NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

# Communicable Diseases Communiqué

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## CONTENTS



## 1 VACCINE-PREVENTABLE DISEASES

### Measles outbreak update

A total of 62 laboratory-confirmed measles IgM-positive cases (excluding all vaccine-associated IgM-positive cases) was reported from 01 January to 31 December 2014. As at 09 January 2015, three laboratory-confirmed measles IgM-positive cases have been detected for the year to date. By comparison, only five cases of confirmed measles were reported for the whole year during 2013.

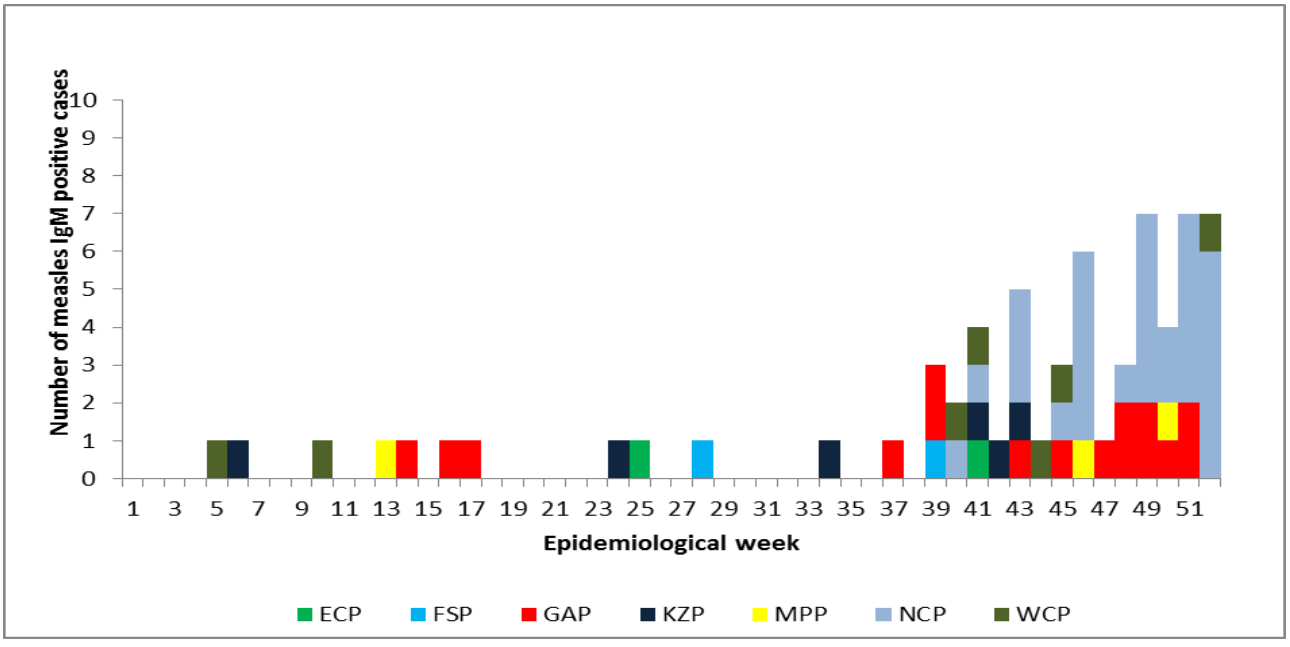


**Figure 1. Laboratory-confirmed measles IgM-positive cases in South Africa, January - December 2014**

A notable increase in confirmed measles cases began during epidemiological week 39 of 2014 (week ending 31 October 2014) – Figure 1. Of particular concern are the number of cases in Northern Cape Province (30 cases, clustered mostly in ZF Mgcawu District – Figure 2), Gauteng Province (6 cases from Ekurhuleni District, City of Johannesburg Metro and City of Tshwane Metro – Figure 3) and Western Cape Province (four cases). Additionally, sporadic cases of measles have been detected in all other provinces except for Limpopo.

