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Disease Alert प्रकोप चेतावनी

Monthly Surveillance Report
From
Integrated Disease Surveillance Programme
National Health Mission

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**FINAL INVESTIGATION REPORT OF OUTBREAK OF ACUTE DIARRHEAL DISEASE
DESUMAJRA COLONY, KHARAR, DISTICT, DISTRICT SAS NAGAR, PUNJAB**

BACKGROUND

Kharar is a Municipality in district of SAS Nagar, Punjab. The Kharar Municipal Council has population of 74,460 of which 39,218 are males while 35,242 are females as per report released by Census India 2011. Literacy rate of Kharar city is 87.85 %, higher than state average of 75.84 %. In Kharar, male literacy is around 90.57 % while female literacy rate is 84.83 %.

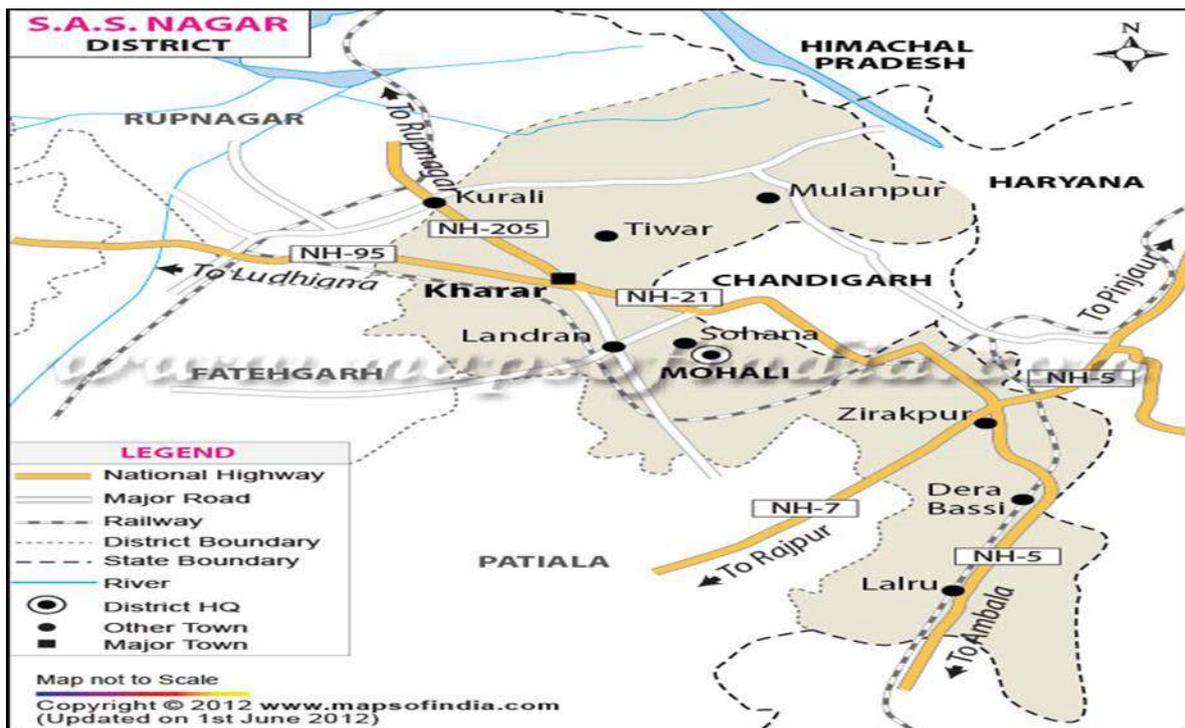


Figure 1: SAS Nagar district (Kharar is highlighted in bold letters)

CASE DEFINITION:

Diarrhoea: Diarrhoea is usually defined in epidemiological studies as the passage of three or more loose or watery stools in a 24-hour period, a loose stool being one that would take the shape of a container.

Frequency: It is normal for young infants to have up to 3 to 10 stools per day, although this varies depending upon the child's diet (breast milk versus formula; breastfed children usually have more frequent stools). Older infants, toddlers, and children normally have one to two bowel movements per day.

DETAILS OF INVESTIGATION:

As per telephonic information received from DH Mohali on 28-07-2022, 23 cases presented with loose stools and vomiting on 26th and 27th. On hearing this news, District Rapid response team was constituted with District Epidemiologist (IDSP) and Data Manager along with Lab technicians. This was deployed in the affected area along with Block Rapid Response team under the supervision of Civil Surgeon, SAS Nagar.

CONFIRMATION OF OUTBREAK:

The outbreak was confirmed as the case definition meets the clinical case definition of probable and confirmed case. The following definition was used-

Any person aged (1 year to 90 years) suffering from acute onset of watery diarrhea (passage of 3 or more loose/watery stools in past 24 hours) with or without dehydration, lasting for more than 7 or more days. More than 10 houses with diarrhea in a village or urban ward or a single case of severe dehydration or death in a patient less than 5 years with diarrhea.

Using this definition, a total of 121 cases of acute diarrhea were identified.

ACTION TAKEN BY RRT:

On Day 1 (29th July): House to house survey activity done in affected area. 102 houses were surveyed and 29 active cases were identified. ORS sachets distributed to all population, health education given to population regarding hygiene and boiled drinking water, home care and prevention. 4 blood samples and 4 stool samples collected from affected area and sent to DPHL, Mohali for testing. 5 water samples collected and sent to State Bacteriological Lab, Kharar.

On Day 2 (30th July): Under the supervision of Civil Surgeon SAS Nagar, District Rapid response team and Block Rapid response team deputed on second day activity in the affected area. House-to-house survey was completed and an additional 68 active cases were found who complained of loose stools. Again, ORS sachets

distributed to all population, health education given to population regarding hygiene and boiled drinking water, home care and prevention. In addition, following additional measures undertaken-

- 5 water samples were collected and sent to State Bacteriological Lab, Kharar.
- Health Education & IEC Activity done. Health education imparted regarding the personnel hygiene, sanitation, and use of potable water and to boil water before consumption.
- Water pipelines repaired.
- ANM, Health workers and ASHA workers were instructed to closely monitor the situation.

Medical camp organized in the Desumajra Colony (Gurudwara)

On Day 3 (31st July): A third round of House to house survey activity done and an additional 19 cases were found who complained of loose stools. ANM, Health workers and ASHA workers were instructed to closely monitor the situation. Medical camp was organized in Gurudwara.

On Day 4 (1st August): A fourth round of House to house survey activity done and an additional 5 cases were found who complained of loose stools and vomiting. ANM, Health workers and ASHA workers were instructed to closely monitor the situation. Medical camp was organized in Gurudwara.

On Day 5 (2nd August): A fifth round of House to house survey activity done. During survey, no new case was found who complained of loose stools. All old cases are stable. Medical was organized in Gurudwara. ANM, Health workers and ASHA workers were instructed to closely monitor the situation.



Figure 2: Medical camp organized under the supervision of civil surgeon

LAB RESULTS:

Sample	Date	Samples Collected	Result	Testing Lab
Water samples	29-7-2022	9	5 samples tested non potable. 4 tested potable	State Bacteriological Lab, Sector 11, Kharar
Stool Samples	29-7-2022	4	Non sterile for vibro Cholera	DPHL Mohali
Blood samples	29-7-2022	4	HAV and HEV- All Negative	DPHL Mohali

DESCRIPTIVE EPIDEMIOLOGY: Is given by following graphs -

Time distribution: with respect to date on which cases were found.w.r.t to onset of symptoms

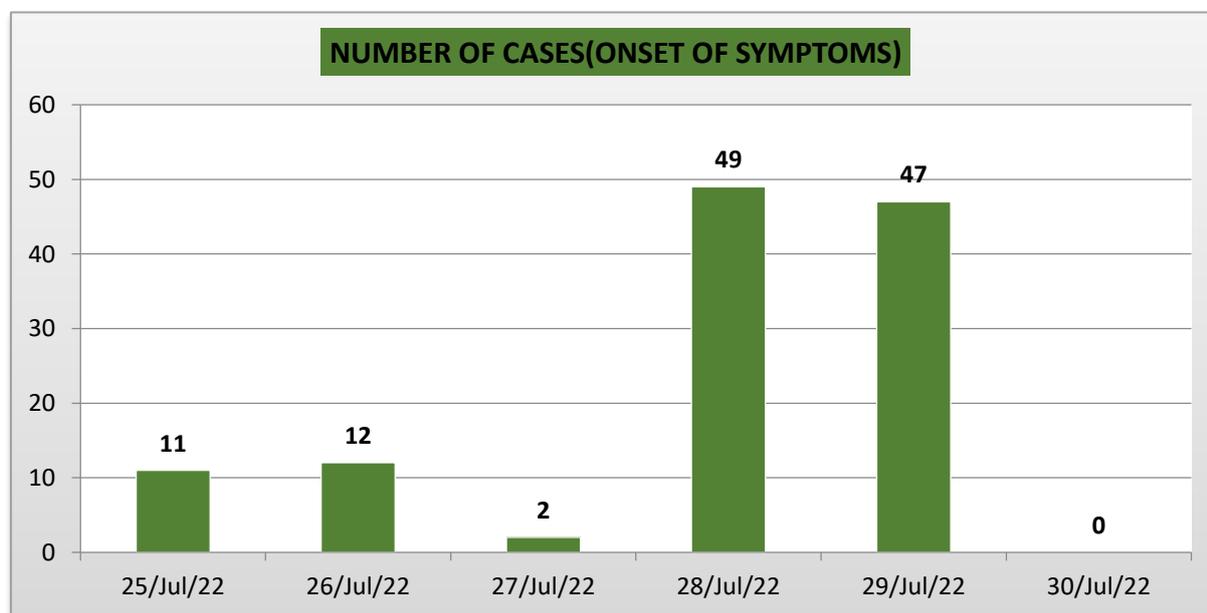


Figure 3: Date-wise breakup of the cases

Person Distribution (w.r.t age):

