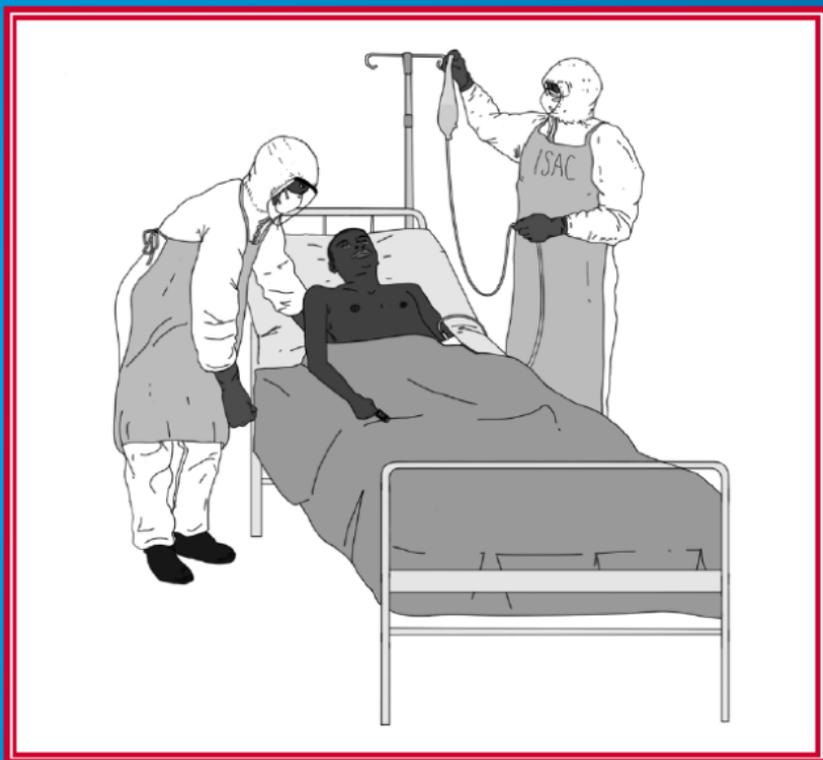


Clinical management of patients with viral haemorrhagic fever

A pocket guide for front-line health workers

FEBRUARY 2016



Interim emergency guidance for country adaptation

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Insert national foreword from the Ministry of Health

Note: For Ebola-affected countries, the adaptation and foreword may reflect a guide which concentrates on clinical care delivered in Ebola Treatment Units (ETUs; also called Ebola Treatment Centres, or ETCs) as well as in Ebola Holding Centres (EHC), Ebola Holding Units (EHU) and Ebola Community Care Centres (CCC). These guidelines are also relevant to managing suspect or probable Ebola patients in an isolation ward in a mainstream health facility and patients isolated prior to referral to an ETU.

For at-risk countries the guidelines should also include a section for facilities without VHF treatment capacity, where quality screening for Ebola and other VHF should take place and then, if VHF is suspected, isolation (with treatment in full personal protective equipment (PPE) and rapid transfer to an ETU or holding centre.

Although these guidelines concentrate on Ebola Virus Disease (EVD), referred to throughout this guide as Ebola, they also address Lassa fever, which is an endemic problem in Sierra Leone and also occurs in Liberia, Guinea and Nigeria, as well as two other viral haemorrhagic fevers that are transmitted person-to-person, Marburg and Crimean-Congo haemorrhagic fever. Country adaptation should address which VHFs are included in this pocket guide.

Introduction to second edition, February 2016

The large number of cases of Ebola in Guinea, Sierra Leone and Liberia required many new ETUs and holding centres to provide many more treatment beds and a large scale-up of training and mentoring to prepare health workers. This large scale-up required efficient and effective approaches to case management. Much has been learned about clinical presentation and management during this epidemic. The VHF pocket guide has provided a good resource for such training and care within ETUs.

The predominant clinical syndrome in the West African Ebola epidemic is a severe gastrointestinal illness with vomiting and large-volume diarrhoea, leading to volume depletion, metabolic abnormalities and hypovolaemic shock (1,2).

Experience from the treatment of patients with Ebola in developed health-care settings reveals that the case fatality rate with well-resourced supportive care may be much lower than in resource-constrained environments. This observation highlights the potential value of improving the provision of supportive care in all environments (3), particularly adequate fluid resuscitation and prevention and correction of electrolyte abnormalities (4,5). In patients not able to maintain hydration orally, "...placement of an intravenous catheter and delivery of appropriate replacement solutions are required, but we have seen many critically ill patients die without adequate intravenous fluid resuscitation" (1). The absence of reports of fluid overload and pulmonary oedema in the ETUs, whereas these have occurred in a few patients receiving ICU care (6), also suggest that inadequate fluid resuscitation has been common in most ETUs.

While this pocket guide provides guidelines to support improved fluid resuscitation and the use of a few laboratory tests, it should be emphasized that this level of care may not be possible when very large numbers of Ebola patients place severe pressures on staff-to-patient ratios or staff qualifications. Priority must be given to admitting and providing safe, basic care to as many Ebola patients as possible in order to stop transmission in the home and community while striving to provide the best care that staffing permits.

This pocket guide provides strong support for the practical application of key lifesaving interventions that are feasible in an ETO as well as interventions that relieve pain and other symptoms. Providing good supportive care while in personal protective equipment

(PPE), which limits the time for patient care and can impair vision and dexterity, is a challenge. Practical approaches to improving the volume of fluids administered are discussed using ORS, IV and intraosseous (IO) fluids.

This pocket guide seeks to provide clear guidance on current best practices for VHF, including both clinical management and infection prevention and control. Throughout, guidance is provided for the front-line health worker, focusing on triage and case definition, early and ongoing case management, infection control and subsequent hospital discharge. Recommendations come predominantly from published VHF guidelines (primarily consensus-based), and also are drawn from algorithms for diarrhoeal diseases, sepsis and vaginal bleeding management from the WHO Integrated Management of Adolescent and Adult Illness (IMAI) and Childhood Illness (IMCI) guidelines and other current WHO normative guidelines. The rationale for including the management of GI loss from diarrhoeal disease and vomiting and the sepsis algorithms is that many patients in the West African Ebola epidemic have had severe diarrhoea and vomiting with dehydration and shock; others have this combined with severe sepsis or a clinical picture consistent with suspected pathophysiology and final common pathway of severe sepsis, with manifestations of increased vascular permeability, vasodilatation, multiple organ failure and shock. In addition, this book provides guidance on infection prevention and control to minimize nosocomial transmission and on the common clinical manifestations of VHF to help the front-line health worker increase his or her level of suspicion for VHF, particularly before an epidemic is recognized in the community. Separate notes have been added on the care of children and pregnant women.

Importantly, this document does not cover how to create a VHF treatment unit (that is, an isolation ward), and it also does not address community interventions to control transmission or respond to disease outbreaks. It is hoped that this manual will complement such guidance and will strengthen the overall response to VHF outbreaks in Africa, contributing to the Integrated Disease Surveillance and Response activities necessary for compliance with international health regulations.

This is the updated version of the WHO's *Clinical management of patients with viral haemorrhagic fever: A pocket guide for front-line health workers. Interim emergency guidance for West Africa – for country adaptation*, first published in March 2014 (7).

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