

Republic of the Philippines
Department of Health
OFFICE OF THE SECRETARY

April 7, 2014

DEPARTMENT MEMORANDUM

NO. 2014- 0112

**FOR: DOH BUREAUS, CENTER FOR HEALTH DEVELOPMENT
HOSPITALS AND ATTACHED AGENCIES, UNITS AND TEAMS
DESIGNATED TO WORK FOR THE PREVENTION AND
CONTROL OF DENGUE IN THE COMMUNITY**

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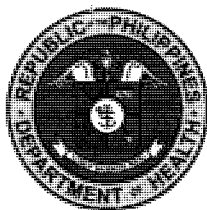
**SUBJECT: Technical Guidelines, Standards and other Instructions for Reference
in the Implementation of Sentinel-based Active Dengue Surveillance**

Whereas, Republic Act 3573 entitled "Law of Reporting of Communicable Diseases" requires all individuals and each facilities and health facilities to report notifiable diseases to local and national health authorities.

Whereas Resolution WHA 58.3 (2005) formally adopted the revised International Health Regulations (IHR) that further urged Member States to carry out surveillance at all levels or report events that may constitute a public health emergency of international concern and contribute fully to international health security.

Whereas, the Department of Health issued Administrative Order 2007-0036 establishing the Philippine Integrated Disease Surveillance and Response (PIDSRS) framework for reporting of notifiable diseases and other health events through the National Epidemiology Center (NEC), which is also the National Focal point for IHR 2005.

Due to the high concern over the increasing number of suspected Dengue cases reported though the disease sensors in the community such as hospitals, clinics, ports, airports, etc. and the potential clustering or outbreaks in the country, the DOH issues the Interim Technical Guideline, Standard and other Instructions for Reference in the Implementation of Sentinel-based Active Dengue Surveillance.



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Interim Guidelines No. 1
Interim Guidelines on the Sentinel-based Active Dengue Surveillance

This set of guidelines is issued as reference for all participating health agencies (DOH Central Offices, Regional Health Offices, referral hospitals, etc.) and their local counterparts to enable the public to appreciate, cooperate and participate with regards to public health surveillance requirements of the Sentinel-based Active Dengue Surveillance.

Introduction

Dengue Fever/Dengue Hemorrhagic Fever has emerged as a major public health problem in the past 20 years, with an increasing incidence and expanding geographical distribution in both the vector and the disease (Gubler, 2002). Increased human migration and travel, climate change, urbanization and social changes have all contributed to this resurgence. These factors will continue to increase in the future, thus, an effective prevention and control program needs to be in place in order to predict and prevent epidemics.

Having a strong and established surveillance system is a vital component of any Dengue prevention and control program since it may provide necessary information for risk assessment and management, especially during epidemic response, and also program monitoring and evaluation.

Dengue is considered a Category II notifiable disease in the syndromic based Philippine Integrated Disease Surveillance and Response (PIDSRS) of the country lead by the National Epidemiology Center (NEC). Dengue cases from health facilities nationwide are reported to the NEC on a weekly basis. However, laboratory confirmation of these cases has been limited. An active surveillance obtained from a smaller percentage of cases on a sentinel basis may provide a more detailed serotype-specific incidence data. Using the data from both systems, disease burden estimates could be determined.

The Research Institute for Tropical Medicine (RITM) served as the National Reference Laboratory for Dengue and other arboviruses together with NEC has started laboratory confirmation of Dengue cases in 2008, thus providing the serotype incidence over the years. However, efforts are needed to enhance and strengthen the collection of samples from these cases such that it may provide the true serotype incidence in the country. Also this system will track serotype shift in a specific area thus providing insight of a pending outbreak.

General Principles

1. The Sentinel-based Active Dengue Surveillance of PIDSR shall be faithful to the spirit of decentralization and recognize the vital role of local government units on all matters related to health.
2. The Sentinel-based Active Dengue Surveillance of PIDSR shall build on the strengths and learn from the weaknesses of existing disease surveillance systems.
3. The Sentinel-based Active Dengue Surveillance of PIDSR shall draw its strength from laboratory confirmation of reported dengue cases.
4. The Sentinel-based Active Dengue Surveillance of PIDSR shall maintain the privacy and confidentiality of patient's information.

