

A Systematic Comparison of the Use of Neighborhood-Level Indices in Place-Based Policies in the United States



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Introduction

What is the **value** that opportunity & disadvantage indices bring to the narrative of **improving neighborhood well-being** in the United States?

Municipalities use these tools because the neighborhood factors that indices measure intersect with overall neighborhood wellbeing and display an important narrative of community needs, disadvantages, and risks

Because indices are being used to determine real-world allocation of resources in neighborhoods, we must understand if these indices would provide the best measurement to support communities most in need.

Methods

- A. "Disadvantage Index"
- B. "Vulnerability Index"
- C. "Deprivation Index"
- D. "Risk Index"
- E. "Opportunity Index"
- F. "Advantage Index"

#1: Google Scholar #2: Scopus

Also Meeting These Criteria...

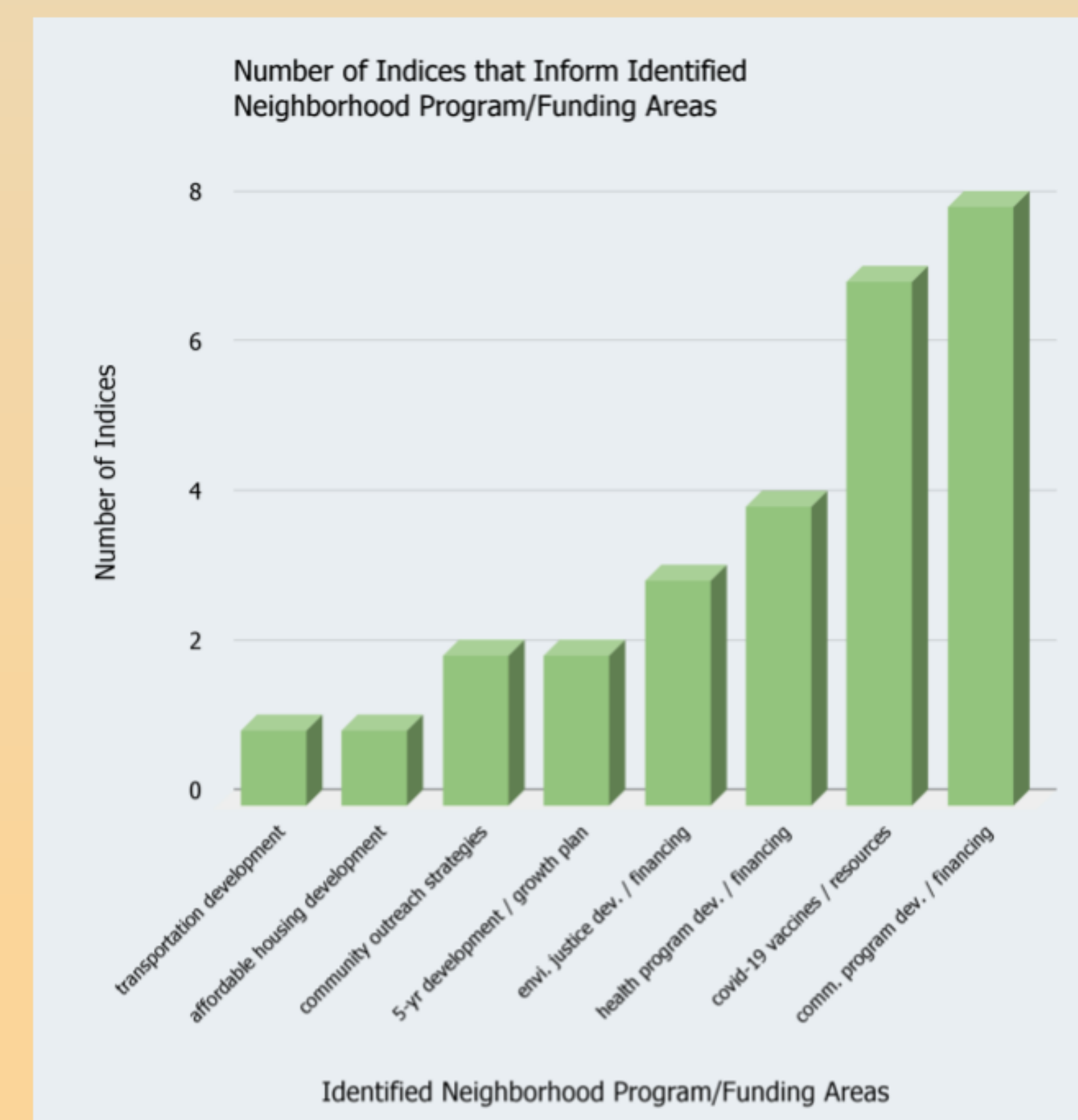
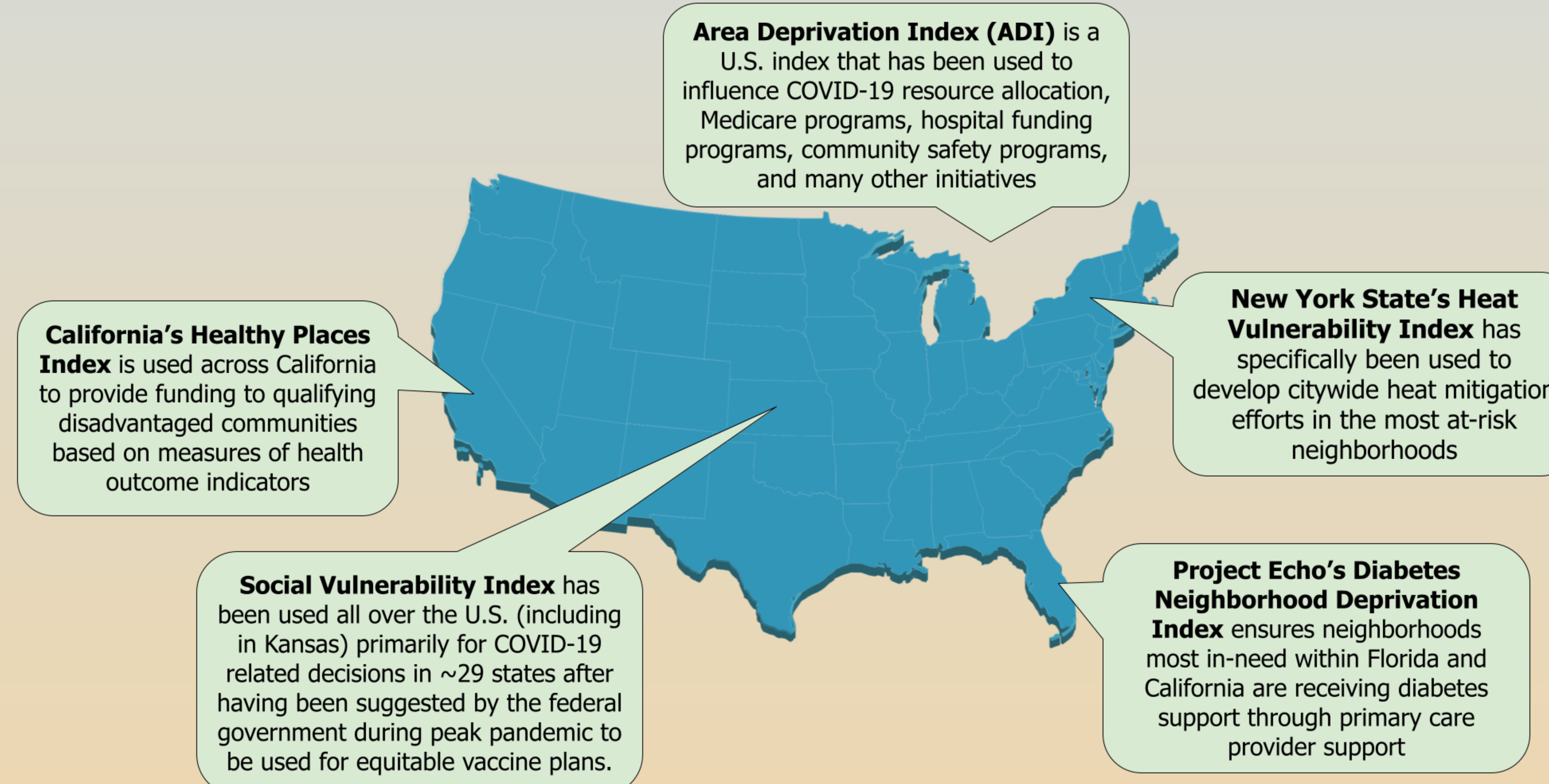
1. Published no later than 2015
2. Relevant to social science, public health, or environmental science
3. Index is neighborhood level (census block group, tract, or zip code)
4. Evidence of specific use for programs, initiatives, or funding by federal, state, regional, county, city or other municipality
5. Found within the article or in grey literature search

