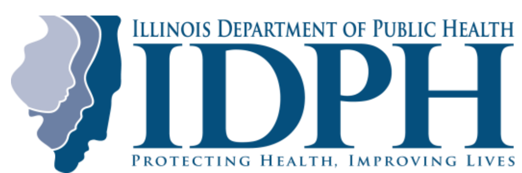


This series is made possible with funding from IDPH and the Community Health Assessment and Planning Grant, 2025

March 27, 2025

Turning Data into Information

IPLAN Training Webinar Series

This session is being recorded.

IPHI Training Team and Peer Presenters

- Samantha Lasky, Program Manager, Center for Community Capacity Development (CCCD), Illinois Public Health Institute (IPHI)
- Karen Aguirre, Senior Program Manager CCCD, IPHI
- Laurie Call, Center Director, IPHI
- Mediha Sayeeduddin, Program Associate, IPHI
- Presenters
  - Aldara Henderson, St. Clair County Health Department and Southern Illinois University
  - Sara Kelly, University of Illinois at Chicago

Today's Training Agenda

- Welcome and Introductions
- Importance of Data for Community Health Assessment and Improvement Planning
- Data Analysis to Develop Priorities
- Data Driven Action Planning
- Break
- Data Visualization and Storytelling
- Q&A
- Closing and Evaluation

Learning Objectives

Participants will be able to:

1. Use data to define health and community problems and understand root causes of health inequities as identified by the community

2. Utilize methods of quantitative and qualitative analysis for data storytelling to disseminate information to communities

3. Use data to inform more actionable strategies to address IPLAN priorities through storytelling and narratives for health.

Group Agreements

- Actively participate
- Take space/ Make space
- Seek to understand different perspectives.
- Allow facilitator to move conversation along
- Ask questions in the chat or raise hand
- We can "park" items we cannot address today and get back to you
- What else?

Poll Question

What does it mean to you to “turn data into information”?

Importance of Data for CHA/CHIP

Samantha Lasky

Program Manager

Illinois Public Health Institute

Why is the data important?

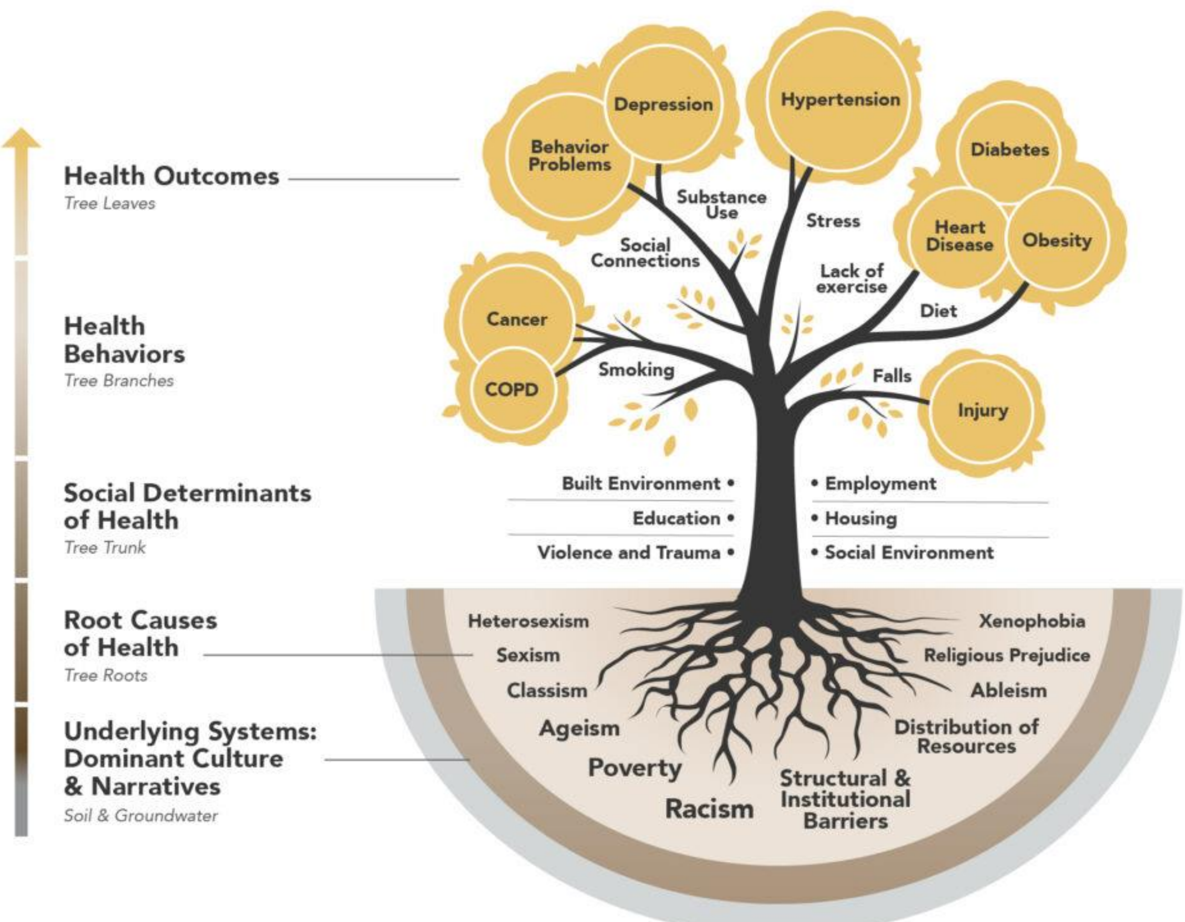
- Collecting primary and secondary data paints the **full picture of health** of your community
- Telling the community story emphasizes the need for a complete, accurate, and timely understanding of community health and well-being across all **subpopulations** within the community. (NACCHO, MAPP 2.0 User's Handbook)
- CHA data "identif[ies] **priority** issues, develop[s] and implement[s] **strategies** for action, and establish[es] accountability to ensure measurable health improvement" (NACCHO, CHA/CHIP)

NACCHO CHA/CHIP, 2025

Why is this important?

- Uncover the **inequities** that exist in a community and **WHY** they exist
- Uncover inequities through both qualitative and quantitative data on **root causes of health inequities and their influence on data related to social determinants of health (SDOH), risk behaviors, and health outcomes.**
- Assessing health status only through health indicators (such as chronic disease rates) is an **incomplete picture and prevents strategic action to address root causes**

NACCHO, MAPP 2.0 User's Handbook



https://mahealthfunds.org/health-racial-equity/

The Health EquiTREE (2022, 2024), illustration by Health Resources in Action for the Massachusetts Community Health and Healthy Aging Funds. https://mahealthfunds.org/resources/

Overview of the IPLAN Substantial Compliance

IPLAN Substantial Compliance Checklist

Description of the Problem:

2. The description includes summarized data and information on which the priority is based

3. The description includes the relationship of the priority to Healthy People national health objectives

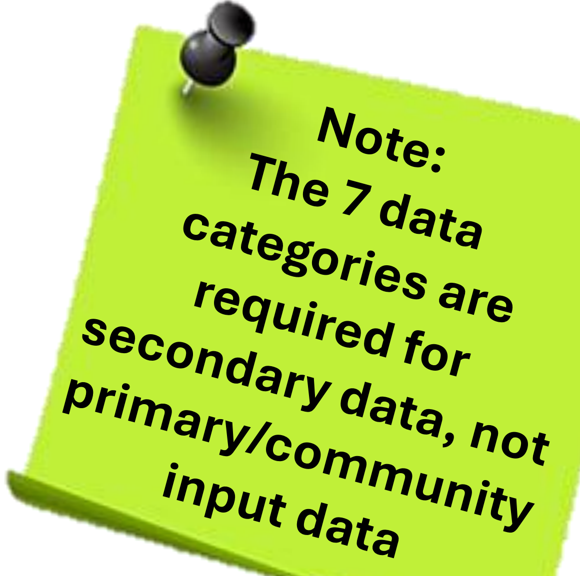
Analysis by Grouping:

4. Analysis of data from IQuery by the 7 data categories

- demographic and socioeconomic characteristics
- general health and access to care
- maternal and child health
- chronic disease
- infectious disease
- environmental/occupational/injury control
- sentinel events

5. The assessment includes a description of the health problems most meaningful for the community by grouping

Objectives and Strategies: 8. Each strategy includes an analysis of community resources that will contribute, estimated funding needed, and anticipated sources of funding



Overview of the Public Health Accreditation Board (PHAB) Measures

Measure 1.1.1A: Develop a community health assessment.

C. Comprehensive, broad-based data. Data must include: primary data conducted, contracted, or overseen by the health dept or CHA partnership and secondary data from two or more different sources.

D. A description of demographics of the population served by the health dept, which must at a minimum include: % of the population by race and ethnicity, languages spoken within the jurisdiction, and other demographic characteristics, as appropriate for the jurisdiction.

E. A description of health challenges experienced by the population served by the health dept, based on data listed above, which must include an examination of disparities between subpopulations or sub-geographic areas in terms of each of the following: health status and health behaviors

F. A description of inequities in the factors that contribute to health challenges which must include social determinants of health or built environment.

G. Community assets or resources beyond healthcare and the health dept that can be mobilized to address health challenges in the jurisdiction.

Measure 1.2.1 A Collect non-surveillance population health data

1. Primary quantitative population health data collected for the purpose of understanding health status in the jurisdiction.

2. Primary qualitative population health data collected for the purpose of understanding health status in the jurisdiction.

Measure 1.2.2 T/L: Participate in data sharing with other entities

1. Participate in data sharing with other entities (record-level data) by either providing data to another entity; or receiving data from another entity; or providing a data use agreement with another entity

PHAB Standards and Measures for Initial Accreditation, Version 2022, https://phaboard.org/wp-content/uploads/Standards-Measures-Initial-Accreditation-Version-2022.pdf

Overview of the Public Health Accreditation Board (PHAB) Measures

Standard 1.3 (see all measures): Analyze public health data, share findings, and use results to improve population health.

1.3.1 Analyze public health data (quantitative and qualitative), share findings, and use results to improve population health.

1.3.2 Share and review public health findings with stakeholders and the public (includes data visualization)

1.3.3 Use data to recommend and inform public health actions (policies, processes, programs, or interventions designed to improve the health of the population)

Measure 5.2.1 A: Engage partners and members of the community in a community health improvement process

C. Review of the causes of disproportionate health risks or health outcomes of specific populations

PHAB Standards and Measures for Initial Accreditation, Version 2022, https://phaboard.org/wp-content/uploads/Standards-Measures-Initial-Accreditation-Version-2022.pdf

Data Sources

Samantha Lasky

PHAB Definitions

Primary Data	• Data for which collection is conducted, contracted, or overseen by the health department.
Secondary Data	• Data collected by others, outside of the health department.
Qualitative Data	• Data concerning information that is difficult to measure, count, or express in numerical terms
Quantitative Data	• Data concerning information that can be expressed in numerical terms, counted, or compared on a scale

PHAB Acronyms and Glossary

Poll Question

Have you accessed data from IQuery in the past 6 months?

IQuery Data Dashboard

Visit website: https://dph.illinois.gov/data-statistics/iquery.html

Log in to the IQuery dashboard requires access to an Illinois.gov account. To request access, contact ***DPH.IQuery@Illinois.gov****. Include your name, phone number, email address, and local health department.*

- IPLAN Community Health Data System (IQuery)
  Vital data source for Community Health Needs Assessment
- In order to gain access to the new dashboard, IDPH needs to have the master data use agreement signed by the LHD Administrator/Executive Officer.
- Only 1 agreement per health department is required. Multiple users will be able to access the IQuery Dashboard.

Common Data Sources

- American Community Survey
- Adverse Pregnancy Outcomes Reporting System (APORS)
- Behavioral Risk Factor Surveillance System (BRFSS)
- County Health Rankings
- Illinois Department of Public Health- Health Statistics
- **IPLAN Data System / IQuery**
- National Center for Health Statistics (NCHS)
- State Cancer Registry
- U.S Census
- CDC PLACES
- Youth Risk Behavior Surveillance System (YRBSS)
- National Survey for Children's Health (NSCH)
- Illinois Youth Survey (IYS)
- Illinois EPA EJ Start
- Illinois Healthcare Cost Containment Council (IHCCCC)
- Illinois State Board of Education (ISBE)
- IDPH Opioid Data Dashboard
- CDC SUDORS data (Substance use disorders overdose reporting system)
- National Violent Death Reporting System (NVDRS)

Poll Question

What additional data sources do you use to compile secondary data in the 7 data categories?

Primary Data Collection Methods

SURVEYS

FOCUS GROUPS/ LISTENING SESSIONS

COMMUNITY FORUMS

INTERVIEWS

OBSERVATION

ASSET MAPPING

PHOTO VOICE

Poll Question

Which methods have you used to collect primary data?

Data Analysis to Develop Priorities

Aldara Henderson, Systems Quality Planner, Epidemiologist

St. Clair County Health Department

Data Analysis and Priority Identification

Aldara Henderson, MPH

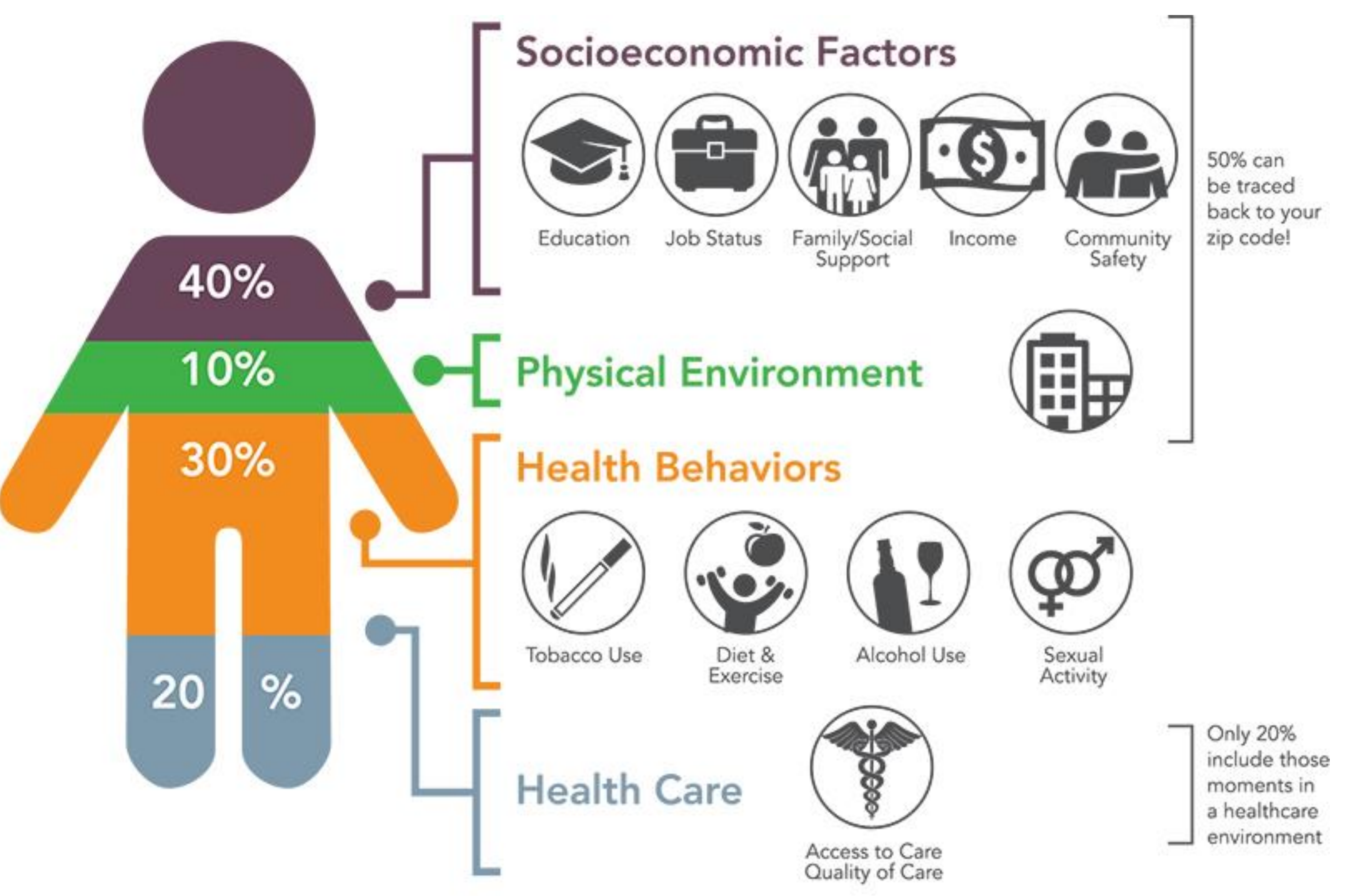
St Clair County Health Department
Systems Quality Planner
Epidemiologist

2023
Community Health
Needs Assessment

Community Health Principles

Community Health identifies three guiding principles to achieving sustainable community health:

1. Health care is efficient and equitable;
2. Good health flourishes across geographic, demographic and social sectors;
3. Everyone has access to affordable, quality health care because it is essential to maintain or reclaim health.


