IOWA

Institute for Public Health
Practice, Research and Policy

Tackling Data

Communicating Using the Bite, Snack, Meal Approach

2025

Meet your training team

Anjali Deshpande, PhD, MPH, Clinical Associate Professor, University of Iowa, College of Public Health

Vickie Miene, MS, MA, LMHC, Executive Director, Institute for Public Health Practice, Research and Policy

Abigail Stock, MPH, Admin Services Specialist, Institute for Public Health Practice, Research and Policy

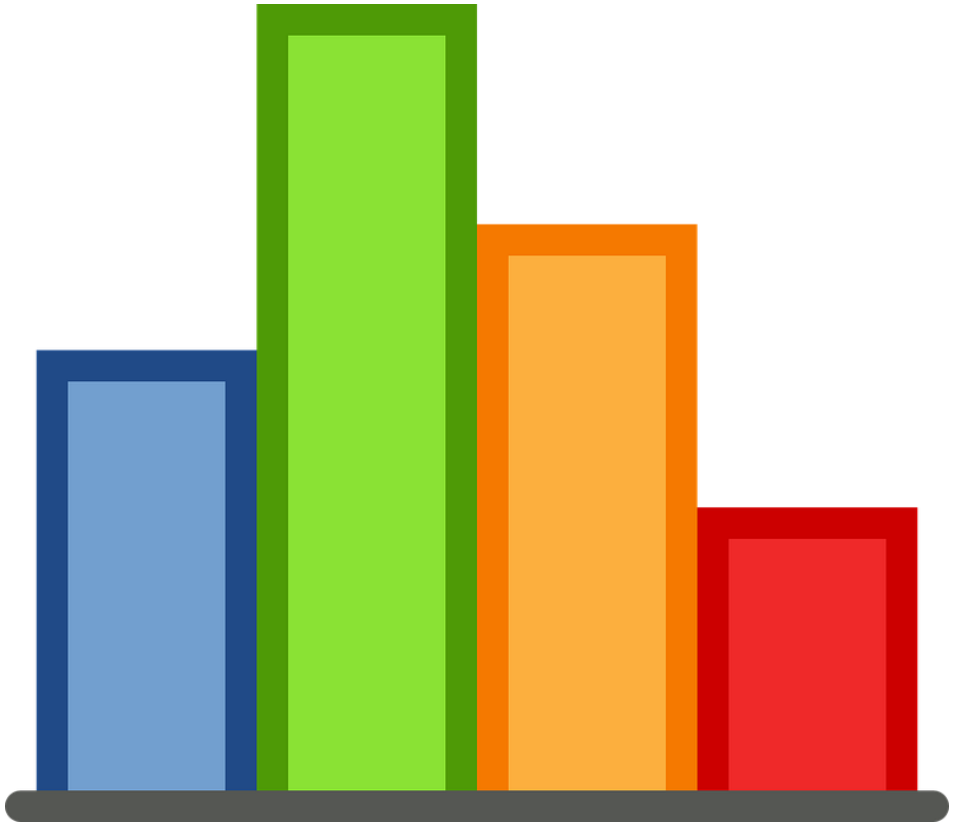
Training provided in partnership with the Institute for Public Health Practice, Research and Policy through a contract from the Iowa Department of Health and Human Services

Data Training Opportunities

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

Check out our website to see upcoming training dates!

Menti.com



Tackling Data Resources

TACKLING DATA

RESOURCES

Training Resources

Data and Surveillance Resources

Data Resources

Learning Objectives

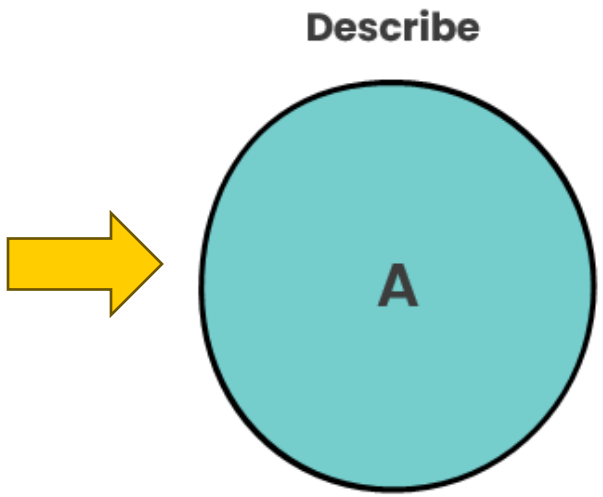
1. Understand and appreciate the importance of effective data communication to meet public health challenges.

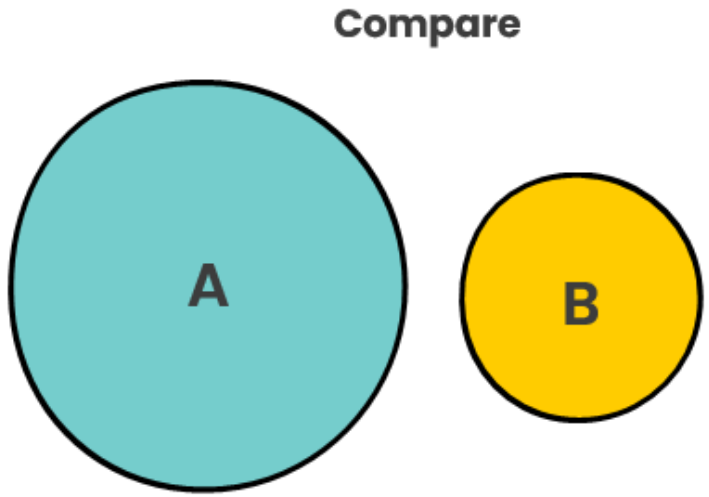
2. Be aware of the principles of effective data communication as applied to different audiences.

3. Learn to use a Bite, Snack, Meal approach to tell your data story.

Data Introduction

Descriptive Epidemiology

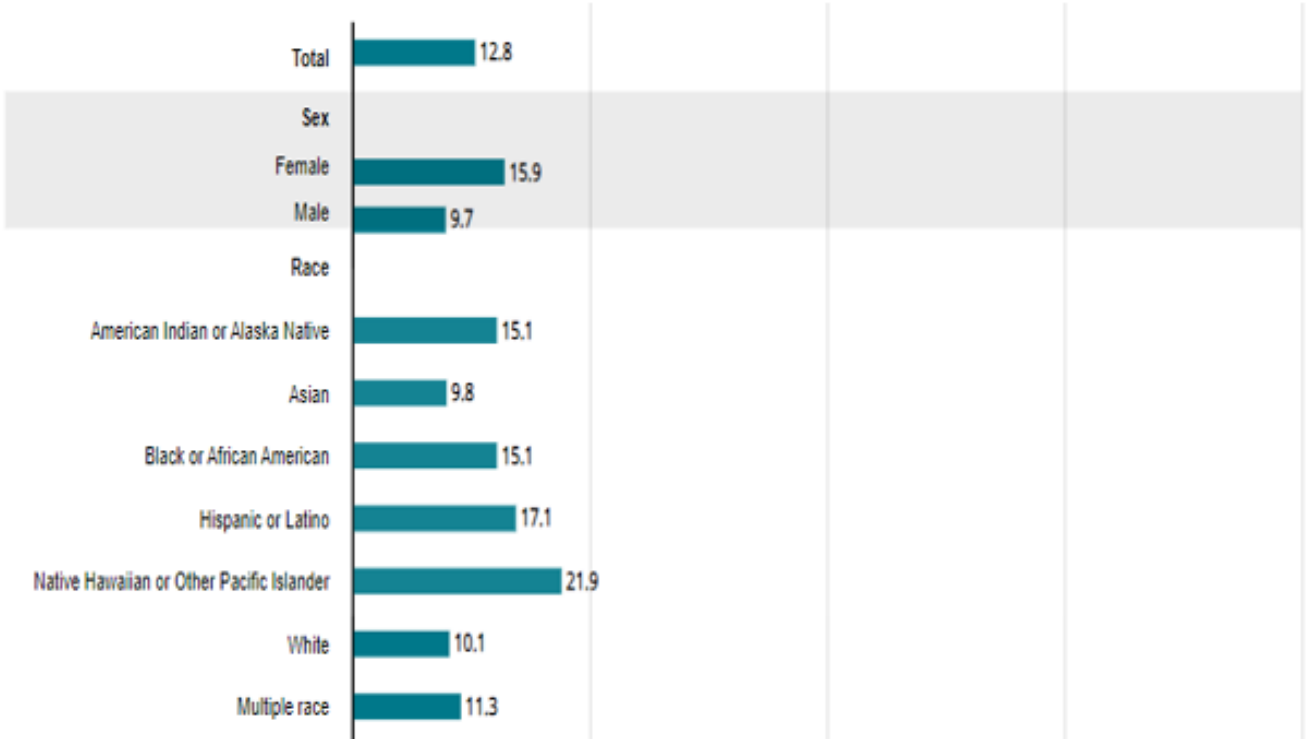




What Is Disaggregated Data?

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

High School Students Who Did Not Go To School Because They Felt Unsafe at or on their way to/from School (US, 2023)



Measures of Frequency

Counts

There were 8152 cases of breast cancer in Iowa in 2017-2019.

