

Week 6 d-1

Health & Medicine, Nursing



Week 6 D al Affiliation) Week 6 D Scientists discovered Ebola in 1976.

Various have since investigated the infectivity of the disease and established that a person suffering from Ebola can only infect between 1.5 and 2 other people (American Association for the Advancement of Science, 2014). The infectivity of the disease is low since good infection-control practices can prevent the disease from spreading thus making it hard to contract. The R-nought value used to measure the infectivity of a bacterium or virus asserts that infectivity of Ebola is low in comparison with other diseases like measles that infect about 18 people (American Association for the Advancement of Science, 2014).

With regard to pathogenicity, Ebola virus refers to an aggressive pathogen, which leads to high immunosuppression in humans and nonhuman primates. The pathogenicity of Ebola is homogenous across species of the disease since the species associate with hemorrhagic fever outbreaks. Apparently, the Ebola virus enters host cells via mucous membranes, skin replication, and endocytosis (Centers for Disease Control and Prevention, 2015). The Ebola virus affects different host cells, blood coagulation, and immune defense system. As such, the Ebola virus causes significant immunodeficiency that usually results to fatalities.

Ebola has a high virulence. Indeed, World Health Organization confirms that the disease can lead to a 90% case fatality rate (Kloc, 2014). Ebola virulence rate depends on its host factors like cellular enzymes that split fundamental Ebola viruses (Pozos, n. d). Nevertheless, virulence is always multigenic since Ebola has different stains (Pozos, n. d). This is evident where Ebola had a 90% fatality rate in Sudan and just 1% in Uganda. However, its low infectivity

mitigates the high virulence rate (Kloc, 2014). This relates to the fact that pathogens that kill hosts have limited time to spread. As such, the need to establish balance between Ebola's virulence and infectivity may lead to a global pandemic (Kloc, 2014).

References

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