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EXECUTIVE ORDER NO. JS2026-13

AN ORDER ADOPTING THE PHILIPPINE INTEGRATED DISEASE SURVEILLANCE AND RESPONSE (PIDSAR) AS TECHNICAL GUIDELINES/MANUAL OF OPERATIONS ON EPIDEMIOLOGY AND SURVEILLANCE SYSTEM IN THE MUNICIPALITY OF MARILAO, PROVINCE OF BULACAN

WHEREAS, Section 13, Article X of the 1987 Constitution states that "Local Government Units may group themselves, consolidate or coordinate their efforts, services and resources for purposes commonly beneficial to them in accordance with Law."

WHEREAS, the RA 11223 or otherwise known as the Universal Health Care Act of 2019 Implementing Rules and Regulations, Rule IV Section 17 states that Health Services shall be classified as population- based health services if they fulfill any of the following criteria; 17.1.a. intended to be received by populations or identified groups of people, of which outcomes contribute to the general public health, safety and protection and 17.1.b Rendered in response to a public health emergency or disaster or any circumstance of equal magnitude, such as diseases for elimination, that has affected, or can potentially affect a population.

WHEREAS, Section 17.3.b of UHC IRR requires Accurate, sensitive and timely Epidemiologic Surveillance Systems, which refer to the continuous systematic collection, analysis, interpretation, and timely dissemination of Health data for Planning, implementation, and evaluation of Public I health Programs. in accordance with Section 31 and 36 of IRR.

WHEREAS, the Manual of Procedures (PIDSAR) describes in detail the integrated approach of disease surveillance and response and will serve as a practical guide to all who will implement, monitor and support the PIDSAR. All disease surveillance coordinators in disease reporting units from hospitals, clinics, rural health units, city health offices, and staff be guided by this manual in the management and implementation of their surveillance systems. Likewise. communicable disease program managers and managers of the expanded Program on Immunization at the national and local levels, members of the epidemic investigation and control team, epidemic management committee at the provincial and regional levels, health emergency management staff, medical doctors and nursing personnel, and community health volunteers will find this manual as a useful reference.

WHEREAS, the Philippine Integrated Disease Surveillance and Response (PIDSAR) System was established to improve the current disease surveillance systems in the Philippines and to comply with the 2005 IHR call for an urgent need to adopt an integrated approach for strengthening the epidemiologic surveillance and response system of each member nation. PIDSAR envisions the integration of all surveillance and response activities at all levels. This integration will provide a more rational basis for decision making and implementing public health interventions that effectively respond to priority diseases and events. The Focus of PIDSAR is to strengthen the capacity of local government units for early detection and response to epidemics. It emphasizes a standardized proactive nationwide approach to outbreak detection, prevention and control from the community up to the national level. It harmonizes existing systems and synchronizes training, manpower deployment, laboratory and financial support from all levels.

NOW, THEREFORE. I, ATTY. JEMINA M. SY, Municipal Mayor of the Municipality of Marilao, Province of Bulacan, by the virtue of the people vested in me by law, do hereby order the following:





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SECTION 1. INTRODUCTION TO PIDSR

Disease surveillance is recognized as the cornerstone of public health decision-making and practice. Surveillance data provide information which can be used for priority setting, policy decisions, planning, implementation, resource mobilization and allocation, prediction and early detection of epidemics. A surveillance system can also be used for monitoring, evaluation and improvement of disease prevention and control programs. Also, the surveillance system generates data that is helpful to the Public Health Officials in understanding the existing and emerging infectious and non-infectious diseases. Without these quality data, interventions may become misguided and wasteful. With the functional surveillance and proper understanding of health problem it will not be difficult to ameliorate the health issue. The six core functions of public health surveillance must be implemented regularly to all Epidemiology Surveillance Unit for us to monitor and detect new disease that threatens global health security and to our community. There is a need to strengthen disease surveillance and response system in the Philippines. The revised International Health Regulations (IHR), adopted by the World Health Assembly in May 2005, gives further impetus to this issue. Strengthening surveillance and response systems starts with developing policies and strategies that would make the system more efficient and effective. In order to achieve this, the Philippine Department of Health has adopted an integrated approach to surveillance of priority communicable diseases and conditions. This approach aims at coordinating and streamlining all surveillance activities and ensuring timely provision of surveillance information for action. The PIDSR manual defines and discusses the various steps of an integrated disease surveillance and response process, from collecting data that will help to identify problems, through data analysis that leads to an appropriate response, to evaluating and improving the response and the system as a whole.

- a. Purpose of the manual of procedures
- b. Integrated approach to disease surveillance and response
- c. Philippine Integrated Disease Surveillance and Response (PIDSR) system
- d. Policies that support PIDSR
- e. Scope, goal and objectives of PIDSR
- f. Basic features and the conceptual framework of PIDSR
- g. Priority disease, syndromes and conditions targeted for surveillance

SECTION 2. ROLES AND RESPONSIBILITIES

2.1 DEPARTMENT OF HEALTH

2.1.1 National Epidemiology Center

- a. Assess all reported epidemics within 48 hours.
- b. Notify WHO when the assessment indicates that the event is a public health emergency of international concern (PHEIC).
- c. Determine rapidly the control measures required to prevent domestic and international spread of disease.
- d. Provide support through specialized staff and logistical assistance during epidemic investigation and response.
- e. Establish effective networking with other relevant government agencies at the national level and local level, including the National PhilHealth office.
- f. Provide direct operational link with health officials at the national and local levels for immediate approval and implementation of containment measures.
- g. 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.
- h. Initiate the development and implementation of the integrated national epidemic preparedness and response plan.





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- i. Facilitate or expedite the budget allocation for surveillance and response at the regional health offices.
- j. Oversee the design and implementation of PIDSRS.
- k. Provide surveillance feedback to a regional level.
- i. Maintain the National PIDSRS database.

2.1.2 Bureau of Quarantine

- a. 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.
- b. 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.
- c. Monitors public health threats in other countries.
- d. Provides effective networking and collaboration among the Bureau of Quarantine stakeholders.
- e. Assist in the development and implementation of the integrated national epidemic preparedness and response plan.

2.1.3 National Center for Disease Prevention and Control

- a. Provides updates, technical advice and recommendations on the recognition, prevention and control of diseases.
- b. Assist in the development and implementation of the integrated national epidemic preparedness and response plan.
- c. Organize the DOH Management Committee for the Prevention and Control of Emerging and Re-emerging Infectious Diseases.

2.1.4 Health Emergency Management Staff

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

2.1.5 Center for Health Development

- a. Provide on-site assistance (e.g., technical, logistics, and laboratory analysis of samples) as requested to supplement local epidemic investigations and control.
- b. 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.
- c. Assess reported epidemics immediately and report all essential information to DOH central office.
- d. Provide direct liaison with other regional government agencies.
- e. Provide a direct operational link with senior health and other officials at the regional level.
- f. Facilitate submission of weekly notifiable disease surveillance reports from public and private hospitals.
- g. Provide technical and logistical assistance in the establishment of ESUs at the provincial/city/municipal health offices. (See Annex 2: Guide in the Establishment and/or Strengthening Of Epidemiology And Surveillance Units)
- h. Ensure the functionality of the regional disease surveillance and response system.
- i. The Hospital Licensing Team at the CHDs shall track and monitor the compliance of public and private hospitals in the implementation of PIDSRS 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 PIDSRS reporting requirements. The regional director shall issue a regional order to enforce compliance.





