



## OFFICE OF THE GOVERNOR

### EXECUTIVE ORDER NO. 10 Series of 2024

#### AN EXECUTIVE ORDER IMPLEMENTING GUIDELINES AND MEASURES ON THE PREVENTION, DETECTION, AND MANAGEMENT OF PERTUSSIS AND DIPHTHERIA IN ORIENTAL MINDORO

**WHEREAS**, Section 15, Article II of the 1987 Philippine Constitution declares that, *"the State shall protect and promote the right to health of the people and instill health consciousness among them."*

**WHEREAS**, the Department of Health (DOH), through the Research Institute of Tropical Medicine detected and confirmed re-emerging cases of the highly transmissible Pertussis disease in various provinces in the Philippines.

**Whereas**, on 25 March 2024, the DOH-Center for Health Development (CHD) MIMAROPA issued an advisory to implement guidance on the increasing cases of Pertussis in the MIMAROPA Region.

**WHEREAS**, on 11 April 2024, the Provincial Health Office (PHO) recorded twenty-one (21) confirmed Pertussis cases in Oriental Mindoro.

**WHEREAS**, DOH Department Memorandum No. 2023-0284 provides interim guidelines for all health offices, facilities and other concerned on the Prevention, Detection, Isolation, Treatment, and Reintegration (PDITR) Strategy and Response for Pertussis and Diphtheria.

**NOW, THEREFORE, I, HUMERLITO A. DOLOR, MPA, Ph.D.**, by virtue of the powers vested in me as the Provincial Governor by Republic Act No. 7160, also known as the Local Government Code of 1991, and other pertinent laws and issuances, do hereby promulgate this Executive Order as follows:

**SECTION 1. Pertussis.** DOH Department Memorandum No. 2023-0284 describes Pertussis or "whooping cough" as a highly contagious respiratory infection caused by the bacterium *Bordetella pertussis* and, less frequently, by *Bordetella parapertussis* and *Bordetella holmesii*. It is transmitted from infected to susceptible individuals by droplets. Pertussis has three phases of symptoms:

- the catarrhal stage which is highly contagious, with a secondary attack rate of 90% among non-immune household contacts;
- the paroxysmal stage marked by more frequent spasmodic coughing followed by a whoop; and
- the convalescent stage marked by less frequent and less severe coughing.

Diphtheria is similarly transmitted from person to person by droplet and direct contact. It is caused by *Corynebacterium* species, mostly by toxin-producing *Corynebacterium diphtheriae*, and rarely by toxin-producing strains of *C. ulcerans* and *C. pseudotuberculosis*. The most common type of diphtheria is classic respiratory diphtheria, whereby the exotoxin produced characteristically causes the formation of a pseudomembrane in the upper respiratory tract and damages other organs, usually the myocardium and peripheral nerves. Acute respiratory obstruction, acute systemic toxicity, myocarditis, and neurologic complications are the usual causes of death (WHO, 2018).

**SECTION 2. Prevention of Transmission.** Transmission of both pertussis and respiratory diphtheria occurs from person to person through respiratory droplets (i.e., from coughing or sneezing), while transmission of cutaneous diphtheria can occur upon close physical contact with open sores or ulcers. To prevent the transmission of pertussis and diphtheria, DOH Department Memorandum No. 2023-0284 states that the following preventive measures shall be undertaken:



- a. Observe the following respiratory hygiene, especially when sneezing and coughing;
  - i. Cover mouth and nose with tissues or wipes;
  - ii. Properly dispose of used tissues or wipes;
  - iii. If tissue is not available, use one's upper sleeve or arm;
  - iv. Avoid coughing into hands which can easily spread germs; and
  - v. Wash hands after coughing or sneezing, or after contact with an infected person.
- b. Individuals who are unvaccinated or have not completed their vaccination series or are at increased risk of severe illness should avoid or limit contact with individuals with known or probable pertussis.
- c. **In household settings:** Practice standard precautionary measures such as mandatory hand washing with soap and water as well as hand hygiene using alcohol-based sanitizer, in all opportunities and occasions.
- d. Additional precaution for cutaneous diphtheria: Avoid exposure or contact with secretions from suspected infection sites (e.g., mouth, skin) of the patient.
- e. **In health facilities:** Health workers should strengthen infection prevention and control measures by observing standard precautions complemented by droplet precautions (for pertussis and respiratory diphtheria) or contact precautions (for cutaneous diphtheria) such as the following:
  - i. Wear a medical mask before entering the patient room and remove it upon exit. Additional Personal Protective Equipment (PPEs) may be worn upon risk assessment such as gown and gloves for cases of cutaneous diphtheria.
  - ii. Perform hand hygiene before and after the use of PPEs, and caring for patients.
  - iii. Use disposable or dedicated patient-care equipment (e.g., stethoscopes) and regularly clean and disinfect equipment before and after use.
  - iv. Limit contact with patients and adequately space beds if possible.
  - v. If transport is necessary, instruct the patient to wear a mask and follow respiratory hygiene and cough etiquette while additional precautions such as covering of any wounds or lesions on the patient's body for cases of cutaneous diphtheria.