Objectives

1. To determine the Dengue serotype incidence in a specific area in order to predict impending outbreaks.
2. To monitor trends in the Dengue serotype distribution and shift
3. To provide information for early detection of pending or possible outbreak
4. To provide geographical representative serotype data

Implementing Guidelines

The active sentinel-based Dengue surveillance will be implemented together with the syndromic reporting of Dengue through PIDSR with the supervision of the NEC, the following activities should be simultaneously performed:

- a. All suspected cases of Dengue shall be reported to NEC on a weekly basis following the usual PIDSR system of reporting.
- b. The designated sentinel hospitals below shall report all Dengue suspected cases and collect specimens from a percentage of these cases for laboratory confirmation and serotyping to RITM.

Table 1. Designated Sentinel Sites for Proposed Sentinel-based Active Dengue Surveillance

Region	Clusters	Sentinel Site	SAMPLES/WEEK	SAMPLES/MONTH	SAMPLES/YEAR
1	Ilocos	Ilocos Training and Regional Medical Center	5	20	240
2	Cagayan Valley	Cagayan Valley Medical Center	5	20	240
3	Central Luzon	Jose B. Lingad Memorial Medical Center	5	20	240
4A	CALABARZON	Batangas Regional Hospital	5	20	240
4B	MIMAROPA	Ospital ng Palawan	5	20	240
5	Bicol	Bicol Medical Center	5	20	240
6	Western Visayas	Western Visayas Regional Medical Center	5	20	240
7	Central Visayas	Vicente Sotto Memorial Medical Center	5	20	240
8	Eastern Visayas	Eastern Visayas Medical Center	5	20	240
9	Western Mindanao	Zamboanga City Medical Center	5	20	240
10	Northern Mindanao	Mayor Hilarion Regional and Training Hospital	5	20	240
11	Southeast Mindanao	Southern Philippines Medical Center	5	20	240
12 / ARMM	Southern Mindanao	Cotabato Regional Medical Center	5	20	240
12	Southern Mindanao	General Santos City Hospital	5	20	240
CAR	Cordillera	Baguio General Hospital and Medical Center	5	20	240
CARAGA	CARAGA	CARAGA Regional Hospital	5	20	240
NCR	Metro Manila Cluster 1	Valenzuela Medical Center	5	20	240
NCR	Metro Manila Cluster 2	Quirino Memorial Medical Center	5	20	240
NCR	Metro Manila Cluster 3	San Lazaro Hospital	5	20	240
NCR	Metro Manila Cluster 4	Ospital ng Muntinlupa	5	20	240
Total samples			100	400	4800

Core Surveillance Activities

1. Case Detection, Notification, and Reporting

- a. Disease surveillance coordinators (DSCs) or Disease Surveillance Advocates (DSA) shall detect suspected Dengue fever cases (with or without warning signs) PIDSR using the usual means of reporting.
- b. Reporting of Dengue fever shall follow the described flow of notification for weekly reporting of notifiable disease in PIDSR (Annex B).

2. Case Investigation

- a. All dengue cases shall be reported and investigated using the new standard case definition for Dengue:

Dengue without Warning signs

Suspect

Person with acute febrile illness of 2-7 days duration plus two of the following: headache, body malaise, myalgia, arthralgia, retro-orbital pain, anorexia, nausea, vomiting, diarrhea, flushed skin, rash (petechial, Herman's sign).

Probable

A suspected case and with a Laboratory test result of a, CBC with leucopenia with or without thrombocytopenia and/or a positive Dengue NS1, antigen test or dengue IgM antibody test

OR A suspected case and with leucopenia with or without thrombocytopenia and/or positive Dengue NS1, antigen test or dengue IgM antibody test

Confirmed

A suspected case with positive results for:

- a. Viral culture isolation, and/or
- b. Polymerase Chain Reaction (PCR)

Dengue with Warning Signs

Person with acute febrile illness of 2-7 days duration plus any one of the following:

- Abdominal pain or tenderness/
- Persistent vomiting/
- Clinical signs of fluid accumulation/
- Mucosal bleeding/
- Lethargy, restlessness/
- Liver enlargement, and/or
- Laboratory: increase in Hct and/or decreasing platelet count.

