



**Republic of the Philippines
Department of Health
OFFICE OF THE SECRETARY**



**Interim Guidelines
On the Surveillance of Hand, Foot and Mouth Disease (HFMD) and
Severe Enteroviral Disease**

This set of guidelines is issued as reference for all participating health agencies (DOH Central Offices, Regional Centers for Health Development, referral hospitals, etc.) and their local counterparts to enable the public appreciate, cooperate and participate with regards to public health surveillance requirements for Hand, Foot and Mouth Disease and Severe Enteroviral Disease.

Introduction

In July 2012, the World Health Organization (WHO) reported severely fatal Enterovirus-71 (EV71)-associated Hand, Foot and Mouth Disease in Cambodia affecting mostly children less than 3 years old. WHO encouraged Member States in the region to enhance HFMD surveillance at all levels of health care.

Thus, the **National Epidemiology Center (NEC) of the Department of Health** has now included HFMD and Severe Enteroviral Disease among the list of notifiable diseases under category 1 (immediately reportable within 24 hours of detection) of the Philippine Integrated Disease Surveillance and Response (PIDSR) system. In addition, the NEC also captures information related to clustering, outbreaks or deaths of HFMD in its event-based surveillance system.

General Principles

1. The aim of this surveillance is for early detection of HFMD and Severe Enteroviral Disease outbreak and for appropriate response when the extent and speed/spread of transmission of the disease among specific populations and in geographic areas is appropriately determined.
2. All suspected cases of HFMD and severe Enteroviral Disease shall be reported. Laboratory confirmation is not necessary to report these cases.
3. Designated Sentinel Hospitals for HFMD shall report all suspected cases and collect appropriate specimens for laboratory confirmation at the Research Institute for Tropical Medicine (RITM), which is the National Reference Laboratory for Human Enteroviruses.
4. Other hospitals with existing capacity for laboratory confirmation shall provide RITM with collected samples as part of Quality Assurance measures.

Objectives

1. To describe early epidemiological, virological and clinical characteristics of HFMD and Severe Enteroviral Disease
2. To establish mechanism for coordination among existing surveillance system in terms of case detection, confirmation, validation, investigation, reporting and feedback
3. To provide recommendations for preventive and control measures

Implementing Guidelines

The surveillance of HFMD and Severe Enteroviral Disease under the PIDSR will be implemented with the supervision of the NEC. However, in order to enhance the sensitivity of the system to detect early cases of HFMD and Severe Enteroviral Disease or signs of human-to-human transmission, the following activities should be simultaneously performed:

Core Surveillance Activities

1. Case Detection, Notification, and Reporting

- a. The NEC, based on current WHO guidelines and expert consensus, shall develop standard case definition for HFMD and Severe Enteroviral Disease.
- b. Disease surveillance coordinators (DSCs) shall report cases of unexplained acute febrile illness with papulovesicular and maculopapular rash among health workers who provide care for the patients.
- c. Disease surveillance coordinators shall report changes noted in the response to treatment or in the treatment outcome for those with severe signs and symptoms.
- d. All reports and rumors of HFMD and Severe Enteroviral Disease must be reported to the RESU, ESR and NEC for verification.
- e. Immediate reporting (within 24 hours) of HFMD and Severe Enteroviral Disease cases under PIDSR shall be pursued. All epidemiology and surveillance units (ESU) are required to make weekly zero reporting even if no cases are seen during the week.
- f. Reporting of HFMD and Severe Enteroviral Disease shall follow the described flow of notification for immediate notifiable disease in PIDSR (Annex A).

2. Case Investigation

- a. The case definition for suspected HFMD and Severe Enteroviral Disease are the following:

Suspected case of HFMD: Any individual, regardless of age, who develop acute febrile illness with papulovesicular or maculopapular rash on palms and soles, with or without vesicular lesion/ulcers in the mouth.

Probable case of HFMD: A suspected case that has not been confirmed by a laboratory, but is geographically (schools, community, etc.) and temporally (within 12 weeks) related to a laboratory-confirmed case.

Confirmed case of HFMD: A suspected case with positive laboratory result for Human Enteroviruses that cause HFMD.