40%
10%
30%
20 %
Socioeconomic Factors
Education
Job Status
Family/Social Support
Income
Community Safety
Physical Environment
Health Behaviors
Tobacco Use
Diet & Exercise
Alcohol Use
Sexual Activity
Health Care
Access to Care
Quality of Care
50% can be traced back to your zip code!
Only 20% include those moments in a healthcare environment

Access to Health and Healthcare Barriers

Structural

- Availability
- How Organized
- Transportation

Financial

- Insurance Coverage
- Reimbursement Levels
- Public Support

Personal

- Acceptability
- Cultural
- Language
- Attitudes
- Education / Income

St. Clair County Demographics

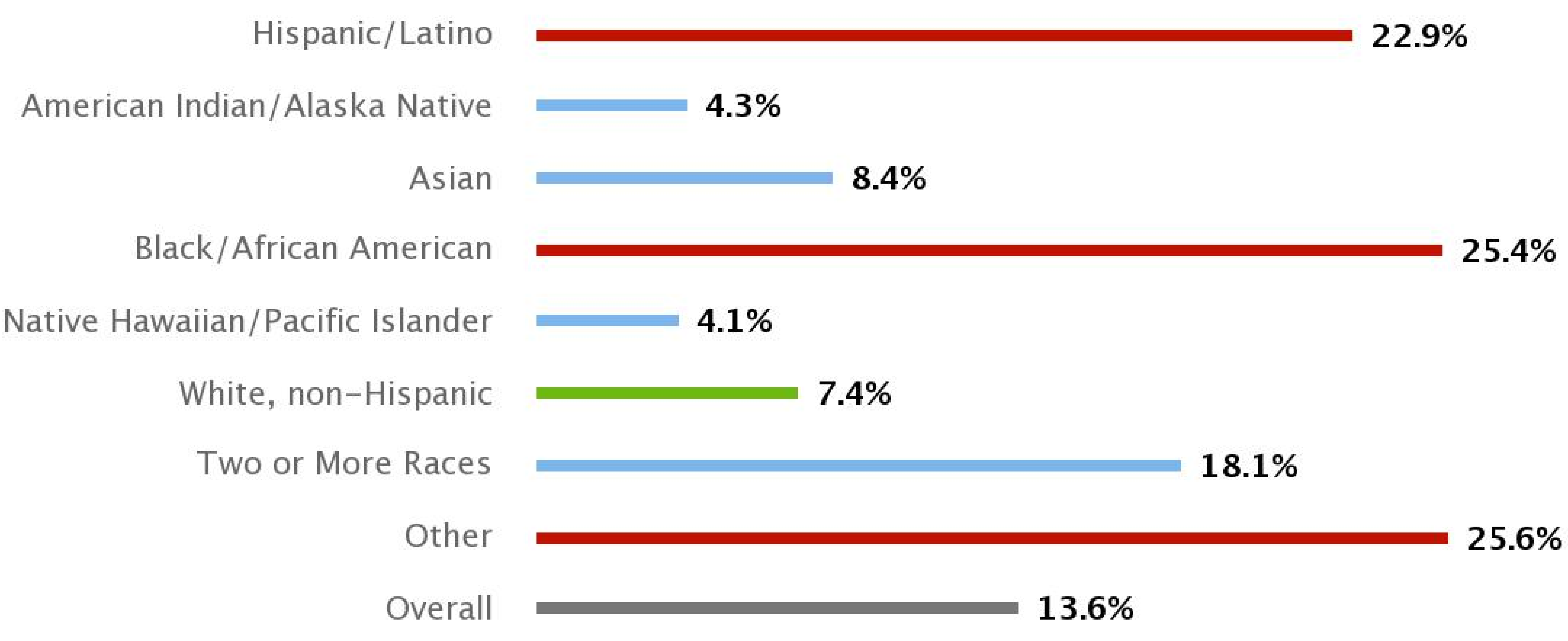
- Population by Zip Code
- Overall Demographics
- Veterans

Demographics – Overall Summary

Race and Ethnicity	Illinois 2022	St. Clair 2022	Illinois 2020	St. Clair 2020	% Change
White (non-Hispanic)	76.1	64.2	76.3	64.5	-0.3
Black or African American	14.7	30.8	14.7	30.6	+0.2
Native American or Alaska Native	0.6	0.4	0.1	0.4	0
Asian	6.3	1.6	6.1	1.6	0
Hispanic or Latino	18.3	4.7	18.0	4.6	+0.1
Speaks Language other than English at home	23.2	4.8	23.2	4.8	0
% below poverty in the last 12 months	12.1	13.3	12.1	13.3	0
High School graduate or higher, % of persons age 25+	89.9	92.3	89.9	92.3	0
Bachelor Degree graduate or higher, % of persons age 25+	36.2	29.6	--	--	--
Median household income	72,563	63,017	72,563	63,017	0
Per Capita Income	39,571	32,949	40,098	34,705	-1,756
Unemployment Rate: June 2023	4.0	5.4	4.9	5.1	+0.3

Poverty and Housing

- Poverty by Age
- Children and Poverty
- Socio-needs Index by zip code
- Homelessness
- Safe and Affordable Housing
- Housing Cost by Location
- ALICE Households
- Disparities in Economy


People Living Below Poverty Level by Race/Ethnicity
County: St. Clair
Hispanic/Latino
22.9%
American Indian/Alaska Native
4.3%
Asian
8.4%
Black/African American
25.4%
Native Hawaiian/Pacific Islander
4.1%
White, non-Hispanic
7.4%
Two or More Races
18.1%
Other
25.6%
Overall
13.6%
Source: American Community Survey 5-Year (2017-2021)

County: St. Clair

14.8%

Source: County Health Rankings
Measurement period: 2015-2019
Maintained by: Conduent Healthy Communities Institute
Last update: April 2023

COMPARED TO

IL Counties

U.S. Counties

IL Value (16.1%)

US Value (17.0%)

Prior Value (14.7%)

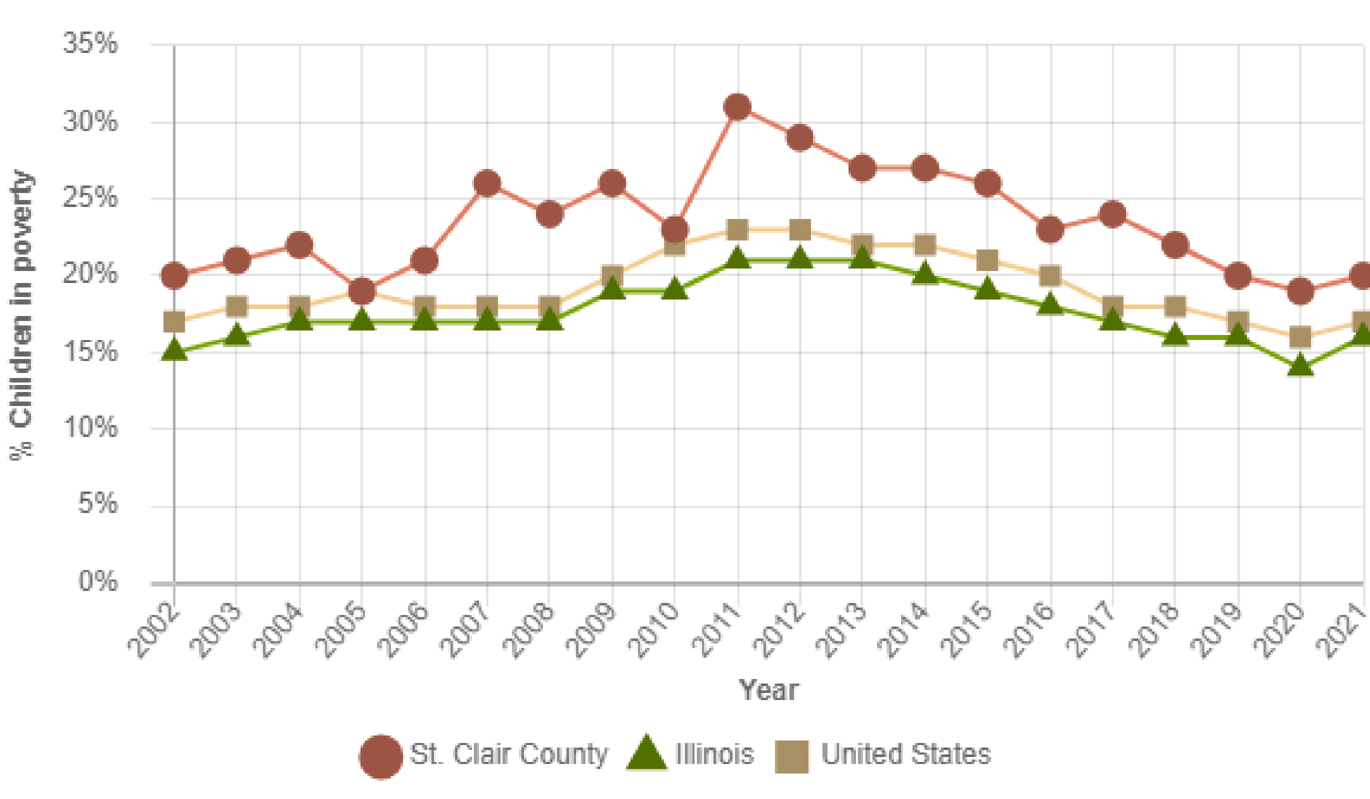
Trend

This indicator measures the percentage of households with at least one of the following four housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities

Housing Conditions by Location

Children in Poverty and Other Socioeconomic Factors

	St. Clair County	Illinois
Total Children in Poverty	20%	16%
White Children in Poverty	9%	9%
Black / African-American Children in Poverty	40%	35%
Hispanic/Latino Children in Poverty	33%	19%
Uninsured Children	3%	3%
Single Parent Household	47%	34%



Education and Labor

- Educational Attainment
- Education and Employment
- Unemployment
- Internet and Computer Access

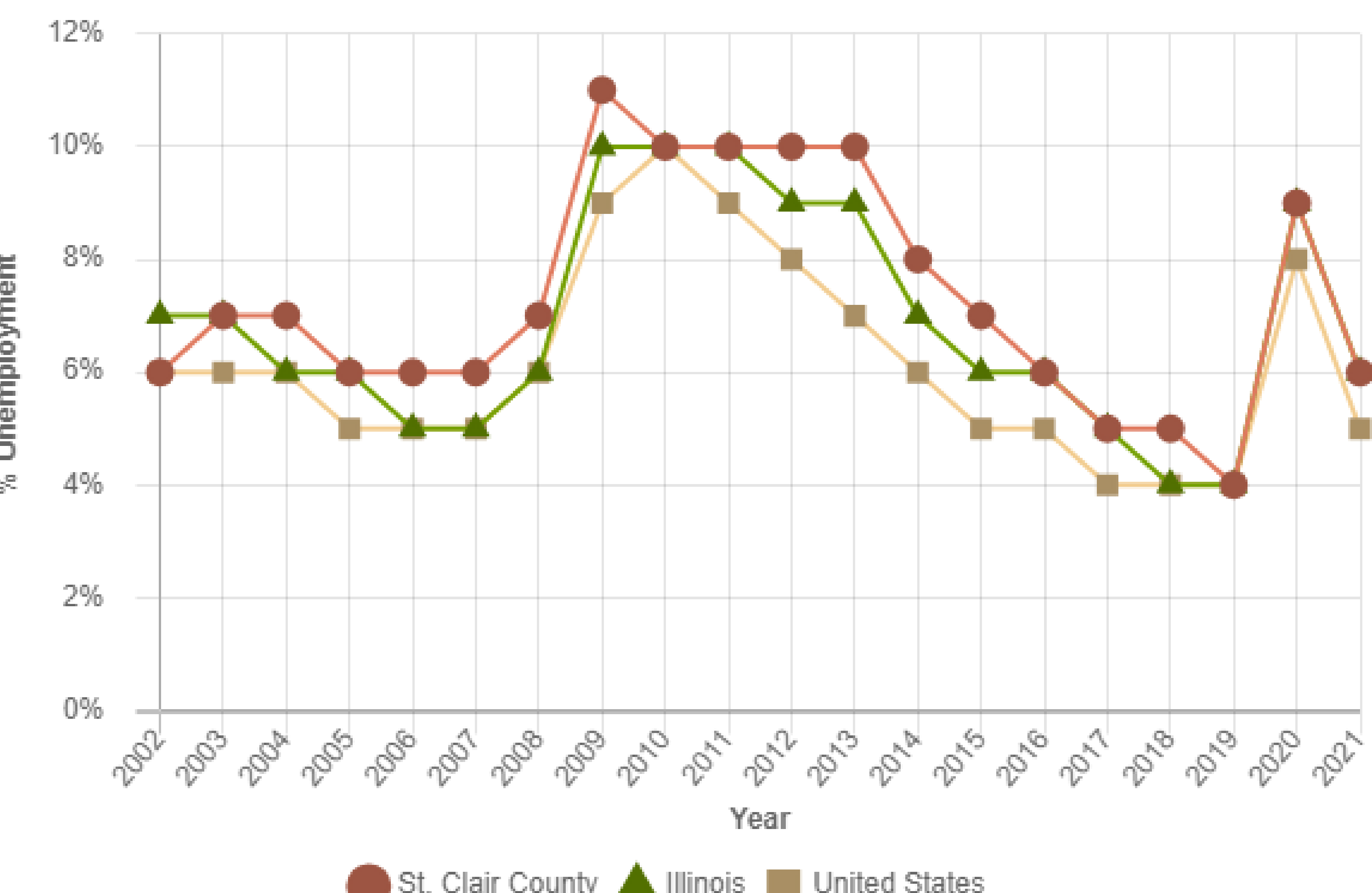
Education Level and Employment

Education Level	St. Clair Co.	Illinois
Population 25 years +	185,818	8,697,701
Less than 9th Grade	2.3%	4.4%
Attended High School, No Diploma	5.2%	5.2%
High School Diploma	28.5%	25.2%
Attended College, No Diploma	23.6%	19.2%
Associate Degree	10.5%	8.2%
Bachelor's Degree	17.6%	22.6%
Graduate or Professional School Degree	12.2%	15.1%

