



Maldives

Health Protection Agency

Ministry of Health

Guide on
Event Based Surveillance
PHUBLIC HEALTH UNITS

Cornerstone of Public Health Surveillance

DRAFT 2

8th February 2015

Compiled by the

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1 Event Based Surveillance

Event-based Surveillance

Rapid detection, reporting, confirmation and assessment of public health events, including

- Clusters of disease: rumors of unexplained death or illness.
- Environmental exposures that represent health risk.

Source of information or reporting

- Immediate reporting, usually telephonic or SMS
- News media , social media are often the principle source

Event-based surveillance is the organized and rapid capture of information about events that are a potential risk to public health. This information can be rumours and other ad-hoc reports transmitted through formal channels (i.e. established routine reporting systems) and informal channels (i.e. media, health workers and nongovernmental organizations reports), including:

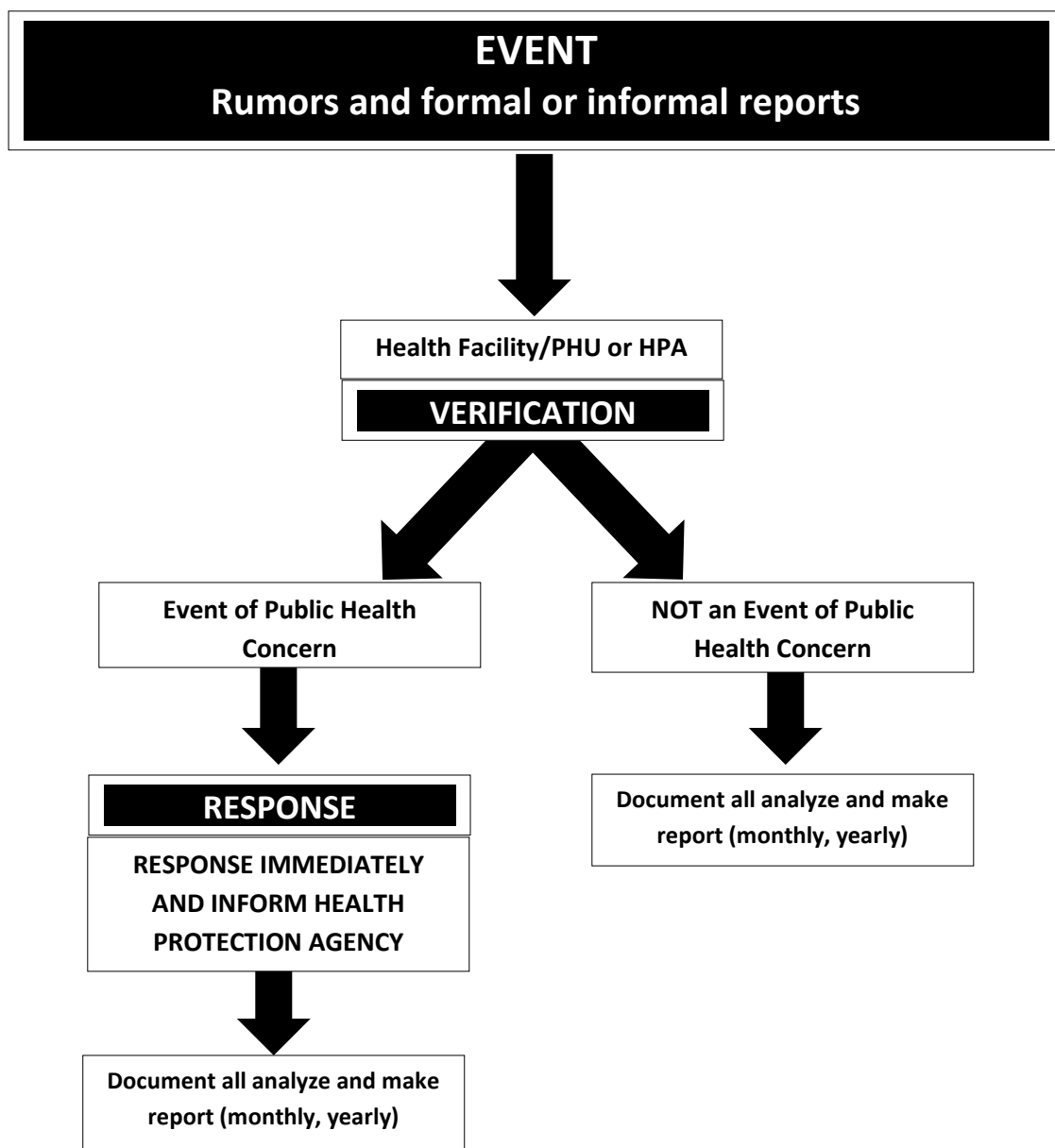
- Events related to the occurrence of disease in humans, such as clustered cases of a disease or syndromes, unusual disease patterns or unexpected deaths as recognized by health workers and other key informants in the country; and
- Events related to potential exposure for humans, such as events related to diseases and deaths in animals, contaminated food products or water, and environmental hazards including chemical and radio-nuclear events.