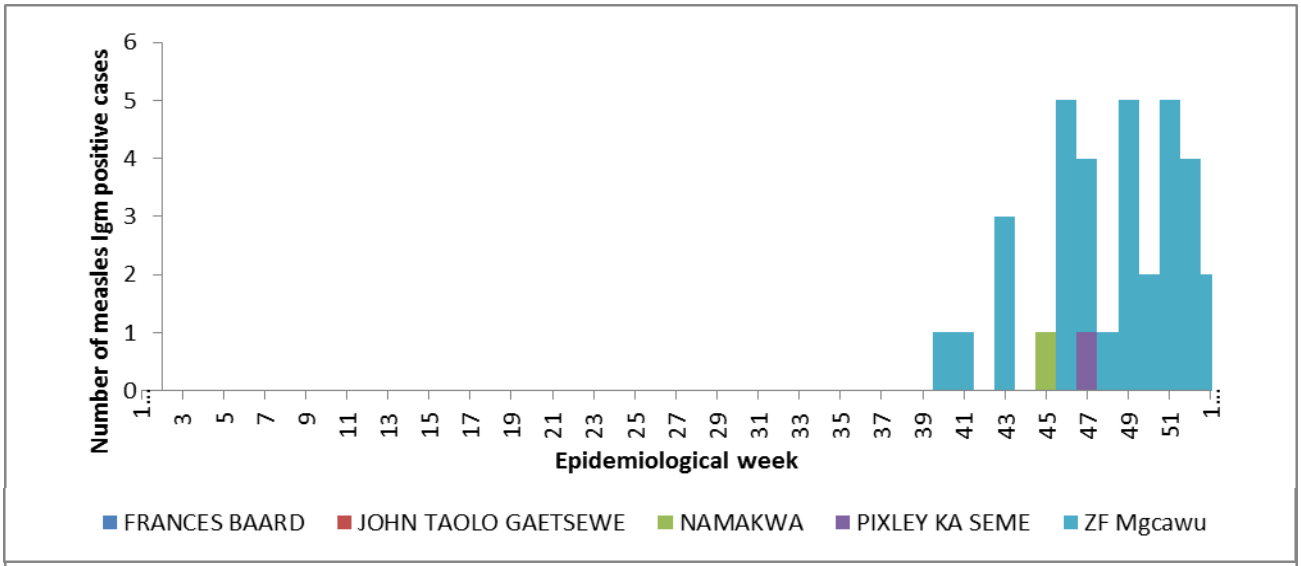


**Figure 2. Laboratory-confirmed measles IgM positive cases in Northern Cape province, January - December 2014**

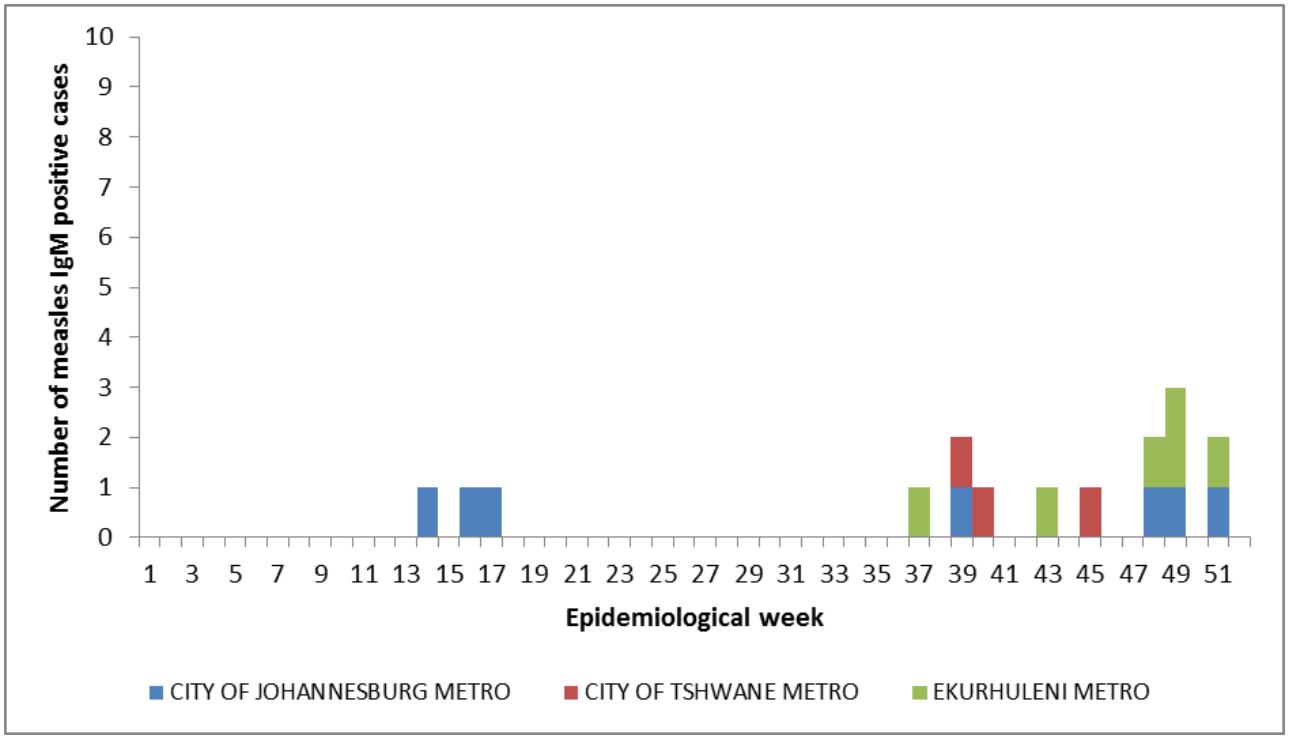


**Figure 3. Laboratory-confirmed measles IgM positive cases in Gauteng Province, January -December 2014**

Regarding the age distribution of cases (Figure 4), in Ekurhuleni District of Gauteng Province, four of the six children infected with measles were under nine months of age. In ZF Mgcawu District of Northern Cape Province, most case-patients were over 15 years of age (16/28, 57%) followed by children under nine months of age (9/28, 32%).