Population Distribution by Employment	St. Clair Co.	Illinois
Pop Age 16+	213,785	10,175,804
Armed Forces	2.0%	0.2%
Civilian employed	59.9%	61.7%
Civilian unemployed	3.1%	3.1%
Not in labor force	34.9%	34.9%

Unemployment:

- 6.1% 2021
- 4.3% 2022
- 5.8% ave. 2023



Health

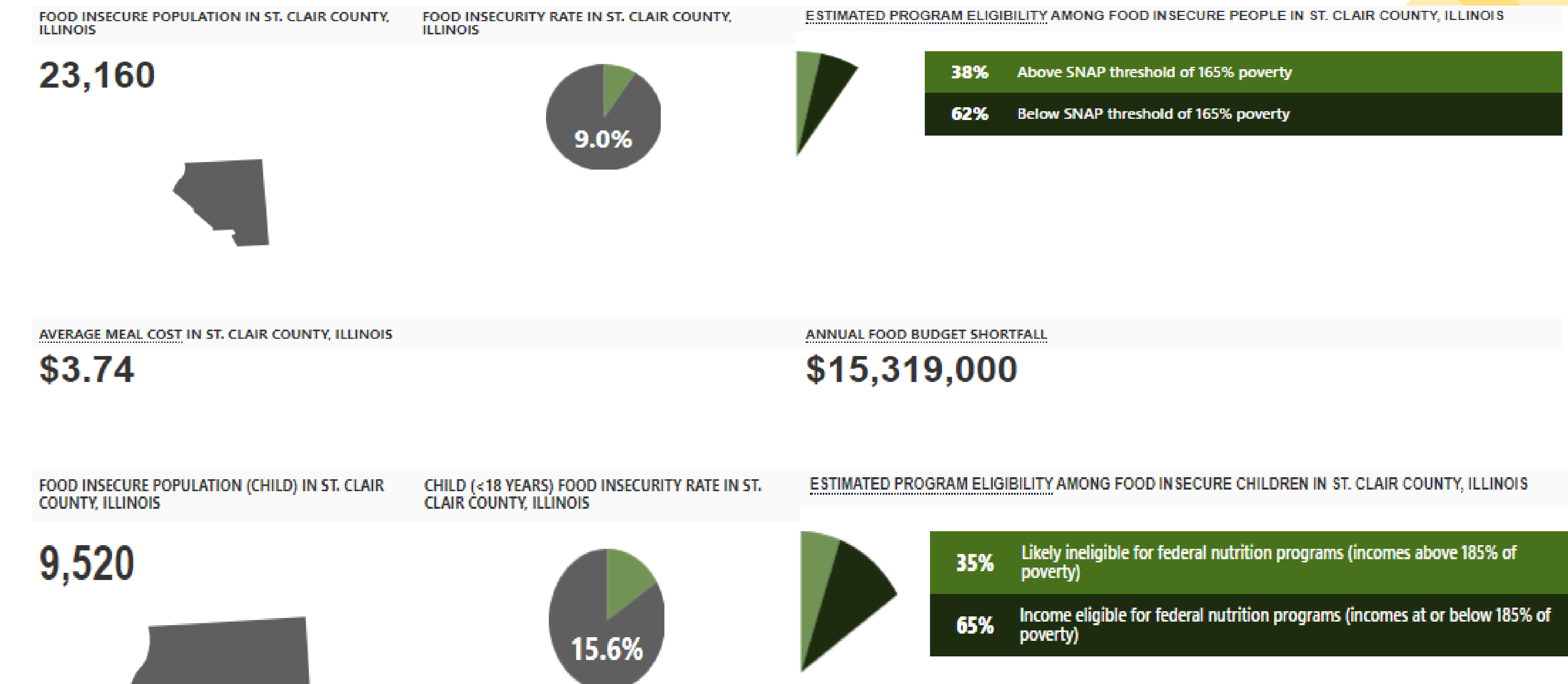
- Food Insecurity
- Sexually Transmitted Infections
- Health Behaviors
- Chronic Conditions
- Health Factors
- Behavioral Health: Substance Use
- Mental Health
- Maternal and Infant Health
- Violent Crimes

2021 Food Insecurity

Average Food Insecurity Rate in Illinois:
- Total: 9.5%
- Children: 11.3%

Three Year Trends: Adults in St. Clair County:
- 2021: 9%
- 2020: 11%
- 2019: 10.6%

Children St. Clair County:
- 2021: 15.6%
- 2020: 19.3%
- 2019: 16.6%



Health Factors: Visits and Payor Type

Insurance Source	St. Clair Co.	Illinois
Medicare	5%	3%
Medicaid	18%	14%
Employer Based	61%	67%
Self Insured	10%	10%
Uninsured	9%	10%

Health Factors	St. Clair Co.	Illinois
Visited A Doctor in the Past Year	80.7%	80.5%
I go to the doctor regularly for check-ups	52.3%	51.5%
I only go to the doctor when I'm very ill	24.2%	23.3%
I take medicine as soon as I don't feel well	10.3%	10.4%
Medication has improved the quality of my life	26.5%	25.8%
I follow a regular exercise routine	29.4%	31.6%
My medical conditions limit my lifestyle somewhat	11.5%	10.6%

Prevalence of Ailments

St. Clair County Patients Presented in the ED from FY2022

Ailments	St. Clair Co.	Illinois
Backache/Back Pain	23.7%	22.4%
Hypertension/High Blood Pressure	18.4%	16.5%
Heartburn/Acid Reflux	16.4%	14.8%
Sinus Congestion/Headache	12.8%	11.2%
Allergy/Hay Fever	18.8%	18.2%
High Cholesterol	14.3%	13.6%
Depression	11.4%	10.4%
Dry Eyes	11.1%	11.1%
Obesity/Overweight	11.9%	10.7%
Arthritis/Osteoarthritis	8.6%	7.6%
Anxiety/Panic	13.5%	12.6%

- **Academic achievement** including Early Childhood Learning, K-12, higher education
- **Access to Behavioral Health Services**
- **Access to Healthy Lifestyle**
- **Access to Mental Health Services**, considering isolation and loneliness
- **Chronic Diseases** and comorbidities including obesity
- **Community safety** including violence and crime
- **Food insecurity**, specifically access to nutrient dense food
- **Housing** specific to safe and affordable housing and cost burdened renters
- **Maternal / Infant Health** – including poor birth outcomes and infant mortality
- **Poverty**, including disparities in economy
- **Sexually Transmitted Infection**
- **Substance Use Disorders**
- **Suicide**
- **Workforce Preparedness**, includes pipeline programs and workforce development to address career building and homelessness

Questions?

Data Driven Action Planning

Sara Kelly, Ph.D., M.P.H.
Research Assistant Professor
Department of Pediatrics
Department of Research Services
University of Illinois, Peoria

From Statistics to Stories: Integrating Quantitative and Qualitative Data to Inform Community Health Insights

March 27, 2025

Sara Kelly, PhD, MPH

OUTLINE

I. Background
II. Importance of quantitative data
III. Population health assessments
IV. Practical application
V. Helpful resources

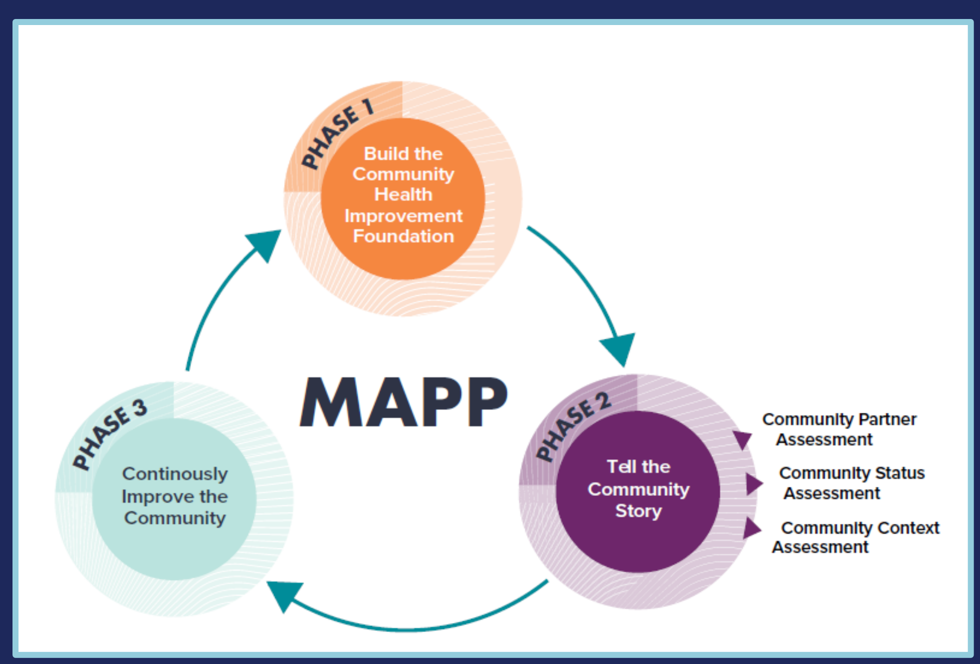
PARTNERSHIP FOR HEALTHY COMMUNITIES

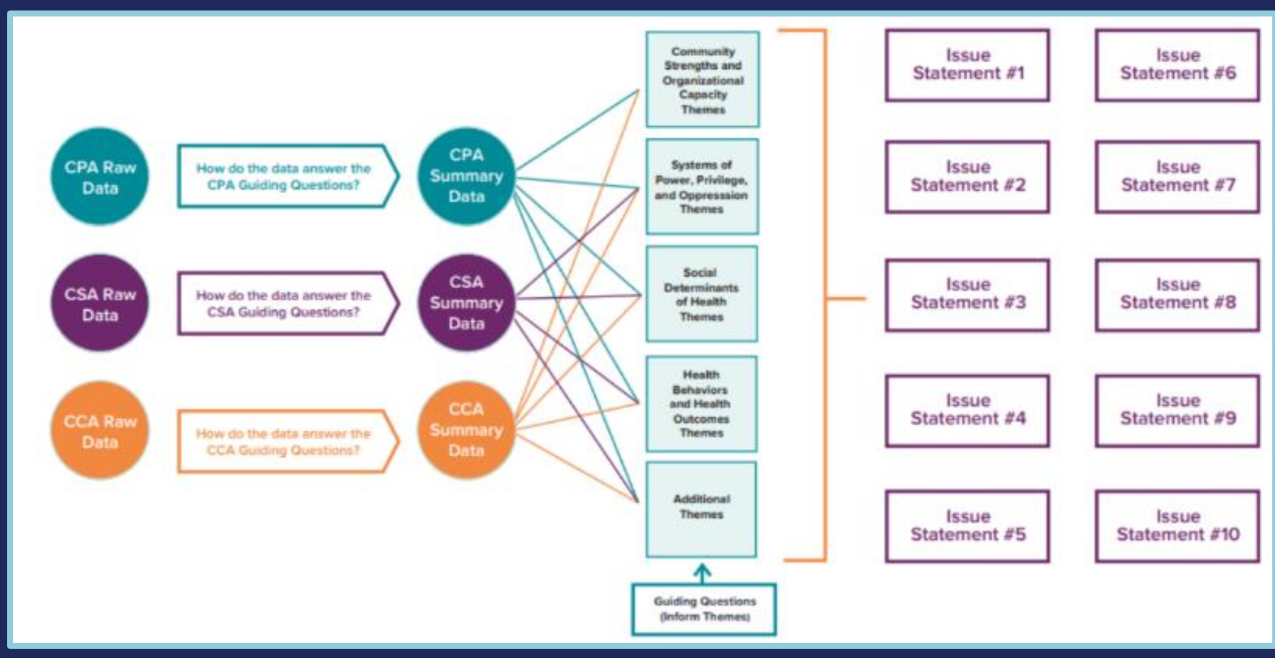
•The Partnership for a Healthy Community (PFHC) is a community-driven partnership of public and private partners working together to address priority health issues in Peoria, Tazewell, and Woodford Counties in Illinois.

Data Team

- The goal of the data team is to track progress and challenges in the Tri-County region and provide timely feedback to the communities and Board on a variety of health metrics
- Comprised of a diverse set of stakeholders from the region
  - Representatives from 3 county health departments, 2 healthcare systems, medical school, higher education
- **Data reports**
  - Quarterly data reports: combine outputs and outcomes
  - Annual data reports: mortality and public health surveillance measures

APPROACH





MAPP 2.0 is a community-driven strategic planning framework developed by the National Association of County and City Health Officials (NACCHO) designed to achieve health equity by assessing pressing population health issues and aligning resources across sectors for strategic action

DATA-DRIVEN APPROACHES

For these community assessments (e.g., CHNA, CSA), the following categories are typical used:

1. Demographic and socioeconomic characteristics
2. General health and access to care
3. Maternal and child health
4. Chronic disease
5. Infectious disease
6. Environmental/occupational/injury control
7. Sentinel events

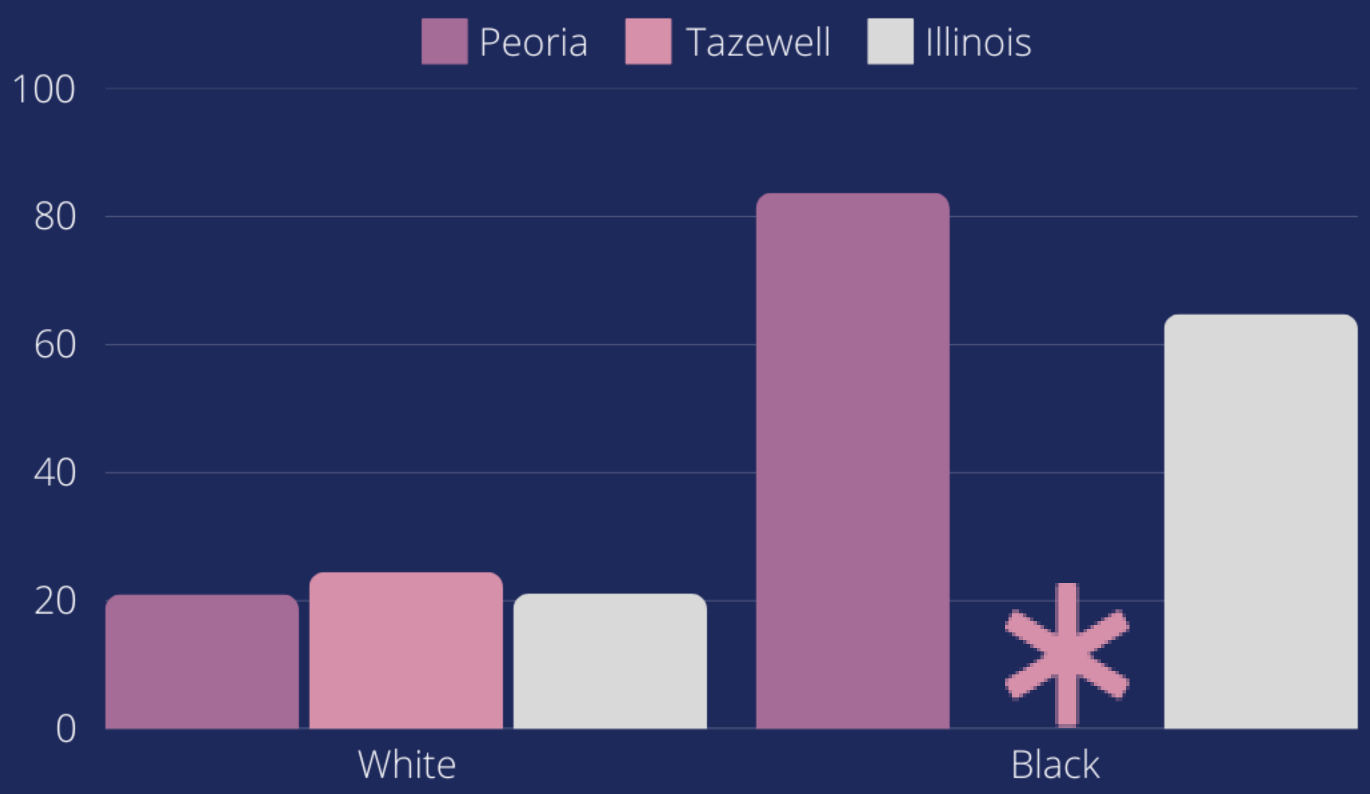
Data plays a crucial role in public health for several reasons:

