

## 2 VACCINE PREVENTABLE DISEASES

### a A cluster of pertussis cases in Emalahleni Sub-district, Mpumalanga Province

Pertussis (whooping cough), caused by the bacterium *Bordetella pertussis*, is a highly contagious, vaccine-preventable respiratory tract disease. Unvaccinated, or partially vaccinated infants and young children are at high risk for infection and severe disease. Immunity following vaccination lasts for 5-6 years.

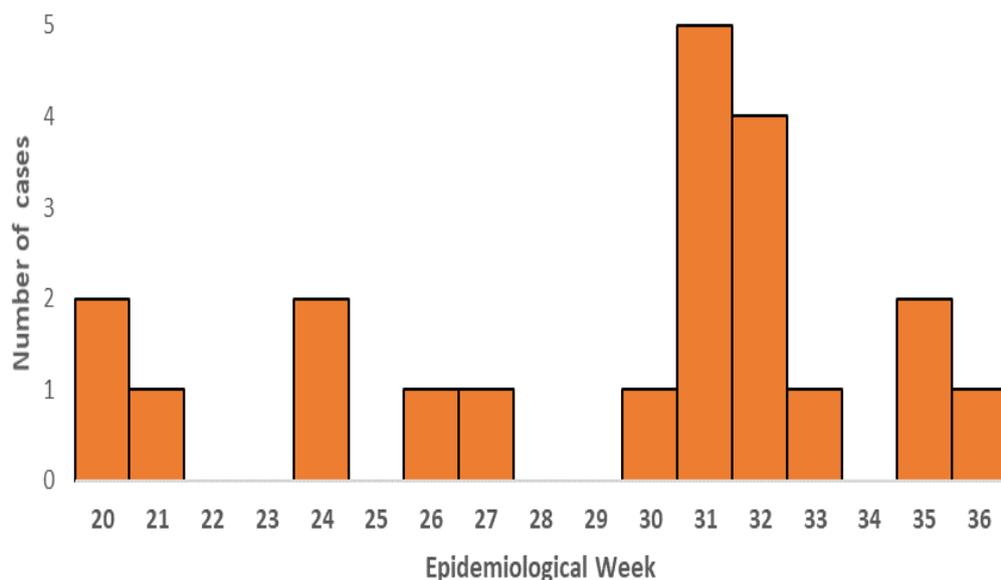
A laboratory-confirmed pertussis case in a five-month old male was notified from a private hospital in the Emalahleni Sub-district of Mpumalanga Province, on 17 July 2018. This was followed by a second case on 25 July 2018. During investigation of the cases, an epidemiological link was found between the two cases. The cases are family friends and travelled together on holiday. The second case was found to be a teacher at a primary school; two more teachers and 11 learners were found to be positive for pertussis in this primary school.

Both district and sub-district outbreak response teams in Nkangala District were activated to conduct investigation and public health action, which included: identification and tracing of contacts, providing of prophylaxis, testing of symptomatic contacts and providing Expanded Programme on Immunization (EPI) catch-up vaccine to contacts as per requirement. Consent forms, together with a fact sheet on pertussis, were issued to the school and the parents of school going children. The Provincial Department of Health informed the Provincial Department of Basic Education about the increase of cases. Both departments worked together to release media statements and thereafter radio slots were conducted.

From July 2018 – October 2018, a total of 25 pertussis cases linked to this cluster was diagnosed. Five (5/25, 20%) of the cases were reported in children  $\leq 5$  years, 52% (13/25) were in the 6–19 years age group and 28% (7/25), in the  $\geq 20$  years age group. In total, one aftercare centre, three schools (two primary schools and one secondary school) and one orphanage were affected. No new cases linked to this cluster have been reported since the last case tested positive on 13 September 2018 (Figure 2). The situation is still being monitored by the team.

There is a concurrent increase in pertussis cases as detected through the NICD sentinel sites (Western Cape, Gauteng, Mpumalanga, North West and Kwa-Zulu-Natal provinces), September Communiqué Vol. 17(9). Clinicians are advised to be on the alert for cases, to conduct diagnostic testing where appropriate, to notify cases and prescribe post-exposure prophylaxis to close and high-risk contacts of suspected or confirmed cases. NICD recommendations for pertussis diagnosis, management and public health response may be found on the NICD web page (<http://www.nicd.ac.za/index.php/pertussis/>).

**Source:** Mpumalanga Provincial Department of Health, Division of Public Health Surveillance and Response, NICD Provincial Epidemiology Team and Centre for Respiratory Diseases and Meningitis, NICD-NHLS (outbreak@nicd.ac.za)



**Figure 2.** Epidemic curve of laboratory-confirmed pertussis cases by week of illness onset, Emalahleni Sub-district, Nkangala District July - September 2018.