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- j. Create Epidemic Management Committee (EMC) at the regional level.

2.2 LOCAL GOVERNMENT UNITS

2.2.1 Provincial Health Office

- a. 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. (Sec Annex 2: Guide In The Establishment and/or Strengthening Of Epidemiology And Surveillance Units)
- b. Collect, organize, analyze and interpret surveillance data in their respective areas.
- c. 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.
- d. Assess reported epidemics immediately and report all essential information to CHO and DOH central office.
- e. Provide on-site assistance (e.g., technical, logistics, and laboratory analysis of samples) as requested to supplement local epidemic investigations and control.
- f. Facilitate submission of weekly notifiable disease surveillance reports from public and private hospitals.
- g. 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.
- h. Create Epidemic Management Committee (EMC) at the provincial level.

2.2.2 Municipality/City Health Office

- a. 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. (See Annex 2: Guide in The Establishment and/or Strengthening Of Epidemiology And Surveillance Units)
- b. Collect, organize, analyze and interpret surveillance data in their respective areas.
- c. 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.
- d. Implement appropriate epidemic control measures immediately.
- e. 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.
- f. Facilitate submission of weekly notifiable disease surveillance reports from public and private hospitals.

2.3 Philippine Health Insurance Corporation (PhilHealth or PHIC)

- a. The Philippine Health Insurance Corporation shall support the implementation of PIDS in hospitals and private practitioners by using its accreditation authority and reimbursement of claims as a leverage to encourage compliance.

2.4 DOH Representative

A DOH representative ensures that the roles and functions of the CHD are being implemented in his/her assigned municipality/city. as follows:

1. Planner
2. Advocate
3. Technical assistance provider





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4. Resource mobilize
5. Evaluation
6. Inter-agency and inter-sectoral collaborator

SECTION 3. IDENTIFYING CASES

3.1 Using Standard Case Definitions for diseases, syndromes and events under surveillance

- A standard case definition for surveillance is a set of criteria that is used to determine if a person has a particular disease, syndrome or condition and if the case should be included in reporting and investigation.
- Using the same case definition throughout the entire surveillance system allows data from all reporting units to be compared consistently and ensures accurate tracking of particular diseases, syndromes or conditions.
- The DRUs should strictly use the standard case definitions for each of the notifiable diseases, syndromes or conditions. This is to ensure a consistent and accurate identification of cases throughout the system.
- Cases are further classified to indicate whether cases are suspect, probable or confirmed. These definitions were designed for surveillance purposes only and are not intended for use in managing cases nor to indicate intention to treat.
- Note that Case definitions are not sufficient for establishing a medical diagnosis and should not be relied upon to initiate therapy.
- A 3-tiered system with the following levels is used:
 - **Suspected case:** indicative clinical picture without being a confirmed or probable case
 - **Probable case:** clear clinical picture, or linked epidemiologically to a confirmed case; Note: A "case with an epidemiological link" is a case that has either been exposed to a confirmed case, or has had the same exposure as a confirmed case (e.g., eaten the same food, stayed in the same hotel, etc.).
 - **Confirmed case:** verified by laboratory analysis. Note: The classification on these different levels might vary according to the epidemiology of the individual diseases.
- Unless specifically stated, only symptomatic cases are to be reported. Asymptomatic infections are to be regarded as cases, however, if the infection has therapeutic or public health implications.

3.2 Where do we expect to see cases?

3.2.1 Disease Reporting Units (DRUs)

- Case detection will be done by the Disease Reporting Units (DRUs) which are the following:
 - Barangay Health Stations
 - Rural Health Units
 - MHO/CHO
 - Local hospitals (district hospitals, provincial hospitals, regional hospitals)
 - Private Clinics
- The DRUs are expected to:
 - Use standard case definitions to identify notifiable and immediately notifiable diseases or syndromes in inpatient and outpatient services, and community reports.
 - Record Information about suspected cases in clinic registers.
 - Use local laboratory capacity to diagnose suspected cases.
 - Use standard protocols to process laboratory specimens.
 - Collect and transport clinical specimens for laboratory investigation.
 - Update List of DRUs in the area.
- List of DRUs should be updated annually to determine status of report submission at every level of health facility. This will further validate increase or decrease in the number of cases reported.





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3.3 Who are our partners in detecting and reporting cases?

3.3.1 Disease Reporting Advocates (DRA)

- Disease Reporting Advocates are health workers and other individuals who have attended orientation on the PIDSRS and committed to actively participate in reporting. They can be any of the following:
 - Community leaders - e.g., Barangay Captain, Tribal Leader
 - Barangay Health Worker
 - Faith Healer/Traditional Healer
 - Private Practitioners
- DRAs will report cases of notifiable diseases detected in their areas to the DRU. Referral to report these cases is possible when: A member of the community reports a single suspect case, a cluster of deaths and or an unusual health event in the community. - A school has increasing number of absentees due to similar signs and symptoms. - Attendees of a festival or any gathering become ill with similar signs and symptoms. - A member of the community reports on information obtained from the radio, television and newspaper of a rare or unexplained health event in the area.
Important initial information about the case the ORA should report to facilitate the investigation of the DSC should include:
 - Complete name, address and type of the ORU where the patient was seen or admitted
 - Patient's name. If neonatal tetanus is reported, also record the name of the mother
 - Patient's age and/ or date of birth - Patient's gender
 - Patient's current complete address (if possible, get landmarks or sketch)
 - How to contact the patient
 - Date patient sought consult to the DRU or date of admission
 - Date of the onset of illness
 - Patient's diagnosis/ condition
 - Name of the DRA who made the report - How to contact the reporting ORA
 - Date the report was received
- Obtain information from the patient, guardian, watcher, attending physician and/or nurse and from available records at the DRU. Since most patients may be too young to answer, ask family members or guardian to provide needed information, particularly about the patient's symptoms, immunization and travel history.
- The health worker who conducted the investigation and completed the PIDSRS forms should record his or her name and the date the form was completed and sent to the next higher level.
- Make several copies of the completed PIDSRS forms so that one copy is left with the DRU, send one copy for the laboratory (e.g., if laboratory confirmation is required) along with the required specimen, and one for submission to the next higher level.
- The DSC and the DSO should ensure that only true cases are investigated and the process of case investigation is complete and conforms to the standard procedures as stated in the manual of operation.
- There are 3 types of PIDSRS forms:
 1. Weekly Notifiable Diseases Report Summary Page - It serves as the summary table for the weekly reporting of notifiable diseases. It also shows the category and frequency of reporting of all the notifiable disease included in the PIDSRS. (See Annex 3)
 2. Case Investigation Forms - It is a disease specific investigation form that should be filled up by the DSC during case investigation diseases/syndromes under Category I. (See Annex 4)
 3. Case Report forms- It is a disease specific report form that should be filled up by the DSC for diseases/syndromes under Category II. (See Annex 5)

3.4.2 How to fill up PIDSRS Forms

Information gathered during the investigation process will lose its value if not recorded in the standard PIDSRS forms. A specific notifiable disease has a corresponding investigation/reporting form that will be used for the case-based investigation. Each form