Proportions or Percents

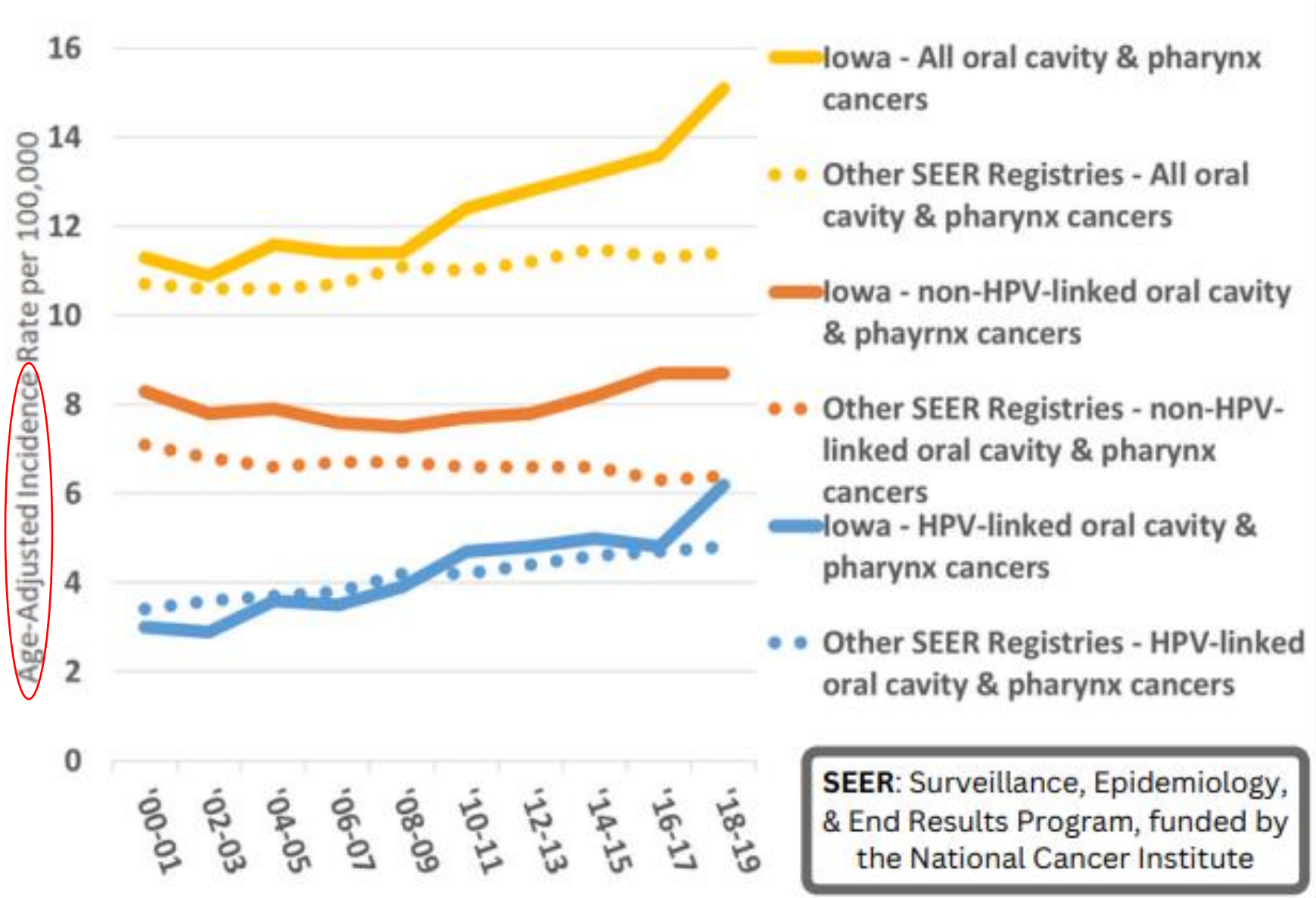
68% of women above the age of 50 yrs in Iowa were current on mammography screening in 2018.

Rates

The incidence rate of breast cancer in Iowa from 2017-2019 was 171.5 per 100,000 women.

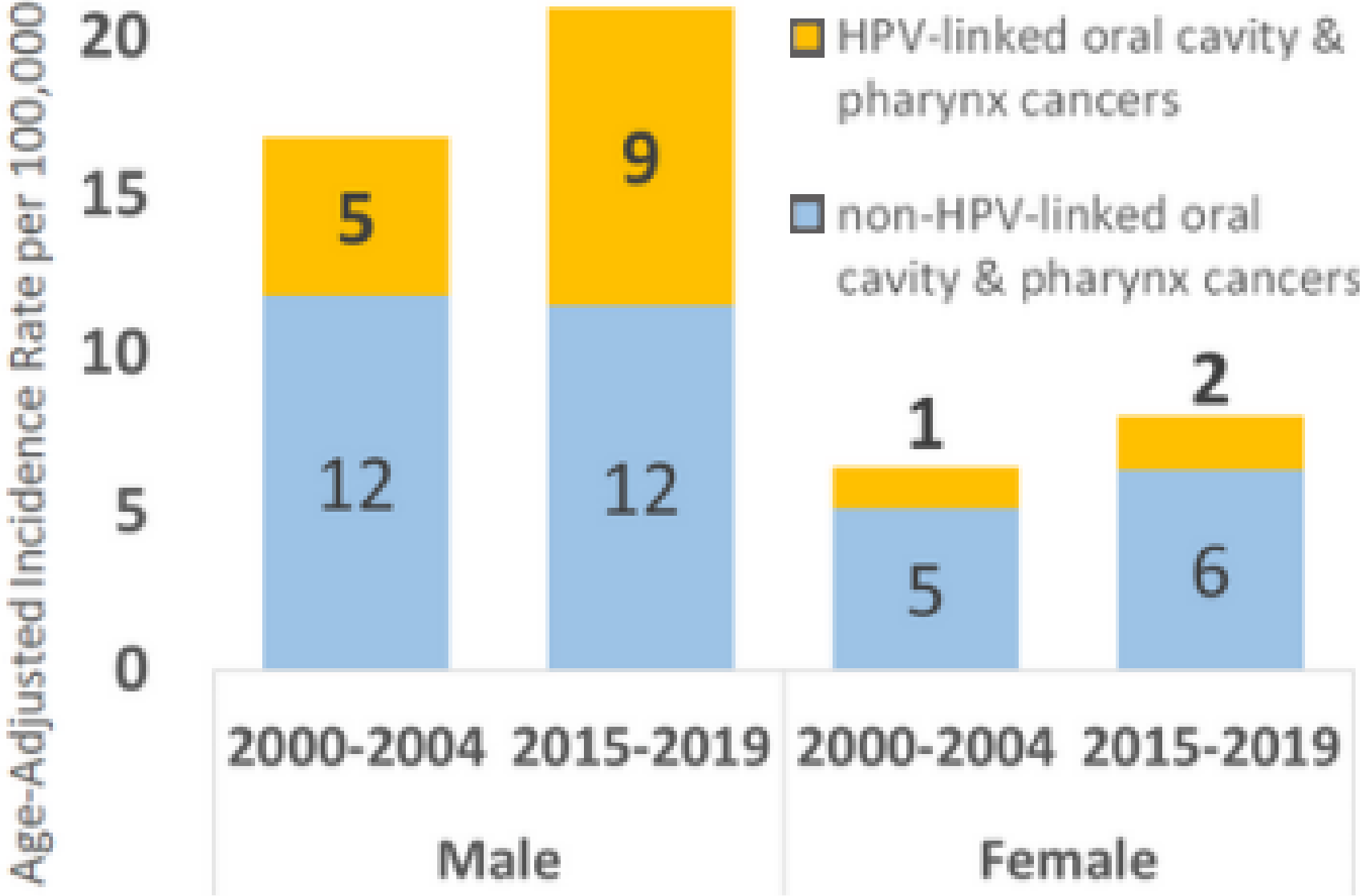
Ratios

There were twice as many new cases of breast cancer in White women as compared to Black women in Johnson County in 2017-2019.



