

Event Alert and Outbreak Investigation Manual (version 3.0)

IHIP-IDSP WEB PORTAL (Software Version 10.0 Last Updated On: 11/02/2020)

This guide is prepared basically to explain the data flow of Outbreak Investigation and the related things.

The **learning objectives** of the guide are as following:

1. Understanding **Data Flow during Outbreaks and Events**
2. Understanding **Event Alerts**
3. Understanding **Health Condition Alerts**
4. Understanding **EWS Outbreak Summary**
5. Understanding **IHR linkages**

Contents

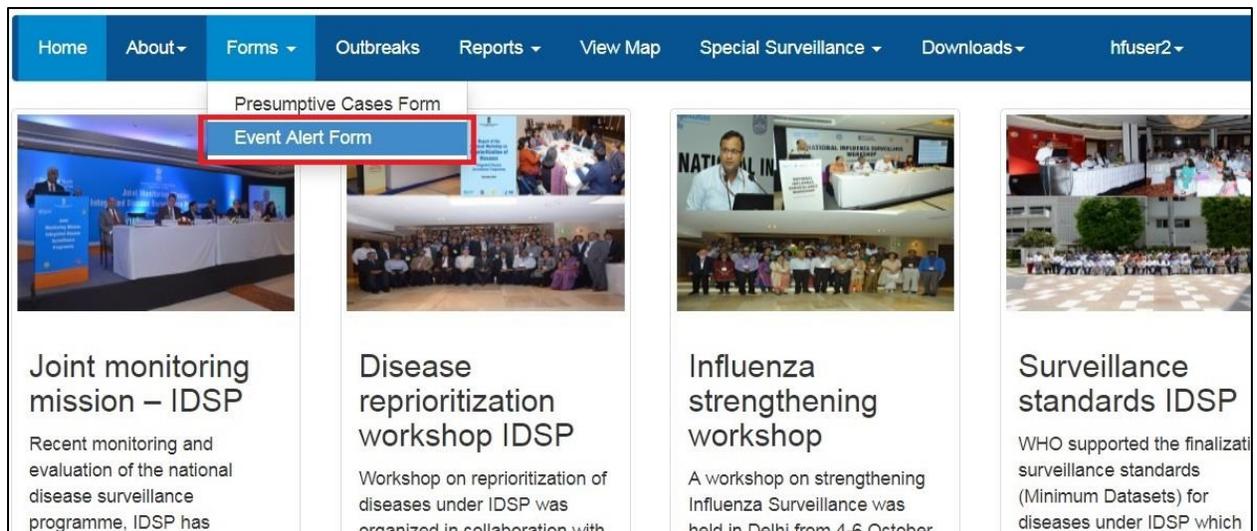
Definition of Outbreak	2
1. Data Entry in Event Alert form	2
2. Responding to Event Alert / Health Condition Alert	3
3. Updating data of Outbreak Investigation	7
4. Completing an Outbreak Investigation	10

Definition of Outbreak

The outbreak is said to occur in a particular place when the number of cases of a particular health condition / disease is clearly in excess of the expected frequency and / or requires rapid public health response to control the morbidity and mortality from the health condition. The suspicion of the outbreak is done by information. This information is captured in Event Alert or Health Condition Alert. So first we will understand how the Event Alert form can be used by various Users in flagging the potential outbreak. Then we will have a step by step approach to understand how we can manage the data of Outbreak Investigation using IHIP-IDSP web portal.

1. Data Entry in Event Alert form: Any user of any health facility (except the Lab user) can flag an event through “Event Alert Form”. Here we will take the example of P form user (**Medical Officer or IDSP Nodal Officer of the Health Facility**) raising the event alert. Similarly, Health Workers can also raise an Event Alert using IHIP mobile app, District/State/National level user can also raise an Event Alert using Event Alert form using their respective user account on IHIP-IDSP web portal.

