IOWA

Institute for Public Health
Practice, Research and Policy

Disaggregate It!

Understanding the health status of your population

2025

Meet Your Training Team

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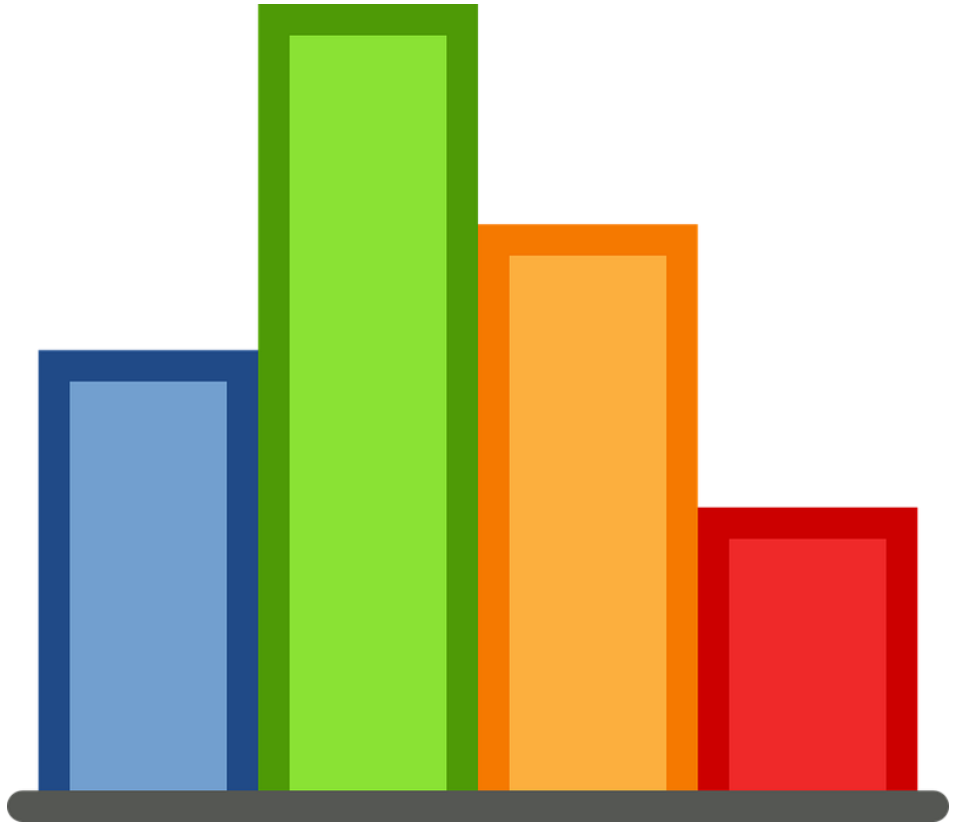
Training provided in partnership with the Institute for Public Health Practice, Research and Policy through a contract from the Iowa Department of Health and Human Services

Data Training Opportunities

- Data Basics
- Tackling Data
- Visualize This
- Disaggregate It

Check out our website to see upcoming training dates!

Menti.com



Disaggregate It! Resources

Training Resources

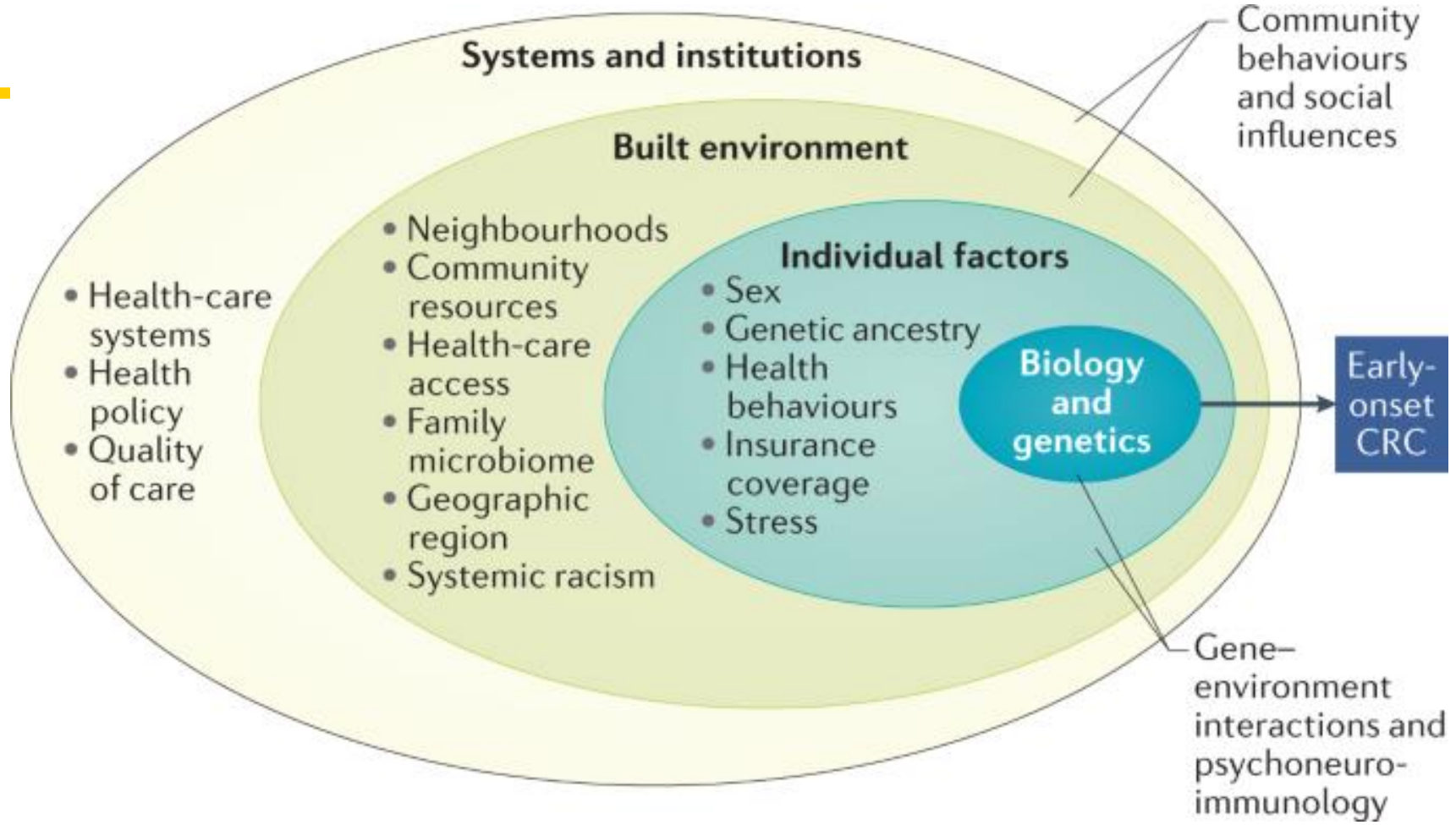
BRFSS Prevalence and Trends Data (CDC)

