Spotlight Shift from H1N1 to the Ebola Virus

Rachel Granberg  
Department of Biology  
Lake Forest College  
Lake Forest, Illinois 60045

U.S. Airway passengers covered their faces, videotaping the health experts coming down the center aisle of the plane wearing blue hazmat suits to escort an American passenger off the flight. The reports claim that the passenger sneezed and then announced to the plane “I have Ebola!” Emergency health experts were notified and quickly boarded the plane to escort the passenger into isolation only to find out that the man had been joking.

The World Health Organization has declared the Ebola virus to be an international health emergency. However, the Ebola virus is not a new disease and has been present in society since 1976. There have been sporadic outbreaks in Africa since then, but the most recent outbreak, occurring currently, has experienced media attention and public interest beyond compare. To analyze this most recent outbreak of Ebola, this article compares Ebola to another notorious virus-caused disease, H1N1. H1N1, also known as swine flu, created a similar effect on the public and caused for incidences similar to the Ebola panic on the U.S. Airway flight. Additionally, H1N1 shares similarities to Ebola and demonstrates the potential danger of this new outbreak in perspective to a past U.S. pandemic. In 2009, we saw a worldwide pandemic as the H1N1 virus caused the closing of several schools and seemed to be taking over the United States. H1N1 transmission is similar to Ebola in that it is transmitted via direct bodily fluid contact from an infected individual. Contrary to Ebola, where the patient is contagious as long as the virus is in their bodily fluids, H1N1 is only contagious for five to seven days. While the H1N1 virus is no longer considered a pressing health issue it is still present in our population as a seasonal flu. The symptoms are typically a variety of flu-like symptoms similar to the first symptoms of Ebola. The H1N1 virus is often fairly mild and does not require medical attention or hospitalization. However, certain groups of people, young children, the elderly, and pregnant women, are more susceptible to flu-related complications, which include pneumonia, bronchitis, and several others. These complications require hospitalization and in some cases result in death. Ebola has several flu-like symptoms but also causes the blood vessels to weaken. Ultimately, this allows blood to leak out of the vessels and can create hemorrhaging. This weakening of the blood vessels is what causes the high death rate of Ebola. As for treatment and prevention, the two diseases differ drastically. Since the 2009 H1N1 pandemic there is a vaccine readily available to the public and it is strongly encouraged. Although H1N1 is no longer a major health threat, it is still present in the U.S. population as a seasonal flu. There is also available treatment for the H1N1 virus in the form of Antiviral Drugs. Ebola, in contrast, currently has no vaccine and the only preventative measures one can take is avoiding places where the disease is prevalent and taking the proper hygienic precautions. As for treatment there are a few measures that can be taken to increase survival rate if used early in the disease. These treatments include providing intravenous fluids, the maintenance of oxygen levels and blood pressure, and the treatment of infections as they occur. Due to the recentness of the outbreak, experimental vaccines and treatments are still in the process of being tested. The final estimated amount of H1N1 cases in the U.S. is 60.8 million, a daunting number compared to the number of patients treated for Ebola in the U.S. which is currently only at 9. The major difference between H1N1 and Ebola is the hospitalization and death rate. All 9 people who have been diagnosed in the U.S. required hospitalization. Out of the 9 patients treated in the U.S. there has been only one death. Globally, it’s a different story; when looking at Guinea, Liberia, and Sierra Leone there have been a total of 5,666 laboratory-confirmed cases and of that there has been 4,912 deaths. For H1N1, it is estimated that only 274,304 people required hospitalization out of the 60.8 billion infected. Overall, it is estimated the death rate globally is telling in that while Ebola is estimated to be 50-90%, H1N1 is only 0.01-0.3%.

Comparing the Ebola virus to H1N1 allows us to see the potential seriousness of this threat. Particularly for those of us on a college campus, the high likelihood of transmission of the disease would cause catastrophic effects if the disease showed up at the college population. H1N1 received tremendous spotlight and concern as the infected patient count increased. As for Ebola, we can expect the reaction to be even more considerable due to the increased severity of the disease. It is safe to assume that this recent outbreak will continue to make daily news as the United States begins to prepare itself to face another pandemic.
References