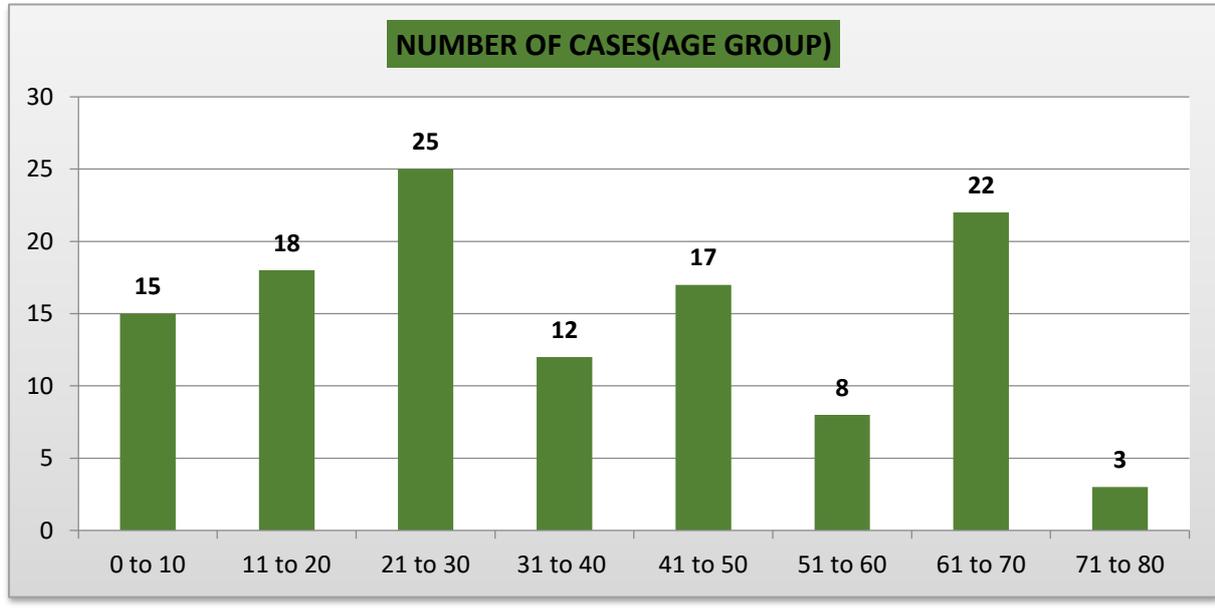


Figure 4. Age-wise breakup of the cases

Gender wise distribution:

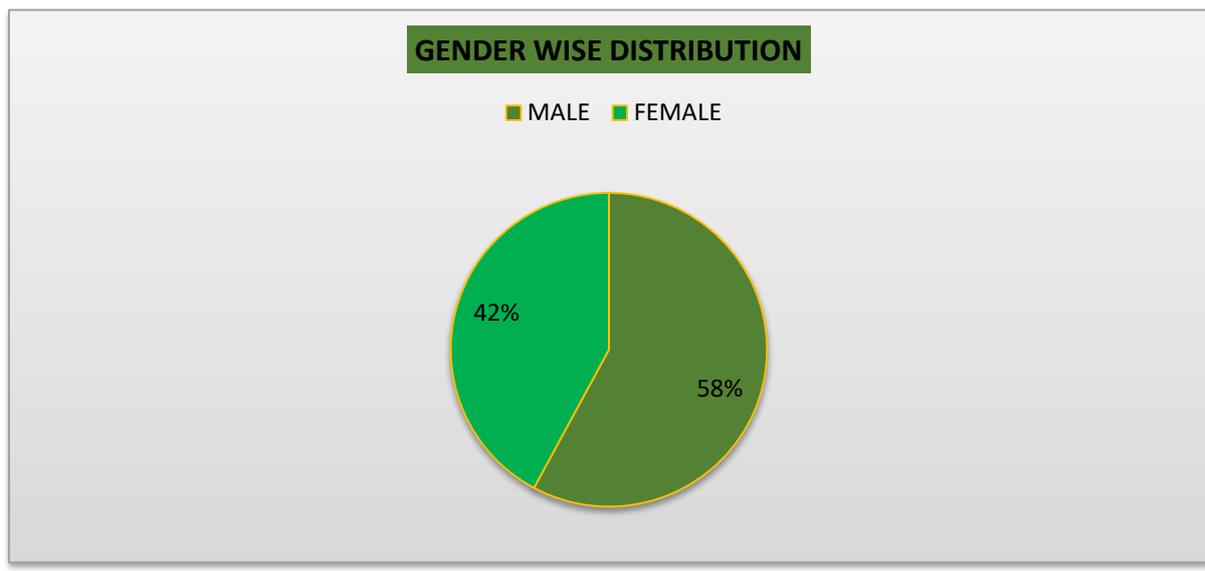


Figure 5. Gender-wise breakup of the cases

Place distribution:

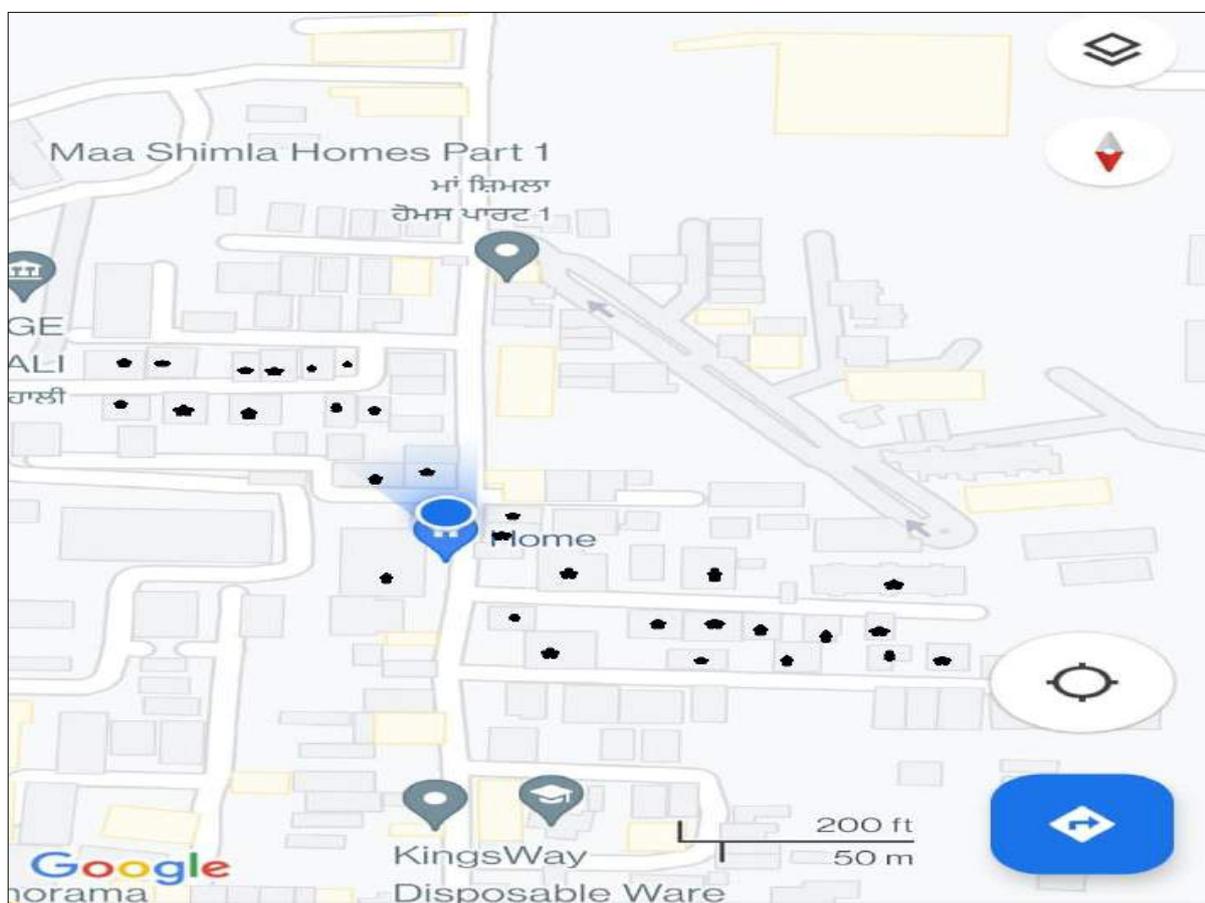


Figure 6. Marking of the houses

CONTROL MEASURES TAKEN:

1. Rapid Response Team (RRT) was immediately sent for investigation of outbreak & institution of control measures.
2. Health Education (IEC) given to all the inhabitants of the area. Information was shared about the effectiveness of ORS, the benefits of early reporting for prompt treatment, hygienic food habits and eating practices, hand washing before and after eating, benefits of cooked food and safe drinking water practices by chlorination and boiling of water.
3. Health workers were instructed to daily visit the area and inform about the status of old and new patients, if any.
4. Public Health department was involved to get the repair done of the faulty /leakage water pipelines.

