Incorporating Health Equity Into Cancer Initiatives

July 9, 2020

Johnnie (Chip) Allen, MPH
Director of Health Equity
Ohio Department of Health

Applying Targeted Universalism to Health Equity Interventions

Learning Objectives:

- Apply concepts to Targeted Universalism to health equity goal setting and strategies.
- Use geospatial tools and data to identify specific social determinants which drive poor health outcomes.
- Incorporate different types of data to gain a comprehensive understanding of health outcomes and their underlying causes.

Resources Needed:

This requires the use of the following resources:

https://belonging.berkeley.edu/video-john-powell-collective-impact-forum (Advance video to the 41minute mark)
https://www.youtube.com/watch?v=a0At2xbQB7w
https://news.berkeley.edu/2019/05/29/berkeley-talks-john-powell-on-targeted-universalism/
https://haasinstitute.berkeley.edu/sites/default/files/targeted_universalism_primer.pdf

Targeted Universalism & Health Equity

- **Health equity can be achieved** by setting universal health equity goals. However, strategies to achieve those goals are targeted are based upon how different groups are situated within structures, culture, and across geographies. This approach is grounded in the framework of Targeted Universalism.

- **TARGETED UNIVERSALISM** is defined by the Hass Institute as " an alternative framework to design policies and implementation strategies to achieve policy goals. Targeted universalism is sensitive to structural and cultural dynamics in ways that often elude both targeted and universal strategies. As such, it is also a way of communicating, a vernacular to build support for inclusive policies."

- "Universal approaches are not defined by the problems they are attempting to solve, but by their scope of coverage or application, and by how they establish or provide broadly uniform minimums or protections." (HASS Institute)

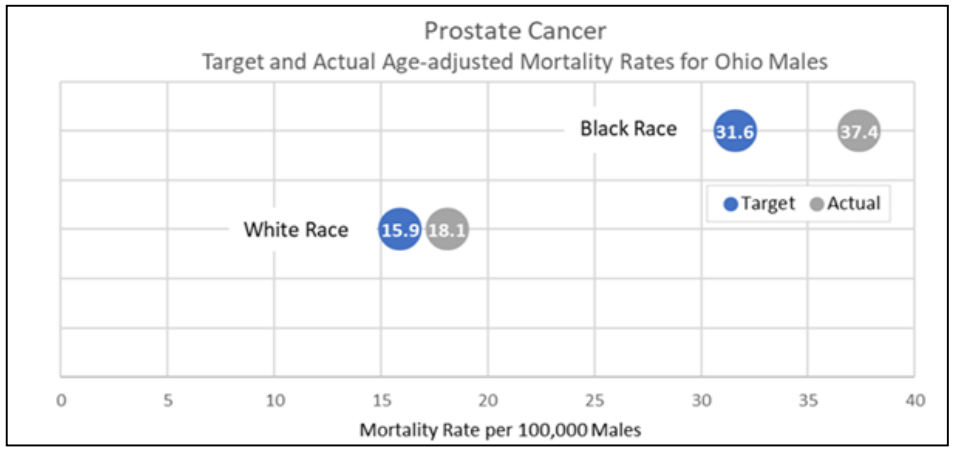
- The range of implementation strategies to advance health equity must be cognizant of the social, economic and political circumstances which can compel or constrict strategies designed to achieve health equity.

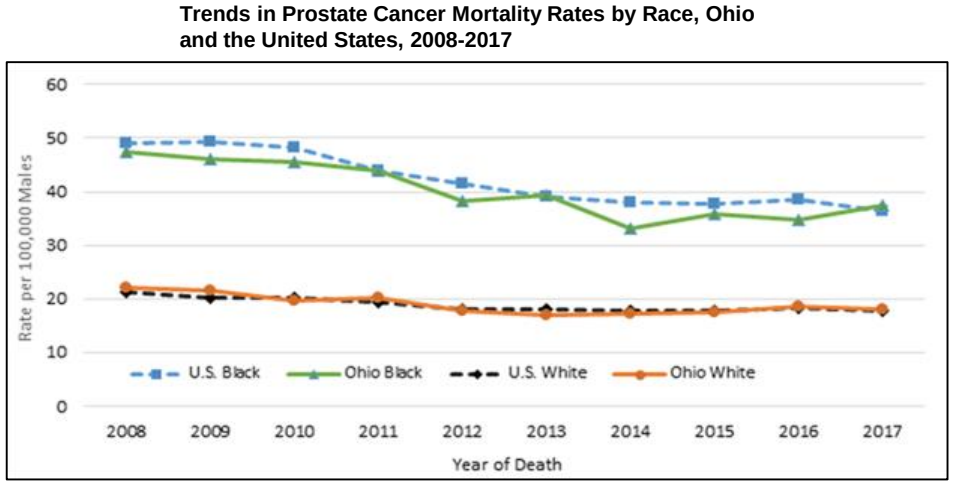
Five Steps to Targeted Universalism

- Establish a universal goal.
- Assess performance relative to a goal.
- Identification of different performance between goal and overall population.
- Assess and understand the structures.
- Develop and implement targeted strategies.

Steps to Transform Your Thinking to Change Health Disparity Goals to a Health Equity Goal

Step 1: Please review the following data regarding prostate cancer





Step 2: If we try to formulate a new 10 year goal based on the current prostate cancer mortality rates (and using the suggested target rates), we could possibly reduce the disparity but we would not achieve health equity.

Step 3: Think about the information in the previous step and think about the 5 steps for Targeted Universalism:

- Establish a universal goal.
- Assess performance relative to a goal.
- Identification of different performance between goal and overall population.
- Assess and understand the structures.
- Develop and implement targeted strategies.

Step 4: Using data and information, you could formulate a health equity goal for prostate cancer using the Targeted Universalism Framework.

Using Spatial Analysis to Understand Targeted Universalism & Health Equity

Step 3 of Targeted Universalism states “Identification of different performance between goal and overall population.” In order to do this we need data. Using for different types of data that are spatially enabled it is possible to:

(1) Visualize where different health disparities simultaneously exist at their worst levels in the same census geographies using ***Convergence Analysis***. This will help understand the intersectionality of different types of health disparities.
(2) Connect disparate health outcomes (convergence) to overall opportunity using the ***USR Opportunity Index*** to understand the role of social determinants.
(3) Understand convergence and overall opportunity based the overall opportunity of residents to achieve optimal health using the ***Health Opportunity Index***. This will help you understand health inequities.

This following slides will review these different data-sets and how they can be harmonized to facilitate multi-sectorial approaches for health equity.

Place Matters

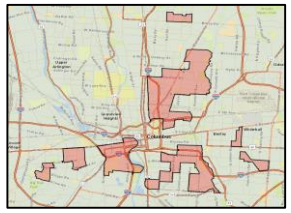
Convergence Analysis helps visualize where different health disparities simultaneously exist at their worst levels.

Convergence Analysis

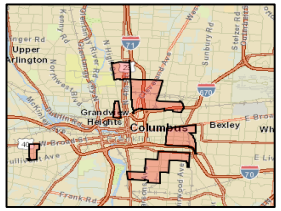
This technique functions to harmonize data. It is possible to identify where at least four (4) or more of the health outcomes below simultaneously exist at their highest levels.

Columbus, Ohio. Selected Health Conditions/Outcomes by Census Tract at the Highest (Worst) Levels.

