Population Health Evaluation: *Comparative Populations*

GAVIN RIENNE, MPH, PHD(C)

UNIVERSITY OF KENTUCKY

COLLEGE OF PUBLIC HEALTH

Greater Louisville Project

The Greater Louisville Project is an independent, non-partisan civic initiative supported by a consortium of philanthropic funders.

The GLP publishes data, research, and information helping to connect the dots between education, jobs, health, and quality of place.

Peer Cities Approach

Assessing 200 factors to identify "sister" cities.

Comparing those cities to Louisville to identify driving factors inhibiting Louisville's socioeconomic growth.
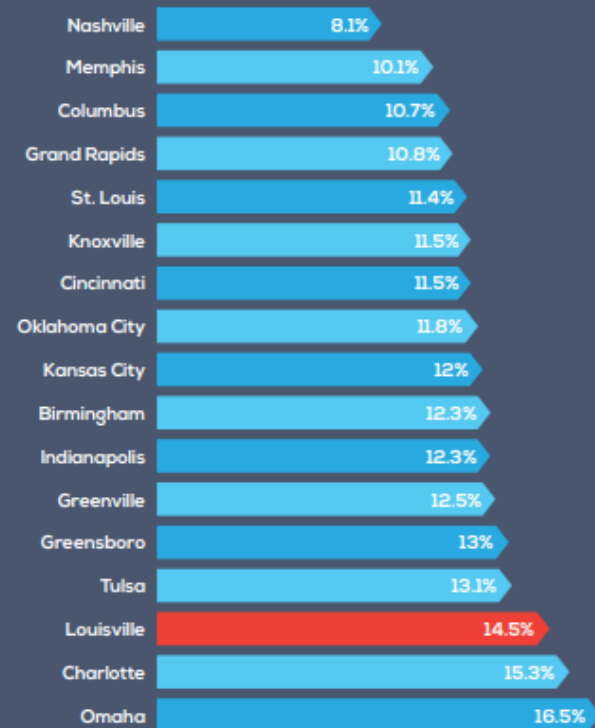

Trailing Our Peers

Louisville ranks 15th out of 17 among our peer cities, with 1 in 7 Louisvillians living in concentrated poverty.

Concentrated poverty is defined as a census tract that is far below the citywide average across income, jobs, education, and health. A census tract in concentrated poverty is one that is in aggregate at least 1 standard deviation worse off than the citywide average in terms of all four MPI indicators highlighted in this report.[1]

1 in 7 LOUISVILLIANS LIVES IN CONCENTRATED POVERTY

Population in Multidimensionally Poor Areas

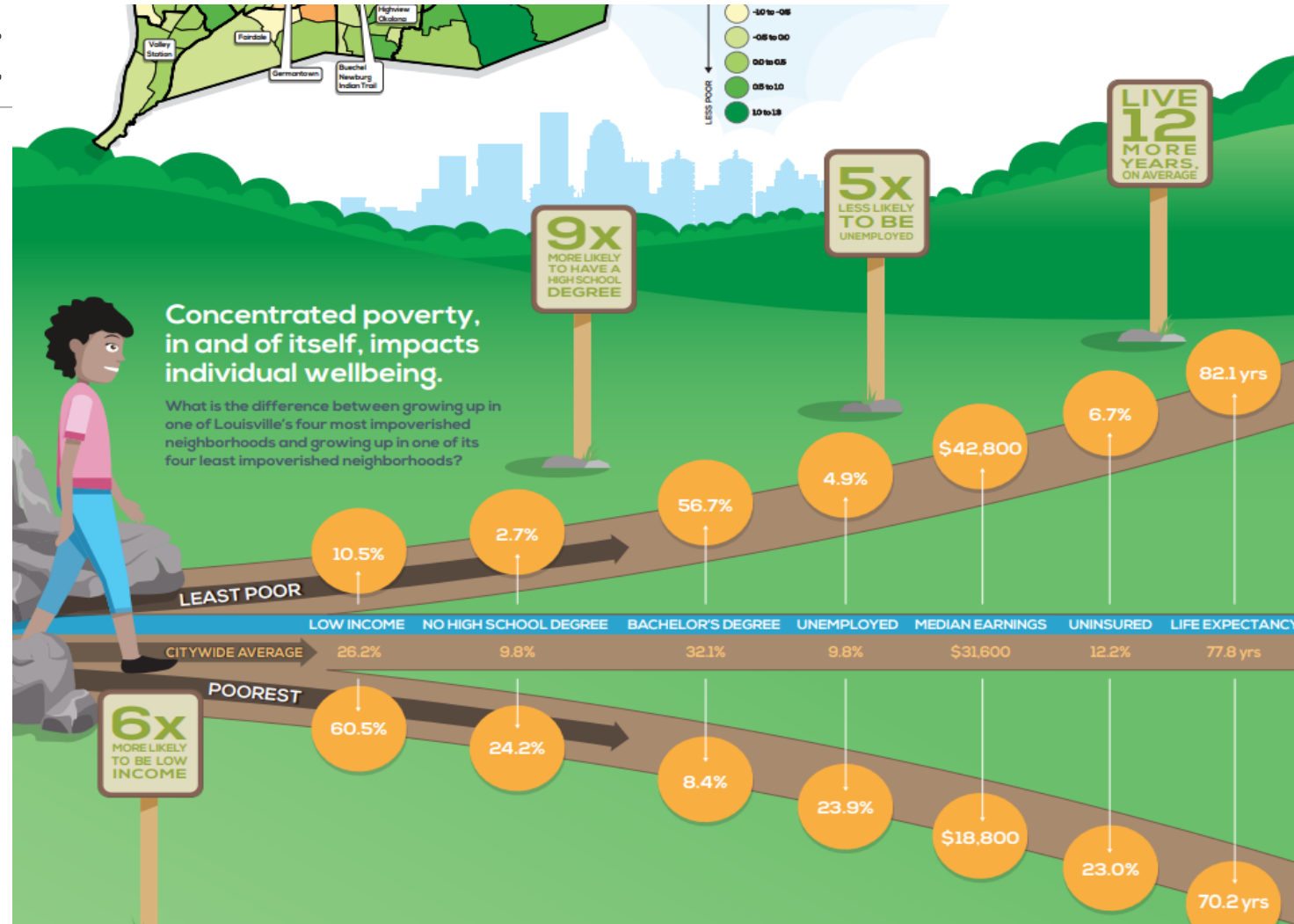| City	%
Nashville	8.1%
Memphis	10.1%
Columbus	10.7%
Grand Rapids	10.8%
St. Louis	11.4%
Knoxville	11.5%
Cincinnati	11.5%
Oklahoma City	11.8%
Kansas City	12%
Birmingham	12.3%
Indianapolis	12.3%
Greenville	12.5%
Greensboro	13%
Tulsa	13.1%
Louisville	14.5%
Charlotte	15.3%
Omaha	16.5%

