Review of *Mode of Communication of Cholera*

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In this article, the author first introduced the history of cholera and its prevalence in the UK. Using UK historical data to study the pathology of cholera, the author found that cholera is transmittable, and the symptoms start from the affection of the alimentary canal. Later, the patients would suffer from loss of fluid from the stomach. Thus, the author hypothesized that the cholera poison must be introduced and takes place into the alimentary canal. The author then examined the transmission pattern among patients and found that the spread of cholera generally happens among people living together and visitors generally could escape. Also, the outbreak usually happened in poor neighborhood with dense population and bad hygiene. Thus, the author concluded that the mode of communication of cholera is through contaminated water in the wells and water channels. For the recent outbreak in Broad Street and Golden Square, the author used tables to document the time and number of died patients and mapped these cases geographically. From the map, he identified the contaminated pump and the water company producing the contaminated water.

I think this is a very good article showing the authors reasoning why he think the mode of communication of cholera is through contaminated water. I find it very inspiring how the author demonstrated his argument with a series of detailed investigation of patient cases. I learnt a lot from him about the steps to do scientific research. For example, he first went back to the historical outbreaks of cholera and asked local people and doctors about the date, symptoms and treatment of cholera patients. He examined these cases and came up with his hypothesis of the mode of communication of cholera, which is through the contaminated water. The author insisted his argument although most people at that time believed it was caused by miasma. After having the hypothesis, I think the next step for examining the research hypothesis would be finding real data and see if the data agrees with the hypothesis. The author used the most recent outbreak as an example and proved his hypothesis. In addition, in epidemiological studies, map is a useful tool showing how disease is spreading geographically and how it is transmitted. For the cholera example here, we can see that the cases are more clustered around the contaminated pump. The removal of this pump stopped cholera spread, which suggest that this should be the source of cholera outbreak.

Questions:

1. Is there any other tools helpful in epidemiology research other than maps.
2. What would the map be like if the disease communication is through other mode like air?