Information received through event-based surveillance should be rapidly assessed for the risk the event poses to public health and responded to appropriately. Unlike classic surveillance, event-based surveillance is not based on the routine collection of data and automated thresholds for action but rather on unstructured descriptions and

reports. When it comes to the timely detection of outbreaks and important public health events, indicator-based surveillance systems often fail. Furthermore, the systems are not suited to the detection of rare but high-impact outbreaks (Severe Acute Respiratory Syndrome, Avian influenza) or emerging and unknown diseases.

2 Reporting Mechanism

Figure 1 : Mechanism of Event based surveillance



3 Role of Health Protection Agency

Surveillance is information for action. Even though not formal Event Based surveillance has always been part of the surveillance system of the Maldives. Rumors have been responded by the health authorities and actions taken on events of public health concern have been taken action. Formalizing the system beyond simply receiving rumor reports (i.e. by using standardized forms and logging all reports) has several benefits. These include improved accountability, since, once a report is logged, it must be pursued until it is investigated or dismissed; a more consistent approach to assessing reports; the ability to evaluate the relative contribution of different reporting sources; and responding with key organizations.

Key responsibility of Health Protection Agency:

1. Coordinate with relevant organization and response to events at national level.
2. Guidance for atoll level and island level on response to events of public health concern.
3. Provide training for event-based surveillance to all atolls.
4. Manage and response for public health events of international concern.

4 Event Based Surveillance through Public health Units

4.1 Role of Public health Units

1. Sensitize hospital staff including management and clinical personnel on reporting of events of public health concern.
2. Sensitize local media, councils, community leaders, NGOs, institutions and public on reporting events.
3. Establish a mechanism by which the community can report events
 - E.g.: To designated 24/7 available phone number of Hospital/Public health units or direct reporting via SMS.
4. Establish a mechanism to receive reports
 - Surveillance focal points in Public health units
 - Documenting all the events in the event based surveillance form (
 - Compiling all the reports

5. Report events of public health concern to Health protection agency after the assessment.
6. Initiate the response in collaboration with HPA and other relevant government authorities, sectors, local and national NGOs to control the event of concern.
7. Collect data for all the events and analyse the data (weekly, monthly, and yearly).
Send monthly reports to Health Protection Agency.

4.2 List of people who may report

Medical Settings	
Health care facilities	<ul style="list-style-type: none"> • General practitioners • Health Clinics • Hospitals
Allied health care professionals and organizations	<ul style="list-style-type: none"> • Community health workers • Family Health Workers • Midwives/traditional birth attendants • Nurse • Traditional healers • Laboratory services
Community Settings	
Community groups	Designated community members: <ul style="list-style-type: none"> • Island or Atoll leaders (council members, Imaam, etc..) • NGOs (Women’s Committee, youth committee etc.) • Island health volunteers (MRC), • Members of the public
Community services	<ul style="list-style-type: none"> • Religious organizations • Schools • Pharmacies • Police • Military/Defence • Public utilities (water and sanitation, electrical company) • Nongovernmental organizations • Institutions such as (Kudakudingehiya, Prisons etc.)
Media and published sources	<ul style="list-style-type: none"> • Media (newspapers, radio, television) • Internet • Social Media (Facebook, Twitter, Viber etc)