Follow this link to look at colorectal cancer screening trends for the Disaggregate It! training. To view the colorectal cancer screening data, make sure Iowa is the selected location, and then choose “colorectal cancer screening” from the “Class” drop down list and “USPSTF Recommendations” from the “Topic” drop down list.

Learning Objectives – by the end of this session, participants will be able to:

- Understand why data disaggregation is important to public health practice
- Explain how bias can impact the collection, use, analysis, interpretation, and communication of public health data
- Identify key data sources and methods for data disaggregation in public health

Creating a Conceptual Framework for Early Onset CRC



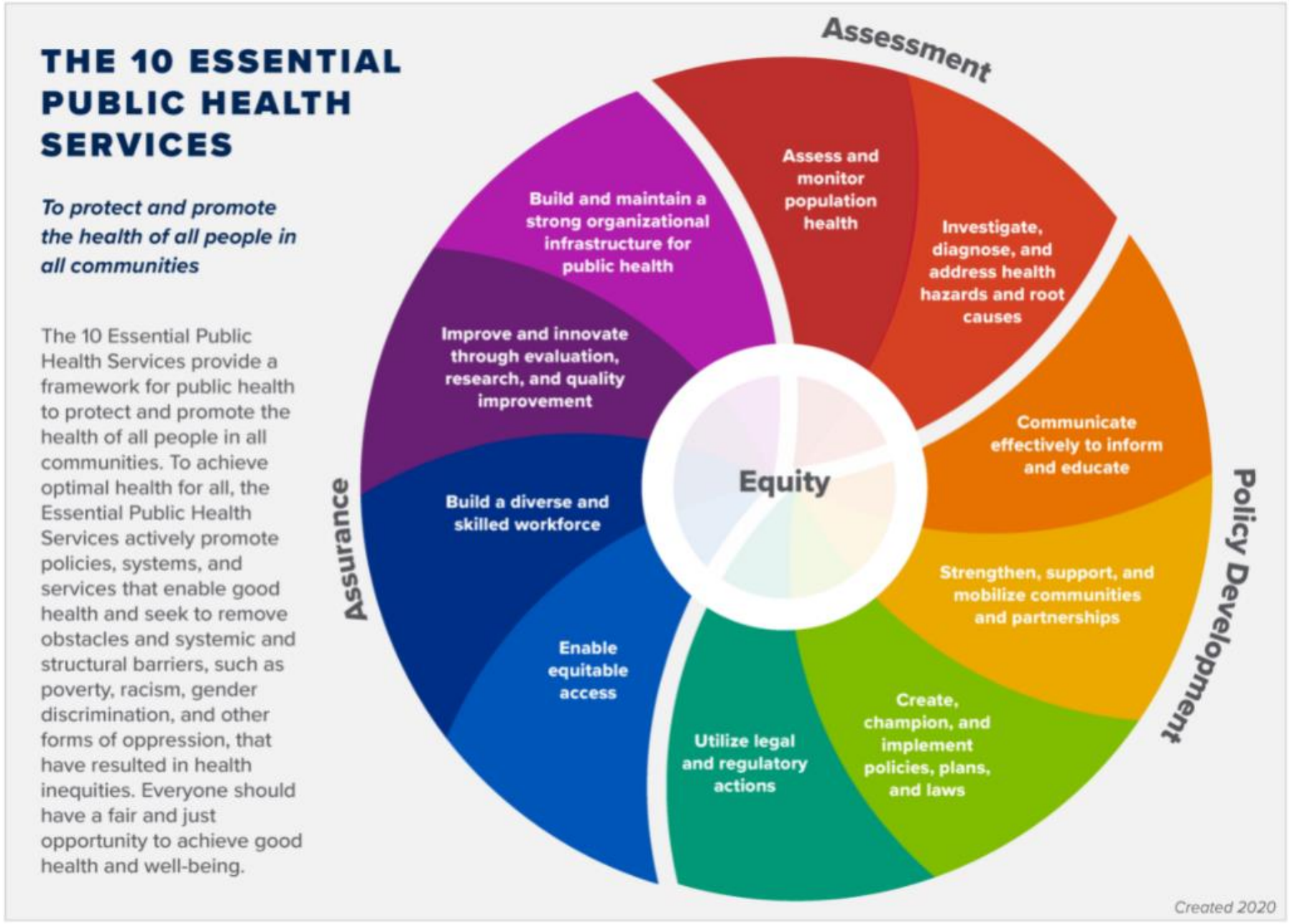
https://www.nature.com/articles/s41568-021-00356-y

What is Data Disaggregation and Why is it Important to Public Health?

- “Disaggregated data refers to the separation of compiled information into smaller units to elucidate underlying trends and patterns.” (PAHO Understanding Data Disaggregation in Public Health Toolkit 2020)

Using an Approach of “Targeted Universalism”

Achieving a goal of good health for all people in a way that is targeted/tailored to the specific challenges of population groups.



We may have goals related to DESCRIBING what is happening and/or IDENTIFYING differences and/or MONITORING disparities.

What is a Health Equity Data Analysis?

- A health equity data analysis (HEDA) is a process that uses data to identify and examine health differences between populations, and the causes of those differences.