Cancer in Iowa Spotlight Series, May 2023

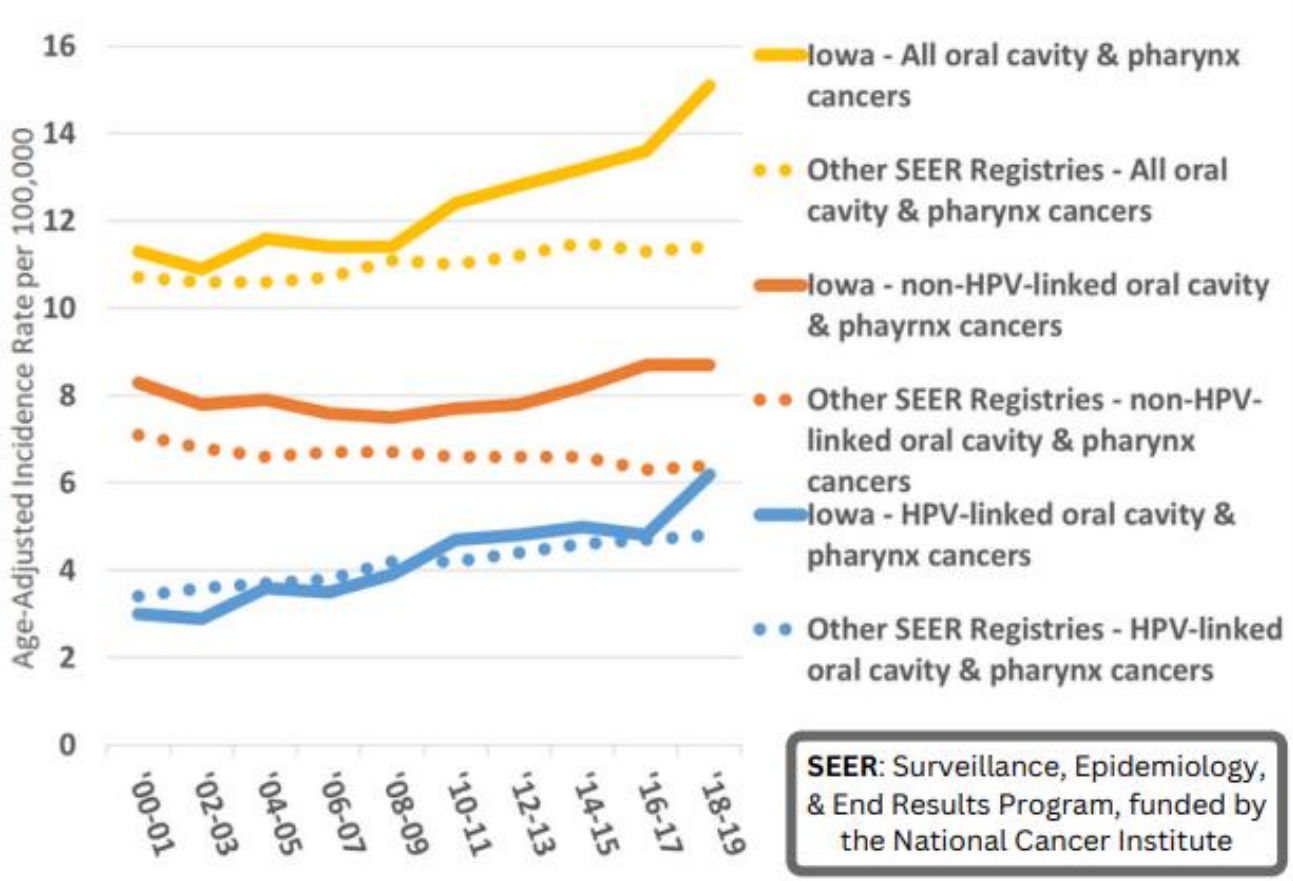
Use Age-Adjusted Rates to COMPARE

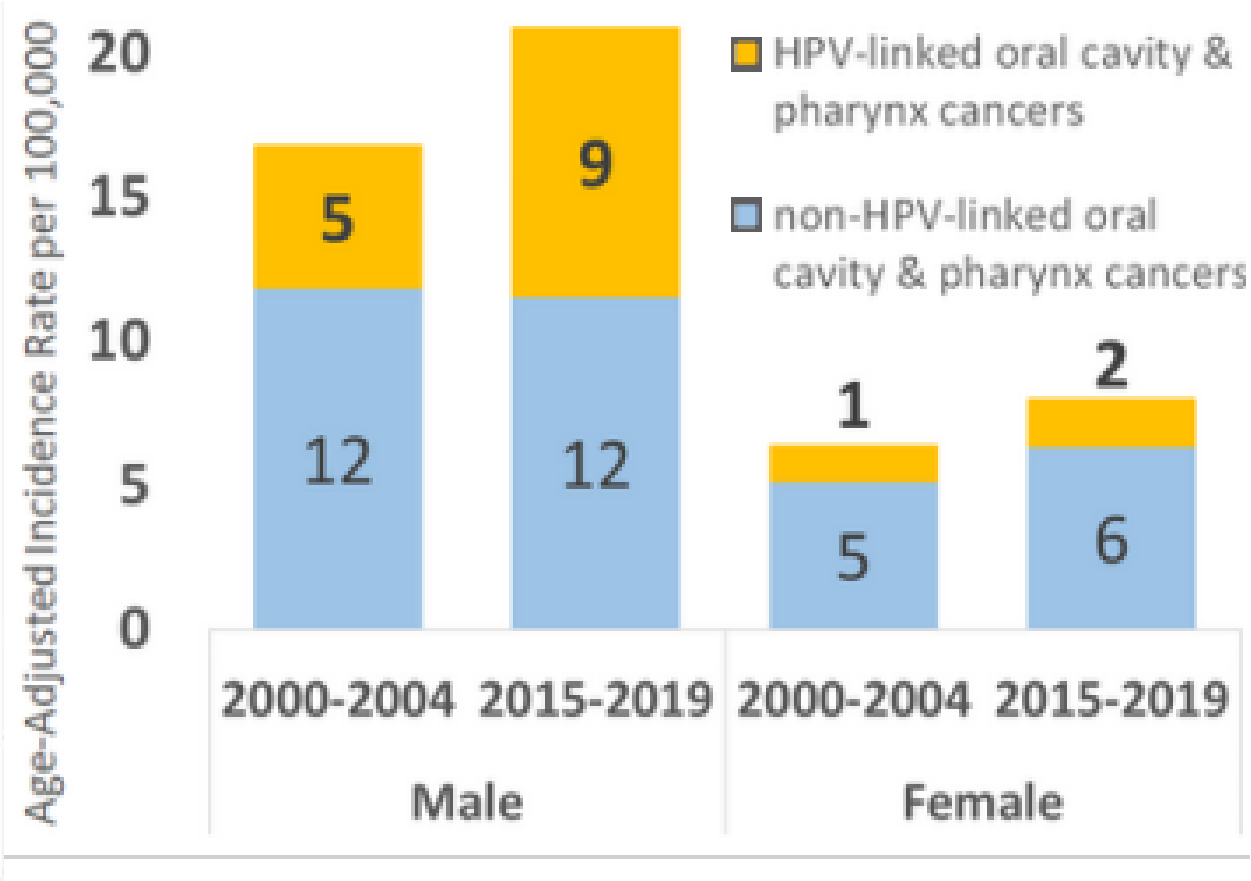


Cancer in Iowa Spotlight Series, May 2023

Use Age-Adjusted Rates to COMPARE

Large Group Activity – Data Interpretation





What are the main messages from each of these slides/both together?

Public Health Surveillance Collection Methods

Provide varying levels of confidence in the data

Population-Based

- Vital Statistics
  - Birth and death
- Reportable diseases
- Registries
  - Birth defects
  - Cancer
  - Immunizations
  - Trauma

Representative Samples

- National Health Interview Survey (NHIS)
- National Health and Nutrition Examination Survey (NHANES)
- Behavioral Risk Factor Surveillance System (BRFSS)
- Youth Risk Behavior Survey (YRBS)

Convenience Samples

- Survey at a local mall

High ← → **Low**

Level of confidence in our estimate

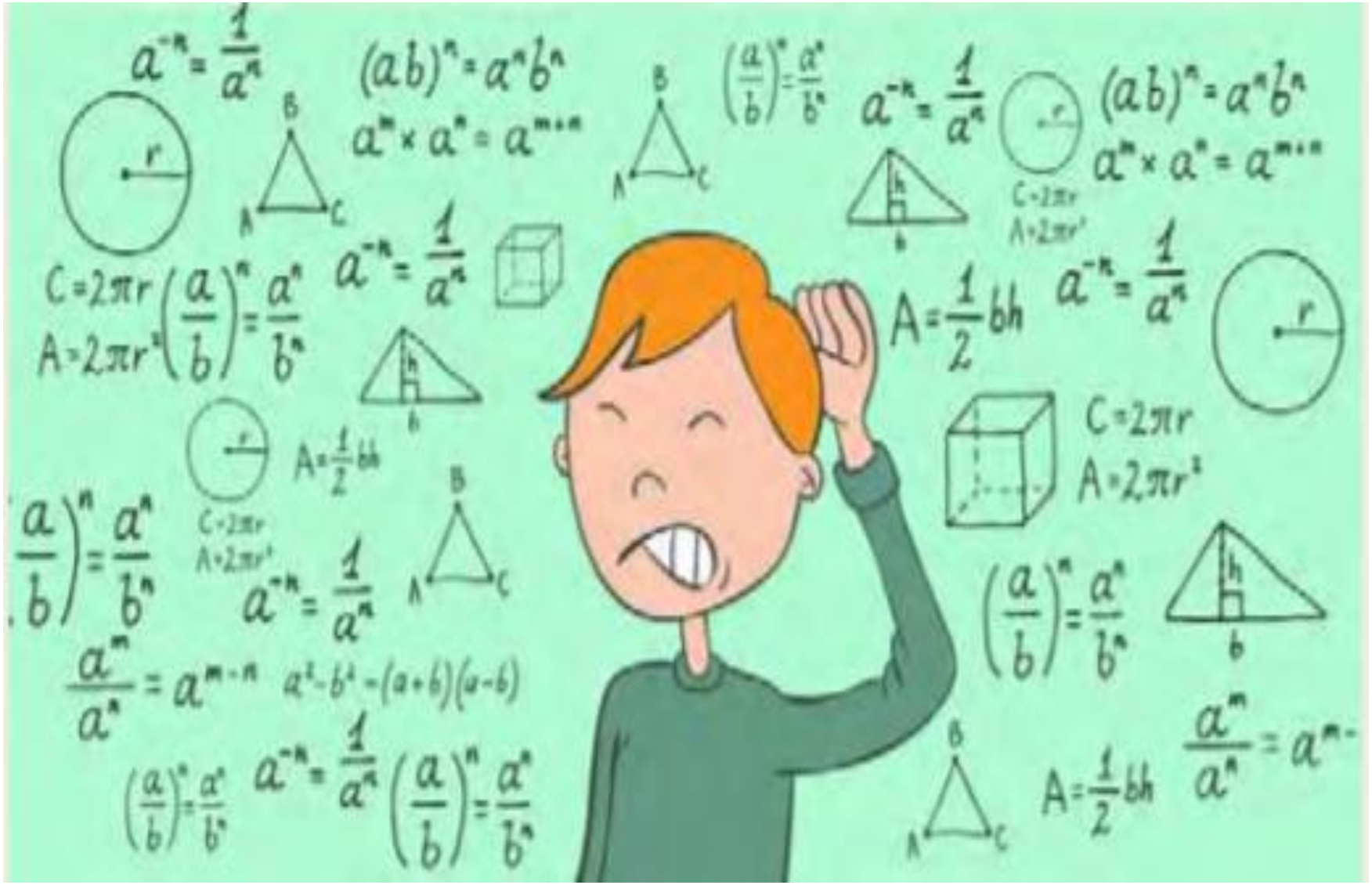
Public Health Surveillance Loop

- Grant Applications
- County Health Needs Assessment
- Information for Legislators/County Officials
- Infographics/Reports
- Evaluation of Programs

Last thoughts about Data in Public Health

- There is no perfect dataset.
- Use the data to learn about your community/issue (be curious, ask questions)
- You may have to collect some data
- Focus on public health practice—don't let the perfect be the enemy of the good (Voltaire)
- The community should be at the table at all phases of the data life cycle--collection, analysis, interpretation and communication.
- Incorporate equity in your data life cycle (Check out our Disaggregate It training)

