

Diphtheria in the Americas - Summary of the situation

Between epidemiological week (EW) 1 and EW 30 of 2018, three countries in the Region of the Americas (Colombia, Haiti, and the Bolivarian Republic of Venezuela) have reported confirmed diphtheria cases. In 2017, four countries in the Region (Brazil, the Dominican Republic, Haiti, and the Bolivarian Republic of Venezuela) had reported confirmed diphtheria cases.

The following is a summary of the situation in each country with reported confirmed diphtheria cases in 2018.

In **Colombia**, between EW 11 and EW 29 of 2018, 7 cases of diphtheria were confirmed, including 2 deaths. Of the 7 cases, one was imported from Venezuela, and 6 acquired the disease in Colombia. The nationality of the cases as follows 5 Venezuelans and 2 Colombians. The median age of the cases is 20-years-old, (ranging between 3 and 37-years-old). None of the cases had vaccination history and symptoms onset was between 2 January and 8 July 2018. Five of the cases were reported in the department of La Guajira and 2 in Norte de Santander. The cases were confirmed based on clinical-epidemiological and laboratory criteria.

In **Haiti**, the outbreak began in EW 51 of 2014 and is ongoing with a total of 601 cumulative probable cases¹ reported (up to EW 30 of 2018), including 96 deaths; of the total cases, 218 were confirmed. The case fatality-rate by year is: 27.6% in 2015, 50.8 % in 2016, 11.3 % in 2017, and 8.7% in 2018 (as of EW 30).

The percentage of probable cases that were female by year is: 56% in 2015, 50% in 2016, 60% in 2017, and 61% in 2018 (as of EW 30).

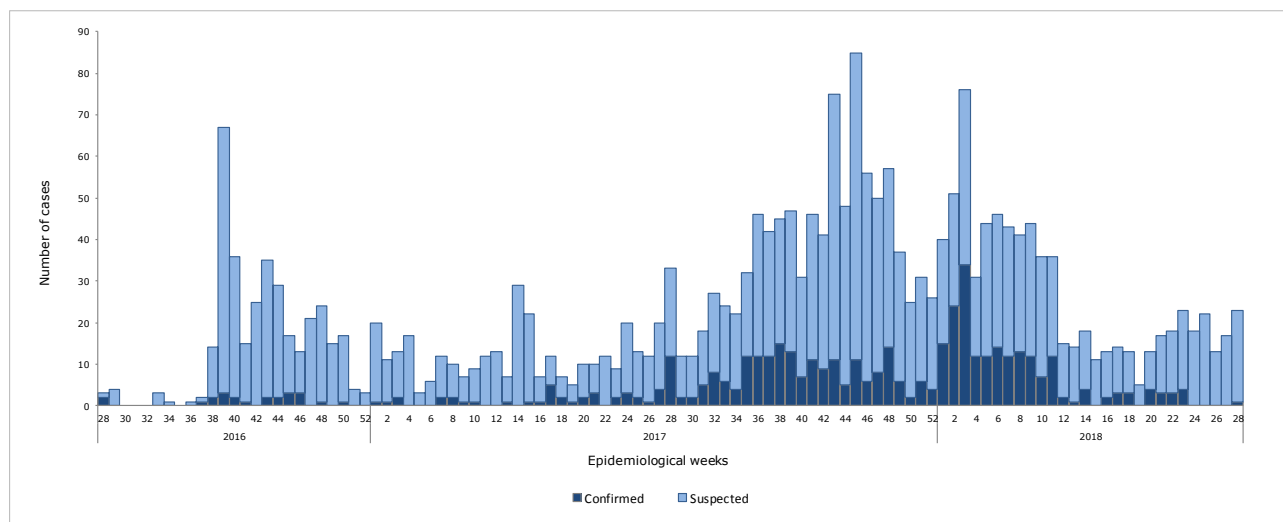
In 2018, 217 probable cases were reported between EW 1 and EW 30, including 52 confirmed cases. Of the total cases reported there were 19 deaths (9 confirmed, 2 under investigation, and 8 without sufficient information available for classification). The age range of the probable cases is from 8 months to 53-years-old, with 49.31% being under 10-years-old. A total of 49% were from the Ouest department alone. In 2018, an average of 7 cases were reported weekly, this number exceeds the 3 per week case average observed in 2016 and 2017.