HEDA: Conducting a Health Equity Data Analysis: A guide for local health departments in Minnesota, version 2.1 (2022)

Data to Advance Health Equity Conducting a Health Equity Data Analysis

https://www.health.state.mn.us/data/mchs/genstats/heda/index.html

STEP	Definition	Data Sources
Connection	Expand your understanding of the multiple determinants of health	Existing scientific literature and research
Population	Description of community and identification of populations that may experience health inequities	Census, local survey, vital statistics
Differences	Description of health differences between population groups	Health surveys, vital statistics, other health surveillance systems, program data
(Re)Connection	Understanding the connections between social and economic factors and health	Existing scientific literature and research
Conditions	Description of the living conditions that create the health differences between population groups	Qualitative data such as focus group findings
Causes	Description of what causes differences in living conditions - policies, systems, structures	Qualitative data such as document reviews or policy analysis

Challenges in doing a Health Equity Data Analysis

- Important to do a complete needs assessment to really know your population (quant and qual)
- Social and economic factors are difficult to measure
- Data may not be available for population sub-groups
- Data may not be available at the geographic level of interest
- Relevant data may be collected outside your organization (do you have access?)

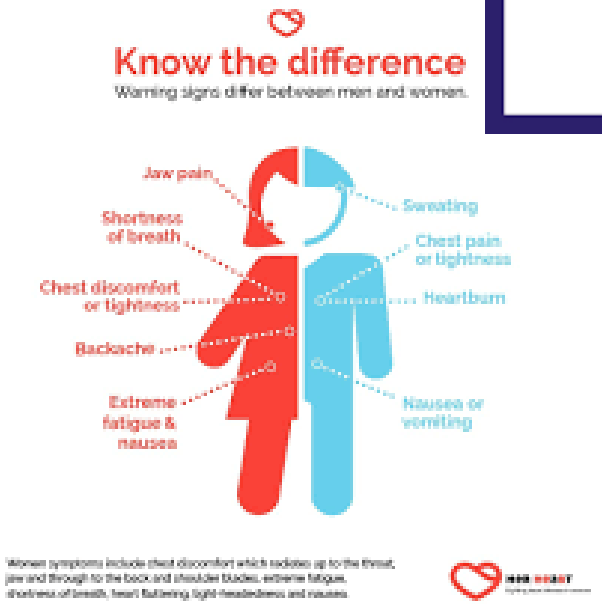
What is error/bias? Why is this important?

- Sampling/random error – we think of this as sampling variability
  - Small samples lead to imprecise estimates. Therefore, any observed small differences based on small samples are more likely to be due to random error and not true differences.
- Systematic error/bias—we think of this as external threats to the validity of the study

How our perceptions about health can influence how we collect, analyze, interpret, and communicate data.

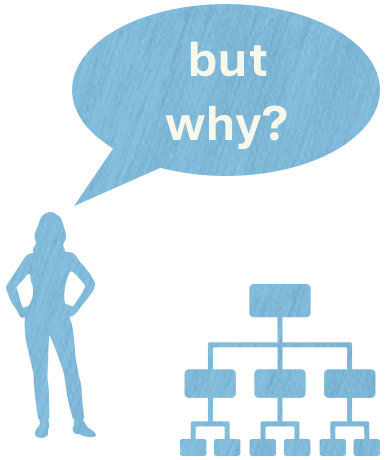
- Each of us has our own “view” of the world based on our experiences, our interactions, what we read, who we talk to, what we watch on TV etc. This can lead us to think about data through a certain lens or perspective.
- When people with different perspectives come together to make decisions across the whole data continuum we can generate a clearer picture of the health status of a community.
- Provide information in ways that tap into and expand people’s view (understand the current mental models and tap into those to educate people on health outcomes and risks).

Invisibility



How does implicit bias affect the data?

- Lack of bias awareness leads to poor evaluation of the language you use in your research question, what data you collect, who you collect data from, and how you interpret data findings



https://www.forsmarshgroup.com/knowledge/news-blog/posts/2020/february/a-researcher-s-tips-for-combating-implicit-bias/

Key groups to consider – what biases might they have?

Stakeholders

Priority population

Target Audience

Stakeholders

- Could be people who are directly impacted by the health issue (priority population)
- People who have expertise in the issue of interest
- Cross-sector partners
- People who will make decisions about what to do (target audience)

Think about what biases your stakeholders might possess

Target Audience

Know your audience

- Identify the primary audience, the more you know about them, the better
- Could be policymakers, experts in a specific field, advocates for specific groups, health care providers, local media

Your audience will influence your decisions about how you display your data, emphasis, organization and tone

Priority population

What population(s) is most impacted by the health issue?

May be defined by:

- Demographic factors like age, sex, race/ethnicity, income, education, health care access
- Geography - county/city/state/country
- Setting - school, church, workplace etc

Think: who, what, where, when?

Are there other characteristics of the priority population that must be considered when collecting data?

https://health.mo.gov/data/InterventionMICA/AssessmentPrioritization_5.html

Approach our work with community centeredness—understanding context

We can ask the following types of questions:

- What are the community's beliefs about health and related risk factors?
- What traditions and norms exist in the community?
- What are some perceived causes for prominent health issues in the community?
- What are the community demographics and trends?
- What are the community's specific interests, needs, and assets?