Asthma

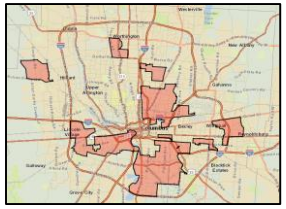


Lead

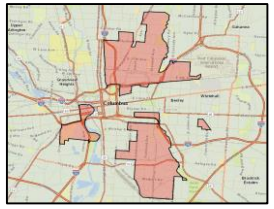


Mental Health

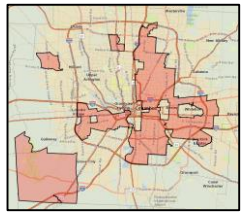
Heart Disease



Diabetes

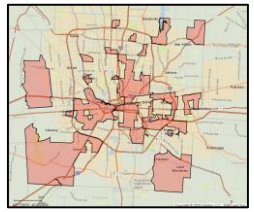


High BP

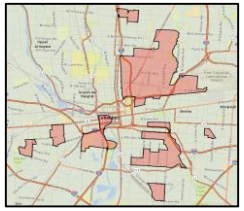


Cancer

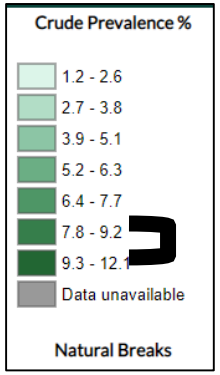
Prematurity



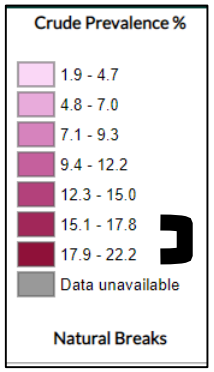
Stroke



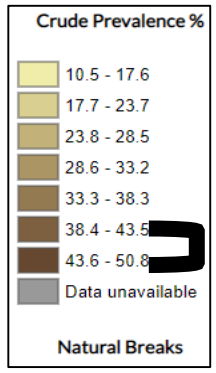
Heart Disease



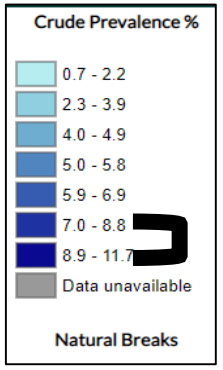
Diabetes



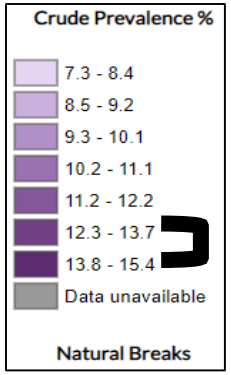
High Blood Pressure



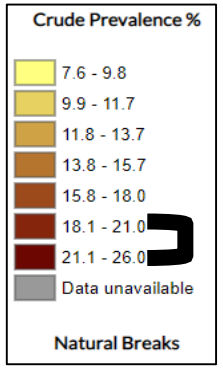
Cancer



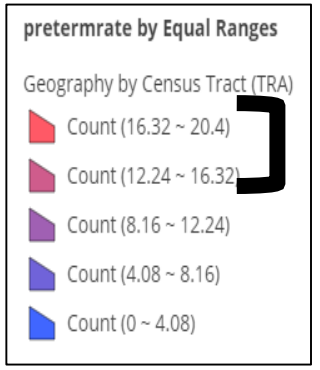
Asthma



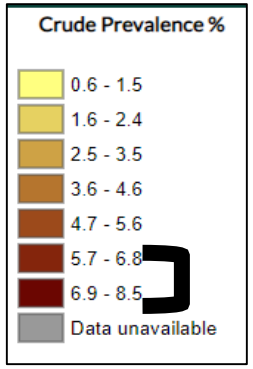
Poor Mental Health



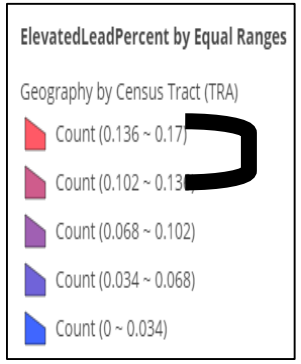
Preterm Birth



Stroke



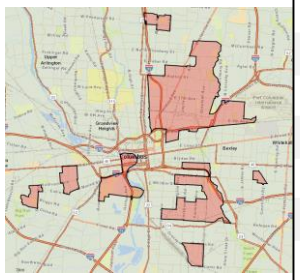
Elevated Lead



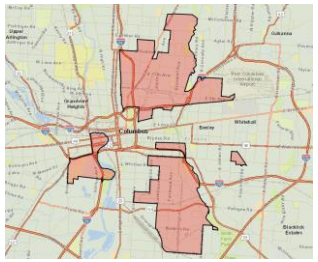
Performing the Convergence Analysis. Using relational database technology to determine which health outcomes simultaneously occur in the same census tract.

Heart Disease

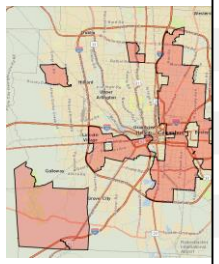
Stroke



Diabetes



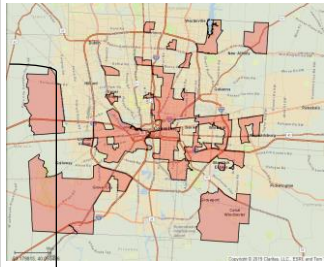
High BP



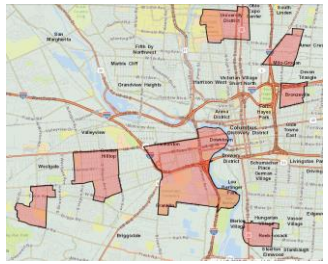
Census Tract FIPS Code	Count	Analysis Area Name
39049005000		
	1	ASTHMACOL2016Converge
	1	CoronaryCOL2016Converge
5		
3		
7		
39049005300		
	1	FranklinPretermConvergence
	1	HBPCOL2016Converge
0.53%		
2		

Use relational database to perform the convergence analysis

Prematurity

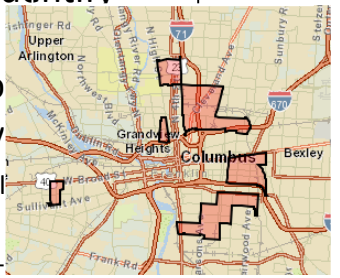


Mental Health



A query helps identify where at least health conditio simultaneously worst levels co census tract.

