

**b Measles**

The Centre for Vaccines and Immunology at the National Institute for Communicable Diseases (NICD) reported three confirmed measles cases from the Cape Town Metropolitan District in the Western Cape Province, after being alerted by Pathcare private laboratory who had tested the original samples. Two of the cases, a 17-year-old female and a 52-year-old male, presented at an oncology unit of a private hospital and the third case is a 47-year-old male who was a close contact of one of the cases. The diagnosis was made by PCR on clinical specimens, as the index patient was immunocompromised and never mounted an immune response with IgM antibody. Nosocomial transmission most likely accounted for these cases. The source is yet to be determined. A fourth measles case, from the West Coast District of the Western Cape Province, was confirmed and is not linked epidemiologically to the three cases described above. Since the beginning of 2015, there have been a total of nine laboratory-confirmed measles cases in South Africa, with onset of symptoms between the 1<sup>st</sup> of January and the 11<sup>th</sup> of June. The cases are from the Eastern Cape, Northern Cape, North West and Western Cape provinces, with ages ranging from 5 months to 52 years.

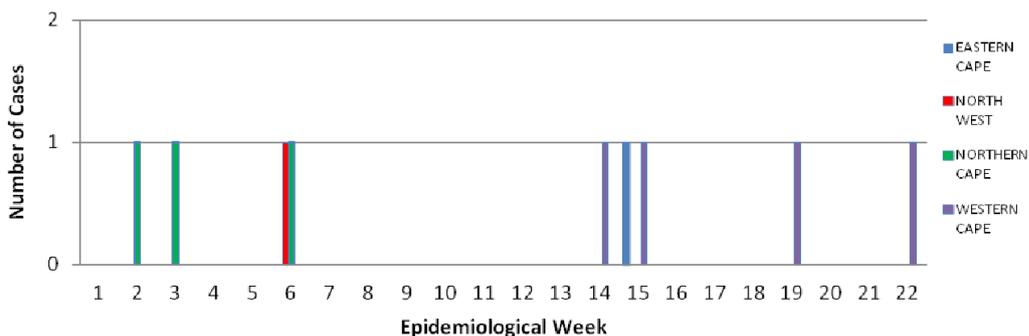
Molecular testing was conducted by CVI using specimens obtained from the two oncology patients, both of whom demised. This revealed that both were infected with a genotype D8 strain of the measles virus. This genotype is currently circulating in Europe, Australia, Brazil, North America and Asia. It is different from the genotype B3 that caused the recent measles outbreak at the end of 2014 in the Northern Cape and Gauteng provinces.

Measles is one of the most contagious viral infections and causes significant morbidity and mortality worldwide. The occurrence of an outbreak at the end of 2014 in South Africa, coupled with measles outbreaks in other parts of the world, including the USA and Europe, is a reminder for all

health care professionals to be vigilant. All suspected cases (any patient with fever, rash, and either cough, coryza or conjunctivitis) should have a blood sample sent for testing at the NICD along with a case investigation form and should be notified prior to blood results being available. Measles is prevented by vaccination with a live attenuated vaccine strain, which is routinely given at 9 months and 18 months according to the South African Expanded Program for Immunization schedule, or to older children and adults during mass vaccination campaigns. Severely immune compromised patients (such as people on prolonged corticosteroids at high doses, organ transplant recipients on immunosuppressive treatment or oncology patients on chemotherapy), should not receive measles vaccine. Protection of such patients against measles is achieved by administration of immunoglobulin and vaccination of contacts and staff of health facilities.

Nosocomial transmission of measles is well described, therefore control measures in response to the cases from the Western Cape described above included vaccination of health care workers and administration of human immunoglobulin (prepared from pooled human serum) to at least two exposed oncology patients. Concern was raised by staff at the oncology facility regarding the risk of transmission of vaccine strain to oncology patients, as vaccine-strain-virus is occasionally shed from immunocompetent recipients post-vaccination. A careful literature search and correspondence with international measles experts revealed no case reports of measles attributable to transmission from a vaccine recipient, and consensus is that this is exceedingly unlikely to occur. Therefore vaccination of immunocompetent staff in an oncology ward represents no risk to patients.

**Source:** Centre for Vaccines and Immunology, NICD; Pathcare, Western Cape; Western Cape Department of Health; Outbreak Response Unit, NICD.



**Figure 2. Cases of measles in South Africa with laboratory confirmation reported by Centre for Vaccines and Immunology, NICD, from weeks 1 to 22 (June 11th), 2015**