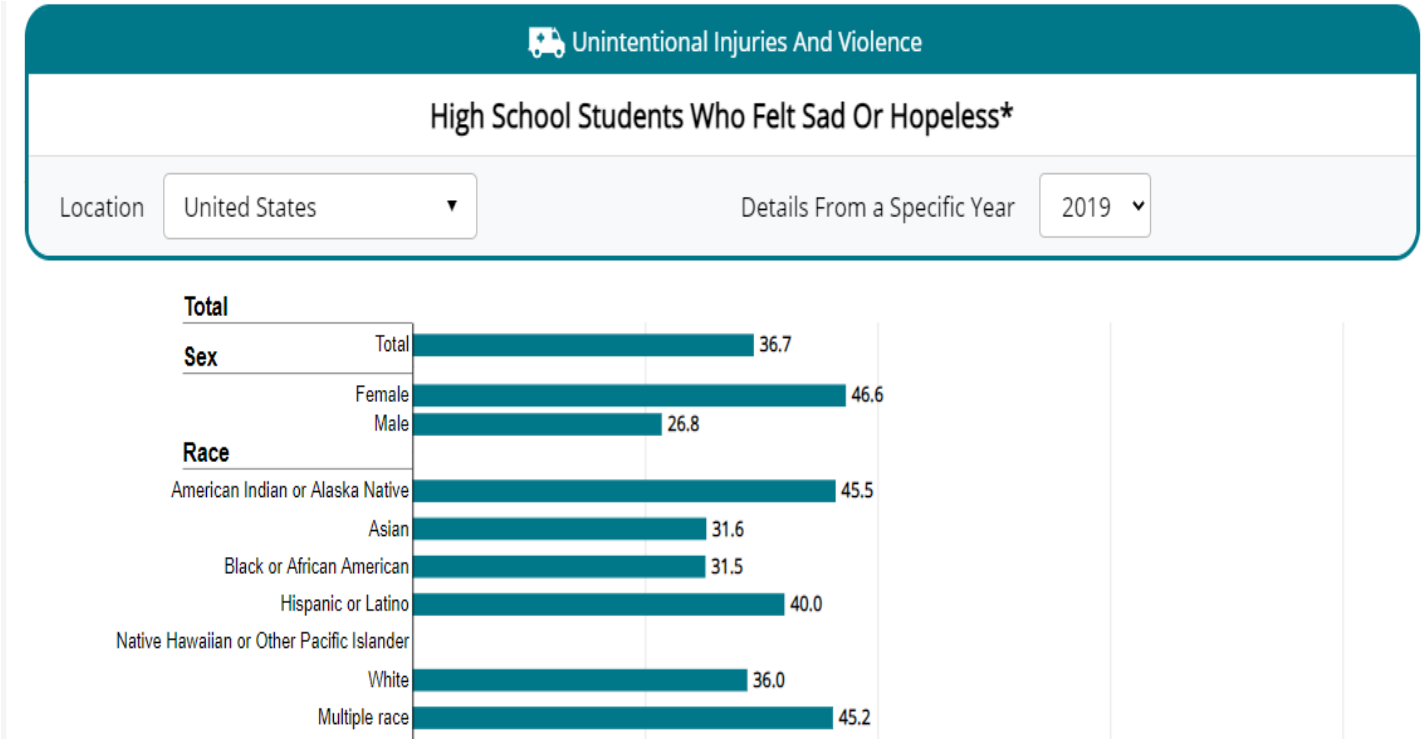
Who are some of the audiences you share information with?

What are the important characteristics you need to consider to communicate with them?

How can we use quantitative & qualitative data to identify and describe health disparities?

What is Disaggregated Data?
Can we better describe the situation?

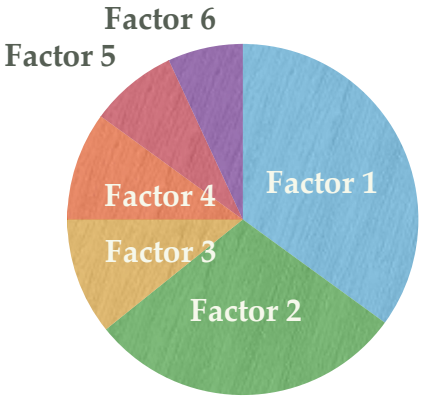
- Data that has been separated into detailed sub-categories or sub-populations.



Disaggregate it!

What is Disaggregated data?

Stratify data by factor(s) of interest



State of Iowa Measure - 2015-2019

Infant Mortality (Per 1,000 Live Births)	4.55

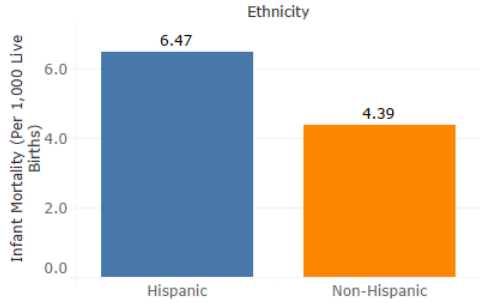
Disaggregated by Ethnicity

State of Iowa Infant Mortality by Ethnicity - 2015-2019

Ethnicity	Infant Mortality (Per 1,000 Live Births)
Hispanic	6.47
Non-Hispanic	4.39

Ethnicity
Hispanic
Non-Hispanic

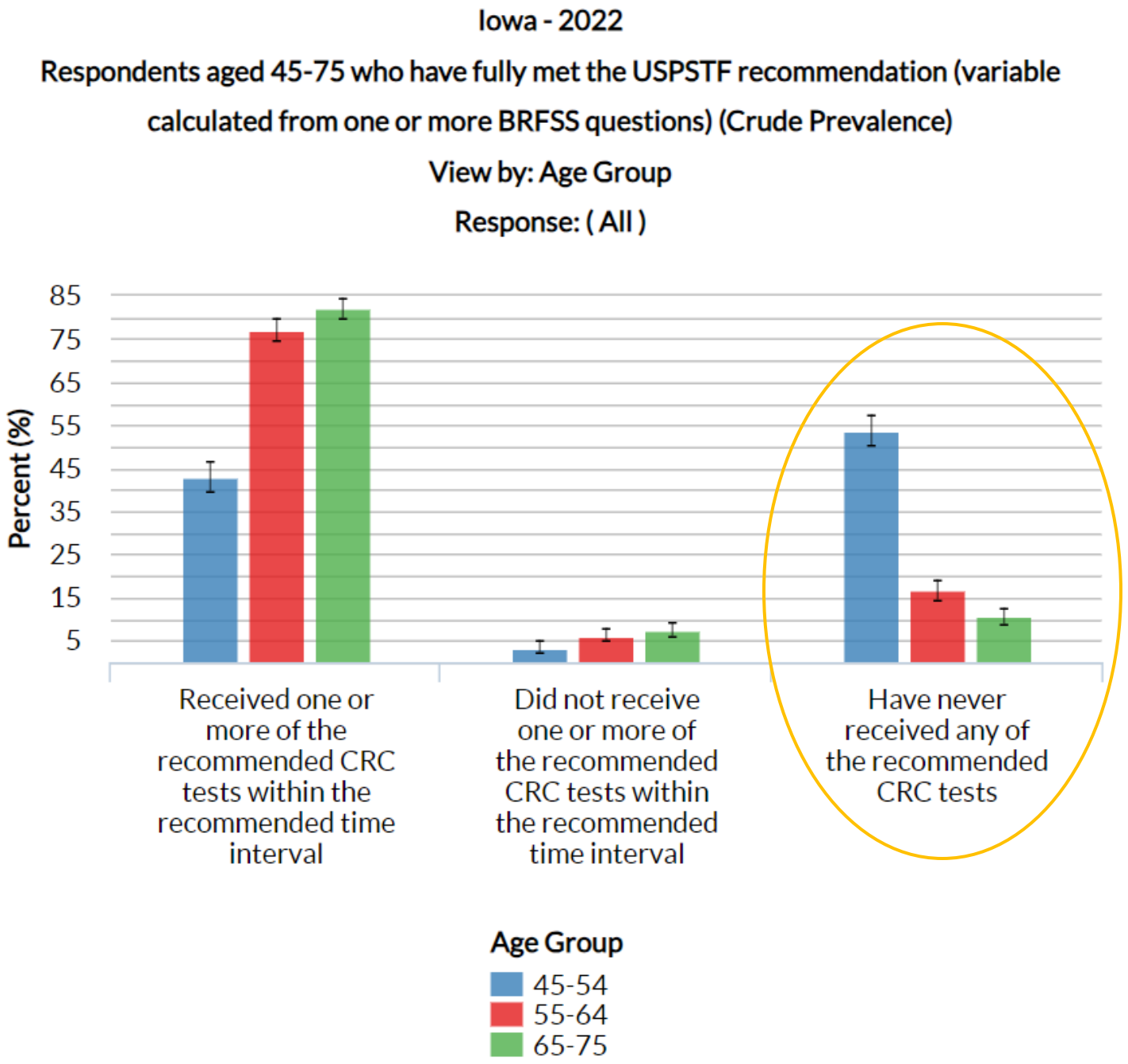
State of Iowa Infant Mortality by Ethnicity - 2015-2019



