

Communicable Diseases Communiqué

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Measles outbreak

There have been an additional 1 353 laboratory-confirmed measles cases since the last published communiqué, bringing the total to 3 767 cases for 2009 to date. Although Gauteng province has reported most new cases (712/1353, 53%), all other provinces have also reported cases.

The case definition for suspected measles is as follows: fever $\geq 38^{\circ}\text{C}$, rash, and one of the following: cough, coryza, conjunctivitis. All suspected cases should have a blood and urine or throat swab specimen taken, and the new measles case investigation form (available on the NICD website) completed by the person diagnosing the patient. Suspected cases should be notified to the local authority health services' Communicable Disease

Control directorates, as required under the Health Act. All close household contacts of the patient should receive a measles vaccination within 72 hours of contact – this may provide some protection against infection. This primary vaccination response should occur as soon as possible (prior to the availability of the results) in order to prevent spread. Frequently-asked-question documents pertaining to measles vaccine and more detailed updates are available on the NICD website.

Source: Divisions of Epidemiology and Virology, NICD; Communicable Diseases Directorate: Tshwane District and Gauteng Province.

Pandemic influenza A(H1N1) 2009

Six laboratory-confirmed pandemic influenza A (H1N1) cases have been reported to the NICD since 15 November 2009, all associated with travellers returning from northern hemisphere countries. No secondary transmission has been documented. As of 23 November 2009, a total of 12 632 laboratory-confirmed cases of pandemic influenza A(H1N1) 2009 infection, including 92 associated deaths, has been recorded in South Africa. Further detail on the epidemiology of cases and factors associated with fatalities can be viewed within the weekly situation report published on the NICD website.

In the northern hemisphere, pandemic influenza activity is variable. It has passed its peak in North America and Canada, and, with the exception of France, activity has peaked or passed its peak in much of western Europe. Increasing activity continues to be observed in parts of central and

south-eastern Europe, including in Albania, the Czech Republic, Estonia, Greece, Hungary, Latvia, Poland, Romania, Montenegro, Slovenia and Turkey. In Western and Central Asia, influenza virus transmission remains active, with increasing activity in Kazakhstan and Kyrgyzstan. In the rest of Africa, limited data suggest that pandemic H1N1 2009 virus continues to be detected from all parts of the continent, and appears to be the predominant influenza virus circulating in northern and eastern Africa. Mass gatherings such as the recent Hajj pilgrimage have also been associated with increased incidence.

It remains very important for clinicians to continue to suspect pandemic influenza A(H1N1) 2009 infection in patients presenting with influenza-like-illness (ILI), especially individuals with a recent history of travel.

(Continued on page 2)

(Continued from page 1)

Empiric antiviral treatment for individuals with severe acute respiratory illness should be strongly considered in returning travellers from countries with current pandemic influenza A(H1N1) 2009 activity and this should not be withheld whilst laboratory results are awaited. Pregnant women and patients with co-morbid conditions associated with increased risk of severe disease (including diabetes, obesity,

chronic cardiopulmonary/renal/hepatic disease, immunosuppression including HIV infection) should be treated promptly and monitored for complications.

Source: NHLS: Epidemiology and Virology Divisions, NICD; Tygerberg Hospital; Groote Schuur Hospital; Universitas Hospital; Steve Biko Academic Hospital; Inkosi Albert Luthuli Central Hospital. Private laboratories: Ampath, Lancet, PathCare and Vermaak laboratories. Elective medical students, University of Stellenbosch.

Rabies update

Rabies was confirmed by RT-PCR on a saliva sample from an eighteen-year-old male who presented to a hospital in Mpumalanga Province with classical rabies symptoms of hydrophobia and marked anxiety. The initial two saliva specimens tested negative for rabies by RT-PCR, highlighting the fact that excretion of virus may be intermittent and that submission of repeat saliva samples and/or other samples such as skin biopsies may be indicated to aid in the ante-mortem diagnosis of rabies. The patient did not visit any health care facility following a category 3 exposure to a rabid dog in June. Insufficient community awareness of rabies remains a major obstacle. A total of 15 human rabies cases in South Africa has been confirmed by the NICD for 2009 to date. These cases have been reported from Eastern Cape (n=8), KwaZulu-Natal (n=4), Mpumalanga (n=2) and Limpopo (n=1) Provinces. In addition, cases have also been confirmed from Namibia (n=7) and Swaziland (n=1). It is noteworthy that few cases are reported and laboratory-confirmed, and these statistics do not reflect the true burden of the disease. Rabies is not always easily clinically diagnosed, with two forms of presentation: the encephalitic ('furious') and

paralytic ('dumb') forms. The encephalitic form often presents with hyperactivity, hallucinations and altered behaviour with periods of lucidity, as well as the classic hydrophobia and aerophobia. The paralytic form initially resembles Guillain-Barré syndrome with an ascending paralysis or a symmetric quadriplegia and normal sensorium, followed by confusion and ultimately coma. There are no routine serological tests that are informative in rabies cases and specific and specialized tests are required to confirm the diagnosis. RT-PCR on saliva, cerebrospinal fluid and nuchal biopsies are recommended for ante-mortem diagnosis; however, the fluorescent antibody test performed on brain smears (usually post-mortem) is the gold standard for rabies diagnosis.

The rabies problem should be addressed by intensified dog vaccination and targeted control programs. Awareness of both the public and the medical fraternity is vital especially in hyperendemic areas.

