

### 3 SEASONAL DISEASES

#### a Enteroviral meningo-encephalitis outbreak in Tshwane — a preliminary description

The NICD was alerted regarding a possible outbreak of enteroviral meningitis in the Tshwane District on 3 November 2015. A total of 21 cases of confirmed or suspected enterovirus meningitis were reported from a single private hospital. All the cases were in children, and 5 (24%) had a confirmed diagnosis of enterovirus meningitis. All children had been admitted with symptoms of meningitis/encephalitis or a nonspecific febrile illness with general myalgia and gastrointestinal complaints. Following further enquiries, 18 additional cases of viral meningitis/encephalitis were reported from other private facilities in the Tshwane area. All cases, except one, were children <10 years of age. To date NICD has obtained residual clinical specimens from 7 of the cases; 3 (43%) of these samples tested positive for enterovirus, of which two had not been previously confirmed.

Enteroviruses belong to the Picornaviridae family and have 2 distinct classes: polioviruses (types 1, 2, and 3) and non-polioviruses (coxsackievirus, enterovirus, echoviruses, and unclassified enteroviruses). The non-polioviruses are responsible for a myriad of clinical syndromes in addition to aseptic meningitis. These include mild respiratory disease, hand-foot-and-mouth (HFM) disease, herpangina, myocarditis and pleurodynia. Reviews of meningitis data from South Africa indicate that there are usually more cases of viral meningitis during dry summer seasons. The most recent viral meningitis outbreak described in Gauteng occurred during the summer of 2010/2011 in Tshwane, and was caused by echovirus 4. Enteroviral infections

are under-reported.

Human-to-human transmission of enteroviruses is usually via the faeco-oral route. Poor hand hygiene practices and contamination of food and water sources facilitate transmission. Children younger than 5 years are most frequently affected because of absent immunity. However most cases are self-limiting and the overall mortality rate is extremely low. The most effective way to prevent the spread of enteroviruses is through adequate hand washing and good general hygiene practices. People who are close contacts of viral meningitis patients do not need prophylactic antibiotic treatment.

Although enterovirus or viral meningitis is not a notifiable condition, the recent global increase in the detection of enterovirus D68 and the putative association with acute flaccid myelitis/paralysis in other countries, emphasises the need to closely monitor enteroviruses associated with outbreaks. Please notify [outbreak@nicd.ac.za](mailto:outbreak@nicd.ac.za) if you are a clinician in the Tshwane area, and identify a case of suspected enteroviral meningitis. Additional samples will allow the NICD together with other healthcare providers to assess the extent of the outbreak.

**Source:** Centre for Respiratory Diseases and Meningitis, NICD-NHLS; Lancet Laboratories, Vermaak and Partners.