**SECTION 3. Additional Preventive Measures.** In addition to the foregoing directives of DOH DM No. 2024-0284, the following measures must also be implemented to prevent transmission of pertussis and diphtheria:

- a. Appointed barangay level health promotion officers and barangay health workers shall be equipped to carry out on-the-ground advocacy work for pertussis and diphtheria in their respective catchment areas.
- b. Local government units, public and private schools, and other institutions/offices/establishments are encouraged to formulate and enforce relevant policies and guidelines to prevent the spread of pertussis and diphtheria.
- c. A Pertussis Task Forces may be created to ensure and monitor compliance with preventive measures in the city/municipal and barangay levels.
- d. It is recommended that all hospitals require visitors of their facilities to wear face masks.
- f. All City/Municipal Health Offices (C/MHO) are mandated to conduct intensified immunization activities to their respective catchment areas. Due to the limited availability of pertussis-vaccine from the Department of Health, C/MHOs shall prioritize the provision of vaccines to unimmunized children. In case of saturation of unimmunized children, the vaccination of those on routine and catch-up immunization shall be prioritized next.

**SECTION 4. Detection and Reporting of pertussis and diphtheria Cases.** The following guidelines shall be observed detection and reporting of pertussis and diphtheria cases:



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- a. The detection and reporting of pertussis and diphtheria cases shall be a shared responsibility among LGUs and health facilities. The Provincial Epidemiology and Surveillance Unit (PESU) shall lead in intensifying the surveillance activities of the Local Epidemiology and Surveillance Units (ESUs), to enable early detection, reporting and analysis of epidemiological data to guide and response.
- b. Diphtheria and Pertussis are category II notifiable disease under Republic Act (RA) No. 11332 (Mandatory Reporting of Notifiable Diseases and Health Events of Public Health Concern Act) and its 2020 Implementing Rules and Regulations (IRR). As such, all public and private physicians, allied medical personnel, professional societies, hospitals, clinics, health facilities, laboratories, institutions, workplaces, schools, prisons, ports, airports, establishments, communities, other government agencies, and NGOs are required to accurately and immediately report notifiable diseases and health events of public health concerns as issued by the DOH. The conduct of surveillance for pertussis cases shall follow the guidelines stated in the Philippine Integrated Disease Surveillance and Response Manual of Operations 3<sup>rd</sup> Edition.
- c. Detection of pertussis and diphtheria cases shall start with passive surveillance from notification of reporting units. Active case finding shall commence upon detection of confirmed cases or clustering of cases.
- d. All cases are required to have a completely filled-out Case Investigation Form (CIF). The surveillance officer or designated surveillance staff in the Epidemiology and Surveillance Units (ESUs) and Disease Reporting Units (DRUs) shall submit all CIFs and be in charge of notification to the appropriate ESU.
- e. All DRUs shall conduct weekly reporting of all cases of pertussis and diphtheria through encoding of the case data in the online or offline Epidemic-prone Disease Case Surveillance – Information System (EDCS-IS) at all levels or through the submission of the properly filled out paper CIF for Pertussis case to the next higher ESU level if there is no access to the EDCS-IS.
- f. The DRUs shall conduct zero reporting if no case was seen for the week.
- g. Cluster of cases or outbreaks of pertussis and diphtheria should be reported within 24 hours of detection through the Event-Based Surveillance System.
- h. All confirmed cases, case clustering, and/or outbreaks of pertussis and diphtheria should be immediately investigated by the ESU, and findings reported to the ESR system.
- i. Contact tracing and management should be done for clusters of cases and confirmed cases, with those close contacts defined as people who:
  - i. Had face-to-face exposure to a case, which includes household or family contacts;
  - ii. Had stayed overnight in the same room with a case, and
  - iii. Had direct contact with respiratory, oral or nasal secretions with a laboratory-confirmed case.
- j. Samples of bacterial testing shall be collected to all individuals meeting the clinical case definition for pertussis based on the specimen collection guidelines.
  - i. Clinical case definition: A person with cough lasting at least two (2) weeks with at least one (1) of the following:
    1. Paroxysms (i.e., fits) of coughing
    2. Inspiratory “whooping”
    3. Post-tussive vomiting (i.e., vomiting immediately after coughing)
    4. Without other apparent cause
  - ii. For enhanced surveillance measures, samples of bacterial testing shall be collected to those close contact individuals with at least one (1) week onset of the signs and symptoms of the clinical case definition of pertussis.