Effective Communication



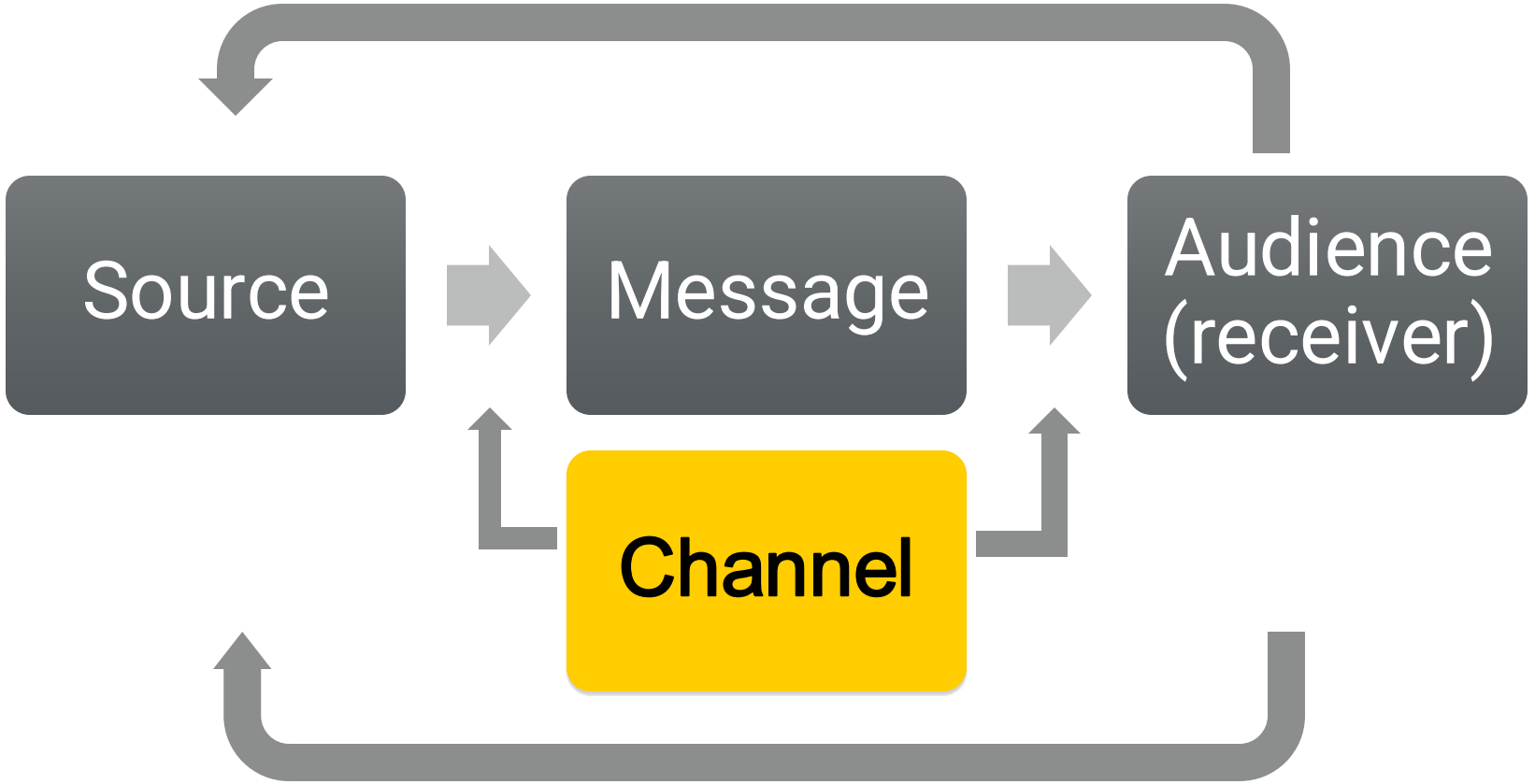
Houston, we have a problem…

Leading Cancer Sites	Count	Population	Age-Adjusted Rate Per 100,000
Brain and Other Nervous System	22,376	323,405,935	6.3
Breast *	247,506	323,405,935	66.3
Cervix Uteri	12,984	164,162,118	7.7
Colon and Rectum	141,270	323,405,935	37.4
Corpus Uteri	54,930	164,162,118	26.4
Esophagus	17,478	323,405,935	4.4
Gallbladder	4,075	323,405,935	1.1
Kidney and Renal Pelvis	63,639	323,405,935	16.8
Larynx	12,243	323,405,935	3.1
Leukemias	48,082	323,405,935	13.1
Liver	28,254	323,405,935	6.9
Lung and Bronchus	218,229	323,405,935	56.0
Melanoma of the Skin	82,476	323,405,935	22.3
Myeloma	25,286	323,405,935	6.5
Non-Hodgkin Lymphoma	68,403	323,405,935	18.3
Oral Cavity and Pharynx	45,543	323,405,935	11.7
Ovary	20,418	164,162,118	10.3
Pancreas	49,093	323,405,935	12.7
Prostate	192,443	159,243,817	101.4
Stomach	24,146	323,405,935	6.4
Thyroid	47,755	323,405,935	14.0
Urinary Bladder, invasive and in situ	73,469	323,405,935	19.2

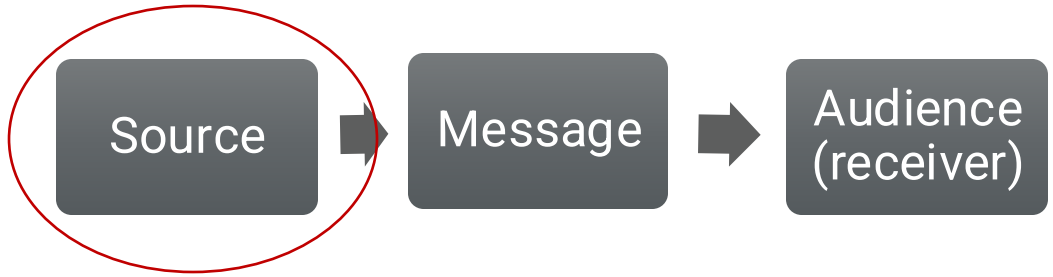
3 Questions to Ask

- What is the purpose of this communication?
- Who will use the information?
- What are the key messages for this audience?

Basic communication model



SOURCE:
The effective persuader



Seen as

- Delivered by someone trusted
- Unbiased
- Relevant to constituent

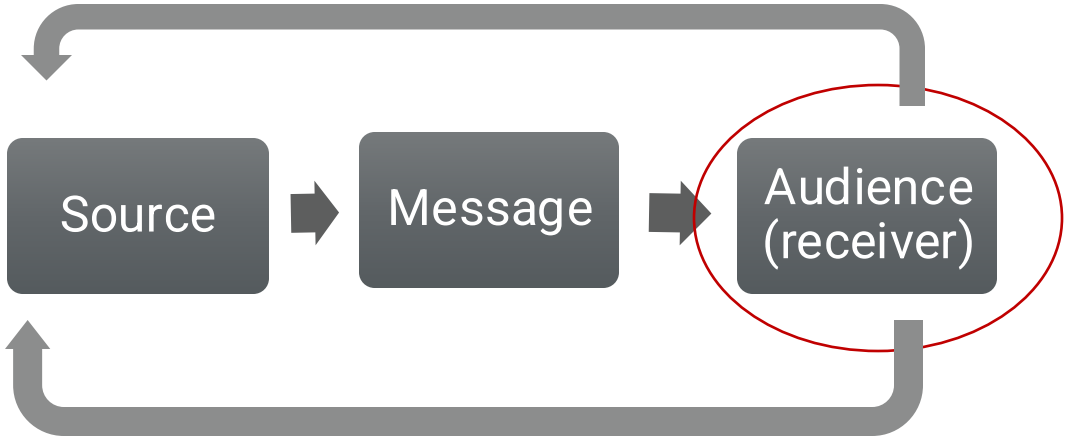
Morshed AB, et al. Comparison of Research Framing Preferences and Information Use of State Legislators and Advocates Involved in Cancer Control, United States, 2012-2013. *Prev Chronic Dis.* Feb 02 2017;14:E10.

Two key characteristics of the Source

- Credible—how trustworthy is the source?
- Reliable—how consistent is the source?

"Audience is more likely to be influenced by a credible source when they don't have prior knowledge about an issue, when they do not have prior attitudes about the issue, or when the message is provided only once."

AUDIENCE



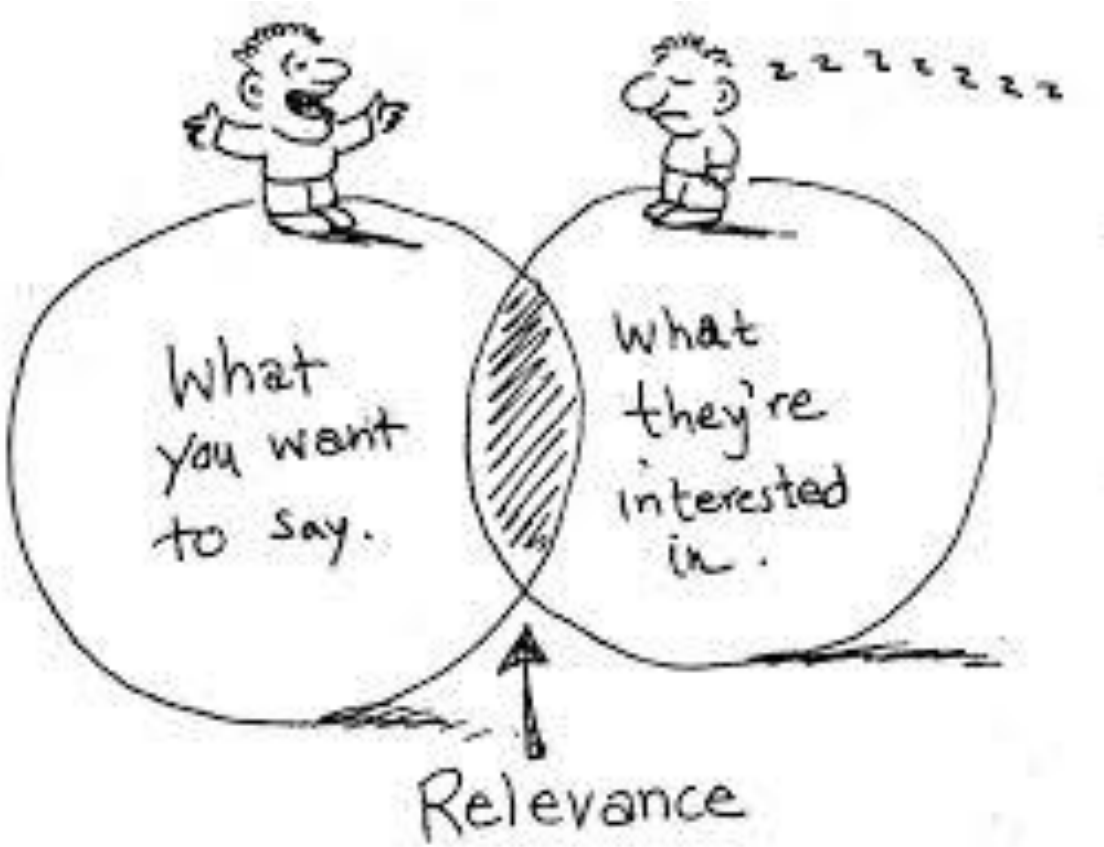
Communicate for someone….. not about something.

AUDIENCE:
Who are you communicating with?

- Elected Officials
- Legislative Staff
- Agency/Organization Leaders
- Community Groups
- Media
- Other?

Connect with your audience

- Understand your audience/ their current position
- What do they care about?
- What are their information needs?
- Where, when and how do they seek information?
- Focus on interests, not positions



Persuading your audience

- The purpose for most communication in public health, but especially with decision makers, is persuasion.

- To persuade is to:
  - Create, strengthen, or change attitudes or behaviors

MESSAGE

Determine your *objectives:*

- What do you want your audience to **think/believe/know**?
- What do you want your audience to **feel?**
- What do you want your audience to **do?**

MESSAGE: SOCO
(Single Overriding Communication Objective)

The change you want to see in your audience as a result of this communication

One audience, one message, one issue

- Define your purpose:
  - We want **[audience]** to **[do what]** in order to **[benefit how]**
- Who is the *main* audience?
- What is the *call to action (i.e., what you want them to do.* Consider what is realistic and doable?
- What is the *main benefit* of taking action?