- Click on “Forms” menu and then click on “Event Alert Form”



The screenshot displays the IHIP-IDSP web portal interface. The top navigation bar includes links for Home, About, Forms, Outbreaks, Reports, View Map, Special Surveillance, Downloads, and a user profile for hfuser2. A dropdown menu is open under the 'Forms' link, showing 'Presumptive Cases Form' and 'Event Alert Form', with the latter highlighted in a red box. Below the navigation, there are four featured articles with images and text:

- Joint monitoring mission – IDSP**: Recent monitoring and evaluation of the national disease surveillance programme, IDSP has
- Disease reprioritization workshop IDSP**: Workshop on reprioritization of diseases under IDSP was organized in collaboration with
- Influenza strengthening workshop**: A workshop on strengthening Influenza Surveillance was held in Delhi from 4-6 October
- Surveillance standards IDSP**: WHO supported the finalization of surveillance standards (Minimum Datasets) for diseases under IDSP which

- Fill in the “**Event Occurred Date**”, select the Sub District and Village, Select the “**Health condition**” (syndrome or disease) and “**Source**” which provided the information about the event and provide some details about the event in the “**Message**” text box; you may also upload any photo or document by clicking on “**Choose Files**”. Click “**Submit**” to share the event data on server.

The screenshot shows a web form titled "Event Alert". It includes the following fields and values:

- Event ID:** 29548201909675-EA
- Event Occurred Date:** 03/03/2019
- State:** Karnataka
- District:** Tumakuru
- Sub District:** Tiptur
- Village:** Bagavala
- Health Condition:** Fever with Rash
- Source:** Informers-Other systems of Medicine
- Message:** 8 cases of fever with rashes
- Document:** Choose Files (No file chosen)
- Submit:** A blue button at the bottom.

2. Responding to Event Alert / Health Condition Alert: Now we will see how **Outbreaks** Menu will help **to monitor and respond to various Event alerts and Health Conditions alerts**; once these alerts are converted in to “Outbreaks” then this menu will also help the Health Facility (P form) user, RRT User, DSO user, SSO user and CSU users **to enter various details about the outbreak**. But here we will stick to **Outbreak data flow** between Health Facility user (P form user) / RRT User and District Surveillance Officer (DSO) user.

- “Outbreaks” page has P form user and DSO user has same 3 parts: **a) Event Alerts, b) Health Condition Alerts and c) EWS Outbreak Summary**. One can click on “Show More.....” to get the whole list of alerts/outbreaks summary. We have already seen above how a Medical Officer / IDSP Nodal Officer of the Health Facility can raise an Event Alert; Health conditions alerts are generated depending upon the threshold set for each disease and when number of Laboratory confirmed cases for a particular disease cross threshold, Health Condition Alert is generated automatically. **Each Event Alert and Health Condition Alert has unique ID ending with EA and HA respectively**. Only District/State/National User has the authority to convert an event to an outbreak based on preliminary information given by the Medical Officer / IDSP Nodal Officer of the Health Facility. **Once the event is converted to an Outbreak, it will appear under “EWS Outbreak Summary” and the Alert ID will be converted in to Outbreak ID with “EA” or “HA” replaced by “O”**. (please see screenshot on next page)

Event Alerts				Health Condition Alerts					
Alert Date	Syndrome/Disease	Source	Action Update	Alert Date	Disease Condition	Sub-District	View Details	Action Update	
11/04/2019	View	Jaundice of < 4 weeks	Food safety agencies	New	10/04/2019	Malaria	Tiptur	View Details	New
11/04/2019	View	Dengue	Laboratories	New	04/04/2019	Cholera	Tiptur	View Details	New
11/04/2019	View	Only Fever < 7 days	Colleges	New	04/04/2019	Dengue	Tiptur	View Details	New
11/04/2019	View	Acute Diarrhoeal Disease	Media-TV	New	04/04/2019	Malaria	Tiptur	View Details	New
11/04/2019	View	Jaundice of < 4 weeks	Schools	New	04/04/2019	Hepatitis A	Tiptur	View Details	New
12/04/2019	View	Acute Diarrhoeal Disease	Media-Newspaper	New	04/04/2019	Cholera	Tiptur	View Details	New