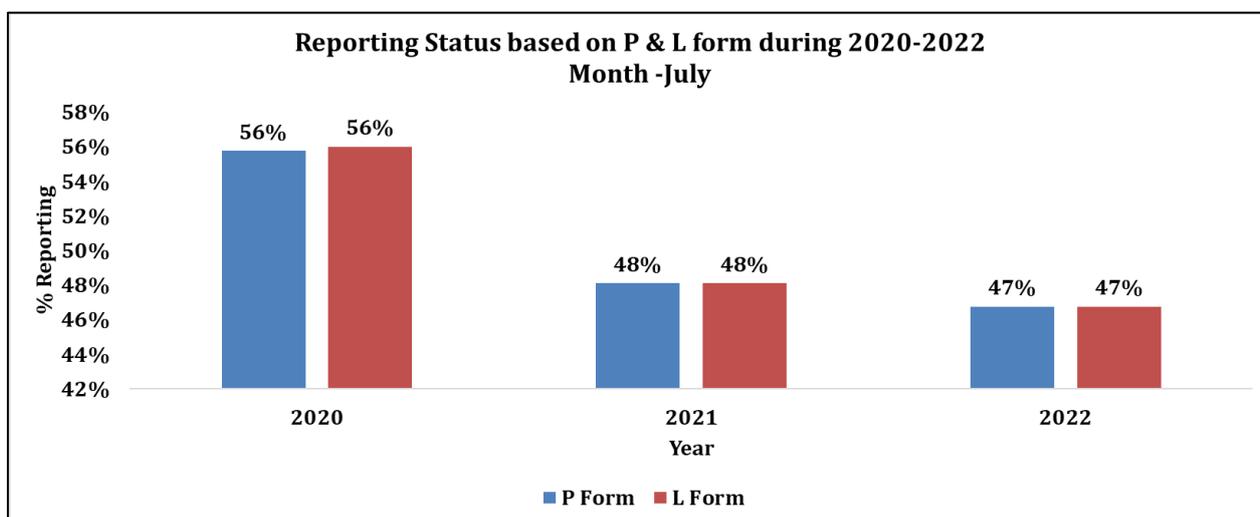
5. Chlorine Tablets were distributed and ORS were distributed and Information was shared about the effectiveness of ORS, the benefits of early reporting for prompt treatment, hygienic food habits and eating practices, hand washing before and after eating, benefits of cooked food and safe drinking water practices by chlorination and boiling of water.
6. ASHA, AWW and health workers instructed to use inter personal communication to propagate the messages on use of safe drinking water, use of ORS, Hand washing and taking of freshly prepared foods.

RECOMMENDATIONS:

- Usage of oral rehydration therapy (ORT): ORT is as effective as intravenous therapy in rehydrating and replacing electrolytes in children with some dehydration and should be the therapy of choice.
- Intake of appropriate fluids to prevent or treat dehydration, a nutritious diet that does not cause diarrhea to worsen, supplementary vitamins and minerals, including zinc for 10-14 days and antimicrobial to treat diagnosed infections.
- All severely malnourished children should receive broad spectrum antibiotics for infections.
- Drinking water should be clean and stored in clean containers. Boiling water is preferred for drinking.
- All family members should wash their hands thoroughly after defecation, after cleaning a child who has defecated, after disposing of a child's stool, before preparing food and before eating. Good hand washing requires use of soap or local substitute such as ashes or soil.
- Raw food should not be eaten except fruits and vegetables that are peeled and eaten immediately. Eat food while it is still hot or reheat it thoroughly before eating and food should be protected from flies by means of fly screens.
- Proper disposal of feces in a designated area helps prevent spread of diarrheal agents.
- All infants should be immunized against measles at recommended age.
- Health education must stress the importance of eating cooked, hot food and of proper safe and hygienic individual food handling techniques.
- Programs to treat water at the household or community level with chlorine or other effective systems, hand washing with soap, and safe disposal of fecal waste should be developed and/or expanded.
- Safe drinking water supplies should continue to be delivered.

Surveillance data of Enteric Fever, Acute Diarrhoeal Disease, Viral Hepatitis A & E, Cholera, Dengue, Chikungunya, Leptospirosis and Seasonal Influenza A (H1N1) During July 2020 - 2022*

Fig. 7: RU-wise reporting based on P & L forms during July 2022



As shown in Fig.7, in July 2020, 2021 and 2022, the ‘P’ form reporting percentage (i.e. % RU reporting out of total in P form) was 56%, 48% and 47% respectively across India, for all disease conditions reported under IDSP in P form. Similarly, L form reporting percentage was 56%, 48% and 47% 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 is same in July 2022 compared to the same month in previous years for both P and L forms, thereby maintaining the quality of surveillance data.

Fig. 8: State/UT wise P form completeness % for July 2022

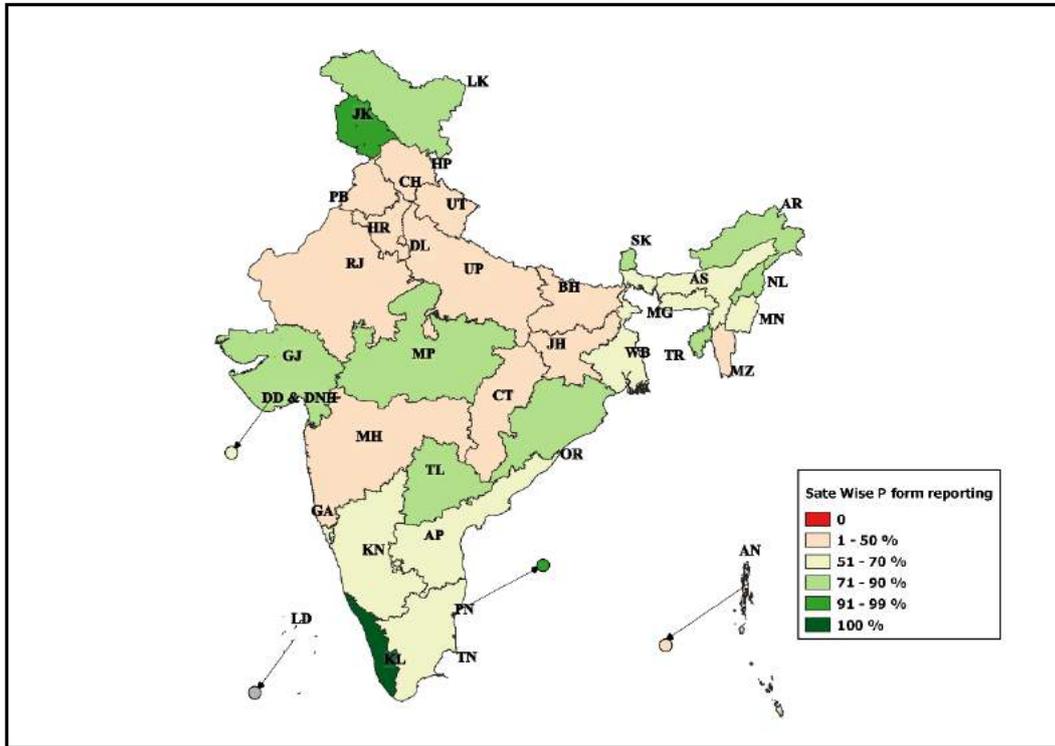


Fig.9: State/UT wise L form completeness % for July 2022

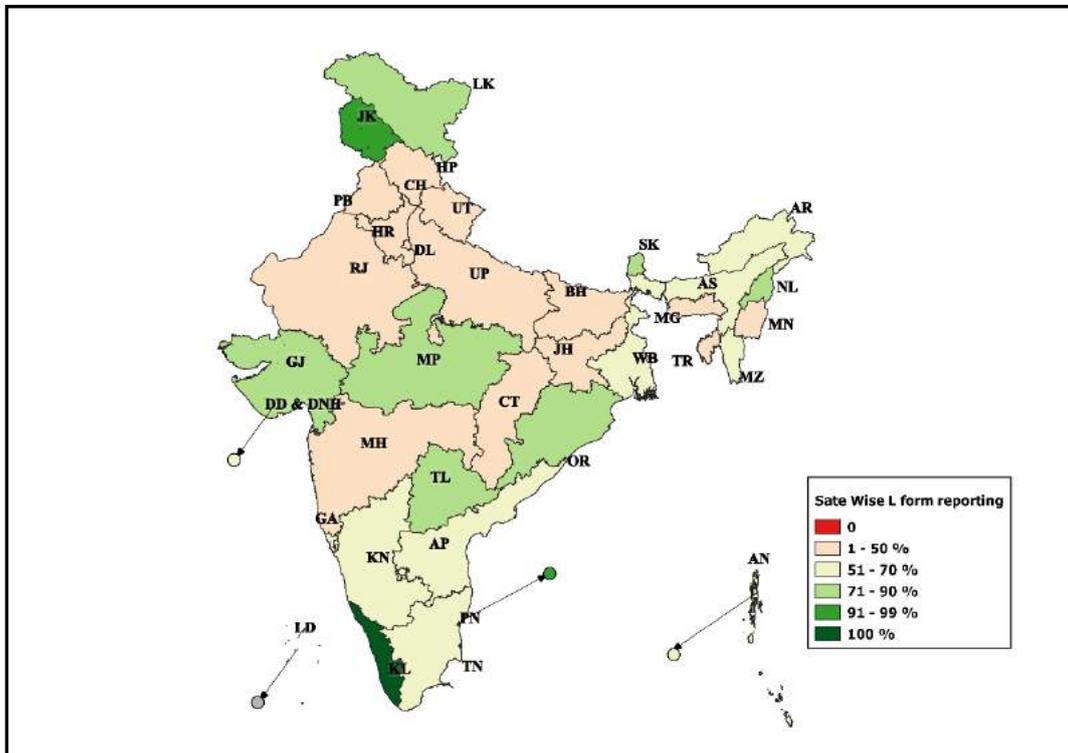
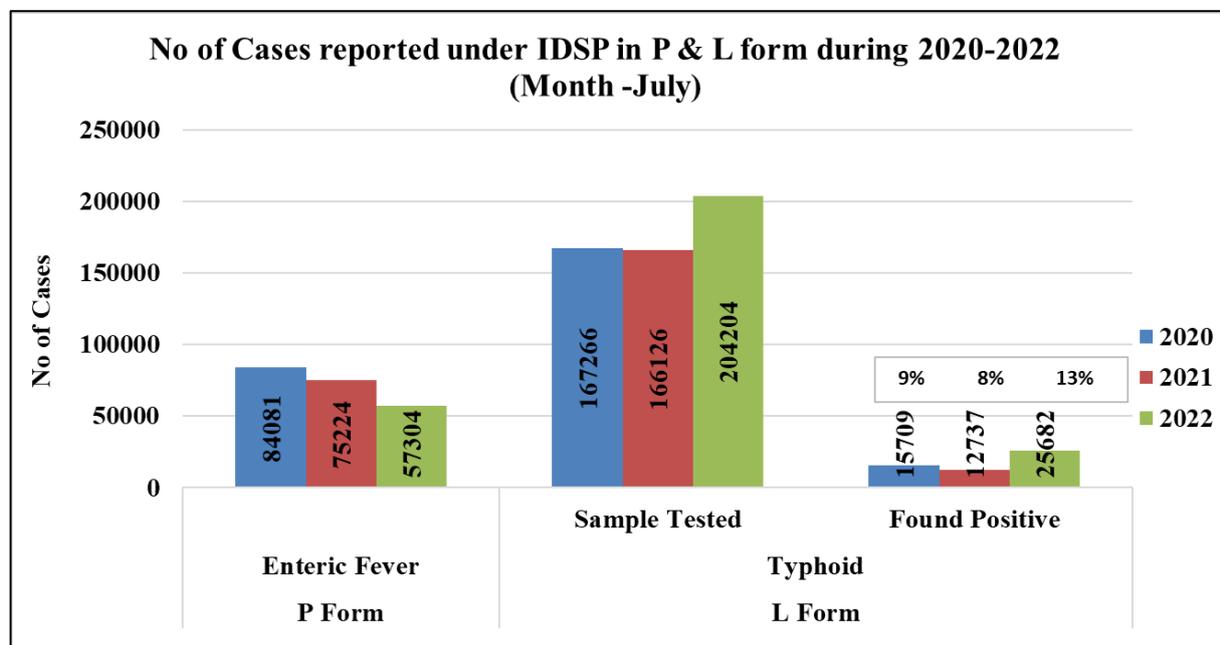


