respectively across India, for all disease conditions reported under IDSP in P form. Similarly, L form reporting percentage was 76%, 86% and 87% 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 P form completeness % for March 2018

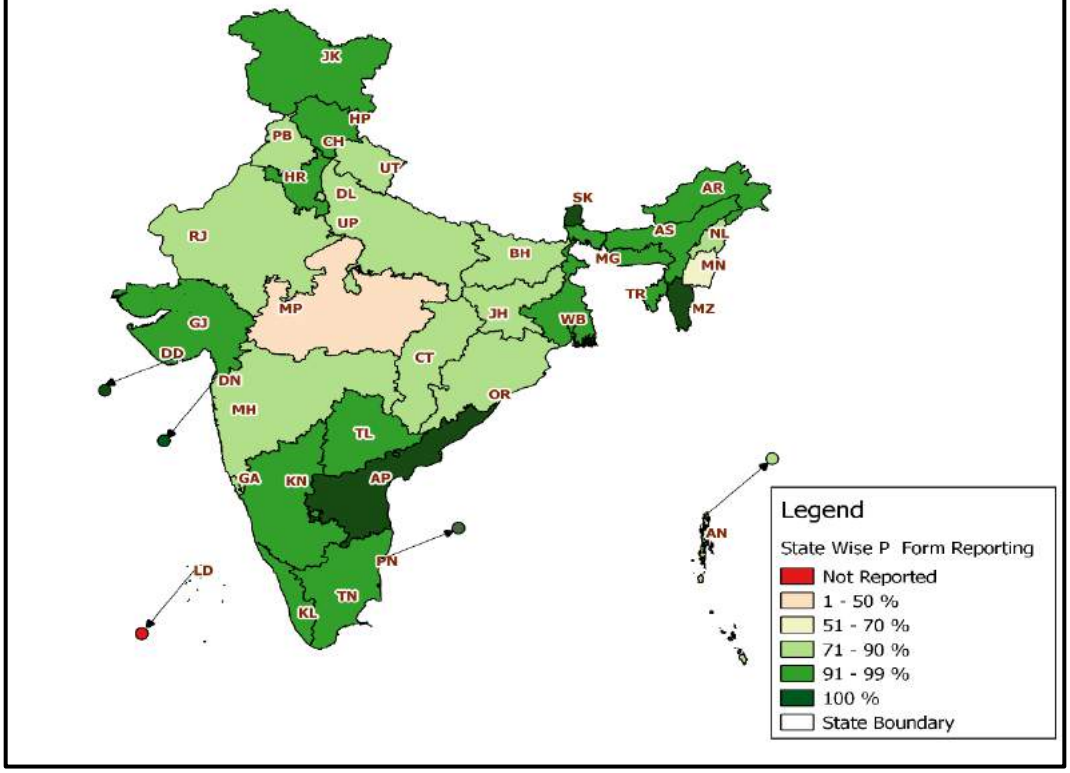
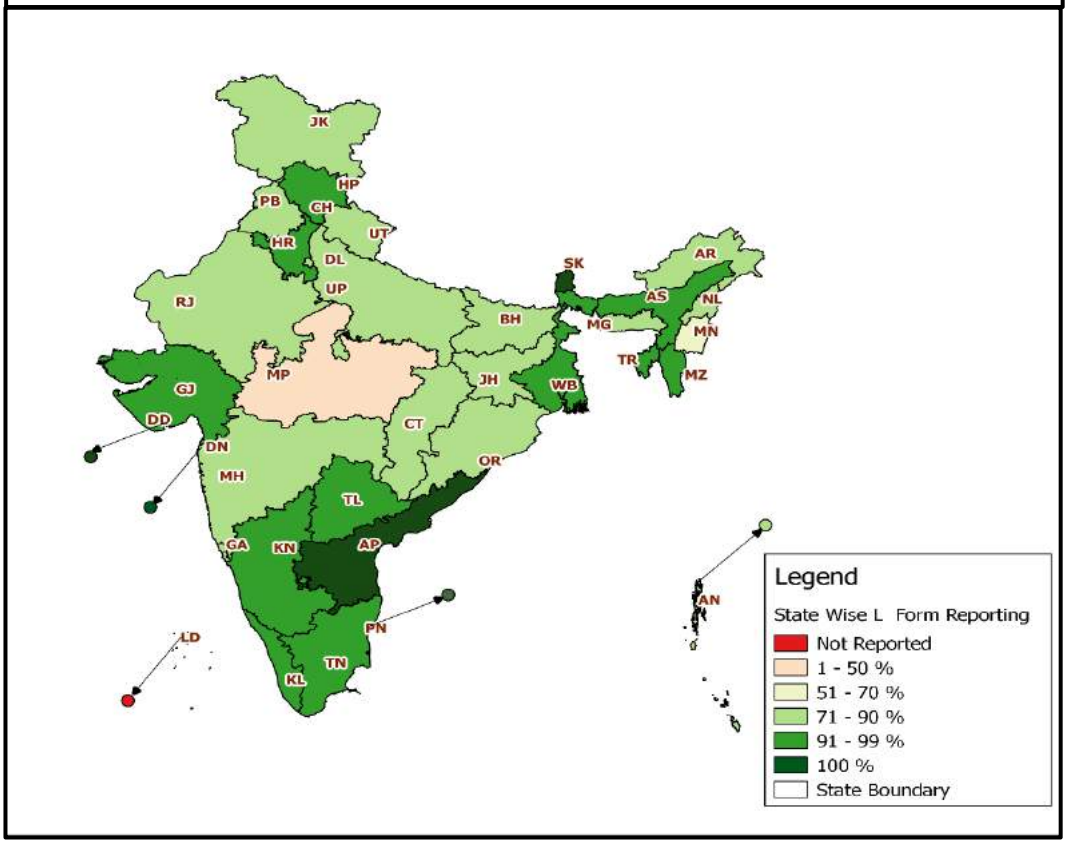


Fig 6: State/UT wise L form completeness % for March 2018



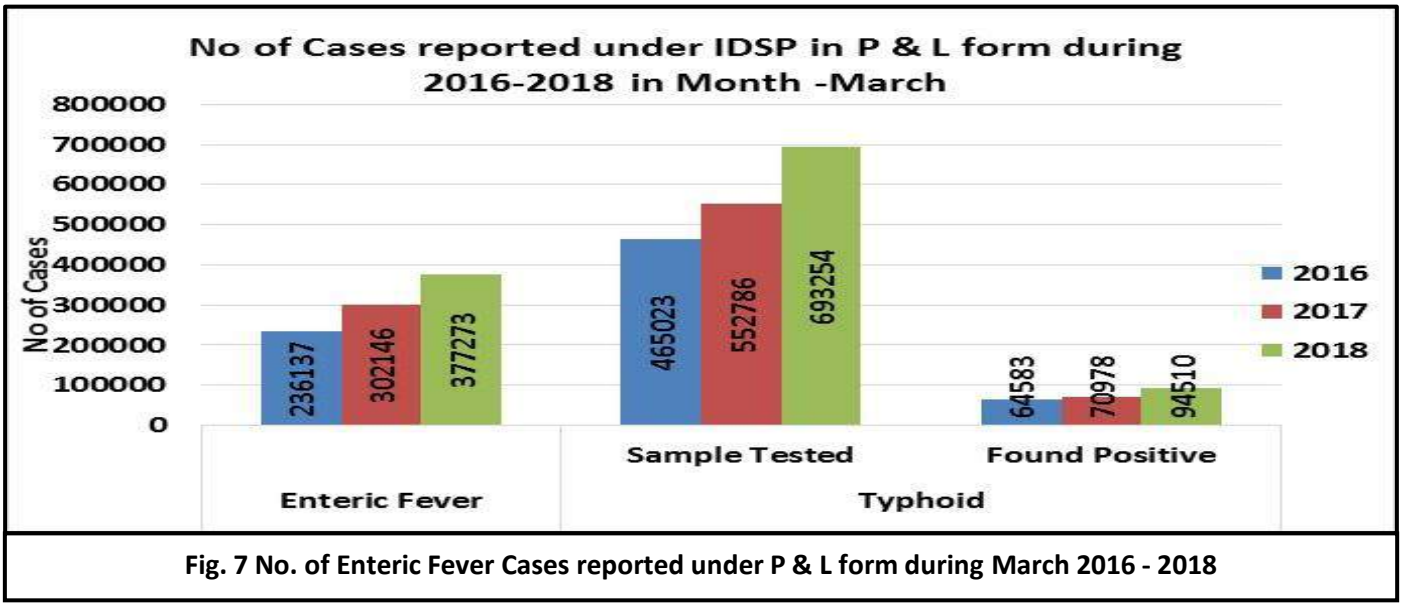


Fig. 7 No. of Enteric Fever Cases reported under P & L form during March 2016 - 2018