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contains questions that are disease specific; hence, it is important for the investigator to check if he or she has the correct form before proceeding with the investigation. All the PI DSR forms are self-explanatory, easy to understand and simple to follow. In filling up the forms, it is essential to do the following:

- Write legibly
- Ask all the questions written in the case investigation form or case report form
- Ask the question clearly and understandable
- Don't leave blanks
- Read and review the forms before leaving the DRU to avoid any inconveniences in the future

3.5 How can we ensure quality data collection?

- Efforts to ensure the quality of the data collected should be a concern at all levels. The following are some measures that can be adopted to assure data quality:
 - All staff (midwives, nurses, med-techs, etc.) involved in data collection shall be trained in completing the forms using the standardized clinical case definitions.
 - All staff (DSC and DSO) involved in collecting the PIDS forms from the barangay and municipal levels and other data reporting units shall be primarily responsible for the conduct of quality assurance checks of reports coming from lower levels. Facilities and staff submitting faulty reports shall be followed up and remedial measures introduced as appropriate.
 - Health managers at all levels shall use regular meetings, monitoring visits, purposive consultative meetings and conferences as opportunities to emphasize the importance of data quality.
 - Random sampling of CIF/CRFs should be done to check for accuracy and completeness of data.

3.6 Laboratory Diagnosis or Surveillance Diseases

- Ideally, confirmatory determination of the diagnosis of cases during routine surveillance should be performed using standardized laboratory methods. As much as possible, specimen should be properly collected and brought to qualified laboratories even if the case consulted only at rural health units and is not seen at hospital facilities.
- During an outbreak, specimen collection for laboratory diagnosis should be a mandatory activity for the investigating team. DSOs must ensure that specimens are brought to diagnostic laboratories.
- Specimen need not be collected from every suspect case during an outbreak. Only a few positive samples may be needed to diagnose an outbreak. Epidemiologic linkage may then be used to confirm the other cases.
- Where no diagnostic procedure was conducted on specimen from cases that are in accordance with surveillance case definition standards, these cases shall remain classified as suspect cases.
- The specimen collection kits of certain priority diseases (e.g., AFP, measles, and cholera) must be readily available at the regional and provincial levels. Whether during routine surveillance or outbreak investigations, the DSCs should facilitate the collection and transport of specimen, with technical assistance provided by the DSOs. The laboratory results should be given to the DSOs and DSCs.
- The DSOs should have a list of laboratories in their respective regions or provinces that perform certain laboratory procedures for guidance.
- Specimens may be brought to tertiary laboratories that perform the following tests:
 1. Bacteriology culture and typing
 - a. Cholera
 - b. Diphtheria
 - c. Meningococcal disease
 - d. Pertussis
 - e. Typhoid and paratyphoid fever





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2. Serological tests
 - a. Hepatitis A
 - b. Hepatitis B
3. Clinical microscopy
 - a. Malaria
 - b. Amebic dysentery
- Specialized laboratories are reference diagnostic laboratories for the following diseases/syndromes or conditions:
 1. RITM
 - a. Measles
 - b. Dengue
 - c. AFP / Poliomyelitis
 - d. ILI / Human Avian Influenza
 - e. SARS
 - f Rota Virus
 - g. Japanese Encephalitis
 - h. HFMD
 - i. Chikungunya
 2. SACCL
 - a. STI / HIV / AIDS
 3. UP-NPMCC
 - a. Chemical Poisoning
 4. BFAD, BFAR, DOST
 - a. Food samples for Food-borne diseases

- Laboratories are encouraged to perform diagnostic procedures on other surveillance diseases such as rabies, tetanus, leptospirosis, PSP, etc.
- Microscopy for malarial smears and stool analysis may be done at the rural health units with trained microscopists.
- Serological tests for typhoid fever (e.g. Widal test and Typhidot) may be used only for presumptive diagnosis. It should not be used as a confirmatory diagnostic tool for typhoid. Hence, cases diagnosed using such method will remain classified as suspect cases.
- Human rabies cases are basically diagnosed clinically on persons with a history of animal bites. The biting animal may be sacrificed with its head decapitated and brought to any laboratory (e.g., RITM, DA-BAI, DA-RADDL) that tests for the presence of negri bodies in the animal brain.
- For food poisoning outbreaks, food samples should also be collected in separate containers and brought to a laboratory that performs specific analytic tests of the samples.
- Bacteriological tests for water, especially during suspected water-borne outbreaks, should be conducted in reference water laboratories located in respective regional or local levels. However, water tests for coliforms using commercially-available kits may also be utilized by the DRU.

3.7 What specimen should be collected and where should these be submitted?

- Table 2 at page 28 lists the recommended laboratory tests for confirming priority diseases and conditions. The table contains information about:
 - The disease or condition.
 - The diagnostic test for confirming the disease or condition.
 - Where the test can be performed.
 - What specimen to collect.
- The table is intended to be used as a rapid reference tool. Use the information when suspected notifiable diseases/conditions or outbreaks are reported.





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3.8 How should specimen be contained and transported?

- During outbreak investigations, the most common specimen collected are stool, blood, water and food samples. The following is an overview of how these specimens should be collected for certain classified diagnostic procedures.
 1. Stool
 2. Blood
 3. Food samples
 4. Water

SECTION 4. NOTIFICATION AND REPORTING CASES

4.1 Mandatory reporting of notifiable diseases, syndromes and events

- 4.1.1 Requirement for PhilHealth accreditation and reimbursement of claims
- 4.1.2 Requirement for issuance of initial or renewal of hospital license to operate

4.2 What is the flow of notification for immediately notifiable diseases, syndromes and events?

- The flow of notification for Category I or immediately notifiable diseases, syndromes or events is shown in Figure 3 below.
- Cases are identified as immediately notifiable diseases at DRUs.
- Cases are reported simultaneously to the PHO/ PESU, CHD/RESU and NEC within 24 hours of detection by the fastest means possible.
- Initial report can be verbal using the telephone or radiophone, or written via facsimile or email.
- It will be followed by case-based reporting form using the standard PIDS case investigation form. Section 4: Notification and Reporting of Cases 33
- Reports received by the NEC will be reported to World Health Organization possibly within 24 hours also.
- The diseases/syndromes or events under this category includes:
 - Acute Flaccid Paralysis
 - Adverse Events Following Immunization (AEFI)
 - Anthrax
 - Human Avian Influenza
 - Measles
 - Meningococcal Disease
 - Neonatal Tetanus
 - Paralytic Shellfish Poisoning
 - Rabies
 - Severe Acute Respiratory Syndrome (SARS)

4.3 What is the flow of weekly reporting notifiable diseases?

4.3.1 Flow of Weekly Reporting for Component Cities:

- Cases identified as notifiable diseases in the community are reported to their respective DRUs (BHS, hospitals, clinics, ports and airports).
- The DSC records in the PIDS Case Report Forms all cases of weekly notifiable diseases from the different DRUs.
- The DSC at the BHS will submit the PLDSR case report forms (including the WNDR Summary Page and Case Investigation Forms) to the DSC of the next higher DRU (RHU/Main Health Center or the CESU for chartered cities) every Friday of the week.
- The DSC will consolidate, analyze and interpret data from the different IJUs (including the hospitals) of their municipality/city. The DSC will maintain a file of all the PIDS forms. DSC from the hospitals will do their own analysis and interpretation of data and will submit their report and dataset to the DSC in the RHU/Main Health Center or CHO.
- The DSC will prepare and disseminate a weekly Municipality/City Disease Surveillance Report.