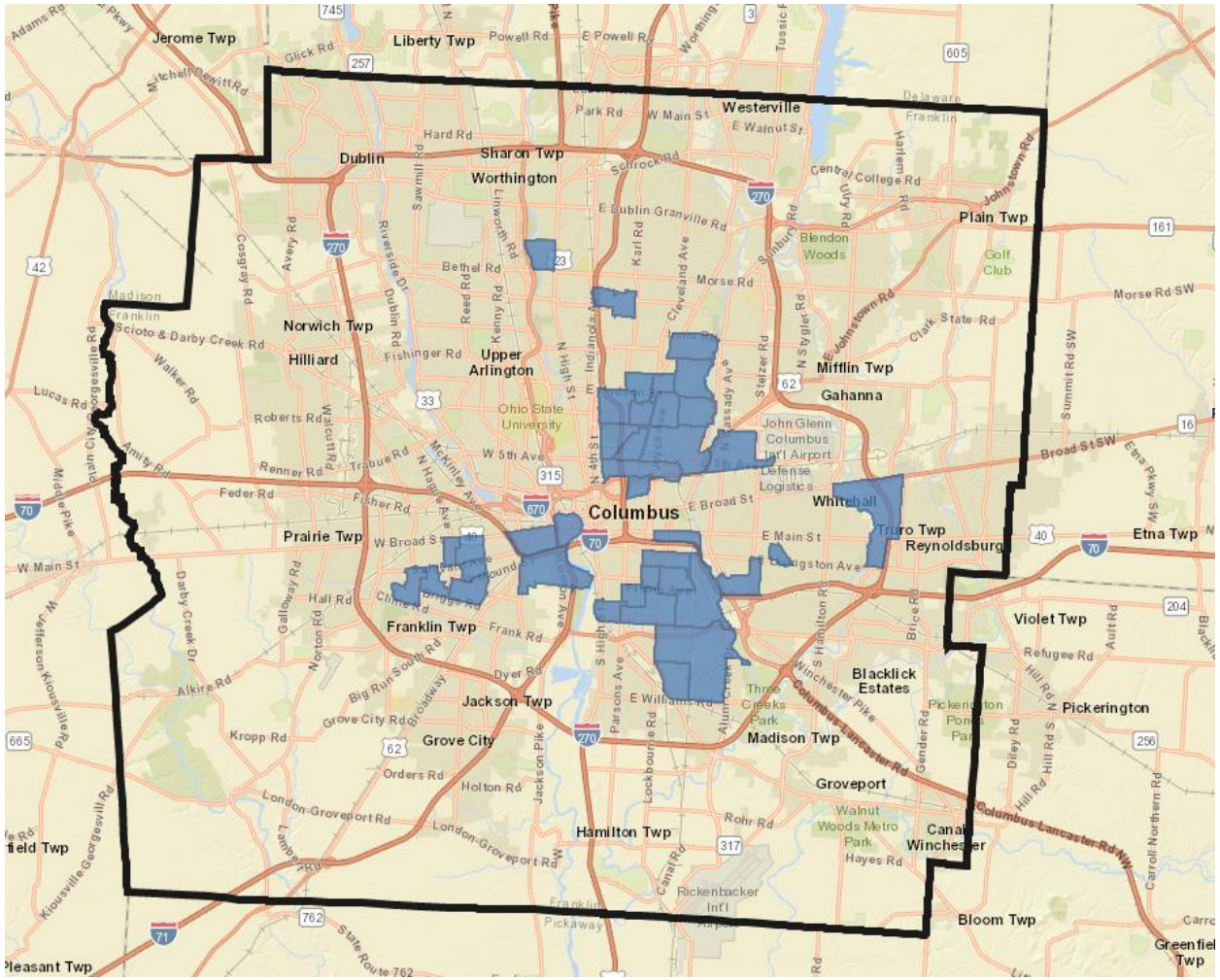
Elevated Lead



Franklin County, Ohio. An Alternate View of Census Tracts in Franklin County, Ohio with More than 4 Health Outcomes Simultaneously at their Worst Levels (Convergence Analysis).

Legend

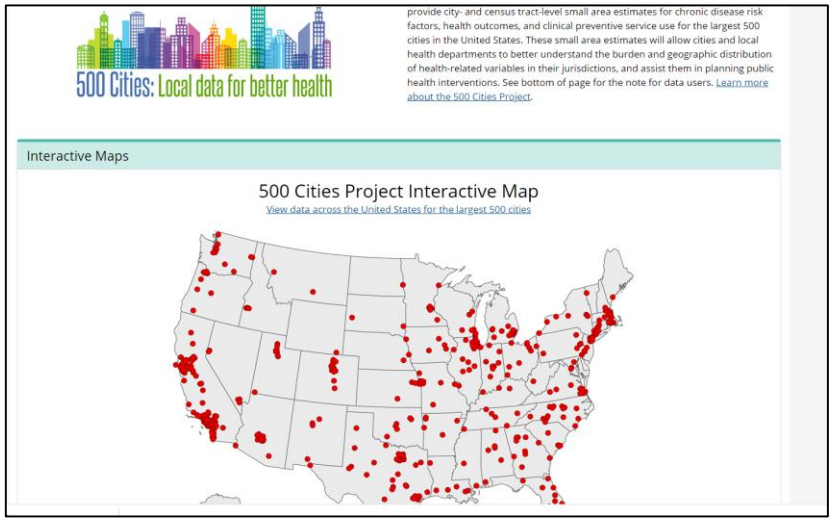
Convergence

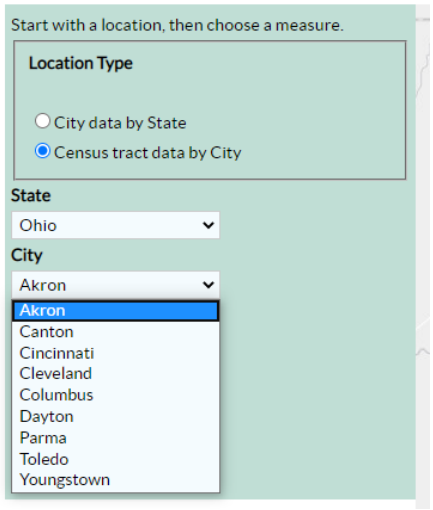


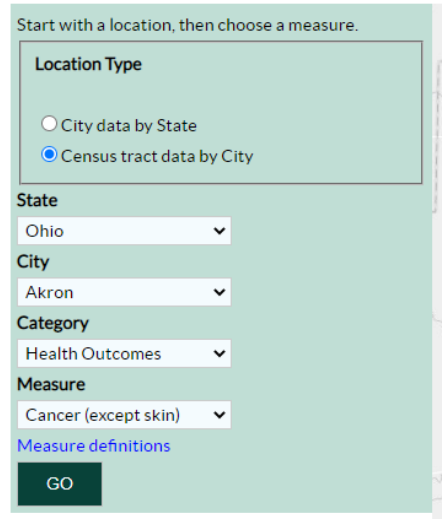
Place Matters

The next slide will show how to understand cancer burden by geography.

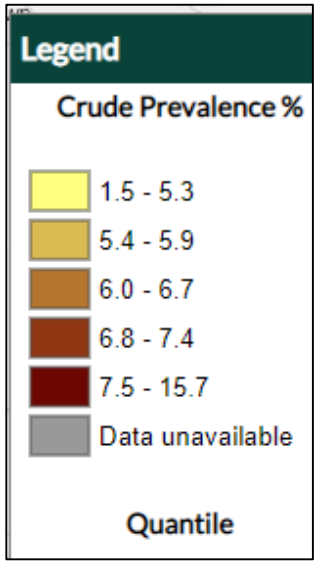
Focusing your Cancer Strategies

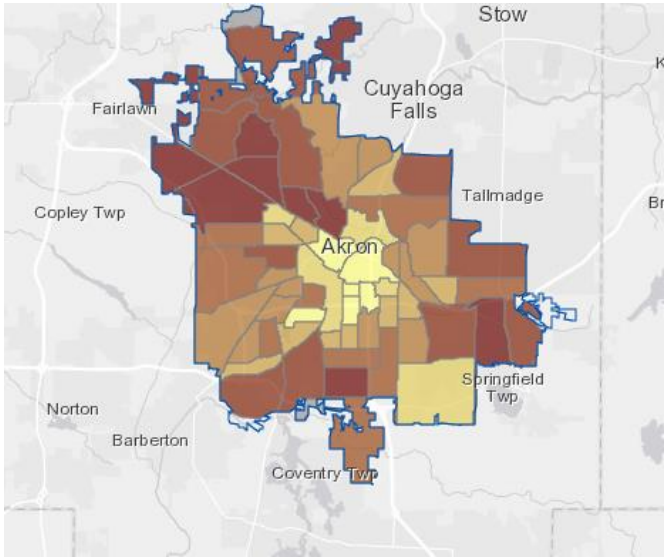






Akron, Ohio. 500 Cities BRFSS Project Data. 2017
Crude Prevalence Rates by Census Tract.