https://tracking.idph.iowa.gov/People-Community/Reproduction-and-Birth/Infant-Mortality/Infant-Mortality-Data

Example: CRC Screening

- What conclusions do you make about who is at risk for not being adequately screened for CRC?
- What actions would you take?



Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

Where/How Do We Get Disaggregated Data?

- Survey Data
- Small Area Estimates
  - We often think of SAEs for county level estimates of data collected at the state level, but SAEs can also be calculated for demographic subgroups.
  - Small area estimates are calculated using statistical methods that allow different data sources to be combined
- Geographic Information Systems (GIS/Mapping)

Benefits of Disaggregated Data

Problem detection

Identification of data patterns - trends and comparisons

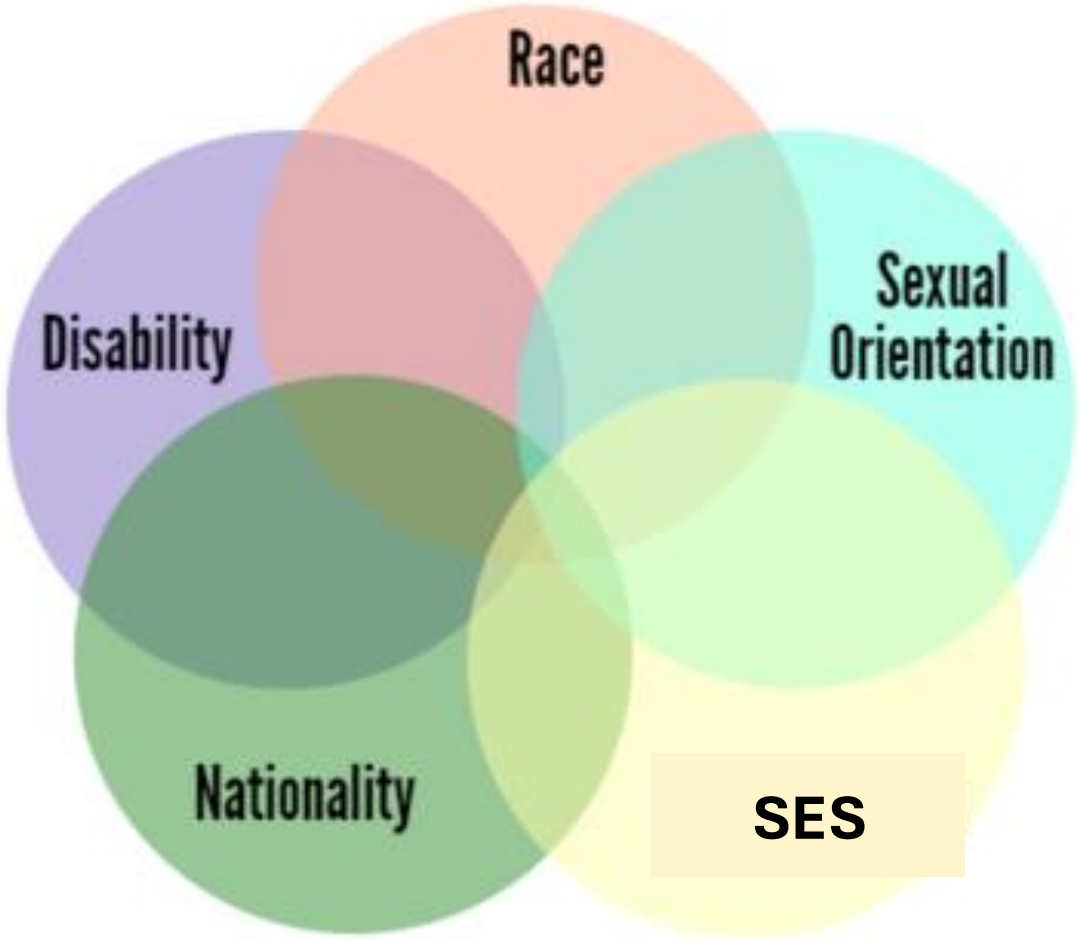
Increase the understanding of a population's characteristics