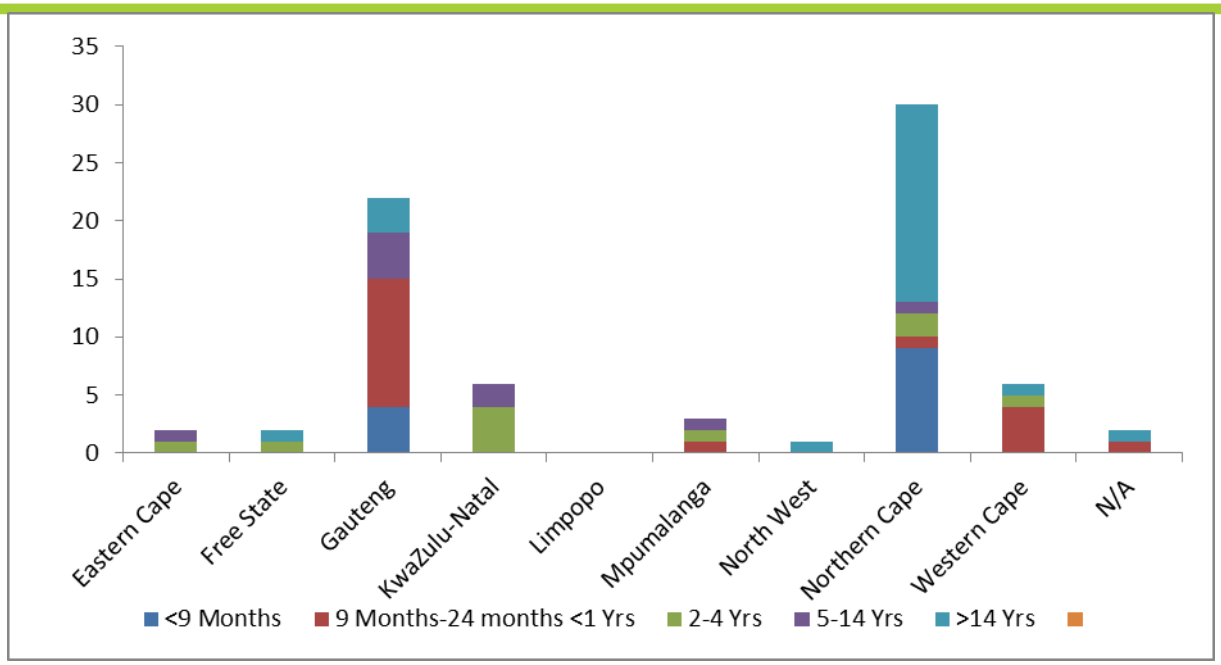


**Figure 4. Laboratory-confirmed measles IgM positive cases by province and age group**

This outbreak is of major public health concern, given that in 2009-2011 South Africa experienced a protracted nationwide measles outbreak with >18 000 recognised cases and, probable, a number of deaths and many more children who suffered permanent disabilities. Measles is targeted for global elimination, with South Africa aiming at an elimination target of 2020. The pre-elimination goal is less than 1 case per million population per annum. For the current outbreak, the estimated population incidence for the country is 1.4 per million population, reaching 25.6 per million for Northern Cape Province (data courtesy of Dr A.Kamruzzaman, World Health Organization).

Notification and investigation of suspected measles cases

All healthcare workers countrywide should be on high alert for suspected measles cases; given experience with previous measles outbreaks in South Africa, the incidence may rapidly increase if the virus spreads to susceptible populations.

The case definition for suspected measles is as follows: fever ≥38$^0$C, rash, and one of the following: cough, coryza, conjunctivitis. As per the government's Health Act (Act No. 61 of 2003), any case that meets this definition should be notified as a suspected measles case by the first healthcare worker who comes into contact with the case-patient. This may include clinic personnel, infection prevention and control practitioners, other hospital staff or private medical practitioners. In the event of cases or deaths in the community, a member of the community can notify the event. All suspected measles cases must be reported immediately by phone, email or fax to the local health authority to enable a prompt public health response. For further details regarding the notification process and relevant contact details, go to www.doh.gov.za.

All suspected measles cases, including those who were tested by private laboratories, should have a blood sample collected and sent to the NICD for confirmatory testing, together with a completed case investigation form (available on the NICD website: http://www.nicd.ac.za/assets/files/Measles%20Rubella%20case%20investigation%20form%20Mar%202014.pdf). It is extremely important to elicit and document the measles vaccination history.

Measles vaccine

Two doses of measles vaccine are stipulated in the South African Department of Health Expanded Programme on Immunisation (EPI) schedule: the first at 9 months and the second at 18 months of age. In the public health sector, measles vaccine is usually administered as per the EPI guidelines (i.e. at 9 months and again at 18 months of age). In an outbreak situation, such as currently in the Northern Cape and Gauteng provinces, a supplementary dose of measles vaccine should be administered at 6 months of age. However, this does not replace the 9-month routine scheduled dose. It is also important that children under the age of 15 years who are admitted to hospital should receive a dose of measles vaccine, if proof of vaccination is not available. Children who are too sick to be vaccinated must be vaccinated with measles vaccine

before being discharged from the hospital.

In the private health sector, healthcare workers may follow the EPI schedule or adapted private health sector immunisation schedules. In the adapted private health sector immunisation schedules, the first dose of measles vaccine is administered at 9 months and the second dose is administered as a component of the MMR (measles, mumps and rubella) vaccine at 12-15 months of age, with an additional dose as a component of the second MMR vaccine dose given at 5-6 years of age. Further information regarding the EPI schedule can be accessed at www.doh.gov.za, and a summary of the adapted private health sector immunisation schedules can be accessed at http://www.amayeza-info.co.za/?page_id=517.

Measles vaccines are safe and highly effective at preventing measles. If a scheduled dose has been missed, it is never too late to catch up measles vaccination.

Measles vaccine is contra-indicated in the following circumstances:

- history of an anaphylactic reaction to previous measles/MMR vaccine
- history of an anaphylactic reaction to neomycin or gelatin
- severe primary immunodeficiency
- advanced leukaemia or lymphoma
- serious malignant disease
- HIV-infection with severe immunosuppression (CD4 percentage <15% at any age or CD4 count <200/mm$^3$ for persons aged >5 years)
- treatment with high dose corticosteroids (>20 mg or >2 mg/kg daily prednisone or equivalent)
- treatment with immunosuppressive chemotherapy
- treatment with immunosuppressive radiation therapy
- theoretically, measles vaccine (alone or in combination with other vaccines) should be avoided by pregnant women.

Measles infection in HIV-infected persons is associated with increased morbidity and mortality. HIV infection per sé is not a contra-indication for vaccination, but should be avoided in patients with severe immunosuppression (CD4 percentage <15% at any age or CD4 count <200/mm$^3$ for persons aged >5 years) since several severe and fatal measles cases have been reported in severely immunosuppressed HIV-infected persons after measles vaccination.