Fig. 10: No. of Enteric Fever Cases reported under P & L form during July 2020 - 2022



As shown in Fig. 10, number of presumptive enteric fever cases, as reported by States/UTs in ‘P’ form was 84081 in July 2020; 75224 in July 2021 and 57304 in July 2022. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in July 2020; 167266 samples were tested for Typhoid, out of which 15709 were found positive. In July 2021; out of 166126 samples, 12737 were found to be positive and in July 2022, out of 204204 samples, 25682 were found to be positive.

Sample positivity has been 9%, 8 % and 13 % in July month of 2020, 2021 & 2022 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. 11: State/UT wise Presumptive Enteric fever cases & outbreaks for July 2022

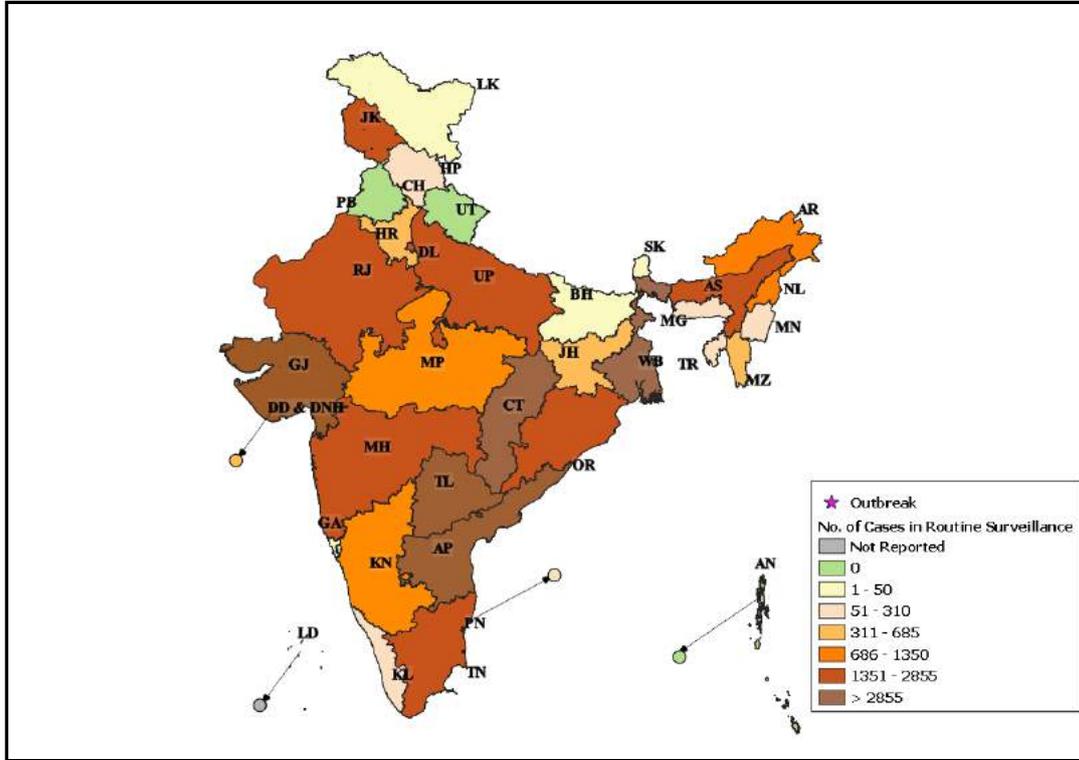
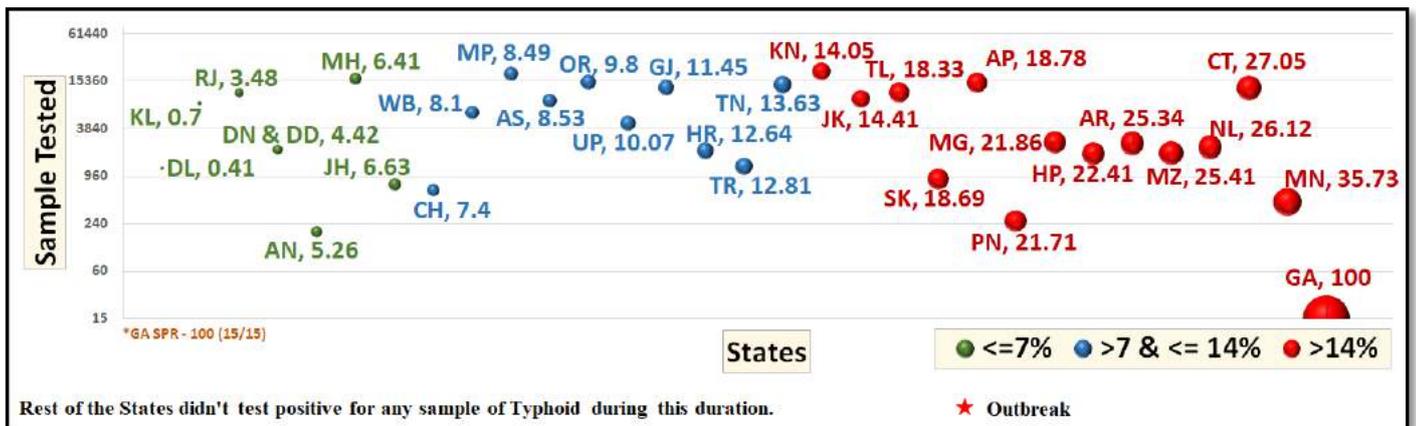
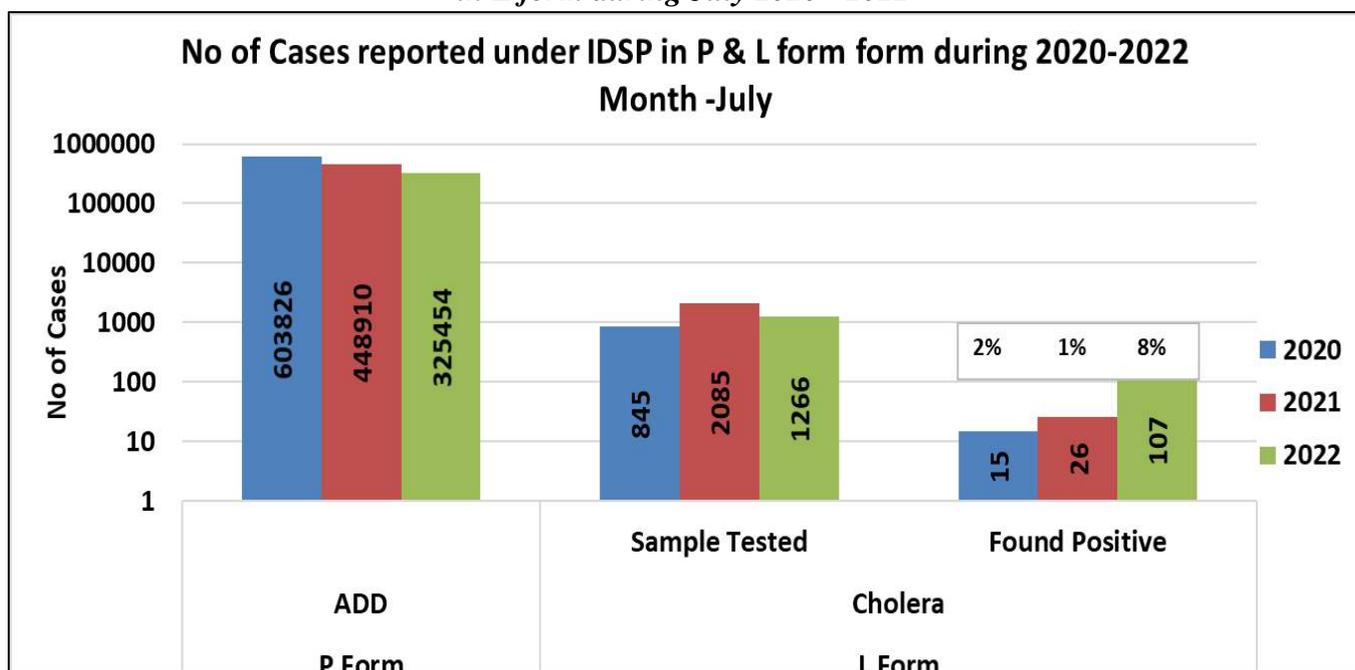