As shown in Fig 7, number of presumptive enteric fever cases, as reported by States/UTs in 'P' form was 236137 in March 2016; 302146 in March 2017 and 377273 in March 2018. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP

As reported in L form, in March 2016; 465023 samples were tested for Typhoid, out of which 64583 were found positive. In March 2017; out of 552786 samples, 70978 were found to be positive and in March 2018, out of 693254 samples, 94510 were found to be positive. Sample positivity has been 13.9%, 12.8% and 13.6% in March month of 2016, 2017 & 2018 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 8: State/UT wise Presumptive Enteric fever cases and outbreaks for March 2018

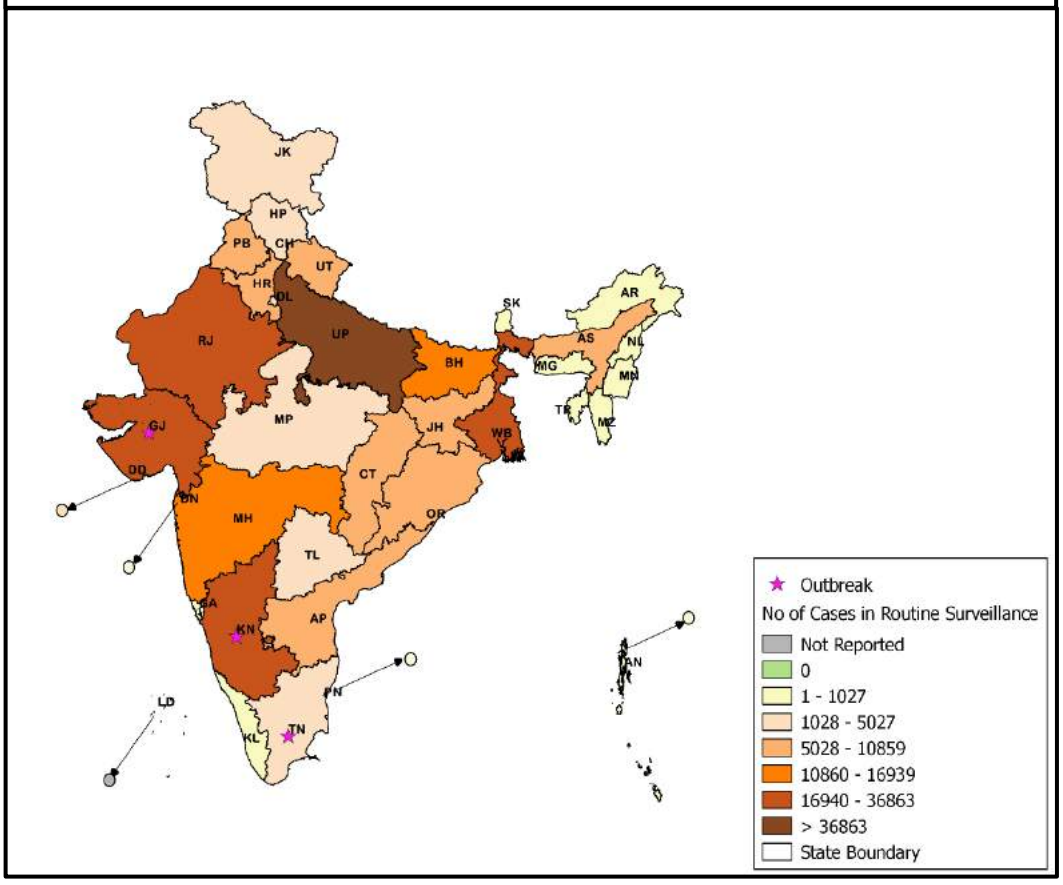
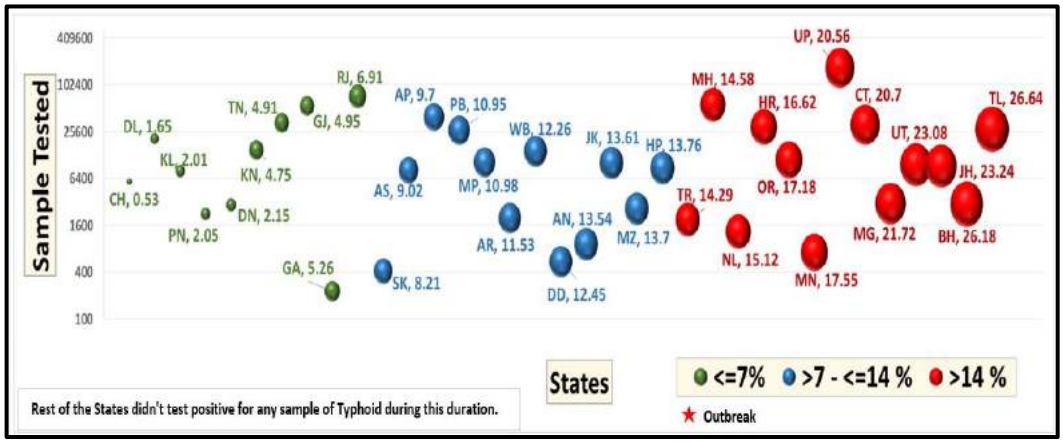