Outbreak I.D	Status	Syndrome/Disease	Health Facilities	Preliminary Information	Initiated Date
29548201914249-O	Completed	Jaundice of < 4 weeks	S.R.D.Palya	confirmed by MO PHC but there is only cases but no death villages.	05/04/2019
29548201914236-O	Completed	Acute Hepatitis	S.R.D.Palya	ggfj/hgh	04/04/2019
29548201914233-O	Ongoing-Under Surveillance	Chikungunya	S.R.D.Palya	10 cases confurmed	03/04/2019
29548201914234-O	Ongoing-Under Surveillance	Jaundice of < 4 weeks	S.R.D.Palya	contaminated water	03/04/2019
29548201914233-O	Ongoing-Under Surveillance	Chikungunya	S.R.D.Palya	10 cases confurmed	03/04/2019

Above screen is of the Outbreak Menu page of the Health Facility (P form) user; the screen of the Outbreak Menu page of the DSO user is same except following differences:

- One can see **“Update Action”** button under **“Action Update”** column (instead of **“New”** word) in the Event Alerts and Health Condition Alerts lists for each of the Event Alerts and Health Condition Alerts which are freshly generated and not yet seen or acted upon by the DSO user.
- Or one can see **“Reviewed”** word in **“Action Update”** column if the DSO has gone through the event alert and thinks that the Outbreak Investigation is not required for this event alert based on the information given by the Health Facility user.
- Or one can see a **unique Outbreak ID** in **“Action Update”** column if the DSO has gone through the event alert and thinks that the Outbreak Investigation is required for this event alert based on the information given by the Health Facility user.

Event Alerts				Health Condition Alerts					
Alert Date	Syndrome/Disease	Source	Action Update	Alert Date	Disease Condition	Sub-District	View Details	Action Update	
25/04/2019	View	Acute Diarrhoeal Disease	Media-Newspape	Update Action	24/04/2019	Cholera	Tiptur	View Details	Update Action
25/04/2019	View	Acute Diarrhoeal Disease	Media-TV	Update Action			View Line Listing		
25/04/2019	View	Acute Diarrhoeal Disease	NGOs	Update Action			View on Map		
25/04/2019	View	Acute Diarrhoeal Disease	Health Facilities	Update Action	10/04/2019	Malaria	Tiptur	View Details	Reviewed
25/04/2019	View	Acute Diarrhoeal	Community	29548201917283-	04/04/2019	Cholera	Tiptur	View Details	Update Action
25/04/2019	View	Acute Diarrhoeal	Community	29548201917283-	04/04/2019	Dengue	Tiptur	View Details	Update Action

Outbreak I.D	Status	Syndrome/Disease	Health Facilities	Preliminary Information	Initiated Date
29548201917283-O	Ongoing-Under Surveillance	Acute Diarrhoeal Disease	S.R.D.Palya	Cases verified by local ASHA	25/04/2019
29548201917280-O	Ongoing-Under Surveillance	Cholera	S.R.D.Palya	requied	24/04/2019

- On clicking “View” for a particular Event Alert, it will show basic details about the Event Alert like Event Alert ID; Event Occurred Date; Place, Health Facility and Syndrome/Disease for which alert has been raised; date of update; Source which/who provided the information about the Event and Message which describes the Event in brief and any important document attached that can help in relation with the event alert raised. This is true for both Health Facility user and DSO user.

The screenshot shows a window titled "Event Details" with the following information:

Event ID: 29548201909675-EA	Event Occurred Date: 03/03/2019
District: Tumakuru	Sub District: Tiptur
Village:	Health Facility: SIDDARAMADEVARAPALYA
Syndrome/Disease: Fever with Rash	Updated Date: 03/03/2019
Source: Informers-Other systems of Medicine	
Message: 8 cases of fever with rashes	
Documents:	

A "Close" button is located at the bottom right of the window.