Fig. 12: State/UT wise Lab Confirmed Typhoid cases and outbreaks for July 2022



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Fig. 13: No. of ADD Cases reported under IDSP in P Form & Lab confirmed Cholera cases in L form during July 2020 - 2022

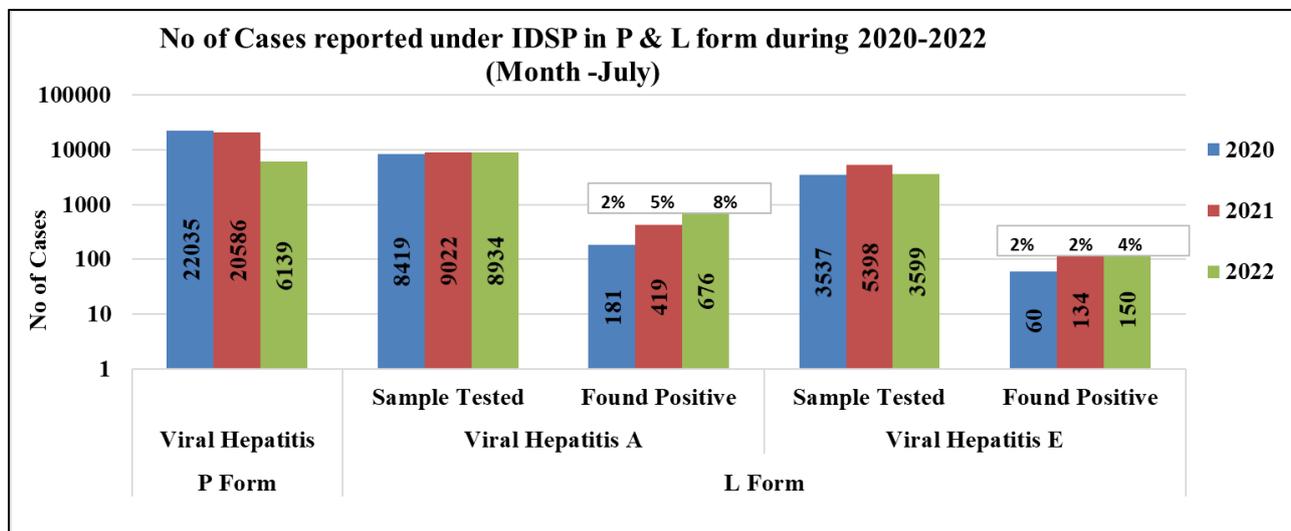


As shown in Fig. 13, number of Acute Diarrhoeal Disease cases, as reported by States/UTs in ‘P’ form was 603826 in July 2020, 448910 in July 2021 and 325454 in July 2022. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in July 2020, 845 samples were tested for Cholera out of which 15 tested positive; in July 2021, out of 2085 samples, 26 tested positive for Cholera and in July 2022, out of 1266 samples, 107 tested positive.

Sample positivity of samples tested for Cholera has been 2%, 1% and 8% in July month of 2020, 2021 & 2022 respectively.

Fig. 16: No. of Viral Hepatitis Cases reported under IDSP in P form & Viral Hepatitis A & E cases reported under L form during July 2020 - 2022



As shown in Fig. 16, the number of presumptive Viral Hepatitis cases was 22035 in July 2020, 20586 in July 2021 and 6139 in July 2022. These presumptive cases were diagnosed on the basis of case definitions provided under IDSP.

As reported in L form for Viral Hepatitis A, in July 2020; 8419 samples were tested out of which 181 were found positive. In July 2021 out of 9022 samples, 419 were found to be positive and in July 2022, out of 8934 samples, 676 were found to be positive.

Sample positivity of samples tested for Hepatitis A has been 2 %, 5 % and 8 % in July month of 2020, 2021 & 2022 respectively.

As reported in L form for Viral Hepatitis E, in July 2020; 3537 samples were tested out of which 60 were found positive. In July 2021; out of 5398 samples, 134 were found to be positive and in July 2022, out of 3599 samples, 150 were found to be positive.

Sample positivity of samples tested for Hepatitis E has been 2 %, 2 % and 4 % in July month of 2020, 2021 & 2022 respectively.

Fig. 17: State/UT wise Presumptive Viral Hepatitis cases and outbreaks for July 2022

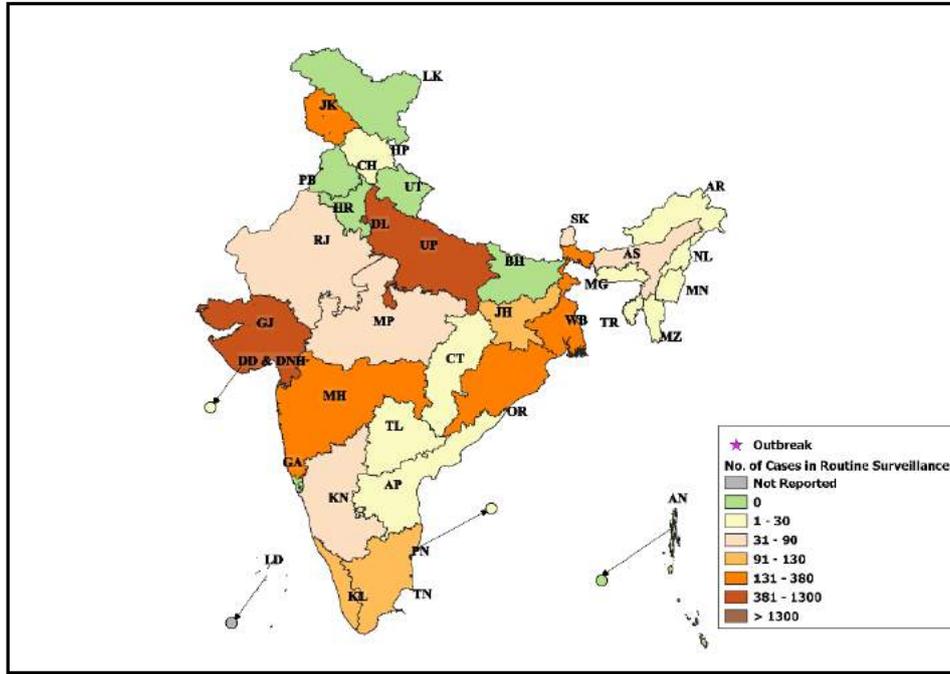


Fig. 18: State/UT wise Lab Confirmed Viral Hepatitis A cases and outbreaks for July 2022

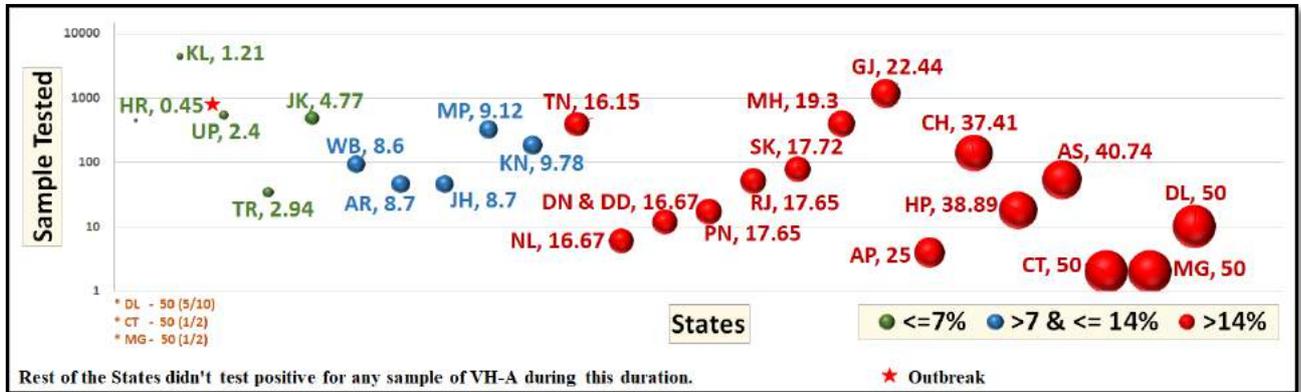


Fig. 19: State/UT wise Lab Confirmed Viral Hepatitis E cases and outbreaks for July 2022

