Communicable Diseases Communiqué

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Rift Valley Fever Outbreak

The Rift Valley fever (RVF) outbreak is gaining momentum, and cases in livestock have been reported from 4 provinces to date: Free State (FSP), Northern Cape (NCP), Eastern Cape (ECP) and Gauteng (Bapsfontein area).

The NICD has confirmed a total of 24 human cases (23 in FSP, one in NCP) since 15 February 2010. Of these, two were fatal cases who presented with hepatitis and haemorrhage; history of comorbid disease possibly contributing to severity of illness could not be ascertained in either case. Contact with animals in RVF outbreak areas has been established for 23 cases (including farmers, farm workers, veterinarians and their assistants); investigation of one case is still ongoing.

Clinical Features: It is important to note that the majority of RVF infections in humans are asymptomatic; most cases are therefore not recognised. Severe disease occurs in <1% cases, including: ocular (retinal) disease (0.5-2% of patients), meningoencephalitis (<1%) or haemorrhagic fever (<1%).
Onset of retinal lesions usually occurs 1 to 3 weeks after the first symptoms appear, and may lead to permanent loss of vision, necessitating continual follow-up of patients for a 1 month period after symptoms resolve.

Mild illness typically presents after an incubation period of 2-6 days as a fever with sudden onset of flu-like illness and/or muscle pain. Some patients develop neck stiffness, sensitivity to light (photophobia), pain behind the eyes, loss of appetite and vomiting.

RVF must be included in the differential diagnosis of any patient meeting the following case definition:
Recent close contact with livestock in or from suspected RVF areas, presenting with:

- Flu-like illness (which may include fever, myalgia, arthralgia or headache), **OR**
- Fever and features of: encephalitis, haemorrhage, hepatitis and/or ocular pathology (retinitis)

Other possible causes for these symptoms must be excluded such as Crimean Congo haemorrhagic fever (CCHF), other arboviruses, tick-bite fever, malaria (where applicable) and bacterial infections (eg meningitis).

A newly confirmed case of CCHF has been reported from Brandfort area (FSP). There are areas currently reporting RVF where CCHF may also be present. Severely ill patients presenting with a fever and bleeding diathesis should be managed as suspect CCHF infection until excluded; this includes appropriate infection control practice and administration of ribavirin.

Transmission to humans usually occurs by direct contact with infected animal tissue or fluids. Less common modes of transmission include: vector-borne transmission via mosquitoes, aerosolisation and inhalation of infected animal tissues or fluid, or, rarely, ingestion of unpasteurised milk from an infected animal. No human-to-human transmission has been documented to date. Certain individuals such as farmers, farm workers, slaughterhouse workers and veterinarians are at higher risk of infection.

Management: There is no specific treatment available for RVF. Management is aimed at general supportive therapy. Unless CCHF is a possible diagnosis that has not yet been excluded, ribavirin is not recommended. Standard infection control precautions should be followed and patients do not require

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isolation or barrier nursing (except for possible CCHF cases). Human-to-human transmission has not been demonstrated, although it remains a theoretically possibility if exposure to bodily fluids of a markedly viraemic patient occurs.

Prevention or mitigation of RVF outbreaks primarily relies on vaccination and vector control. Health education, however, is crucial in reducing the risks of infection among the local population. These messages should focus on:

- Avoiding high-risk animal husbandry and slaughtering practices through use of gloves and other protective clothing, especially when handling sick animals.
- Avoiding the unsafe consumption of fresh blood, raw milk or animal tissue. All animal products (blood, meat and milk) should be thoroughly cooked before eating. Slaughtering of animals for consumption should be discouraged during outbreaks. Unpasteurised milk must be boiled before consumption.
- Personal and community protection against mosquito bites through the use of insect repellents (containing 30-50% DEET) and insecticide-treated bed nets, and wearing of light-coloured clothing.

Please note the following change in laboratory testing protocol: All suspected cases meeting the case definition of RVF should have both a clotted blood (red/yellow top tube) and EDTA blood (purple top tube) specimen taken for viral detection and antibody testing. The NICD does not need to be contacted for each case prior to specimens being sent. **The NICD RVF specimen submission form (appendixed) must be completed and submitted with the specimens.** The specimens should be packaged in accordance with the guidelines for the transport of dangerous biological goods (triple packaging using absorbent material). Samples should be kept cold during transport and transported directly to:

The Special Pathogens Unit, National Institute for Communicable Diseases (NICD)
No. 1 Modderfontein Rd
Sandringham, 2131

- For clinical advice, contact the NICD doctor on call (**Hotline 082-883-9920, strictly for use by health professionals only**).
- Health Workers Guidelines on RVF can be accessed on the NICD website (www.nicd.ac.za).

Source: Special Pathogens, Outbreak Response and SAFELTP Units, NICD. Free State and Northern Cape Departments of Health. Department of Agriculture, Forestry and Fisheries.

Measles Update

There have been 1, 516 additional laboratory confirmed measles cases since the last published communiqué, bringing the total to 8, 615 cases from January 2009 to 9 March 2010. Cases have been reported from all nine provinces, with Gauteng (52%, 4 528/8 615), KwaZulu-Natal (11%, 980/8 615) and Western Cape (9%, 765/8 615) Provinces accounting for the highest proportions of the total. An increase in the number of new cases reported each week has been observed in some provinces, notably KwaZulu-Natal, Western Cape, Eastern Cape and Mpumalanga, while Gauteng experienced a decline in the number of new cases. Children < 1 year account for 34% (2 800/8 297) of cases, with 8% (n=674/8 297) of cases occurring in infants <6 months of age.

Deaths due to measles are not routinely reported to the NICD, and have been inconsistently reported to the Department of Health; there are therefore no reliable figures on mortality. Healthcare practitioners are urged to report measles-associated deaths to the Department of Health.

More detailed information regarding the measles outbreak can be accessed on the NICD website (www.nicd.ac.za).

Source: Divisions of Epidemiology and Virology, NICD.

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