

## 2 ZOOBOTIC AND VECTOR-BORNE DISEASES

### a Yellow fever outbreak in Angola and neighbouring Democratic Republic of Congo

A yellow fever outbreak in Angola was reported in January 2016. Initial cases were diagnosed by the National Institute for Communicable Diseases Centre for Emerging and Zoonotic Diseases on 19 January 2016. Specimens were also submitted to the WHO-AFRO Collaborating Centre for Yellow Fever at the Institut Pasteur, Dakar, Senegal who confirmed the outbreak on 20 January 2016. Subsequently the outbreak escalated dramatically and currently is the largest yellow fever outbreak globally in the past decade and the first in Angola in nearly three decades. In addition, cases have been identified in the Democratic Republic of Congo (DRC) and Uganda amongst residents with no travel history.

The WHO situation report issued on 19 May 2016 indicated a total of 2 420 cases, of which 736 are laboratory confirmed. There have been 298 deaths. The Luanda Province is most affected, accounting for 64% of the cases, followed by the Huambo (17%), Benguela (7%), and Huila (4%) provinces (Figure 1). Eight percent of cases have been reported from the provinces of Bie, Cuanza Sul, Cunene, Uige, Bengo, Cuanza Norte, Zaire, Malanje, Cabinda and Namibe collectively. Only four of the country's provinces, located in the eastern part of the country, (Lunda Norte, Sul, Moxico, Cuando Cubango) remain unaffected.

As of 19 May, 44 laboratory confirmed cases and five probable cases have been reported by the DRC. While 42 cases are reportedly imported from Angola, the possibility of locally-acquired infection is under investigation in the Kinshasa and Kongo central provinces. The Ministry of Health in Uganda reported 60 cases of yellow fever, of which seven are laboratory confirmed. However, according to sequencing results, these cases are not epidemiologically linked to the outbreak in Angola. These cases

represent infection with local strains prevalent in Uganda. In addition, Kenya and China have also reported imported cases amongst unimmunised travellers returning from Angola.

On 19 May 2016, the WHO Director-General under the International Health Regulations (IHR 2005) convened an Emergency Committee (EC) regarding the yellow fever outbreak in Angola. The WHO reports that "Following the advice of the EC, the Director-General decided that the urban yellow fever outbreaks in Angola and DRC are serious public health events which warrant intensified national action and enhanced international support. The events do not at this time constitute a Public Health Emergency of International Concern (PHEIC)".

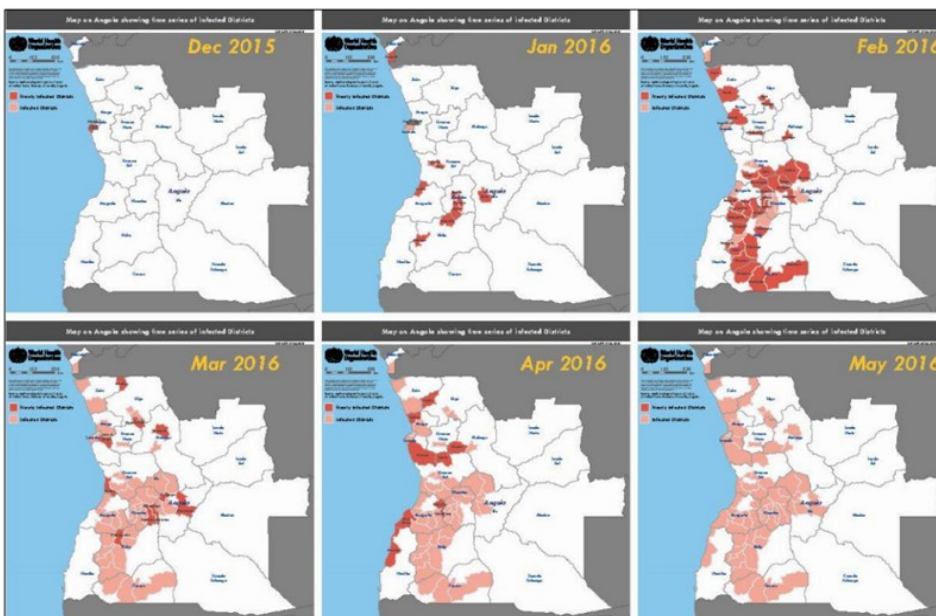
No cases of yellow fever have been reported in South Africa. The NICD has tested 37 specimens for yellow fever in 2016 (Table 1). Five samples sent from Angola in January were positive by PCR. Reports of yellow fever infection in non-immunised, returning travellers emphasise the need to reinforce the implementation of vaccination requirements in accordance with the International Health Regulations (2005). All South Africans travelling to yellow fever endemic areas require vaccination, or a vaccine waiver letter indicating ineligibility for vaccination.

For case definitions, diagnostic testing and contraindications to the vaccine, please consult the NICD Communiqué, April 2016 edition available at [www.nicd.ac.za](http://www.nicd.ac.za).

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

**Table 1.** Number and origin of specimens tested for yellow fever in 2016 by Centre for Emerging and Zoonotic Diseases, NICD

Specimen origin	Number tested
Angola Ministry of Health	11
Namibian Institute of Pathology or other Namibian laboratory	14
Kenyan laboratory	5
South Africans with travel history to yellow fever risk areas	
Angola	4
Other	3



**Figure 1.** A choropleth map showing the numbers of cases of yellow fever identified in the provinces of Angola December 2015-May 2016. (courtesy <http://www.who.int/emergencies/yellow-fever/situation-reports/20-may-2016/en/>)