Fig 9: State/UT wise Lab Confirmed Typhoid cases and outbreaks for March 2018



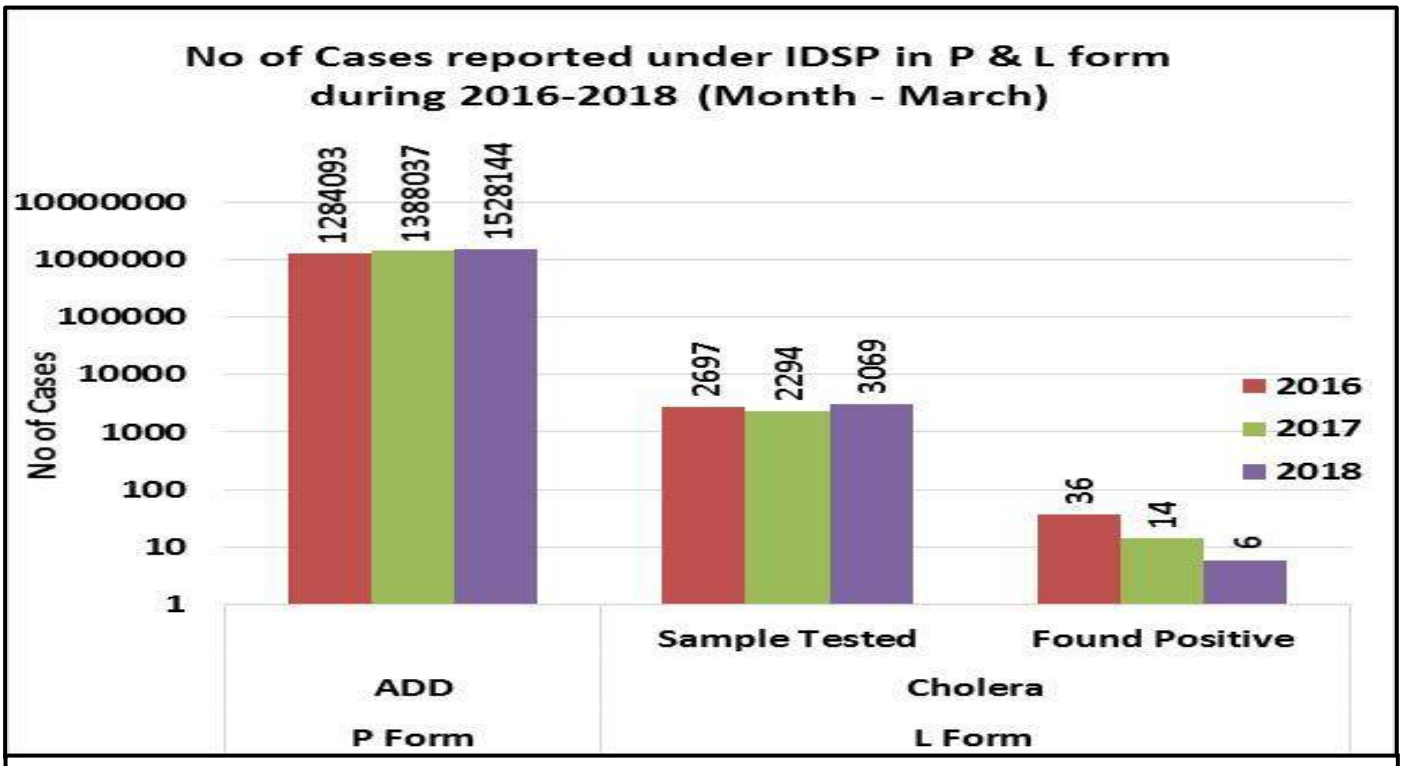


Fig. 10 No. of ADD Cases reported under IDSP in P Form & Cholera Cases in L form during March 2016 - 2018

As shown in Fig 10, number of Acute Diarrhoeal Disease cases, as reported by States/UTs in 'P' form was 1284093 in March 2016; 1388037 in March 2017 and 1528144 in March 2018. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in March 2016, 2697 samples were tested for Cholera out of which 36 tested positive; in March 2017, out of 2294 samples, 14 tested positive for Cholera and in March 2018, out of 3069 samples, 6 tested positive.

Sample positivity of samples tested for Cholera has been 1.33%, 0.61% and 0.19% in March month of 2016, 2017 & 2018 respectively.

Fig 11: State/UT wise Presumptive ADD cases and outbreaks for March 2018

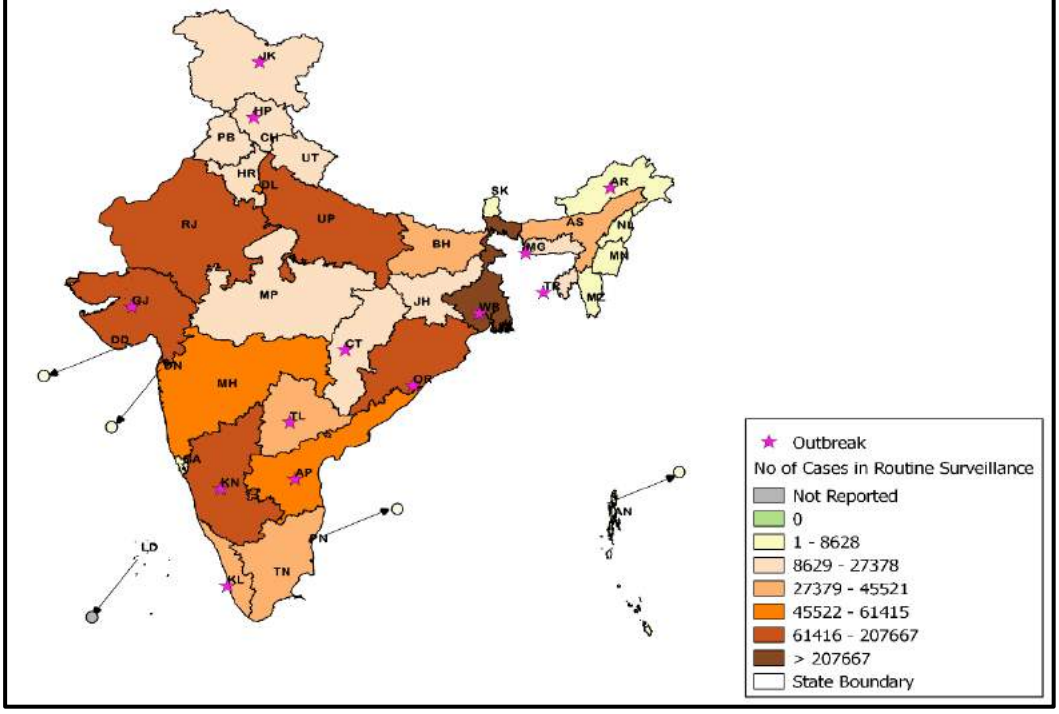
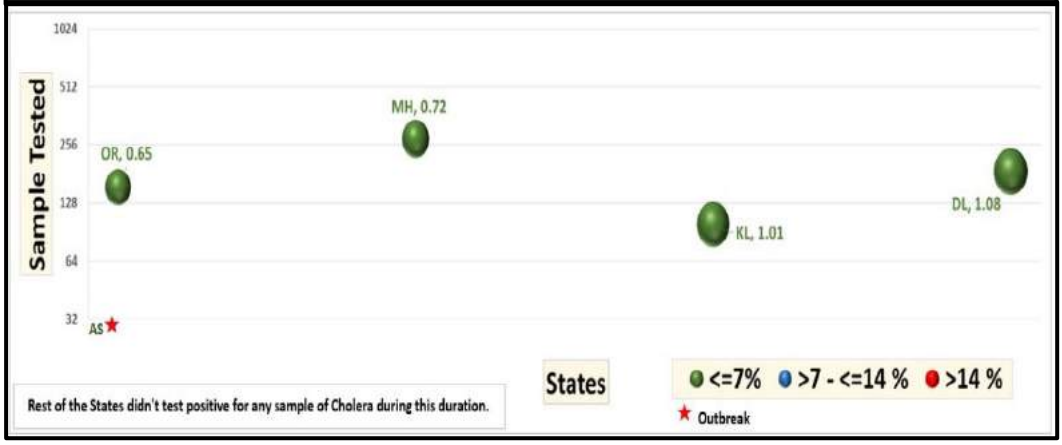