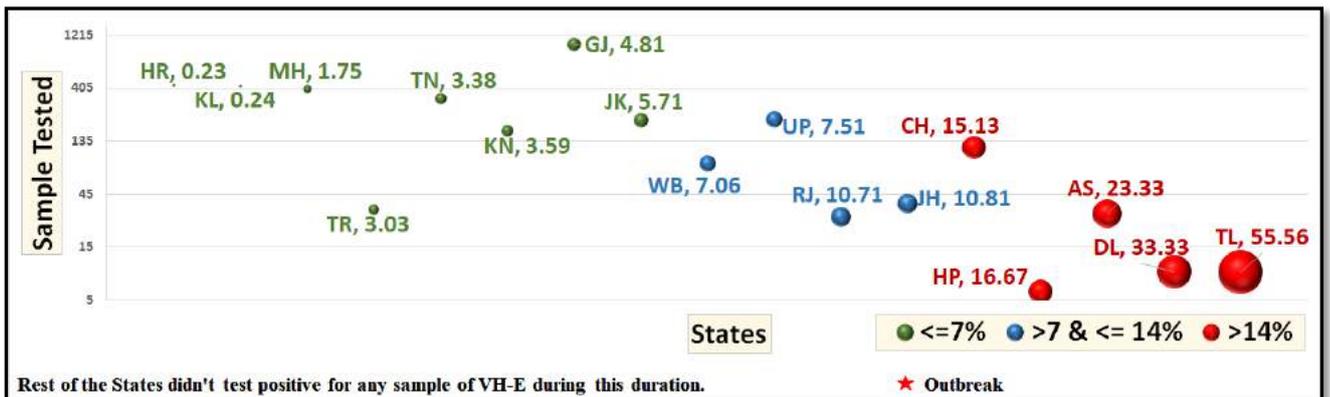
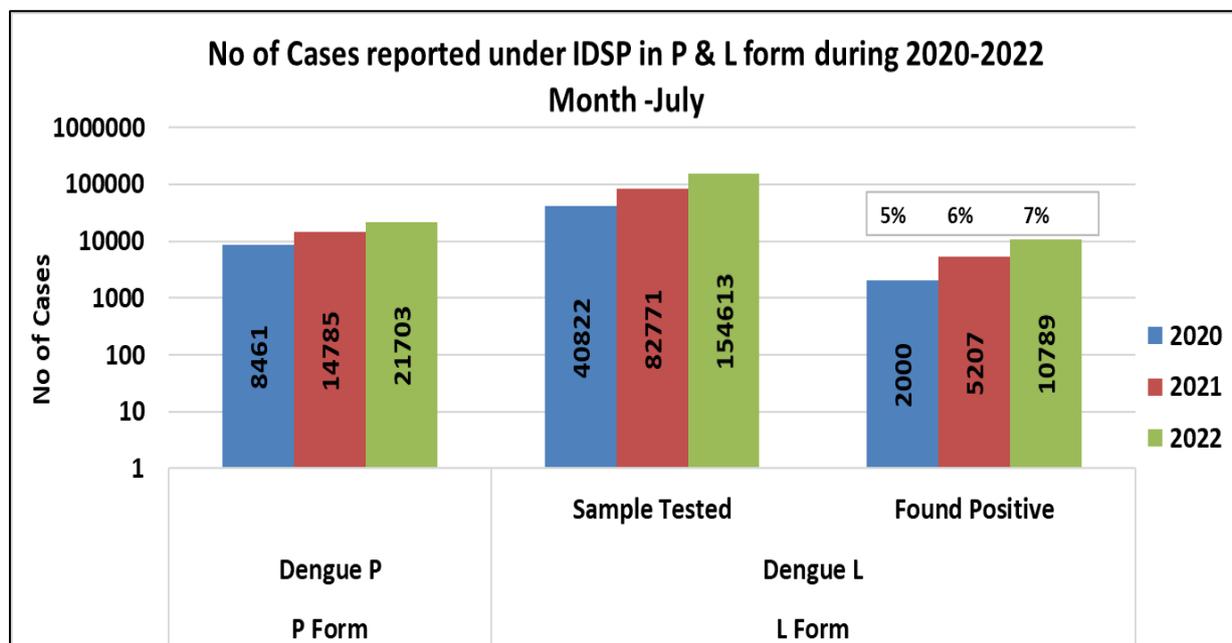


Fig. 20: No. of Dengue cases reported under IDSP in P & L form during July 2022



As shown in Fig. 20, number of presumptive Dengue cases, as reported by States/UTs in ‘P’ form was 6664 in July 2020; 7513 in July 2021 and 15045 in July 2022. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in July 2020; 29088 samples were tested for Dengue, out of which 2453 were found positive. In July 2021; out of 49345 samples, 2847 were found to be positive and in July 2022, out of 114006 samples, 7625 were found to be positive.

Sample positivity of samples tested for Dengue has been 8 %, 6 % and 7 % in July month of 2020, 2021 & 2022 respectively.

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Fig. 21: State/UT wise Presumptive Dengue cases and outbreaks for July 2022

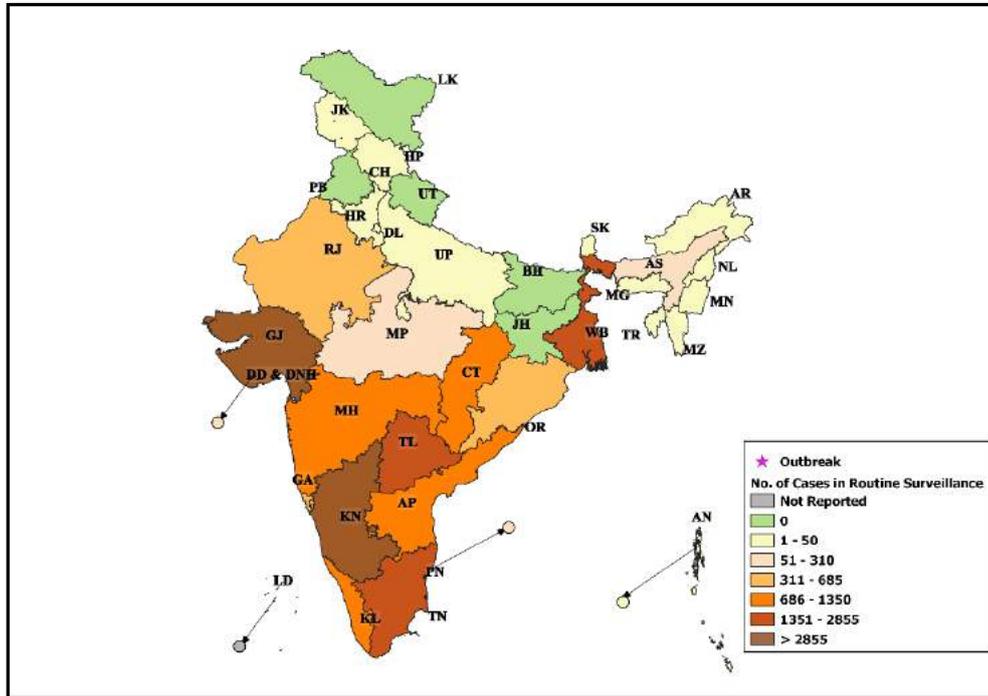


Fig. 22: State/UT wise Lab Confirmed Dengue cases and outbreaks for July 2022

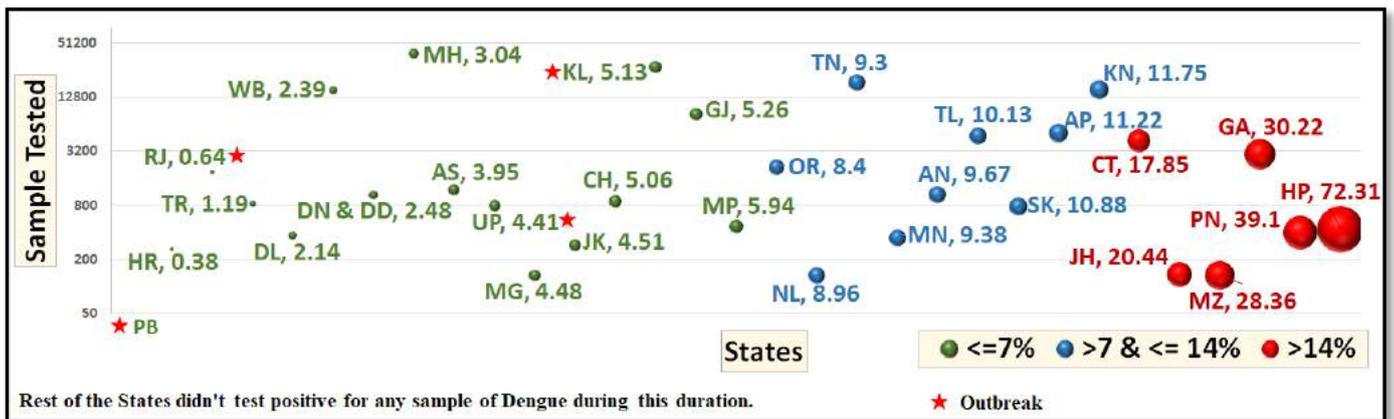
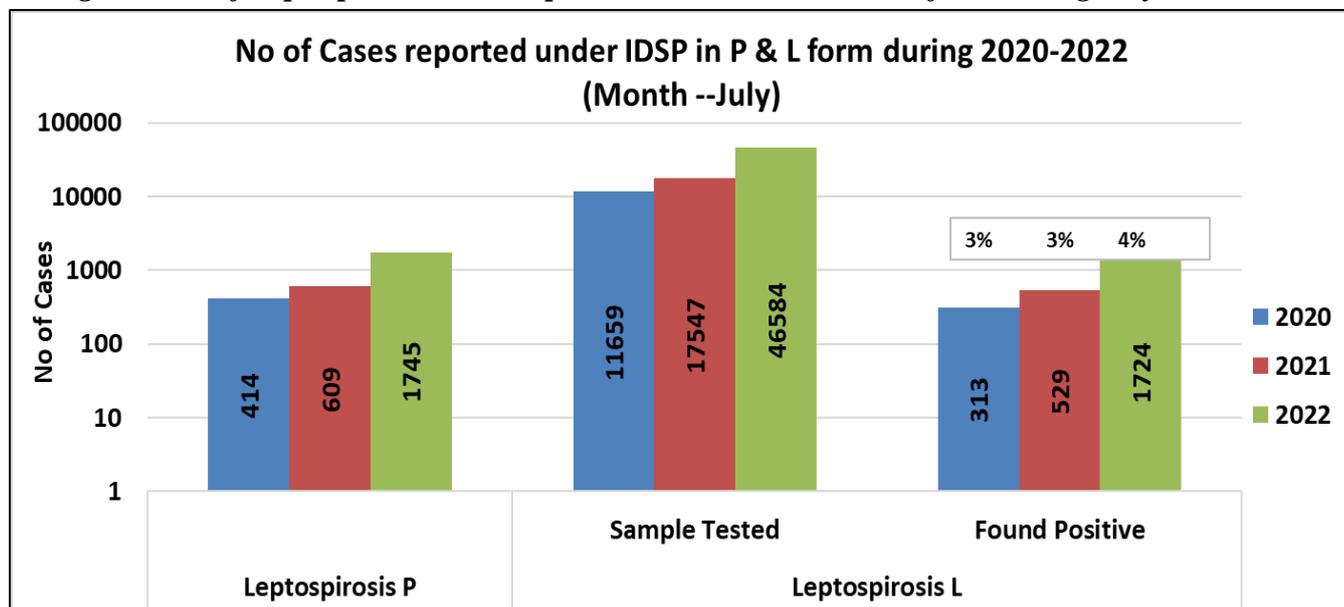