Severe Dengue

A person with acute febrile illness of 2-7 days duration and any of the clinical manifestations for dengue with or without warning signs, plus any of the following:

- a. Severe plasma leakage leading to:
 - Shock, and/or
 - Fluid accumulation with respiratory distress,
- b. Severe bleeding, and/or
- c. Severe organ impairment:
 - Liver: AST or ALT >1000,
 - CNS: e.g. seizures, impaired consciousness,
 - Heart: e.g. myocarditis, and/or
 - Kidneys: e.g. renal failure.

3. Laboratory and Epidemiological Confirmation

- a. The active laboratory based Dengue surveillance, maintained by Research Institute for Tropical Medicine (RITM) in sentinel hospitals in all regions, shall be utilized to facilitate the collection, storage and transport of specimen from suspected cases admitted to the sentinel through the designated DSC in coordination with the RESU.
- b. A total of **5 samples will only be collected for each sentinel hospital per week**. The sentinel hospital in coordination with the DSA, DSC, and the RESU will set the collection days.
- c. The DSC will coordinate with the RESU for the transport of these samples to RITM **once a week**.

4. Feedback

- a. The RESU shall provide weekly monitoring of Dengue cases to all DRUs and ESUs. This includes the following:
 - i. Completeness of reporting (number of DRUs/ESU reports over the total number of DRUs)
 - ii. 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 Dengue were detected.
- c. RITM will provide the Dengue serotype data electronically to the RESU on a weekly basis in a form of a transmittal.
- d. RITM will also provide summary of the results electronically to the Dengue Program Manager on a weekly basis.
- e. RITM shall upload these results in a secured webpage for easy access to defined stakeholders.
- f. The RESU shall incorporate these results to their respective PIDSR database for submission to NEC.
- g. The RESU will provide the serotype results to their respective DRUs on a weekly basis.

5. Monitoring and Supervision

- a. The regional surveillance staff together with RITM staff and RESU shall conduct at least annual monitoring of all sentinel hospitals.
- b. The RESU shall monitor the reporting of Dengue cases in these sentinel hospitals

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. Provide quarterly serotyping results through the PIDSR Unit to WHO country office.
6. Facilitate the budget allocation for surveillance and response at the regional health offices.
7. Oversee the design and implementation of PIDSR at the regional, provincial and local levels.
8. Facilitate the budget allocation for laboratory surveillance:
 - a. Operations of laboratory surveillance
 - b. Operations of surveillance and response at the regional provincial, and local level

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.

Research Institute for Tropical Medicine (RITM)

As the National Reference Laboratory for Dengue and other arboviruses:

1. Provide guidelines and training on the proper collection, handling, transport and storage of specimens on the designated sentinel site.
2. Detect Dengue and determine the serotypes circulating in a specific area.
3. Provide serotyping and genotype results to respective DRU through the RESU on a weekly basis.
4. Provide serotyping data to Philippine Integrated Disease Surveillance and Response Unit of National Epidemiology Center and Dengue Program Manager of NCDPC.
5. Provide on-site assistance (e.g., technical, logistics, and laboratory analysis of samples) for the designated sentinel sites (see Table 1).

Regional Health Offices

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. Facilitate submission of weekly notifiable disease surveillance reports from public and private hospitals.
6. 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.

