**Project 1 Proposal:** Prevalence of Asthma over Time in Relationship to Household Factors

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**Project Description:**

For many years epidemiologists have noted an increase in the number of children diagnosed and living with asthma. While it has been long demonstrated that children living in smoking households are more likely to have asthma, we plan to look for other conditions that are more prevalent in smoking households. We also plan to look at prevalence of childhood asthma in relationship to other household characteristics including urban/rural status, poverty and food-insecurity, medical care deserts. Finally, we want to look over time to see if there are emerging trends in child and early adult condition prevalence.

**Research Questions to Answer:**

1. What is the prevalence of childhood asthma over time?
2. What is the correlation between adult smoking in the household with asthma?
3. Are there other diseases or conditions that are significantly more prevalent in smoking households?
4. What other factors correlate to an increase in asthma prevalence?
   1. Urban/Rural location of the household
   2. Poverty or food insecurity
   3. Availability of medical care (deserts)
5. Are there emerging trends in prevalence among children and young adults in recent years that might warrant further study or intervention?

**Data to be Used:**

We will use publicly available research files from the National Health Information Survey conducted by the CDC, National Center for Health Statistics. Data can be downloaded from the following website:

<https://www.cdc.gov/nchs/nhis/nhis_2017_data_release.htm>

We will start with 2017, the latest year available, and add as many years to the data as possible. We also plan to compare this data with other publicly available information to identify geographic areas with limited access to care.