

**A36 Diphtheria****RATIONALE FOR SURVEILLANCE**

Diphtheria is a widespread severe infectious disease that has potential for epidemics. The control of diphtheria is based on the following 3 measures:

1. Primary prevention of disease by ensuring high population immunity through immunization.
2. Secondary prevention of spread through rapid investigation of close contacts, in order to ensure proper treatment.
3. Tertiary prevention of complications and deaths through early diagnosis and proper management.

Surveillance data can be used to monitor levels of immunization coverage (target >90%) and disease as a measure of the impact of control programmes. Recent epidemics have highlighted the need for adequate surveillance and epidemic preparedness.

**RECOMMENDED CASE DEFINITION****Clinical description**

An illness of the upper respiratory tract characterized by laryngitis or pharyngitis or tonsillitis, **and**

- adherent membranes of tonsils, pharynx and/or nose

**Laboratory criteria for diagnosis**

Isolation of *Corynebacterium diphtheriae* from a clinical specimen.

**Note:** A rise in serum antibody (fourfold or greater) is of interest only if *both* serum samples were obtained before administration of diphtheria toxoid or antitoxin. This is not usually the case in surveillance, where serological diagnosis of diphtheria is thus unlikely to be an issue.

**Case classification**

**Suspected:** Not applicable.

**Probable:** A case that meets the clinical description.

**Confirmed:** A probable case that is laboratory confirmed or linked epidemiologically to a laboratory confirmed case.

**Note:** Persons with positive *C. diphtheriae* cultures who do not meet the clinical description (i.e. asymptomatic carriers) should not be reported as probable or confirmed diphtheria cases.

**RECOMMENDED TYPES OF SURVEILLANCE**

- Routine monthly reporting of aggregated data of probable or confirmed cases is recommended from peripheral level to intermediate and central levels; zero reporting required at all levels
- All outbreaks must be investigated immediately and case-based data collected
- In countries achieving low incidence (usually where immunization coverage is >85%-90%) immediate reporting of case-based data for probable or confirmed cases is recommended from peripheral to intermediate and central levels

Aggregated data on probable or confirmed cases and on immunization coverage must be reported from national level to WHO Regional Offices according to regional specifications.

**RECOMMENDED MINIMUM DATA ELEMENTS****Aggregated data:**

- Number of cases
- Number of third doses of diphtheria-tetanus-pertussis vaccine (DTP3) administered to infants

**Case-based data:**

- Unique identifier
- Geographical area (e.g., district) name
- Date of birth

## **A37.0 Pertussis** (Whooping cough)

### **RATIONALE FOR SURVEILLANCE**

Pertussis is a major cause of childhood morbidity and mortality. An estimated 45 million cases and 400 000 deaths occur every year; case-fatality rates in developing countries can reach 15%. High routine coverage with effective vaccine is the mainstay of prevention. Surveillance data on the disease can monitor the impact of vaccination on disease incidence, identify high risk areas and identify outbreaks.

### **RECOMMENDED CASE DEFINITION**

#### **Clinical case definition**

A person with a cough lasting at least 2 weeks **with at least one of the following:**

- paroxysms (i.e. fits) of coughing
- inspiratory “whooping”
- post-tussive vomiting (i.e. vomiting immediately after coughing)
- without other apparent cause

#### **Laboratory criteria for diagnosis**

- Isolation of *Bordetella pertussis*, or
- Detection of genomic sequences by polymerase chain reaction (PCR)

#### **Case classification**

**Suspected:** A case that meets the clinical case definition.

**Confirmed:** A person with a cough that is laboratory-confirmed.

### **RECOMMENDED TYPES OF SURVEILLANCE**

Routine monthly reporting of aggregated data of suspected and confirmed cases from peripheral level to intermediate and central level. Zero reporting required at all levels.

All outbreaks should be investigated immediately and laboratory-confirmed. During an outbreak, case-based data should be collected.

To describe the changing pertussis epidemiology in countries with low pertussis incidence (where DTP3 coverage is usually >80%), additional information of age group and immunization status should be collected. As an alternative, case-based surveillance, active surveillance, sentinel surveillance and/or occasional surveys and/or laboratory confirmation for suspected cases should be considered.

**International:** Aggregated data of clinical (suspected) and confirmed cases in routine surveillance reports of countries to WHO Regional Offices according to regional specifications.

### **RECOMMENDED MINIMUM DATA ELEMENTS**

#### **Aggregated data for reporting**

- Number of cases
- Number of 3d doses of diphtheria-pertussis-tetanus vaccine (DTP3) given to infants
- Completeness / timeliness of monthly reports

### **CASE-BASED DATA FOR INVESTIGATION AND REPORTING**

- Unique identifier
- Geographical information (e.g., district and province)
- Date of birth
- Date of onset
- Total number of pertussis vaccine doses; 99=unknown
- Date of latest pertussis vaccine dose; 99=unknown
- Classification: 1=confirmed; 2=suspected; 3=discarded