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- The DSC (including the hospitals) will submit the report and copies of PIDS forms, and electronic file if available to the DSO of the next higher level (PESU) every Friday of the week. If the dataset was submitted as a paper file, the DSO will encode data into the computer and maintain a file of the PIDS forms.
- The DSO will prepare and disseminate a weekly Provincial Surveillance Report.
- The Provincial DSO will consolidate, analyze and interpret data from the different DRUs of their province and submit the dataset to the DSO of the next higher level (RESU) every Friday of the week.
- The Regional DSO will consolidate, analyze and interpret data from the different DRUs of their region and submit the dataset to the PH SID of the NEC every Friday of the week.
- The PH SID of NEC will consolidate, analyze and interpret data from the RES Us to prepare and disseminate a weekly National Surveillance Report.

4.3.2 Flow of Weekly Reporting for Chartered Cities:

- Cases identified as notifiable diseases in the community are reported to their respective DRUs (barangay health stations, hospitals, clinics, ports and airports).
- The DSC records in the PIDS Case Report Forms all cases of weekly notifiable diseases from the different DRUs.
- The DSC at the BHS will submit the PLDSR case report forms (including the WNDR Summary Page and Case Investigation Forms) to the DSO of the next higher DRU (CESU) every Friday of the week.
- The DSO will encode, consolidate, analyze and interpret data from the different DRUs (including the hospitals*) of their city. However, the DSO will maintain a file of the PLDSR forms.
- DSC from the hospitals will do their own analysis and interpretation of data and will submit their report and dataset to the DSC in the RHU/Main Health Center or CHO.
- The DSO will prepare and disseminate a weekly City Disease Surveillance Report.
- The DSO will submit the report and the dataset (electronic file) to the DSO of the next higher level (RESU) every Friday of the week.
- The DSO will consolidate, analyze and interpret data from the different DRUs of their region and submit the dataset to the PH SID of the NEC every Friday of the week.
- The PH SID of NEC will consolidate, analyze and interpret data from the RESUs to prepare and disseminate a weekly National Surveillance Report.

4.4 What is zero reporting? Why is it needed?

- Zero reporting is the report made by the DSCs 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 were detected.
- However, zero reporting may not always indicate that there are no cases in the area but it could also mean that there may be problems encountered in the surveillance system.
- Possible reasons for consistently submitting zero report may include:
 - lack of admission of cases that is notifiable
 - presence of "missed" cases that are not reported to the respective DSC or
 - absence of DSC, who is in-charge of monitoring reports from DSAs and admissions of notifiable disease

Why is "zero" reporting important?

- Serve as basis for assessing sensitivity of the disease surveillance system
- Allows the ESU to monitor DRUs that comply with regular weekly reporting and those that do not
- Enable the ESU to determine which DRUs frequently submit "zero" reports
- Serve as a basis for prioritizing the sites requiring close monitoring
- Prompts the DSO to evaluate implementation of surveillance activities and to determine reason(s) for consistently sending "zero" report





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- Zero reporting may be done through phone calls, SMS, fax, email, or whatever mode of communication is available. Failure to submit timely reports will be given appropriate action by the next higher level.
- Mandatory reporting of notifiable diseases, syndromes and event.
 - Requirement for PhilHealth accreditation, reimbursement of claims, issuance of initial or renewal of hospital license to operate, and Sentrong Sigla Certification.
 - Flow of notification for immediately notifiable diseases, syndromes and events and of the weekly reporting notifiable diseases.
 - Importance of zero reporting.
 - Process of receiving and checking the PIDSRS forms.

SECTION 5. DATA ANALYSIS AND INTERPRETATION

- Preparing a summary table by disease, barangay and morbidity week.
- Computer-based data storage and analysis
- Computer hardware and software requirement
- Showing disease trends through the use of graphs
- Analyzing data by time, place and person

5.1 How should the PIDSRS WNDR be consolidated and stored at the RHU/CHO level utilizing a paper-based system?

- Each reporting unit is required to analyze data on a weekly basis to guide appropriate actions needed for unusual occurrences and patterns.
- The RHUs are expected to fill up the PIDSRS case investigation and case report forms by disease. One copy of the forms will be given to the PHO and one copy is retained at the RHU for encoding. RHUs are required to make a summary notifiable disease table by disease, barangay and morbidity week. Figure 5 is a partial summary notifiable disease table and instruction for completion is discussed in section 5.2.1 below.
- For each fiscal year, the 52 weekly summary tables for the morbidity reports can be consolidated to prepare the Annual summary table of notifiable disease.
- The "notifiable disease" component of the FHSIS shall be covered and/or integrated with the disease monitored under the PIDSRS. As such, a common reporting form (i.e. PIDSRS forms) will be used.

5.2 Computer-based data storage and analysis

- The use of computer-based data storage and analysis is highly recommended in all reporting units (RHU/CHO/PHO/CHD). However, for the time being while some LGUs are still acquiring the means for computerization, a paper-based system for reporting may be undertaken.
- The PIDSRS data entry and analysis software has been developed and it will be provided with a separate User's Manual. The different variables obtained for each case reported are included in the program. This will provide the summary of data on all cases reported at all levels. Automatic generation of graphs, tables and charts provided by the program will greatly ease management of voluminous data and their analyses.
- A special training for data encoders to build capability at the provincial level will be conducted by the NEC staff.

5.3 How should surveillance data be analyzed?

- The analysis of surveillance data represents an inductive reasoning process whereby the study of individual data elements produces a more general picture of the problem in the population.
- Regular analysis of data allows for describing the patterns of disease or injury in a given population represented by different measures. Analyzing surveillance data must be given the highest priority at all levels.





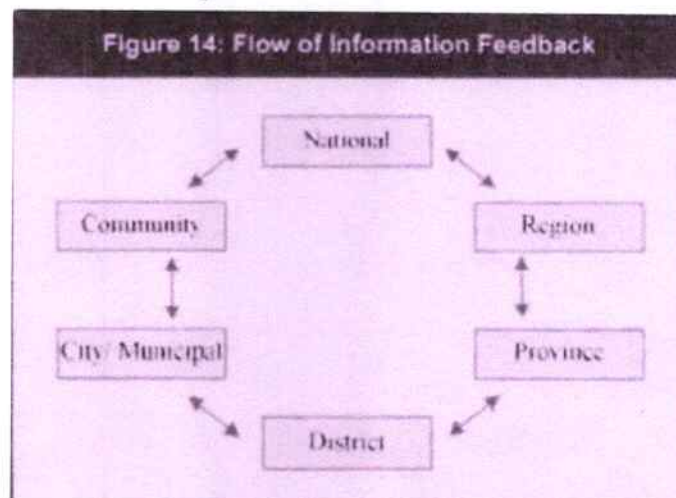
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- In analyzing surveillance data, the following approaches should be considered: - Know the strengths and weaknesses of the data collection methods and processes to get the real sense of the disease trends. - Start from the simplest analysis before proceeding to the more complex methods. Examine first each variable separately both by numbers and trends then examine the relationships among these variables. - Recognize when inaccuracies in the data prevents a higher-level analysis. Haphazardly collected or incomplete data cannot be corrected by complex analytical methods.
- Analysis of information depends on the accuracy of the surveillance data. It is a waste of time and resources to analyze data that are erratically collected or with varying case definitions. Reliability and validity determine the accuracy of surveillance data. - Reliability refers to the consistency of reporting of a condition even by different observers from different locations. - Validity refers to whether the condition reported reflects the "true" condition as it occurs. - The accuracy of data can be more completely assured when biologic measures complement clinical case definitions like laboratory testing. - Accuracy of data is more difficult to confirm in subjective behavioral situations such as lifestyle studies.
- Surveillance data should be used to describe health problems or situations in terms of the basic epidemiological variables of time, place and person. Use and analysis of these epidemiological variables allows the following to be carried out: - Comparison of patterns and risks of disease at different time periods, place or among population groups - Calculation of rates of disease (when appropriate denominators are used) - Detection of epidemics for early control and prevention - Project future occurrence of disease to facilitate prompt public health response - Evaluation of public health policy - Identify new or emerging syndromes or conditions.