**SECTION 5. Isolation of Probable and Confirmed Pertussis Cases and Identified Close Contacts.** To eliminate the possibility of pertussis transmission, identified probable and confirmed pertussis cases and their close contacts should properly be isolated in an appropriate isolation/quarantine area. The following isolation guidelines shall be observed:

- a. **For Confirmed or probable case or any symptomatic close contact:** Avoid contact with high-risk individuals, especially the unimmunized, until at least five (5) days after the start of effective antimicrobial therapy. Untreated cases should avoid contact with high-risk individuals for the full infectious period (21 days).

For diphtheria confirmed or probable case or any symptomatic close contact maintain isolation until elimination of the organism is demonstrated by negative cultures of two samples obtained at least 24 hours apart after completion of antimicrobial therapy.

- b. **For Asymptomatic close contact:** Implement daily monitoring for twenty-one (21) days after the last exposure to a probable or confirmed case for development of signs and symptoms of pertussis.

For diphtheria cases, Monitor close contacts for signs and symptoms for 10 days from the date of the last contact with a probable case.

- c. Patients shall be in a single room or consider the following alternatives when single-patient rooms are not available:
  - a. Prioritize any single-patient room for patients with excessive cough and sputum production.
  - b. Cohort patients with the same symptoms, probable diagnosis, and confirmed diagnosis.
  - c. Physically separate patients by at least one (1) meter (3 feet) and draw privacy curtains.

Place diphtheria patient in separate, isolation area away from other patient care areas or consider the following alternatives when single-patient rooms are not available:

- a. Prioritize any single-patient rooms for patients with excessive cough and sputum production.
- b. Cohort patients with the same symptoms, probable diagnosis and confirmed diagnosis.
- c. Physically separate patients by at least 1 meter (3 feet) and draw privacy curtains.

For cutaneous diphtheria:

- a. If a single room is not available, cohort patients with similar symptoms and diagnosis.
  - b. For cases of shared rooms, avoid having patients share toilets.
- d. The City/Municipal Health Offices may assign Barangay Health Workers (BHWs) to daily monitor patients during their term of isolation. C/MHO and BHWs shall properly document the daily monitoring of patients.
  - e. Local government units may reactivate existing Temporary Treatment Management Facilities and Barangay Isolation Units in adherence to proper patient isolation measures.
  - f. To strengthen the compliance with recommended isolation guidelines, all local government units are encouraged to provide funding/financial support and assistance to patients and affected families.



- g. Schools and educational institutions with confirmed cases shall implement the wearing of masks by students, faculty members, staff, and visitors.

## SECTION 6. Treatment and Management of Pertussis Cases.

- a. **Post-exposure Prophylaxis:** To prevent developing symptomatic infections, severe disease, serious complications, and death due to pertussis, the use of PEP antibiotic is highly recommended for the following high-risk individuals and close contacts:
  - i. All asymptomatic household close contacts are recommended to be given antimicrobial prophylaxis within 21 days of onset of cough of the index patient. Transmission requires close contact (exposure within 1 meter for more than 1 hour) but can be less for young infants.
  - ii. Individuals are considered high-risk if they belong to the following groups and are exposed within 21 days to an infectious pertussis case:
    - 1. Infants under 12 months of age and women in their third trimester of pregnancy.
    - 2. Individuals with pre-existing health conditions (e.g., immunocompromised, with moderate to severe medically treated asthma, etc.) that may be exacerbated by a pertussis infection.
    - 3. Individuals who have high probability of having close contact with high-risk individuals.
    - 4. Individuals in high-risk settings that will have close contact with infants under 12 months of age or women in the third trimester of pregnancy.
- b. **Antibiotic Treatment:** All local government units are encouraged to procure anti-microbial medicines (macrolides) to be used in treatment of pertussis cases (clinically/laboratory confirmed and close contacts). Treatment shall commence during the first one to two weeks before coughing paroxysms occur to reduce symptoms severity. Antibiotics will not alter the course of the illness or prevent transmission if they are given later in the course of illness.

The recommended anti-microbial agents for treatment or post-exposure prophylaxis of pertussis are the following:

- i. Azithromycin
- ii. Clarithromycin
- iii. Erythromycin
- iv. Co-trimoxazole.

All local government units are encouraged for the procurement of pertussis vaccines and anti-microbial agents to be used as treatment and post-exposure prophylaxis of pertussis.

**SECTION 7. Treatment and Management of Diphtheria Cases.** PEP for diphtheria includes receipt of diphtheria vaccine and a single dose of intramuscular benzathine penicillin G or a 7- to 10-day course of oral Erythromycin is recommended for close contacts of someone with diphtheria. If available, close contacts should be swabbed prior to initiating antibiotic prophylaxis.