Understand health barriers and assets in the community

Identify which groups could benefit from resources and tailored intervention

Intersectionality and Health

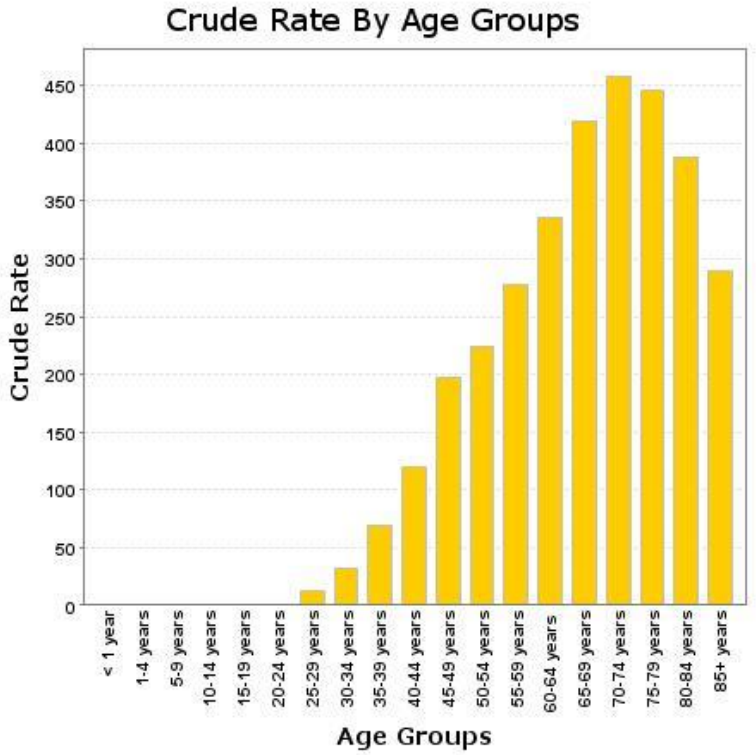
- **Intersectionality** is an analytical framework for understanding how different aspects of a person's identity can influence their risk of different health outcomes, exposures to risk factors, and barriers that they may face in achieving good health.



Public Health Data Resources

- To use publicly available data resources to inform public health practice and advance health equity

Breast Cancer Incidence by Age, GA 2020



CDC Wonder

Public Health Data Resources

Iowa - 2021

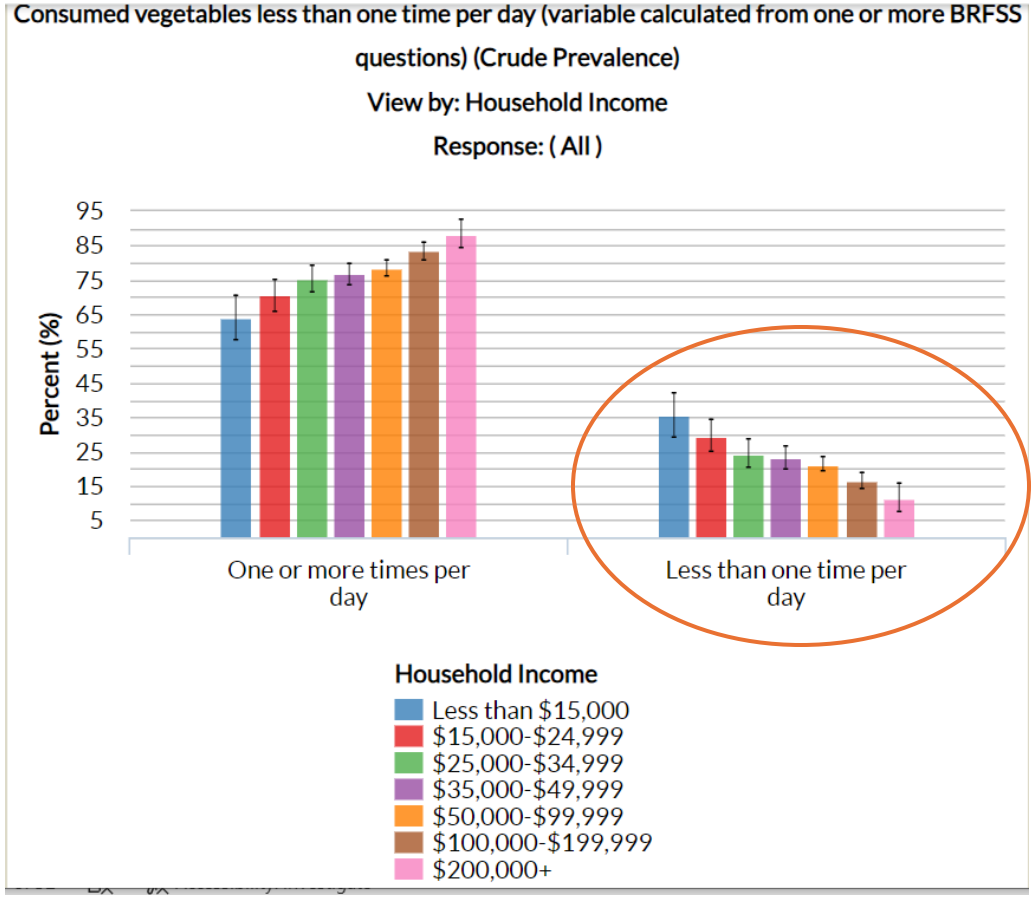
Consumed vegetables less than one time per day (variable calculated from one or more BRFSS questions) (Crude Prevalence)

View by: Overall

Response: (All)

	One or more times per day	Less than one time per day
Percent (%)	77.0	23.0
95% CI	75.8 - 78.2	21.8 - 24.2
n	6546	2004

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)



Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

Some final things to think about when using public health data to advance health equity

- Accuracy of the data
  - Credible source? Valid and Reliable measures?
- Completeness
  - Include all cases/events? Data elements missing?
- Representativeness
  - Does the data include all of the population of interest?

Small Group Activity

Colorectal cancer (CRC) has been a significant health concern in Iowa. We know that the incidence of early onset CRC has been increasing across the US. One area of focus is the relatively lower rates of CRC screening among various groups in the population.

Using the data available in the data packet on the Resources page, answer the following questions:

- What is the overall rate of your outcome of interest?
- What health disparities can you identify?
- What data gaps exist for your outcome of interest? (e.g. lack of disaggregated data; important data on contributing factors not available; data not recent or not at geographical level of interest)

Debrief

How do we interpret data on health disparities/inequities for actionable impact?