SECTION 6. FEEDBACK

6.1 What is feedback?

- Feedback reinforces health staff's participation in the surveillance system. It also raises awareness about certain diseases and any achievements of disease control and prevention activities in the area. There is the need to institute regular and timely feedback within and between levels of the health delivery system. Data, ideally, should be reported routinely from the lower to the higher levels of the health care system and vice versa. Figure 14 illustrates this relationship among the different levels of the health care system.
- When the district, provincial or regional health management teams or National Surveillance Unit receive and analyze data, they should promptly disseminate results to the entities that provided the data.





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6.2 What method of feedback is most appropriate at the level of the RHU/CHO, PHO, CHO and DOH-Central Office?

- Data use is not an isolated activity - it is the final stage in a series of activities that begins with planning health information systems and continues through collecting, managing and analyzing data
- Data, and the information they relate, cannot be used well unless they are of high quality. Public health professionals use the output of the surveillance system as the raw material for data use. The data they present to policy-makers, fellow health workers, the public and communities at risk are only as good as the surveillance systems that produce them. If surveillance systems produce poor data that lead to policy conclusions that are irrelevant or even inaccurate, then efforts to prevent epidemics or reverse disease occurrence will be undermined.
- Here is a simple checklist to help evade common weaknesses encountered in surveillance data:
 - Does the surveillance system cover the right populations?
 - Is the sample population clear? - Is the sample size adequate?
 - Did the surveillance take place in a site used consistently over time?
 - What is known about testing?
 - What is being measured?
 - Are data interpreted correctly?
- There is no hard and fast rule on what form of feedback is appropriate for use by a specific unit of the health system. The choice of format to be used is better guided by the objective or intended purpose of the user. Whether the use of the data is for program planning, program monitoring and evaluation or for advocacy, the format to be chosen should be the one which would best present the message in a clear and straightforward manner and would fit the intended audience.
- For program planning, surveillance data should be used to determine the magnitude of the disease and its distribution in different geographical areas and subpopulation. Estimating the number and distribution of those already infected is important in deciding how prevention resources should be distributed as well as in planning care and support needs. Within prevention programs themselves, surveillance data can be used to identify problem areas, to seek solutions and to devise strategies appropriate to the everchanging disease occurrence.
- In the commercial sector, manufacturers of breakfast cereals or cosmetics have recognized that they sell their products better if they package and advertise them differently for different target markets. The same principle should apply to surveillance data. The same data need to be presented very differently for different audiences to be able to sell the messages implied by the data and ensure that they get acted upon.
- Successful advocacy follows a number of relatively well-defined rules. Choosing the right product for the right audience requires:
 - Defining your goals
 - Defining your audience
 - Finding out what influences their thinking
 - Using the data to address their concern
 - Using the right language - Getting the length right
 - Choosing the best messenger
 - Timing it right

6.3 How do I prepare a written disease surveillance report?

- A surveillance report must be succinct. As the report is intended to give decision makers the bases for future action, it must be written clearly based on accurate information derived from accurate and reliable data.
- The written report follows the IMRAD format in includes the following:





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- Introduction
- Methods
- Results
- Analysis
- Discussion
- Conclusions and Recommendations

- In the introduction, the objective of the report must be stated clearly. The background of the report must be described. It should include what the report is all about, the circumstances why the report is focused on a particular disease or its issues, the significance of the health event and its nature.
- Methods include a description of how the report was obtained, the reporting sites included, how data was collected and an explanation on the laboratory procedure and requirement if diagnosis relies heavily on laboratory examination. Case definitions must be stated exactly how it was applied to standardize the perspective of the reporter and the reader.
- Results of the Surveillance activities must be presented in a manner that even a layman can understand. We present results not to impress or overwhelm our readers but to put our narrative messages across. Our objective is to draw the main point of the surveillance activities and results as well as generate public health actions from decision makers. We must always remember that most of the decision makers at the LGU level have no clinical experience and may just have very little statistical background. Here, the value of the graphical presentations is heightened as readers find it easier to comprehend than a litany of scientific statements describing the surveillance findings. However, excitement on overdoing the graphs must be held back as a complicated graph will even confuse the reader more.
Simple presentation with one or two variables describing the health event would be ideal for a layman's understanding. We must refrain from doing graphics with bars overlapping with lines and notations that the reader cannot decipher where to look first and which part of the complex graphical presentations is indeed important. When graphs and charts use multiple colors, make sure that the report is printed in multiple colors too. A profusion of slices and lines in black or its shades and white will lead to severe frustration.
- Analysis, Discussion, Conclusions and Recommendations are related. Each result that is presented must be accompanied by succinct explanations including the meanings of the graphics. The discussion must be focused on the health event, what the surveillance data implies and the actions that are highly necessary to address the health problem. Honest interpretation of the surveillance data will greatly help in accomplishing what we would want our readers to do next.
- To guide the decision makers and the general public, the surveillance officer must come up with conclusive statements to guide the next action of the stakeholders. The conclusions must be able to generate more interest on the issue and prompt action focused on prevention and control of the health problem.
- The recommendations that we give must be addressed to the right persons. It is ideal to more cooperation than general recommendatory statements such as "improving water supply system". If we truly need to recommend a complex activity, it must be broken down to tasks addressed to specific persons so that they will not be overwhelmed. The simpler the statements, the better it is. The simpler the action, the easier it is to do.

Section 7: Use of Information

7.1 What is the knowledge-driven model of decision making?

- In the knowledge-driven model of decision-making, data are the raw products of the health information system. Data themselves have little value until sorted out, verified, checked and certified correct, organized and analyzed. Through these processes, data





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become information. Yet information is of limited value until it is integrated with and evaluated in terms of issues confronting the health system.

