

Analysis of the Incidence of Poliomyelitis in the United States

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Abstract

Poliomyelitis (Polio) is a disabling and life-threatening disease caused by the Polio virus. The virus spreads from person to person and as well as those in contact with contaminated food and water in unsanitary conditions. The incidence of Polio in 1956 was 38,477 cases. Vaccination campaigns were initiated in the US in 1955 with the administration of the Inactivated Polio Vaccine (IPV) and later in 1961 with the Oral Polio Vaccine (OPV), which resulted in a consistent decrement from 38477 cases to zero cases reported in year 2000 (3). The purpose of the study is to offer an analysis of this historical disease and interpret the results using the statistical technology. The data is presented by the incidence by year and related to the Geographical Occurrence and Age distribution. The results suggests that there is not sufficient evidence to reject that the four by REGION samples come from populations with all equal mean. This results also suggests that there is sufficient evidence to reject the claim that the AGE CLASSES samples come from populations with all equal means. The incidence of Poliomyelitis cases in the US was observed for 46 years, during which the incidence in younger ages was confirmed as the most susceptible population. Also, this disease was spread out mainly in the form of severe outbreaks throughout the country where there were both very populated urban areas and most likely exposed to issues in sanitary conditions and socioeconomic status. The statistical analyses of these variables demonstrate that there is sufficient evidence to believe that through the implementation of sanitary measures, and the IPV and the OPV country wide vaccinations, the incidence of Polio was successfully reduced to the point to be considerate the US a country free of Polio.