Suspected case of Severe Enteroviral Disease: Any child less than ten (10) years of age with fever plus any severe signs and symptoms referable to central nervous system involvement, autonomic nervous system dysregulation or cardiopulmonary failure; or

rapid death in a child less than 10 years of age after presenting with fever and CNS involvement.

Confirmed case of Severe Enteroviral Disease: A suspected case of Severe Enteroviral Disease that has positive laboratory results for Enteroviruses.

- b. For procedure of specimen collection, refer to “Guidelines for Laboratory Confirmation of Suspected HFMD” (see attached RITM Guidelines).
- c. The disease surveillance officers of the Bureau of Quarantine at all points of entry shall be responsible for the preliminary assessment of a suspected case while the designated disease surveillance coordinators in the hospitals and other facilities shall be responsible for doing the preliminary assessment of suspected cases in their respective health care facility.
- d. The case investigation form shall be used for investigation of all HFMD and Severe Enteroviral Disease (Annex B). Disease surveillance coordinators, who are in-charge of case detection, reporting and investigation of HFMD and Severe Enteroviral Disease at their respective health facilities, shall facilitate the completion of CIF once alleged HFMD and Severe Enteroviral Disease is detected. In health facilities without designated DSCs, the attending health care provider shall facilitate the completion of CIF.
- e. The early stage of outbreak investigation of all suspected and confirmed enteroviral disease cases shall be conducted by Regional Epidemiology and Surveillance Unit (RESU), Provincial Epidemiology and Surveillance Unit (PESU), City Epidemiology and Surveillance Unit (CESU), and Municipal Epidemiology and Surveillance Unit (MESU) in coordination with NEC. Trained disease surveillance coordinators shall be involved in case investigation in case of widespread epidemic situation.
- f. All members of the investigation team shall be equipped with appropriate personal protective equipment (PPE) during investigation and contact tracing.

3. Data encoding, analysis and interpretation

- a. PIDSR software version 4 shall be used for encoding by all ESUs.
- b. ESUs and NEC shall facilitate daily analysis and interpretation of HFMD and Severe Enteroviral Disease data to determine clustering and changes in the epidemiology and mortality pattern associated with the occurrence of HFMD and Severe Enteroviral Disease in a particular geographic area, and reporting of these cases when they occur.

4. Laboratory and Epidemiological Confirmation

- a. The laboratory based HFMD and Severe Enteroviral Disease surveillance maintained by Research Institute for Tropical Medicine (RITM) in selected regions shall be utilized to facilitate the collection, storage and transport of specimen (e.g. throat swab, vesicle swab, rectal swab, stool specimen and cerebrospinal fluid) from suspected cases of HFMD and Severe Enteroviral Disease admitted from the sentinel hospitals in the region through the designated disease surveillance coordinator in coordination with the RESU.
- b. In regions without laboratory based HFMD and Severe Enteroviral Disease surveillance, the RESU staff shall be responsible in facilitating the specimen collection, storage and transport of specimens from suspected HFMD and Severe Enteroviral Disease cases.

Actual collection of specimens shall be done only by trained disease surveillance coordinators.

5. Support to Surveillance

- a. Administrative, logistics or supply officers shall ensure the availability of appropriate PPE aside from transportation and other provisions for the case investigation teams.

6. Feedback

- a. The RESU shall provide weekly monitoring of HFMD and Severe Enteroviral Disease to all DRUs and ESUs. This includes the following:
 1. Completeness of reporting (number of DRUs/ESU reports over the total number of DRUs)
 2. Timeliness of reporting by DRU (number of DRUs/ESU submits report on a weekly basis over total number of DRUs)
- b. Disease surveillance coordinators shall implement and exercise zero reporting and submit it to the next higher level even if no cases have been found in their respective DRUs. It is informing the next higher level that no cases of HFMD and Severe Enteroviral Disease were detected.
- c. Laboratory results shall be furnished to the cases through their attending health care providers. Copies of these results will be furnished also to the respective ESUs, NEC and OSEC.

7. Monitoring and Supervision

The regional surveillance staff should conduct at least monthly monitoring of all retained and other hospitals that directly report to RESU.

Implementing Mechanism

Roles and Responsibilities of the Following Offices

National Epidemiology Center

1. Assess all reported epidemics within 48 hours.
2. Provide support through specialized staff and logistical assistance during epidemic investigation and response.
3. Establish effective networking with other relevant government agencies at the national level and local level.
4. Provide direct operational link with senior health and other officials at the national and local levels to approve rapidly and implement containment and control measures.

