

2022-2023 Data Support COL

Educational Offering #7

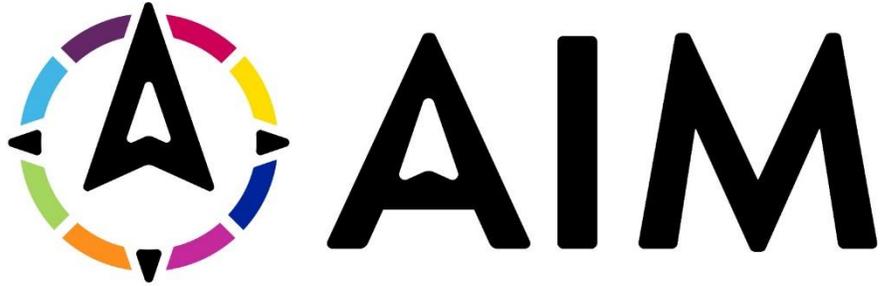
**We Collected the Data, Now What?: Visualization Best Practices  
for Disaggregated Data**



Thursday

June 08, 2023

2:00 PM– 3:30 PM ET



## ALLIANCE FOR INNOVATION ON MATERNAL HEALTH

The Alliance for Innovation on Maternal Health is a national, cross-sector commitment designed to support best practices that **make birth safer**, **improve maternal health outcomes**, and **save lives**.

You can find more information at [saferbirth.org](https://saferbirth.org).

This program is supported by a cooperative agreement with the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number UC4MC28042, Alliance for Innovation on Maternal Health. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.



## Before We Get Started

- ▶ You are **muted** upon entry to the call.
- ▶ **You will have the ability to unmute** yourself during Q&A times.
- ▶ We encourage participants to **remain muted** to reduce background noise.
- ▶ If you are experiencing technical difficulties, please chat an AIM staff member or **email** [aimdatasupport@acog.org](mailto:aimdatasupport@acog.org)

**This presentation will be recorded.**

**Both the slides and recording will be available on the AIM Data Resources Webpage and shared in the follow-up newsletter.**



# Agenda

- 1 Welcome
- 2 Upcoming Data COL Events and Additional Supporting Resources
- 3 Speaker Presentation: Gary Gartner, Richelle Grogg & Courtney Hill
- 4 Questions
- 5 Closing



## Meet the National AIM Data Team



**Isabel Taylor**  
Senior Data Program  
Manager



**Inderveer Saini**  
Program Data Analyst



**Rekha Karki**  
Program Data Analyst



**David Laflamme**  
Epidemiology  
Contractor

# Upcoming Data COL Events and Additional Resources





## Office Hours Opportunity

### Questions?

Sign up for Office Hour with Gary Gartner, Richelle Grogg & Courtney Hill

June 15, 2023  
2:00 PM-3:30 PM (ET)

Register at [saferbirth.org/aim-data/resources/](https://saferbirth.org/aim-data/resources/)  
Click Resource Type and Select 2023 Data Support COL



## Post-Assessment Evaluation

Be sure to  
complete the  
post-assessment  
survey!

**Due By: July  
1, 2023**



## Data Coaching

- ▶ Have broader questions about using data for quality improvement and AIM data processes? **Sign up for data coaching!**
- ▶ Available to state, jurisdiction, and hospital teams
- ▶ Available December 2022 through August 2023

SELECT A SERVICE

Data Coaching - 60 min.

Curious about using data for quality improv... [Read more](#)  
1 hour

Data Coaching - 30 min.

Curious about using data for quality improv... [Read more](#)  
30 minutes

Select a service to see available dates and times

Register at [saferbirth.org/aim-data/resources/](https://saferbirth.org/aim-data/resources/)  
Click Resource Type and Select 2023 Data Support COL



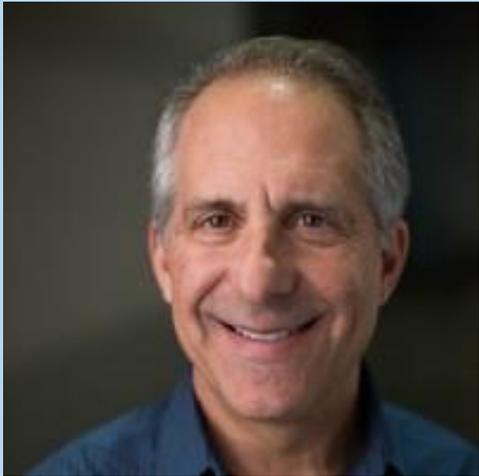
## Supplemental Funding Opportunity

- ▶ AIM has dedicated supplemental funding available to support data and reporting projects.
- ▶ Supplemental funding for data and reporting projects can be submitted via a project narrative through AIM's *Supplemental Funding Form*.

