THE UNIVERSITY OF CHICAGO

Department of Statistics
MASTER'S THESIS PRESENTATION

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Generalized Linear Models for Smoking Prevalence and Consumption

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ABSTRACT

The purpose of my thesis is to determine what factors influence smoking prevalence and cigarette consumption in the United States. The data used in the analysis can be found on the CDC website and consists of survey data from 2004 and 2012. Values of each variable are recorded for each state, so generalized linear models can be fit treating the states as independent observational units. Smoking prevalence and cigarette consumption are interrelated by nature, so independent modeling of these two variables is an important aspect of the analysis. The Poisson Regression model for consumption accounts for the relationship between adult smoking prevalence and per capita cigarette consumption allowing appropriate inferences to be made about other variables. Logistic regression is used to identify factors contributing to smoking prevalence.