

Diphtheria in the Americas - Summary of the situation

Between epidemiological week (EW) 1 and EW 34 of 2018, three countries in the Region of the Americas (Colombia, Haiti, and the Bolivarian Republic of Venezuela) have reported confirmed cases of diphtheria. The following is a summary of the epidemiological situation in these countries.

In **Colombia**, between EW 11 and EW 32 of 2018, 8 cases of diphtheria were confirmed, of which 2 were imported from Venezuela and 6 were locally-acquired in Colombia in areas with a high flow of Venezuelan migrant populations. All confirmed cases are male; 6 are Venezuelan nationals and 2 are Colombian nationals. The median age of the cases is 20-years-old (age range 3 to 37 years). None of the cases had a known vaccination history for diphtheria, and symptom onset was between 2 January and 8 July 2018. The cases were reported by two departments bordering Venezuela: La Guajira (5 cases) and Norte de Santander (3 cases). All were confirmed by clinical-epidemiological and laboratory criteria.

Of the total of confirmed cases, there have been a total of 3 deaths (38% case-fatality rate), all among Venezuelan nationals with 2 corresponding to imported cases.

In **Haiti**, the outbreak continues with a cumulative total of 653 probable cases¹, including 100 deaths, reported between EW 32 of 2014 and EW 34 of 2018 (**Figure 1**). Of the total cases, 223 cases were confirmed (219 by laboratory and 7 by epidemiological link). The case-fatality rate among laboratory-confirmed cases was 23% in 2015, 39% in 2016, and 8% in both 2017 and 2018.

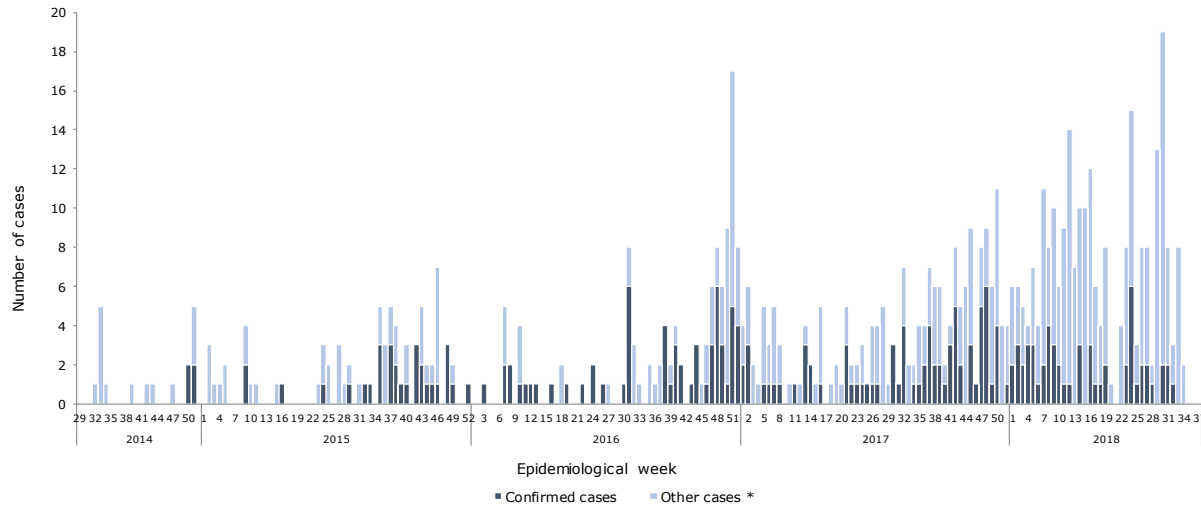
The number of probable cases reported in 2018 until EW 34 is 28% higher than the total number of cases reported in 2017 and 115% higher than that reported in 2016 due to the increased sensitivity of the national surveillance system.

Between EW 1 and EW 34 of 2018, 249 probable cases were reported, including 56 confirmed cases (51 by laboratory and 5 by epidemiological link). During the same period, there were 20 deaths reported (4 laboratory-confirmed, 5 confirmed by epidemiological link, 9 with no viable laboratory samples, and 2 under investigation). The probable cases ranged in age from 0 to 78 years old, with 66% under 15 years old. Regarding gender, 61% of the total cases were female, while in 2015, 2016, and 2017 that proportion was 56%, 50%, and 58%, respectively.

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

Among the 56 confirmed cases reported in 2018, 39% are less than 15 years old (age range 2 to 33 years) and 57% are female; in 2015, 2016, and 2017, the proportion of females was 63%, 54%, and 53%, respectively. In 2018, 46% of probable cases and 43% of confirmed cases were reported by Ouest Department.