- Now let’s see what’s happens when the **DSO user clicks on “Update Action”** button for any of the Event Alert generated. DSO will see the “Action Update” window with some very basic details about the event alert (including Event Alert ID) and space for adding **message under “Preliminary Information”** in which DSO can write the information provided by the Medical Officer / Staff of the Health Facility during preliminary investigation of the event. DSO can also **select Syndrome or Disease** from the “Health Condition” drop down menu based on the preliminary information. And can select whether **Outbreak Investigation is required or not**.

The screenshot shows a window titled "Action Update" with the following fields and controls:

- Source of information:** Informers-Other systems of Medicine
- Alert Id:** 29548201909675-EA
- Event Occurred Date :** 03/03/2019
- Preliminary Information***
8 cases confirmed to have Measles; 4 more cases identified to have the same; detailed investigation required to identify more case
- Health Condition***
Measles (selected in dropdown)
- Outbreak Investigation Required ***
---Select---

Buttons: "Submit", "Reset", and "Close".

- As soon as DSO selects “Yes” under “**Outbreak Investigation Required**”, 2 more parts [RRT Details and Facility Covered] will appear and **Outbreak ID will be generated having same number as “Event Alert” but ending as “O” instead of “EA”**. DSO can select the RRT members with their date of deployment (they will receive the SMS). With “+” sign, DSO can select as many RRT members as required. DSO selects **Health Facilities**, the areas of which seem to be affected based on preliminary investigation. With “+” sign, multiple health facilities can be selected. When DSO clicks on “Submit” button, the select **RRT members will receive an SMS for the deployment** in the concerned outbreak.

The screenshot displays the 'Integra' web application interface for reporting an outbreak. The form includes the following sections and data:

- Health Condition:** Measles
- Outbreak Investigation Required:** Yes
- Event Outbreak ID:** 2954201909675-O
- RRT Details:**
 - Date RRT constituted:** 03/03/2019
 - RRT Member 1:** State/District RRT Member: Dr. Rutajit - Epidemiologist, Mobile Number: 9000117384, Date of Deployment: 04/03/2019
 - RRT Member 2:** State/District RRT Member: Dr. Sharadchandra - Lab Technician, Mobile Number: 9000117385, Date of Deployment: 04/03/2019
- Facility Covered:**
 - District:** Tumakuru
 - Sub District:** Tiptur
 - Health Facility:** S.R.D.Palya (Primary Health)

Buttons for **Submit**, **Reset**, and **Close** are visible at the bottom of the form.

3. Updating data of Outbreak Investigation: Once the DSO has flagged that the outbreak investigation is required then the RRT Members will go to the areas of the Health Facilities along with other staff of the health facility and will investigate the outbreak. In the following session we will see how the Health Facility (P form) user or RRT user can enter data of the outbreak investigation using Outbreak menu.

- The Health Facility (P form) user or RRT user will go to the “**Outbreak**” menu page and will **click a particular Outbreak ID** under “**EWS Outbreak Summary**” to open the “**Action Update**” page. The upper part of this page contains **basic details of the Outbreak** including **Preliminary Information, Details of the RRT Members selected, RRT Update**. RRT Members can update their comments under RRT Update.

