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Ebola Outbreak in West Africa

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Ebola Viral Disease (EVD) is a severe and life-threatening disease with fatality rate of up to 90%. The origin of the virus is unknown, but fruit bats of *Pteripodidae* family are considered to be reservoirs of the virus. EVD spreads through direct contact with body fluids (stool, vomit, blood, urine, saliva, semen and breast milk) of a sick person with EVD [1]. The disease can also be transmitted through direct contact with the deceased person's body during funeral or burial preparation or ceremonies. Ebola can be contracted also by contact with surfaces or equipment contaminated by body fluids of an infected person [2]. The incubation period for Ebola is 2 to 21 days. Symptoms and signs of disease are fever, intense weakness, muscle pain, headache and sore throat followed by vomiting, diarrhea and bleeding. Early diagnosis is done by detecting virus in blood with serological techniques and molecular tests [3]. There is no cure for the disease and treatment is only supportive, through rehydration. Potential vaccines are undergoing human safety testing, but are not yet in clinical use.

Current epidemic of Ebola in West Africa is the 25th outbreak since 1976. The World Health Organization (WHO) declared epidemic as "public health emergency of international concern" [4]. This Ebola epidemic is different from all others because it is the first one to appear in West Africa, is the largest and longest and involves urban centers including capital cities [5]. Until the end of 2014 there has been 20,000 reported cases of EVD, causing around 7900 deaths. The most affected countries are Liberia, Sierra Leone and Guinea. This outbreak was also characterized with aggressive transmission among Health Care Workers (HCW). A total of 650 HCW were infected causing 359 deaths [6]. Countries in this part of the world have gone through decades of civil war leading to destruction of their resources and health care systems, which are characterized with low numbers of health care workers and insufficient capacities in surveillance and information. Many hospitals were closed because of fears of the health care workers. Guidelines of international organizations (WHO, CDC, MSF) very often remained solely on paper. Dissemination of disease in capital cities made contact investigation a great challenge. Other challenges in the field were waste management in health care facilities and coordination between national and international partners. Response from the international community had a great impact in response to the epidemic. Community care centers were institutionalized in some countries looking for alternative ways to decrease the number of cases [7].

The primary interventions to prevent EVD are: early diagnosis, isolation of patients, contact tracing and monitoring, safe burials, infection prevention and control and decreased social mobilization. The implementation of all these components was challenged in the field [8].

The Ebola epidemic has initiated global preparedness and response. Since nobody can predict where a patient with Ebola might go, each hospital and health care facility must be ready to and must evaluate the risk and procedures to isolate a patient with Ebola. Key points of preparedness are facility leadership, written and rehearsed standardized operating procedures, staff training and oversight of practices of PPE [9].

The current Ebola outbreak is entering its second year and it seems that will continue during 2015. At the end of this outbreak affected countries and international community should require evaluation of interventions and address economic and social impacts as well as plan for the rebuilding of health care systems [10].

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