Advancing Geographic Equity Using Spatial Analysis

Moderated by Jessica Solomon Fisher
Chief Innovations Officer, PHNCI
May 15, 2019
Webinar Overview

» Introduction to All In

» Community Spotlights
  – Center for Urban and Regional Affairs at the University of Minnesota
  – Center for Spatial Data Science and the School of Social Service Administration at the University of Chicago

» Q&A and Discussion

» Next Steps
Sharing Data is Hard, So Why Do It?

» There are things we want to do in our communities that we cannot do alone.

» Accelerating interest in health equity drives support for multi-sector collaboration and data-sharing.

» Multi-sector approaches tell us more about our communities and are more responsive to complex social conditions.

» Shared community data documents the problems that we suspect, points us to new opportunities, and supports new kinds of interventions.
What we talk about when we talk about multi-sector data
Two Broad Aims for Data Sharing

Whole Person Systems of Care

Place-based System, Policy, and Environmental Change
ALL IN

Current Program Partners

- The BUILD Health Challenge
- Data Across Sectors for Health
- The Public Health National Center for Innovations
- New Jersey Health Initiatives
- Population Health Innovation Lab

Past Partners

- Community Health Peer Learning Program
- Connecting Communities and Care
All In: Mission and Goals

Support the growth and sustainability of a movement acknowledging health as a product of social, economic, environmental, and behavioral forces.

Build an evidence base to advance the field of multi-sector data integration and sharing to improve community health.

Harness the power of peer learning and collaboration to extend our impact by accelerating sharing of insights, lessons learned, and resources.
Common Use Cases for Data Sharing

- Community needs & resource assessment: 58%
- Evaluation & monitoring; measuring progress: 51%
- Understanding/addressing root causes at a...: 51%
- Mapping, hotspotting & targeting of services: 49%
- Sending/pushing referrals, reports, notifications: 42%
- Research, advocacy, and/or policy-making: 38%
- Planning systems change/improvement: 38%
- Individual assessment: 37%
- Client intake & service eligibility determination: 36%
- Collection and presentation client information in...: 34%
- Client query/look-up for coordinated care: 33%
- Surveillance: 22%
- Predictive analytics: 22%

» Data from 150+ organizations affiliated with 32 collaboratives
Tips to get started:

» Complete your individual member profile

» Contact info@allindata.org to add a project profile or create your own

» Attend an All In Office Hours session for an in-depth tour
All In Learning Network

Publications

Online Platform

Peer Site Visits

Webinars

Newsletters

National & Regional Meetings and Workshops

ALL IN | DATA FOR COMMUNITY HEALTH

Welcome to the ALL IN: Data for Community Health Online Community!

Resources

Case Study: Improving Health Through Housing

ALL IN, Data for Community Health, is a national learning network for organizations working to collect data and use data to improve health outcomes and drive community progress.

Key Legal Considerations When Using Data for Public Health

Electronic health data collection presents policy and ethical challenges, for which the network is creating a comprehensive resource guide that will be available in the future.

ALL IN
Community Spotlights

Jeff Matson
Director of Community GIS
Center for Urban and Regional Affairs at the University of Minnesota

Julia Koschinsky, PhD
Executive Director
Center for Spatial Data Science at the University of Chicago

Nicole Marwell, PhD
Associate Professor
School of Social Service Administration at the University of Chicago
Advancing Geographic Equity Using Spatial Analysis

Jeff Matson
University of Minnesota, Twin Cities
jmatson@umn.edu

All-in Webinar
5/15/19
Center for Urban and Regional Affairs (CURA)

• 50+ years of Community Engagement &
• Community participatory action research
• Student & Faculty-led research
• Technical Assistance
  ▪ Community Geographic Information Systems (CGIS)

NATIONAL NEIGHBORHOOD INDICATORS PARTNERSHIP
Outline

• St. Paul’s Capital Improvement Budget (CIB)
  ▪ Complicated Review Process
  ▪ Neighborhoods, City Departments, Individuals, Task Force

• Who gets funding?
• Is the Eastside getting its fare share?
• Has the process changed?
St. Paul’s Eastside

[Map of St. Paul’s Eastside with various wards and organizations marked, such as ESNDC, DBNHS, and other neighborhoods like Ward 1, Ward 2, etc.]
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<th>Log No.</th>
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<th>Project Submission</th>
<th>Committee Recommendation</th>
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Poverty Rate 2011-2015 ACS
City & Media Response