Action Update



Outbreak Details: **Document Number:** 29-548-5539-0-708209-12042019-E-1

Outbreak Id :29548201909675-0	Source Of Information :Informers-Other systems of Medicine
Preliminary Information :8 cases confirmed to have Measles; 4 more cases identified to have the same; detailed investigation required to identify more case	RRT Constituted Date : 03/03/2019
Health Condition Name :Measles	Health Facility :S.R.D.Palya

RRT Members

Name	Mobile Number	Speciality	Deployment Date
Dr. Rutajit	9000117384	Epidemiologist	04/03/2019
Dr. Sharadchandra	9000117385	Lab Technician	04/03/2019

Documents:

RRT Update:

Event information update:
Date:02/04/2019, Total 13 Cases identified

Public health response:
Date:02/04/2019, all cases given vitamin A

Information from other sectors:
Date:02/04/2019, None

Additional Document

No file chosen

Reset

Save

- The lower part of “**Action Update**” having space for entering and seeing the Line Listing of Cases/Deaths reported under the Outbreak. The Health Facility (P form) user or RRT user can add the Outbreak cases/deaths details using “**Add Affected Case**”.

The screenshot shows a web interface titled "Additional Document". At the top, there is a file upload section with a "Choose Files" button and the text "No file chosen". Below this are "Reset" and "Save" buttons. The main section is titled "Affected Cases" and contains four buttons: "Add Affected Case (Click to Add)", "Line Listing Of Cases - Pending Submission (Click to View)", "Submitted Line Listing (Click to View)", and "List Of Death Cases (Click to View)". At the bottom, there is a "DSO Update History" section and a "Close" button.

- This is how data fields under “**Add Affected Case**” will appear. It’s very much similar to L form with additional data fields like Symptoms, Immunization Status, and Travel History etc.

The screenshot displays the "Add Affected Case (Click to Add)" form, organized into four main sections:

- 1. Patient Details:** Includes fields for Mobile Number (with a dropdown for "India +91"), Landline Number (with "STD Code" dropdown), Name (First, Middle, Last), Date of Birth (dd/mm/yyyy), Age, Gender (Male, Female, Transgender), ID Type, Identification Number, Citizenship (India), State, District, Sub District, Village, House No, Street Name, and Landmark. A checkbox for "Permanent address same as present address" is also present.
- 2. Clinical Details:** Features a dropdown for "Provisional Diagnosis" (set to "Measles"), a date field for "Date of Onset", and a checked checkbox for "Do you want to collect samples?".
- 3. Laboratory Details:** Contains fields for "Type of Sample", "Sample Collection Date", "Test Performed", "Specimen Id", "Date of Test Performed", "Test Result", and "Remarks" (with a green "+" icon).
- 4. Case Details:** Includes fields for "Symptoms", "Immunization Status", "Travel History", "Any Comorbid Condition", "Epidemiologically Linked", "Outcome", and "Remarks".

"Reset" and "Save" buttons are located at the bottom of the form.

- After adding and saving the cases/deaths details under “Add Affected Case”, the line list of the cases/deaths will go under “Line Listing of Case-Pending Submission”. At this stage, one can change the details of the cases by clicking on “Edit” button in front of the case details. Once cross verified and filled in all the mandatory fields (including results of the Laboratory samples collected), click on “Submit” to share the data to the server. *Details once submitted cannot be edited.*

Affected Cases

[Add Affected Case \(Click to Add\)](#)

[Line Listing Of Cases - Pending Submission \(Click to View\)](#)

SI#	Action	1.2. Person Name	2.1. Provisional Diagnosis	2.2. Date of Onset	2.3. Patient Health Id	2.4. Patient Transaction Id	3.1. Type Of Sample	3.3. Date Of Sample Collection	3.4. Test Performed	3.6. Specimen Id	3.7. Date of Test Performed	3.8. Res
1	Edit	Lata	Measles	18/03/2019	29-548-5539-612041-708209-12	708209-02042019-1	Serum	01/04/2019	IgM ELISA	708209-02042019-28-24-2		

[Submit](#)

[Submitted Line Listing \(Click to View\)](#)

[List Of Death Cases \(Click to View\)](#)

DSO Update History

[Close](#)

- Once you “Submit” the case details, it will automatically go under “Submitted Line Listing”. The death case will appear under “List of Death Cases”.

