Examining how the ACA impacted uninsurance rates and the infant mortality

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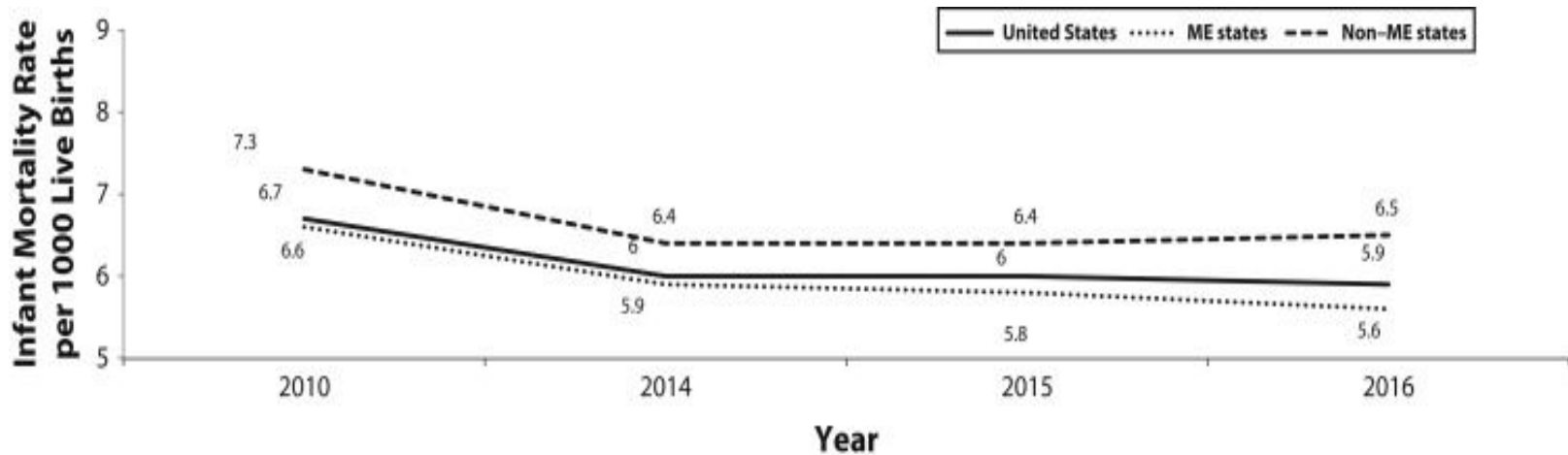
Project Abstract

Infant mortality is defined as the death of an infant before their first birthday. It is used as a broad population indicator of the community's health status, socioeconomic levels and accessibility to medical services [(AMCHP)](). The Affordable Care Act (ACA) was enacted in 2010 in an effort to make affordable health insurance available to more people, thereby reduce uninsured rate and improve patient outcomes. In our project, we will collect datasets of state infant mortality and uninsurance rate pre/post to ACA to assess the differences between each U.S. state.

NHI Article

- Infant mortality rate declined in both Medicaid expansion and non–Medicaid expansion states 2010-2016
- Decline in Medicaid expansion states was more than 50% greater than in non–Medicaid expansion states
- Decline in mean state infant mortality rates by Medicaid expansion were greatest in African American infants

Where our data is from

SQL or Mongo?

ACA_states.acadata

Documents   Aggregations   Explain Plan   Indexes

FILTER

ADD DATA ▾   VIEW ≣ {} ⊞

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State: "Alabama"
Deaths_2010: "524"
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Uninsured_Rate_Change_2010-2015: "-4"
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ACA_states.acadatacharts

