

Open-Source Spatial Visualization for Public Health Intelligence

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Community Partners

- Durham Neighborhood Compass: interactive map that provides community and policy-makers with small-area mapping of demographics, education, infrastructure, housing, and safety data.
- The Durham Public Health Department is interested in prototypes that incorporate health data into the Durham Neighborhood Compass.
- The Orange County Health Department is interested in a similar system for their small-area county mapping.

Data

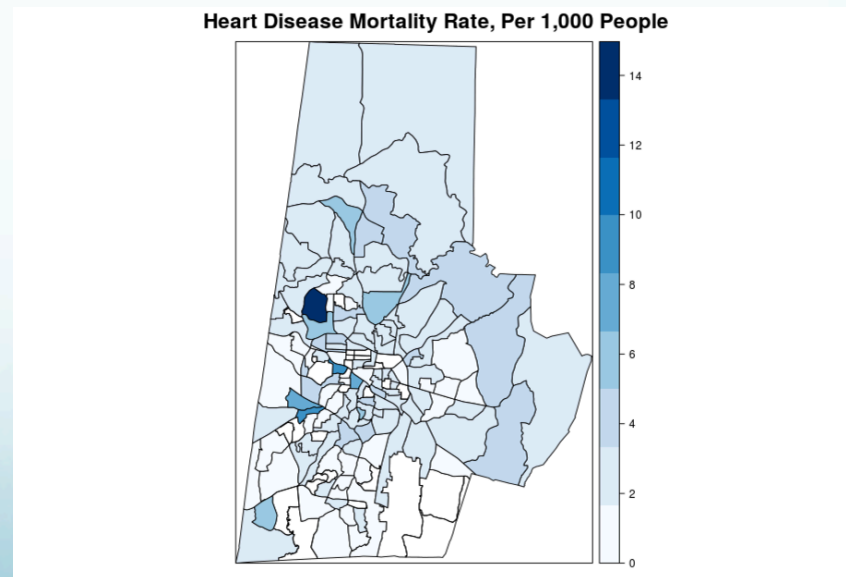
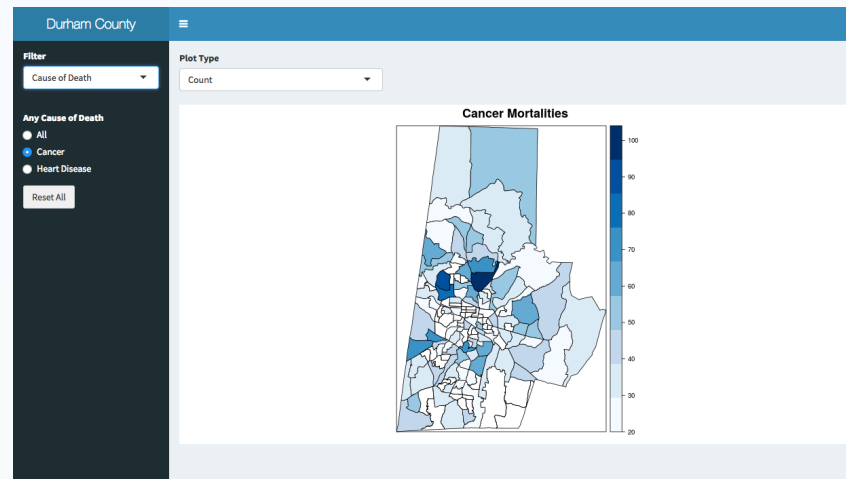
- Mortality data in Durham County from 2004 to 2014 from the State Center for Health Statistics. Includes primary cause of death, sex, age, race, year of death, and census block group.

Why maps?

- Equips community members, researchers, and policy makers with spatial health information about the community to better inform health interventions.

R Shiny

- We created a comprehensive map to be used internally through R Shiny with the ability to change demographic categories such as race, age, and sex as needed and to view the data as counts, rates, or age-adjusted rates.
- In addition, we created an external shiny app with a suppression level of 20 mortalities. The link to the app will be able to be accessed on the Durham Neighborhood Compass website: https://neighborhoodcompass.shinyapps.io/durham_county_mortalities/



East Durham Children's Initiative

- The East Durham Children's Initiative (EDCI) is a nonprofit organization that works to develop and coordinate services to meet the needs of children living in their service area: a 120-block, 1.2-square-mile area in East Durham.
- In order to analyze the EDCI service area, we created a geospatial shape file with coordinates found on their website. We used individual blocks since block groups do not fit well with the service area. We aggregated the information from blocks with centroids within the EDCI service area to estimate demographics. Creating this shape file allowed us to identify which individual mortalities are within the area.