- Identify health trends
- Inform policy and decision-making
- Evaluating public health interventions
- Supporting health equity
- Preparing for pubic health emergencies

STRENGTHS AND CHALLENGES IN ILLINOIS

Top strengths	Top challenges
Adverse childhood experiences	Racial disparity associated with premature death
Drinking water violations	Housing with lead risk
Mental distress	Excessive drinking
Water fluoridation	Homicide
Physical inactivity	Residential segregation Black/White residents

MORTALITY



ILLINOIS

Black youth die at nearly 3 times the rate of white youth in Illinois

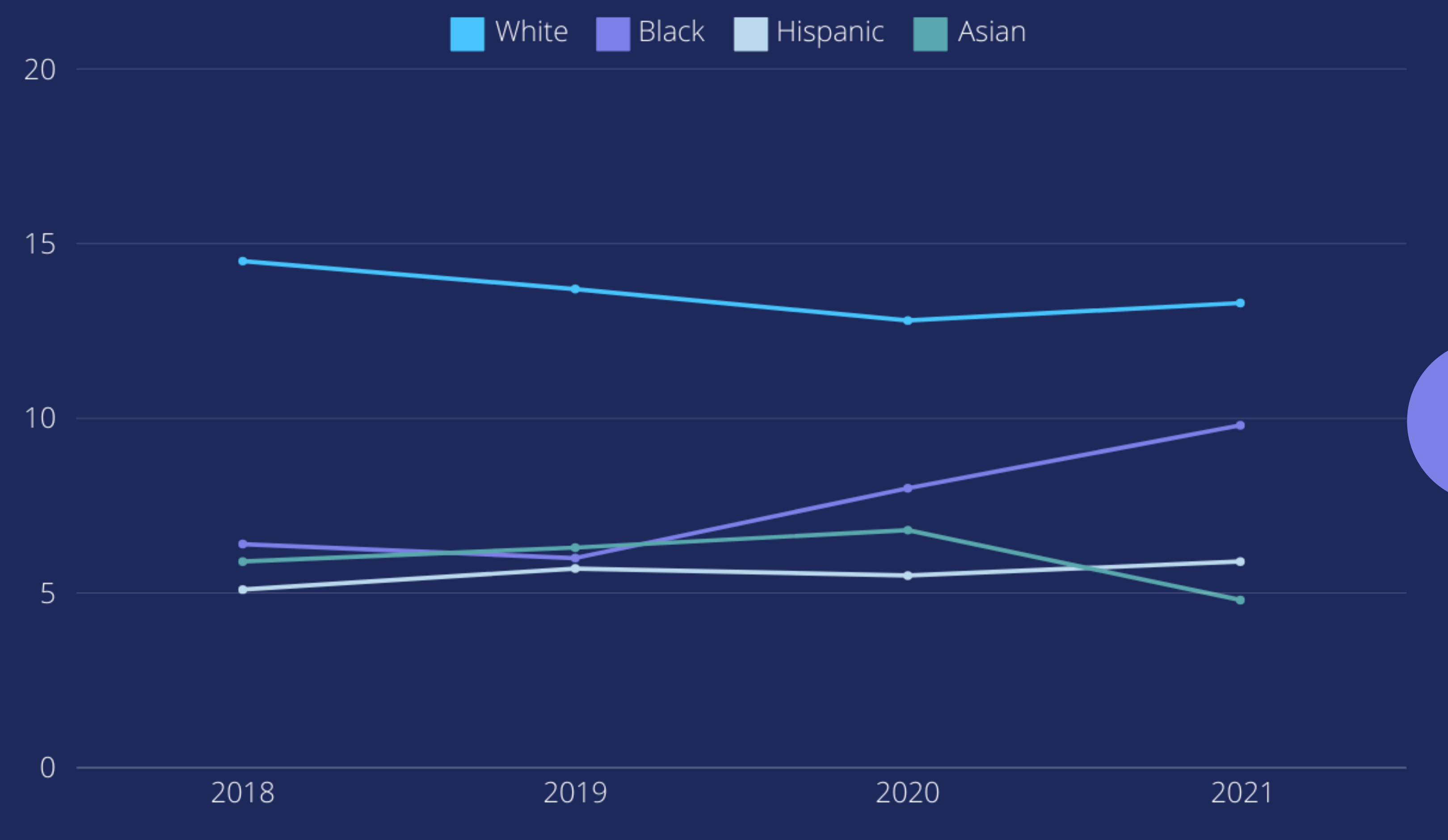
PEORIA

Black youth die at nearly 4 times the rate of white youth in Peoria

MORTALITY-RELATED DISPARITIES

RISK FACTORS

- Known geographic variations
- Economic stress
- Mental health conditions



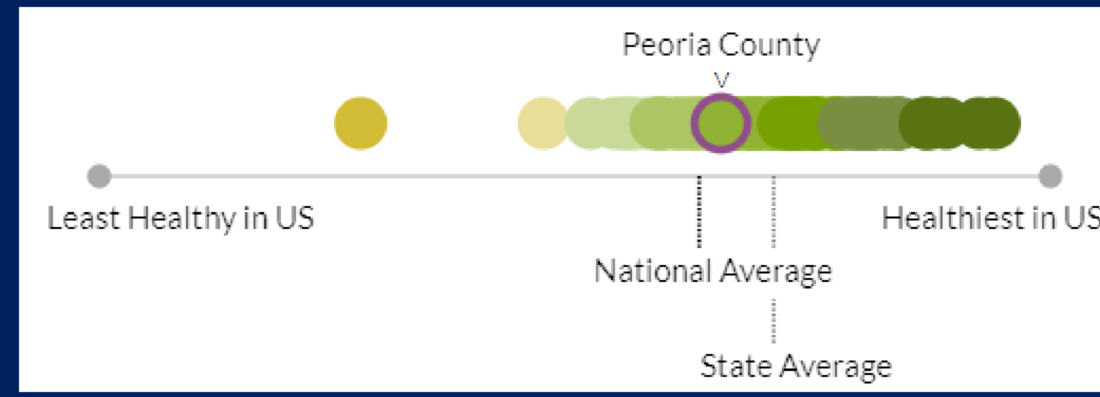
PEORIA COUNTY

Health outcomes tell us how long people live on average within a community, and how much physical and mental health people experience in a community while they are alive

Health Factors represent things we can improve to live longer and healthier lives (i.e. modifiable)

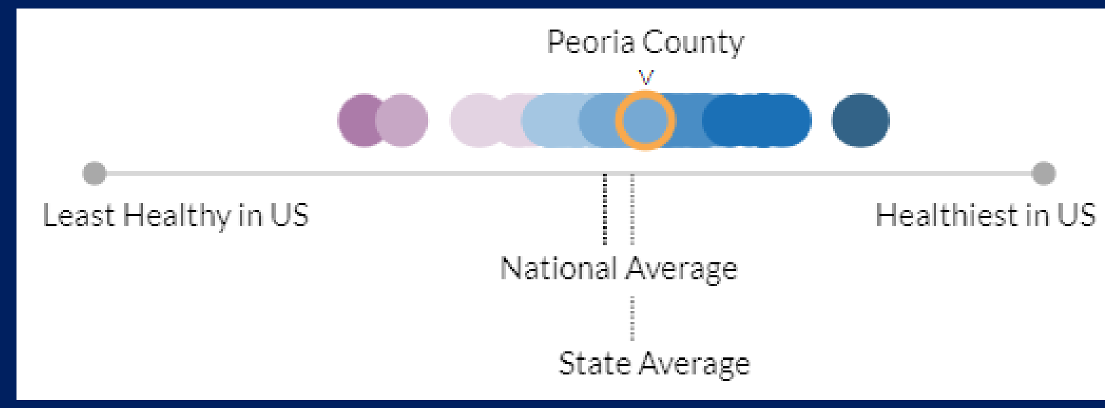
PEORIA HEALTH OUTCOMES

Peoria County is faring about the same as the average county in Illinois for health outcomes, and slightly better than the average county in the nation



PEORIA HEALTH FACTORS

Peoria County is faring about the same as the average county in Illinois for health factors, and about the same as the average county in the nation



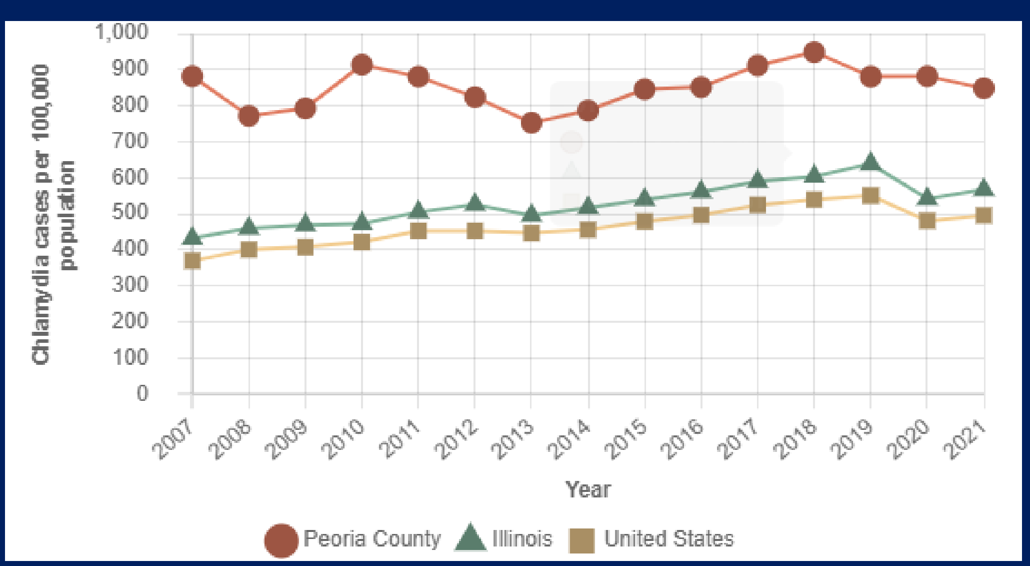
PEORIA

SEXUALLY TRANSMITTED INFECTIONS

In Peoria County, Illinois, 849.3 new cases of chlamydia were diagnosed per 100,000 people. *(Peoria is getting worse for this measure.)*

Definition: Number of newly diagnosed chlamydia cases per 100,000 population.

Data source: National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP)

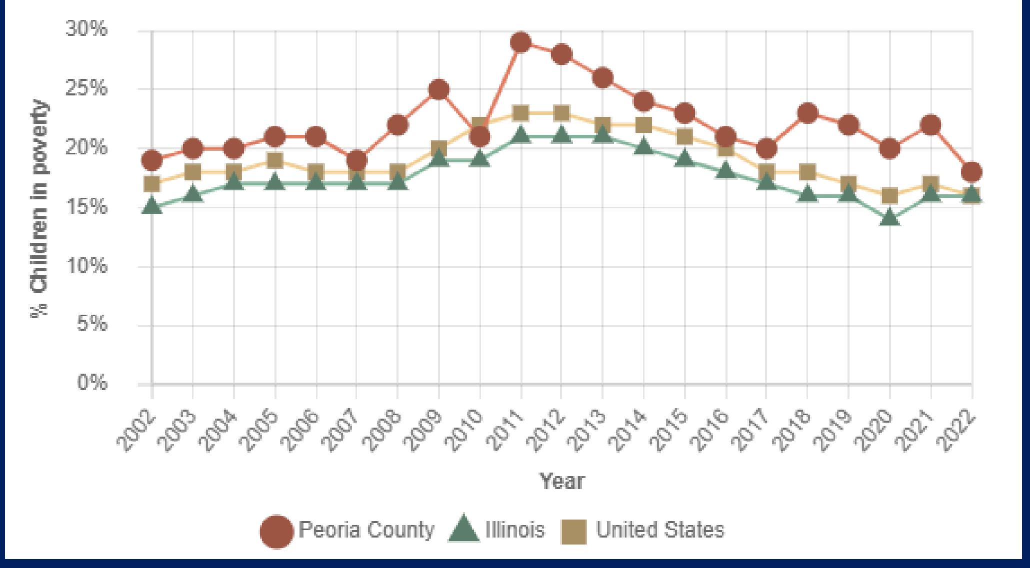


CHILDREN LIVING IN POVERTY

In Peoria County, Illinois, 18% of children lived in poverty.