[1] A multidimensionally poor census tract is defined as one where the average z-score is greater than 1, calculated across each of the four indicators. These tracts are orange to red in the Multidimensional Poverty in Louisville map on the poster side of this report.

The Peer City Report

The peer city approach offers guidance on a deeper dive within Louisville

Within the city, comparative county assessment highlights the results of economic inequity.
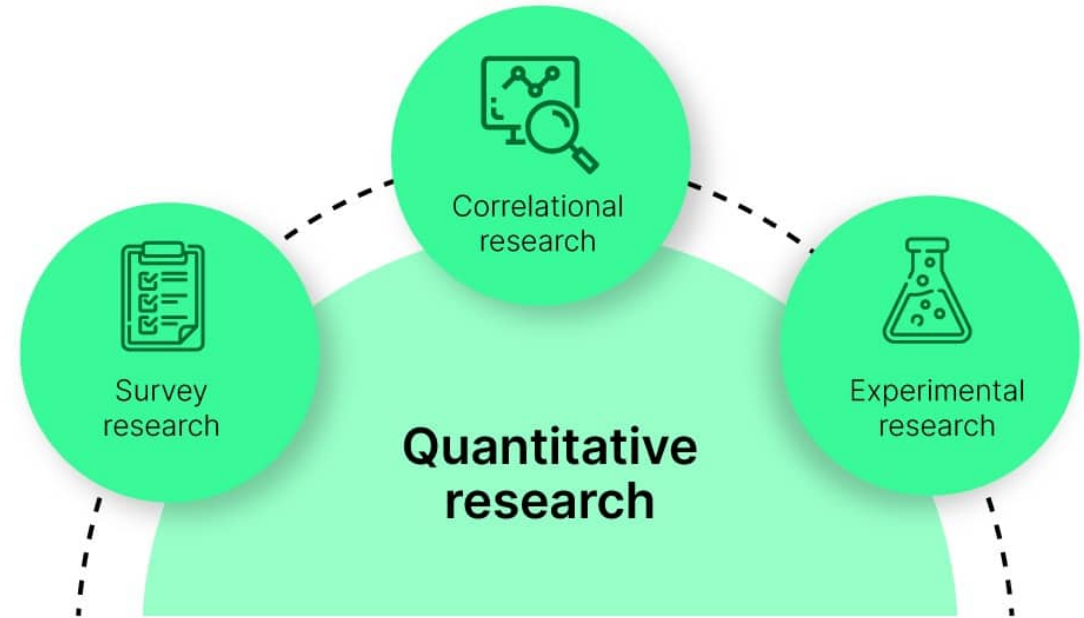
Method Changes