**Only states and entities with an executed subaward agreement with ACOG are eligible for COL supplemental funding.**

# Introductions

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**Dr. Gary Gartner**

Analytics Solutions  
Manager



**Richelle Grogg**

Project Manager,  
Equity & Inclusion



**Courtney Hill**

Analytics Solution  
Manager

# An Analyst's Guide to Advancing Equity in Data Visualizations

*Gary Gartner, MD – Analytical Solutions Manager, Enterprise Analytics and Data Sciences*

*Shelli Grogg – Project Coordinator, Equity & Inclusion*

*Courtney Hill – Analytical Solutions Manager, Enterprise Analytics and Data Sciences*



# Agenda

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Background

Overview of the Guide: Basic Principles

Deep Dive: Visualization Makeovers

Q&A

slido



**What state are you joining from?**

ⓘ Start presenting to display the poll results on this slide.

**slido**



**What questions do you have coming into the presentation today?**

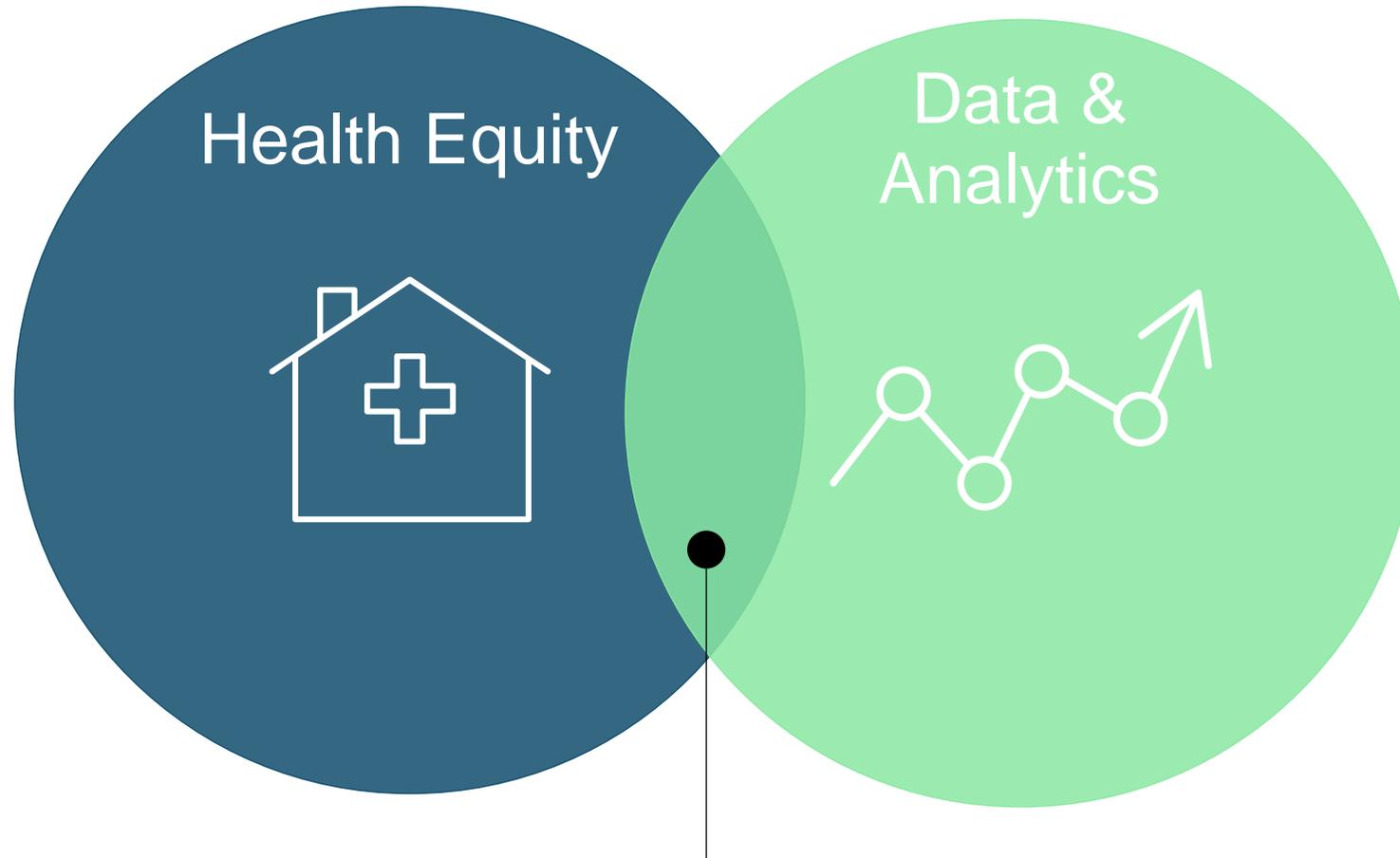
① Start presenting to display the poll results on this slide.

