# Hospital Data

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## Introduction

There are different trends, health wise, depending on where a person lives. I will specifically focusing on the trends in Arizona counties. As well, as diving deeper into nine different sickness. The data used for the analysis will be collected from separate sources. The first source will be from the Arizona Environmental Public Health Tracking (EPHT) Explorer. The second source is from the Census API.

## EPHT Data Collection

The EPHT is a Graphical User Interface (GUI) to allow easy web access for the user. I will be web scrapping the data with selenium library through Python. The GUI has different filters to change what is shown. A table is given with the information I want to analyze, this is the information I will be web scraping. Each illness gives a three column table. The columns are `County`, `Value`, and `State (Rate/Avg)`. The `Value` is a rate over 10,000 people. Each illness has different parameters for the value given and this will be discussed further in the full analysis. I added a `Year` and `Content Area` to be able to append all the illness together in a single CSV file.

## Census API Data Collection

The beginning of the collection, I tried to collect the data through file transfer protocol (FTP) from the Census Database, but it proved more taxing. I have since moved to R's Census API library. I will collect the demographic data for Arizona counties to align with the above data collection.

## Overall Goals

I will be diving deeper if there is a pettern comparing the two sources mentioned before. I want to see if the are demographics or areas that are more affected by specific illness. The two graphs listed below are a great start to see that there is a significant change. **Figure 1** shows the state rate of asthma emergency visits in Arizona. **Figure 2** shows the Mohave rate of asthma emergency vists. Mohave seems to be greatly affected by asthma. It would be great to add on the census api demographic information to compare Mohave to the rest of the state and see which are being the most affected.

\begin{figure}[p]