- When the significance of the information is obtained, understood and accepted, becomes evidence of use to decision-makers. The synthesis of evidence is still insufficient however until packaged, communicated and disseminated to decision-makers in a form that changes their understanding of the issues and needs. At this stage, the evidence becomes knowledge. Once knowledge is applied through the planning process to result in action and change, an impact on the indicators can be expected. And such impact should be measurable through change in the source data for the indicators.
- The Health Metrics Network visualizes a continuous cycle of data processes to obtain the greatest possible impact, thanks to a comprehensive health information system.
- Health information systems in low- and middle-income countries tend to be data-rich, but information-poor. This is a consequence of the belief that data can be used directly for decision-making. Raw data alone are rarely useful. The point of the system is not just to generate data and hope that it will be used. Raw data must be cleaned, validated, organized and entered into a first-level data repository or warehouse. At the same time, preliminary analysis of data converts them to initial information at the primary level that is already useful for front-line program management, monitoring and measurement of progress on local targets. Such a preliminary analysis of data should be done as close to the level of data collection as possible. In this process, raw data are converted into immediate information and evidence for local decision-making within the system.
- Once the health information system has started to convert data into information, the information should be used on a regular basis at meetings, and displayed where it can be seen by staff and the public. By being used, the information system, and the quality of its information, is gradually improved through a cyclic learning process. By learning through hands-on experience, problems are identified, new needs defined, and new features added that will be refined and improved upon in the next cycle. This low-level analysis of primary data requires an appropriate and simple tool-kit of targeted methods aimed at providing relevant feedback to the front lines.

7.2 How can surveillance information be used?

- Public health surveillance focused almost exclusively on the detection and monitoring of cases of specific communicable diseases and surveillance data were disseminated primarily in tables. However, surveillance efforts have expanded rapidly and may eventually include chronic diseases, injuries, occupationally acquired conditions and other problems. Because of the fundamental changes in public health programs and priorities, programs at all levels require innovative approaches to convey surveillance findings to new and more diverse audiences.
- Surveillance has been characterized as a process that provides "information for action". This concept is inherently consistent with the definition of communications as " ... a process, which is a series of operations, always in motion, directed toward a particular goal." Therefore, public health programs must ensure more than the mere transmission or dissemination of surveillance results to others; rather, surveillance data should be presented in a manner that facilitates their use for public health actions.
- One fundamental concept is that the terms dissemination and communication cannot be used interchangeably. Dissemination is a one-way process through which information is conveyed from one point to another. In comparison, communication is a loop - involving at least a sender and a recipient - a collaborative process. The communicator's job is complete when the targeted recipient of the information acknowledges receipt and comprehension of that information.
- Table 6 summarizes a model that emphasizes the effect of communications and includes the sender, the message, the receiver, the channel and the impact:





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Table 6. Controlling and Directing Information Dissemination

Steps	Questions to be Answered
Establish communications message	What should be said?
Define the audience	To whom should it be?
Select the channel	Through what communication medium?
Market the message	How should the message be stated?
Evaluate the impact	What effect did the message create?

- Surveillance data should be analyzed at the local level and at the regional level of the health system in the timeliest fashion possible to determine the public health response required from each level. Those actions include:
 - Notification, investigation and intervention of epidemics
 - Program management
 - Impact monitoring
 - Problem identification
 - Planning
 - Social mobilization
- The local level should design simple graphs and charts to illustrate the data collected for each community, so that disease trends, other public health problems and responses can be visualized. The spatial distribution of the data collected can best be presented and interpreted if projected on a map, preferably through the use of a Geographic Information System (GIS)- enabled system. The RHU staff along with the health workers regularly discusses the interpretation and implications of the data collected and the interventions needed.
- Monthly updates of surveillance status should be generated to describe the coverage and events being recorded and preventive actions being undertaken. Reports are disseminated on periodic bases in a format easily understood by those collecting and utilizing the information for decision-making: local leaders, health facilities, the media and collaborating agencies.

7.3 What are the ways to enhance the use of surveillance information in all levels of the health system?

- Following the packaging and communications stage, data should be used for decision making. Capacity for data analysis is often lacking at peripheral levels where the data are generated and the results should be used for planning and management. Bringing together a comprehensive analysis of the health situation and trends with data on health inputs, such as health expenditure and health system characteristics, is particularly important. The development of such analytic capacity requires planning, investment and tools.
- An important function of the health information system is to connect data production with data use. Users comprise those delivering care as well as those responsible for the management and planning of health programs. More broadly, users include those financing health care programs, both within the country (health and finance ministries) and outside (donors, development banks and technical support agencies). Users of health-related data are not confined to health-care professionals, managers or statisticians. Indeed, decision-making around country health priorities necessarily involves the wider community, including civil society as well as policy-makers at the senior levels of government.





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- These different users of data have varying needs in terms of the level of detail and technical specificity required. Health-care planners and managers responsible for tracking epidemiological trends and responses of the health-care system generally require more detailed data than policy-makers who need data for broader strategic decision-making and investments.

SECTION 8. EPIDEMIC RESPONSE

8.1 Epidemic Detection

8.1.1 How are epidemics detected? Epidemics can be detected through the following surveillance systems:

- Case-based - routine collection of data, analyzed on a periodic basis (e.g., NESSS).
- Event-based - reports are received anytime from sources outside the routine reporting system (e.g., Media reports).
- Laboratory-based - reporting of laboratory results based on criteria (e.g., Influenza surveillance).

8.1.2 Who should verify reported epidemics?

- The DSCs at the RH Us and CHOs shall promptly verify reports of epidemics received from health facilities, laboratories, or through community rumors. Feedback (verbal or written) to stakeholders (LCE, Province, CHO, and NEC) should be provided within 24 hours. This is important to ensure that timely decisions are made and to prevent expending resources on investigating events that are not true epidemics
- Triggers for Epidemic Detection
 - Case-based surveillance
 - Alert and epidemic thresholds have been reached.
 - Event-based surveillance
 - Reports of public health concern have been confirmed.
 - Laboratory-based surveillance
 - Detected laboratory results fulfill the criteria for notification.

8.1.3 What is the role of the Bureau of Quarantine in detecting epidemics?

- The Bureau of Quarantine shall immediately notify NEC/CHO/local health authorities of any suspected case of notifiable disease detected in airports and ports of entries.
Travel itinerary and other health-related documents shall be submitted to NEC/CHO/local health authorities.

8.2 Epidemic Investigation

8.2.1 Deciding to Investigate an Epidemic The decision to investigate an epidemic shall be based on the following circumstances:

- The RHU/CHO/PHO receives a report of a suspected epidemic.
- An unusual increase is seen in the number of deaths during routine analysis of data.
- Alert or epidemic thresholds have been reached for specific priority diseases. Communities report rumors of deaths or a large number of cases that are not being seen in the health facility.
- A cluster or group of cases or deaths.
- A report of cases or deaths for which the cause is not explained or is unusual.
- The RHU/CHO/PHO receives a report of a case with any of the following diseases:
 - Acute Flaccid Paralysis "Hot Case"
 - Adverse Events Following Immunization (AEFI)
 - Anthrax





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- Human Avian Influenza
- Measles Confirmed
- Meningococcal Disease
- Poliomyelitis Confirmed
- Severe Acute Respiratory Syndrome (SARS)
- Other emerging or re-emerging infections

In addition, the decision to investigate an epidemic may be based on the following circumstances:

1. Case-based surveillance
 - An unusual increase is seen in the number of deaths during routine analysis of data.
 - Alert or epidemic thresholds have been reached for specific priority diseases.
2. Event-based surveillance
 - The RHU/CHO/PHO receives a notification of a suspected epidemic, increase cases, deaths and unusual occurrence of health events.
 - Reports of public health concern have been verified.
 - Communities report rumors of deaths or a large number of cases that are not being seen in the health facility.
 - A report of cases or deaths for which the cause is not explained or is unusual.
3. Laboratory-based surveillance
 - Detected laboratory results fulfill the criteria for notification.
4. Clustering and Hot Spots of cases and deaths of diseases under surveillance.
5. Single case of disease for elimination or eradication.