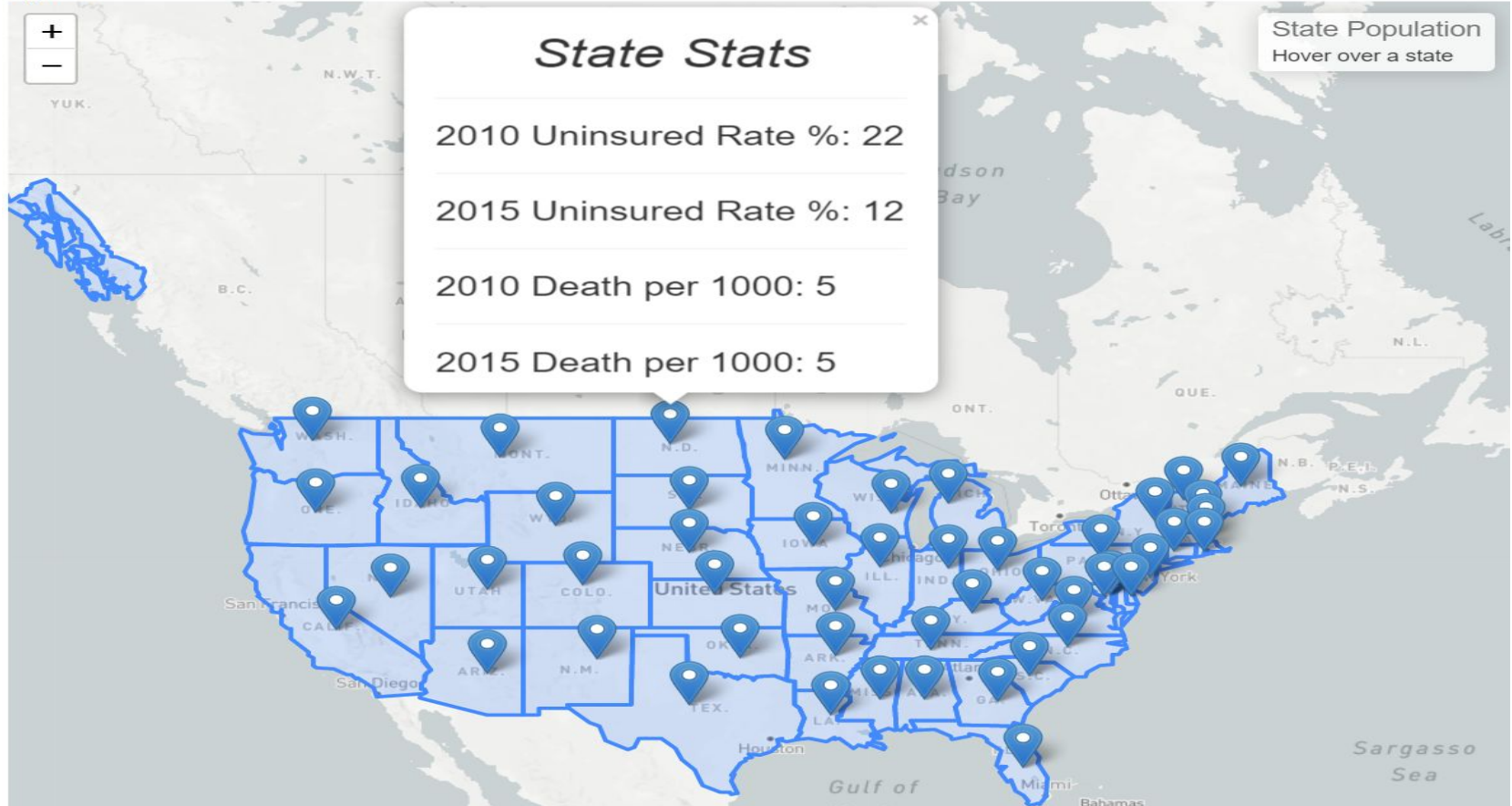Documents   Aggregations   Explain Plan

FILTER

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> Births_2015: Array
> Death_Per_1000_2015: Array
> ABB: Array
> Latitude: Array
> Longitude: Array
> Uninsured_Rate_2010: Array
> Uninsured_Rate_2015: Array
> Uninsured_Rate_Change_2010-2015: Array
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Interactive State Map - Uninsured & Death per 1000 Stats: 2010 vs 2015

Figure 1.