List of Indices

- Area Deprivation Index (ADI)
- Covid-19 Community Vulnerability Index (CCVI)
- Child Opportunity Index (COI)
- Social Vulnerability Index (SVI)
- Texas Opportunity Index
- California Healthy Places Index (HPI)
- Chicago Covid-19 Community Vulnerability Index (CCCVI)
- New York State Heat Vulnerability Index (NYS HVI)
- Wisconsin Heat Vulnerability Index (W HVI)
- Project ECHO Diabetes Neighborhood Deprivation Index (DNDI)
- COVID Local Risk Index
- Access to Opportunity Index (AOI)
- Displacement Risk Index (DRI)
- Distressed Communities Index (DCI)
- Climate and Economic Justice Screening Tool (CEJST)
- National Risk Index (NRI)
- USDOT's Equitable Transportation Community (ETC) Explorer Healthfulness Index (HI)
- EJScreen: Environmental Justice Screening and Mapping Tool
- COVID-19 Vaccine Coverage Index (CVAC)
- Distressed Communities Index (DCI)

Results

- 22 total indices have been identified after scoping search review that are used specifically by federal, state, regional, county, city or other municipality
- 229 research articles from Google Scholar and 251 research articles from Scopus have been examined in this systematic scoping review.
 - Of these, 19 research papers and 35 grey literature sources have been used in identifying the indices use in developing specific policy/program/funding.
- While we have themed the policies/programs along eight different categories, we have found that indices are commonly used for both a wide variety and very specific range of uses.
- The geographical range of indices used in policy/program/funding initiatives included those developed just for a specific city or state all the way to those developed and used across the entire United States.



From the scoping review search strategy, we themed the most common policy, program, or funding uses seen to be informed by the indices.

These common categories include:

1. community program/resource development or financing
2. COVID-19 vaccine allocation, resources and support
3. healthcare program development or financing
4. environmental justice development and financing
5. 5-year plan development or growth strategy
6. community outreach strategies
7. affordable housing development
8. transportation development

Conclusions & Next Steps

Conclusions:

There is a very wide and niche variety of neighborhood level indices used within the United States that aim to improve neighborhood wellbeing by targeting disadvantaged communities.

While there seem to be significant numbers of indices used within policy, there is a need for improved ease of access to information about how indices are used to shape our communities.

Specific Next Steps Towards Completing This Research:

1. Case studies to gain more specific details about how identified indices have been used in neighborhood specific policy, programs, or funding
 - a. What more information is available about the populations these index-informed initiatives affect?
 - b. What can the municipalities or developers of the indices tell us about how these indices are used and how the policies, programs, or funding have improved neighborhood wellbeing?
2. Spatial data analysis of qualifying indices identified in this search to understand how they differ spatially
 1. How much does neighborhood disadvantage cluster?
 2. How much do these indices correlate with each other?
 3. What socioeconomic factors show divergence?

Acknowledgements

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References

- Brazil, N., Wagner, J., & Ramil, R. (2023). Measuring and mapping neighborhood opportunity: A comparison of opportunity indices in California. *Environment and Planning B: Urban Analytics and City Science*, 50(3), 757-775. <https://doi.org/10.1177/23998083221129616>