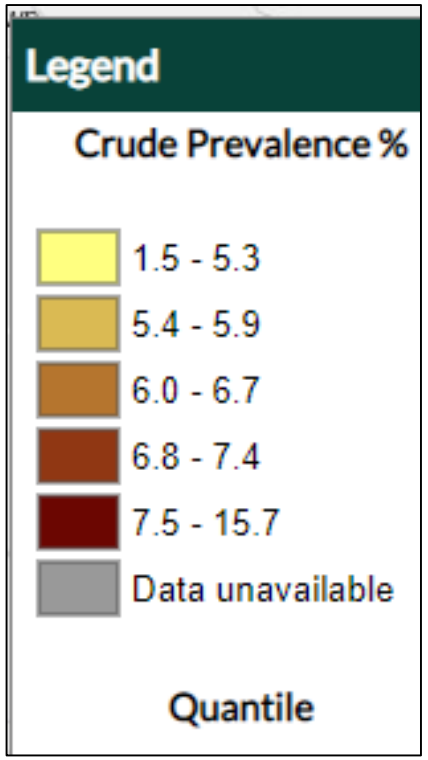


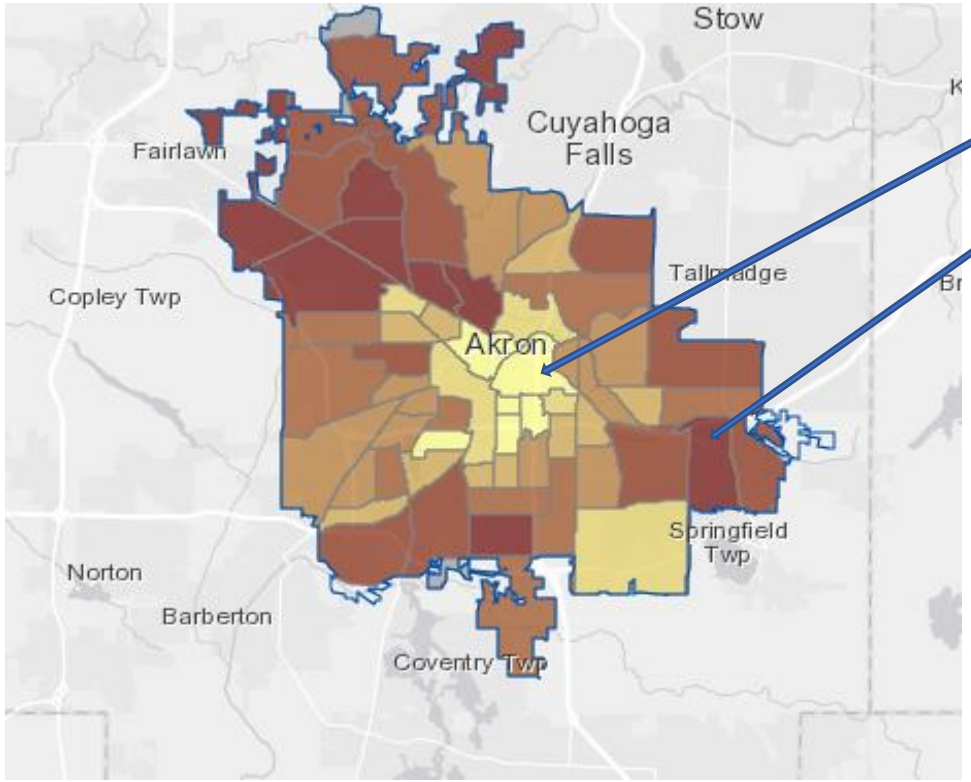


Cancer Interventions Based on Targeted Universalism

- Establish a universal goal.
- Assess performance relative to a goal.
- Identification of different performance between goal and overall population.
- Assess and understand the structures.
- Develop and implement targeted strategies.

Akron, Ohio. 500 Cities BRFSS Project Data. 2017
Crude Prevalence Rates by Census Tract.





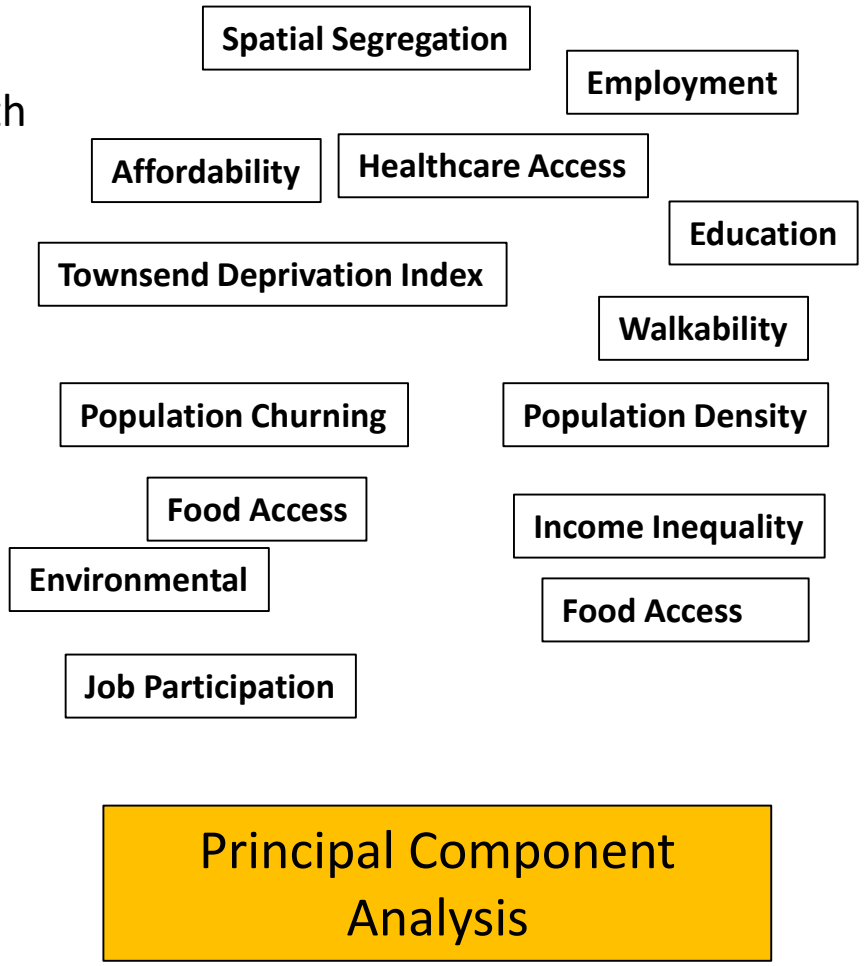
How would you develop and implement targeted strategies differ based on disease burden?

Health Opportunity Index (HOI)

- A composite measure of overall opportunity for residents in a neighborhood to achieve good health. It also highlights the influence various Social Determinants of Health (SDOH) on health outcomes.

The HOI is developed using the statistical technique of **Principal Component Analysis** (PCA)**.**

- This technique analyzes and simplifies data on SDOH into four into smaller categories(or Components).
- Enables communities to come together and focus on solutions.
- For Ohio, these components include **Environmental, Consumer, Mobility and Economic.**



Health Opportunity Index (HOI)

The columns below reflect the groupings on how specific social determinants tend to occur in Ohio. This is important when interpreting data for the HOI.

The HOI is developed using the statistical technique of **Principal Component Analysis** (PCA)**.**

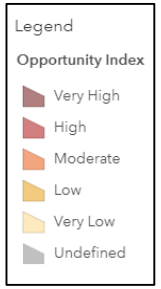
- This technique analyzes and simplifies data on SDOH into four into smaller categories(or Components).
- Enables communities to come together and focus on solutions.
- For Ohio, these components include **Environmental, Consumer, Mobility and Economic.**

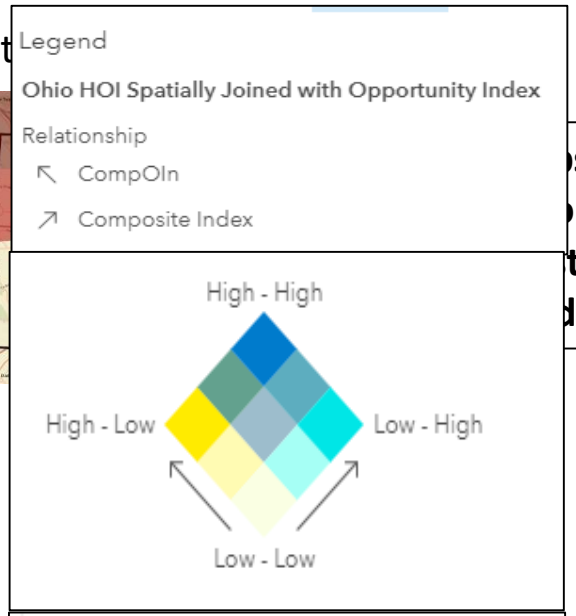
	Component 1	Component 2	Component 3	Component 4
	Environmental	Consumer	Mobility*	Economic
Affordability	x			
Healthcare Access	x			
Job Participation				x
Spatial Segregation				x
Walkability	x			
Education		x		
Employment	x			
Environmental	x			
Food Access		x		
Income Inequality				x
PopChurning			x	
PopDensity	x			
Townsend		x		

This animated slide illustrates how to use GIS technology to combine different spatial analysis to create a multi-dimensional perspective to understand how opportunity structures influence health.