Systems Thinking in Public Health

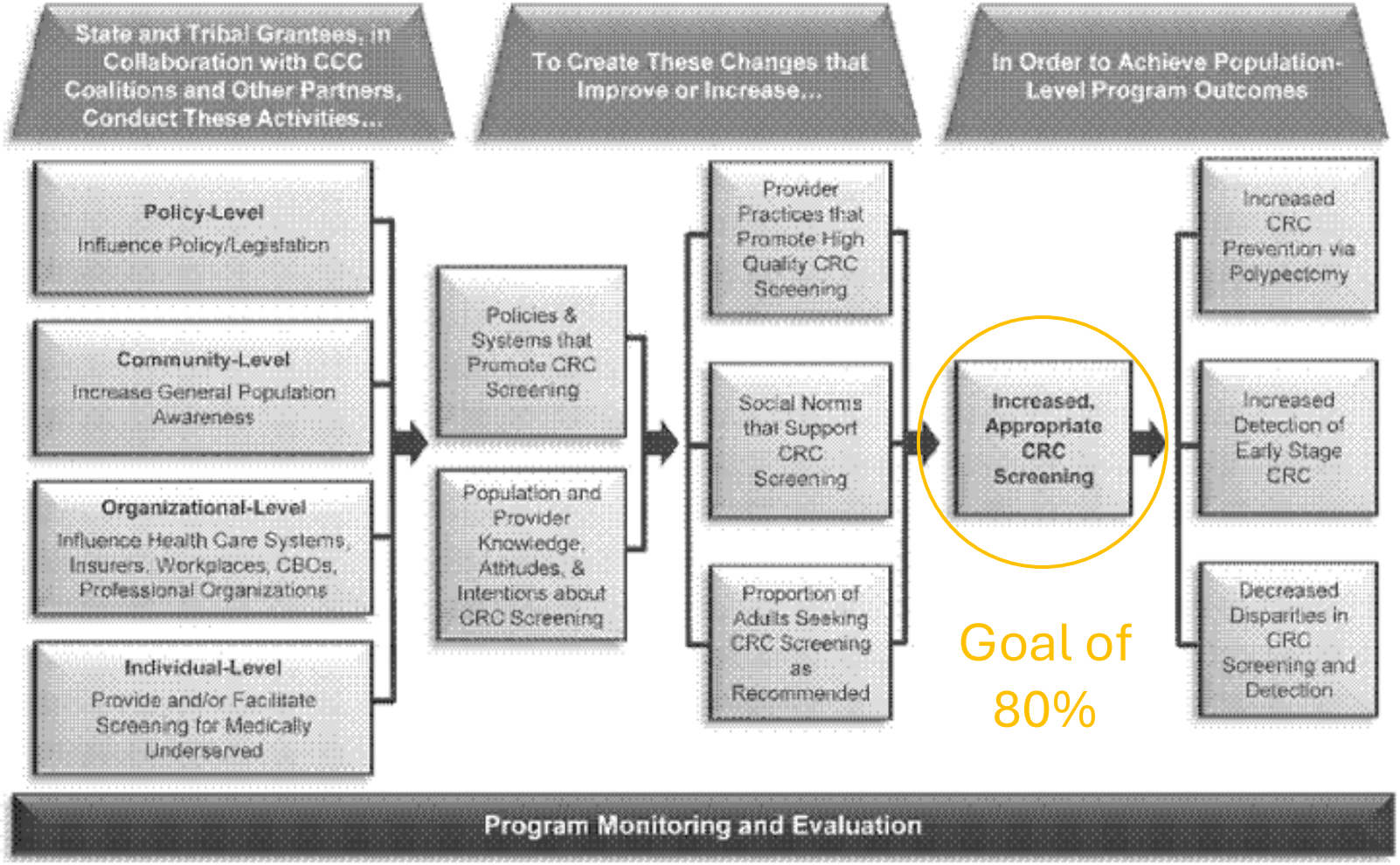
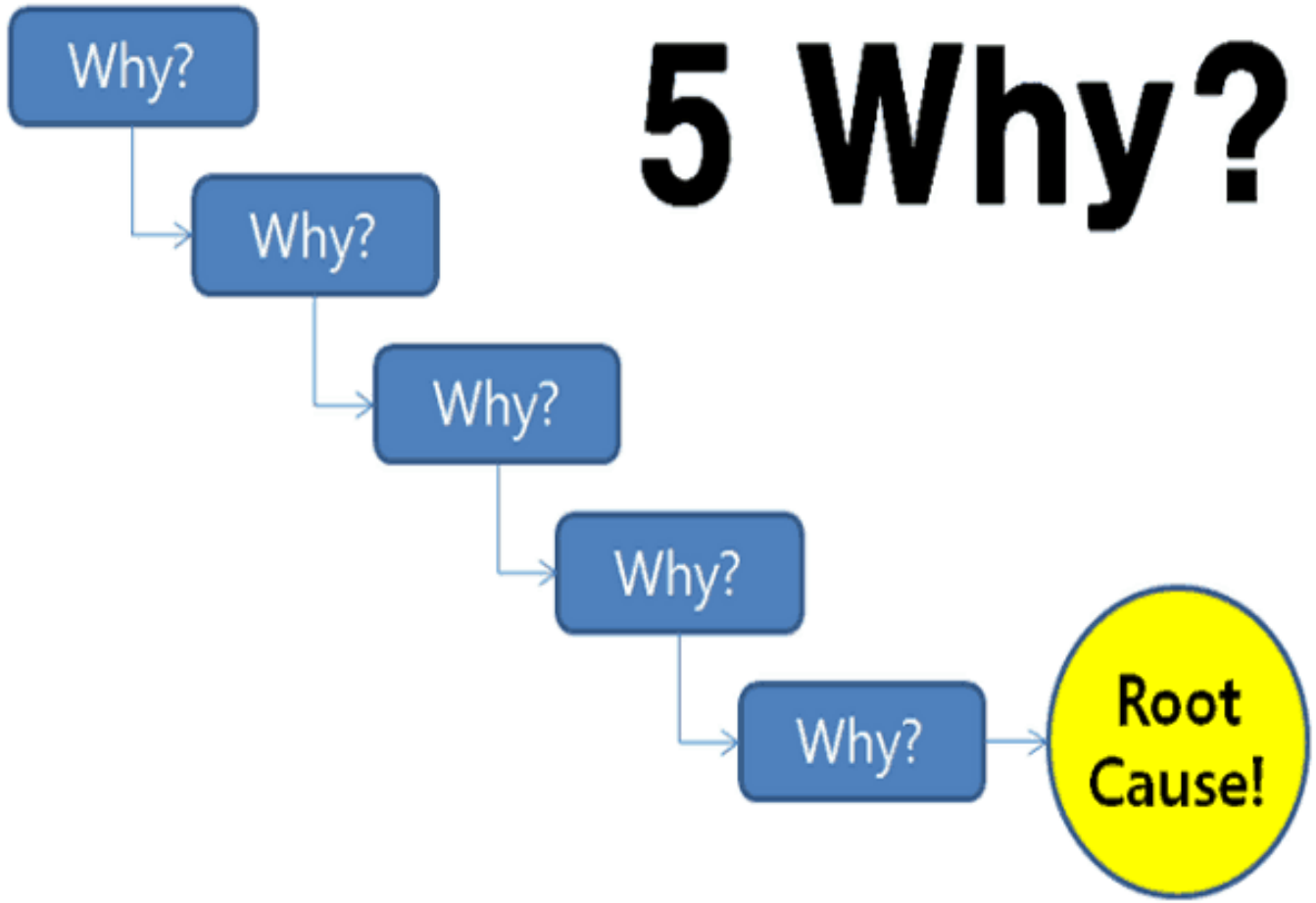


