

BEYOND OUR BORDERS

The 'Beyond our Borders' column focuses on selected and current international diseases that may affect South Africans travelling abroad. Numbers correspond to Figure 6 on page 11.

Monkeypox virus – Maryland, USA

A case of monkeypox virus has been reported from Maryland, USA, in a resident who recently returned from Nigeria. This is the second case of monkeypox virus imported into the USA from Nigeria. Monkeypox is endemic mostly in central and western African countries, with majority of infections reported in the Democratic Republic of Congo. In Africa, monkeypox has been shown to cause death in as many as 1 in 10 people who contract the disease.

Monkeypox virus belongs to the Orthopoxvirus in the family Poxviridae, the same family of viruses as smallpox; however, monkeypox generally causes a milder infection than smallpox. The main reservoir of the virus is unknown, although rodents are largely suspected to play a role in transmission. Transmission can occur from animal-to-human or human-to-human. Animal-to-human transmission occurs by bites, scratches or bushmeat preparation, whilst human-to-human transmission mainly

occurs through respiratory droplets, or direct contact with contaminated bodily fluids or lesion material.

The incubation period for monkeypox can range from five to 21 days and symptoms are mostly nonspecific, such as fever, headache, muscle aches and exhaustion. The main difference between symptoms of smallpox and monkeypox is that monkeypox causes lymphadenopathy, whilst smallpox does not. Within a few days after the appearance of the rash, patients develop a rash that often starts on the face then spreads to the rest of the body. The lesions progress through four stages, namely the macular – papular – vesicular and pustular stages, then finally the lesions form scabs and fall off. The duration of illness typically lasts 2 to 4 weeks.

There is no specific treatment for monkeypox virus; however, the smallpox vaccine and immunoglobulin can be used during outbreaks.

Melioidosis – United Kingdom

A case of melioidosis has been reported from the UK in a 33-year-old man, who emigrated from Ghana 14 months prior to his presentation. The patient presented with femoral osteomyelitis and melioidosis was diagnosed from bone marrow aspirate samples that yielded the causative agent *Burkholderia pseudomallei*, a Gram-negative, aerobic bacillus.

Melioidosis, also referred to as Whitmore's disease, is a bacterial disease that can infect both humans and animals. It is predominately found in tropical climates, such as Southeast Asia and northern Australia. Transmission occurs through inhalation of contaminated dust particles or water droplets or through their ingestion. Human-to-human transmission is very rare.

The incubation period is highly variable; generally, symptoms may appear 2 to 4 weeks after exposure but years can elapse between presumed exposure and appearance of disease. Melioidosis has a wide range of signs and symptoms and can mimic other diseases such as tuberculosis and pneumonia. The disease may manifest either as an acute localized infection, acute pulmonary infection, acute bloodstream infection, or disseminated infection. Sub-clinical infections are also possible. The type of infection and manifestation of the illness will determine the course and duration of treatment. Treatment usually starts with parenteral antibiotics for two weeks, followed by oral antibiotics for 3 to 6 months.

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Visceral leishmaniasis – Tharaka Nithi County, Kenya

A total of 33 cases of visceral leishmaniasis has been reported from Tharaka Nithi County in Kenya. Health officials from the region have also reported associated five deaths. The spread of the disease is attributed to poor hygienic conditions, malnutrition, and environmental changes.

Visceral Leishmaniasis, also called kala-azar, is a vector-borne disease, caused by obligate intracellular protozoa and is transmitted through the bites of infected female sandflies. Human infection has been found to be caused by more than 20 species of *Leishmania* parasites. Visceral leishmaniasis is commonly caused by the species *L. donovani* and *L. infantum*, which affect the spleen, liver and bone marrow. The incubation period ranges from weeks to months. Asymptomatic infection can occur and manifest years after exposure, in people who become immunocompromised from other illnesses such as HIV/AIDS or cancer.

Visceral leishmaniasis is characterized by irregular bouts of fever and anaemia. Symptoms typically include fever, weight loss and fatigue and clinical signs involve the appearance of hepatomegaly, splenomegaly, anaemia, leukopenia and thrombocytopenia.

The disease is diagnosed by detecting *Leishmania* parasites in tissue specimens. Visceral leishmaniasis, is most often diagnosed using bone marrow aspirates. Treatment depends on the *Leishmania* species causing the disease, the underlying host factors, and the severity of the disease. Thus, treatment decisions are individualised; however, the use of effective systemic therapy is important as well as supportive care.



Figure 6. Current outbreaks/events that may have implications for travellers. Numbers correspond to text above. The red dot is the approximate location of the outbreak or event.