

- Rift Valley Fever: Rift Valley fever (RVF) is caused by a virus that is transmitted by mosquitoes. Since it was discovered in 1930, RVF virus has caused multiple outbreaks in Africa and the Middle East. The virus can cause severe disease in both animals and humans. Many infected animals, especially young animals, die from the disease. Almost all pregnant animals will abort if they are infected with the virus. 98% of infected people will have subclinical symptoms, and only 2 in 100 people will develop a severe disease. To date, no human-to-human transmission of RVF virus has been documented.
- Case Definition:  
A suspected case is defined as a person with recent contact with hooved animals or current mosquito bites in or from RVF- affected areas presenting with an influenza-like illness (which may include fever, myalgia, arthralgia or headache), or with encephalitis, haemorrhage, hepatitis and/or ocular pathology (retinitis) with or without fever, or a person with unexplained encephalitis, hepatitis or haemorrhagic illness residing in an area where RVF can potentially occur.
- Who to test:
  - Persons meeting the criteria of the case definition.
  - Occupational groups such as livestock owners, farmers and farm workers, abattoir workers or butchers and veterinarians or animal health technicians or wildlife capture and culling team from known outbreak areas or laboratory workers are at especially high risk of infection.
  - Note that other causes for these symptoms must be excluded where appropriate, to facilitate timely treatment and appropriate infection prevention and control measures for other infections, including: malaria, Crimean-Congo haemorrhagic fever (CCHF) and tick-bite fever.
- Infection Prevention and Control Measures:  
Outbreaks of RVF in livestock can be prevented by vaccination.  
Animal immunisation must be implemented prior to an outbreak if an epizootic is to be prevented. Most human infections result from contact with the blood or organs of infected animals and also from the bites of infected mosquitoes.
  - Activities related to infected animal husbandry and slaughter or butchering practices are risky especially during an outbreak.
  - Contact with blood and organs from sick or dead animals must be avoided or minimised:
  - Personal protective equipment (PPE), apron, gloves, mask, goggle, should be provided and worn by persons who manipulate carcasses or aborted fetuses of infected animals. Veterinary procedures and necropsies. Protect mucous areas against inhalation of aerosols produced during the slaughter/necropsy of infected animals.
  - Hand hygiene: people must wash hands with soap immediately after every contact with any bodily fluid from an infected animal.
  - Consumption of products of animal origin: All products and tissues of animal origin such as the internal organs (liver, kidneys, lungs), meat and milk should be thoroughly cooked before eating. In times of an epidemic, in the affected areas, sick animals should not be eaten.
  - Raising awareness of the risk factors of RVF infection as well as the protective measures individuals can take to prevent mosquito bites is the only way to reduce human infection and deaths.
  - People can reduce the risk of transmission from mosquito through using insecticides, repellent, screened windows and mechanical ventilation.

- As laboratory workers are also at risk, samples taken from suspected human RVF cases for diagnosis should be handled in BSL3-4 laboratories and transported according to IATA regulations.
- Management:
  - If an RVF animal outbreak is suspected : Quarantine local animals; limit and/or prohibit movements of animals from affected areas to disease-free areas; establish a system of active animal surveillance to serve as an early warning for veterinary and human health authorities, Do not vaccinate during the epizootic due to the high risk of intensifying the outbreak (animal health workers may, inadvertently, transmit the virus through the use of multi-dose vials and the re-use of needles and syringes.)
  - Case management in humans: For the more severe cases, the predominant treatment is general supportive therapy: Monitor fluid and electrolyte balance and renal function, blood pressure, oxygenation, rehydration, support of coagulation, pain medication. Antiviral drug ribavirin is not recommended.
- Who to contact/ notify if human cases occur

RVF is a notifiable medical condition and should be reported using the Notifiable Medical Conditions (NMC) mobile or web App (<http://www.nicd.ac.za/notifiable-medical-conditions/>). RVF virus infection can be confirmed in the laboratory and all suspected cases of RVF should have 2 blood specimens (either red top tubes or SST-gel tubes which usually have a yellow top) of sufficient volume ( $\pm 8.5$  ml each) taken for viral detection and antibody determination. Supplementary specimens may still be required for confirmation of negative or positive results. A case investigation form (<http://www.nicd.ac.za/diseases-a-z-index/rift-valley-fever/>) should accompany specimens submitted to the Arbovirus Reference Laboratory, National Institute for Communicable Diseases. NICD-NHLS Hotline (082-883-9920) can be contacted by health-care professionals for clinical advice and to prioritise testing for severe cases.