Example SOCOs

Lives will be saved if children and adults who have not been vaccinated get the measles vaccine now to prevent spread. **Contact XYZ county health department** for information about free vaccine times and locations. #VaccinesWork

Worker productivity is decreasing due to extreme heat. **Support Senate Bill XYZ** to institute heat safety regulations to protect outdoor workers and improve productivity

The developing brain is highly vulnerable to the effects of nicotine. **Support the Tobacco 21** bill to protect our young people and save lives

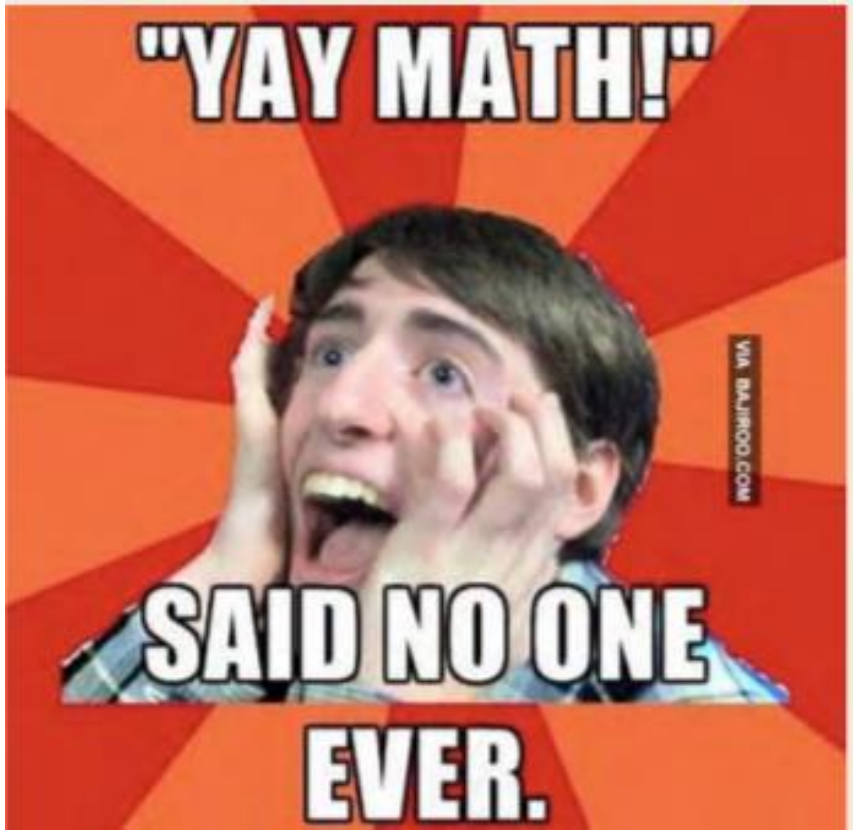
Any Questions?

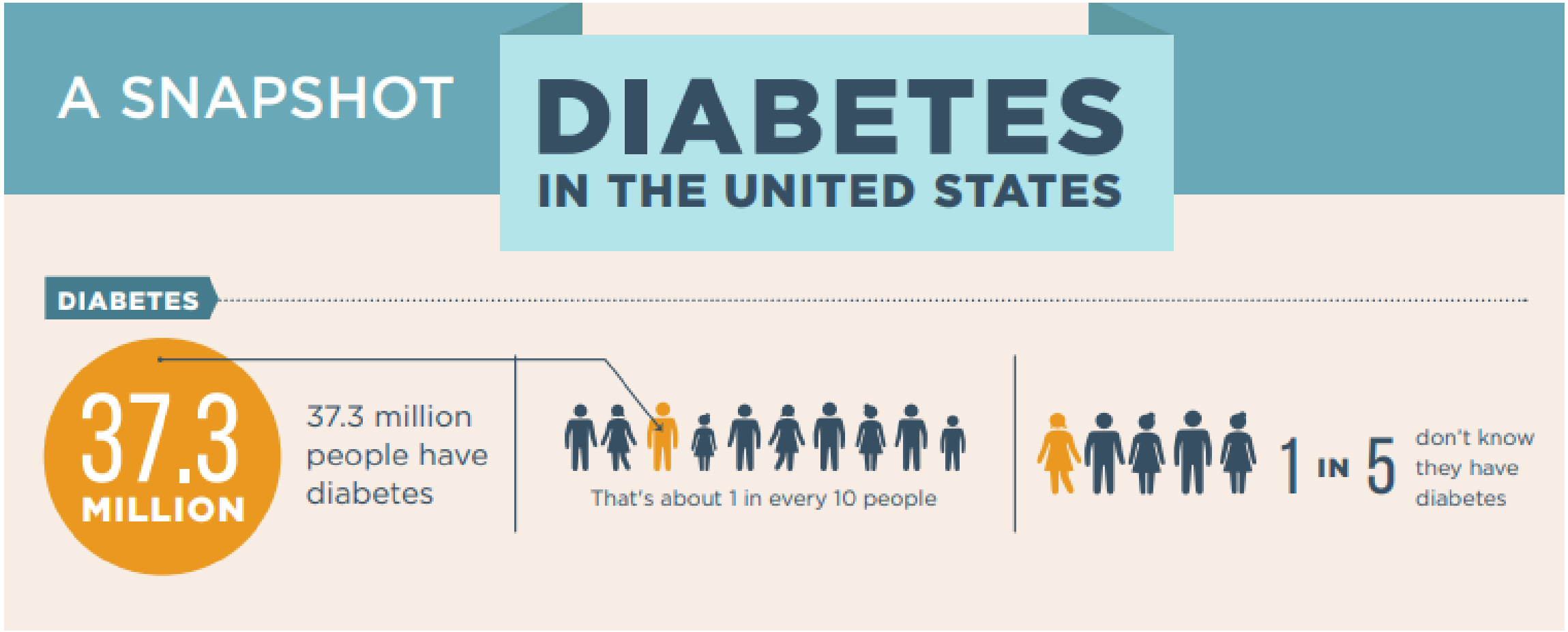
Social Math

Using Social Math

- Social math makes large numbers comprehensible and relevant by placing them in a social context that is familiar to the audience.

- Social math is a way of telling a story!





Centers for Disease Control and Prevention. National Diabetes Statistics Report. Atlanta, GA: Centers for Disease Control and Prevention, US Dept of Health and Human Services; 2022.

Social Math Examples

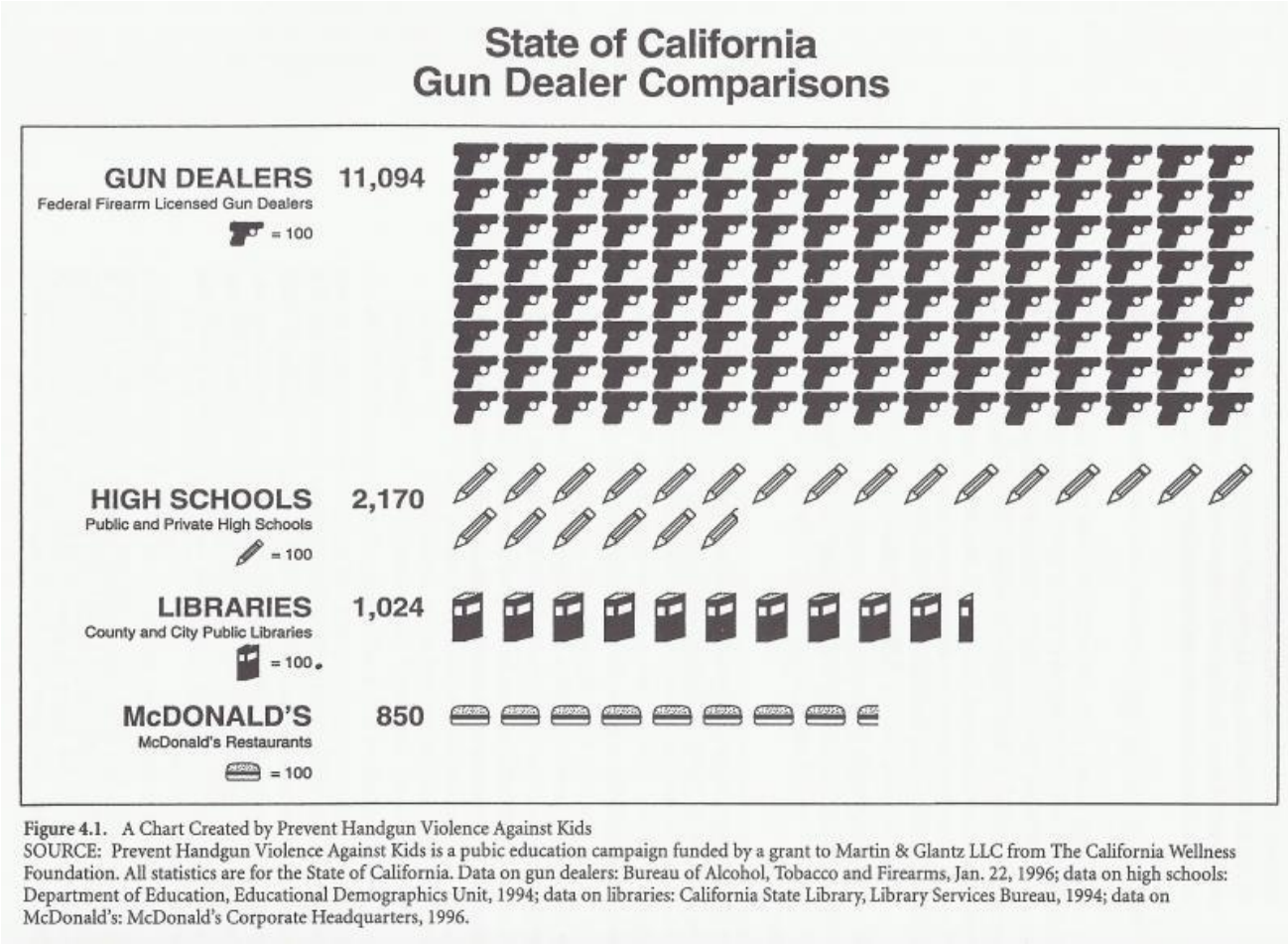
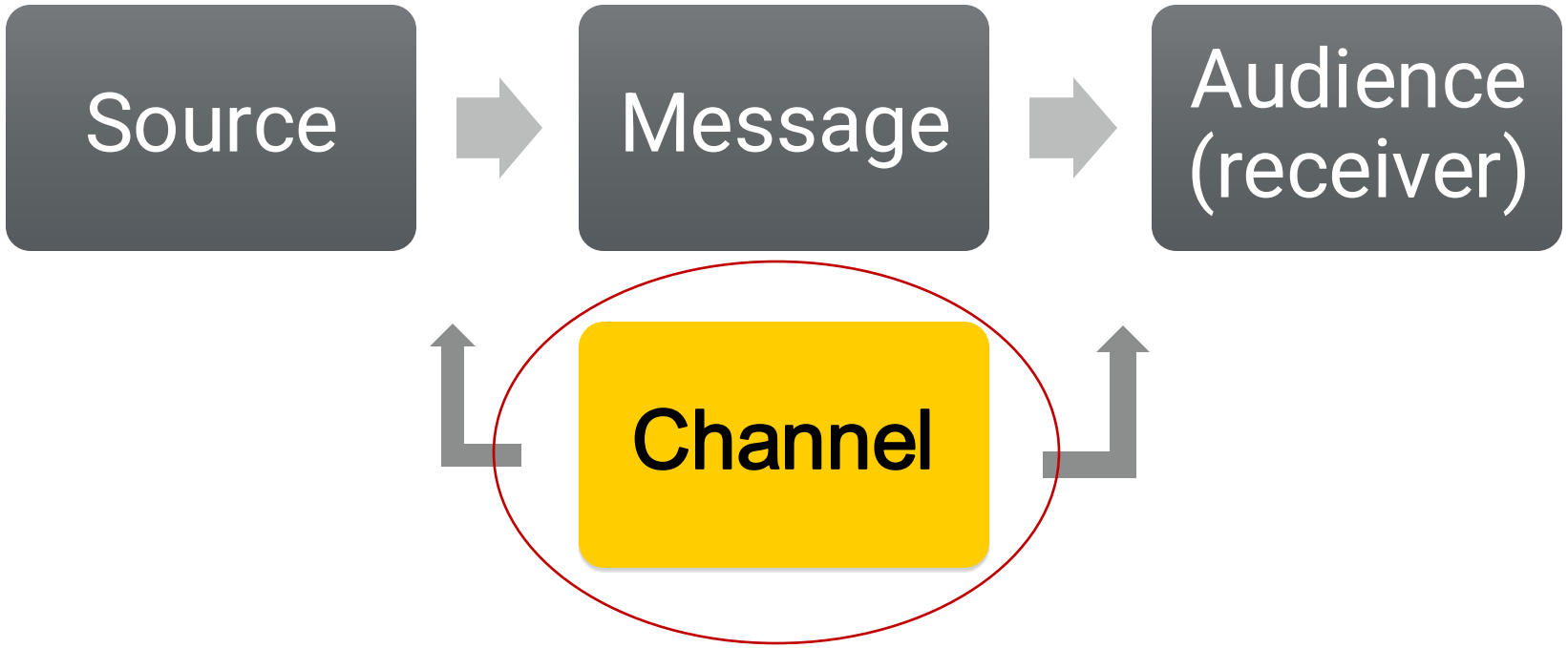


