

# Using Best Practices For Graphical Communication to Share Social and Environment Data in an Environmental Justice Context

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## INTRODUCTION

- Data are widely available, but it can often be challenging to communicate data to lay audiences with differing levels of data literacy
- This research focuses on enhancing the accessibility of maps and graphs of social and environmental data for residents living in environmental justice neighborhoods in Denver, Colorado
- Our goal is to bridge the gap between complex data and community empowerment, enabling residents to make informed decisions about their health and well-being

## AIMS

1. Identify evidence-based strategies and best practices for intuitive visualizations of social and environmental data.
2. Develop interactive tools for Denver residents, enhancing their understanding of complex data

## METHODS

**Step 1.** Literature review: focused on data visualization, communication theory, and public health.

**Step 2.** Selected peer-reviewed articles and journals identified best practices.

**Step 3.** Developed graphical representations of census-tract indicators with R

## RESULTS

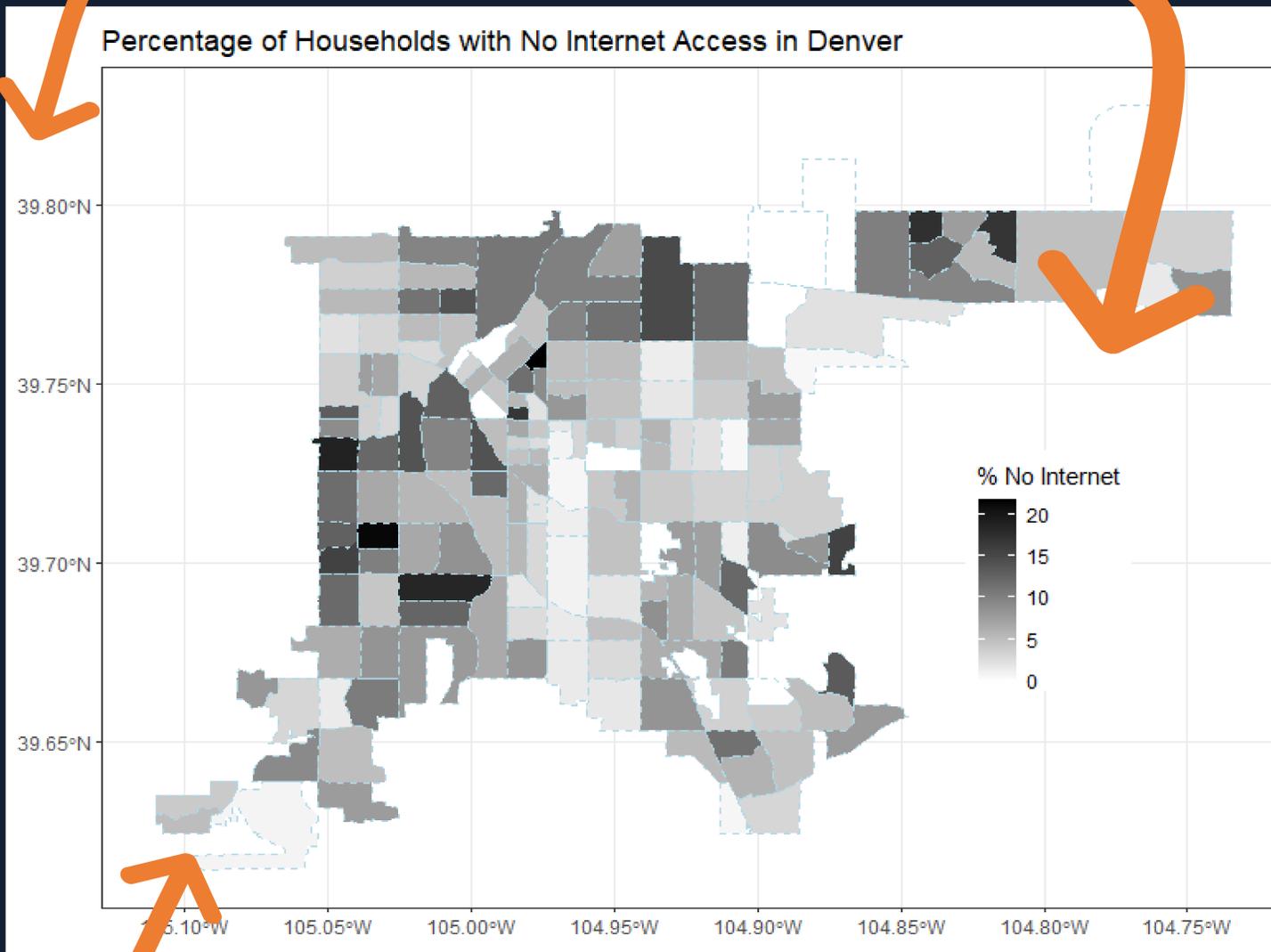
### Scaling and orientation

- Maintaining the shape and location of the regions represented (Midway 2020).
- Standard with north at the top

### Graduated symbols

- Graduated color scheme to represent different percentages for showing variations in density or quantity across a geographical area (Gupta, 2018).

### Interactive Maps



### Color

- Use of textures or patterns: Dotted or hashed lines help differentiate census tracts
- Visual Weight: Darker shades naturally draw the eye. When the darker tones represent higher or more significant values (Quin 2020).
- Cultural Connotations: In many cultures, darker colors are associated with more intense qualities
- Grayscale Compatibility: A map with a color ramp that works well in grayscale is more accessible and retains its utility when color printing is not available (Grainger 2016).

## CONCLUSIONS

- This work establishes a baseline for future efforts to communicate health and environment data to diverse audiences in Denver, CO
- By continuing to refine our visualization tools and methods, we aim to empower Denver's communities with the knowledge to make well-informed health and well-being decisions.
- Future work will refine these visualizations iteratively based on community feedback and insights.
- Health, socioeconomic, and environment data will be made available to the community using a Shiny dashboard

## REFERENCES



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