8.2.2 What are the roles of LGUs during epidemic investigation and response?

- It is the primary responsibility of local government units to manage epidemic investigation and response. However, the next higher level will continue to exercise its technical oversight functions.
- The responsibilities of the LGU during an epidemic investigation and response include:
 - Immediate release of funds (local funds, surveillance funds from regular budget, ILHZ funds, congressional funds)
 - Priority access to vehicles
 - Provision of additional manpower
 - Provision of resources for laboratory support
 - Provision of resources for treatment of patients and other epidemic control measures
 - Provision of access to communication
- Local government unit should assess whether they have sufficient capacity to undertake the epidemic investigation and response, and arrange for additional assistance if required.

8.2.3 What are the composition and core responsibilities of Epidemic Investigation and Control Team?

- An Epidemic Investigation and Control Team (EICT) shall be organized at the municipal or city level. The composition of the team may vary depending on the disease suspected and the control measures required. The team should include the Disease Surveillance Coordinator and other members as determined by the municipal or city health officer. These members may include the following:
 - Municipal/City Health Officer
 - Health Program Coordinator





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- Clinician
- Laboratory technician
- Sanitation Engineer
- Vector control specialist
- Health educators

The MHO/CHO shall automatically be the team leader, or may designate a team leader in his behalf. Each member of the team should be given a clear role.

- The core responsibilities of the EICT are the following:
 - Conduct epidemiologic investigation of epidemics suspected or confirmed.
 - Establish active surveillance in the affected area.
 - Implement the epidemic response plan.
 - Identify and coordinate other sources of additional human (multi-sectoral teams in the area) and material resources (list of referral laboratories and available examinations, list of referral hospitals) for managing the epidemic
 - Ensure the use of standard treatment protocols for the disease and train health workers.
 - Oversee the implementation of control measures.
 - Meet daily to review the latest surveillance data and implement additional control measures.
 - Provide regular feedback to the community, LGU, PHO, CHO, DOH and WHO.
 - Request assistance when necessary.
 - Perform other tasks as instructed by the head of office or agency.

8.2.4 What should the RHU or CHO do in instances when they do not have the capacity in conducting epidemic investigation?

- In some instances where the RHU or CHO have no technical capacity in conducting epidemiological investigation, the MHO or CHO shall immediately request for assistance from the PHO, CHD or NEC. The investigation will be conducted by the PESU or RESU staff in close coordination with the Municipal or City EICT.
- Assistance can be in three forms:
 - Logistics (supplies, equipment, etc.)
 - Technical advice (verbal or written guidance)
 - Technical assistance (investigation team, experts or consultants who will go to the field and assist in the investigation or with the control measures)
 - Laboratory back-up

8.2.5 In what instances shall the NEC and CHD-RESU provide immediate on-site technical assistance during epidemic investigation?

The Department of Health through the National Epidemiology Center in coordination with CHD-RESU shall provide immediate on-site technical assistance to the LGU for further epidemic investigation in the following conditions:

- Epidemics of national importance as described in Section 8.3.3 of this manual of operations.
- The epidemic is continuing (i.e., there is evidence of ongoing transmission).
- Similar epidemics have occurred before, or are expected in the future, and more information is needed to develop preventive measures.
- The epidemic is having, or likely to have, a very high impact on public health because of its size and/or the severity of illness.
- The epidemic has attracted public, media or political interest.
- The epidemic transmission route is new or unusual.
- The causative agent is unknown.
- Descriptive characteristics of the epidemic (time, place, person or organism subtype) suggest that a common source is highly likely.





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8.2.6 What is the role of the National Epidemiology Center as the National IHR Focal Point?

- The National Epidemiology Center is designated by the Department of Health as the National IHR Focal Point (NFP). Among its crucial responsibilities as NFP is to notify WHO of Immediately Notifiable Diseases and all events that may constitute a public health emergency of international concern within 24 hours of assessment. In line with this, the National Epidemiology Center shall carry out all appropriate and expeditious means of obtaining information to assess all suspected epidemics (including unofficial reports) in coordination with the CHD, local government units, government agencies and other parties directly or indirectly involved in the investigation and control of epidemics.

8.3 Declaring an Epidemic

8.3.1 What are the necessary information that should be used to support declaration of an epidemic?

Declaration of an epidemic should be supported by sufficient scientific evidence. These include:

- Surveillance information
- Epidemiologic investigation (descriptive or analytic)
- Environmental investigation
- Laboratory investigation

8.3.2 What is the basic requirement for an LGU to declare an epidemic?

- The municipal/city health office can declare an epidemic if it has a functional surveillance system. A functional surveillance system means the office can produce the necessary information stipulated section 8.3.1 above.
- In case the requirements in section 8.3.1 are not met, the next higher level may provide technical assistance in the declaration of an epidemic.

8.3.3 In what instances does the Secretary of Health have the sole authority in declaring an epidemic?

- The DOH Rules and Regulations Implementing the Local Government Code of 1991 (DOH RRILGC of 1991), Chapter 11, Section 44 c, specifies that the Department of Health has the final decision regarding the presence of epidemic, pestilence, or other widespread public health danger in a particular area or region. In compliance to this rule, the Secretary of Health shall have the sole authority to affirm or reverse any declaration of an epidemic.

8.4 Response

8.4.1 Investigation For specific disease investigation requirements, refer to handbook for responding to communicable disease epidemics.

- Define cases.
 - Case definitions should include a location, a time period, and clinical symptoms (E.g. A case is a) "" Identify all cases and contacts.
 - Obtain a line list of cases from the hospitals, barangay health stations/RHUs, ESUs, and other institutions
 - Do contact tracing
- Describe the cases.
 - Time: When did the cases occur? Make an epidemiologic curve of onset of illness
 - Place: Where so the cases live 7 Where were they found? Draw a spot map, number of cases per area
 - Person: What were the characteristics of those affected? Age range, median age, sex distribution, symptoms, vaccination status, etc.
- Describe the severity.
 - Number of fatalities, case-fatality rate
 - Number who were hospitalized





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- Number who had complications
- Confirm the diagnosis.
 - Obtain and analyze specimen from cases
 - Obtain and analyze specimen from environment (water, air, soil, food, etc)
- Identify possible sources of the epidemic.
- Identify possible causes of transmission.
- The results of the epidemic investigation should be communicated to all stakeholders in two forms:
 - a. Oral briefing for local authorities and (b) a written report. a. Oral Briefing – Oral briefing should be attended by the local health authorities and persons responsible for implementing control and prevention measures.
 - Findings must be presented in clear and convincing fashion with appropriate and justifiable recommendations for action. This presentation is an opportunity to describe what the investigation and control team did, what they found, and what they think should be done about it. The findings should be presented in scientifically objective fashion, and should be able to defend the conclusions and recommendations.
 - b. Written Report
 - A written report of epidemic investigations should be provided to all levels of the reporting system. This includes PHOs, CHDs, NEC, WHO, etc.
 - By formally presenting recommendations, the report provides a blueprint for action. It also serves as a record of performance and a document for potential legal issues.
 - It serves as a reference if the health department encounters a similar situation in the future.
 - A written epidemic investigation report should follow the IMRAD format which includes:
 - a) Introduction
 - b) Methods
 - c) Results
 - d) Analysis
 - e) Discussion
 - f) Conclusion
 - g) Actions Taken
 - h) Recommendation

8.4.2 Treatment of Cases

- Refer to handbook for specific treatment protocols.
- Hospitals should be alerted and should activate their epidemic response plans. There should be adequate antimicrobials and supplies for treatment. Needs must be immediately identified and a request for logistic assistance should be made.
- Referral hospitals should be alerted about the epidemic.