## Mohave County Asthma Emergency Visits Compared to the State Rate
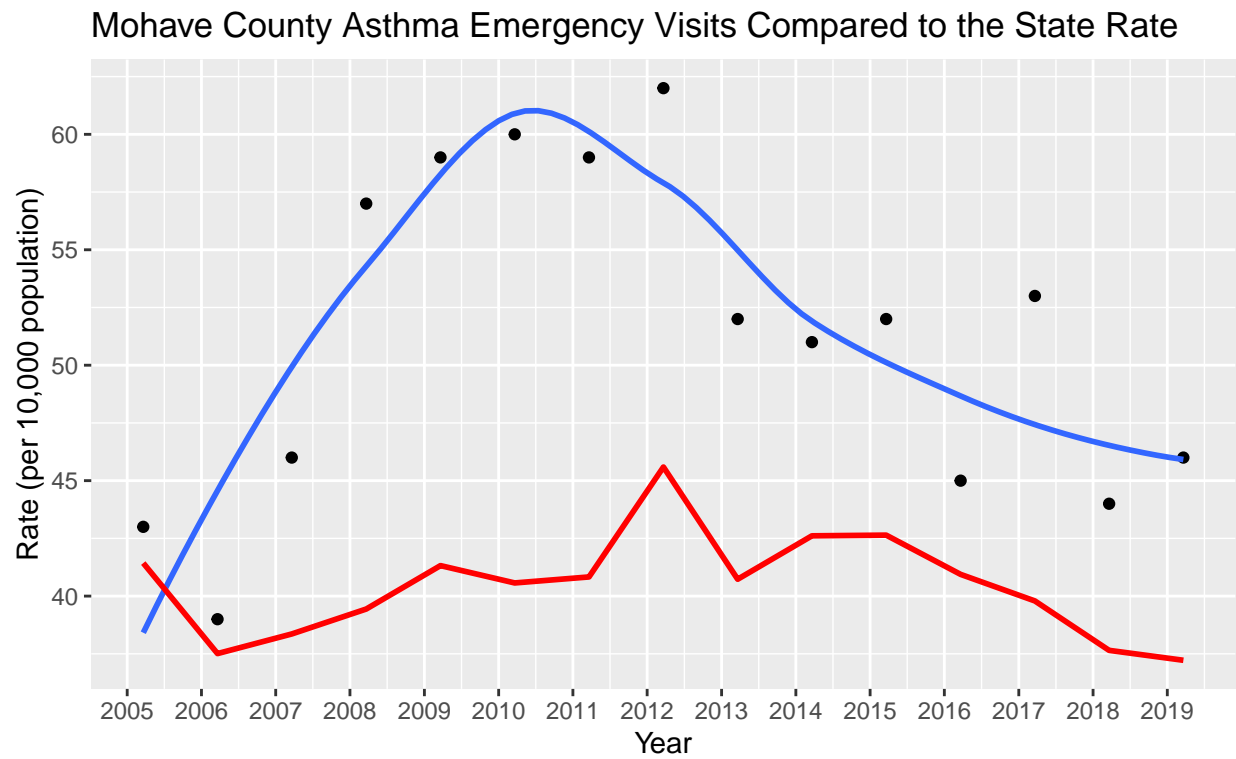


Figure 2. The rate of the Mohave county for emergency visits that have to do with asthma (Blue). The rate of the state of Arizona for emergency visits that have to do with asthma (Red). The rate number is age adjusted per 10,000 population.

\end{figure}

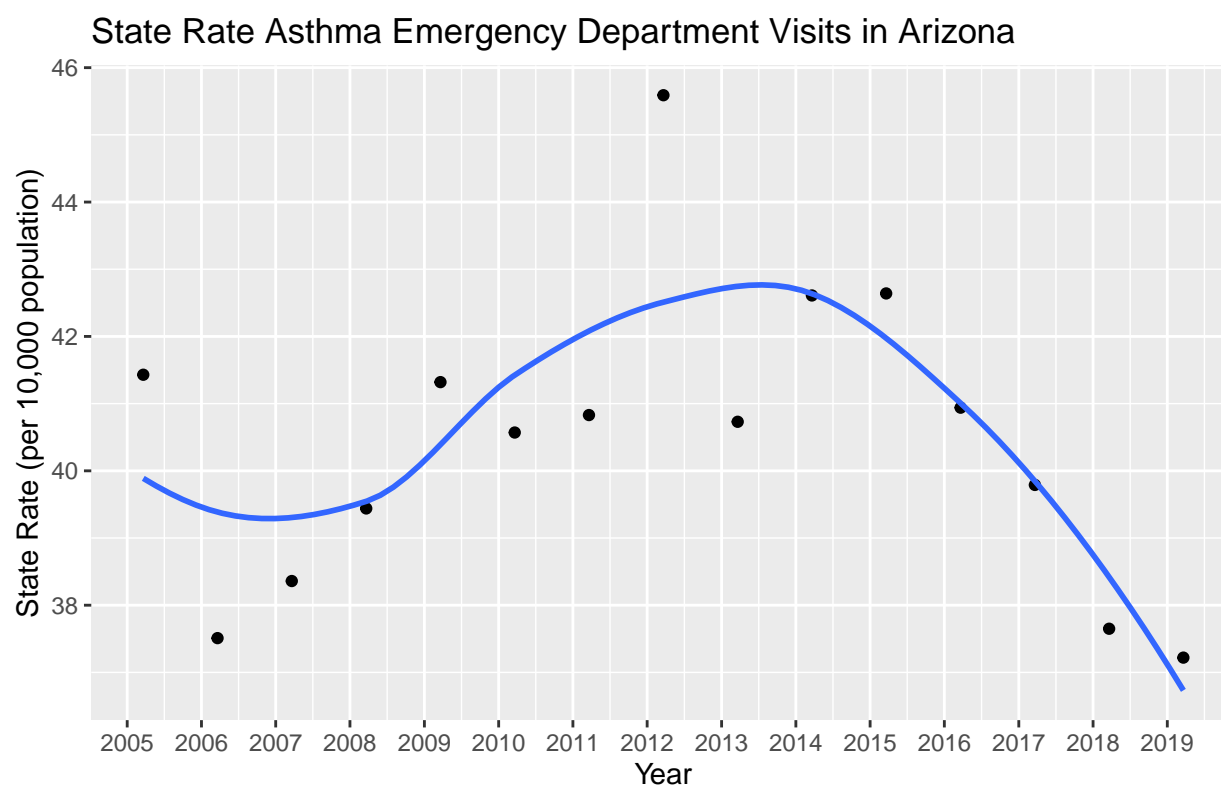# State Rate Asthma Emergency Department Visits in Arizona



Figure 1. The rate of the state of Arizona for emergency visits that have to do with asthma. The rate number is age adjusted per 10,000 population.