

# Disparities in Chronic Disease Burden: Understanding Community Context

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## BACKGROUND & PURPOSE

- Chronic diseases account for approximately 7 out of every 10 deaths in the United States
- Several studies have identified the association with individual chronic diseases and socioeconomic variables; however, areas afflicted heavily by one chronic disease are likely to be afflicted by multiple
- The purpose of this study was to create a measure of chronic disease burden using prevalence estimates for 10 chronic diseases at the Zip Code Tabulation Area (ZCTA) level and identify the community characteristics of communities that are and are not as heavily burdened by chronic disease

## METHODS

- This study linked 2019 CDC PLACES ZCTA chronic disease estimates and ACS 5-yr estimates for socioeconomic variables
- To quantify the burden of chronic disease, prevalence quartiles of each chronic disease were used as thresholds to identify ZCTAs in the top 25%, middle 50%, and lower 25% and given a score of 1-3 for each chronic disease
- ZCTAs that were in the top 25% for each chronic disease received a score of 30 and those in the lowest 25% for each chronic disease received a score of 10
- We mapped and performed a hot spot analysis to identify the geographic location and clustering of heavily chronic disease burdened communities

Figure 1. Quartiles of Chronic Disease Score

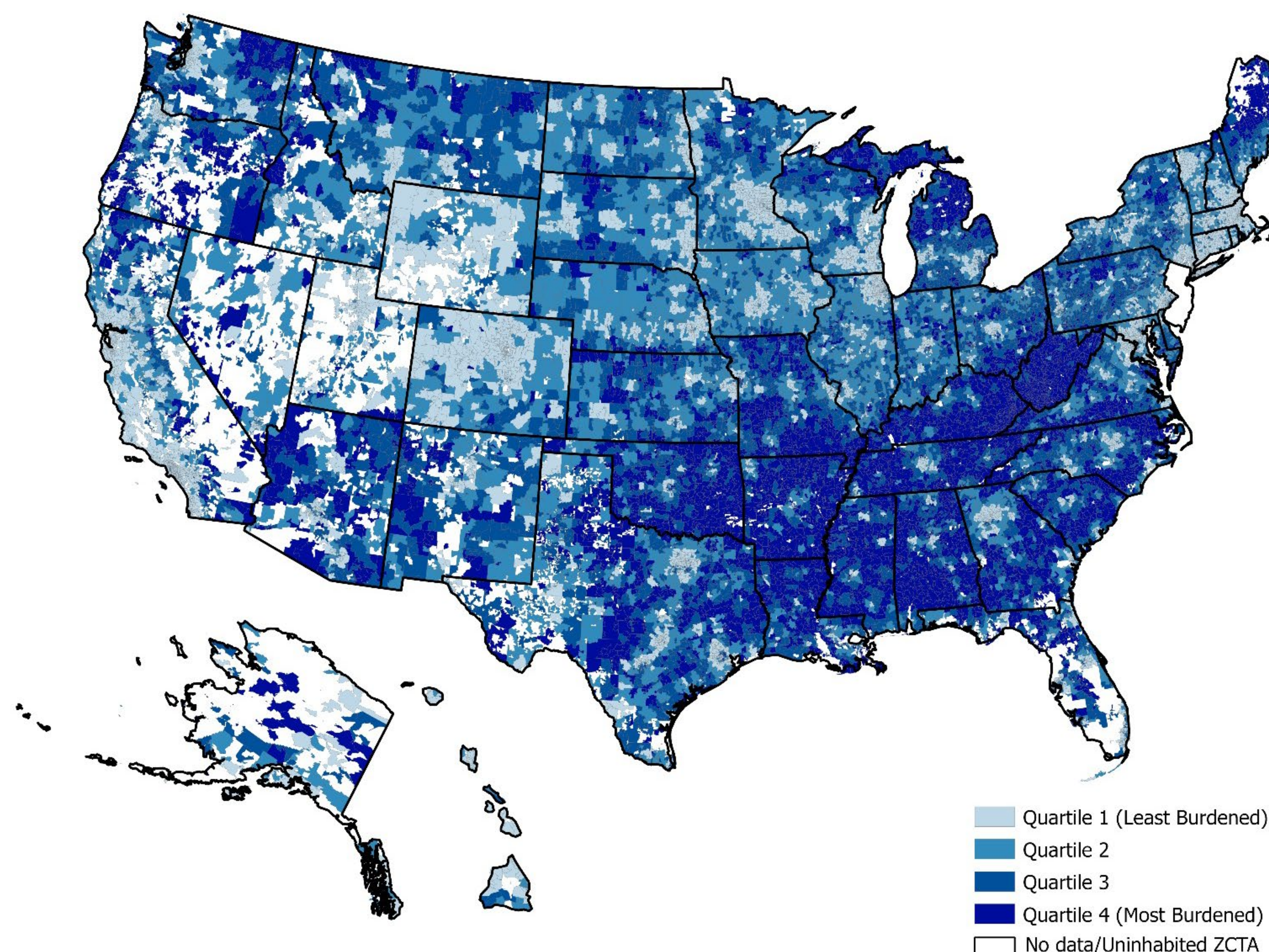
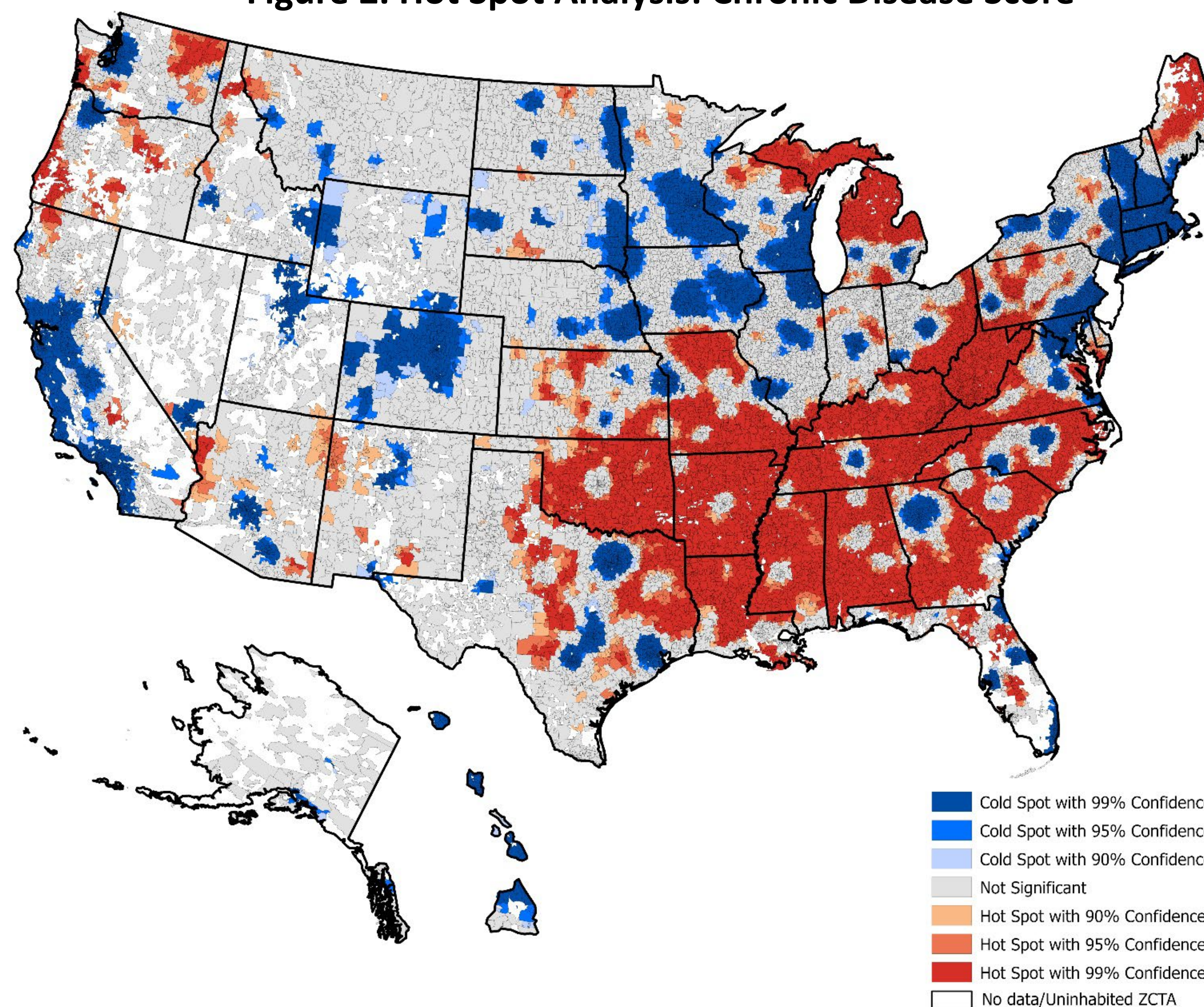