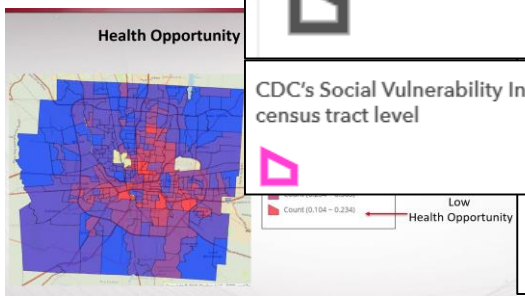
Combine All Four

Kirwan Institut





Health Oppor

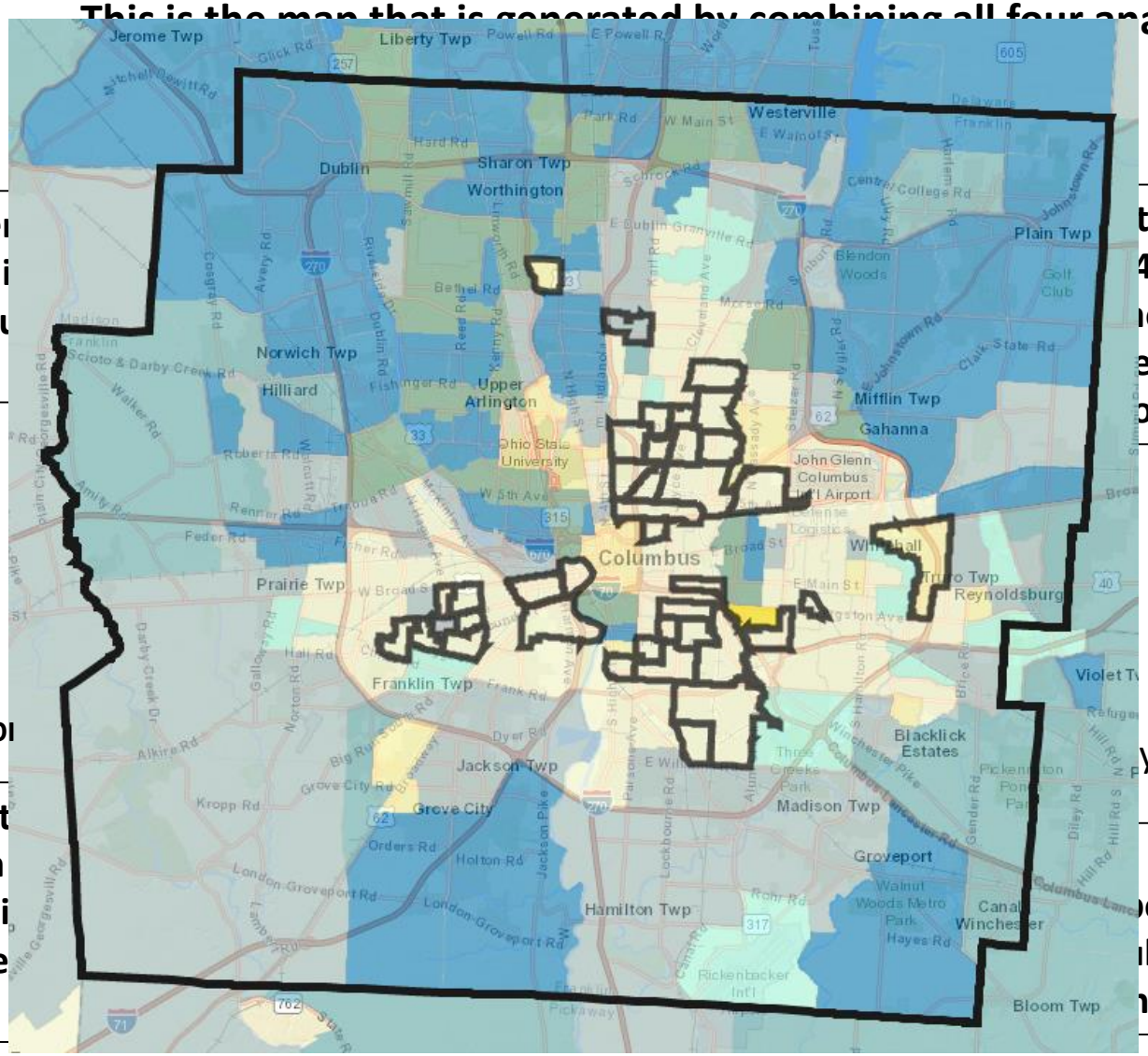


s ider
nomi
tructu
ds.

Low HOI

ident
with
ortuni
health and associate
determinants.

This is the map that is generated by combining all four analysis.



ta helps identify
4 or more health
e exist at their
evels in
orhoods.

y Index

helps the resilience
orhoods to
lly endure natural
n-made disasters.

Franklin County, Ohio. Visualizing the Relationship Between the Health Opportunity Index (HOI), Comprehensive Opportunity Index (COI) and Disparate Convergence Analysis (DCA) by Census Tract and CDC Social Vulnerability Index.

Legend

Ohio HOI Spatially Joined with Opportunity Index

Relationship

↖ CompOIn **(COI)**

↗ Composite Index **(HOI)**

High COI, High HOI

High - High

High - Low | Low - High

High COI Low HOI | **Low HOI, HOI COI**

Low - Low

Low COI, Low HOI

Disparate Convergence Analysis

CDC's Social Vulnerability Index (SVI) - 2014 overall SVI, census tract level

Reflecting neighborhoods with high health opportunity and high health opportunity.

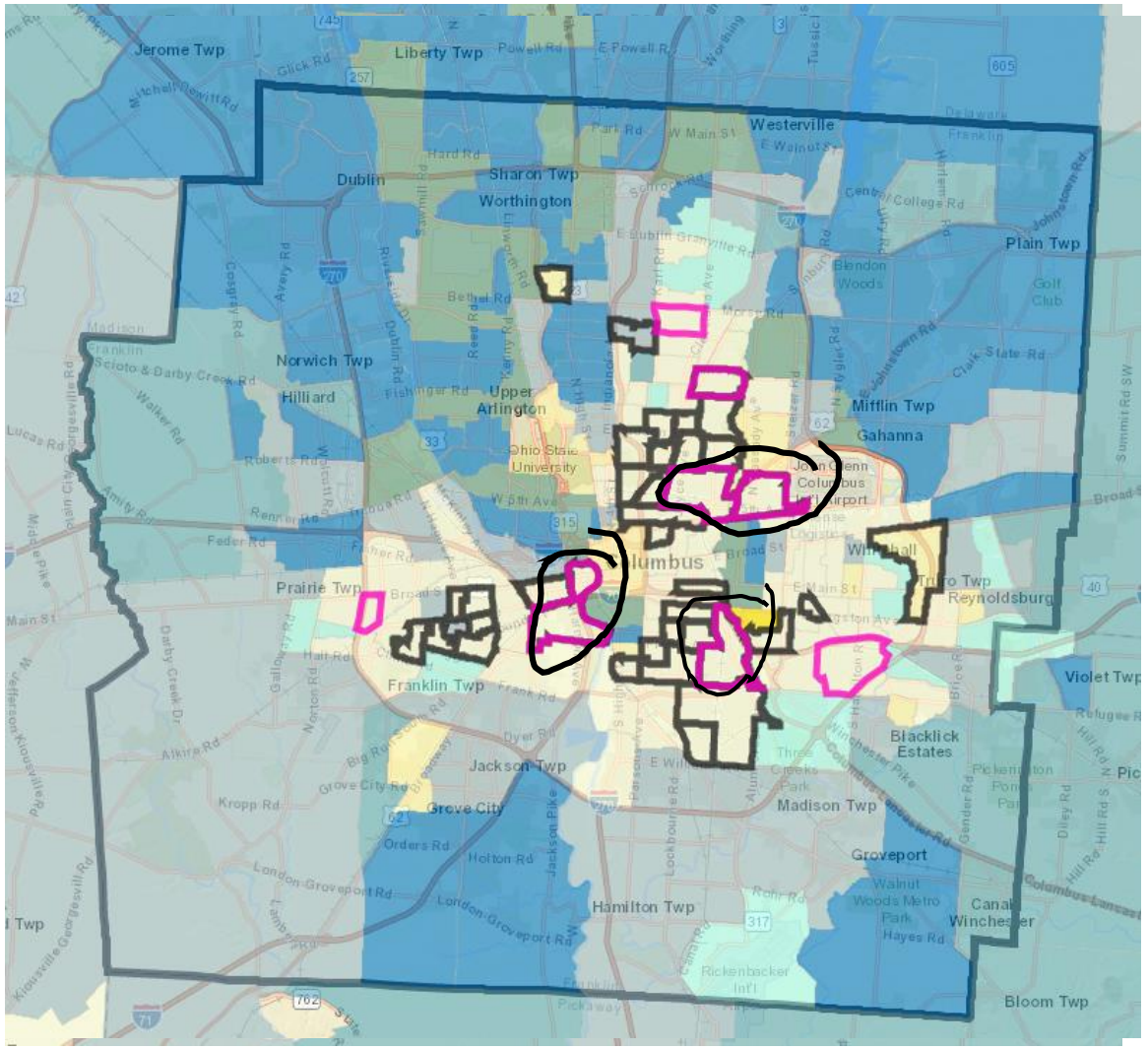
Next, identify neighborhoods with high opportunity and low health opportunity.