# Background

# Background:

## Why Health Equity and Analytics?

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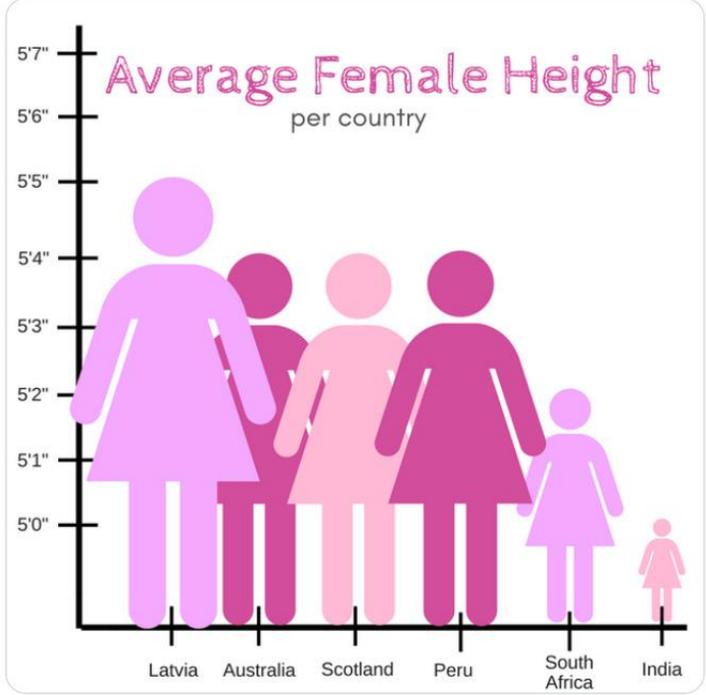


Identification of inequities, data-driven decision-making to develop interventions, and monitoring progress in decreasing care variation.

# Background: The Power of Visualizations

 **Sabah Ibrahim**  
@reina\_sabah

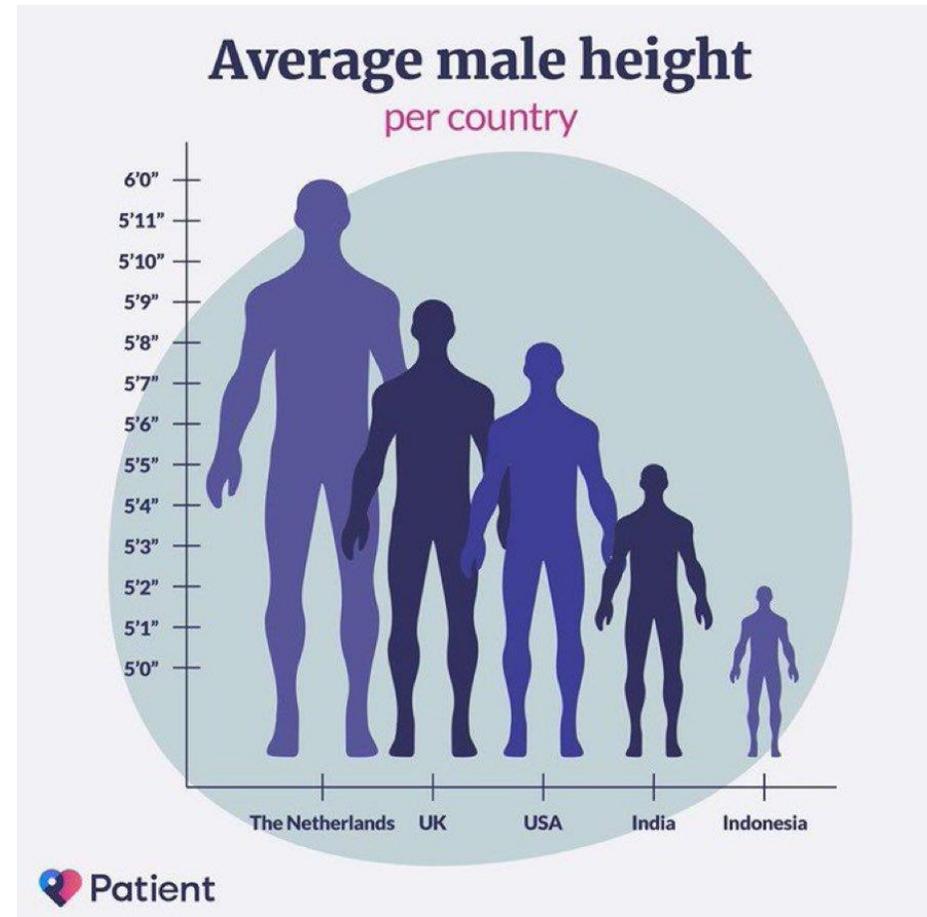
As an Indian woman, I can confirm that too much of my time is spent hiding behind a rock praying the terrifying gang of international giant ladies and their Latvian general don't find me