Interactive Bar Charts: Uninsured Rate (%) and Infant Mortality: 2010 vs 2015
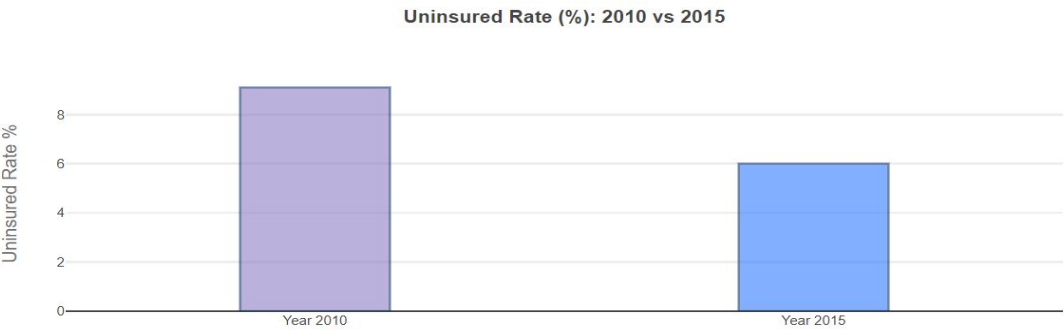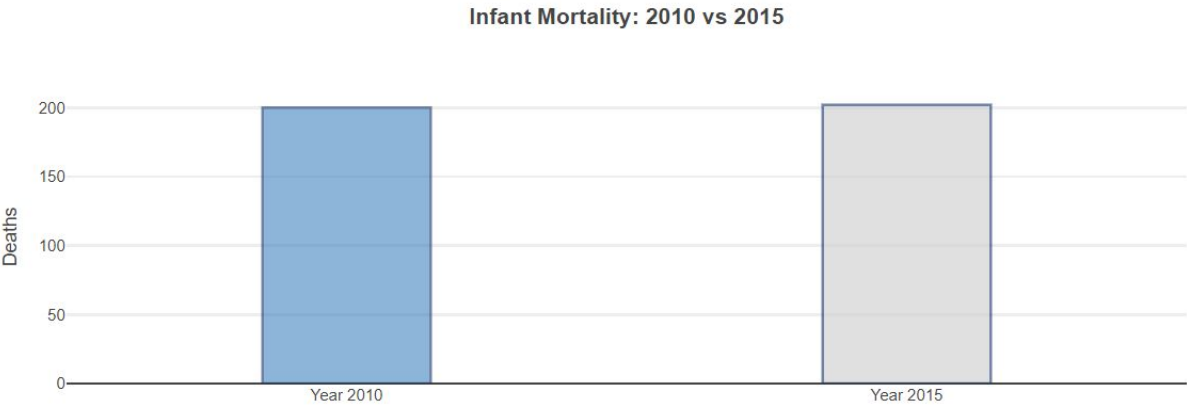
Figure 2.

Uninsured Rate (%): 2010 vs 2015

Figure 3.
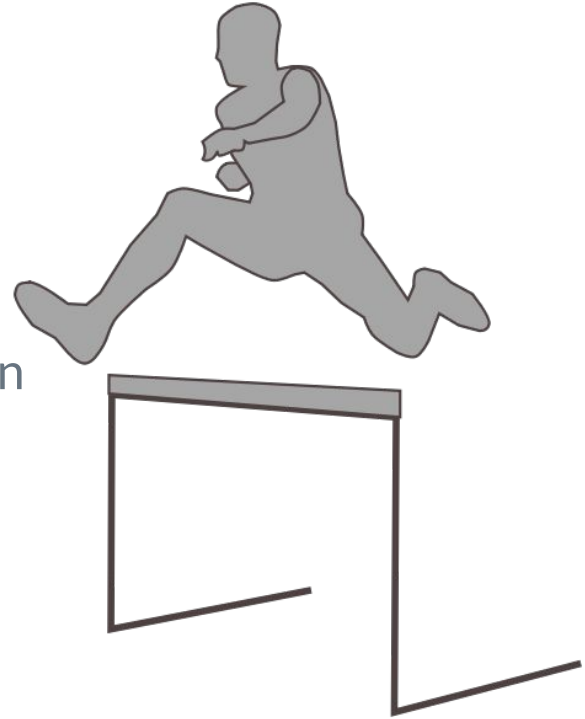
Infant Mortality: 2010 vs 2015

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Analysis

▷ ACA has brought infant mortality rates down, however, it varies state by state
▷ Pondering Questions:
  ○ Differences in infant mortality disparities according to mother's education, ethnicity and age
  ○ Accessibility to ACA access and awareness varies by state

Hurdles

▷ Brainstorming topic along with finding adequate data
▷ Limitations visualization types
▷ Cleaning the data
▷ Creating a comprehensive project within a limited timeframe
▷ Deciding between SQL/Mongo
▷ Heroku mix up

Final Thoughts

▷ The ACA was limited according to state Medicaid expansion
  ○ States with expansion had greater decline in infant mortality rates

▷ Limitations in data and time constraints