Next, reflect neighborhoods with low opportunity and low health opportunity.

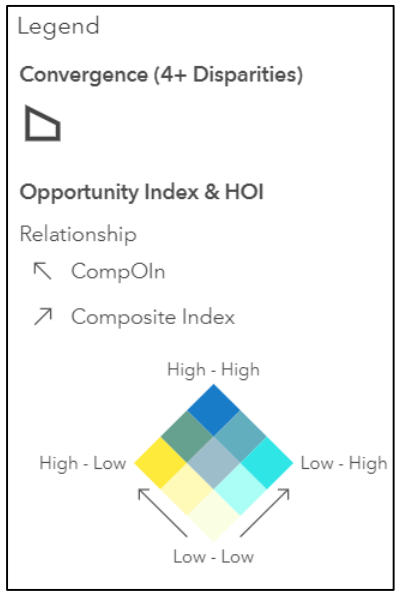
Next, identify neighborhoods with more than four extremely poor health outcomes, simultaneously, at their worst levels (Convergence Analysis).

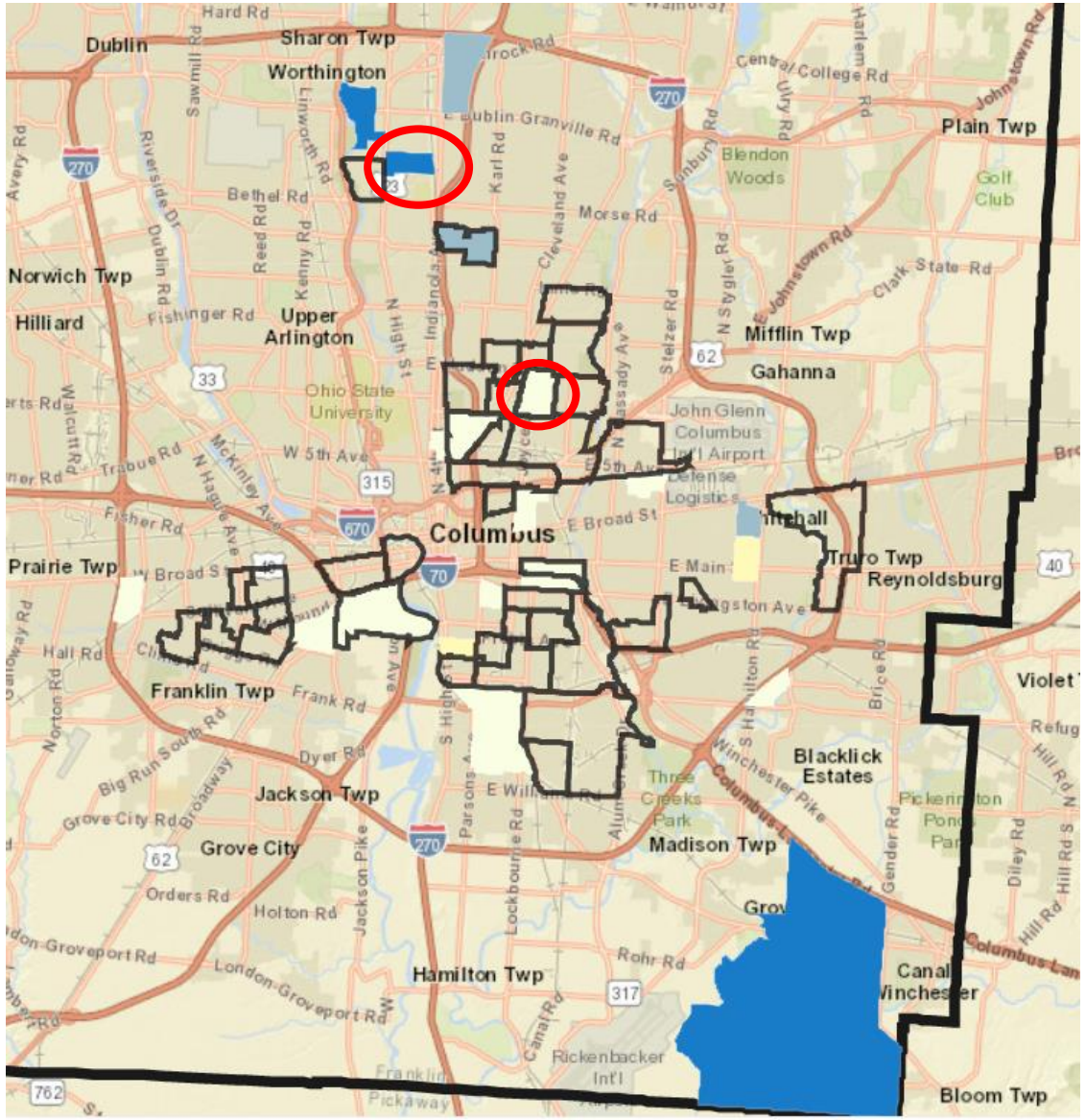
Next, identify neighborhoods with a high CDC Social Vulnerability Index (between 0.955 to 1).

Next, identify were all for conditions are simultaneously challenging.



Comparing Apples to Apples. Franklin County, Ohio. Focusing in On Opportunity Structures which Govern Health Status. Census Tracts with a Total Population Between 1,500 to 2,000 Residents.





Filter the map to only show census tracts of the same size population (1,500 to 2,000 residents.

Now we will reflect areas of convergence (more than four poor health outcomes) at their worst levels.

Now identify census tracts with high opportunities, low opportunities, and convergence (4 or more disparities).

Now that we have accounted for overall health opportunity and health opportunity, it is now important to focus on specific structures.

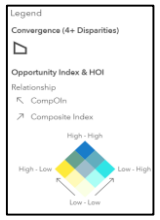
It is important to frame important questions in relation to opportunity structures to contemplate how to develop universal health equity goals.

This will be done by comparing two census tracts with similar sized populations. Sometimes it is necessary to compare apples to apples to completely understand the concept.

Remember there is a lot of information on the following slide. It has been animated to help you step through the information.