Definition: Percent of people under 18 years in poverty. Prior to 2005, Children in poverty was based on the Current Population Survey; beginning in 2005, it was based on the American Community Survey

Data source: American Community Survey, Small Area Income and Poverty Estimates (SAIPE) program



DATA REVIEW PROCESS

WEEKLY UPDATES FOR CSA

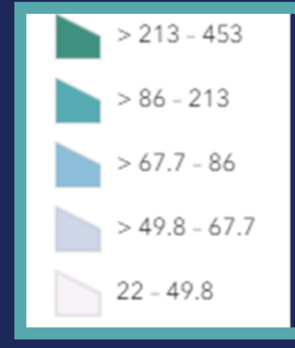
Survey completion by county and region to obtain regional data				
REGION (Zip Codes)	**Name**	**Estimated survey distribution (5% Margin of Error & 90% CI)**	**Current survey responses by region (n=)**	**% of goal for regional estimates**
PEORIA COUNTY		**271 (or 1,589 for regional)**	**826**	**52.0%**
Region 1 (61602, 61603, 61604, 61605, 61606, 61625)	Peoria/West Peoria	270	283	**104.8%**
Region 2* (61614, 61615, 61616)	North Peoria/Peoria Heights	269	273	**101.5%**
Region 3 (61607, 61547)	Bartonville/Limestone	265	59	**22.3%**
Region 4 (61569,61533, 61536)	South West Peoria County	257	53	**20.6%**
Region 5 (61529, 61517, 61559)	North West Peoria County	261	38	**14.6%**
Region 6* (61528, 61525, 61523, 61552)	North East Peoria County	267	74	**27.7%**
TAZEWELL COUNTY		**270 (or 1,065 for regional)**	**804**	**75.5%**
Region 1 (61611, 61571, 61610)	North Tazewell County	269	290	**107.8%**
Region 2 (61534, 61734, 61747, 61759, 61721)	South Tazewell County	260	54	**20.8%**
Region 3 (61550, 61755, 61568)	East Tazewell County	267	203	**76.0%**
Region 4 (61564, 61554)	West Tazewell County	269	248	**92.2%**
WOODFORD COUNTY		**269 (or 794 for regional)**	**747**	**94.1%**
Region 1 (61738, 61760, 61771, 61561, 61516)	East Woodford County	262	270	**103.1%**
Region 2 (61570, 61545, 61530, 61729, 61742)	Central Woodford County	264	287	**108.7%**
Region 3 (61548, 61611)	West Woodford County	268	291	**108.6%**

WEEKLY UPDATES FOR CSA

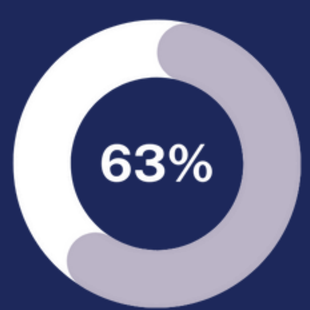
Peoria CHNA survey completion status					
Estimated sample size for selected demographics	**Goal (n=2,234)**	**90% Goal (n=1,589)**	**Census %**	**Current responses (n=)**	**Current %**
Age					
Under 20 years	223	159	10.0%	8	1.0%
21-35 years	447	318	20.0%	175	21.5%
36-50 years	648	461	29.0%	231	28.4%
51-65 years	402	286	18.0%	223	27.4%
Over 65 years	514	365	23.0%	176	21.7%
Gender					
Male	1,054	750	47.2%	286	34.9%
Female	1,144	814	51.2%	517	63.1%
Non-binary, transgender, or other	36	25	1.6%	17	2.0%
Race/ethnicity					
White/Caucasian	1,566	1,113	70.1%	604	73.9%
Black/African American	393	280	17.6%	125	15.3%
Hispanic/LatinX	71	51	3.2%	35	4.3%
Pacific Islander	2	2	0.1%	5	0.6%
Native American	2	2	0.1%	3	0.4%
Asian/South Asian	101	71	4.5%	24	2.9%
Multiracial	98	70	4.4%	21	2.6%
Household income					
Below median household income	1,117	795	50.0%	371	46.3%
Above median household income	1,117	795	50.0%	431	53.7%
Housing instability					
% population housing problems	304	216	13.6%	121	14.9%

CSA RESPONSE RATE

Response rate (per 10,000)

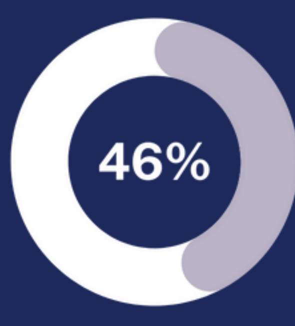


CSA RESPONSES FOR PEORIA



GENDER

A majority of respondents were females



INCOME

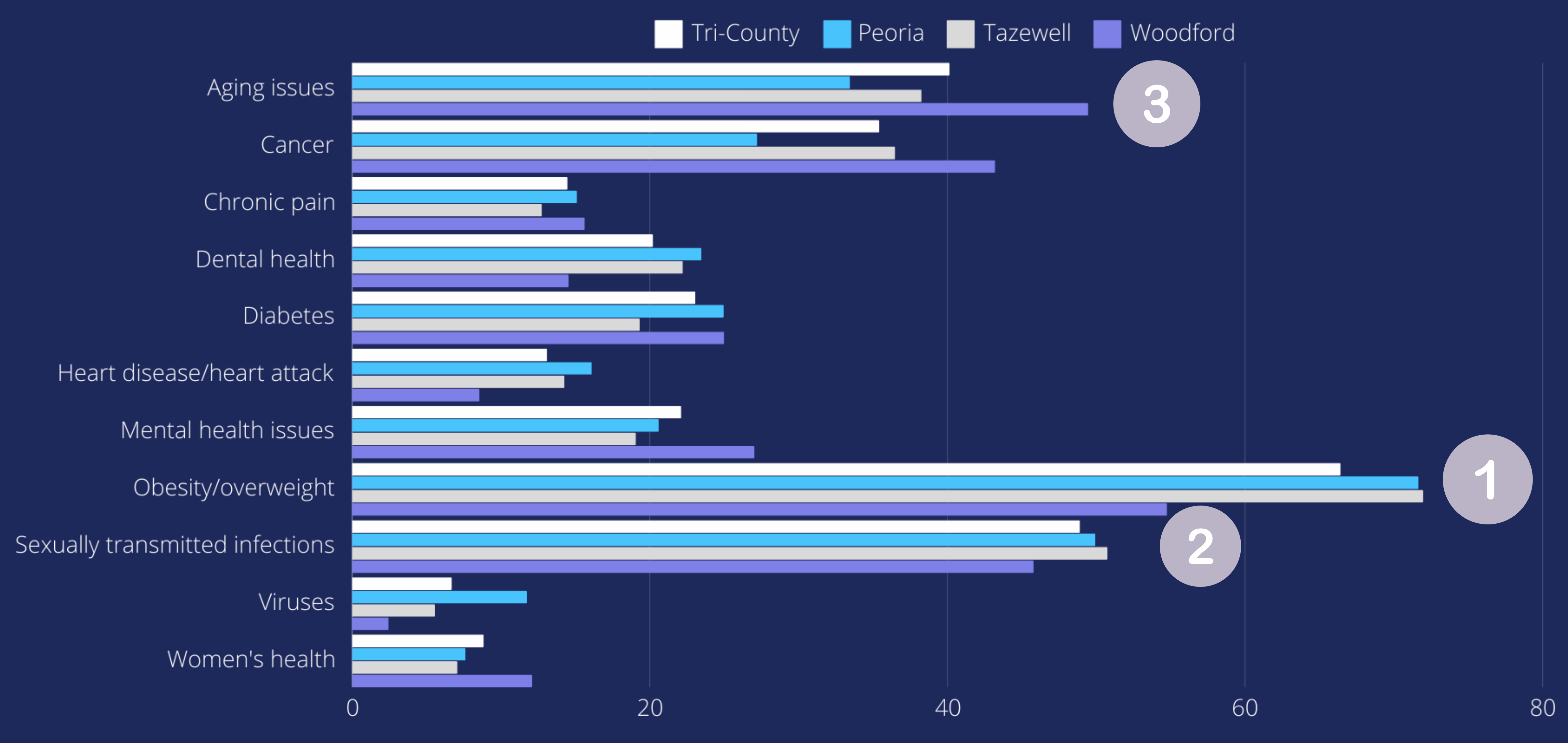
Approximately half of respondents reported living below the median income level for Peoria

Census % Response %

80.0%
60.0%
40.0%
20.0%
0.0%

	Census %	Response %
White/Caucasian		
Black/African American	17.6%	15.3%
Hispanic/LatinX	3.2%	4.3%
Pacific Islander	0.1%	0.6%
Native American	0.1%	0.4%
Asian/South Asian	4.5%	2.9%
Multiracial	4.4%	2.6%

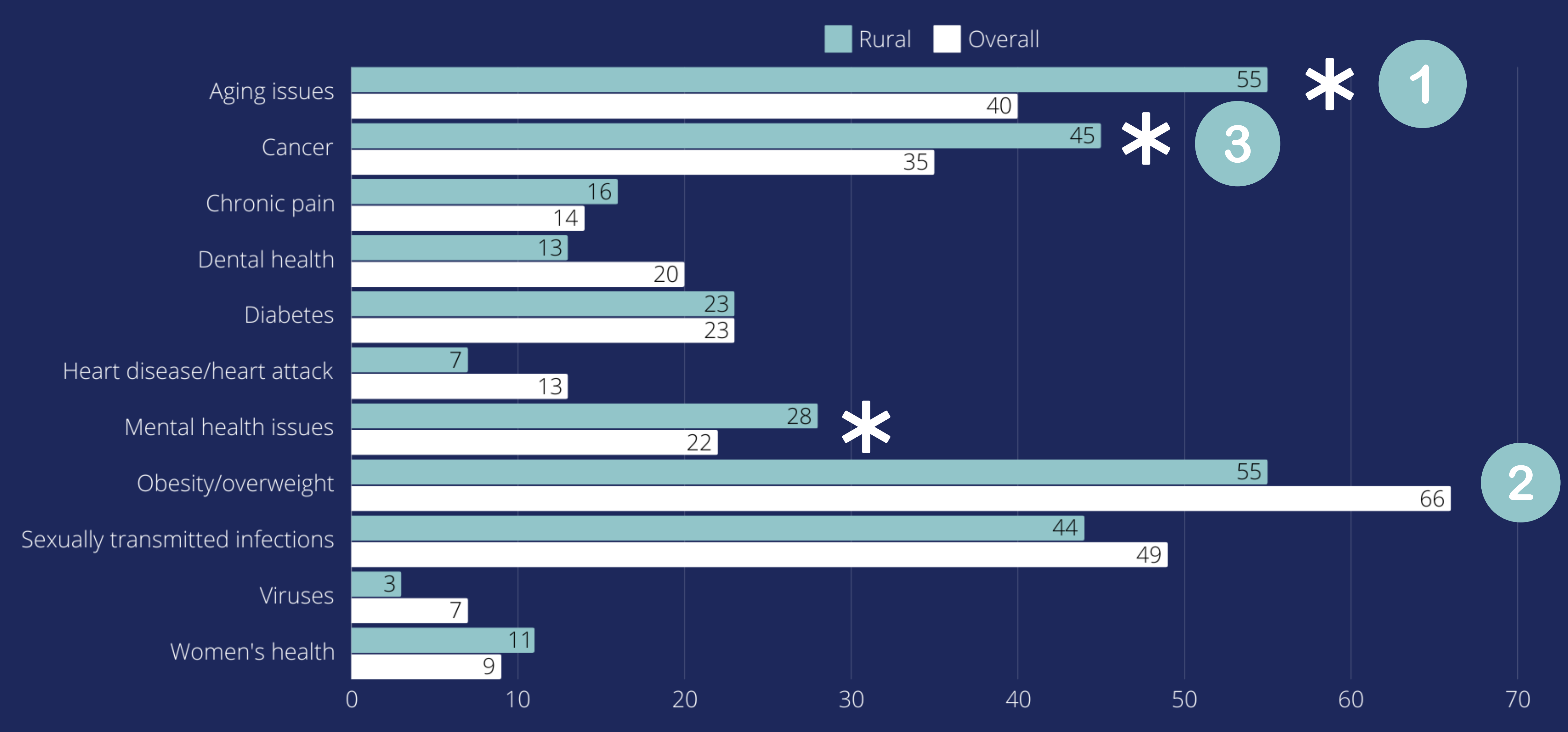
BIGGEST HEALTH ISSUES AMONG TRI-COUNTY RESPONDENTS



BIGGEST HEALTH ISSUES IN TRI-COUNTY REGION

	Health issue	Peoria	Tazewell	Woodford
★ 3	Aging issues			*
	Cancer			*
	Chronic pain			
	Dental health	*	*	
	Diabetes	*		*
	Heart disease/heart attack	*		
	Mental health issues			*
★ 1	Obesity/overweight	*	*	
★ 2	Sexually transmitted infections			
	Viruses	*		
	Women's health			*

BIGGEST HEALTH ISSUES AMONG RURAL RESPONDENTS



ASSESSING VULNERABILITY

As a way to assess health issues among the community that has a higher level of vulnerability, we assessed indicators in the CSA to determine if there were common elements

INDICATORS OF VULNERABILITY

The following pieces were examined among respondents using questions from CSA:

LOW INCOME

Reported household income <$20,000 last year, before taxes

MINORITY

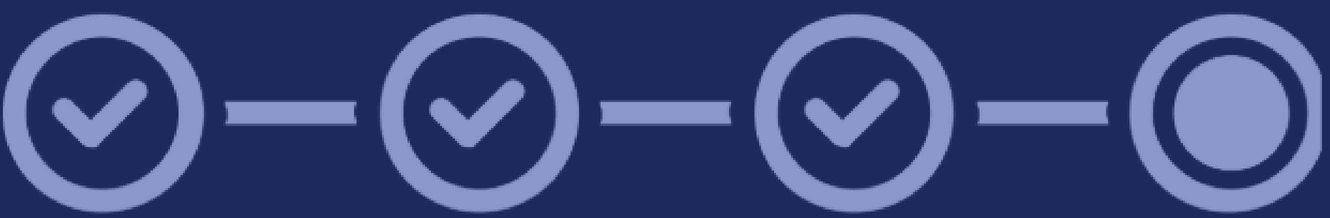
For this analysis, 'minority' was defined as those who reported any race other than white

LGBTQ+

Those who reported being non-binary, transgender, lesbian, gay, bisexual, or queer

