

## 2 VACCINE-PREVENTABLE DISEASES

### a Diphtheria outbreak in the Western Cape Province

A total of four laboratory-confirmed cases of diphtheria and one asymptomatic carrier of toxin-producing *Corynebacterium diphtheriae* has been identified in a community in the Eastern sub-district of the Cape Town Metropolitan District.

On 3 August 2017, a diagnosis of diphtheria was confirmed in a 10-year-old child at a provincial hospital in Cape Town. The case presented severely ill with membranous pharyngitis and respiratory obstruction and died in ICU on 4 August. Two siblings and a neighbour of the family were diagnosed with diphtheria, and the mother tested positive for *Corynebacterium diphtheriae* but was asymptomatic. Diphtheria anti-toxin and appropriate antibiotics were administered to the two surviving siblings. No further diphtheria cases have been identified since 14 August.

Provincial and district health services were activated immediately to identify contacts of the family, including household members, pupils at the school attended by the index case and health care workers in order to identify and prevent additional cases. Throat swabs were taken, azithromycin prophylaxis was provided and age-appropriate diphtheria vaccination was administered to close and eligible at-risk contacts. As part of contact tracing nearly 500 persons were given antibiotic prophylaxis, 200 laboratory screening tests were conducted, and over 1 000 vaccines were administered. Information, education and communication material were distributed to the public and healthcare care workers.

In response to the low community vaccination coverage rates for the Td booster for children

scheduled at 6 and 12 years of age, a selective vaccination campaign targeting the at-risk community commenced on 14 August. To date, 11 506 children 6 to 15 years of age have been vaccinated at schools in the area. In addition, a catch-up campaign has also commenced with 2 817 vaccines given to children under 6 years of age. Various methods, e.g. house-to-house call out and mobile health buses, are being used to enhance community participation.

Clinicians and other healthcare workers need to be made aware of the clinical case definition of diphtheria, the importance of notifying suspected cases as well as good communication with the laboratory. Early case detection and appropriate treatment is essential to minimize the risk of the infection spreading if it is introduced into a community. District, sub-district, and local health authorities must put strategies in place to improve the routine vaccination coverage in the primary series (6, 10, 14 weeks) and booster doses at 18 months, 6 and 12 years of age. Every effort should be made to adhere to all components of the 'Reach Every District' WHO vaccination strategy which has been adopted by South African National and Provincial departments of health.

**Source:** Western Cape Department of Health; Division of Public Health, Surveillance and Response, Centre for Respiratory Disease and Meningitis; NICD-NHLS; charlene.jacobs@westerncape.gov.za