Fig. 23: No. of Leptospirosis Cases reported under IDSP in P & L form during July 2020 - 2022



As shown in Fig. 23, number of presumptive Leptospirosis cases, as reported by States/UTs in ‘P’ form was 414 in July 2020; 609 in July 2021 and 1745 in July 2022. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in July 2020; 11659 samples were tested for Leptospirosis, out of which 313 were found positive. In July 2021; out of 17547 samples, 529 were found to be positive and in July 2022, out of 46584 samples, 1724 were found to be positive.

Sample positivity of samples tested for Leptospirosis has been 3 %, 3 % and 4 % in July month of 2020, 2021 & 2022 respectively.

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Fig. 24: State/UT wise Presumptive Leptospirosis cases and outbreaks for July 2022

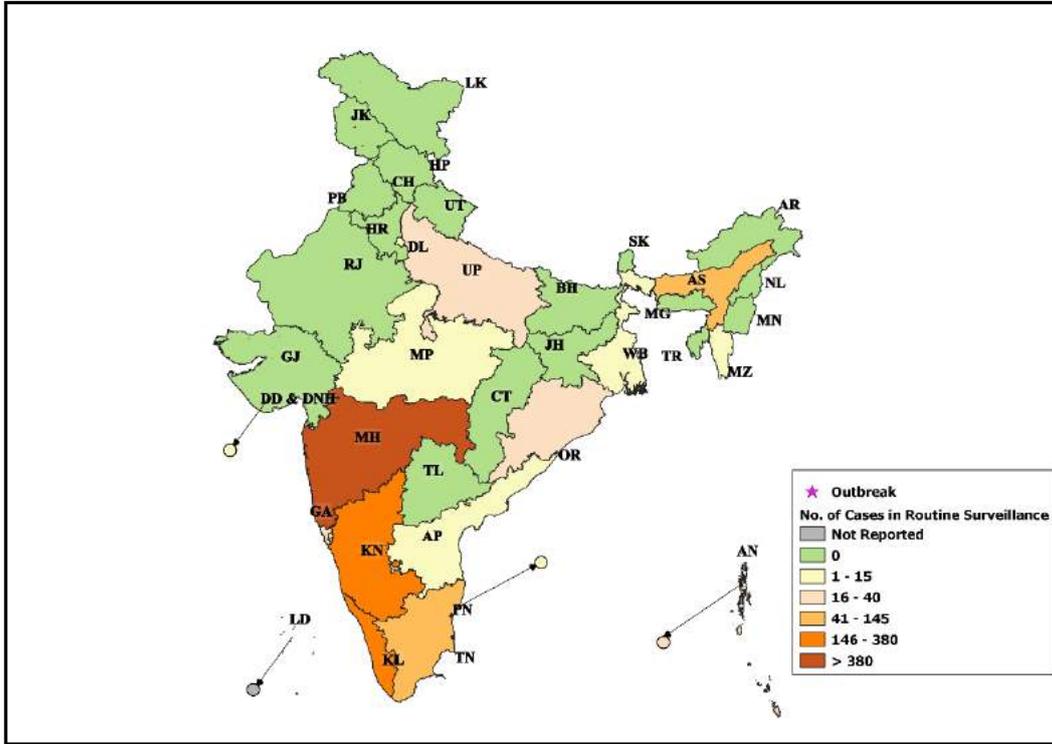
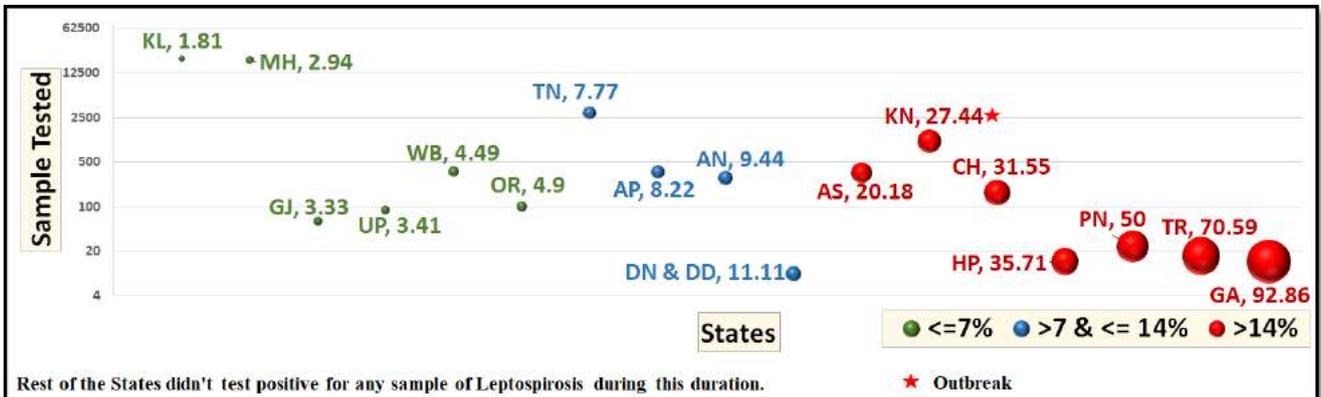
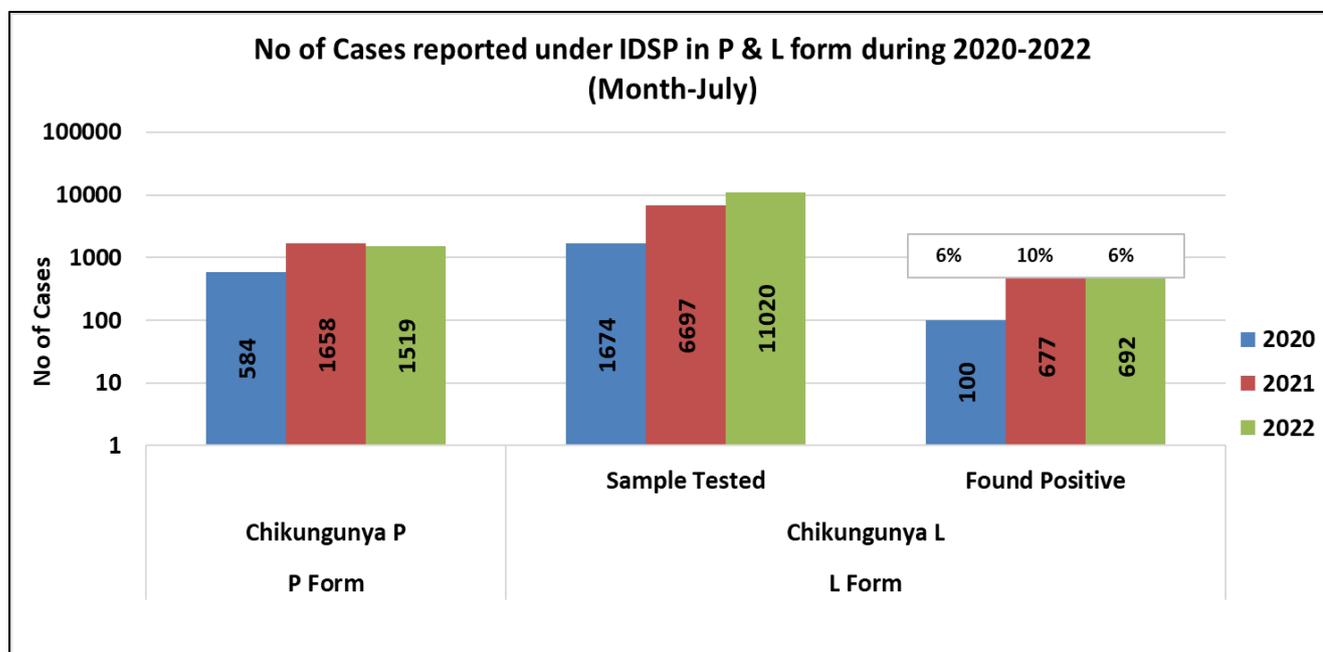


Fig. 25: State/UT wise Lab Confirmed Leptospirosis cases and outbreaks for July 2022



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Fig. 26: No. of Chikungunya Cases reported under IDSP in P & L form during July 2020 - 2022



As shown in Fig. 26, number of presumptive Chikungunya cases, as reported by States/UTs in ‘P’ form was 584 in July 2020; 1658 in July 2021 and 1519 in July 2022. These presumptive cases are diagnosed on the basis of standard case definitions provided under IDSP.