Figure 3. Colorectal Cancer Control Program simplified logic model.

https://www.alabamapublichealth.gov/colon/assets/GIECRCCPJoseph.pdf

Tools to Understand the Root Causes



Activity: Systems Thinking in Public Health—5 Whys Tool

Rising Rates of Colorectal Cancer in a Community (screening example)

1. Why are colorectal cancer cases increasing?

Systems Thinking in Public Health—5 Whys Tool

Rising Rates of Colorectal Cancer in a Community (screening example)

1. Why are colorectal cancer cases increasing?
    a. Fewer people are getting regular colorectal cancer screenings.
2. Why are fewer people getting regular screenings?

Systems Thinking in Public Health—5 Whys Tool

Rising Rates of Colorectal Cancer in a Community (screening example)

1. Why are colorectal cancer cases increasing?
    a. Fewer people are getting regular colorectal cancer screenings.
2. Why are fewer people getting regular screenings?
    a. Many individuals lack access to healthcare services or are unaware of the need for regular screenings.
3. Why do people lack access to healthcare or awareness?

Systems Thinking in Public Health—5 Whys Tool

Rising Rates of Colorectal Cancer in a Community (screening example)

1. Why are colorectal cancer cases increasing?
    a. Fewer people are getting regular colorectal cancer screenings.
2. Why are fewer people getting regular screenings?
    a. Many individuals lack access to healthcare services or are unaware of the need for regular screenings.
3. Why do people lack access to healthcare or awareness?
    a. There are barriers such as cost, limited healthcare facilities in certain regions, and a lack of educational outreach regarding cancer prevention.
4. Why are there barriers to healthcare and education?
    a. Public health infrastructure in certain communities is underfunded, and there is inadequate emphasis on cancer screening programs and awareness campaigns.
5. Why are the public health infrastructure underfunded and screening programs insufficient?
    a. Limited resources so other healthcare needs may be prioritized, and policies may not focus enough on preventive care, especially in underserved areas.

Using this method allows us to drill down to the underlying or root causes of the health issue!

Common misconceptions about how we can achieve positive health outcomes for all people.

- ACCESS=EQUITY Access to health care and insurance coverage are the most important factors to good health.
- We can achieve positive health outcomes for all by providing equal access to health care/resources to all people
- Some groups have worse outcomes because they make poor choices, don't take of themselves, or are non-compliant…
- Health disparities are based solely on race.
- Disparities only occur in urban settings.
- Socio-economic data is just more noise in an already data-overloaded world

Debrief and Final Thoughts

- Disaggregating data helps us understand our community and any issues of health inequity
- One size does not fit all – disaggregating our data gives us the evidence
- Storytelling allows us to share high impact data effectively
- Use short, concise, data-driven messages with visualizations!
- Health equity = social justice

THANK YOU!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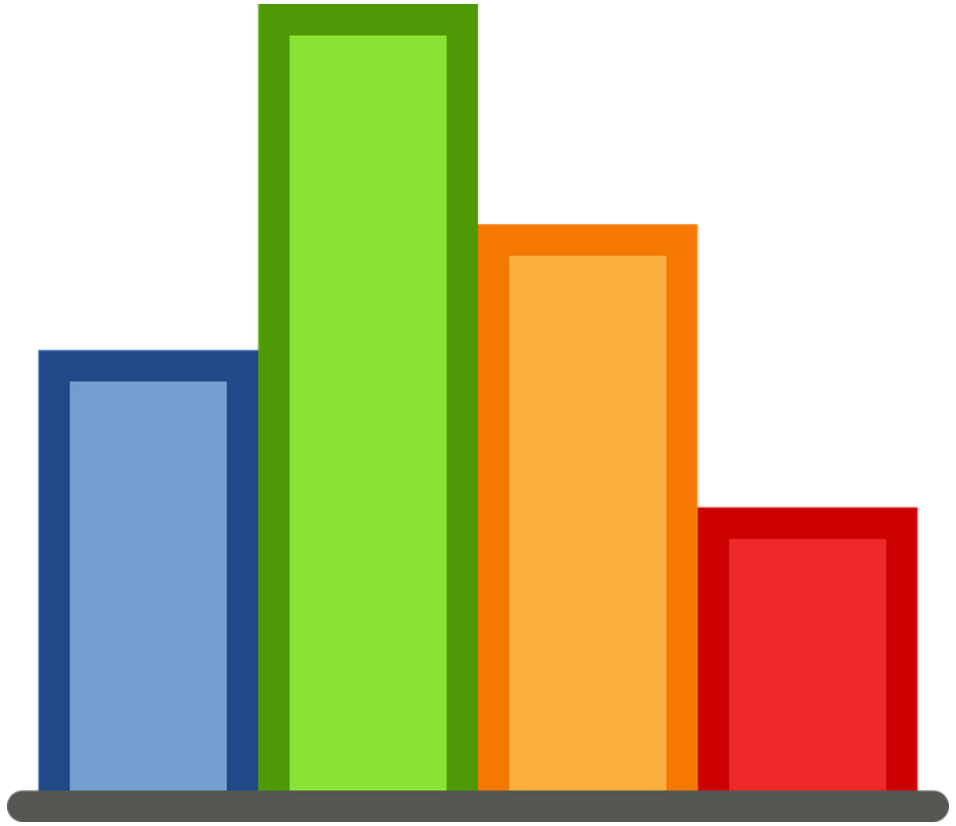

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Thank you!

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