Mild concurrent infections are not a contraindication to measles vaccination, but vaccination should be avoided if the patient has a high fever or severe illness.

**Source:** Centre for Vaccines and Immunology, and Division for Public Health, Surveillance and Response, NICD-NHLS; Department of Health - EPI and Communicable Diseases Directorates (National, Northern Cape Province and ZF Mgcawu District)

# 2 ZOONOTIC AND VECTOR-BORNE DISEASES

## a Odyssean malaria in Gauteng Province

On 09 January 2015, the NICD Outbreak Response Unit was notified of a case of an 11-year-old girl from Protea Glen in Soweto (Gauteng Province) with confirmed malaria. The onset of her symptoms was on 05 January 2015 with fever which progressively worsened over several days. On 08 January the patient presented to a GP with high fever, rigors, restlessness, dyspnoea and signs of dehydration. The commendably vigilant GP performed a rapid malaria test which showed positive and the child was referred to a private hospital in Johannesburg where she was treated for malaria. On admission, *Plasmodium falciparum* malaria was confirmed on a thick and thin smear with a parasitaemia of 9%. Laboratory findings included a platelet count of 166 x $10^9$/L, haemoglobin and white cell count in the normal range, and moderately elevated creatinine level. By the second day of antimalarial treatment her condition had improved with parasitaemia decreased to 3%. The patient has subsequently recovered uneventfully.

Based on the date of illness onset, it is highly likely that she was infected during the week of 22 to 26 December 2014. The patient and her parents have no history of travel to a malaria risk area, nor were any blood transfusions or injections administered to her in the recent past. An entomological investigation of the patient's residence, including the room she sleeps in, revealed no mosquitoes.
It is most likely that this patient acquired malaria from the bite of an infective *Anopheles* mosquito inadvertently translocated from a malaria-endemic

area via a vehicle such as a car, mini-bus taxi or bus – a phenomenon known as odyssean malaria. Odyssean malaria is the acquisition of malaria in a non-endemic area by the bite of an imported mosquito. This phenomenon has been given many names including airport, baggage, container, port, taxi-rank, and minibus-malaria - all of which describe a variety of routes by which a mosquito may be imported to a non-endemic area and transmit malaria. Outbreaks of this nature in non-endemic areas such as Gauteng Province are rare and typically very short-lived because most malaria vector mosquito species only thrive in tropical conditions characterised by consistently high temperatures and humidity.

This case once again demonstrates that healthcare workers need to maintain a high index of suspicion for malaria in all patients presenting with fever >38$^0$C and headache with flu-like illness, or fever >38$^0$C with impaired consciousness, where no obvious cause is evident and in whom no recent history of travel to a malaria risk area is forthcoming.

A single negative malaria test does not exclude malaria. If clinical suspicion for malaria is high and the first test negative, repeat tests every 12-24 hours until the patient has improved or an alternative diagnosis is confirmed. Low platelets that are otherwise unexplained may indicate the possibility of malaria. Malaria is a notifiable medical condition and must be reported promptly to local health authorities.

The malaria season in South Africa typically extends from September to May each year. Cases of both local and imported disease can be expected, especially as travellers return from malaria-endemic areas following holiday periods. The malaria-endemic provinces within South Africa include KwaZulu-Natal (north-eastern part), Mpumalanga and Limpopo. Neighbouring countries such as Zimbabwe and Mozambique also have malaria-endemic areas and are an important source of imported malaria into South Africa.

**Source:** Division of Public Health Surveillance and Response, and Centre for Opportunistic, Tropical, and Hospital Infections, NICD-NHLS

## c Rabies

A total of seven laboratory-confirmed human rabies cases was documented in South Africa during 2014. Five locally-acquired cases were reported from Eastern Cape (n=3), North West (n=1) and Limpopo (n=1) provinces. In all these cases, the case-patients had a compatible history of contact with potentially rabid domestic dogs. In addition, two laboratory-confirmed human cases with exposure in neighbouring countries were reported during 2014: an adult South African citizen who acquired rabies whilst living in Angola was medically evacuated to South Africa for healthcare and tested for rabies whilst hospitalised in Johannesburg, and a six-year-old boy from Tshikombedzi in Zimbabwe (a main town near Beitbridge border with South Africa) who was hospitalised in a Limpopo Province hospital. The child presented with symptoms compatible with rabies infection (confusion, hypersalivation, vomiting and restlessness) approximately three to four weeks following a dog bite sustained in Zimbabwe. Saliva samples and nuchal skin biopsy collected on 09 and 10 December 2014 were found positive for rabies by PCR testing at the NICD.

A total of five probable cases of human rabies were also recorded for South Africa for 2014 (Mpumalanga Province (n=2), Limpopo Province (n=2) and Eastern Cape Province (n=1)). These cases could not be verified by laboratory testing for various reasons, but their clinical presentation and disease course were compatible with rabies and all reported a history of contact with potentially rabid dogs.

All confirmed and probable rabies cases during 2014 followed exposure to domestic dogs, of which the majority were unknown stray animals; in one case an adult male was bitten by his own dog. Whilst most of these case-patients did not seek medical care following the implicated exposure, in four cases the case-patients presented to a healthcare facility following exposure but did not receive appropriate rabies post-exposure prophylaxis (PEP).