Fig 12: State/UT wise Lab Confirmed Cholera cases and outbreaks for March 2018



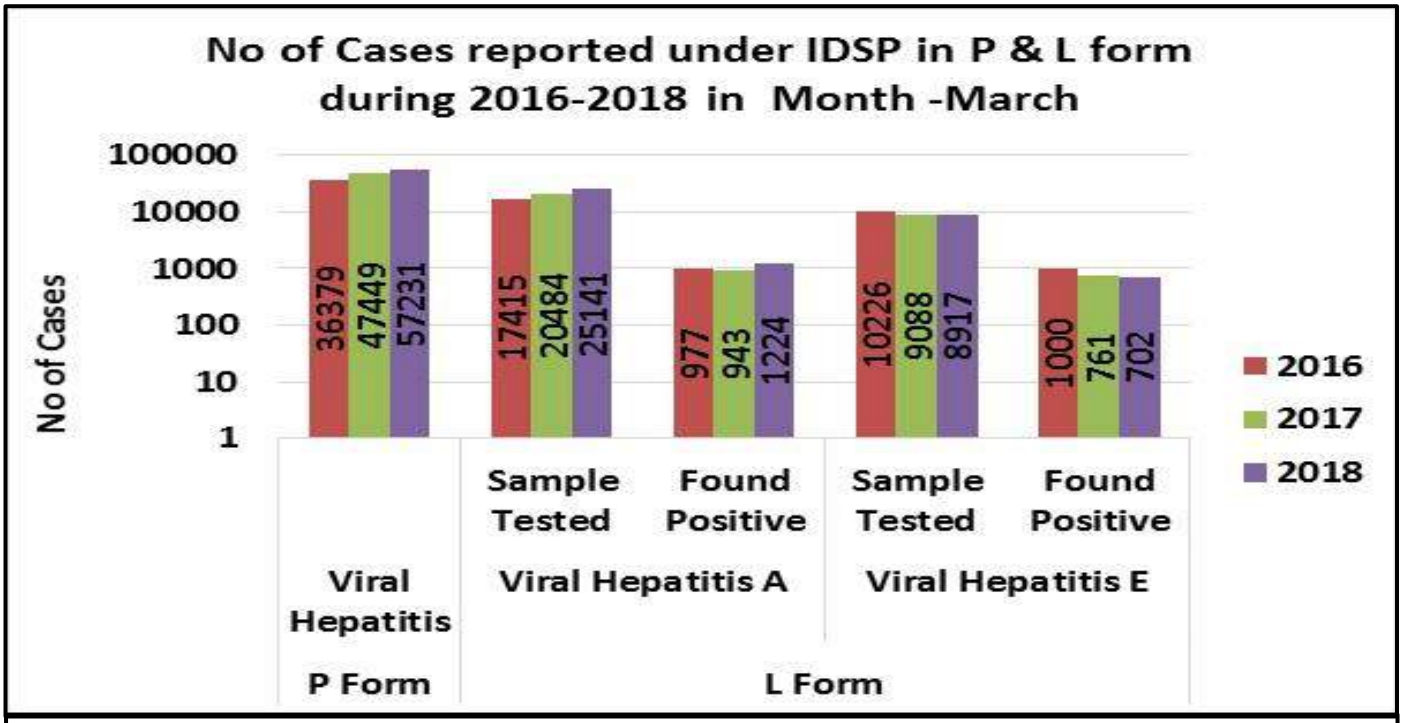


Fig 13: No of Viral Hepatitis Cases reported under IDSP in P form & Viral Hepatitis A & E cases reported under L form during March 2016 - 2018

As shown in Fig 13, the number of presumptive Viral Hepatitis cases was 36379 in March 2016, 47449 in March 2017 and 57231in March 2018. 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 2016; 17415 samples were tested out of which 977 were found positive. In March 2017 out of 20484 samples, 943 were found to be positive and in March 2018, out of 25141 samples, 1224 were found to be positive.

Sample positivity of samples tested for Hepatitis A has been 5.6%, 4.6% and 4.7% in March month of 2016, 2017 & 2018 respectively.

As reported in L form for Viral Hepatitis E, in March 2016; 10226 samples were tested out of which 1000 were found positive. In March 2017; out of 9088 samples, 761 were found to be positive and in March 2018, out of 8917 samples, 702 were found to be positive.

Fig 14: State/UT wise Presumptive Viral Hepatitis A cases and outbreaks for March 2018

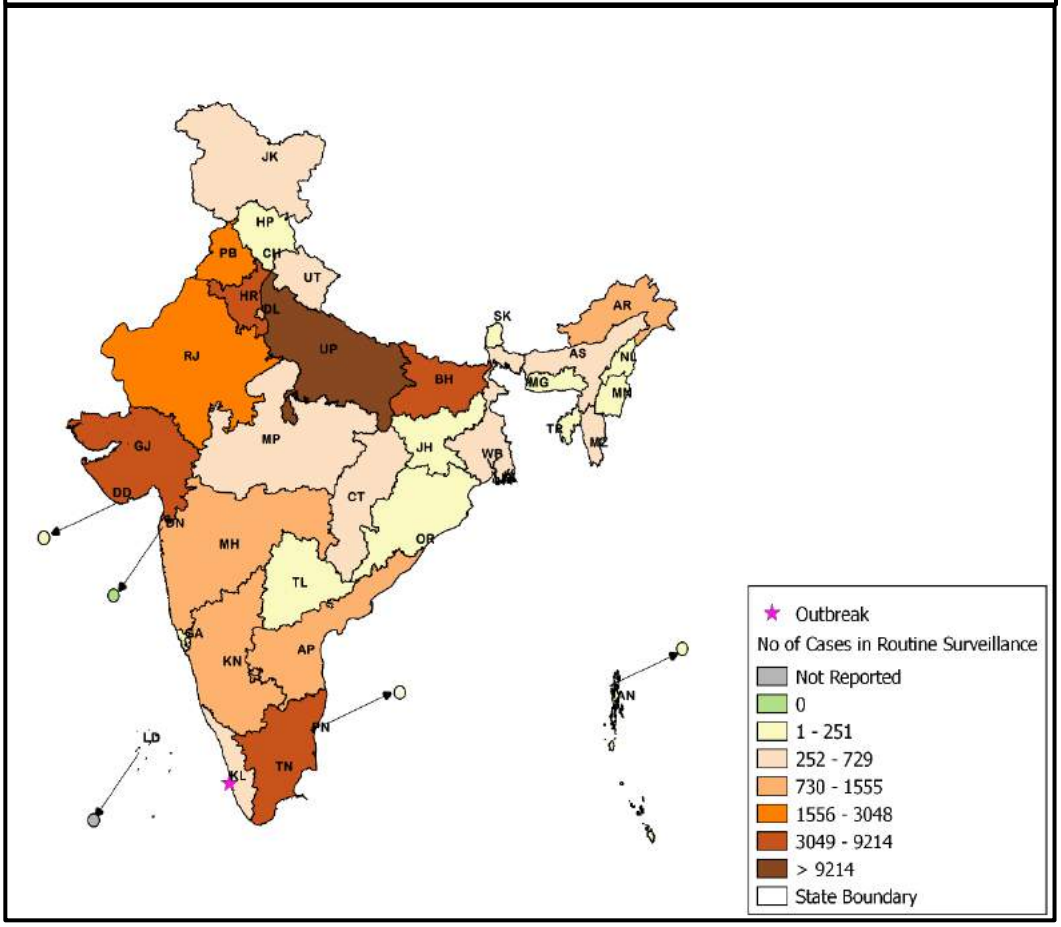


Fig 15: State/UT wise Lab Confirmed Viral Hepatitis A cases and outbreaks for March 2018

