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**Sarah Rachell Salter\*** (sarah.salter226@gmail.com), 1143 Overlook Drive, Toms River, NJ 08753, and **Amanda Luby** and **Kevin Torres**. *Salmonella Outbreaks: Assessing Causes and Trends*.

According to the Center for Disease Control and Prevention, it is estimated that each year foodborne disease is the cause of roughly 48 million illnesses, 128,000 hospitalizations, and 3,000 deaths among American citizens. Of the 31 known pathogens that contribute to domestically acquired foodborne illness, Salmonella is deemed the leading pathogen causing hospitalization and death. Although there has been greater implementation of government regulations, the CDC has confirmed that since 1998 the rate of infection of Salmonella is slightly increasing rather than decreasing. For this reason, Salmonella presents itself as a public health concern. This research focuses heavily on using Bayesian statistical methodology to determine change points using a Markov Chain Monte Carlo computational method, as well as a Bayesian Poisson Analysis. A simulation study was developed to evaluate how well these methods were able to successfully detect outbreaks and how different factors affect these results. (Received September 17, 2012)