Figure 1. Distribution of reported cases of diphtheria by epidemiological week and year of notification, Haiti, EW 32 of 2014 to EW 34 of 2018

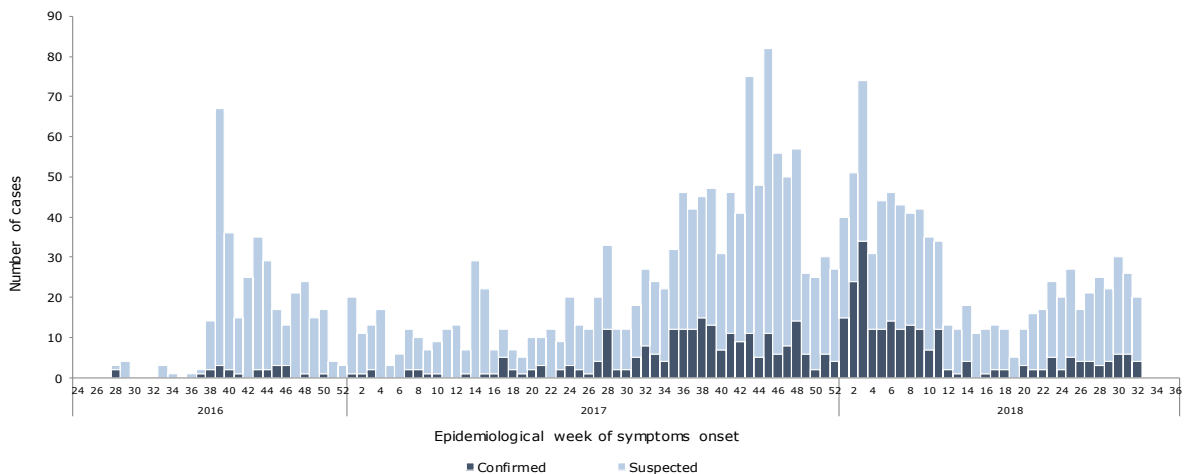


*Other cases refer to all cases that were not classified as confirmed: those with negative laboratory results, those for which test results are pending, and those for which viable samples were not available.

Source: Haiti Ministère de la Santé Publique et de la Population (MSPP). Data reproduced by PAHO/WHO

In **Venezuela**, the diphtheria outbreak that began in July 2016 remains ongoing (**Figure 2**). Since the beginning of the outbreak until EW 32 of 2018, a total of 1,992 suspected cases were reported (324 cases in 2016, 1,040 in 2017, and 628 in 2018); of these, 1,217 were confirmed (470 by laboratory and 747 by epidemiological link) and there were 168 deaths (17 in 2016, 103 in 2017, and 48 in 2018). The cumulative case-fatality rate among confirmed cases is 14%.

Figure 2. Distribution of suspected and confirmed cases of diphtheria by epidemiological week of symptom onset, Venezuela, EW 28 of 2016 to EW 32 of 2018



Source: SIS 04/EPI 12 years 2016, 2017, 2018. DVE/Coordination of Surveillance of Vaccine-Preventable Diseases. Venezuela Ministry of Popular Power for Health. Data reproduced by PAHO/WHO

In 2016, cases were reported in 5 states (Anzoátegui, Bolívar, Delta Amacuro, Monagas, and Sucre) while in 2017, cases were reported in 22 states and the Capital District. In 2018, 20 federal entities have reported confirmed cases. Cases have been reported among all age groups, but the most affected group is 1 to 49 years old, of which the highest incidence rate is among 10 to 14 years old.

Advice for Member States

The Pan American Health Organization / World Health Organization (PAHO/WHO) recommends that Member States continue their efforts to ensure vaccination coverage over 95% with the primary and booster doses and using strategies to reach adequate coverage 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 for diphtheria infection, it is recommended that national authorities remind travelers going to areas with diphtheria outbreaks to be properly vaccinated prior to travel in accordance with the national vaccination scheme established in each country. If more than five years have passed since their last dose, a booster dose is recommended.

PAHO/WHO recommends that Member States strengthen their surveillance systems for the early detection of suspected cases in order to initiate the timely treatment of cases and follow-up of contacts, as well as maintaining a 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. Final report of the 3rd Ad-Hoc Meeting of the Technical Advisory Group (TAG). Ad-hoc Virtual Meeting, March 19, 2018. Available at: <https://bit.ly/2wsLeIk>