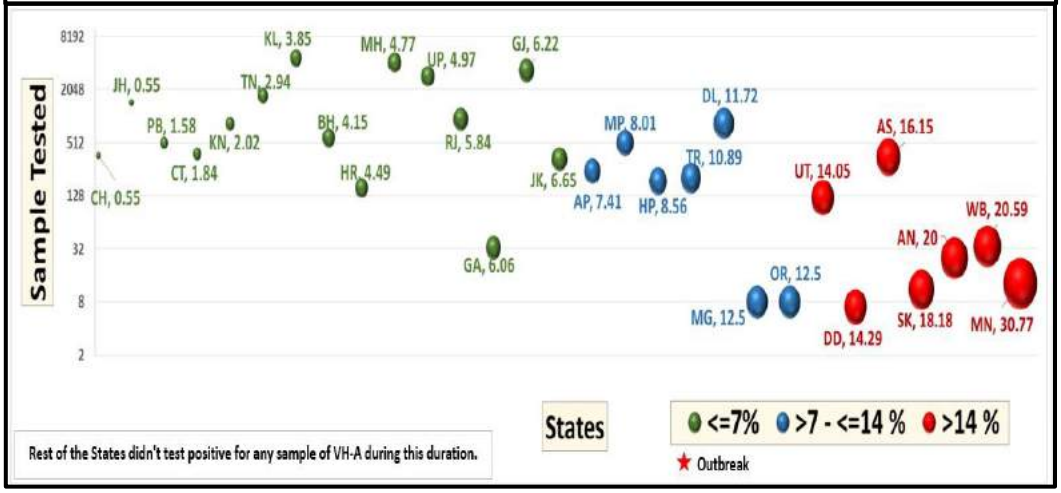
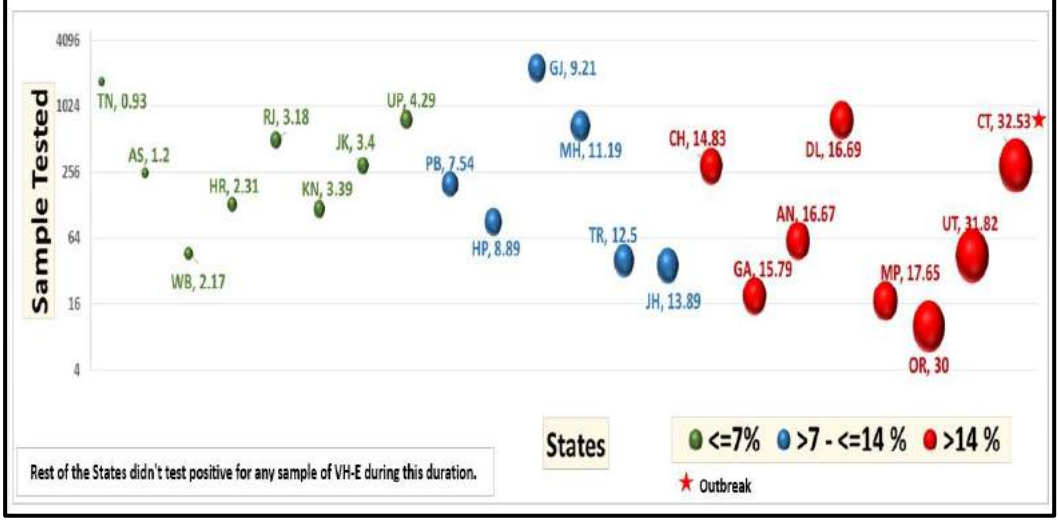


Fig 16: State/UT wise Lab Confirmed Viral Hepatitis E cases and outbreaks for March 2018



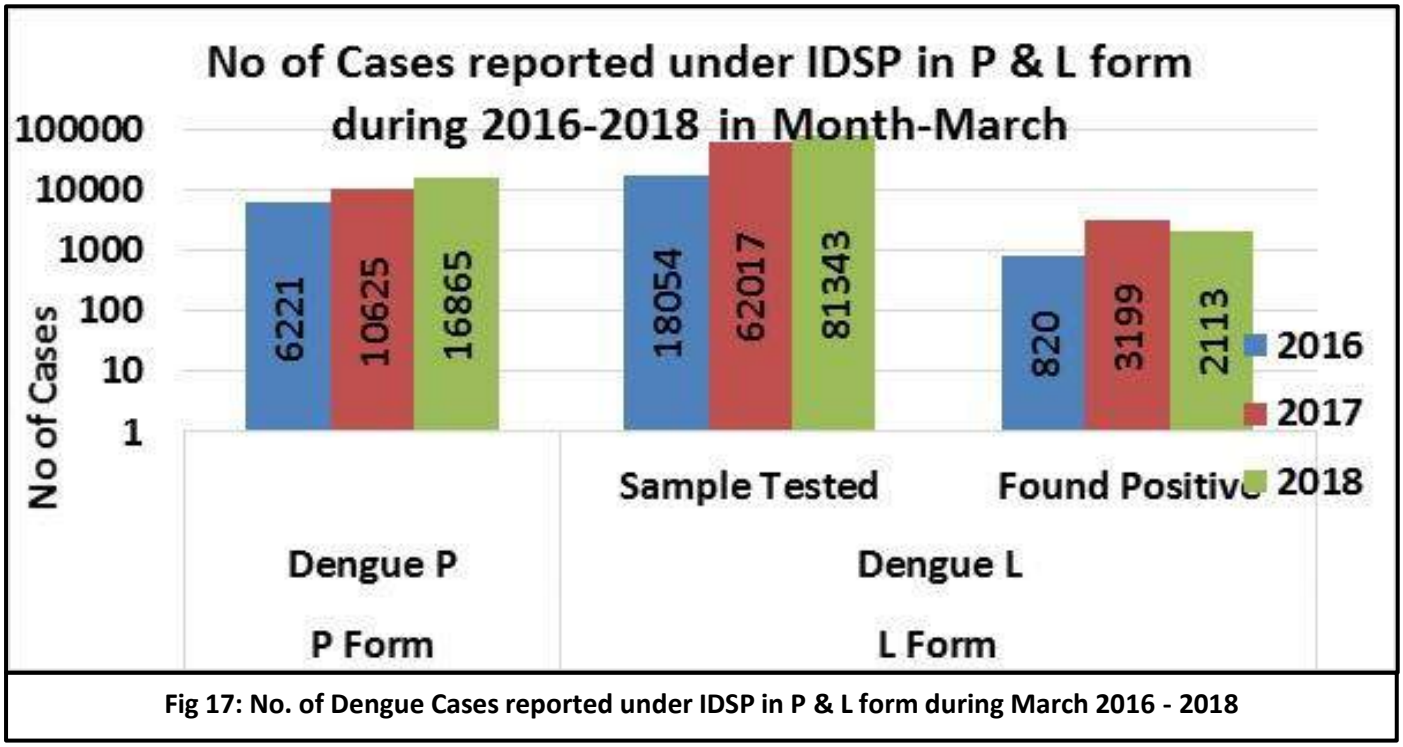


Fig 17: No. of Dengue Cases reported under IDSP in P & L form during March 2016 - 2018

As shown in Fig 17, number of presumptive Dengue cases, as reported by States/UTs in 'P' form was 6221 in March 2016; 10625 in March 2017 and 16865 in March 2018. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in March 2016; 18054 samples were tested for Dengue, out of which 820 were found positive. In March 2017; out of 62017 samples, 3199 were found to be positive and in March 2018, out of 81343 samples, 2113 were found to be positive.

Sample positivity of samples tested for Dengue has been 4.5%, 5.2% and 2.6% in March month of 2016, 2017 & 2018 respectively**.**

