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## **NR503: Population Health, Epidemiology, & Statistical Principles**

### **Week 1: Epidemiology and Advanced Practice Nursing**

#### **TD3: Please provide a summary of the case or information you have discussed this week**

Disease outbreaks can affect countries at any time, causing substantial human suffering and deaths. The Ebola outbreak that originated in Guinea in December 2013 spread across land borders to Liberia, Sierra Leone, and to Senegal and turned out to be an unprecedented event in health sector of West Africa (Fauci, 2014). It created havoc globally- stirred a monumental fear in people around the globe as for the World Health Organization (WHO) to declare it a "Public Health Emergency of International Concern" (WHO, 2014). Because of the ill equipped health care system, some countries were hit very hard by the disease whereas the USA with modern healthcare facilities had experienced only one death. Even though there is no specific vaccine or medicine that can prevent the disease, our medical professional came up with interventions method called "supportive therapy" to keep the disease from getting even more severe. Those interventions included: keep the patients afflicted with the virus well hydrated, maintaining oxygen status and blood pressure to give their immune system a better chance to fight off the disease (Goeijenbier, Van Kampen, Reusken, Koopmans, & Van Gorp, 2014). Good planning, preparation and timely communication between federal and local officials were part of the reason why the disease has not hit hard the United States. These basic principles are valid for every infectious disease. National surveillance during the emergency response met important surveillance objectives as directed by Healthy People 2020. It identified illness clusters for further investigation, tracked progression of the epidemic in the United States, and facilitated specimen collection from suspect and probable case-patients for EVD diagnosis. This surveillance allowed for rapid and frequent updates to the healthcare and public health communities and to the public on the status of the outbreak (Braden, Dowell, Jernigan, & Hughes, 2013). Ebola outbreak highlighted the need to avoid complacency,

to strengthen efforts to improve disease surveillance that will allow for earlier detection of the emergence and spread of diseases, to increase laboratory capacity, to encourage and strengthen public participation in disease control efforts, to develop national preparedness capacities to educate communities about the diseases, how they are transmitted, and how they can protect themselves from infection.

### **References**

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- Goeijenbier, M., Van Kampen, J. J., Reusken, C. B., Koopmans, M. P., & Van Gorp, E. C. (2014). Ebola virus disease: a review on epidemiology, symptoms, treatment and pathogenesis. *Neth J Med*, 72(9), 442-8.
- World Health Organization. (2014). WHO statement on the meeting of the International Health Regulations Emergency Committee regarding the 2014 Ebola outbreak in West Africa. Retrieved on October 24, 2016 from: <http://www.who.int/mediacentre/news/statements/2014/ebola-3rd-ihr-meeting/en/>