| Country      | Average Height |
|--------------|----------------|
| Latvia       | 5'7"           |
| Australia    | 5'4"           |
| Scotland     | 5'4"           |
| Peru         | 5'4"           |
| South Africa | 5'2"           |
| India        | 5'0"           |

10:58 PM · Aug 6, 2020

104.6K



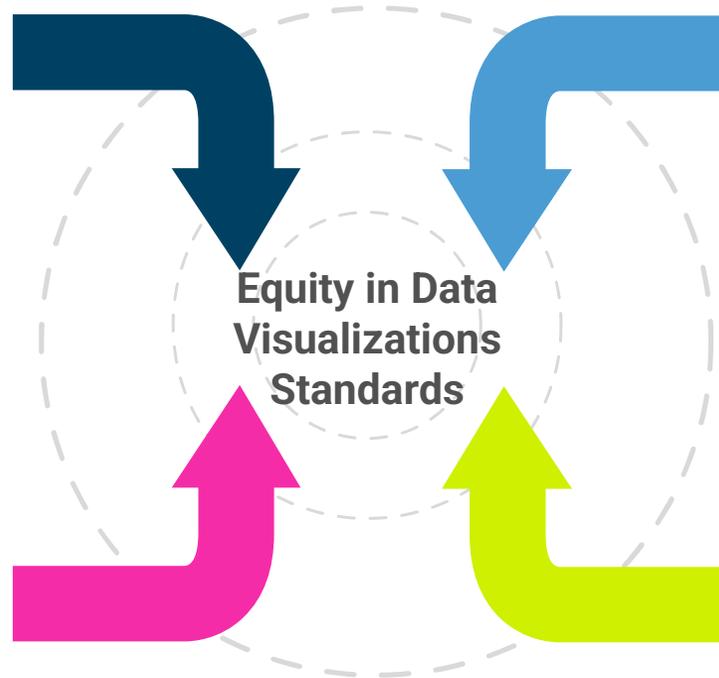
# Background:

## Why develop standards?

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Influx in request for equity related visualizations

Lack of consistency in display and labeling of demographic elements



No best practice for how to incorporate equity elements into visualizations

Visualizations and language choice can unintentionally perpetuate bias

# An Analyst's Guide to Advancing Equity in Data Visualizations

This guide aims to support analysts (and all others involved in creating data visualizations) to embed equity into new and existing data displays. It provides a starting point to begin building consistency in equity-related data displays at UNC Health and eliminating unintentional bias.

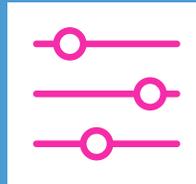
The guide includes topics such as:



Color Use



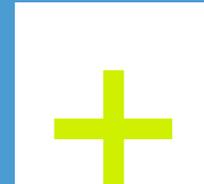
Language Choice



Layout



Group Creation



and More.

# slido



**What purpose are you most interested in developing equity related data visualizations for?**

① Start presenting to display the poll results on this slide.