Source: Special Pathogens and Outbreak Response Units, NICD

Viral haemorrhagic fever

Two cases of Crimean-Congo haemorrhagic fever (CCHF) were confirmed in the past month. The first case was a marine inspector from Stompneus Bay, near Vredenburg in Western Cape Province, who was bitten by a *Hyalomma* tick and developed a febrile illness with headache and rigors 3 days later, followed by a petechial rash on day 5 of illness. A thrombocytopenia (platelet count of $23 \times 10^9/l$) and moderate transaminitis (AST of 184 IU/l and ALT of

165 IU/l) were supportive of the diagnosis. CCHF RT-PCR performed on a blood specimen collected on day 8 of illness was negative, but positive CCHF-IgG and IgM serology confirmed the clinical diagnosis. The patient has recovered uneventfully. The second case, a veterinarian from Bethlehem in Free State Province, also reported a tick bite and complained of myalgia two days thereafter. The patient

(Continued on page 3)

(Continued from page 2)

developed petechiae on the ankles, haematuria and epistaxis, and an altered mental state. Laboratory tests revealed profound thrombocytopenia (platelet count of $13 \times 10^9/l$) and a severe transaminitis (AST of 2600 IU/l and ALT of 1300 IU/l). The course of illness was complicated by renal dysfunction and a nosocomial pneumonia. The patient was ventilated, received ribavirin for CCHF as well as broad-spectrum antibiotics, and is recovering with evidence of a good antibody response to the CCHF-infection.

Three CCHF cases have been confirmed in South Africa for 2009 to date, with cases reported from Northern Cape (n=1), Western Cape (n=1) and Free

State (n=1) Provinces. Informal reports of increased tick populations attributed to the good rainfall season in much of South Africa may be an indicator of increased risk of CCHF-exposure.

No additional cases of Rift Valley fever have been confirmed since last reporting. Seven cases have been confirmed in South Africa for 2009 to date, with 5 cases from KwaZulu-Natal and 2 cases from Northern Cape Provinces.

Source: Special Pathogens and Outbreak Units, NICD

Beyond Our Borders: infectious disease risks for travellers

The "Beyond Our Borders" column focuses on selected and current international diseases that may affect South Africans travelling abroad.

Disease & Countries	Comments	Advice to travellers
Rabies: USA (New York), Indonesia (Bali)	Rabies transmission has been identified in Manhattan's Central Park (New York, USA) among racoon populations, where rabies has been confirmed in three animals. These documented infections highlight that rabies is not confined to rural areas. There are continued reports of dog rabies on the Indonesian island of Bali. Fifteen human deaths have been reported to date.	Travellers should avoid animal bites - avoid contact with all wild animals, and domestic animals with unknown rabies exposure or vaccination history. Health workers should inform travellers of post-exposure measures if bitten or scratched; including to thoroughly wash the wound with soap and water, and seek immediate medical treatment to receive vaccine and/or rabies immunoglobulin (depending on the exposure).
Anthrax: Zimbabwe (Matabeleland North)	An outbreak anthrax involving cattle has been detected in the northern valley of the Zambezi. A total of 32 human cases and 3 deaths have been reported to 7 December 2009.	Anthrax is transmitted from animals to humans by ingestion, inhalation or handling of infected animal products. Travellers are advised to avoid contact with animals or animal products within high-risk areas. Vaccines are not available to the general public.
Q fever: Netherlands, Belgium	As of 11 December, Q fever has been confirmed on 55 goat farms in the Netherlands. Over 2 300 human cases were reported in 2009, up from 1 000 in 2008 and 168 in 2007. Six human deaths have been reported this year. The outbreak has since spread to neighbouring Belgium where 2 farms have confirmed goat infections, and 36 cases have been reported.	Q fever is caused by <i>Coxiella burnetii</i> , a bacterium that may affects livestock and domestic animals, but may also be transmitted to humans by inhalation of contaminated particles, and direct contact with tissue or body fluids (incl. milk) from infected animals. Disease typically manifests after 2-3 weeks as fever with malaise, profuse perspiration, headache, myalgia, upper respiratory symptoms, confusion and/or gastrointestinal symptoms. Travellers should avoid contact with livestock in the affected area.

(Continued on page 4)

(Continued from page 3)

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<p><u>Meningococcal meningitis:</u> Democratic Republic of Congo (DRC), Meningitis belt</p>	<p>Over 100 cases and a dozen deaths due to <i>Neisseria meningitidis</i> serogroup C have been reported from the city of Kisangani (Orientale Province, DRC). The DRC is not considered part of the usual African meningitis belt, although cases have been reported in recent years.</p> <p>During the first 11 weeks of 2009 (January 1 - March 15), a total of 24 868 suspected cases, including 1 513 deaths, was reported to WHO by countries of the meningitis belt.</p>	<p>Disease is characterised by a sudden onset of fever, intense headache, nausea/vomiting and a petechial rash. Transmission occurs by direct contact with respiratory droplets from the nose and throat of infected people. Vaccination is recommended for individuals (excl. children <2 years) travelling to areas currently experiencing epidemics, and serogroups in circulation should be targeted. Re-immunisation is warranted after 3-5 years.</p>

Source: Travel Health and Outbreak Response Units, NICD.

References: ProMED-Mail (www.promedmail.org), World Health Organization (www.who.int), The Center for Disease Control and Prevention (www.cdc.gov), Europe Media Monitor (<http://medusa.jrc.it/medisys/helsinkiedition/en/home.html>); last accessed 2009/12/14.

This communiqué is published by the National Institute for Communicable Diseases (NICD) on a monthly basis for the purpose of providing up-to-date information on communicable diseases in South Africa. Much of the information is therefore preliminary and should not be cited or utilised for publication.