Focus On Opportunity Structures in Census Tracts with 1500 to 2000 Residents to Advance Health Equity

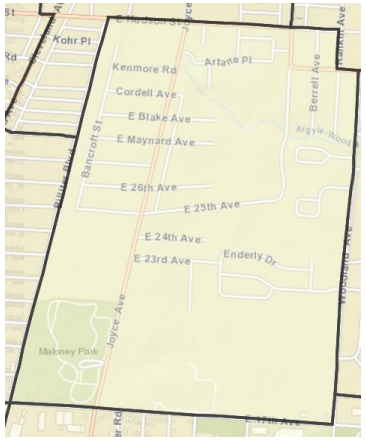
CT 6822, High Opp., High Health Opp.



(Between E. Granville Rd. & Morse Road)

- Both census tracts are similar in population size.
- What structures are in place which govern opportunity?
- What universal health equity goals should be developed based on these structures?
- How does the existence of multiple health inequities impact the development of universal health equity goals?

CT 7511, Low Opp., Low Health Opp., Health Disparities



(Near E. Hudson Street)

CONVERGENCE

- Asthma
- Coronary HD
- Diabetes
- High BP
- Preterm Birth
- Stroke
- Spatial Segregation*

NO CONVERGENCE

- Life Expectancy: **81 Years**
- High Opportunity, Experienced a slight growth.
- **7.2%** Change In % Vacant Housing Units 2012 to 2017
- Median HH Income 2017: ***$74,848***
- **$1112** Net Change, Median HH Income 2012- 2017.
- Entry Level Job Index **0.55**
- Housing Burden Rate **18.5**
- Average Net Worth ***$702,706***

CONVERGENCE

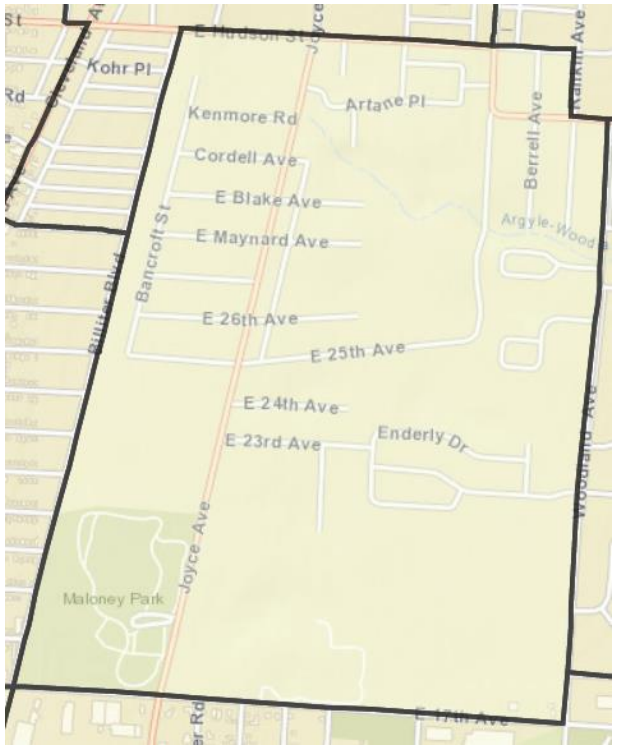
- Life Expectancy: **70 Years**
- Very Low Opportunity, Experienced a slight growth.
- -**5.9 %** Change In % Vacant Housing Units 2012 to 2017
- Median HH Income 2017: ***$23,175***
- **-$1563** Net Change, Median HH Income 2012-2017.
- Entry Level Job Index **0.27**
- Housing Burden Rate **54.8**
- Average Net Worth ***$82,104***

Based on the information you now have on these areas, what opportunity structures need to change in order to provide the same opportunities for optimal health in both of these communities in Columbus, Ohio?

CT 6822, High Opportunity, High Health Opportunity.

(Between E. Granville Rd. & Morse Road)

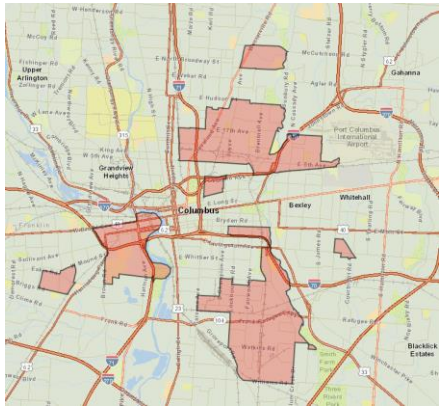
CT 7511, Low Opportunity, Low Health Opportunity, Health Inequities



(Near E. Hudson Street)

Answers to Key Questions to Advance Health Equity Using Targeted Universalism

Census Tracts, Low Opp., & Low Health Opportunity.



- **55,902 Total Pop**.
- 61% Black/Afr. Am
- 29% White
- 1.58 Asian
- 0.43% AI/AN
- 0.23 NH/PI
- 6% Latino
- Median Age 34
- **Median HH Income $30,411**
- 8% Unemployment
- 56% Renter Occupied
- 45% Owner Occupied
- 21% HH no Vehicles

QUESTION: *What is the current level of health disparities? Are they convergent?*
ANSWER: *Add new data to the existing Convergence Analysis.*

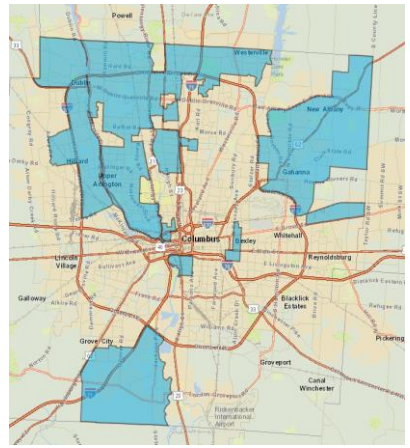
QUESTION: *How well are these interventions working and to what extent are they integrated?*
ANSWER: *Use advance features of tools like Clear Impact or the Proposed Master Health Equity Database.*

QUESTION: *What are reasonable universal health equity goals for these areas?*
ANSWER: *Assemble a broad based coalition of stakeholders from different sectors and community organizations directly impacted by health inequities to develop universal health equity goals*

QUESTION: *How can we document public health interventions are currently operating in these areas?*
ANSWER: *Use Place Matters Documentation and other similar techniques.*

QUESTION: *How should targeted interventions be different based on the different opportunity structures?*
ANSWER: *Use Targeted Universalism Mapping Strategies, University Health Equity Goal and protocols which guide the development of interventions based on the distance of varies communities to the universal goal.*

Census Tracts, High Opp., & High Health Opp.



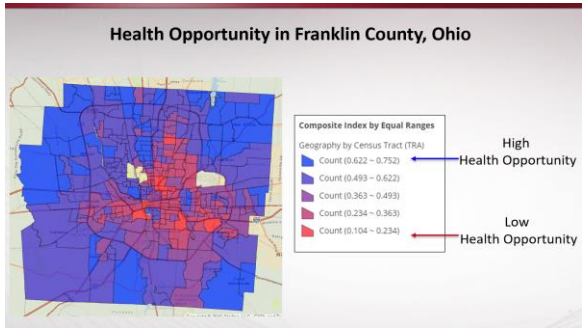
- **433,017 Total Pop.**
- 7% Black/Afr. Am
- 80% White
- 9% Asian
- 0.16% AI/AN
- 0.02 NH/PI
- 4% Latino
- Median Age 37
- **Median HH Income $90,358**
- 2% Unemployment
- 65% Renter Occupied
- 35% Owner Occupied
- 3%% HH no Vehicles

Health Opportunity Index & Convergence Analysis Report

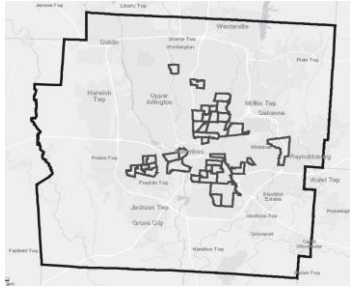
The Health Opportunity Index (HOI) provides insights regarding the overall health status of a given neighborhood and the specific social determinants that drive poor health outcomes. However, by adding the Convergence Analysis to this information it provides greater context to help address health equity issues.

