

### 3.13 EPIDEMICS: VIRAL HAEMORRHAGIC FEVERS (VHF: Ebola, Marburg)

Scenario/Key facts	Priority Actions/Critical Steps/Mechanisms of Delivery	Indicators	ECHO Advice
<p><b>Scenario:</b> A viral haemorrhagic fever (VHF) outbreak can generate a crisis in itself but can also aggravate existing emergencies, as the high risk zones are often in areas affected by on-going crises.</p> <p><b>Key facts</b></p> <ul style="list-style-type: none"> <li>- Haemorrhagic Fever can be caused by a number of viruses including Ebola, Marburg, Rift Valley Fever, CCHF and Dengue Viruses. This table focuses on the first two.</li> <li>- In particular, Ebola and Marburg viruses (both filoviruses) can cause large epidemics spread from person to person by contact with the blood and body fluids of infected cases.</li> <li>- Countries at higher risk of Ebola or Marburg Haemorrhagic Fever are DRC, Angola, Gabon, Sudan, Kenya, Uganda, Republic of the Congo, Kenya and Zimbabwe</li> <li>- Initial transmission is from animal to human although reservoir/host(s) remain uncertain.</li> <li>- Viral prodrome is non-specific with haemorrhagic features occurring late in the illness</li> <li>- Initial person –index case- becomes infected from reservoir and then person to person transmission (by contact with blood/body fluids).</li> <li>- Initial diagnosis is based on clinical assessment.</li> <li>- Laboratory diagnosis for viral haemorrhagic fevers is generally done in national and international reference centres,</li> <li>- There is no specific vaccine or treatment for Ebola or Marburg and ribavirin is not recommended</li> <li>- No strategy has proved successful in specific pre-exposure and post-exposure treatment of Ebola or Marburg virus infections in man</li> <li>- Case fatality varies according to viral species, exposure dose and route (30-90%)</li> </ul>	<p><b>Priority Actions/Critical Steps</b></p> <ul style="list-style-type: none"> <li>- EWARS in at risk areas should include suspected VHF</li> <li>- Investigation of all alerts with initial control measures as needed</li> <li>- Where outbreak is verified, carry out detailed outbreak investigation &amp; epidemiological description (time, person, place) with appropriate sampling and initial measures to reduce transmission</li> <li>- Assessment of risk of spread &amp; risk of severe outcomes (high mortality)</li> <li>- Set up urgent, structured and coordinated task force</li> <li>- Set up specific unit/isolation for affected cases to contain transmission and provide care:</li> <li>- Set up barrier nursing procedures &amp; safe waste disposal mechanism</li> <li>- Set up procedures and community outreach to avoid intra-family and community spread (e.g. funeral and burial procedures)</li> <li>- Diagnose and manage cases with supportive treatment in isolation unit</li> <li>- Use mobile teams for systematic case finding and contact tracing in the community with transport of suspected cases to isolation facility for diagnosis and care</li> <li>- Strengthen capacity to carry out laboratory diagnosis on site or transport of samples to national or international reference labs</li> </ul> <p><b>Mechanisms of Delivery</b></p> <p><b>Community Health and Outreach</b></p> <ul style="list-style-type: none"> <li>- Community education and sensitization</li> <li>- Recognition of suspected cases and alert</li> <li>- Contact tracing and follow up</li> </ul> <p><b>Primary Health Care</b></p> <ul style="list-style-type: none"> <li>- Case recognition and initial isolation and minimal barrier nursing</li> <li>- Referral to isolation facility</li> <li>- Safe injection practices and medical waste disposal</li> <li>- Liaison with mobile teams for case finding and contact tracing</li> </ul> <p><b>Secondary Health Care</b></p> <ul style="list-style-type: none"> <li>- Isolation facilities</li> <li>- Recognition of suspected VHFs in patients admitted with “other” diagnoses</li> <li>- Processing and shipping of laboratory samples</li> </ul> <p><b>Health supplies and infrastructure</b></p> <ul style="list-style-type: none"> <li>- Personal protective equipment</li> <li>- Safe burial equipment</li> <li>- Drugs and fluids for supportive care to patients</li> </ul>	<ul style="list-style-type: none"> <li>- Task force in place (Y/N)</li> <li>- Number of suspected cases/deaths per district</li> <li>- Number of confirmed cases/deaths per district</li> <li>- Number of contacts identified (total and per week)</li> <li>- Number of contacts followed for 21 days</li> <li>- % of contacts lost to follow up</li> <li>- Number of isolation units established</li> <li>- Number of admissions per isolation unit</li> <li>- Case fatality ratio</li> <li>- Barrier nursing equipment available</li> <li>- Health personnel trained in barrier nursing</li> </ul>	<p>See decision tree</p> <p>Ensure safe barrier nursing in properly equipped isolation unit</p> <p>Ensure training included in project for health care workers</p> <p>Consider adding support to local initiatives via larger international effective operational partners.</p>