Figure 4.1. A Chart Created by Prevent Handgun Violence Against Kids
SOURCE: Prevent Handgun Violence Against Kids is a pubic education campaign funded by a grant to Martin & Glantz LLC from The California Wellness Foundation. All statistics are for the State of California. Data on gun dealers: Bureau of Alcohol, Tobacco and Firearms, Jan. 22, 1996; data on high schools: Department of Education, Educational Demographics Unit, 1994; data on libraries: California State Library, Library Services Bureau, 1994; data on McDonald's: McDonald's Corporate Headquarters, 1996.

"Schoolhouse or jailhouse? How would you invest in Nevada's youth?"

It feels like there is a McDonalds on every corner but there are more gun dealers in CA than high schools, libraries, and McDonalds COMBINED!!

What is the most effective channel (method) for reaching my audience?



CHANNEL: Means of communication

- Written (briefs, reports, infographics)
- Internet/email
- Social media, newspaper, television
- Face-to-face (with assistant, family member, physician as channels)
- Legislative testimony
  - 12% of state legislators say testimony is “very influential”
- Stories (may be embedded in any of these)

(*The easiest may not be the most effective*.)

Moreland-Russell S, et al. "Hearing from all sides" How legislative testimony influences state level policy-makers in the United States. *Int J Health Policy Manag.* Feb 2015;4(2):91-98

How do I decide what data point(s) to use?

- Should I use a Rate? Percentage? Count?
- Should I show disaggregated data? A trend over time? The effectiveness of an intervention?
- You have to know what data you have available, what the data is telling you, what data points tell the story best, and what will be most relevant to your audience.

When would I use graphics to present my data?

- When you can simplify your data into a couple/few bite size pieces
- When you have limited space/time and want to quickly show the scope of a problem
- When you want to tell a story and you've already gotten their attention!

Check out our Visualize This training!

Using a “Bite, Snack, Meal” Approach to Communicating Data

Bite, Snack, Meal

- A method for providing data to a variety of audiences. Some will want just a small piece of information, some will want to know more, and some will want as much information as possible about the topic.

- **Bite:** A headline with a message
- **Snack:** A concise summary that provides enough information for a content overview
- **Meal:** The full array of information you want to provide

CANCER

Many risk behaviors linked to cancer can be prevented such as excessive drinking, using tobacco products, physical inactivity, poor nutrition, and ultraviolet light exposure. Cancer screening tests can help detect cancer at earlier stages, making treatment easier and improving rates of survival.

486.8

County incidence rate for cancer (per 100,000 people)

442.3 U.S. avg

National Cancer Institute, State Cancer Profiles, 2016-2020

154.2

County death rate from cancer (per 100,000 people)

149.4 U.S. avg

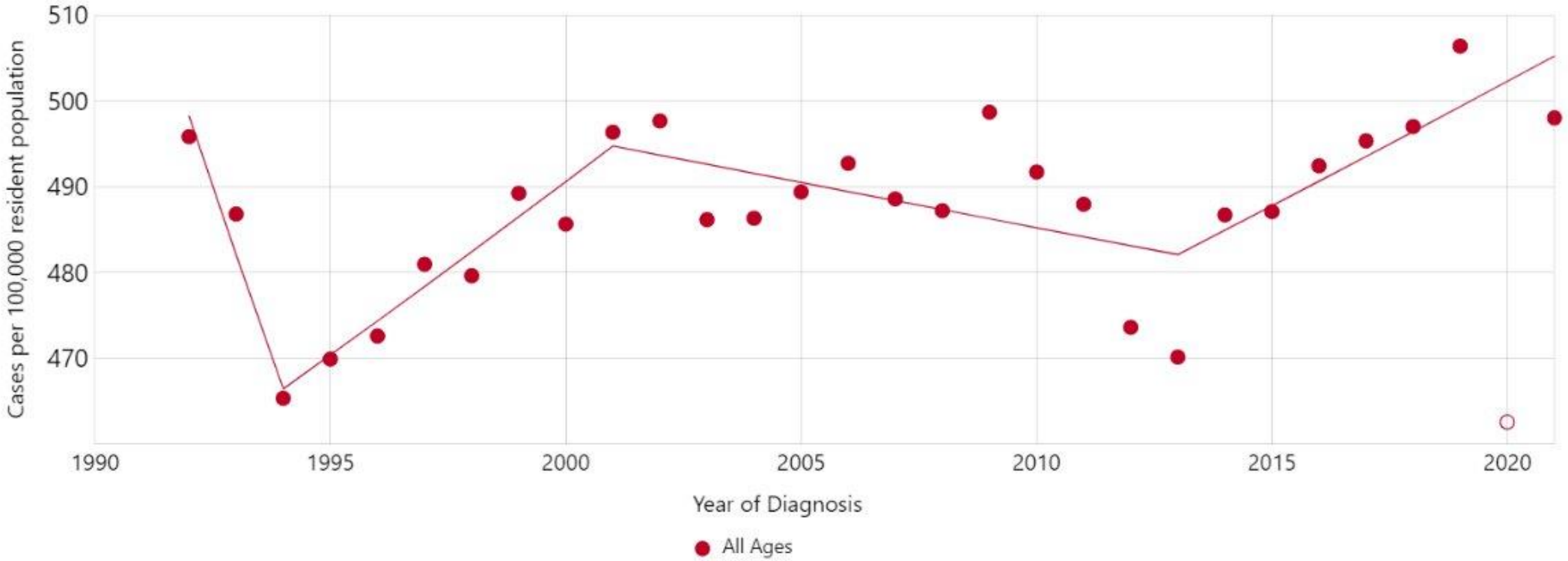
National Cancer Institute, State Cancer Profiles, 2016-2020

Historical Trends

Incidence, Iowa

All Cancer Sites, All Races (incl Hisp)

Both Sexes, All Ages



Iowa - 2021 Fruit and Vegetable Consumption (BRFSS)		
	Consumed 1 or more times per day	Consumed less than 1 time per day
Fruits	58.5%	41.5%
Vegetables	77%	23%

Any Questions?