The ODH Office of Health Equity has used database technology to combine the Health Opportunity Index and Convergence Analysis into one report. The following slide outlines 5 steps outlines how to interpret this report.

Ohio Health Opportunity Index



Convergence Analysis



The **HOI** describes the overall opportunity of residents within neighborhoods to achieve good health as well as identifies specific social determinants which drive health outcomes. Remember that social determinants in Ohio tend to occur in groups reflected by each of the columns (Environmental, Consumer, Mobility & Economic). The data is available for every census tract in Ohio.

Convergence Analysis identifies census tracts with at least 4 or more health outcomes simultaneously at their worst levels.

	Component 1	Component 2	Component 3	Component 4
	Environmental	Consumer	Mobility*	Economic
Affordability	x			
Healthcare Access	x			
Job Participation				x
Spatial Segregation				x
Walkability	x			
Education		x		
Employment	x			
Environmental	x			
Food Access		x		
Income Inequality				x
PopChurning			x	
PopDensity	x			
Townsend		x		

Steps to Interpret the Health Opportunity Index (HOI) & Convergence Analysis Report

This tool helps to identify three dimensions. 1) Place; 2) disease convergence (where different disparities occur at their worst levels in the same place); and (3) specific social determinants which drive poor health outcomes out of control.

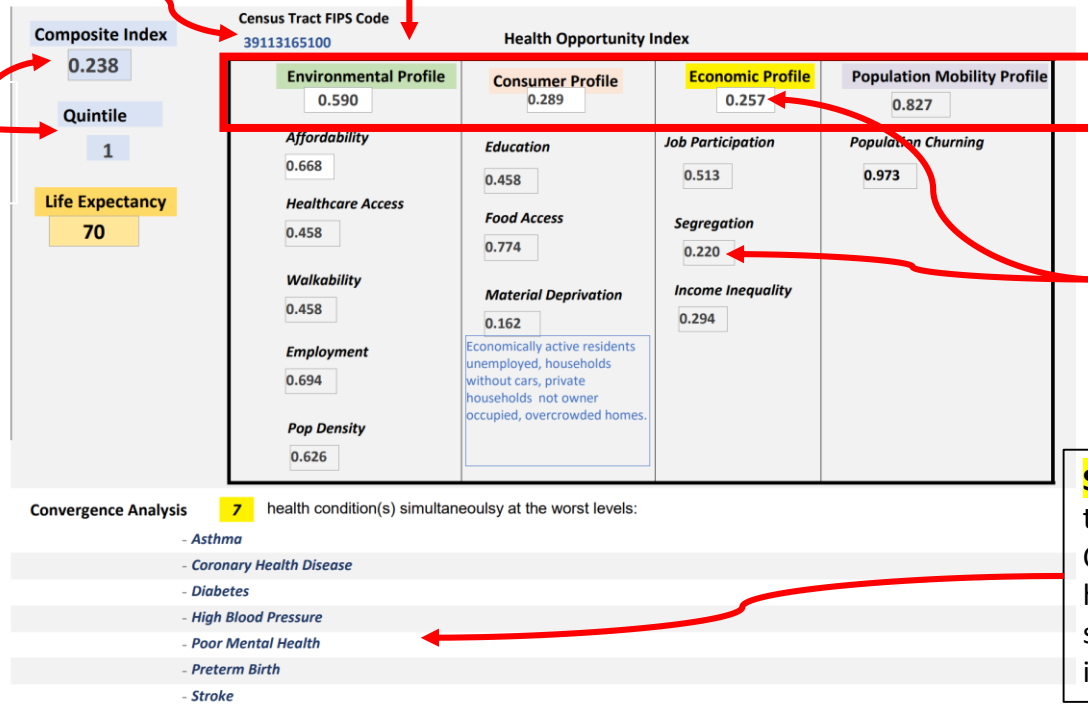
Step 1: HOI composite score and profile scores range from 0 to 1. The closer the score is to zero, the lower the chances for residents in the census tract to experience opportunity for good health. **Conversely, the closer the score is to 1, the greater chances that residents will experience high opportunities for good health**. You can also gauge health opportunity by looking at the **Quintile.** Quintile 1 reflects low health opportunity. Quintile 5 reflects high health opportunity. Life expectancy can also help gauge health opportunity.

Step 2: Once overall health opportunity is determined, you then can search for the social determinants which drive health opportunity. This requires you to analyze each of the Profile scores (***Environmental, Consumer, Economic and Population Mobility***) to detect which profile with the ***lowest*** score.

Census Tract 39113165100

Place

Overall Health Opportunity



Step 3: Based on the **Profile** with the **lowest score**, (in this case, Economic Profile) select the social determinant(s) for that profile with the lowest score.

Step 4: Available data is used for the Convergence Analysis (CA). The CA reveals that there are seven (7) health outcomes that simultaneously at their worst levels in this census tract.

Step 5: Interpret/Summarize Findings (2016 Data):

Census Tract 39113165100 has overall low health opportunity for the residents to achieve good health. There are seven (7) health conditions simultaneously at their worst levels in this census tract. They include **Asthma, Coronary Heart Disease, Diabetes, High Blood Pressure, Poor Mental Health, Preterm Birth and Stroke**. The 2017 500 Cities data also reflects **COPD** and **Kidney Disease** also at their worst levels. A deeper examination of the HOI data reveals that the social determinants of the **Economic Profile** drive poor health opportunity. A closer look at the Economic Profile reveals that **spatial segregation** is a major factor contributing to poor health opportunity in this area. Interventions to improve overall health opportunity and disparate health conditions must take into account segregation.

Health Opportunity Index/Convergence Analysis Exercise

Below is an actual HOI/CA report for a particular census tract in Cleveland, Ohio. Please use Steps 1-5 and the HOI/CA report to describe overall health opportunity and identify specific social determinants which drive health outcomes in Cleveland census tract 39035112100. Please post your analysis in Canvass.

Step 1: HOI composite score and profile scores range from 0 to 1. The closer the score is to zero, the lower the chances for residents in the census tract to experience opportunity for good health. **Conversely, the closer the score is to 1, the greater chances that residents will experience high opportunities for good health**. You can also gauge health opportunity by looking at the **Quintile.** Quintile 1 reflects low health opportunity. Quintile 5 reflects high health opportunity. Life expectancy can also help gauge health opportunity.

Step 2: Once overall health opportunity is determined, you then can search for the social determinants which drive health opportunity. This requires you to analyze each of the Profile scores (***Environmental, Consumer, Economic and Population Mobility***) to detect which profile with the ***lowest*** score.

Step 3: Based on the **Profile** with the **lowest score** , select the social determinant(s) in that column with the lowest score.

Step 4: Review and summarize data for the Convergence Analysis (CA) by listing those health outcomes that all occur at their worst levels for that census tract.

Step 5: Interpret/Summarize Findings.

Cleveland Census Tract 39035112100

Census Tract FIPS Code

39035112100

Health Opportunity Index

Composite Index	Environmental Profile	Consumer Profile	Economic Profile	Population Mobility Profile
0.102	0.724	0.176	0.179	0.857
Quintile	*Affordability* 0.797	*Education* 0.336	*Job Participation* 0.387	*Population Churning* 0.946
1	*Healthcare Access* 0.593	*Food Access* 0.655	*Segregation* 0.088	
	Walkability 0.692	*Material Deprivation* Economically active residents unemployed, households without cars, private households not owner occupied, overcrowded homes. 0.093	*Income Inequality* 0.304	
	Employment 0.855			
	Pop Density 0.842			

6 **Health outcome(s) simultaneoulsy at their worst levels:**

Cancer
High Blood Pressure
Stroke
Coronary Heart Disease
Diabetes
Asthma

Thank you for listening!

Chip.Allen@odh.ohio.gov