Affected Cases

[Add Affected Case \(Click to Add\)](#)

[Line Listing Of Cases - Pending Submission \(Click to View\)](#)

[Submitted Line Listing \(Click to View\)](#)

SI#	Person Name	2.1. Provisional Diagnosis	2.2. Date of Onset	2.3. Patient Health Id	2.4. Patient Transaction Id	3.1. Type Of Sample	3.3. Date Of Sample Collection	3.4. Test Performed	3.6. Specimen Id	3.7. Date of Test Performed	3.8. Results	3.9. Patl
1	Lata	Measles	18/03/2019	29-548-5539-612041-708209-12	708209-02042019-1	Serum	01/04/2019	IgM ELISA	708209-02042019-28-24-2	02/04/2019	Positive	Rub viru

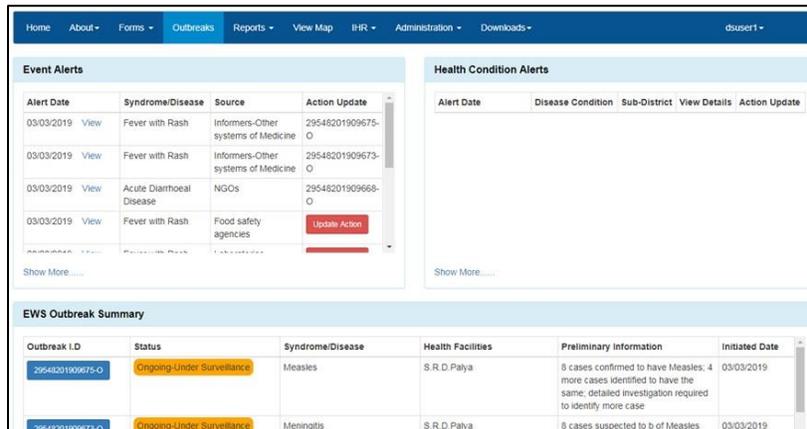
[List Of Death Cases \(Click to View\)](#)

DSO Update History

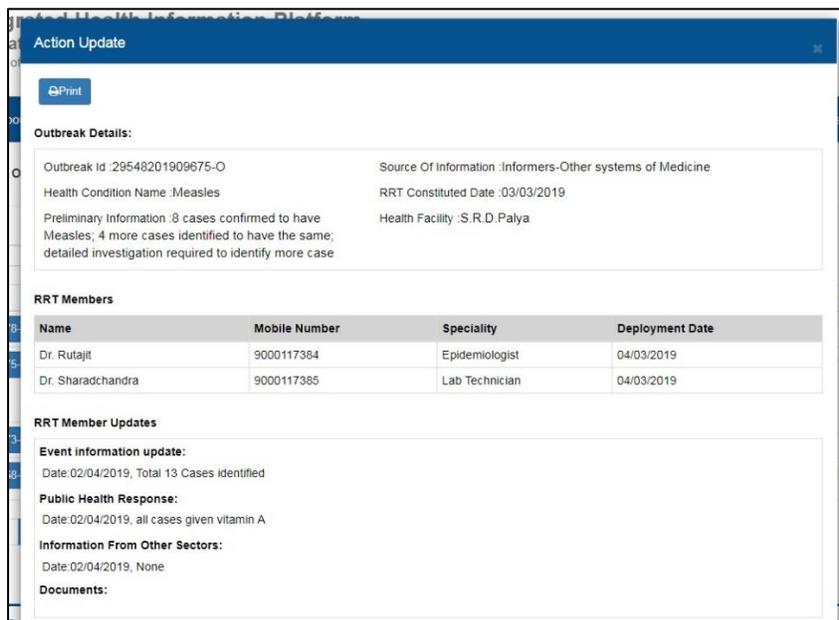
[Close](#)

Similarly, add all the cases identified by the RRT members and other health staff during outbreak investigation. The Health Facility (P form) user or RRT member can add as many cases as detected after the initiation of outbreak investigation until outbreak is “Completed”. Once the cases stop coming and it seems that the outbreak is contained then the DSO can close the outbreak. In the following section we will see the same.