As reported in L form, in July 2020; 1674 samples were tested for Chikungunya, out of which 100 were found positive. In July 2021; out of 6697 samples, 677 were found to be positive and in July 2022, out of 11020 samples, 692 were found to be positive.

Sample positivity of samples tested for Chikungunya has been 6 %, 10 % and 6 % in July month of 2020, 2021 & 2022 respectively.

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Fig. 27: State/UT wise Presumptive Chikungunya cases and outbreaks for July 2022

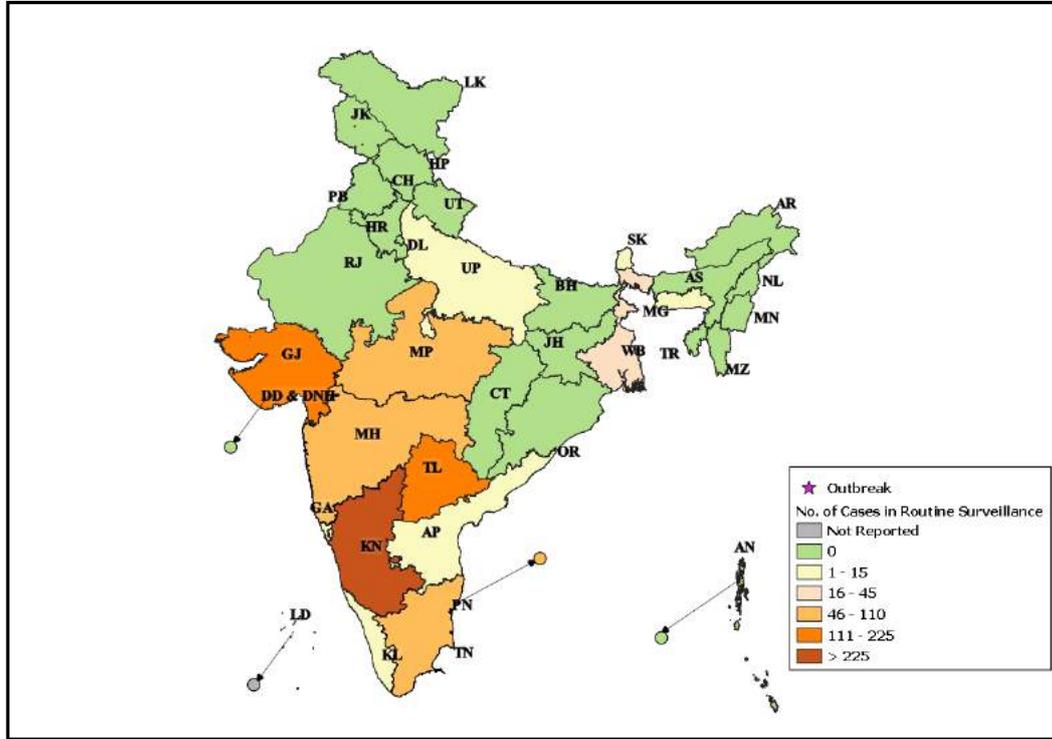


Fig. 28: State/UT wise Lab Confirmed Chikungunya cases and outbreaks for July 2022

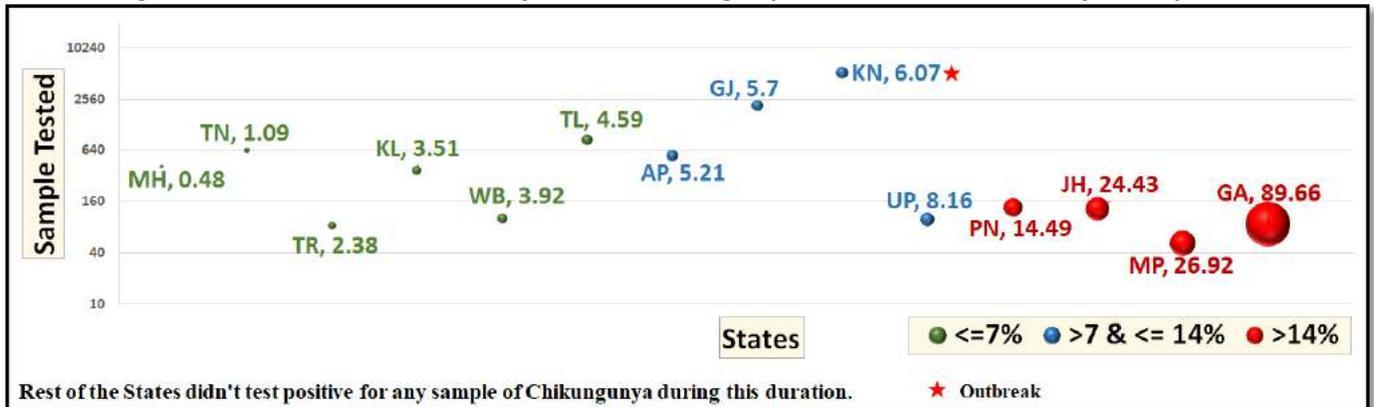
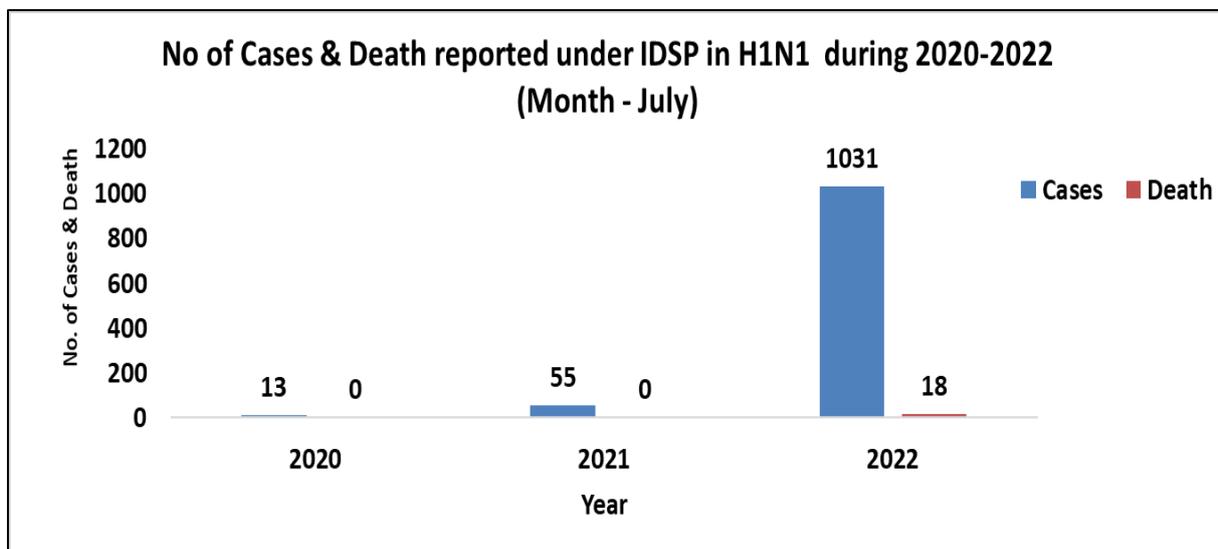


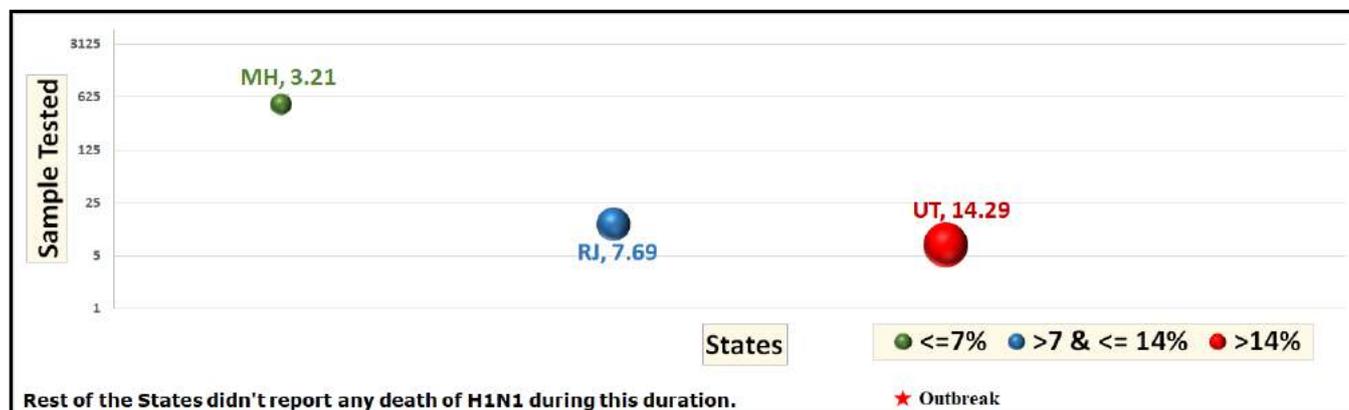
Fig. 29: H1N1 cases & deaths reported under IDSP in L Form during 2020-2022 in July



As shown in Fig. 29, as reported in L form, in July 2020, there were 13 cases and 0 deaths. In July 2021, there were 55 cases and 0 deaths; and in July 2022, there were 1031 cases and 18 deaths.

Case fatality rate for H1N1 were 0.00 %, 0.00 % and 1.7 % in July month of 2020, 2021 & 2022 respectively.

Fig. 30: State/UT wise H1N1 cases and outbreaks for July 2022



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: dircid@nic.in & idsp-npo@nic.in

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