5. Facilitate the dissemination of information and recommendations from DOH Central office and WHO regarding local and international public health events to the concerned agencies and institutions.
6. Facilitate the budget allocation for surveillance and response at the regional health offices.
7. Oversee the design and implementation of PIDSR.
8. Facilitate the budget allocation for laboratory surveillance:
 - a. Operations of laboratory surveillance
 - b. Operations of surveillance and response at the regional level

Bureau of Quarantine (BOQ)

1. The BOQ shall be responsible for entry screening and preliminary investigation of all suspected cases identified in all ports of entry and exit. These cases shall be reported within 24 hours to the corresponding RESU and NEC.
2. BOQ shall provide RESU the passenger manifest and other relevant information in situations where contact tracing is necessary.
3. Develops and ensures compliance to protocols and field operation guidelines on entry/exit management of persons, conveyances and goods in coordination with airport and port authorities.
4. Conducts surveillance in ports and airports of entry and sub-ports as well as the airports and ports of origin of international flights and vessels.
5. Monitors public health threats in other countries.
6. Provides effective networking and collaboration among the Bureau of Quarantine stakeholders.
7. Assist in the development and implementation of the integrated national epidemic preparedness and response plan.

National Center for Disease Prevention and Control (NCDPC)

1. Provides updates, technical advice and recommendations on the recognition, prevention and control of the above diseases.
2. Develop and implement the integrated national epidemic preparedness and response plan.
3. Organize the DOH Management Committee for the Prevention and Control of Emerging and Re-emerging Infectious Diseases.
4. Determine rapidly the control measures required to prevent domestic and international spread of disease.
5. Notify WHO when the assessment indicates that the event is a public health emergency of international concern (PHEIC).

Health Emergency Management Staff (HEMS)

1. Acts as the DOH coordinating unit and operations center for all health emergencies, disasters and incidents with potential of becoming an emergency.
2. Assist in the development and implementation of the integrated national epidemic preparedness and response plan.

Research Institute for Tropical Medicine (RITM)

As the national reference laboratory for polio and other enteroviruses:

1. The Research Institute for Tropical Medicine (RITM) will maintain laboratory - based Hand Foot and Mouth Disease and Severe Enteroviral Disease surveillance in selected regions of the country.
2. Provide laboratory results to the case through their attending health care providers, respective ESUs, NEC and Office of the Secretary of Health (OSEC).

Center for Health Development

1. Provide on-site assistance (e.g., technical, logistics, and laboratory analysis of samples) as requested to supplement local epidemic investigations and control.
2. Establish, operate and maintain a regional epidemic preparedness and response plan, including the creation of multidisciplinary/multisectoral teams to respond to events that may constitute a public health emergency of local and international concern.
3. Assess reported epidemics immediately and report all essential information to DOH central office.
4. Provide direct liaison with other regional government agencies.
5. Provide a direct operational link with senior health and other officials at the regional level.
6. Facilitate submission of weekly notifiable disease surveillance reports from public and private hospitals.
7. Provide technical and logistical assistance in the establishment of ESUs at the provincial/city/municipal health offices. Ensure the functionality of the regional disease surveillance and response system.
8. The Hospital Licensing Team at the CHDs shall track and monitor the compliance of public and private hospitals in the implementation of PIDSR as part of the requirements for renewals of license to operate. The team will inform the CHDs/PHOs/LGUs of activities taken against non-complying hospital institutions. Likewise, CHOs/MHOs/PHOs shall report to the CHDs hospitals and related facilities that fail to comply with the PIDSR reporting requirements. The regional director shall issue a regional order to enforce compliance.
9. Create Epidemic Management Committee (EMC) at the regional level.

Hospitals and Other Health facilities in Surveillance

1. Orient or re-orient hospital/health facility staff regarding mandatory disease reporting requirements, such as those for HFMD and Severe Enteroviral Disease.
2. Designate disease surveillance coordinators who will be responsible for preliminary investigation of suspected cases seen at the hospital or health facility, as prescribed in the PIDSR guidelines.
 - a. Designate disease surveillance coordinators shall Report suspected cases of HFMD and Severe Enteroviral Disease to their respective local health offices.
 - b. Other facilities (clinic, schools, etc.) without designated DSC, the attending health care provider shall report suspected cases of HFMD and Severe Enteroviral Disease to their respective local health offices.