The total number of human rabies cases for 2014 is similar to that of 2013, when 7 confirmed and 5 probable cases were reported. For the past five years, an average of 11 confirmed human rabies cases has been reported in South Africa (approximately 1 per 5 million population). Rabies in humans is expected to be underestimated in South Africa primarily due to low index of clinical suspicion and misdiagnosis. The list of differential diagnoses for patients presenting with an encephalitic illness is broad, and in the absence of accurate exposure

histories that may implicate contact with rabid animals, the index of suspicion for rabies is usually low and a diagnosis of possible rabies is not entertained. Healthcare workers may not specifically elicit, and patients or their families may not recall, more subtle or unusual exposures to potentially rabid animals (e.g. licking of mucous membranes or broken skin, seemingly superficial scratches, exposure to apparently tame and friendly animals, exposure to potentially rabid animals other than domestic dogs – including cats, bats, cows, sheep or wildlife). Domestic dogs do however, remain the most important vector of the disease to humans.

Rabies remains the infection with the highest mortality rate in humans, but is fortunately entirely amenable to control and prevention when the appropriate measures are taken. The feasibility of regional elimination of domestic dog rabies in many countries around the world has been demonstrated and remains the most cost-effective strategy for combatting human rabies.

The national rabies guidelines including instructions for administration of rabies PEP are available from the NICD website, www.nicd.ac.za.

**Source:** Centre for Emerging and Zoonotic Diseases, NICD-NHLS

## 3 INTERNATIONAL OUTBREAKS OF IMPORTANCE TO SOUTH AFRICAN TRAVELLERS AND HEALTHCARE WORKERS

### a Ebola

**Ebola virus disease (EVD) outbreak: situation update**

All three affected countries with widespread and intense transmission (Guinea, Liberia and Sierra Leone) continue to report new cases and deaths. Furthermore, healthcare worker infections and imported EVD cases continue to be reported. The latest imported EVD case was confirmed on 29 December 2014 in Glasgow, Scotland. This is the first EVD case to be reported in the United Kingdom (UK) since the current EVD outbreak began in West Africa during December 2013. The case-patient is a healthcare worker who returned from volunteering at an Ebola Treatment Centre in Sierra Leone.

**1. Countries with widespread and intense transmission**

As at 20 January 2015, a cumulative total of 21 797 EVD cases (laboratory-confirmed, probable and suspected) including 8 675 deaths with a case fatality rate of 40% have been reported in the current EVD outbreak in Guinea, Liberia and Sierra Leone. A summary of case numbers and deaths reported is shown in Table 1.

**Table 1: Number of Ebola virus disease cases and deaths in Guinea, Liberia and Sierra Leone as at 20 January 2015**

| Country | Total cases (laboratory-confirmed, probable and suspected) | Total deaths | Case fatality rate | Number of cases among healthcare workers (number of deaths)* |
|---|---|---|---|---|
| Guinea | 2 873 | 1 880 | 65% | 162 (100) |
| Liberia | 8 524 | 3 636 | 43% | 370 (178) |
| Sierra Leone | 10 400 | 3 159 | 30% | 296 (221) |
| **Totals** | **21 261** | **8 414** | **40%** | **828 (499)** |

* data as at 18 January 2015

**2. Countries with an initial case or cases, or with localised transmission**

To date six countries (Nigeria, Senegal, Spain, United States of America (USA), Mali and UK) have reported localised transmission or an imported case or cases from Guinea/Liberia/Sierra Leone. The EVD outbreaks in Senegal, Nigeria, Spain, USA and Mali have been declared over. Table 2 summarises the number of EVD cases and deaths in Mali and UK.

**Situation in South Africa**

As at 27 January 2015 there have been no EVD cases in South Africa associated with the current outbreak in West Africa. In addition, there are no suspected cases of EVD in South Africa at present.

The risk of Ebola being introduced into South Africa still remains low. Nonetheless, several measures for early detection and reporting of suspected cases have been put in place.

A national outbreak preparedness and response plan for EVD has been produced. Other measures instituted include (but are not limited to):

- Surveillance at South African ports of entry and healthcare facilities for at-risk persons from the affected countries presenting with fever has been intensified. Port health officials and healthcare workers are on high alert for any ill persons that have travelled to countries with widespread and intense transmission or other countries reporting imported cases with localised transmission.
- Eleven public-sector hospitals (with at least one in all nine provinces) have been designated to manage EVD cases and have been supplied with the appropriate personal protective equipment should the need arise. Furthermore, other hospitals within the private sector and military health services have also been earmarked.
- Many frontline healthcare workers, especially those at designated hospitals and ports of entry, have been trained on infection prevention and control practice for the management of suspected EVD cases.
- Alerts, guidelines and several other documents have been developed to inform or guide healthcare workers as well as the general public regarding EVD. These resources are available on the NICD website (www.nicd.ac.za) and South African Department of Health (DoH) website (www.doh.gov.za). In addition, the country is monitoring the current EVD outbreak in West Africa through regular situation updates posted on the NICD website.
- A travel advisory has been issued and is available on the DoH website (www.doh.gov.za).
- The NICD has strengthened laboratory surveillance activities and has been designated as the centre of excellence for Ebola diagnostics for the SADC region. Moreover, the country has joined the international fight against Ebola by operating a mobile diagnostic laboratory in Sierra Leone.

Testing for viral haemorrhagic fever viruses (including Ebola) in South Africa is only available at the NICD. EVD testing is neither warranted nor useful for persons that are not suffering from a clinical illness compatible with EVD, even in the event of compatible travel histories. The tests cannot be used to determine if the patient has been exposed to the virus and may develop the disease later.

Requests for testing (with a detailed clinical, travel and exposure history) should be directed to the NICD Hotline at 082 883 9920 (a 24-hour service, for healthcare professionals only).