• Disputed findings

• Newspaper and local TV news coverage

• Changed process

Link to report
https://conservancy.umn.edu/handle/11299/182093
Capital Improvement Budget Process Redesign

Changes for the 2018-2019 Capital Improvement Budget Process

The Saint Paul Capital Improvement Budget (CIB) process is designed to engage the public in evaluating capital needs in the City. The current system has been in place for more than 40 years and the City and the CIB Committee recognize a need to evolve the CIB process to ensure three basic objectives are met:

1. **Equity and inclusion**: Budgeting decisions reflect our commitment to equity. The CIB Committee supports identifying ways to invite more voices to the table and ensure investments are distributed equitably throughout the City.
Summary / Conclusion

• What are cities providing
• What SHOULD they provide?
  ▪ Is the data in a useful format?

• How are these decisions being made
  ▪ Who, where, why

• Need for historical data

• Other related / future projects
Thank you!

Jeff Matson
imatson@umn.edu
Advancing Spatial Equity: Using Spatial Analysis with Public Health Spending

Julia Koschinsky, Ph.D.
Nicole Marwell, Ph.D.
$1,000,000,000,000,000

annual government spending on human services
The Problem

- Nobody can provide a “big picture” view of service locations
- Highly fragmented data on where services are delivered in local communities
- *How can we know if services are delivered near needs?*
Questions for Spatial Equity Analysis

1. Where is the need for services?
2. Where does the money spent on services go?
3. How well is need matched to spending?
The Traditional Approach: Aggregate Funding to Headquarters within an Area

Headquarters Only
Chicago Dept. of Public Health Starts Collecting Service Site Data in 2018
Without Service Location Data, Spatial Reach of Health Funding is Underestimated
Without Service Location Data, Share of Health Funding to Areas with Higher Economic Hardship is Underestimated

- Headquarters Only: 44% Medium + High Hardship, 56% Low Hardship
- With Service Locations: 66% Medium + High Hardship, 34% Low Hardship
Measuring Spatial Access & Equity

Origin
eg home or work

1. time to nearest provider
2. # of nearby providers
3. access score: service mix
4. access to per capita spending

Destinations
eg health clinics

1. per capita spending: funding for services
   --per person in area
   --per person near service

Travel times by foot, bike, car and transit
What is the share of housing blocks with 30 min walkable access to health services? By hardship level?

**Health Service Category 1 (9 Sites)**
- High Hardship: 6%
- Medium: 4%
- Low: 8%

**Health Service Category 2 (3 Sites)**
- Medium: 3%
- Low: 26%

**Health Service Category 3 (133 Sites)**
- High Hardship: 6%
- Medium: 39%
- Low: 51%

**Health Service Category 4 (52 Sites)**
- Low: 45%

**Health Service Category 5 (175 Sites)**
- Low: 55%
- High Hardship: 55%
- Medium: 80%
Service Need, Spatial Access And Spending

Service Need

- High Economic Hardship Areas
  - A: 100%
  - B: 85%
  - C: 49%
  - D: 0%

Service Access

- Walkable Access to Mix of Services
  - 0-100 Score
  - A: 78%
  - B: 70%
  - C: 0%
  - D: 0%

Service Spending

- Per Capita Spending
  - A: $14
  - B: $5
  - C: $105
  - D: $0

- Per Pop within 30 min walking
  - A: 288k
  - B: 94k
  - C: 1,900k
  - D: 0
Get the Code on PyPi and Github
(AWS + GeoDa desktop versions: later 2018)

https://pypi.org/project/spatial-access/

saxon.harris.uchicago.edu/mmap
JamesSaxon/routing-container
Model: JamesSaxon/raam

dfsnow/routing
Acknowledgements

Logan Noel
Larissa Vieira
Irene Farah
Erin Ochoa

George Oliver
Shiv Agrawal
Jerry Shi
Marynia Kolak

phnci

Robert Wood Johnson Foundation

Healthy Chicago

Chicago Department of Public Health
Questions?
spatial@uchicago.edu
Q&A and Discussion
SAVE THE DATE!

ALL IN | DATA FOR COMMUNITY HEALTH

NATIONAL MEETING 2019

OCTOBER 15-17, 2019 | BALTIMORE, MD
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