UNINSURED

Comprised of respondents who stated they did not have insurance



VULNERABLE POPULATIONS

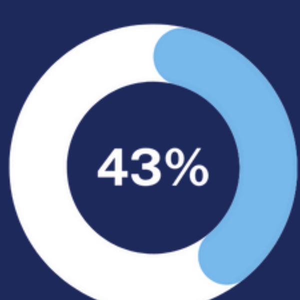
AT LEAST ONE INDICATOR OF VULNERABILITY

Overall % of respondents who reported at least 1 indicator of being marginalized

TWO OR MORE INDICATORS OF VULNERABILITY

Overall % of respondents who reported 2 or more indicators of being marginalized

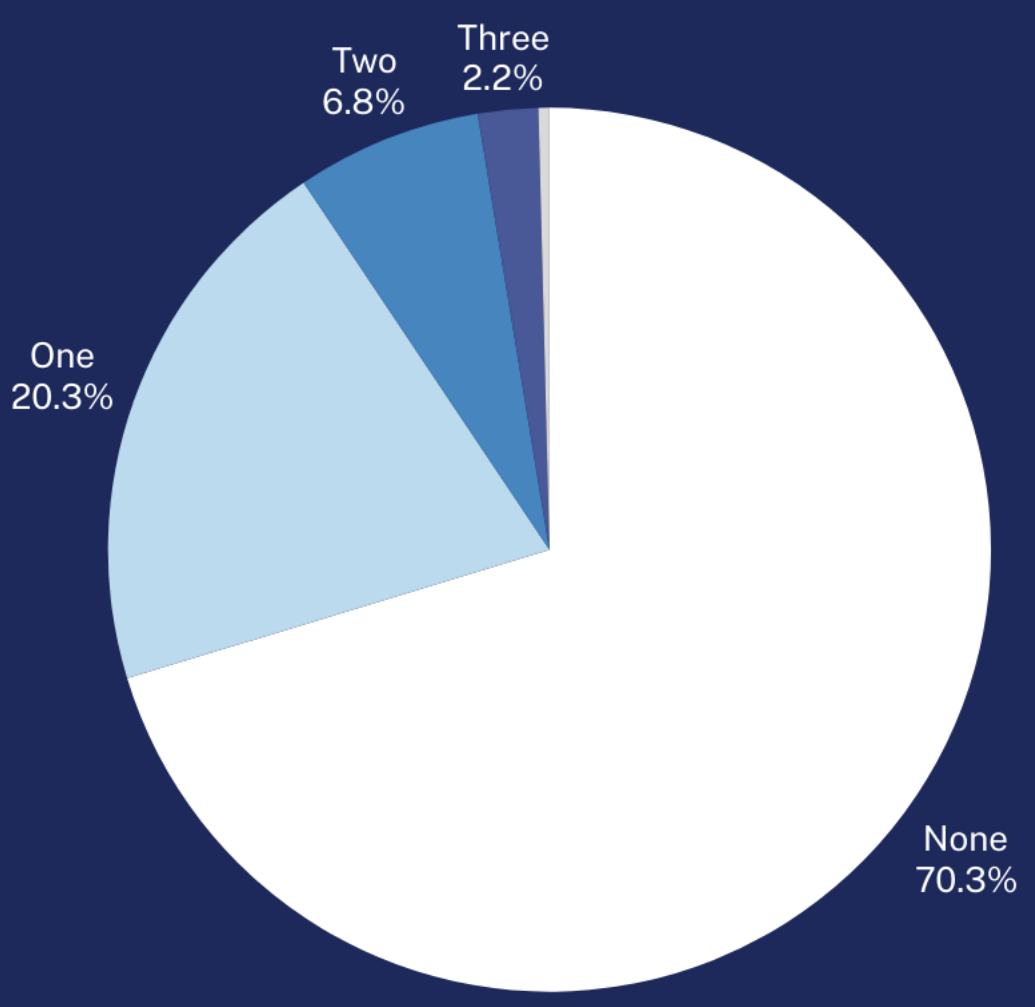
PEORIA



TAZEWELL

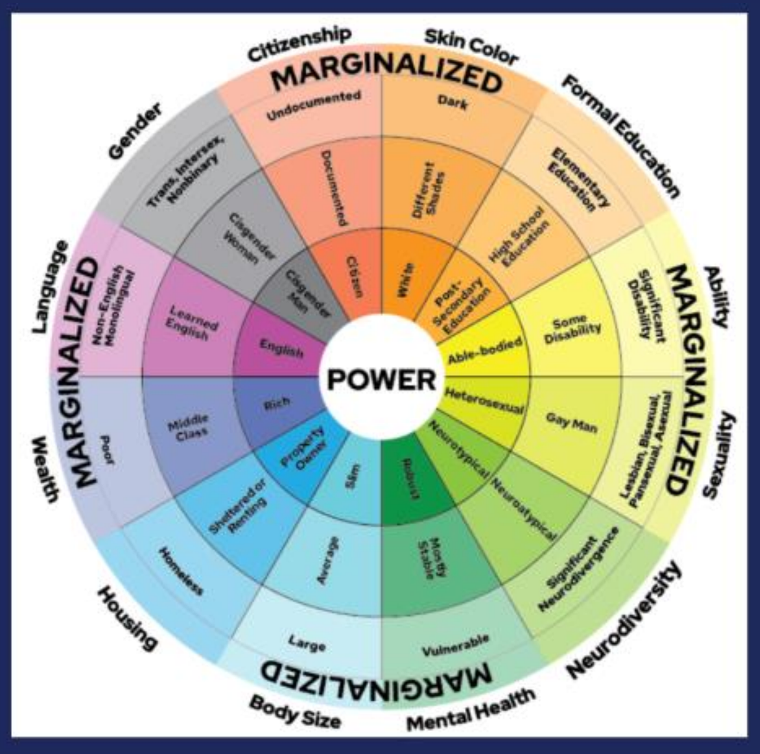
WOODFORD

NUMBER OF INDICATORS RELATED TO VULNERABILITY



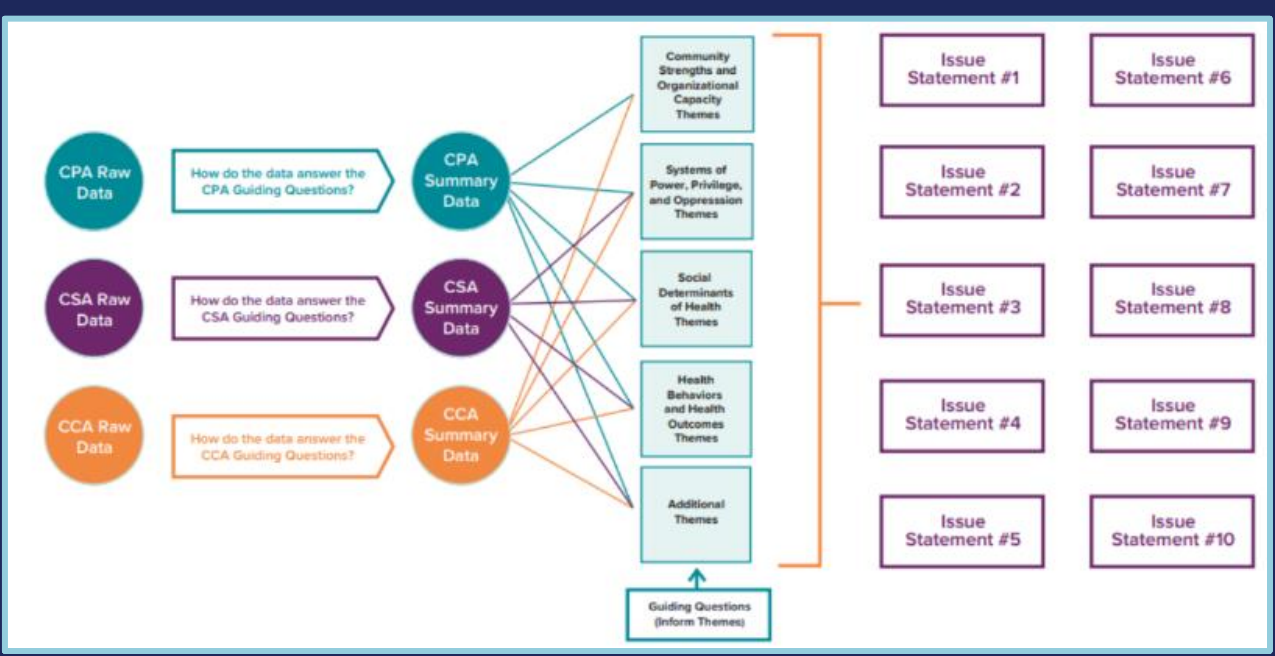
CONTINUOUS IMPROVEMENT

- The Data Team worked directly with the Community Conversation Team to provide tailored reports that helped guide conversations
  - Identified gaps (subpopulations)
  - Context and depth on what the health issues are in the region



DATA RESULTS

- Share results for the prioritization process
- Board and community members are presented with the results
- Series of meetings to review and discuss the findings
- Identify issue statements are voted on for prioritization



HELPFUL RESOURCES

- IDPH
  - IQuery
- Health factors
  - America's Health Rankings: https://www.americashealthrankings.org/
  - County Health Rankings & Roadmap: https://www.countyhealthrankings.org/
- Health outcomes
  - **CDC WONDER**: Wide-ranging ONline Data for Epidemiologic Research: https://wonder.cdc.gov/mcd.html
  - **WISQARS**: Web-based Injury Statistics Query and Reporting System: https://wisqars.cdc.gov/
  - **ESSENCE:** Electronic Surveillance System for the Early Notification of Community-based Epidemics
  - **Other annual survey data:** BRFSS, YRBS, NSDUH, NHANES
- Partnership: Leverage community partner data to provide insight

THANK YOU

skelly88@uic.edu

Questions?

10 Minute Break

Data Visualization

Samantha Lasky

Importance of Data Visualization

Identification of patterns within datasets

Quick comprehension of the point

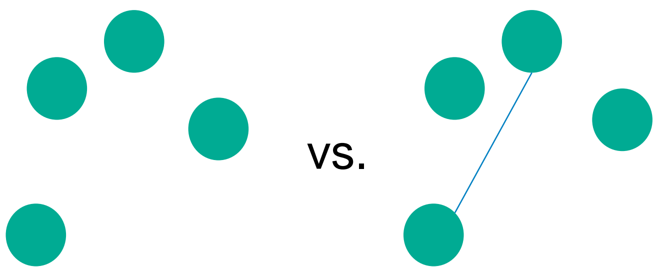
Better memory retention

Communication of stories and narratives associated with research

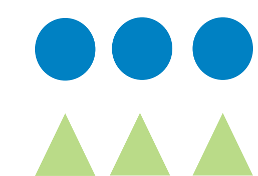
Better engagement or emotional reaction than text

Visual Perception Principles

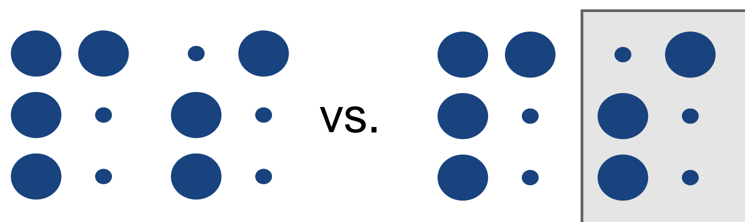
Connection



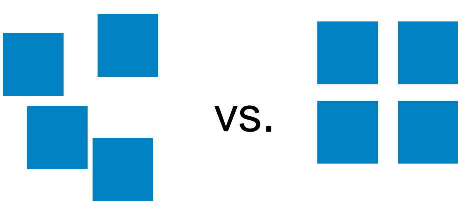
Similarity



Enclosure/Common Region



Proximity



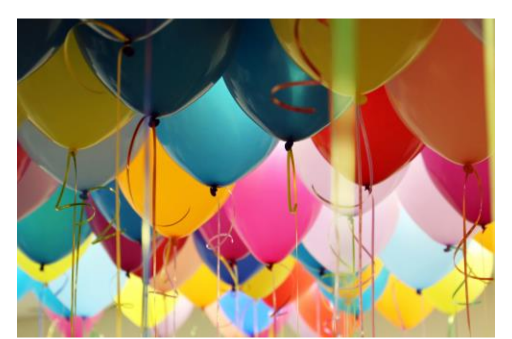
Continuity

Illinois Health
Public Institute

vs.

Illinois Public
Health Institute

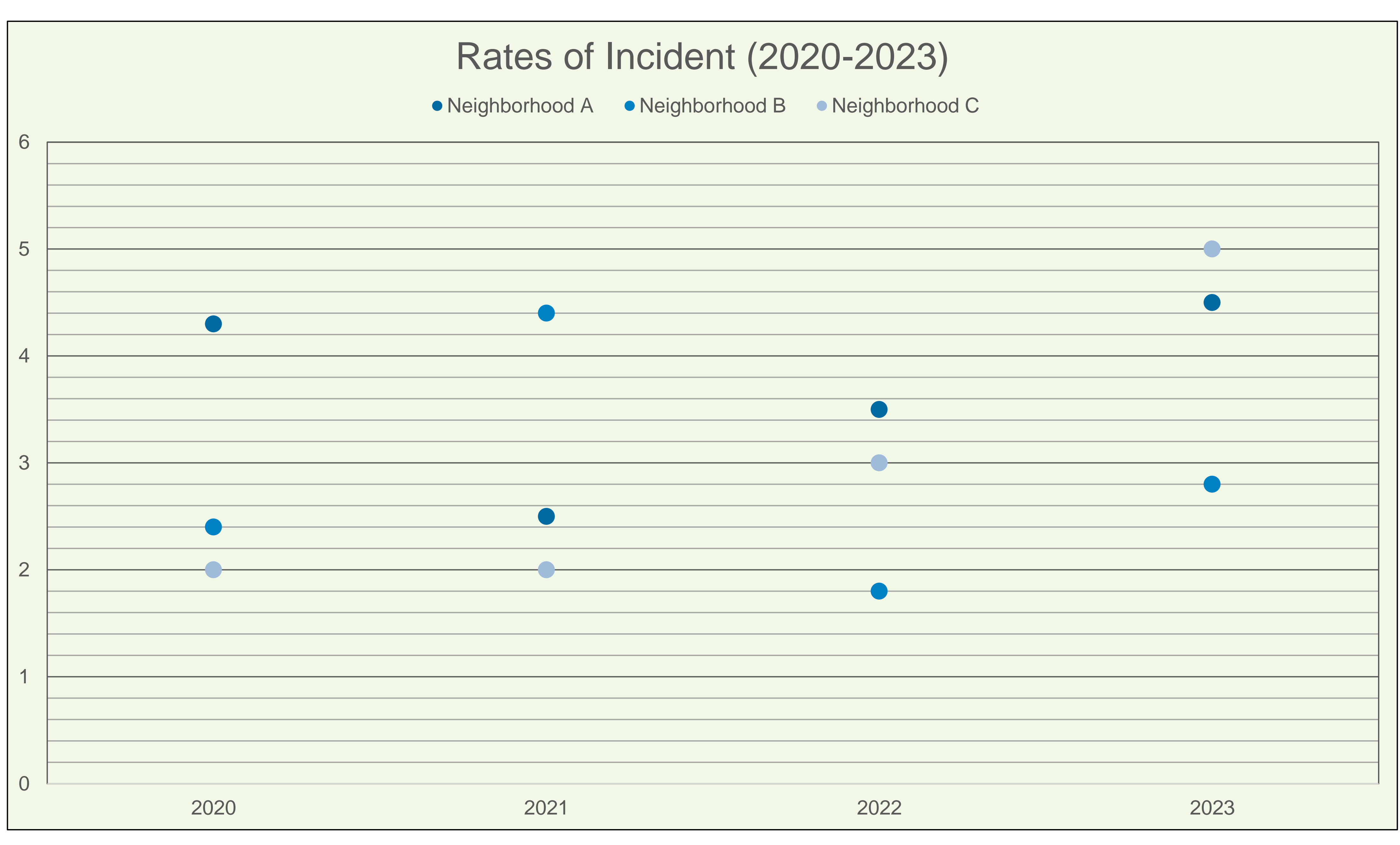
Blank Space

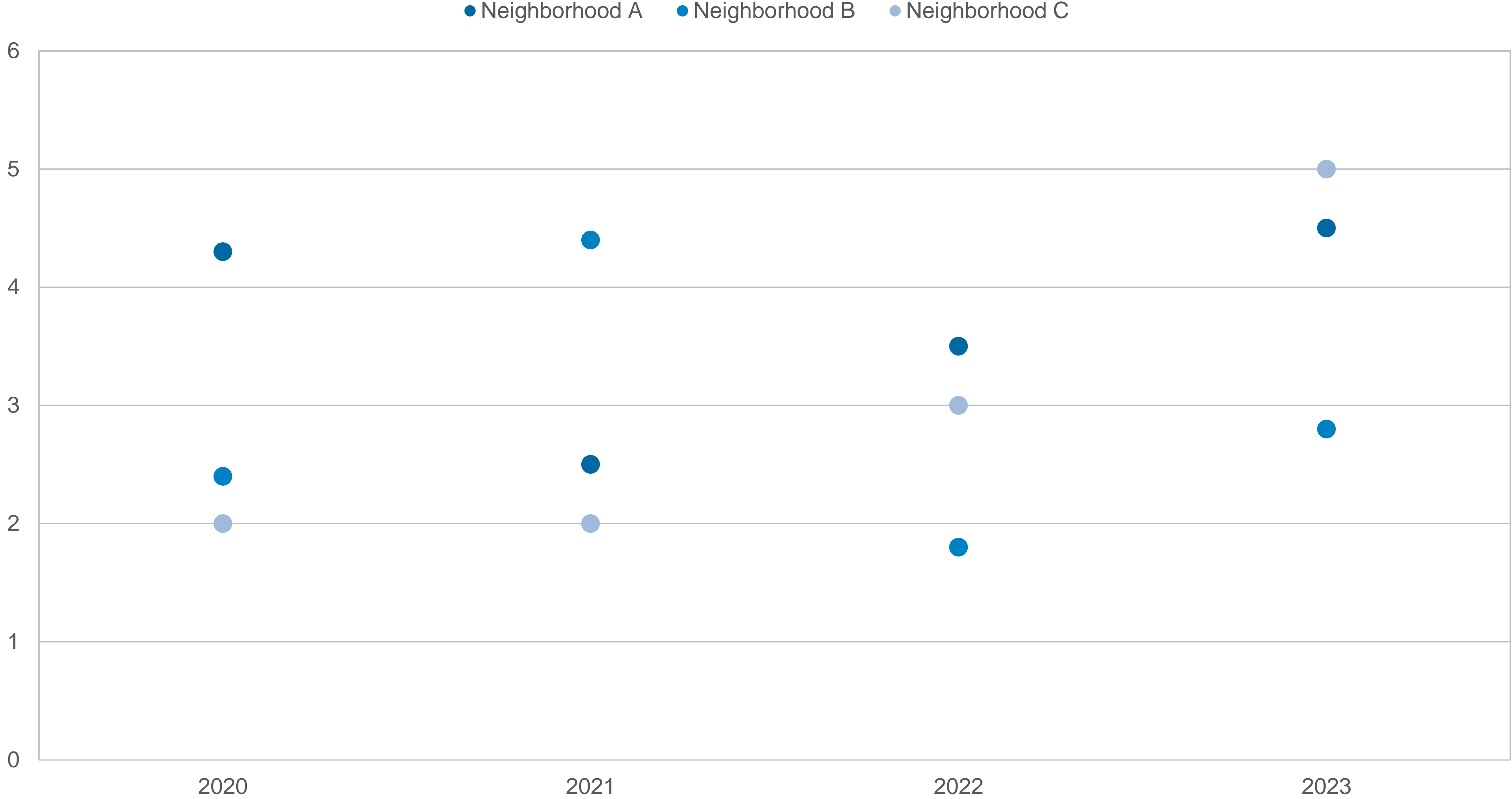


vs.