8.4.3 Establish Epidemic Disease Surveillance

- The location of the epidemic disease surveillance (BHS, RHU, CHO, PHO, and RESU) and the extent of its catchment area will depend on the location of the epidemic and its severity.
- Information to be gathered should include:
 - Name
 - Age
 - Sex
 - Address (Sitio, Barangay, Municipality, Province)
 - Date of onset of illness
 - Other pertinent information depending on disease





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- Frequency of reporting will depend on the epidemic.

8.4.4 Implement Public Health Measures

- The data gathered in the course of investigations will be used to define the measures needed to control the epidemic and prevent a similar situation in the future.
- In any epidemic, the plan of action for control measures should fall in any of the following: -
Prevention and control of exposure
 - Prevention and control of infection/disease
 - Prevention of spread
 - Prevention of death
- The selection of control measures should consider feasibility (technical/operational), availability (stockpiles), acceptability, safety (of operators and population), and cost.
- For the recommended public health measures for specific diseases, refer to the handbook for responding to communicable disease epidemics.

8.4.5 Risk Communication

- Coordinated communication is essential during epidemic response.
- Activate the communication plan for the following areas:
 - Within the Epidemic investigation and control team
 - With the Epidemic management committee, the ESUs at different levels, and the NEC
 - Directly with the affected community
 - Public and local officials
 - With the general public through media
 - With other agencies involved (hospitals, laboratories, industries, other government agencies, etc.)
- Determine which level (municipal, provincial, regional, national) will be responsible for communication to each area mentioned in Section 8.4.5.2. Then identify person(s) who will take charge of communicating to each area.
- Schedule regular meetings for each area.

8.5 Evaluation

- After an epidemic, there should be a thorough assessment of the following component areas:
 - preparedness
 - surveillance
 - response
 - investigation
 - treatment of cases
 - public health measures
 - risk communication
 - epidemic management
- Each component area should be assessed according to:
 - timeliness
 - efficiency and effectiveness
 - cost
 - lost opportunities
 - policy gaps and unimplemented policies
- The team leader of the epidemic management committee will be the one to organize the evaluation. All members of the management committee, the investigation team and control team, and other persons involved in the epidemic surveillance and response should be present during the evaluation.





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- A post-epidemic assessment report should be documented and used as a reference for improving epidemic preparedness and response.

9.0 Monitoring and Evaluation

9.1 What is monitoring in the context of surveillance and response?

- Accurate, timely and accessible disease surveillance data plays a vital role in the planning, implementing, development and maintenance of the control program. In recent years, data quality has emerged as an important issue because of the need to improve the services delivered at various level of the health system. " Monitoring is needed to verify step by step, the progress of the disease Control Program at the municipal, provincial, regional and national levels e.g., to verify whether activities have been implemented as planned, to ensure accountability, and to detect any problems and/or constraints. This in turn can provide feedback to the relevant authorities for them to take remedial measures thus promote better planning through careful selection of strategies for future action.
- When monitoring is conducted by the surveillance implementing team itself, it is referred to as internal monitoring. Here, the members closely observe the manner of implementing the system identifies facilitating and hindering factors and notes these down for discussion with the other members of the group. Although indicators are developed by the team by which they will monitor their own performance, the manner of self-monitoring may sometimes become subjective. Thus, is it highly necessary to resort to external monitoring in order to ensure objectivity of the observations.
- External monitoring is when another team not involved in the daily implementation of the system, for example, a staff from a higher health level such as the PESU will visit the local team and observe the implementation of the surveillance system based on certain indicators. While external monitor may already favor a certain team and give very good feedback on their performance even if the quality of performance is not very good. It is therefore imperative that indicators used in monitoring are set in the most objective manner with objective scale for rating so that subjectivity will be minimized, if not eliminated.
- Another way to increase objectivity in observation is by doing monitoring as teams so that many members of the monitoring team observe and rate the performance all at the same time. They discuss the results of their observations after the monitoring activity and share their findings with others. Other qualitative observations maybe written as a separate report. These are the observations not included in the pre-set indicators for monitoring.
- Evaluation is the periodic assessment of the relevance, effectiveness and impact of activities in the light of the objectives of the surveillance and response systems. Evaluation of outcomes and impact is needed to document periodically whether defined strategies and implemented activities lead to expected results.
- While monitoring is a continuous process, evaluation will need to be conducted intermittently. The periodicity of evaluation varies considerably according to the changes expected in the different areas evaluated.

9.2 M&E activities will happen at three surveillance levels

9.2.1 Municipality and provincial level where the program is implemented

- Reporting from the barangays or villages will be validated and consolidated at the municipal level through the Rural Health Units (RH Us) on a monthly basis. These will be submitted to the PHO/CHO where they will be cross-checked by provincial/city level coordinators. Validated and cross-checked reports shall be submitted to the CHDs on a quarterly basis.

9.2.2 Regional level M&E

- A team composed of staff of the DOH Centers for Health and Development (CHDs) will be visiting the provinces at a designated time period or as necessary





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to confirm provincial/city reports. Confirmed reports shall be submitted to the national level on a semi-annual basis.

9.2.3 National level M&E

- A team from the National Epidemiology Center will visit CHDs and priority provinces/cities at least once during the year and as necessary. RESU staff will assist the team in the conduct of the activity. External Evaluation will also be considered at national level monitoring.
- Likewise, all stakeholders and partners will be kept informed of the progress of the implementation of the system and the outcome of the monitoring visits and evaluation through regular briefings and meetings.

9.3 What Is a Technical Assistance Visit (TAV)?

- TAV is conducted by experts from the next higher level of the surveillance system to address gaps and enablers identified in the regular monitoring and activity. This activity addresses issues on implementation and provides on-site mentoring and hands-on training to key field personnel.

9.4 Performance Indicators

- Indicators are variables that can be measured repeatedly (directly or indirectly) over time and provide measures of change in a system. They provide useful information on the status of the system and flag areas that need improvement. They are usually expressed as simple counts, proportions, rates or ratios. These measurements should be interpreted in the broader context, taking into consideration other sources of information (e.g., supervisory reports and special studies), and supplemented with qualitative information.

SECTION 10. GUIDELINES FOR DISEASES, SYNDROMES AND HEALTH EVENTS UNDER SURVEILLANCE

- a. The specific diseases, syndromes and health events under surveillance
- b. The importance of surveillance for each disease, syndrome and health event
- c. How to investigate and control the spread of specific diseases, syndromes and health events under surveillance and notify the proper

Reference: 3rd Edition National Epidemiology Center Department of Health, Volume 1

SECTION 11. EFFECTIVITY. This executive order shall take effect immediately upon signing.

Done this 27th day of **January 2026**, here at Municipality of Marilao, Province of Bulacan.

Jemina M. Sy
ATTY. JEMINA M. SY
Municipal Mayor