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

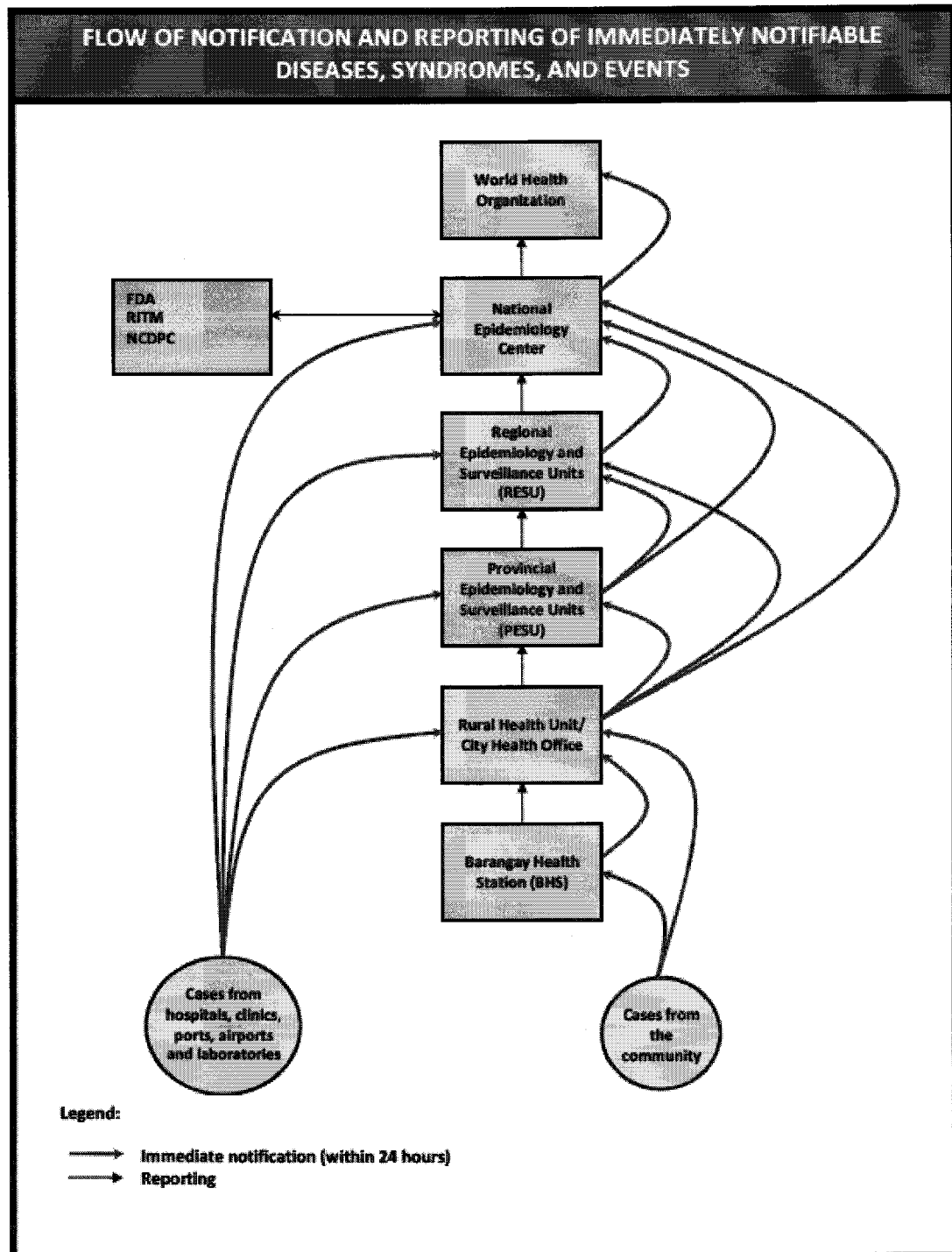
1. Set up and maintain a functional municipal/city/community disease surveillance system equipped with the necessary resources and adequate local financial support. Financial support may come from the disaster, calamity or other appropriate funding sources as determined by the municipal/city government 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.