Points of View: Gestalt principles (Part 1)

What are the Gestalt Principles? | IxDF


Rates of Incident (2020-2023)
Neighborhood A
Neighborhood B
Neighborhood C
6
5
4
3
2
1
0
2020
2021
2022
2023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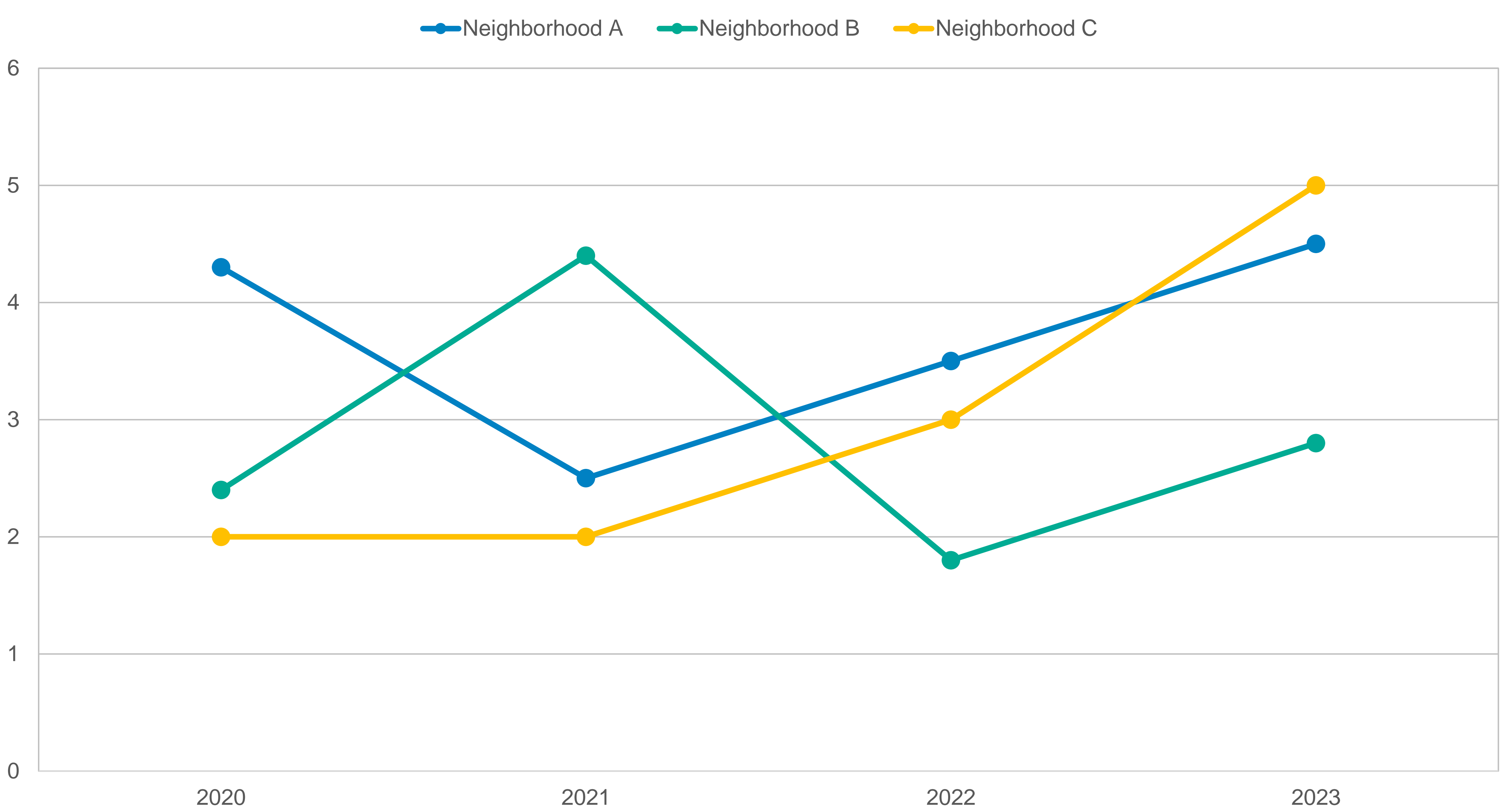

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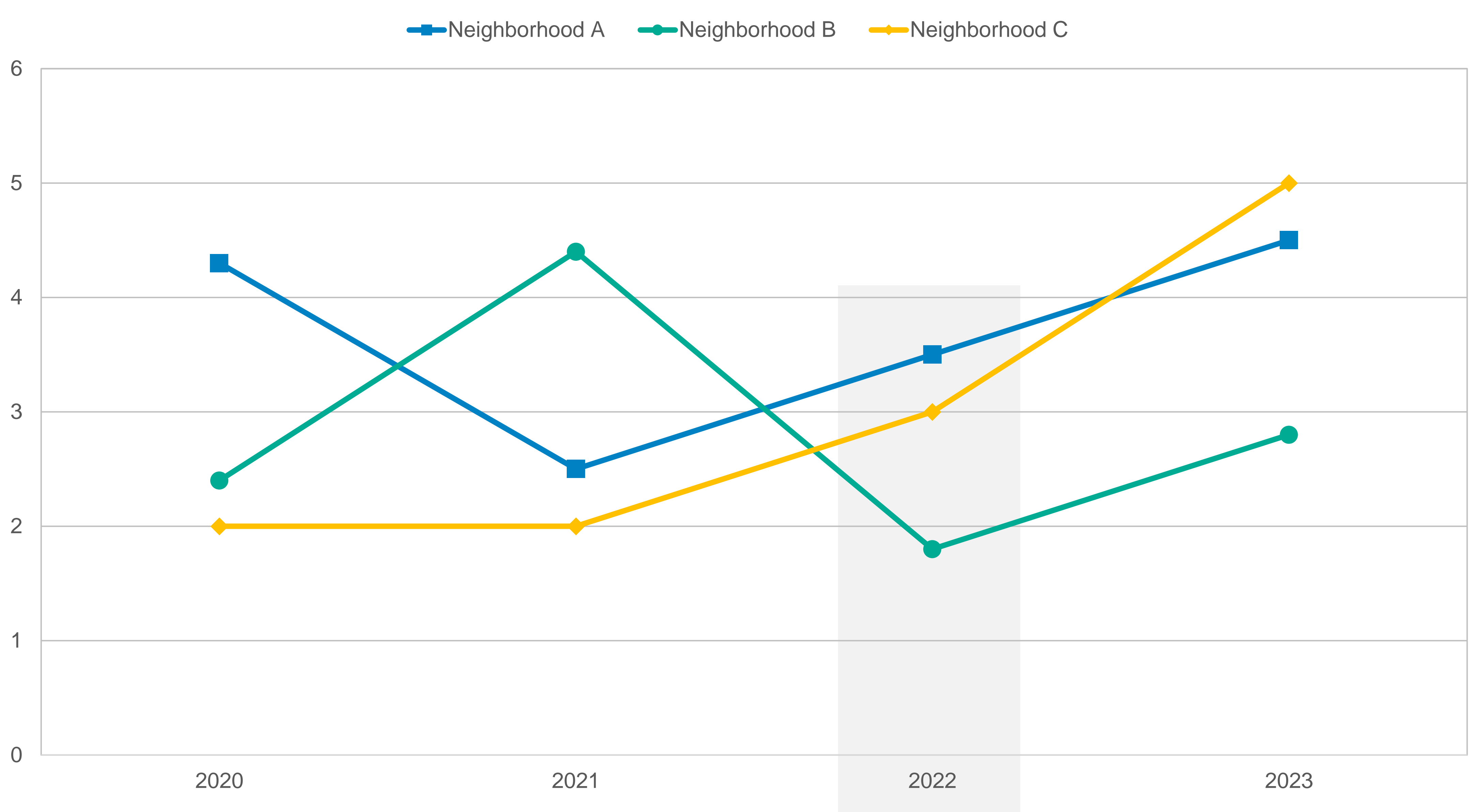

Rates of Incident (2020-2023)
Neighborhood A
Neighborhood B
Neighborhood C
6
5
4
3
2
1
0
2020
2021
2022
2023

Table Example

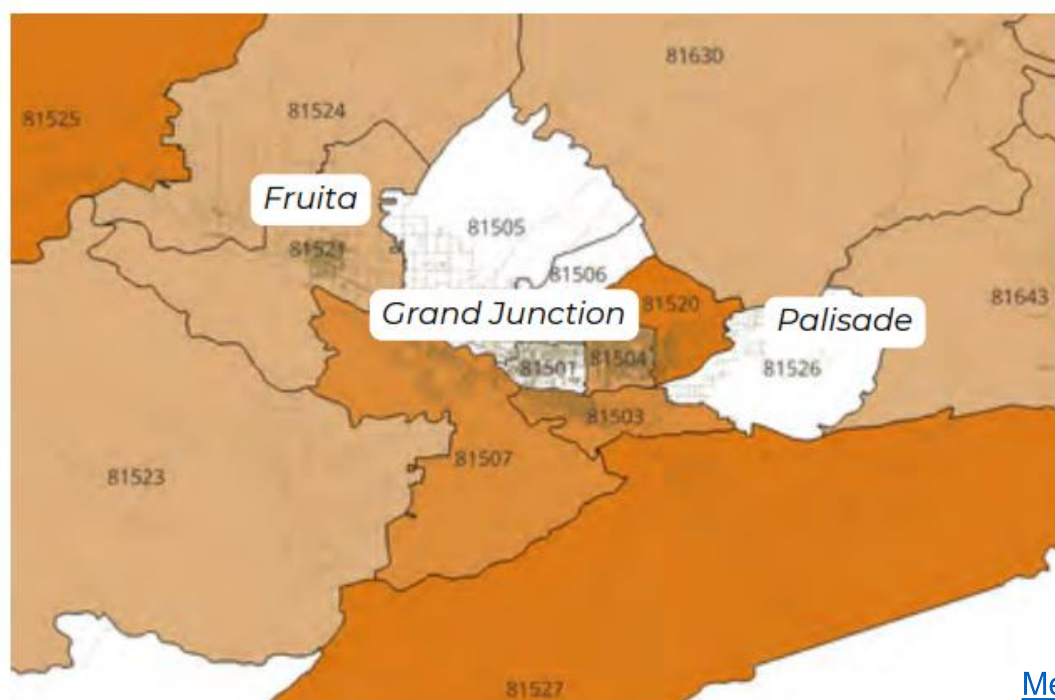
Group	Metric A	Metric B
Group 1	X.XX%	X.XX%
Group 2	X.XX%	X.XX%
Group 3	X.XX%	X.XX%
Group 4	X.XX%	X.XX%
Group 5	X.XX%	X.XX%

Group	Metric A	Metric B
Group 1	X.XX%	X.XX%
Group 2	X.XX%	X.XX%
Group 3	X.XX%	X.XX%
Group 4	X.XX%	X.XX%
Group 5	X.XX%	X.XX%

Group	Metric A	Metric B
Group 1	X.XX%	X.XX%
Group 2	X.XX%	X.XX%
Group 3	X.XX%	X.XX%
Group 4	X.XX%	X.XX%
Group 5	X.XX%	X.XX%

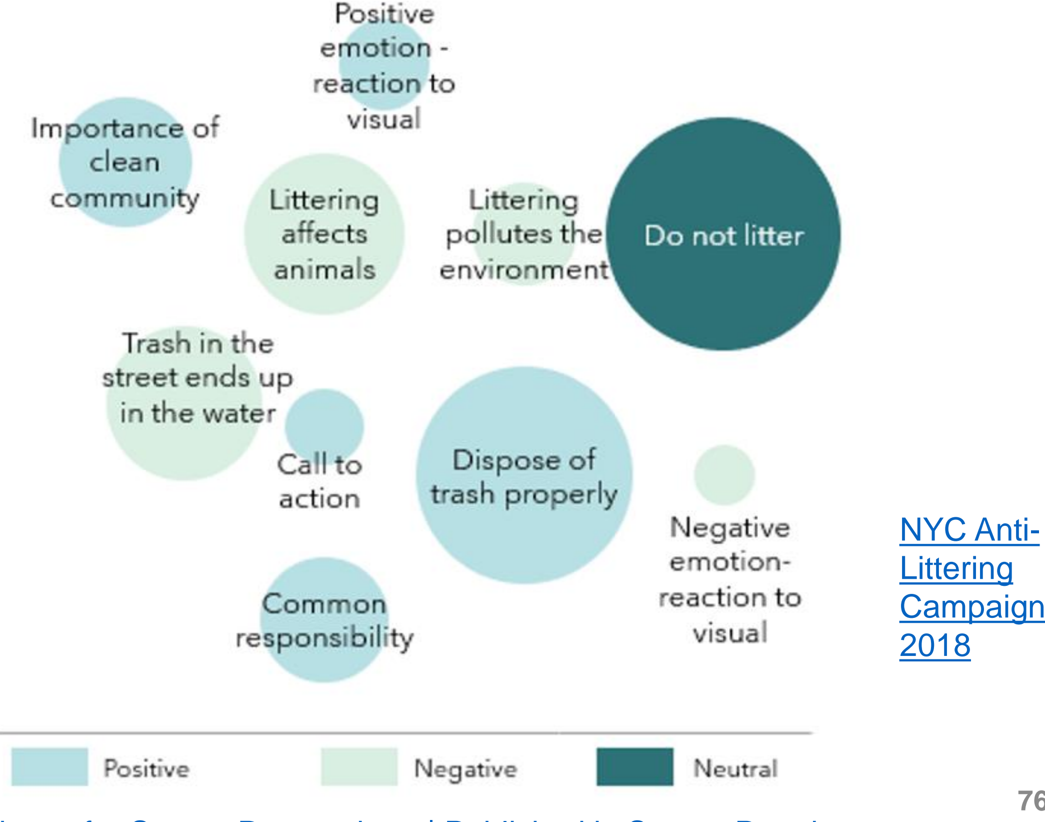
Data Visualization - Qualitative Data

Color and shape: used to highlight commonality among respondents or topics



[Mesa County, Colorado CHNA Report 2024]

Weight and size: shows important of information or hierarchy



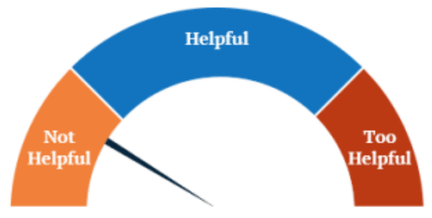
[NYC Anti-Littering Campaign 2018]

[What to Do With All Those Open-Ended Responses? Data Visualization Techniques for Survey Researchers | Published in Survey Practice]

Data Visualization - Qualitative Data

Gauge: breaks mental model and tells a story

The drug and alcohol program is unstructured, and the GED program is not fostering independence.