Figure 2. Hot Spot Analysis: Chronic Disease Score



## FINDINGS

- A total of 31,634 ZCTAs were included in this analysis
- The lowest burdened ZCTAs were predominantly urban (82.0%), whereas the highest burdened ZCTAs were predominantly rural (68.0%)
- Compared to the least burdened ZCTAs, the highest burdened had a higher proportion of residents that were
  - Older 65+ (22.6% vs 14.0%)
  - Black (12.0% vs 6.0%)
  - Not college educated (56.7% vs 32.8)
  - Uninsured (11.2% vs 6.9%)
  - Below 200% of federal poverty limit (20.2 vs 9.4%)
  - On SNAP (18.5% vs 8.2%)
  - Vehicle less (7.9% vs 5.9%)
- Heavily chronic disease burdened ZCTAs also had greater distances to healthcare services compared to least burdened ZCTAs
  - Nearest FQHC 11.4 vs 7.9 miles
  - Nearest Emergency Room 16.3 vs 7.6 miles
  - Nearest ICU 20.7 vs 8.7 miles
  - Nearest pharmacy 7.0 vs 2.8 miles

## CONCLUSIONS

- The highest chronic disease burdened ZCTAs are afflicted by many factors relating to poverty
- Public health interventions targeting individual behavior may not be well-suited to combat diseases stemming from systemic neglect