Designated Sentinel Sites for Proposed Sentinel-based Active Dengue Surveillance

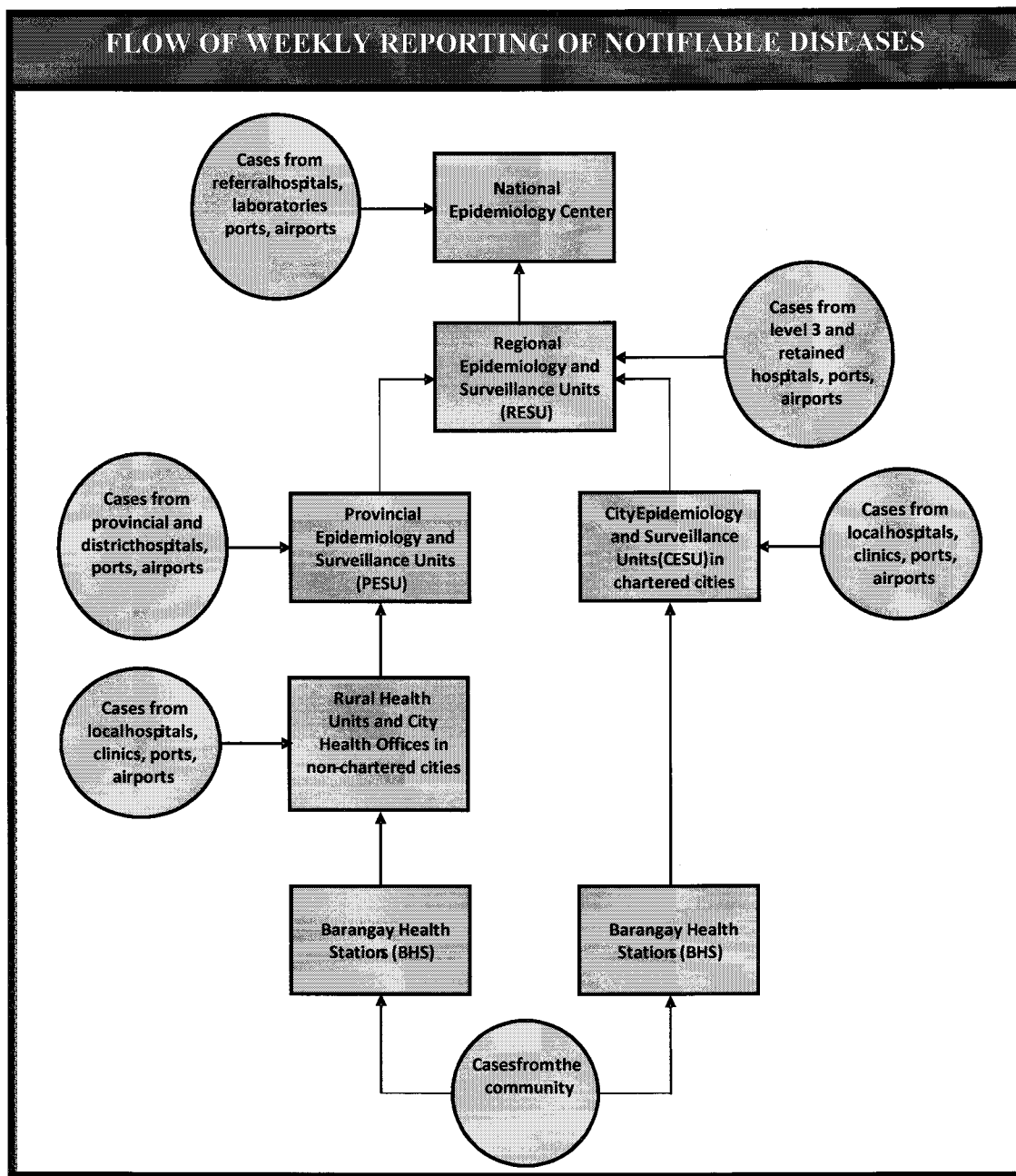
1. Orient or re-orient hospital/health facility staff regarding mandatory disease reporting requirements, such as those for Dengue.

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.
3. Orient or reorient disease surveillance coordinators or infection control nurses on the case definition of Dengue and the proper filling-up of forms.
4. Facilitates timely submission of dengue specimen/samples to the Regional Health Office as stipulated in Table 1.
5. Maintain and continue zero-reporting. Zero reporting is the report made by the DSCs to the next higher level even if no cases have been found in their respective sentinel hospital. It is a way of informing the next higher level that no cases were detected for the particular day or week.
6. The DSC shall be responsible for submitting the PIDSR forms from the city or municipality to the provincial health office either in electronic form or paper copy of the PIDSR forms. The DSO may send the electronic file by email simultaneously to the PHO,CHD and DOH-NEC.

Annex A – Flow of Notification and Reporting of Immediately Notifiable Diseases, Syndromes, and Events



Annex B – Flow of Weekly Reporting of Notifiable Diseases



Annex C – Flow of Reporting of Dengue Cases from Designated Sentinel Sites