¹ Per the Haiti Ministry of Public Health and Population, a probable case is defined as any person, of any age, that presents laryngitis, pharyngitis or tonsillitis with false adherent membranes in the tonsils, pharynx and / or nasal pits, associated with edema of the neck.

In **Venezuela**, the diphtheria outbreak that began in July 2016 is ongoing (**Figure 1**), with a total of 1,904 suspected diphtheria cases reported, including 164 deaths: 324 cases and 17 deaths in 2016, 1,040 cases and 103 deaths in 2017, and 540 cases and 44 deaths in 2018 (as of EW 28).

Between EW 1 to EW 28 of 2018, there were 540 suspected cases reported, including 102 confirmed by laboratory, 109 confirmed by clinical criteria and epidemiological-link, and 138 that were discarded. During the same period there were 70 deaths, 44 were confirmed and 26 remain under investigation.

Figure 1. Suspected and confirmed diphtheria cases by epidemiological week of symptom onset. Venezuela, EW 37 of 2016 to EW 28 of 2018



Source: Data from the Venezuela Ministry of Popular Power for Health and reproduced by PAHO/WHO

In 2016, cases were reported in 5 states (Anzoátegui, Bolívar, Delta Amacuro, Monagas, and Sucre), while in 2017 and 2018, 22 states and the Capital District reported confirmed cases.

Cases have been reported among all age groups. In 2018 the incidence rate per 100,000 inhabitants was higher in those under 15-years-old than those over 15-years-old. The incidence rates reported by age group are the following: 0 to 4-years-old (1.2 per 100,000 inhabitants), 5 to 9-years-old (1.0 per 100,000 inhabitants), and 10 to 14-years-old (1.6 per 100,000 inhabitants), 15 to 19-years-old (0.9 per 100,000 inhabitants), 20 to 29-years-old (0.6 per 100,000 inhabitants), 30 to 39-years-old (0.6 years old), 40 to 49-years-old (0.3 per 100,000 inhabitants), and 50-years-old and above (0.2 per 100,000 inhabitants).

Advice for Member States

The Pan American Health Organization / World Health Organization (PAHO/WHO) advises Member States to continue their efforts to ensure vaccination coverage over 95% with the full 3-dose primary series and booster doses in all territorial entities.

PAHO/WHO stresses that the populations at greatest risk are unvaccinated children under 5 years of age, schoolchildren, healthcare workers, military service personnel, prisoner

communities, and persons who, due to the nature of their occupation, are in contact with a large number of persons on a daily basis.

Although travelers do not have a special risk of diphtheria infection, it is recommended that national authorities remind travelers going to areas with diphtheria outbreaks to be properly vaccinated in accordance with the national vaccination scheme established in each country prior to travel. If more than five years have passed since their last dose, a booster dose is recommended.

PAHO/WHO recommends Member States strengthen their surveillance system for the early detection of suspected cases in order to initiate the timely treatment of cases and follow-up of contacts and ensuring the supply of diphtheria antitoxin.

Vaccination is key to preventing cases and outbreaks, and adequate clinical management reduces complications and mortality.

References

1. Diphtheria vaccine: WHO position paper – August 2017. Available at: <http://bit.ly/2CCN7UW>
2. Faulkner A, Acosta A, Tejpratap S.P, Tiwari. Manual for the Surveillance of Vaccine-Preventable Diseases, 5th Edition, 2011. Diphtheria: Chapter 1. Available at: <http://bit.ly/2oFCA5j>