**Table 2: Number of Ebola virus disease cases and deaths in UK and Mali as at 20 January 2015**

| Country | Total cases (laboratory-confirmed, probable and suspected) | Total deaths | Number of cases among healthcare workers (number of deaths) |
|---|---|---|---|
| UK | 1 | 0 | 1 (0) |

**Source:** Division of Public Health Surveillance and Response, and Centre for Emerging and Zoonotic Diseases, NICD-NHLS

## b Middle East respiratory syndrome coronavirus (MERS-CoV) update

**Situation update**

As at 16 January 2015, the World Health Organization (WHO) has been notified of a total of 950 laboratory-confirmed cases of infection with Middle East respiratory syndrome coronavirus (MERS-CoV), including at least 350 deaths. To date, all reported cases have been linked to countries in or near the Arabian Peninsula, with the majority of cases reported from the Kingdom of Saudi Arabia. Other countries in or near the Arabian Peninsula with laboratory-confirmed cases include Jordan, Yemen, United Arab Emirates (UAE), Qatar, Oman, Kuwait, Lebanon and Iran. Countries with travel-associated cases include United Kingdom (UK), France, Netherlands, Turkey, Tunisia, Egypt,

Greece, Germany, Italy, Malaysia, Philippines, United States of America (USA) and Algeria.

There have been no laboratory-confirmed cases of MERS-CoV in South Africa to date. In addition to the Hajj surveillance conducted in 2013 where samples from 237 returning pilgrims were tested (and all found negative for MERS-CoV), to date the NICD has tested a total of 23 patients for MERS-CoV (four in 2013, 16 in 2014 and two in 2015). Of the 23 patients tested, 15 had reported a history of travel or contact with a person who had travelled outside South Africa, eight of whom had travelled to countries in or near the Arabian Peninsula.

**Clinical features**

Individuals with MERS-CoV infection have presented with a wide clinical spectrum, ranging from asymptomatic infection to mild illness (acute upper respiratory illness) to severe illness (rapidly progressing lower respiratory illness, respiratory failure, septic shock and multi-organ failure). Atypical presentations, including mild respiratory illness without fever, and diarrhoea preceding the development of pneumonia, have been reported, especially in immunocompromised persons. Secondary cases appear to experience milder disease than that of primary cases.

**Modes of transmission and infection control**

To date, person-to-person transmission has occurred through close contact, both among family contacts and in healthcare settings. However, there is no evidence of sustained person-to-person transmission in community settings. As with other respiratory infections, early symptoms of MERS-CoV are non-specific and it is not always possible to identify patients with MERS-CoV early in the course of illness. In the case of a suspected MERS-CoV case, healthcare workers are encouraged to practice infection prevention and control precautions as per the World Health Organization recommendations; this includes standard precautions, droplet precautions, and additional airborne precautions when performing aerosol-generating procedures.

**Travel advice**

WHO does not advise screening for MERS-CoV at points of entry, nor does it currently recommend the application of any travel or trade restrictions.

**Indications for testing**

Healthcare workers should be aware of the possibility of MERS-CoV infection in patients with travel history from countries in or near the Arabian Peninsula who present with acute respiratory illness. Details of case definitions, indications for testing and appropriate specimens for MERS-CoV testing can be accessed at the NICD webpage: http://www.nicd.ac.za/page=alerts&id=5&rid=340.

Additional information on MERS-CoV can be accessed at the following websites:

- WHO website: http://www.who.int/csr/disease coronavirus infections/en/ and http://www.who.int/csr/bioriskreduction/infection control/publication/en/
- NICD website: http://www.nicd.ac.za
- US CDC website: http://www.cdc.gov/coronavirus/index.html.

**Source:** Centre for Respiratory Diseases and Meningitis, NICD-NHLS

## 4 ANTIMICROBIAL RESISTANCE

### Update on carbapenemase-producing Enterobacteriaceae

The Johannesburg and Cape Town Antimicrobial Resistance Reference Laboratories (AMRRL) of the Centre for Opportunistic, Tropical and Hospital Infections (COTHI) at NICD-NHLS provide a service for testing referred isolates of suspected carbapenemase-producing Enterobacteriaceae (CPE) for the presence of selected carbapenemase genes. For December 2014, a total of 64 Enterobacteriaceae isolates was received. Fifty-nine isolates were screened, 46 of which were CPE. Five isolates were not processed due to technical issues. The majority of the isolates tested were *Klebsiella pneumoniae* (26/64, 41%) followed by *Enterobacter cloacae* (12/64, 19%) (Figure 5).

Eighteen $bla_{NDM}$-positive isolates were identified, twelve from private hospitals in KwaZulu-Natal Province and six from public hospitals in Gauteng Province. Nineteen $bla_{OXA-48}$-positive isolates were identified: thirteen from private hospitals (eleven from Gauteng Province, one from Eastern Cape Province and one from Western Cape Province) and six from public hospitals (four from Gauteng Province, one from Eastern Cape Province and one from Western Cape Province). Five $bla_{VIM}$-positive isolates were identified: one from the private sector in KwaZulu-Natal Province, and four from the public sector in Gauteng Province. Additionally, three $bla_{KPC}$-positive isolates were identified from the public sector in Gauteng Province, and one $bla_{IMP}$-

positive isolate from the private sector in Gauteng Province was identified (Figure 6).