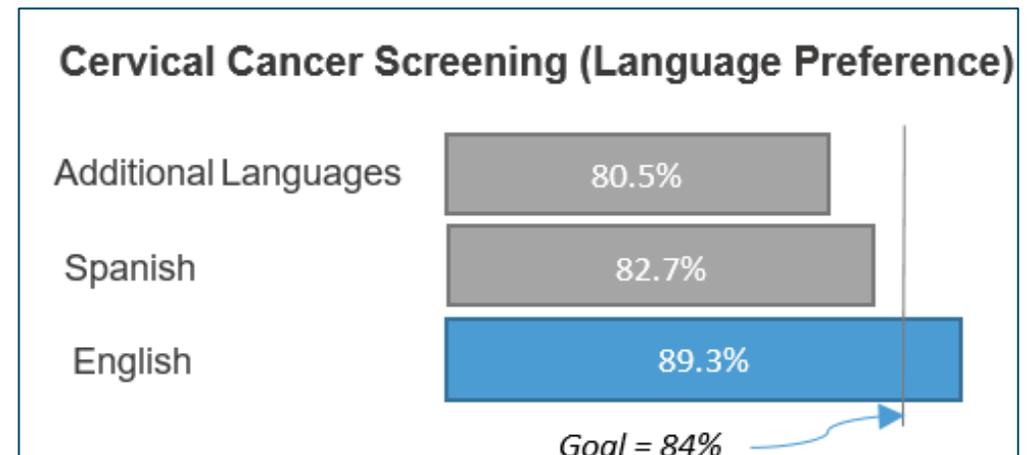
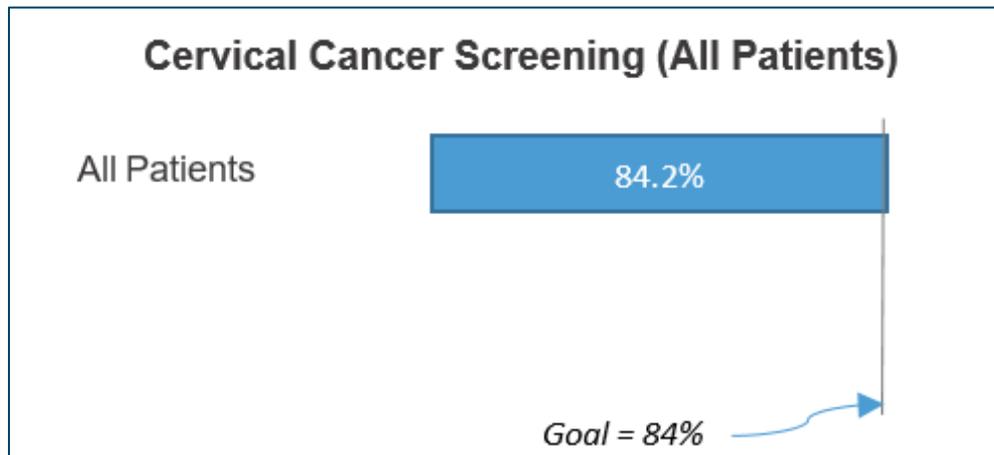
# Overview of Guide: Principles of Equitable Data Visualizations