Drug and Alcohol

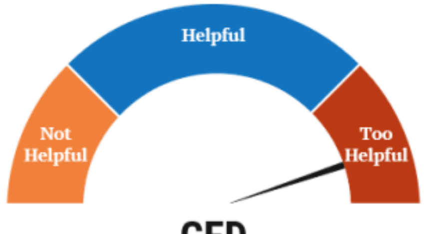
"Most of the time in class, we all mess around and talk."

- *Inmate Respondent*

Domestic Violence

"There is a strong bond of friendship and support from others in the program."

- *Inmate Respondent*



GED

"I felt like I learned a lot, but some of the material was very hard. The teacher gave us strong hints about some answers."

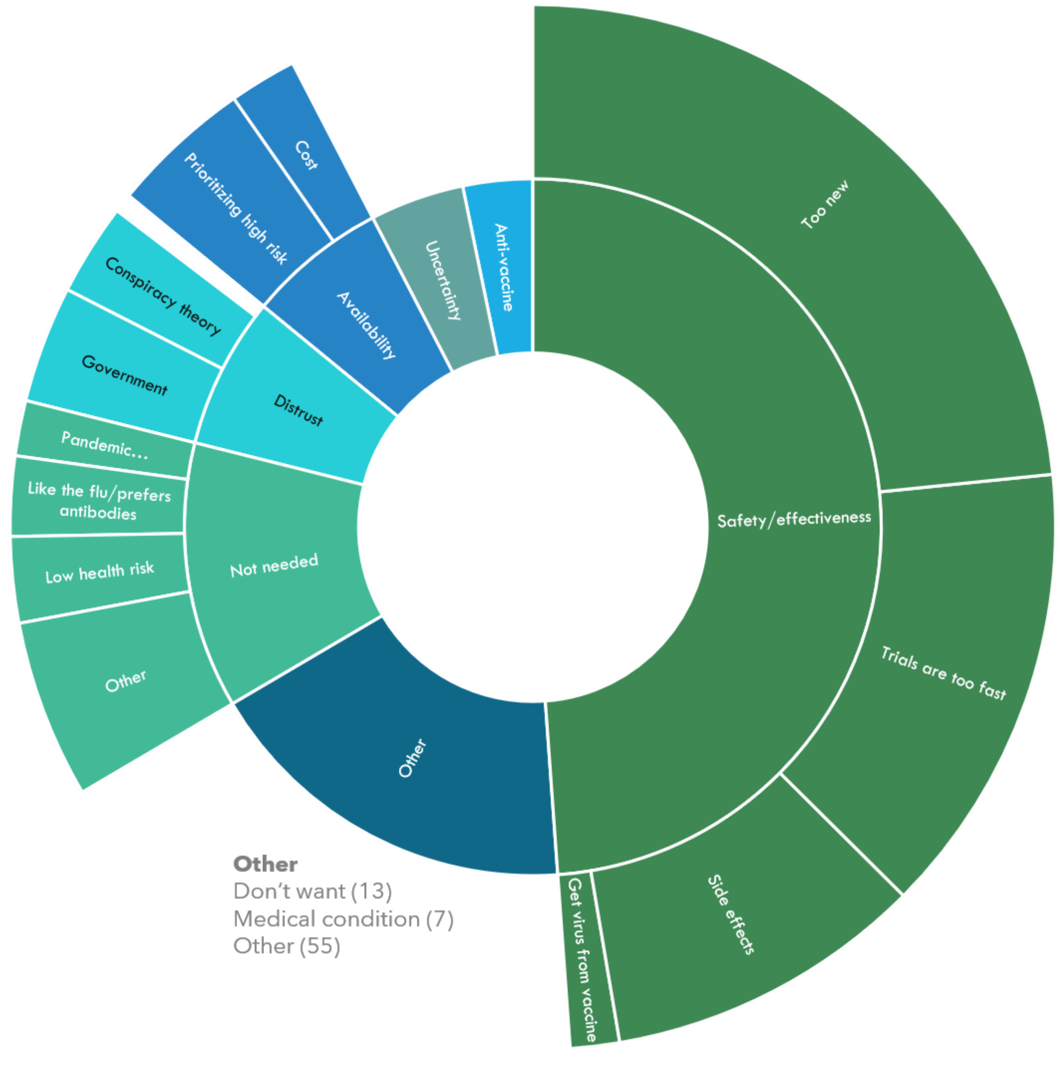
- *Inmate Respondent*

Must Know Qualitative Charts

Within the **Categories** the **code** highlights the diversity of opinions

632 total statements (Wave 6)

Proximity and connection: highlight the interconnection of ideas



What to Do With All Those Open-Ended Responses? Data Visualization Techniques for Survey Researchers | Published in Survey Practice

Considerations for sharing data with your community

Methods

- What are the best ways to connect with your community?
  - Community presentations
  - Press releases
  - Written reports

Message

- What information do you need your community to know?
- What are your key messages?

Audience

- What are the characteristics of your community?
- Develop a distribution plan for different community groups.

Channel

- What channels would be best to reach specific community groups?
  - Radio
  - Newspaper
  - Social Media
  - Others?

Adapted from: NACCHO, MAPP 2.0 Community Status Assessment Handbook

Accessibility Considerations

Color

- Colours in Cultures by Information is Beautiful: what colors emote by culture.
- Color Oracle by Bernie Jenny & Nathaniel Vaughn Kelso for those who experience color-vision deficiency (CVD) (red/green and red/blue most common).
- Color contrast is important to ensure you can read or view the visual (see here).

Labels and descriptions

- Visual indicators, such as a pattern, shape, or text label in charts
- alternative “alt” text that provides context and explains the most important details about the visualization

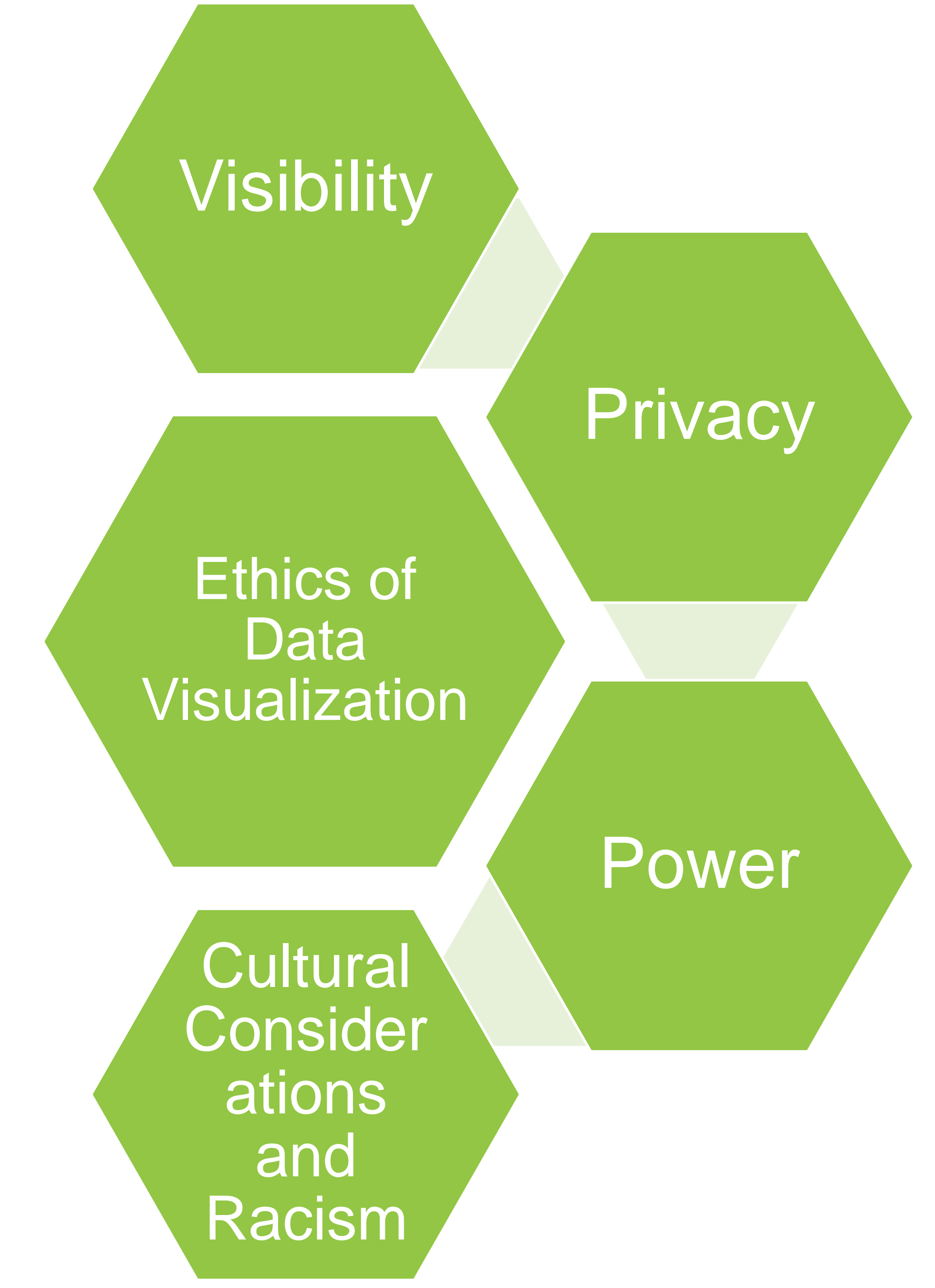
Visual considerations/screen readers

- Font sizes – for presentations at least 14 font
- Be conscious of using movement, animation, and flashing

https://accessibility.huit.harvard.edu/data-viz-charts-graphs

Ethical Considerations

Quote from Datassist: “Those in the process of using data - statisticians, designers, journalists, government officials, and more - ***have a responsibility to find meaning beyond their current understanding, and bring inclusive answers to light***. Because inclusive answers are also the right answers. Statistically. “



Breakout Group Activity

1. One person in each group should step up to be the facilitator (if no volunteers, choose the person whose last name comes first in alphabetical order).
2. One person in each group should step up to be a note-taker (If no one volunteers, choose the person whose last name comes last in alphabetical order).
3. Discuss the challenges with turning data into information.
   - What challenges do you experience with analyzing and presenting secondary data? (list 2-3)
   - What challenges do you experience with analyzing and presenting primary data? (list 2-3)

- Share solutions and ideas for overcoming these barriers. Share what you have done or what you have heard others do or fresh ideas.

Data Storytelling

“Data storytelling is the ability to effectively communicate insights from a dataset using narratives and visualizations. It can be used to put data insights into context for and **inspire action** from your audience.”

Catherine Cote, Harvard School of Business

https://online.hbs.edu/blog/post/data-storytelling

Components of Data Storytelling

Data: Analysis of data is the foundation of the story. Data analysis helps you understand the full picture (both qualitative and quantitative).

Narrative: Tells the story to communicate insights from the data, with context and action you hope to drive and recommend

Visualizations: Visual representations communicate your story clearly and memorably.

Steps of Data Storytelling

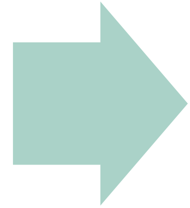
1. Tease the story from your data
2. Know what you want to say with your data
3. Know what your audience needs to know
4. Sketch and storyboard

Narratives and Re-Framing

- "A narrative communicates and reinforces a worldview and engages people in considering their own understanding of the world around them" (County Health Rankings and Roadmaps)

Dominant narratives

narratives currently held by many people, live in our heads and actions



Transformative narratives

align a set of values with health and equity goals to help reimagine what is possible

- Narratives:
  - Provide an understanding or interpretation of people and situations
  - Grounded in a larger set of values and beliefs
  - Serve a purpose – shape possibilities and outcomes
  - Most powerful when they draw on values and beliefs people already hold

Narratives for Health | County Health Rankings & Roadmaps

Narratives and Re-Framing

- How do we shift dominant narratives?
  - Exposing dominant narratives
  - Uncovering and elevating new narratives
  - Contrasting narratives and offering a choice
  - Sustain efforts and connect with others
  - Demonstrate through actions
- The Relationship Between Narratives and Messaging

Actions + Policies

Messages

Frames

Narratives

Worldview

Imagery adapted from Narrative Initiative, "Waves: A model for deep narrative change"

[Narratives for Health | County Health Rankings & Roadmaps]

Applying Narratives

Data, Evaluation and Research

- Add community and historical context to dominant narrative
- Identify new research or evaluation or how you'd conduct it differently using the transformative narrative

Communications

- Create talking points
- Pull concepts form your narrative to ground your messaging
- Does the communication unintentionally strengthen dominant narratives? Check yourself

Policy Advocacy

- Reflect on existing policies or policies you are advancing
- Incorporate transformative narrative messaging into advocacy campaign

Relationship and Container Building

- Use narratives as a discussion tool to define shared values
- Co-create group agreements

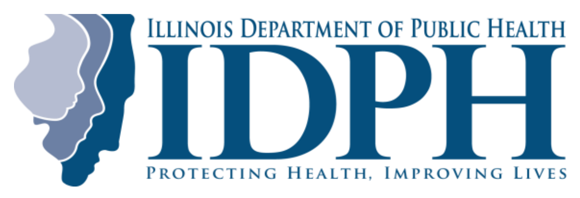
Strategic and Program Planning

- Explore existing activities/programs
- Identify new programs or frameworks to advance the transformative narrative

Q&A

Evaluation Poll

This series is made possible with funding from IDPH and the Community Health Assessment and Planning Grant, 2024



Thank you!

Laurie Call at
Laurie.call@iphionline.org

Samantha Lasky at
Samantha.lasky@iphionline.org

Join us for the rest of our webinar series!

Register at:

https://bit.ly/IPLANtrain2025

Upcoming IPLAN Webinars

- Group TA Session with IDPH Data Stewards - April 24th from 1pm-2pm
- Building Community Power Through Policy and Systems Change - June 26th from 1pm-3pm

Resources

- Chart Dos and Don'ts - Great advice from the European Environment Agency.
- More Dos and Don'ts - Advice from Duke University Libraries.
- Colours in Cultures by Information is Beautiful: what colors emote by culture.
- Color Oracle by Bernie Jenny & Nathaniel Vaughn Kelso for those who may be colorblind.
- The color wheel featured here is a tool to help you choose color combos. (Demonstration.)
- Points of View: Gestalt principles (Part 1)
- What are the Gestalt Principles? | IxDF
- Data Visualization – UC Berkley – helpful guidance
- Data visualization Accessibility
- Accessibility for documents checklist

ILLINOIS PUBLIC HEALTH INSTITUTE

Resources Continued

- https://idatassist.com/how-not-to-visualize-like-a-racist/
- A Reader on Data Visualization – Data Viz ethics
- Building Narrative Power – County Health Rankings
- NFH website materials – Narratives for Health Materials
- Must Know Qualitative Charts
- What to Do With All Those Open-Ended Responses? Data Visualization Techniques for Survey Researchers | Published in Survey Practice
- what is a bubble chart and when should I use a bubble chart — storytelling with data
- Mesa County, CO CHNA 2024
- Qualitative Chart Chooser and Evergreen-Data-Quantitative-Chart-Chooser.pdf