Fig 18: State/UT wise Presumptive Dengue cases and outbreaks for March 2018

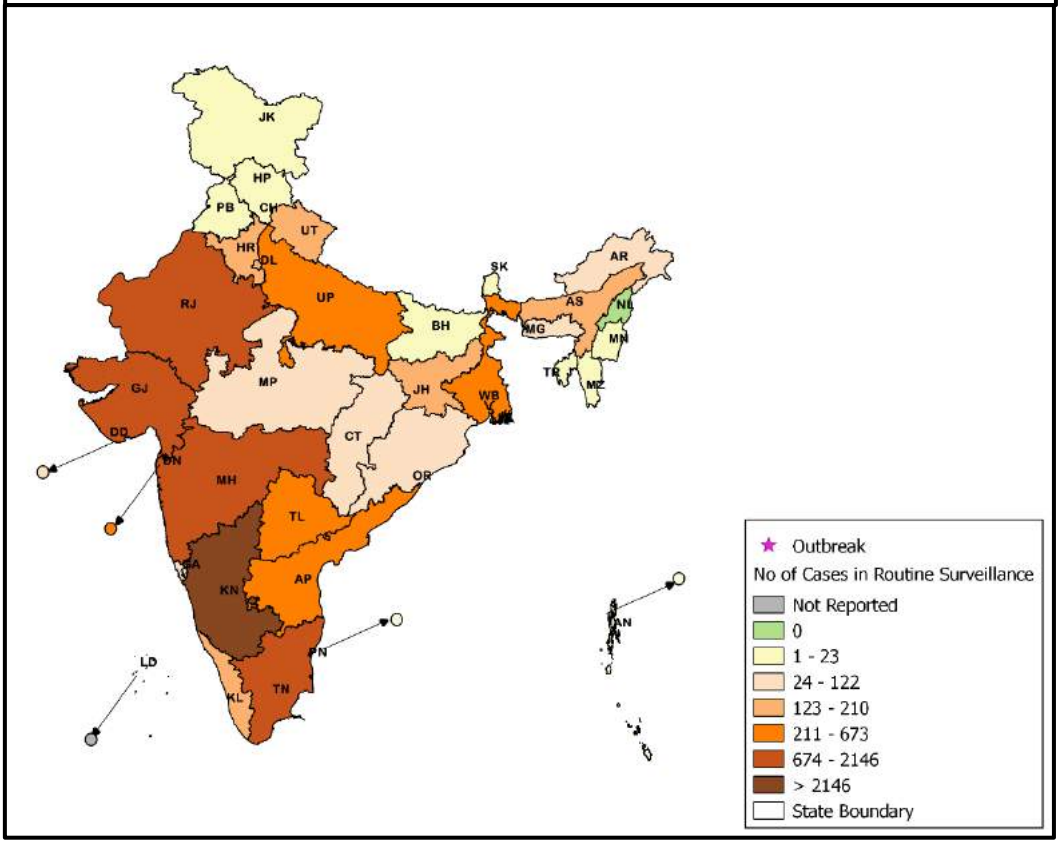
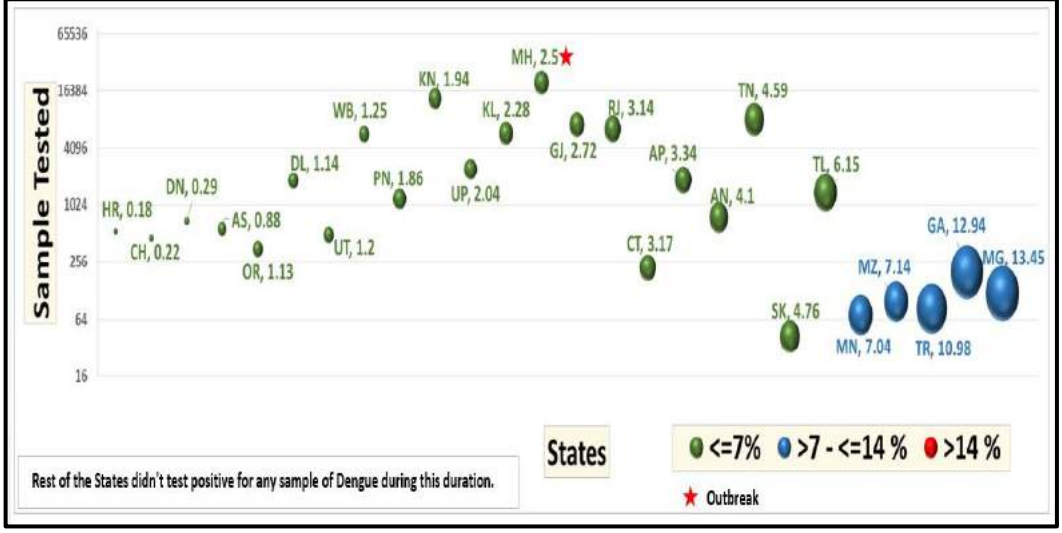


Fig 19: State/UT wise Lab Confirmed Dengue cases and outbreaks for March 2018



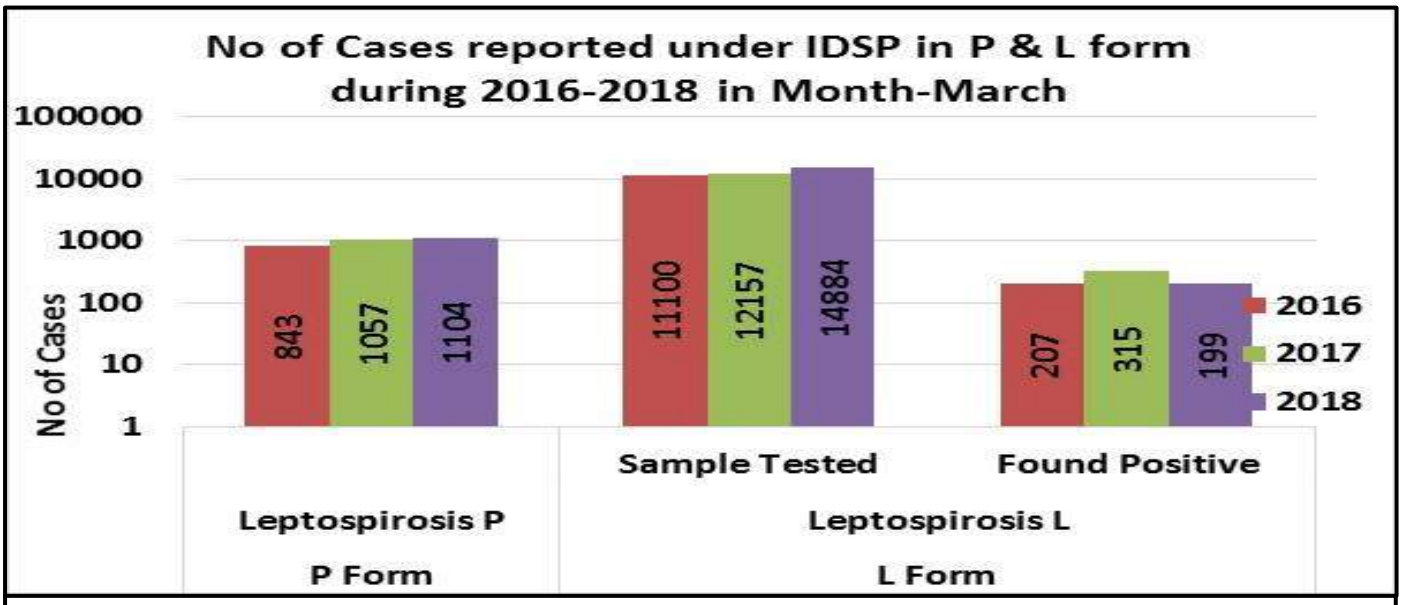


Fig 20: No. of Leptospirosis Cases reported under IDSP in P & L form during March 2016 - 2018

As shown in Fig 20, number of presumptive Leptospirosis cases, as reported by States/UTs in 'P' form was 843 in March 2016; 1057 in March 2017 and 1104 in March 2018. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in March 2016; 11100 samples were tested for Leptospirosis, out of which 207 were found positive. In March 2017; out of 12157 samples, 315 were found to be positive and in March 2018, out of 14884 samples, 199 were found to be positive.

Sample positivity of samples tested for Dengue has been 1.9%, 2.6% and 1.3% in March month of 2016, 2017 & 2018 respectively.

