ANALYSIS OF FOOD-BORNE RELATED ILLNESS AND DEATH FROM EXPOSURE TO E. coli

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Abstract: Food-borne illness is an important public health concern. The causes of foodborne illness include viruses, bacteria, parasites, toxins, metals and prions. Microbial foodborne illness is a significant source of human disease despite food safety information campaigns and educational efforts. Infection with E. coli O157:H7 is a leading cause of childhood kidney failure due to hemolytic uremic syndrome (HUS). In this study, foodborne illness in the United States caused by exposure to E. coli was studied. Data source for this analysis include Foodborne Diseases Active Surveillance network (Food Net), the Foodborne Disease Outbreak Surveillance System, and the National Hospital medical Care Survey. The numbers of reported outbreak-related cases, the rate of hospitalization and death caused by exposure to E. coli were collected and analyzed. The locations of the outbreak in addition to the different source of contamination in different age groups were examined. Analysis of variance was used to determine any significant difference among the E. coli outbreak cases and reported death from 1996-2009. In 2009, infections related to E. coli exposure (STEC O157) were 41% lower than 1996; and 25% decrease in the rates than 2006-2008. Prevention of foodborne illness and outbreaks through effective interventions, availability of early warning systems, and reliable detection methods for pathogens is a critical issue worldwide.

Key words: E. coli, Food Safety, Foodborne Diseases.

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