4.3 Event Verification and Assessment

4.3.1 Verification

Events can be reported through various mediums including sms, telephone and media. All events must be noted in the *Figure 2: Event-Based Surveillance Reporting Form*. It is important to verify any event which is reported. Further information required for verification may be obtained by contacting other sources, i.e. hospitals, laboratories, schools. A decision will then need to be taken about further investigation and what actions should be taken.

4.3.2 Assessment

Once the event is verified, the assessment should be carried out by a team based on the available information and judge whether it an event of public health concern.

Assessment team may include:

1. surveillance focal point
2. A senior clinician from the atoll hospital or higher level
3. Atoll hospital public health unit in charge
4. Manager of health facility.
5. Where relevant, a professional from the relevant area of concern (e.g.: agriculture focal point, environment focal point)

A real or confirmed report does not mean, however, that the event is a potential risk to public health. If an event report meets one of the criteria in *section 4* of the event based surveillance form (*Figure 2: Event-Based Surveillance Reporting Form*), a response is triggered. Responding to an event is an integral part of event-based surveillance. Once an event is confirmed and is considered to be a potential risk to public health, the response can be organized from either the local or national level. During a response to an event, details of all decisions, requests for additional support, actions and implementation of control measures should be collected and archived as a reference for future outbreaks/event investigations.

4.3.3 Event assessment form

Figure 2: Event-Based Surveillance Reporting Form

Health Protection Agency		Form 007
Event# ____/20__		Ministry of Health Male' Republic of Maldives
EVENT-BASED SURVEILLANCE FORM		
1. Information about source of report (caller or informant details)		
a) What is your name?		b) What is your position?
c) If the report is second-hand information, what is the original source of information? (Name and contact information)		
2. Location of Event (specific location where the event took place)		
a) Atoll	b) Island	c) Other details
3. Description of the Event		
a) What do you want to report? (What happened/who is affected/ what are the symptoms)		
b) No of cases among children		c) No of deaths among children
d) No of cases among adults		e) No of deaths among adults
f) When did the problem begin?		
g) Is the problem ongoing? Yes or No (circle appropriately)		
h) What do you think is the cause of the event?		
i) What are the control measures being implemented?		
j) What support do you need from us?		
k) Is there any other information you would like to share with us?		
Thank You		
Name of the person collecting the information		
Designation		
Date:		
4. Assessment to be carried out by PUBLIC HEALTH UNIT TEAM to make Decision Making Assessment : if answer is YES to any question, a response is required		
a) Is the disease unusual or unexpected in this community?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
b) Could the disease have an impact on the international trade and travel?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
c) Could the suspected disease cause outbreaks with high potential for spread (e.g.: cholera, measles)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
d) Is there a higher than expected mortality and morbidity from the suspected disease?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
e) Is there a cluster of cases with similar symptoms?(eg: bloody diarrhea, hemorrhagic signs and symptoms)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
f) Could the disease be caused by contaminated, commercially available product (e.g.: food item)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
g) Is there a suspected transmission with in a health care setting (i.e. nosocomial transmission)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
h) If the event is non-human event (e.g. animal disease or chemical spill), does the event have known or potential consequences for human health?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Team who completed the assessment (including Facility /PHU)		Note: attach all details of response carried out with the form
Designation		
Date:		
Health Protection Agency Public Health Surveillance hotline: +960 3014 333 email: hpa@health.gov.mv		

4.4 Responding to an event

The mandate for outbreak investigation and response lies primarily with local and national public health authorities i.e HPA and Public Health Units. In specific circumstances (e.g. Events associated with a particular health facility), investigations may be initiated directly by affected island health facilities or atoll hospitals. Support from higher levels (e.g. HPA, WHO and/or other partners) occurs only upon notification of the event. The EBS Coordinator of Maldives will be Public Health Surveillance Section of the Health Protection Agency. HPA will follow up periodically with the relevant Public health units to obtain reports about the local response.