4. Completing an Outbreak Investigation: When an Event Alert is converted in to Outbreak by the DSO, the Outbreak will be enlisted under EWS Outbreak Summary with the initial status of “Ongoing - Under Surveillance” with orange color background.



- One can click on the Outbreak ID (blue button) to see the details of the outbreak investigation as entered by the Health Facility (P form) user &/or RRT user. In the upper part of the “Action Update”, one can see basic details of the outbreak, RRT Members chosen for Outbreak investigation and various comments put by RRT Members with Date. One can also click and download any document uploaded by the Health Facility (P form) user &/or RRT user in relation with the outbreak.



- In the lower part of the “Action Update”, DSO can update IHR Risk Assessment as per IHR guidelines. If the outbreak is ongoing then one of the 2 sub statuses [Under Surveillance / Contained] can be selected.

- Once the outbreak is over [i.e. no new case coming even after twice the duration of incubation period of the disease since the date of onset of last case of the outbreak], DSO can select “Completed” status. In this case, DSO will also have to select the date on which RRT completed investigation. DSO can add any important comments in “Remarks” box and can also attach any important document in relation with outbreak investigation. DSO can also view the Line-List of the Cases and Deaths. On clicking the “Save” button the details will be saved. *Once the outbreak is “Completed” and the “Save” button is clicked, no changes can be made after that.*

Outbreak I.D	Line Listing Of Cases - Pending Submission (Click to View)	Submitted Line Listing (Click to View)	List Of Death Cases (Click to View)
29548201909678			
29548201909675			
29548201909673			
29548201909668			

- When the outbreak status is selected as “Completed”, the same can be seen in the EWS outbreak summary with Green color background under “Status” column.

← Back EWS Outbreak Summary

State: Karnataka | District: Tumakuru | Sub District: ----Select---- | From Date: 01/03/2019 | To Date: 05/03/2019 | Search

Outbreak I.D	Status	Syndrome/Disease	Health Facilities	Preliminary Information	Initiated Date
29548201910711-O	Ongoing-Under Surveillance	Jaundice of < 4 weeks	S.R.D.Palya	suspected hepatitis outbreak	05/03/2019
29548201909678-O	Ongoing-Under Surveillance	Acute Hepatitis		11 cases	03/03/2019
29548201909675-O	Completed	Measles	S.R.D.Palya	8 cases confirmed to have Measles; 4 more cases identified to have the same; detailed investigation required to identify more case	03/03/2019
29548201909673-O	Ongoing-Under Surveillance	Meningitis	S.R.D.Palya	8 cases suspected to b of Measles	03/03/2019
29548201909668-O	Ongoing-Under Surveillance	Acute Diarrhoeal Disease	S.R.D.Palya	25 cases; all cases attended same wedding function	03/03/2019
29548201909598-O	Ongoing-Under Surveillance	Acute Diarrhoeal Disease	Mathighatta	30 cases found	01/03/2019

- One can always get print of the details of the Outbreak investigation whenever required by clicking on “Print” command under “Action Update”

State: Karnataka | Action Update

Print

Outbreak Details:

Outbreak Id :29548201909675-O | Source Of Information :Informers-Other systems of Medicine
 Health Condition Name :Measles | RRT Constituted Date :03/03/2019
 Preliminary Information :8 cases confirmed to have Measles; 4 more cases identified to have the same; detailed investigation required to identify more case | Health Facility :S.R.D.Palya

RRT Members

Name	Mobile Number	Speciality	Deployment Date
Dr. Rutajit	9000117384	Epidemiologist	04/03/2019
Dr. Sharadchandra	9000117385	Lab Technician	04/03/2019

RRT Member Updates

Event information update:
Date:02/04/2019, Total 13 Cases identified

Public Health Response:
Date:02/04/2019, all cases given vitamin A

Information From Other Sectors: