

# Spatial Equity Mapping: Patterns and Distributions of Neighborhood Risk

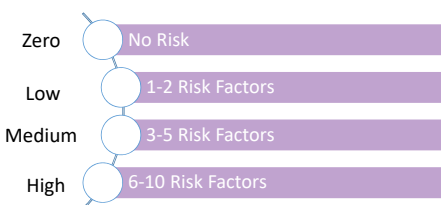
Nicole Pereira & Jared Schor, UCLA

## Background

Neighborhoods can have a profound impact on early childhood development. Environmental influences include social and physical factors that interact with each other impacting health outcomes for children. Differences in exposure to such factors unfortunately vary by race and ethnicity both between and within neighborhoods. The significance of place and population measures is critical to the goals of achieving equity.

## Methods and Approach

Using the Neighborhood Risk Index (NRI), generate one dimensional maps of neighborhood risk levels classified by zero, low, medium, and high risk.



Data was obtained from the American Community Survey at the census tract level. A neighborhood is considered at risk if it is +/- 1 standard deviation from the national mean of the following indicators:

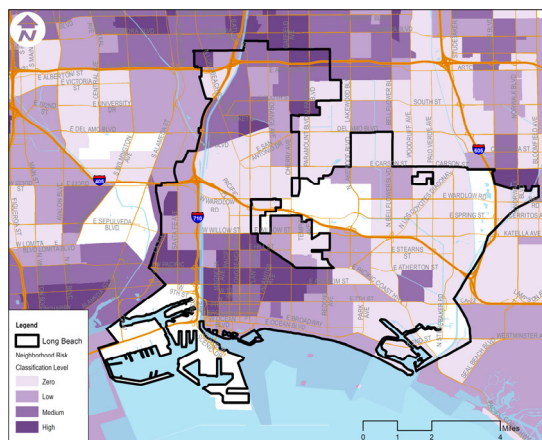
### Positive NRI Indicators

- Pct. 25+ with college degree
- Pct. owner occupied housing
- Pct. head of household with interest, dividend, or rent income
- Pct. head of household with wage income

### Negative NRI Indicators

- Pct. families with children in poverty
- Pct. 25+ with no diploma
- Pct. head of household on public assistance
- Pct. single parent families
- Pct. 18+ with limited English proficiency
- Pct. youth not engaged in education or employment

Long Beach Neighborhood Risk



Distribution of Neighborhood Risk by Race (Long Beach)



## Conclusions

Identifying clusters of risk factors tell us more about areas of concentrated deprivation within a city. Visually depicting this adds to the discussion on the structural barriers imposed by disproportionate exposure to risk factors.

These maps also allow us to identify areas of opportunity in neighborhoods to positively influence child development and help local communities develop a greater sense of spatial awareness

Snapshots of risk patterns can inform population place-based strategies which can be deployed in conjunction with individual intervention.

## Future Directions

Ultimately, we aim to work directly with cities using these maps as both tools and starting points for deeper discussions on child health and development. Our goals in the forthcoming months are:

- To help cities explore the histories that underpin the data
- Identify strategies to address these patterns of risk
- Compile a list of strategies to be shared between participating cities
- Develop an online platform using ArcGIS Hub to explore and track city data and dashboards over time

## Acknowledgements

We also thank our colleagues Efrén Aguilar, Charlene Choi, and Joshua Bader for their ongoing work on this project.