Small Group Activity

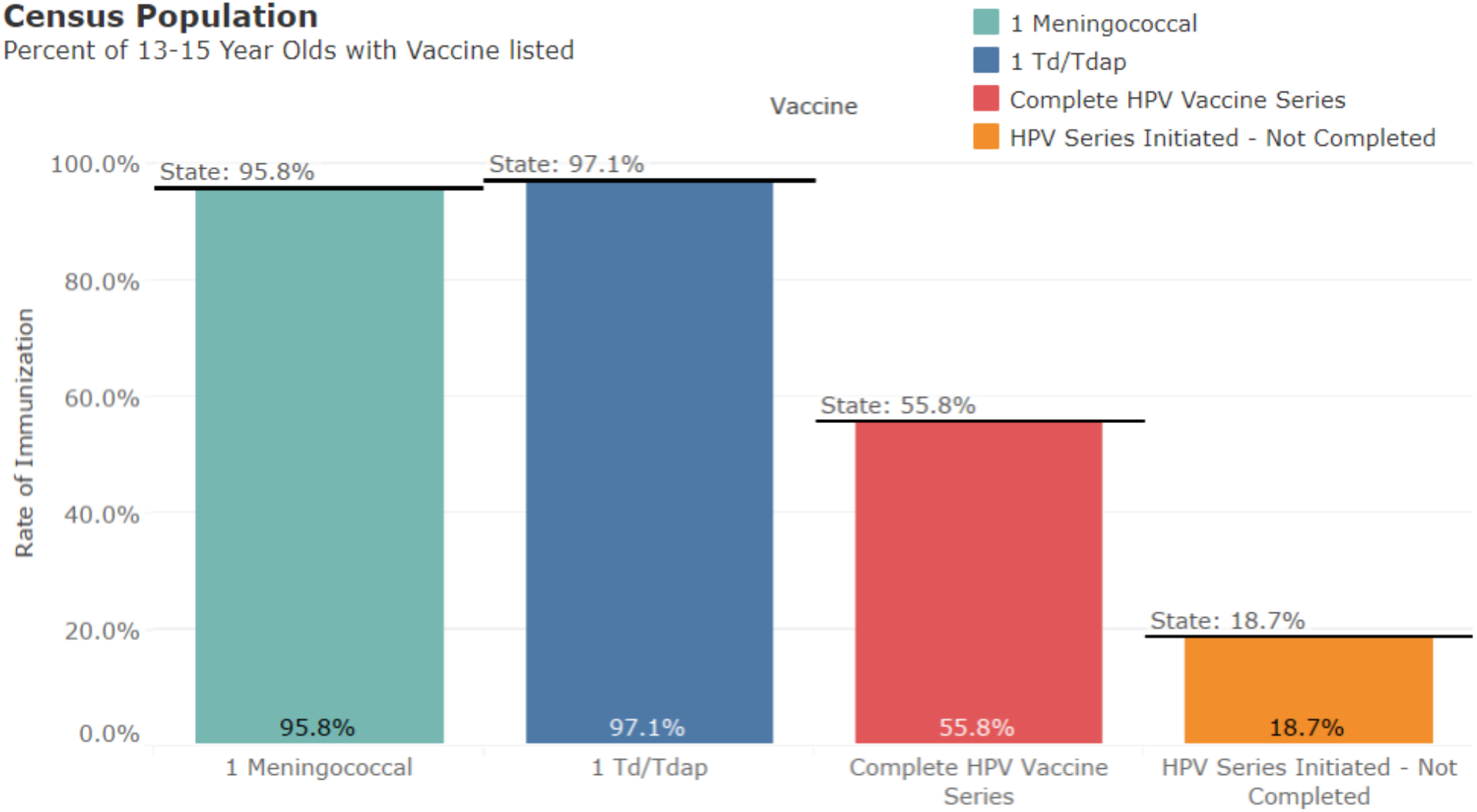
Increase HPV vaccination rates in youth to decrease head and neck cancers in Iowa

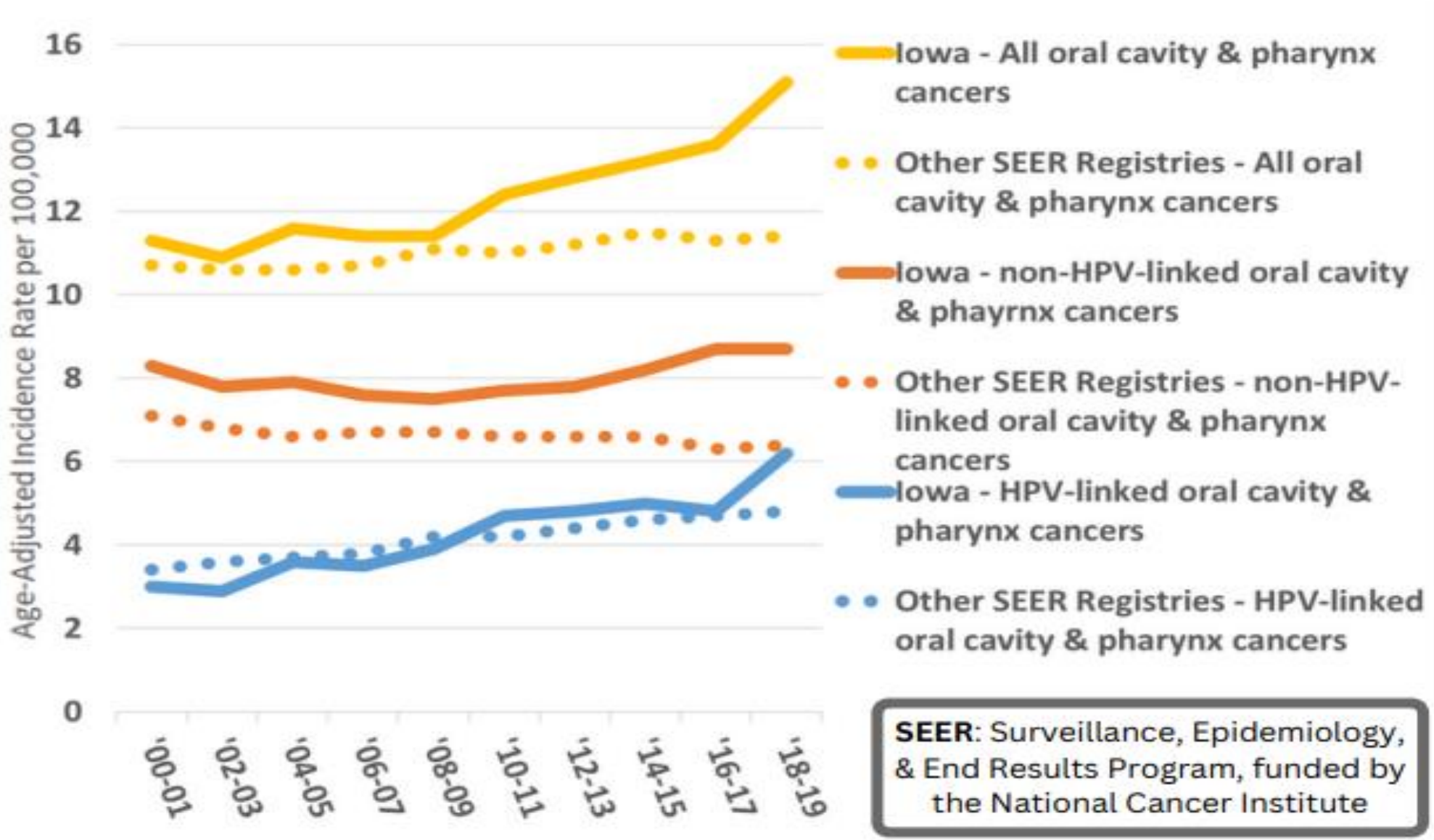
Instructions:

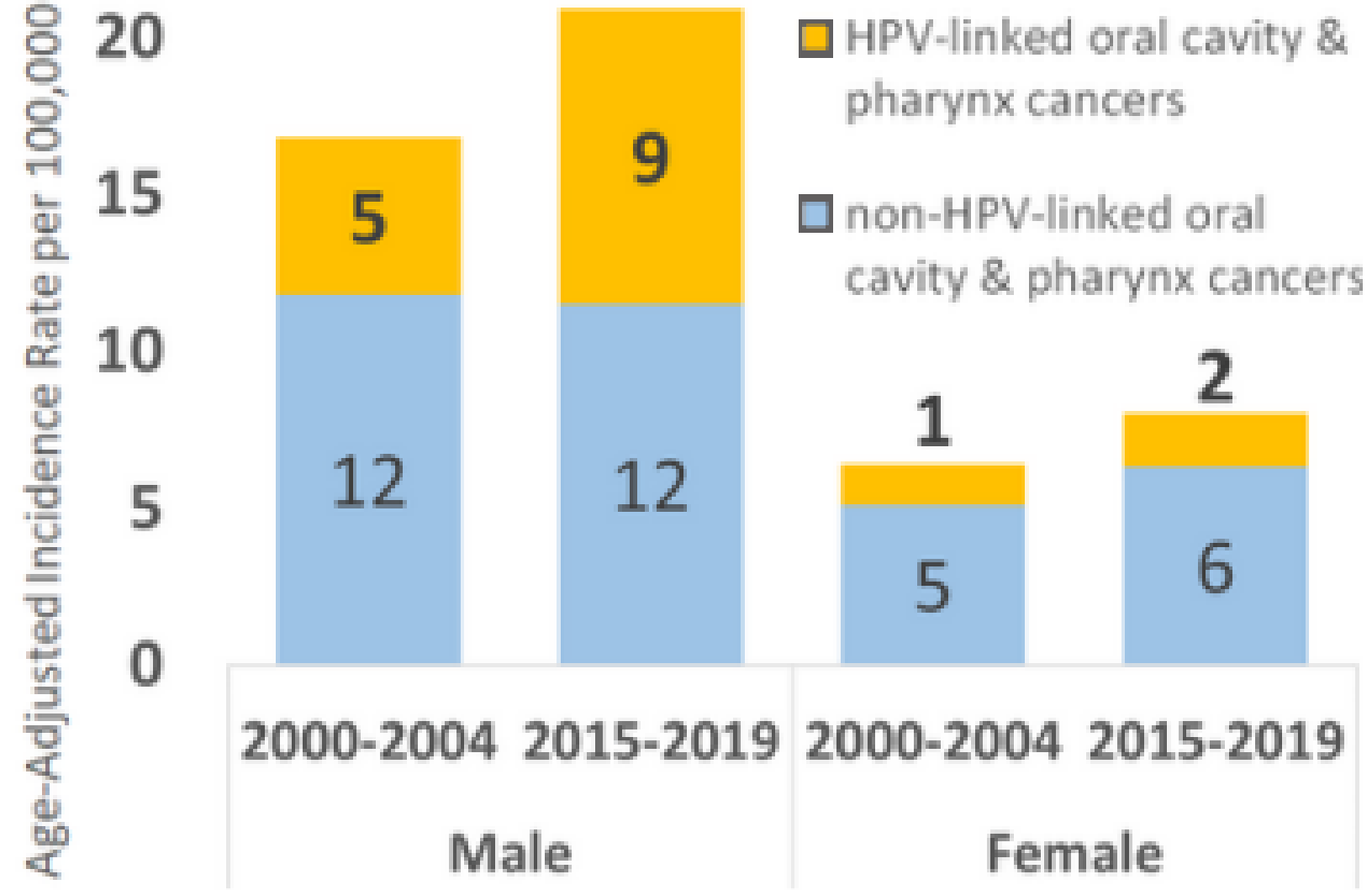
- Introduce yourselves!
- **Choose your target audience: Employers, School Administrators, Health Professionals, or Parents.**
- What data points would be of interest to your target audience? Is there any additional information you would want to have?
- Develop your “bite” and "snack" (Bite: A headline with a message; Snack: A concise summary that provides enough information for a content overview)
- Choose one person to share out in large group