Fig 21: State/UT wise Presumptive Leptospirosis cases and outbreaks for March 2018

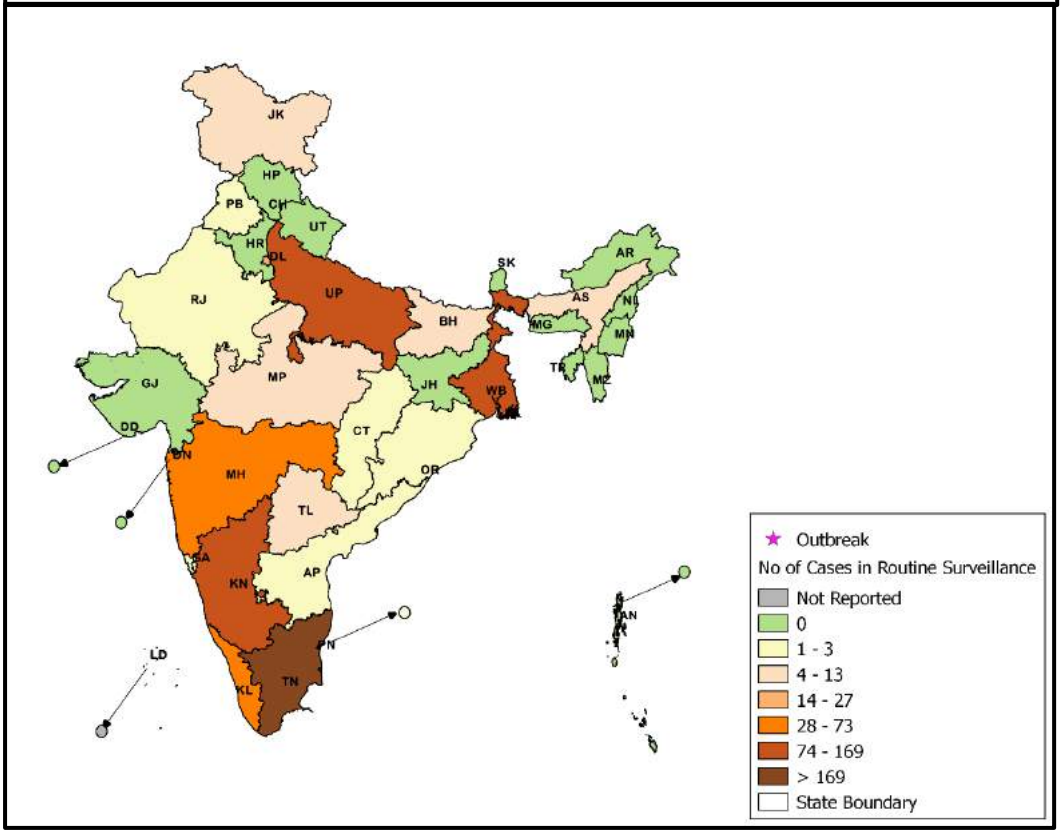
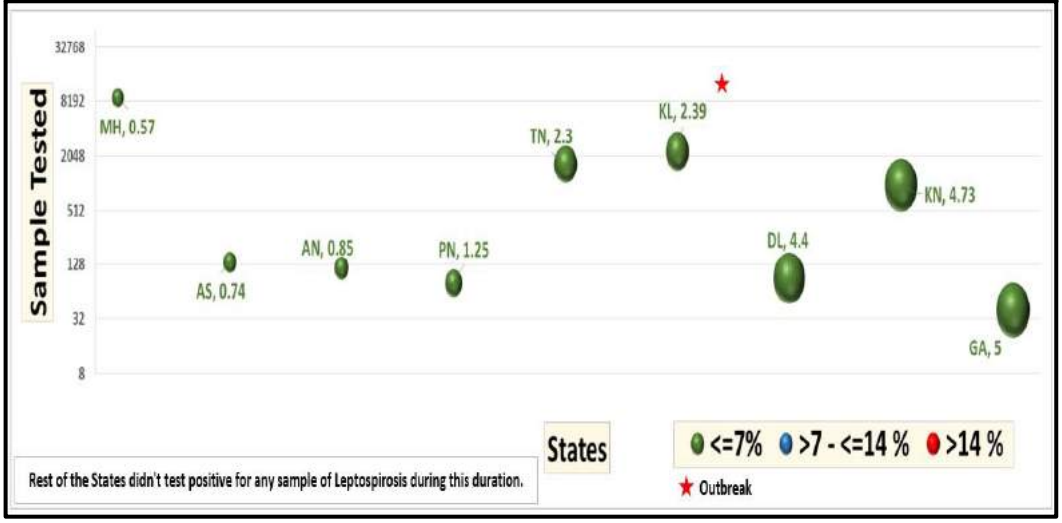


Fig 22: State/UT wise Lab Confirmed Leptospirosis cases and outbreaks for March 2018



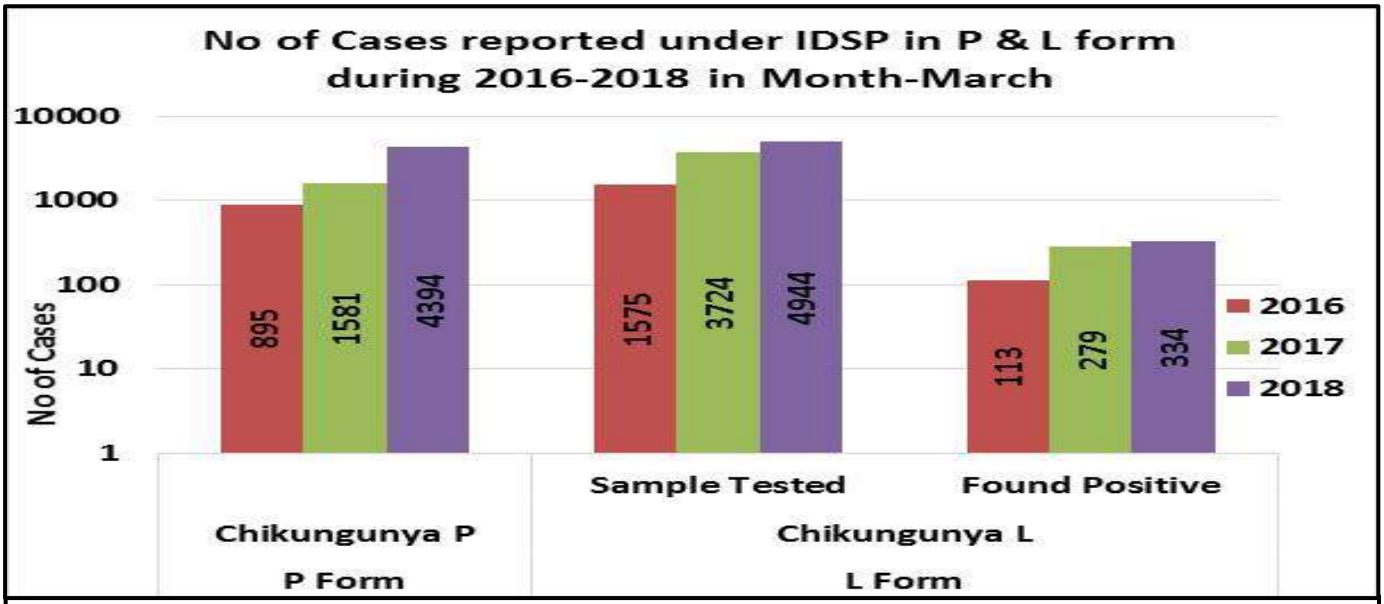


Fig. 23: No. of Chikungunya Cases reported under IDSP in P & L form during March 2016 - 2018

As shown in Fig 23, number of presumptive Chikungunya cases, as reported by States/UTs in 'P' form was 895 in March 2016; 1581 in March 2017 and 4394 in March 2018. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in March 2016; 1575 samples were tested for Chikungunya, out of which 113 were found positive. In March 2017; out of 3724 samples, 279 were found to be positive and in March 2018, out of 4944 samples, 334 were found to be positive.

Sample positivity of samples tested for Chikungunya has been 7.2%, 7.5% and 6.6 % in March month of 2016, 2017 & 2018 respectively.