Local Government Units

Provincial Health Office

1. Set up and maintain a functional provincial disease surveillance system equipped with the necessary resources and adequate local financial support. Financial support may come from the disaster, calamity or other appropriate funding sources as determined by the provincial government officials.
2. Collect, organize, analyze and interpret surveillance data in their respective areas through their ESU's.
3. Report all available essential information (e.g., clinical description, laboratory results, numbers of human cases and deaths, sources and type of risk) immediately to the next higher level.
4. Assess reported epidemics immediately and report all essential information to CHD and DOH central office.
5. Provide on-site assistance (e.g., technical, logistics, and laboratory analysis of samples) as requested to supplement local epidemic investigations and control.
6. Facilitate submission of immediately/weekly notifiable disease surveillance reports from public and private hospitals.
7. Establish, operate and maintain a provincial epidemic preparedness and response plan, including the creation of multidisciplinary/multisectoral teams to respond to events that may constitute a public health emergency of local and international concern.
8. Create Epidemic Management Committee (EMC) at the provincial level.

Municipal/City Health Office

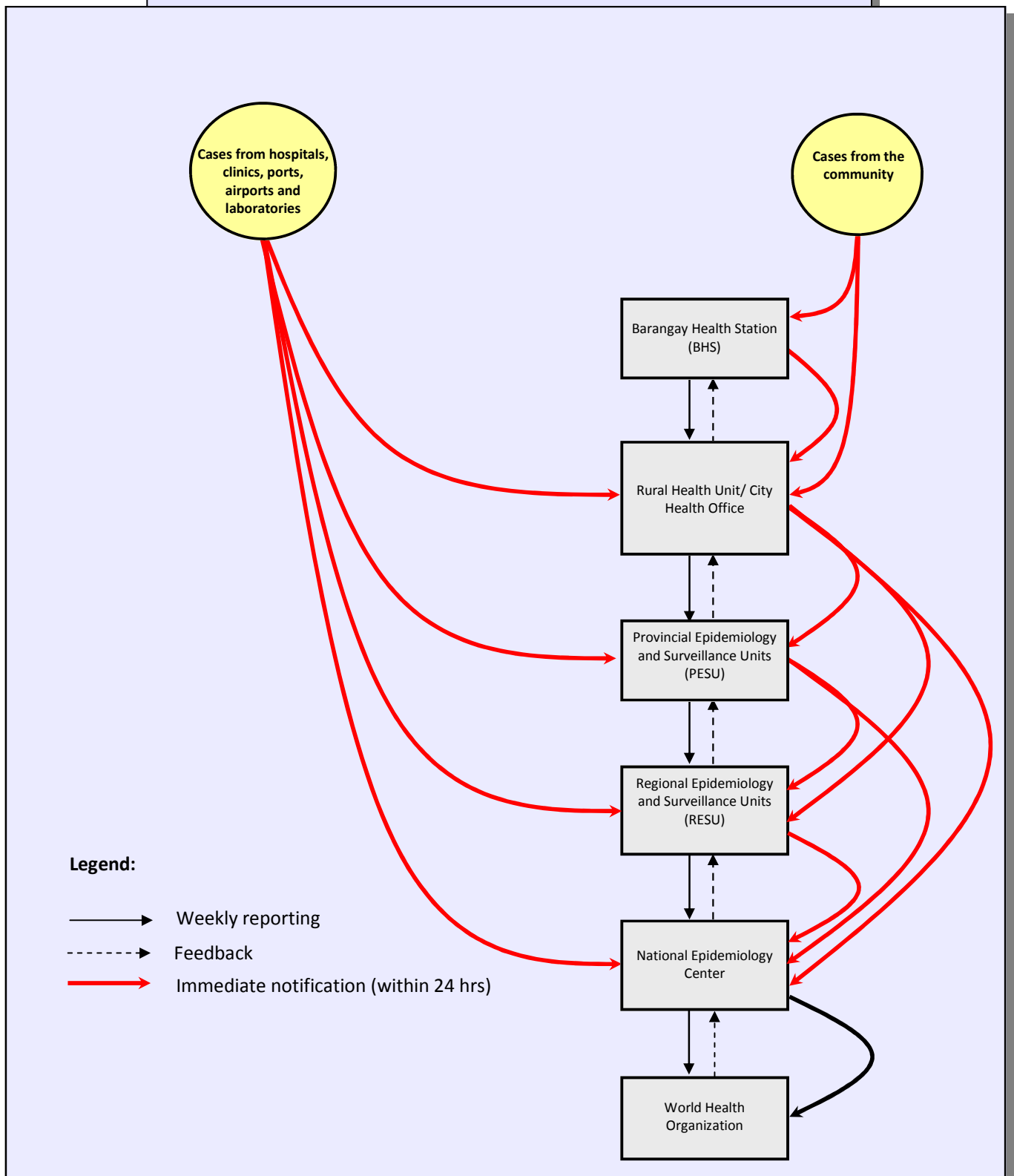
1. Set up and maintain a functional municipal/city/community disease surveillance system equipped with the necessary resources and adequate local financial support. Financial support may come from the disaster, calamity or other appropriate funding sources as determined by the municipal/city government officials. Collect, organize, analyze and interpret surveillance data in their respective areas.
2. Report all available essential information (e.g., clinical description, laboratory results, numbers of human cases and deaths, sources and type of risk) immediately to the next higher level.
3. Implement appropriate epidemic control measures immediately.