It is important to note that these figures do not represent the current burden of CPEs in South Africa. Given that CPE infections are currently not reportable or notifiable in South Africa, there is no platform for appropriate surveillance reports and consequently no locally representative data is available. This is of major concern, since meaningful data can inform public health policy and highlight priorities for action. Controlling the spread and limiting the impact of CPEs in South Africa will require intensive efforts in both the public and private healthcare sectors going forward. NHLS and private laboratories are encouraged to submit suspected CPE isolates based on antimicrobial susceptibility testing (AST) criteria to the AMRRL, NICD/NHLS. Please telephone (011) 555 0342/44 or email ashikas@nicd.ac.za and olgap@nicd.ac.za for queries or further information. In the Western Cape area, please email colleen.bamford@nhls.ac.za.

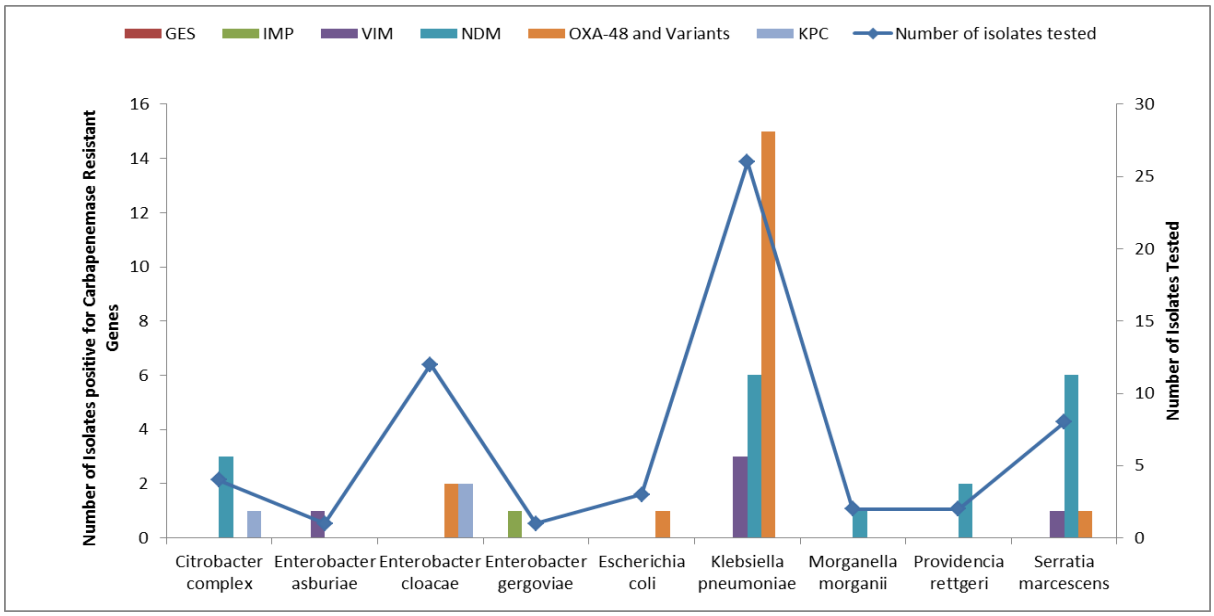


**Figure 5. Enterobacteriaceae isolates phenotypically screened (n=59) and confirmed CPE (n=46) during December 2014 at AMRRL, NICD-NHLS**

