



## CONTENTS

Rotavirus disease update	1	Influenza surveillance	2
Rabies update	4	Crimean-Congo haemorrhagic fever	4
Meningococcal disease update	5	Middle East respiratory syndrome corona-virus (MERS-CoV)	6
Beyond Our Borders: infectious disease risks for travellers			8

## Rotavirus disease update

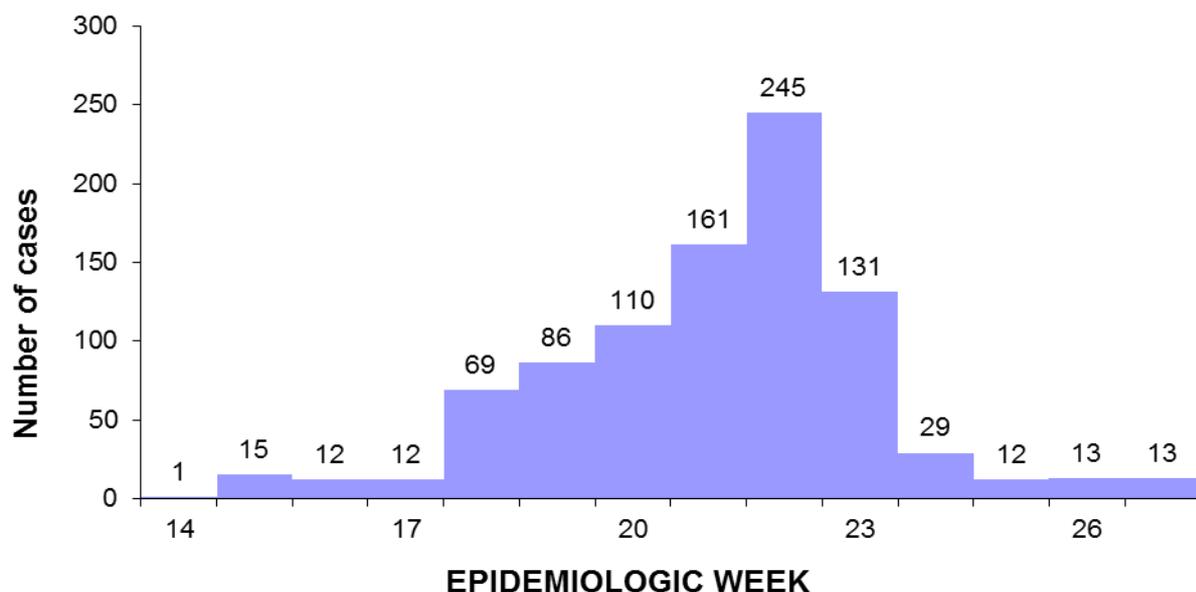
An increase in the number of diarrhoeal cases seen in health care facilities in the eThekweni Metropolitan, KwaZulu-Natal Province and Uptington, Northern Cape Province, was reported in the June Communicable Diseases Communiqué (<http://www.nicd.ac.za/assets/files/NICD-NHLS%20Communicable%20Disease%20Communiqu%C3%A9%20June%202013%20%281%29.pdf>).

As of 09 July 2013 more than 1000 cases, including 26 deaths, have been reported from health care facilities in the eThekwini Metropolitan, and more

than 900 cases, including 6 deaths, from 32 health care facilities in Uptington, Siyanda District.

### Uptington, Siyanda District, Northern Cape Province

Initial investigations revealed that an increase in the number of diarrhoea cases was documented from epidemiologic week 18 (week starting 29 April) with a peak occurring during epidemiologic week 22 (week starting 27 May 2013) before declining to low levels (<10 cases per day) as at epidemiologic week 24 (week starting 10 July 2013) (Figure 1).



**Figure 1. Number of cases of diarrhoeal illness by epidemiologic week, Uptington, Siyanda District, Northern Cape Province, 9 April to 7 July, 2013**

Diarrhoea, vomiting and abdominal cramps were the most common symptoms reported. Children aged <5 years accounted for a higher proportion of cases (58%, 554/953). Of those aged <5 years (n=554), the majority were <1 year of age (44%, 245/554). Of the laboratory-confirmed rotavirus cases where age was recorded (n=37), 86% (32/37) were children aged <5 years, while those aged <1 year accounted for 57% (21/37).

As of 04 July 2013, stool samples for 88 cases had been tested at the Centre for Enteric Diseases (CEDv) virology laboratory at the NICD-NHLS. Rotavirus was detected in 38/88 (43%) samples; other enteric viruses (including adenovirus, norovirus GI and GII, astrovirus, sapovirus and bocavirus) were also detected (22%, 19/88) in most cases as co-infections with rotavirus (58%, 11/19). The predominant circulating strains were G3P[8] (45%, 17/38), and G9P[8] (42%, 16/38) respectively. The phylogenetic analysis of the VP4 gene showed that the circulating P[8] strains clustered with non-vaccine P[8] strains in lineage-III and were not markedly different to South African P[8] strains that were circulating in 2011 and 2012.

Interviews were conducted with caregivers of rotavirus-positive patients to determine vaccination history, diet, housing, level of overcrowding, water and sanitation. The number of cases has declined dramatically since week 25 (week starting 17 June). Health promotion is ongoing and a review is underway.

### **eThekweni Metropolitan, KwaZulu-Natal Province**

As of 3 July 2013, 242 stool samples had been tested at the CEDv at the NICD-NHLS.

Rotavirus was detected in 55% (134/242) of the samples, with strains G2P[4] and G9P[8] detected in 54% (72/134) and 39% (52/134) of cases respectively. Other enteric viruses including adenovirus, norovirus GI and GII, astrovirus, sapovirus and bocavirus were also detected in 30% (73/242) of the samples, with at least half (51%, 37/73) of the cases co-infected with rotavirus. Of the laboratory-confirmed rotavirus cases where age was reported, 94% (171/181) were children <5 years of age and of these, 58% (100/171) were less than one year of age.

The rotavirus strains currently circulating in eThekweni should be covered by the monovalent rotavirus vaccine administered in the national immunization program. Similarly to the rotavirus strains detected in Upington, the P[8] strains from eThekweni clustered with lineage III P[8] strains and were not markedly different from P[8] strains circulating in South Africa in 2011 and 2012. Of concern is that a large proportion of cases were children in age groups that should have received two doses of rotavirus vaccine and thus developed protective immunity against rotavirus diarrhoea.

An investigation of this upsurge in diarrhoeal illness with predominance of rotavirus is currently underway. Aspects being investigated include a case-control study, vaccine status of rotavirus-positive cases, and EPI-related issues.

**Source:** Division of Public Health Surveillance and Response, Centre for Enteric Diseases and SA-FELTP, NICD-NHLS; Departments of Paediatrics and Public Health, University of KwaZulu-Natal; Department of Health: EPI and Outbreak Response Teams - National, Northern Cape provincial and district, KwaZulu-Natal provincial and district teams.