4. Establish, operate and maintain a municipal/city epidemic preparedness and response plan, including the creation of multidisciplinary/multisectoral teams to respond to events that may constitute a public health emergency.
5. Facilitate submission of immediately/weekly notifiable disease surveillance reports from public and private hospitals.


Philippine Health Insurance Corporation (PHIC)

1. The Philippine Health Insurance Corporation shall support the implementation of PIDSR in hospitals and private practitioners by using its accreditation authority and reimbursement of claims as a leverage to encourage compliance. A letter or memorandum from PHIC shall be issued to this effect.

Flow of Notification for Immediately Notifiable Diseases, Syndromes and Events




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Philippine Integrated Disease Surveillance and Response

Case Investigation Form

Hand, Foot and Mouth Disease and Severe Enteroviral Disease



Name of DRU:		Type: <input type="checkbox"/> RHU <input type="checkbox"/> CHO <input type="checkbox"/> Gov't Hospital <input type="checkbox"/> Private Hospital <input type="checkbox"/> Clinic	
Address:		<input type="checkbox"/> Gov't Laboratory <input type="checkbox"/> Private Laboratory <input type="checkbox"/> Airport/Seaport	

I. PATIENT INFORMATION

Patient Number	Patient's First Name	Middle Name	Last Name
Complete Address		Date of Birth: mm/dd/yy	Age
District		ILHZ:	<input type="checkbox"/> Days <input type="checkbox"/> Months <input type="checkbox"/> Years
Patient admitted? <input type="checkbox"/> Y <input type="checkbox"/> N	Date Admitted/ Seen/Consult	MM	DD
Date of Investigation:	Name of Investigator/s:	Date Onset of Illness	MM
			DD
			YY
		Contact Nos.:	

II. CLINICAL INFORMATION

Fever: <input type="checkbox"/> Y <input type="checkbox"/> N Date onset: ____/____/____ Rash: <input type="checkbox"/> Y <input type="checkbox"/> N Date onset: ____/____/____ <input type="checkbox"/> palms <input type="checkbox"/> fingers <input type="checkbox"/> soles of feet <input type="checkbox"/> buttocks <input type="checkbox"/> mouth ulcers Painful? <input type="checkbox"/> Y <input type="checkbox"/> N Characteristic: <input type="checkbox"/> maculopapular <input type="checkbox"/> papulovesicular	Other signs/symptoms (please tick) <input type="checkbox"/> Poor/loss of appetite <input type="checkbox"/> Body malaise <input type="checkbox"/> Sore throat <input type="checkbox"/> Nausea & vomiting <input type="checkbox"/> Difficulty of breathing <input type="checkbox"/> Acute Flaccid Paralysis <input type="checkbox"/> Meningeal Irritation Others, specify: _____	Are there any complications? <input type="checkbox"/> Y <input type="checkbox"/> N If YES, specify: _____ Working/Final Diagnosis
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III. EXPOSURE HISTORY