Antibiotic treatment for probable and confirmed cases: Antibiotics should be administered as soon as possible.

- a. For patients unable to swallow or are critically ill: Use IV or IM preparations.
- b. For severely ill patients unable to take oral therapy: Initially use IV or IM formulation and shift to oral antimicrobials once condition improves clinically.
- c. For less sick patients: Oral therapy can be used at the onset.
- d. It is also essential to check for penicillin allergy (risk of anaphylaxis from penicillin is very rare) before initially administering.



**Diphtheria Antitoxin Treatment (DAT).** DAT is an equine serum product that is highly effective and the gold standard for the treatment of respiratory diphtheria but not routinely indicated for treatment of non-respiratory infections, unless cutaneous lesions are sufficiently large (more than 2 cm<sup>2</sup>) and membranous. This should be administered without delay after disease onset to reduce complications and mortality to the following but not limited to (WHO, 2023):

- a. All cases of respiratory diphtheria with laboratory-confirmed toxigenic *C. diphtheriae* or respiratory diphtheria-like cases with laboratory-confirmed toxigenic *C. ulcerans*.
- b. Probable cases. Respiratory diphtheria should be strongly considered in a probable case-patient who is toxic in appearance and one or more of the following:
  - i. Without another clearly established diagnosis
  - ii. Has rapidly worsening illness
  - iii. Has history of recent contact with dogs, cats, or dairy animals
  - iv. Was never vaccinated or is not up-to-date with diphtheria toxoid vaccination

For cases with low probability for diphtheria, consider other diagnoses. However, the final decision to request and administer DAT to a patient is left to the assessment of the attending physician. When needed upon thorough medical assessment, DAT shall be requested to the Department of Health (DOH) through a formal communication. Issuance of DAT shall be subject to availability due to limited global production. It is also important to note that due to the small risk of serious allergic reaction to the horse serum (0.6 % anaphylaxis), it is vital to obtain a detailed history on previous administration of equine-derived anti-toxin or immunoglobulins and regarding any known animal allergy, specifically equine allergy, and perform sensitization test (i.e., Besredka test) for all candidate patients before administering and to be given with caution for pregnant women or depending on the assessment of the attending physician. This should be given in a closely monitored setting with appropriate medical interventions available if needed in case of anaphylaxis.

Patients with positive sensitivity testing to DAT or with a previous history of adverse reaction to DAT should undergo desensitization (UKHSA, 2022). The recommended DAT dose depends on the site, extent, and duration of disease, varying from 20,000 to 100,000 units in a single IV or IM dose.

**SECTION 8. Reintegration of patients after treatment and isolation.** The following measures shall be implemented for the reintegration of patients after their treatment and isolation:

- a. Advise recovering individuals to continue practicing hand hygiene and respiratory etiquettes to prevent the possible transmission of pertussis.
- b. After discharge, restrict contact with others until completion of antibiotic therapy or depending on the assessment and advice of the attending physician.
- c. Everyone is advised to be up to date with vaccination against pertussis especially the high-risk individuals.
- d. Mental health status of the family especially the isolated patients shall also be assessed and monitored.

**SECTION 9. Immunization activities in response to Pertussis and Diphtheria cases in the community.** City/Municipal Health Offices are mandated to conduct intensified vaccination activities in catchment areas. Documentary evidence of immunization through immunization cards or through records from TCL must be checked prior immunization. Due to inadequacy of pertussis containing vaccines nationwide, unimmunized children are the priority population to receive inoculation. In case of saturation of unimmunized child, next priority for the vaccination is those on routine and catch-up immunization.

To boost vaccination efforts and campaigns, local government units through City/Municipal Health Offices shall establish and implement strategies to acquire support from significant local entities (Schools, IP/Tribe Leaders, Barangay Officials, etc.).


**SECTION 10. Separability Clause.** In any provision of the Executive Order is found to be unconstitutional or inconsistent with any national or local laws, ordinances, or resolutions, all the other provisions thereof shall remain in full force and applicable.



**SECTION 11. Repealing Clause.** All executive orders, rules, and regulations or parts thereof issued by the Provincial Government of Oriental Mindoro inconsistent with Executive Order are hereby amended, repealed and/or modified accordingly.

**SECTION 12. Effectivity.** This Executive Order shall take effect immediately upon its approval.

**DONE IN THE CITY OF CALAPAN, PROVINCE OF ORIENTAL MINDORO,** this 17<sup>th</sup> day of April in the Year of our Lord Two Thousand and Twenty-Four.

  
**HUMERLITO A. DOLOR, MPA, Ph. D.**  
Provincial Governor