Empirical Methods
◦ Variable Selection

Expanded Standardization
◦ Encouraging Building Partnerships

Causal Inference
◦ Seeking firmer "causal" conclusions
◦ Identify which part of the observed improvement is attributable to the impact of the intervention
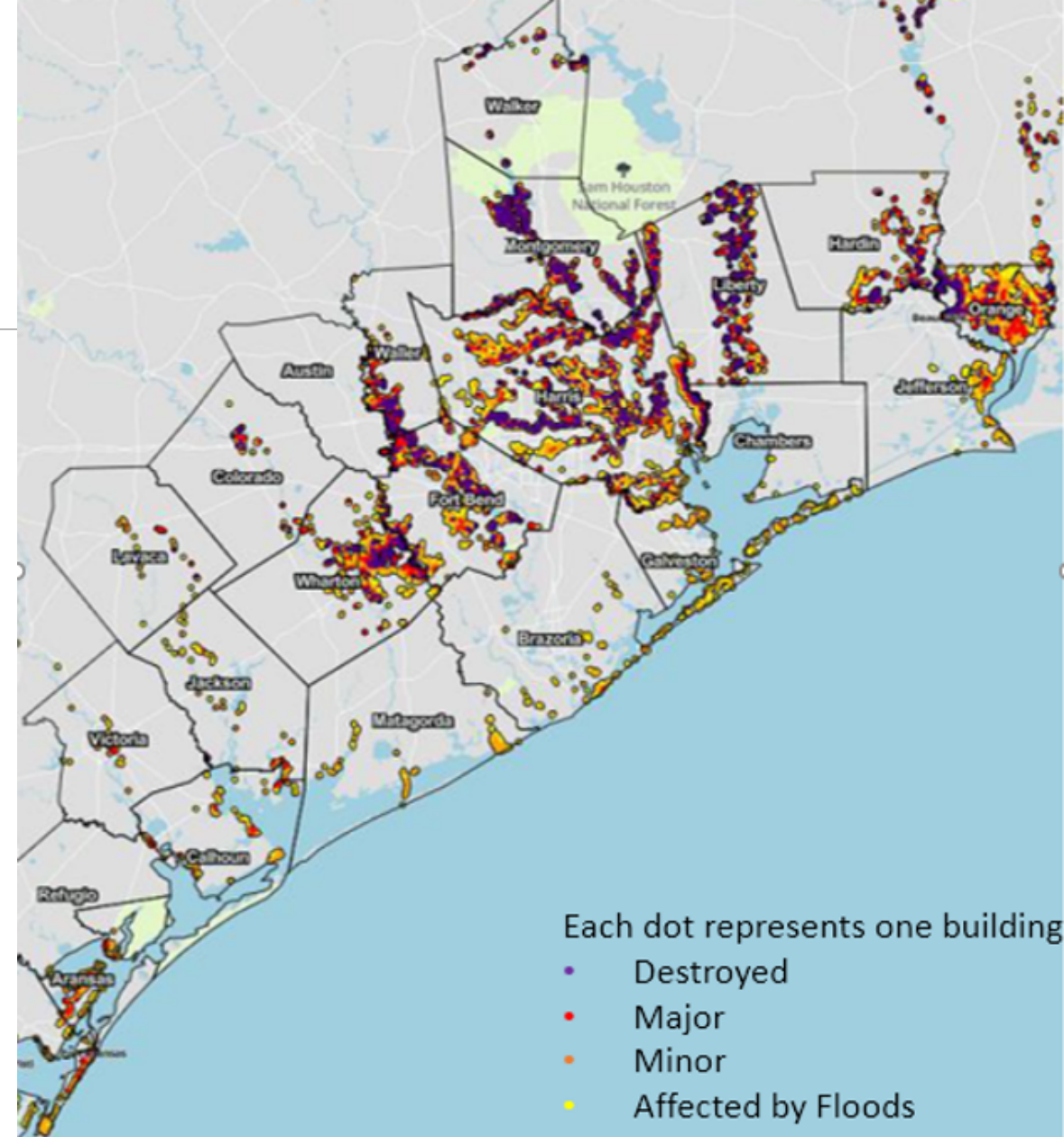
Hurricane Harvey

Natural Disaster
◦ Hurricane Harvey was a category 4 disaster that struck Texas, August 2017, impacting 13 million people, forcing an estimated 32,000 into immediate temporary housing

People
◦ Nearly 3 million kids living in disaster-declared counties
  ◦ 60% from low-income families
◦ 650+ childcare programs were destroyed

Financial
◦ Infrastructural losses estimated at approximately $150B damages
◦ 300k destroyed buildings
◦ In 2020, 20% said they were still "displaced"

Each dot represents one building
• Destroyed
• Major
• Minor
• Affected by Floods

Texas properties damaged by 2017 Hurricane Harvey as estimated by FEMA

Child and Adolescent Needs and Strengths

The CANS was developed from a communication perspective to facilitate assessment and design of individual health and welfare service plans with evidence-based practices.

A multi-purpose tool developed for children's services to support decision making, to facilitate quality improvement initiatives, and to allow for the monitoring of outcomes of services.

Courtesy of TCOM Praed Foundation

The Role of Public Health Scientists

Policy Making

Non-Profit Organizations

Determinants of Health

Community Engagement
◦ Empowerment
◦ Giving Space

Social Determinants of Health

Education Access and Quality

Health Care Access and Quality

Economic Stability

Neighborhood and Built Environment

Social and Community Context

Health People 2020 Social Determinants of Health, CDC

Discussion