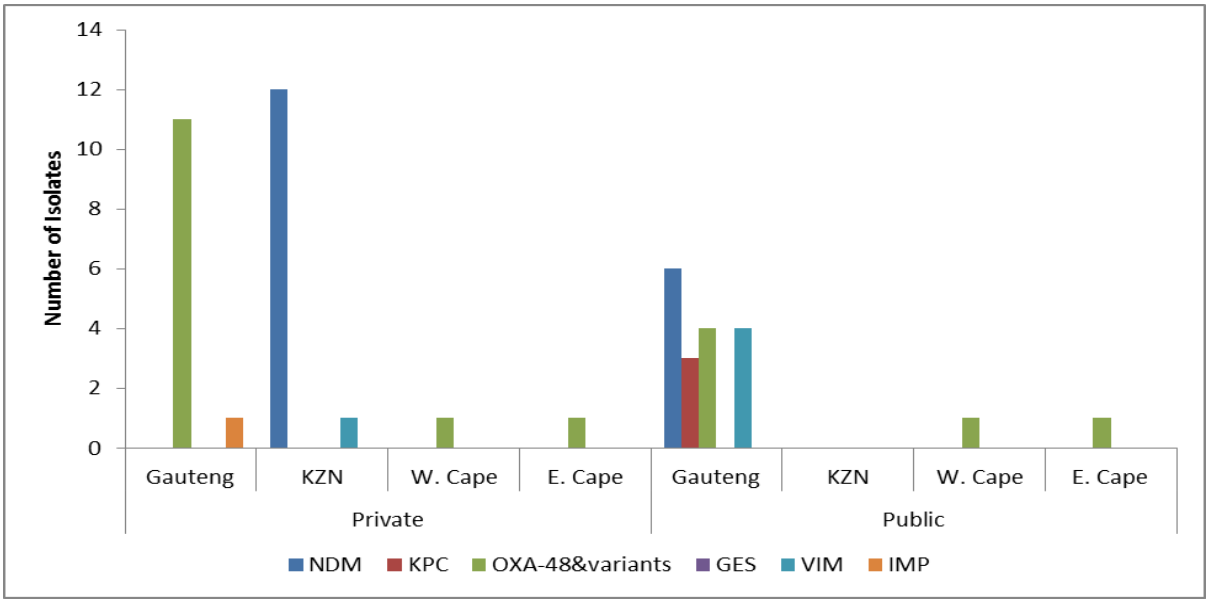


**Figure 6. Distribution by province of confirmed CPEs (n=46), December 2014**

**Source:** Centre for Opportunistic, Tropical and Hospital Infections, NICD-NHLS

## 5 BEYOND OUR BORDERS

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 |
|---|---|---|
| **1. Vector-borne diseases** | | |
| **Dengue fever**<br><br>**Mexico and Central America**<br><br>Mexico, Costa Rica, Honduras, Panama<br><br>**South America**<br><br>Brazil<br><br>**Caribbean**<br><br>Dominican Republic<br><br>**Pacific**<br><br>Tonga | Ongoing transmission with new cases identified during December 2014 and early January 2015.<br><br>An outbreak of dengue is now officially confirmed. | Dengue fever (like chikungunya) is a mosquito-borne viral infection transmitted by *Aedes* spp. mosquitoes, which bite mostly during the day.<br><br>Travellers should wear clothing which minimises skin exposure (i.e. long-sleeved shirts and long pants) during the day, and apply mosquito repellents to exposed skin or clothing. |
| **Chikungunya**<br><br>**Caribbean** | Local transmission of chikungunya in the Americas was first reported in Saint Martin in December 2013. Since then, local and transmission of chikungunya is now being reported in many other Caribbean countries. As of 09 January 2015, ongoing transmission is reported from the following Caribbean countries: Anguilla, Antigua, Aruba, Bahamas, Barbados, British Virgin Islands, Cayman Islands, Curacao, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Montserrat, Puerto Rico, St Barthelemy, St Kitts, St Lucia, St Martin (French), St Maarten (Dutch), St Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos Islands, US Virgin Islands. | |

| Disease & countries | Comments | Advice to travellers |
|---|---|---|
| **1. Vector-borne diseases (continued)** | | |
| **Chikungunya (continued)** | | |
| **South America** | Local transmission of chikungunya in South America was first reported in French Guiana in December 2013. Since then, local transmission of chikungunya is now being reported in many other South American countries. As of 09 January 2015, ongoing transmission is reported from the following South American countries: Brazil, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Suriname, and Venezuela. | Chikungunya is a mosquito-borne viral infection transmitted by *Aedes* spp. mosquitoes, which bite mostly during the day.<br><br>The incubation period is usually 3-7 days (range 1-12 days), and the illness is characterised by an abrupt onset of fever and arthralgia. Arthralgia is usually bilateral and symmetrical and is often severe and debilitating. Other symptoms may accompany the fever and arthralgia, including: headache, myalgia, arthritis, conjunctivitis, nausea, vomiting, and nonspecific maculopapular rash.<br><br>Laboratory findings can include lymphopenia, thrombocytopenia, elevated creatinine, and elevated hepatic transaminases.<br><br>Most chikungunya infections are self-resolving, but rare complications include bullous skin lesions, uveitis, retinitis, myocarditis, hepatitis, nephritis, meningoencephalitis, Guillain-Barre syndrome, and haemorrhage.<br><br>There is no specific antiviral therapy, and treatment is symptomatic.<br><br>Travellers should wear clothing which minimises skin exposure (i.e. long-sleeved shirts and long pants) during the day, and apply mosquito repellents to exposed skin or clothing. |
| **Mexico** | In October 2014, Mexico reported a locally transmitted chikungunya case for the first time. As of 02 January 2015, ongoing transmission is reported from the following states: Sonora, Sinaloa, Guerrero, Oaxaca and Chiapas. | |
| **Central America** | In June 2014, El Salvador reported locally transmitted cases for the first time in Central America. As of December 2014, ongoing transmission is reported from the following Central American countries: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama. | |
| **French Polynesia** | In October 2014, Tahiti reported locally transmitted cases for the first time in French Polynesia. Chikungunya cases have since been reported, with ongoing transmission, on other French Polynesian islands as well. | |
| **2. Respiratory diseases** | | |
| **Influenza** | | |
| **Europe** | Increased influenza activity has continued to rise in the first two weeks of January across many northern and eastern European countries. Influenza A (H3N2) viruses predominate in most countries. | |

| Disease & countries | Comments | Advice to travellers |
|---|---|---|
| **2. Respiratory diseases (continued)** | | |
| **Avian influenza**<br><br>**Egypt:** avian influenza A (H5N1)<br><br>**China:** avian influenza A (H7N9) | Since November 2014, Egypt has reported at least 18 new laboratory-confirmed human cases; as of 21 January 2015, additional suspected cases are under investigation.<br><br>On 13 January 2015, China reported an additional 15 laboratory-confirmed cases including 3 deaths identified during December 2014. | Travellers to countries with known outbreaks of avian influenza should avoid exposure to poultry. Avoid poultry farms, entering areas where poultry may be slaughtered, avoid live bird markets, and avoid contact with any surfaces that may be contaminated with poultry faeces. |
| **Cholera**<br><br>**Africa**<br><br>Nigeria<br><br>Democratic Republic of Congo<br><br>**India** | A cholera outbreak has been confirmed in Rivers State. The outbreak was identified on 05 January 2015; as of 14 January 2015, 171 cases have been recorded.<br><br>A cholera outbreak has been confirmed in South Kivu. The outbreak was identified on 10 January 2015; as of 13 January 2015, 14 cases including one death have been recorded.<br><br>Current outbreaks are reported from Bayesia State in Gujarat, and from Narmada District in Gujarat. | Drink safe water (bottled water with an unbroken seal, boiled water or water treated with chlorine tablets). Strict washing of hands with soap and safe water must be practiced. Food must be well-cooked before eating. Peel fruit and vegetables before eating. |

**References and additional reading:**
ProMED-Mail (www.promedmail.org)
World Health Organization (www.who.int)
Centers for Disease Control and Prevention (www.cdc.gov)
Last accessed: 22 January 2015

**Source:** Division of Public Health Surveillance and Response, NICD-NHLS