Effective, rapid and appropriate response is a fundamental part of event-based surveillance and all parties involved should respond immediately

4.5 Data collection

Once response to the event is completed, data must be entered into an excel sheet.

4.5.1 Sample data collection sheet

Unique ID	Atoll	Island	Date of reporting	Reported by	Date of event	Description of Event	Actions taken
E.g. 001/2014	HDH	KURINMBI	1 JAN 2014	PUBLIC	31 DEC 2013	Food poisoning after new year party. 30 people affected. 20 admitted.	Food poisoning sample taken send for testing. Prevention measures. active case finding
002/2014	HDH	Kulhudhufushi	20 June 2014	HCW	20 June 2014	Influenza like ill ness. Patients with SARI admission high	Testing carried out by HPA to identify if it is influenza.

Description of the event may include no of people affected, died (time , place, person) etc..

4.6 Analysis and Dissemination.

Event-based surveillance is an important tool for early warning. Therefore it is crucial to regularly disseminate EBS performance characteristics and findings back to reporters and other stakeholders. A monthly report must be send to health protection agency. Island health facilities will be compiling their summary event reports and atoll health facilities will be compiling the events of the atoll. Based on the reports provided Health Protection Agency will generate a summary EBS surveillance bulletin. This summary bulletin will be electronically shared with all health facilities andto relevant stakeholders who can receive e-mail. Bulletin will be the mode of feedback to all levels from Health Protection Agency, as routine feedback is essential to maintaining event-based surveillance systems. Without relevant and useful feedback people will stop reporting events.

4.6.1 Summary of data analysis

Indicator	Number	Percent
No of events reported	10	-
No. of events assessed	8	80%
No. of events confirmed	4	40%
No of events discarded (i.e false rumour)	4	40%
No. of ongoing investigations	1	10%
Source of reporting	Reported	No. of events (%)
	Hospital	2 (20%)
	Health Centers	3 (30%)
	Public	2 (20%)
	Community Leader	1 (5%)
	Community Institutions	1 (5%)
	NGOs	1 (10%)
	Media	1 (10%)

All true events must have a full report including all the actions taken.

4.6.2 Summary of health events captured

4.6.2.1 Summary EBS report for X.Atoll in 2011

Event	Source of information	Investigation/response involvement*	Outcome
Acute watery diarrhoea (1)	HCW	HC/Hospital/HPA/other agencies	No outbreak (false rumour)
Animal health (1)	Council	HC/Hospital/HPA/other agencies	Unverifiable (animal health authority's investigation report unavailable)
Bloody diarrhea (1)	Media	HC/Hospital/HPA/other agencies	Unverifiable
Acute respiratory illness (1)	NGO	HC/Hospital/HPA/other agencies	not determined
Haemorrhagic Fever (1)	Community	HC/Hospital/HPA/WHO/other agencies	Ebola Hemorrhagic Fever
Sudden Fainting (1)	School	HC/Hospital/HPA/other agencies	
Acute fever and rash (1)	HCW	HC/Hospital/HPA	Clinically suspected chickenpox; tested some samples for measles
Heavy Rain (1)	Community	HC/Hospital/HPA	Suspected diarrheal cases

4.7 Contact List

Organization	Name of Member	Contact Details	Email
Health Protection Agency	Ibrahim Nishan Ahmed	+960 7512240	nishan.ahmed@health.gov.m
	Public Health	+960 3014496	v
	Surveillance Section	+9603014333	
Add			

5 Reference

1- A Guide to Establishing Event-based Surveillance

http://www.wpro.who.int/emerging_diseases/documents/docs/eventbasedsurv.pdf

- Event-based surveillance in Papua New Guinea: strengthening an International Health Regulations (2005) core capacity

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3854102/>