Is there a history of travel within 12 weeks to an area with ongoing epidemic of HFMD or EV Disease?	<input type="checkbox"/> Y <input type="checkbox"/> N
Are there other known cases in the community?	<input type="checkbox"/> Y <input type="checkbox"/> N
Where did exposure probably occur?	
<input type="checkbox"/> Day care	<input type="checkbox"/> Community
<input type="checkbox"/> Home	<input type="checkbox"/> School
	<input type="checkbox"/> Dormitory
	<input type="checkbox"/> HealthCare Facilities
	<input type="checkbox"/> Others, specify _____

IV. LABORATORY TESTS

Specimen	If YES, Date Collected	Date sent to RITM	Date received at RITM	Result: Positive, Negative, Not Done	Specify organism	Date of result
<input type="checkbox"/> Throat swab	____/____/____	____/____/____	____/____/____			____/____/____
<input type="checkbox"/> Vesicle swab	____/____/____	____/____/____	____/____/____			____/____/____
<input type="checkbox"/> Rectal swab	____/____/____	____/____/____	____/____/____			____/____/____
<input type="checkbox"/> Stool	____/____/____	____/____/____	____/____/____			____/____/____

V. CLASSIFICATION

<input type="checkbox"/> Suspected case of HFMD	<input type="checkbox"/> Suspected case of Severe Enteroviral Disease
<input type="checkbox"/> Probable case of HFMD	<input type="checkbox"/> Confirmed case of Severe Enteroviral Disease
<input type="checkbox"/> Confirmed case of HFMD	

VI. OUTCOME

<input type="checkbox"/> Alive	<input type="checkbox"/> Died
	Date died: ____/____/____

Hand, Foot and Mouth Disease and Severe Enteroviral Disease**CASE DEFINITION/CLASSIFICATION:**

Suspected case of HFMD: Any individual, regardless of age, who develop acute febrile illness with papulovesicular or maculopapular rash on palms and soles, with or without vesicular lesion/ulcers in the mouth.

Probable case of HFMD: A suspected case that has not been confirmed by a laboratory, but that is geographically and temporally related to a laboratory-confirmed case.

Confirmed case of HFMD: A suspected case with positive laboratory result for Human Enteroviruses that cause HFMD.

Suspected case of Severe Enteroviral Disease: Any child less than or equal to ten (10) years of age with fever with any severe signs and symptoms referable to central nervous system involvement, autonomic nervous system dysregulation or cardio-pulmonary failure.

Confirmed case of Severe Enteroviral Disease: A suspected case of Severe Enteroviral Disease that has positive laboratory results for Enteroviruses.

COMPLICATIONS ASSOCIATED WITH HFMD AND SEVERE ENTEROVIRUS DISEASE:

Aseptic Meningitis	Febrile illness with headache, vomiting and meningism associated with or more than 5-10 white cells per cubic millimeter in cerebrospinal (CSF) fluid, and negative results on CSF bacterial culture.
Brainstem encephalitis	Myoclonus, ataxia, nystagmus, oculomotor palsies, and bulbar palsy in various combinations, with or without MRI. In resource-limited settings, the diagnosis of brainstem encephalitis can be made in children with frequent myoclonic jerks and CSF pleocytosis.
Encephalitis	Impaired consciousness, including lethargy, drowsiness or coma, or seizures or myoclonus.
Encephalomyelitis	Acute onset of hyporeflexic flaccid muscle weakness with myoclonus, ataxia, nystagmus, oculomotor palsies and bulbar palsy in various combinations.
Acute Flaccid Paralysis	Acute onset of flaccid muscle weakness and lack of reflexes.
Autonomic Nervous System (ANS) dysregulation	Presence of cold sweating, mottled skin, tachycardia, tachypnea, and hypertension.
Pulmonary oedema/haemorrhage	Respiratory distress with tachycardia, tachypnea, rales, and pink frothy secretion that develops after ANS dysregulation, together with a chest radiograph that shows bilateral pulmonary infiltrates without cardiomegaly.
Cardiorespiratory failure	Cardiorespiratory failure is defined by the presence of tachycardia, respiratory distress, pulmonary oedema, poor peripheral perfusion requiring inotropes, pulmonary congestion on chest radiography and reduced cardiac contractility on echocardiography.