HPV Vaccine Comparison in 13-15 year olds in All County Iowa - 2023 Census Population

Percent of 13-15 Year Olds with Vaccine listed




Age-Adjusted Incidence Rate per 100,000
16
14
12
10
8
6
4
2
0
'00-01
'02-03
'04-05
'06-07
'08-09
'10-11
'12-13
'14-15
'16-17
'18-19
Iowa - All oral cavity & pharynx cancers
Other SEER Registries - All oral cavity & pharynx cancers
Iowa - non-HPV-linked oral cavity & phayrnx cancers
Other SEER Registries - non-HPV-linked oral cavity & pharynx cancers
Iowa - HPV-linked oral cavity & pharynx cancers
Other SEER Registries - HPV-linked oral cavity & pharynx cancers
SEER: Surveillance, Epidemiology, & End Results Program, funded by the National Cancer Institute


Age-Adjusted Incidence Rate per 100,000
20
15
10
5
0
5
12
9
12
1
5
2
6
HPV-linked oral cavity & pharynx cancers
non-HPV-linked oral cavity & pharynx cancers
2000-2004
2015-2019
2000-2004
2015-2019
Male
Female

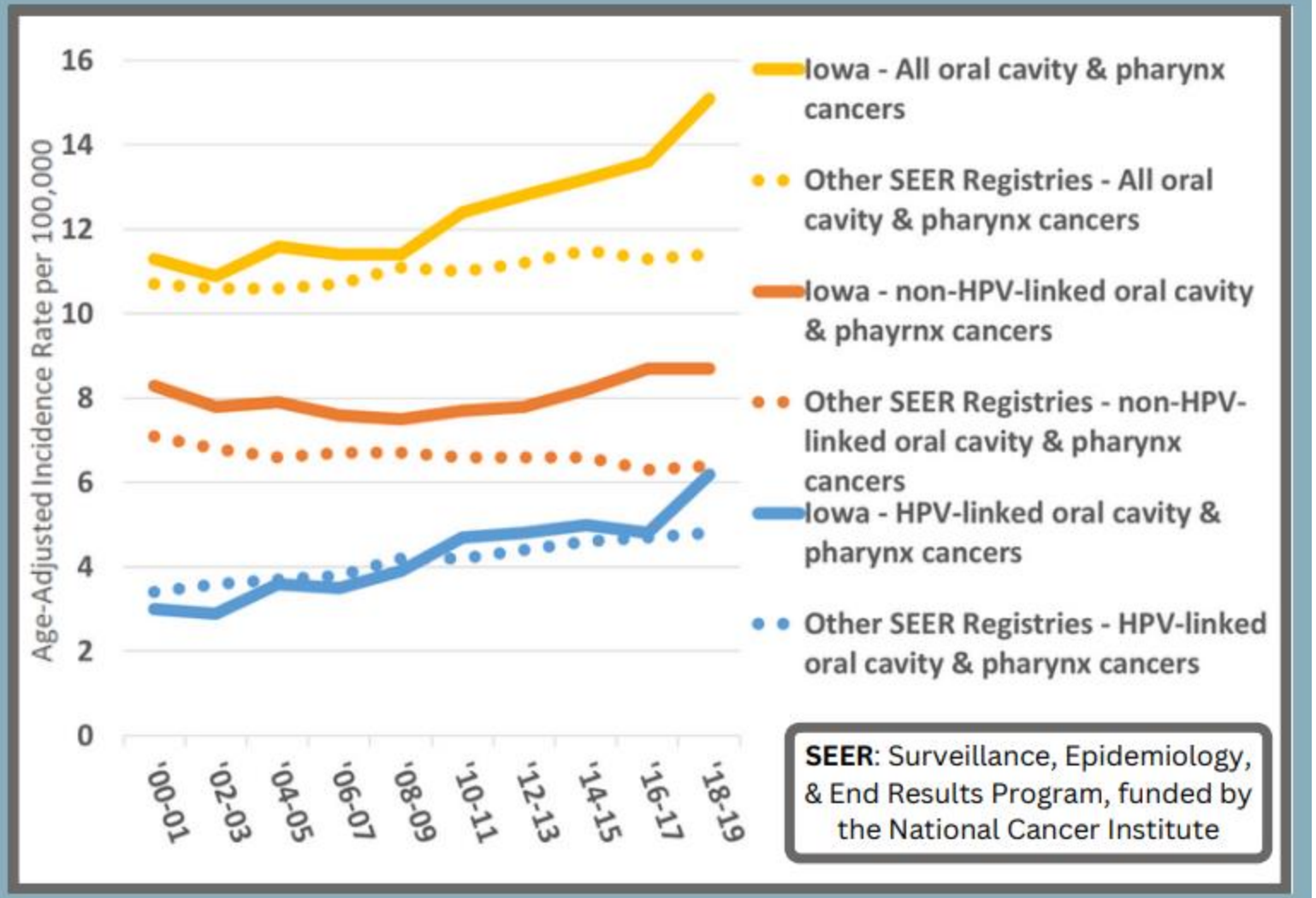

Debrief

Why are these cancer rates so high in Iowa?

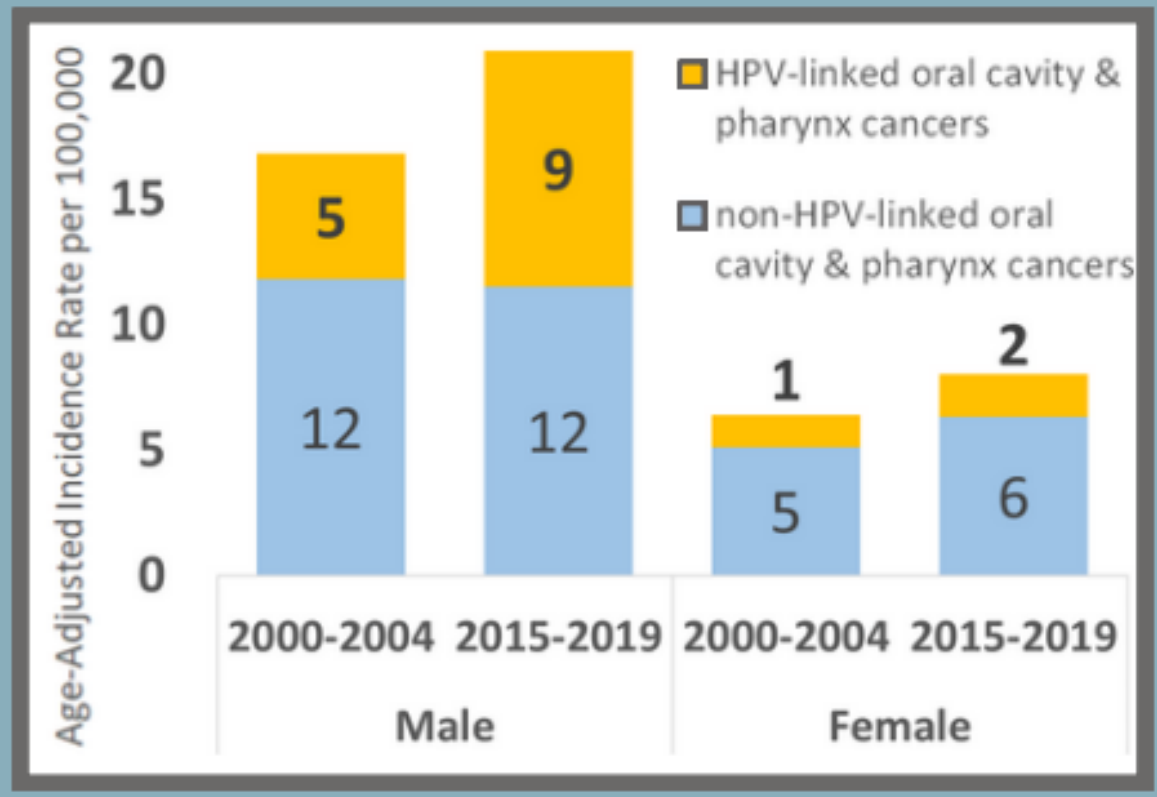
HPV & Other Risk Factors

- Oral cavity and pharynx cancers can be divided into **human papillomavirus (HPV)-linked** and **non-HPV-linked** cancer types.
- Non-HPV-linked cancers may still be caused by other risk factors, like **tobacco** and **alcohol use.**

Both types of oral cavity & pharynx cancer are **rising in Iowa,** especially compared to other SEER registries.



In Iowa, oral cavity & pharynx cancer is **more common among males,** and there has been an **overall increase in HPV-linked cancers** over time.



Our Bite, Snack, Meal Example

- **Bite:** Iowa's incidence rate of oral cavity and pharynx cancer is #1 in the nation, and it is rising faster than all other states.
- **Snack:** Oral cavity and pharynx cancers can be divided into human papillomavirus (HPV)-linked and non-HPV linked cancer types. HPV is thought to be responsible for about 60-70% of oropharyngeal cancers, making vaccination crucial for prevention.
- **Meal:** The HPV vaccination rate among adolescents remains below the national target of 80%, with only about 58.6% of adolescents aged 13-15 years old completing the vaccine series. In Iowa specifically, only 55.8% of 13-15 year olds are fully vaccinated against HPV. Misinformation about the vaccine's safety and necessity contributes to low uptake of this vaccine. Addressing these misconceptions is crucial to increasing vaccine uptake, and subsequently decreasing the rate of oropharyngeal cancer in Iowa.

Last Thoughts About Data Communication

- A “One Size Fits All Approach” to communication is not effective.
- Understand your audience to communicate for someone, not about something!
- Use relevant data points and effective charts/graphs (check out our Visualize This training)
- Using a Bite, Snack, Meal approach will make your messages more effective and relevant for your audience.

Resources

- NCI: Making Data Talk: A Workbook
  https://www.cancer.gov/publications/health-communication/making-data-talk.pdf
- Using Graphics to Report Evaluation Results
  http://learningstore.uwex.edu/assets/pdfs/G3658-13.PDF
- Yocco and Pulli, Social Math: A method to make complex data meaningful, 2016
- Public Health Reaching Across Sectors (PHRASES) toolkits https://www.phrases.org/
- WHO Risk Communication training
  https://www.who.int/risk-communication/training/Module-D1.pdf?ua=1

Thank you!

Institute for Public Health Practice, Research and Policy

anjali-deshpande@uiowa.edu
vickie-miene@uiowa.edu
abigail-stock@uiowa.edu