



وزارة الصحة
Ministry of Health

Rapid Risk Assessment for Potential Lassa Fever Outbreak in KSA

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Executive Summary

1.0 EXECUTIVE SUMMARY

1.1 Overview

Lassa fever (LF) is a viral hemorrhagic fever caused by a single-stranded RNA virus of the Arenaviridae family. Historically, the first reported LF case involved a missionary nurse who became ill and died in 1969, while working in Lassa city, North East Nigeria. The virus is endemic in some West African Countries and spreads to humans through aerosol or direct contact with the feces or urine of infected Mastomys rats. Human-to-human transmission of the virus occurs through contact with the blood, feces, urine or other body secretions of an infected individual. Between January-February 2019, Nigerian health authorities have reported 355 LF cases, including 75 deaths (case fatality rate 21.1%). Guinea also reported 1 LF case within the same period. From 1969-2016, 33 LF cases were imported to 9 countries from 7 West African countries.

1.2 Risk Implication for the Kingdom of Saudi Arabia - Vulnerabilities

- Given that the Kingdom of Saudi Arabia (KSA) hosts two international mass gatherings (Hajj and Umrah) and the historical evidence of imported LF in other countries, potentially an infected visitor/pilgrim from LF endemic countries could introduce the virus to KSA.
- Beside mass gathering-related travels, KSA residents (especially expatriates) on vacation or citizens on tourist/business trips engaging in international travel to affected areas could return with imported LF and trigger outbreaks of the disease.
- Given the rarity/non-existence of LF in KSA, low index of suspicion among healthcare workers could delay case diagnosis and the implementation of appropriate control measures.

1.3 Risk Implication for the Kingdom of Saudi Arabia - Capacities

- The event-based surveillance system needs to be integrated with the proposed health early warning system for country-wide implementation.
- Current healthcare-related outbreaks of other infectious diseases in KSA indicate limited infection prevention and control (IPC) capacity in health settings in the Kingdom. Most LF outbreaks in West Africa are driven by poor IPC measures in health facilities.

- Need for strategic kingdom-wide assessment of hemorrhagic fever preparedness and response capacity, including point of entry measures, designated health facilities, IPC and rapid response capability.

1.4 Risk Estimate

- Moderate risk for the international spread of LF to KSA from LF endemic countries (Table 1)

Table 1: Summary of Risk scenarios for Lassa fever outbreak and proposed public health plan for Saudi Arabia

Risk Estimate	Definition of risk	Plan
Low risk	<ul style="list-style-type: none"> • Endemic or outbreak of LF reported in mainly rural population abroad or • No documented international travel between affected area and KSA 	<ul style="list-style-type: none"> • Monitor epidemiological situation • Conduct public health preparedness assessment • Develop a LF contingency response plan • Awareness campaign of the LF and protective measures for all health workers
Moderate risk (current KSA)	<ul style="list-style-type: none"> • Endemic or outbreak of LF reported with confirmed spread through ground crossings or • Documented international travel between affected areas and KSA 	<ul style="list-style-type: none"> • Strengthen LF/hemorrhagic fever-specific core capacity: disease surveillance, RRT, laboratory, IPC, PoE and case management • Develop/update contingency plan • Awareness campaign about LF and protective measures for all travelers to endemic areas and healthcare workers
High risk	<ul style="list-style-type: none"> • Current confirmed international spread through air or sea route or • Suspected LF case in KSA 	<p>Above measures and:</p> <ul style="list-style-type: none"> • Disseminate protocols for suspected LF case investigations to relevant areas • Intensify public awareness campaign • Activate LF response plan, including exit and entry screening
Extreme risk	<ul style="list-style-type: none"> • Confirmed LF case in KSA 	<ul style="list-style-type: none"> • Escalate LF response plan • Coordinate response with international organizations • Community mobilization

1.5 Recommendations

1. Conduct a hemorrhagic fever preparedness and response capacity assessment in KSA.
2. Develop a LF preparedness plan for KSA.
3. Raise awareness of LF and protective measures among the health workforce and residents/tourists traveling to LF endemic countries.
4. Establish travel clinics in selected cities, including Riyadh, Dammam and Jeddah, to provide preventive and therapeutic services for travelers to, and from LF endemic countries.
5. Integrate an event-based surveillance system for viral hemorrhagic fevers into an early warning system for public health threats which is implemented Kingdom-wide.
6. Establish communication link with IHR national focal point/health authorities and airlines conveying pilgrims/visitors from LF endemic countries.
7. Proactively develop a contingency plan for response to suspected cases of hemorrhagic fever in KSA, including designated rapid response team, isolation centers, point of entry measures, safe burials etc.