Fig 24: State/UT wise Presumptive Chikungunya cases and outbreaks for March 2018

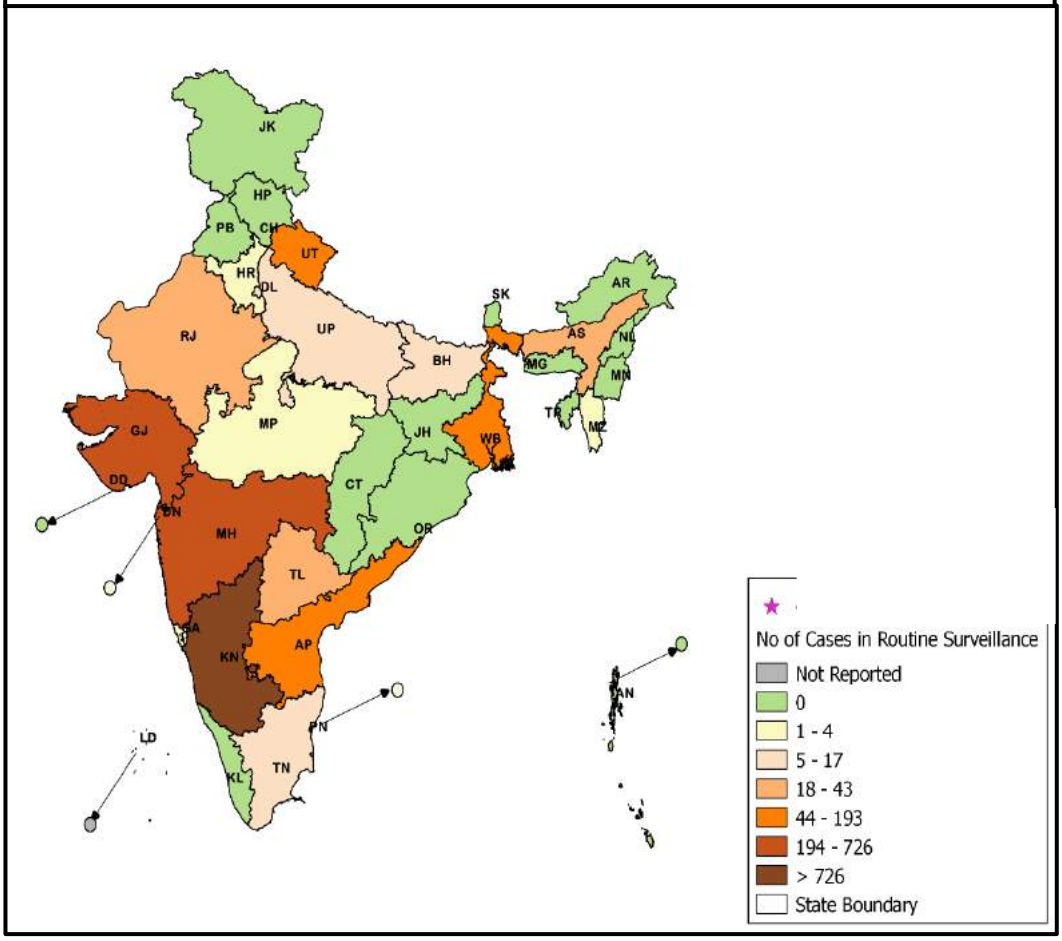


Fig 25: State/UT wise Lab Confirmed Chikungunya cases and outbreaks for March 2018

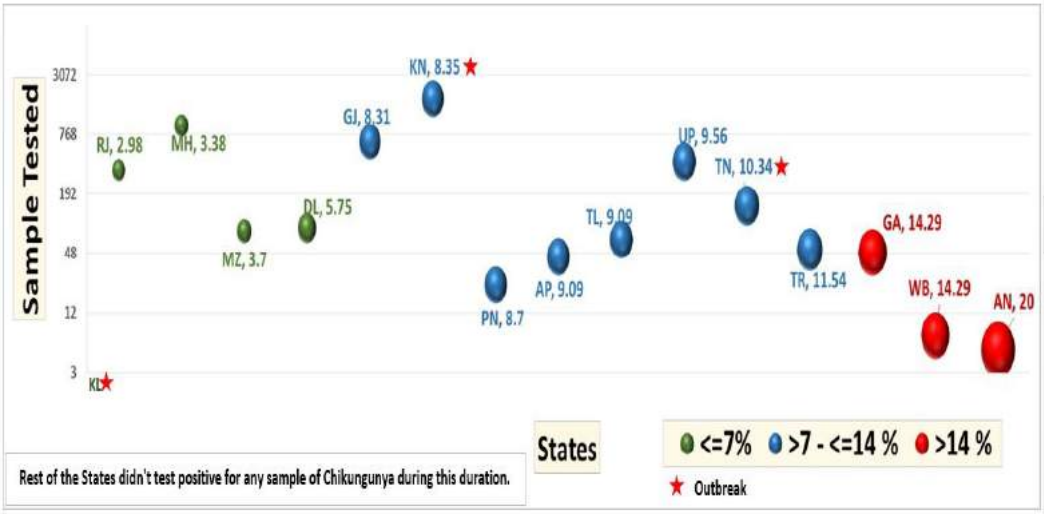
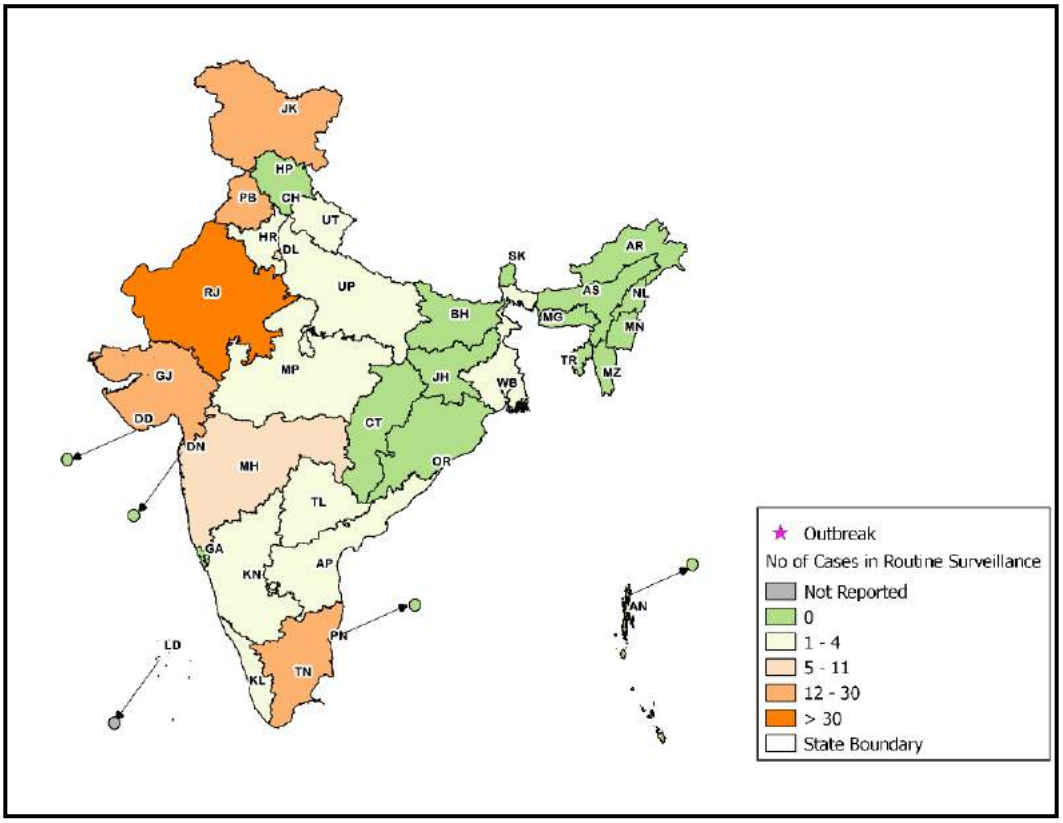


Fig 26: State/UT wise Influenza A (H1N1) cases & outbreak for March 2018



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**: 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:

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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

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