# Background

## Why Data & Analytics?

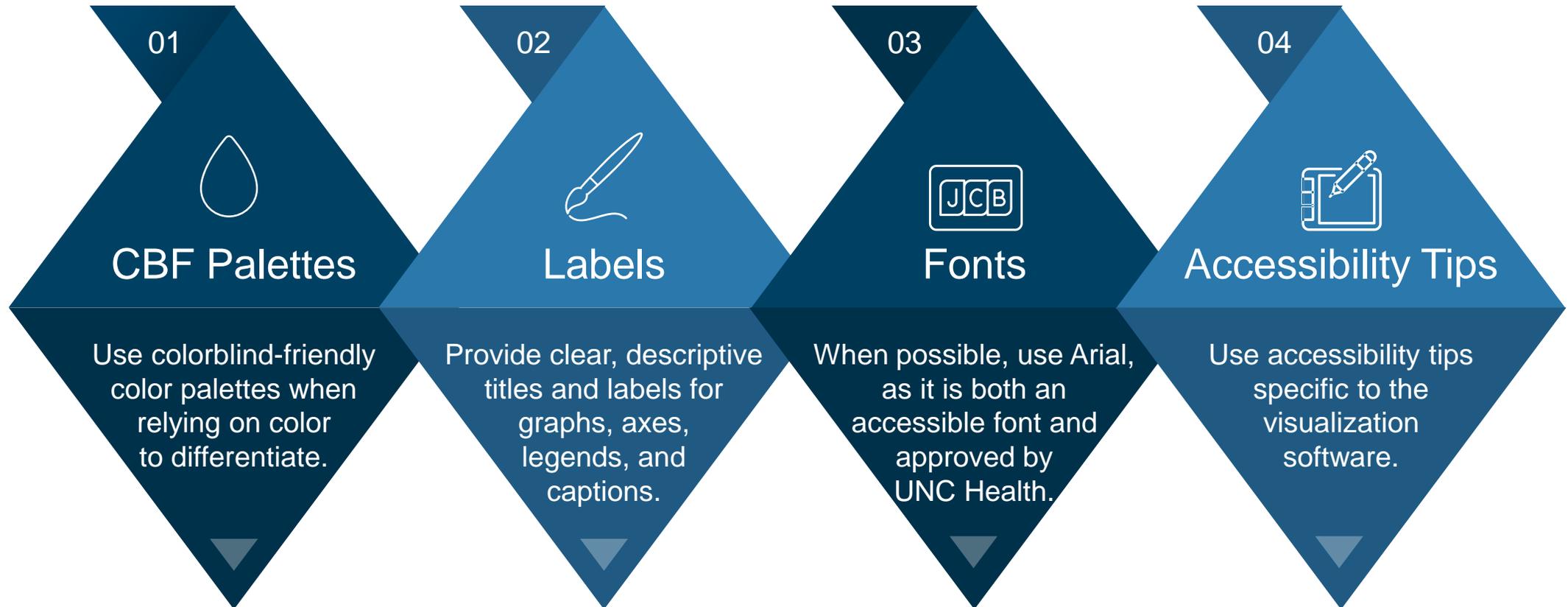
Stratification\* of demographic groups helps uncover disparities.

*\*Also known as disaggregation or separation*



# Accessibility

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# Decentering Whiteness



**Avoid making the non-Hispanic, White group the comparison group.**



**When whiteness is centered it perpetuates a racial hierarchy by assuming this group's outcomes is the standard or goal.**

Some ways to decenter Whiteness include:

- Avoid creating a dichotomy of races – Don't use “White” vs. “non-White” or “people of color.” Rather, disaggregate the “non-White” group to show the diversity amongst communities.
- When looking at a data set, consider other ways to set a standard rather than using White group outcomes. This could include using overall averages or organizational goals/measures of excellence. Below are two examples, Figure 2 uses state average as the comparison and Figure 3 uses a vertical line which represents a set goal.

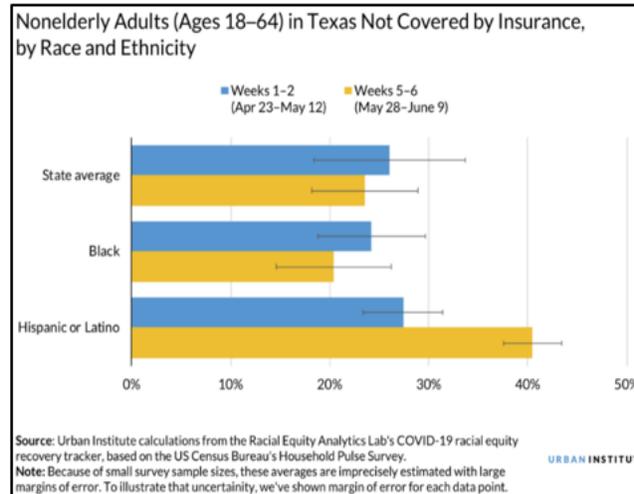


Figure 2 - (Urban Institute, 2020)

## Breast Cancer Screening by Language Preference

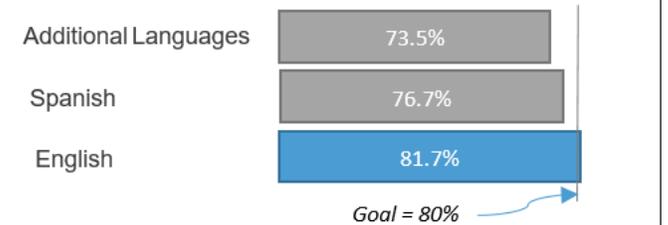


Figure 3 – Example created for the purpose of these standards

# Language Choice

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## Importance of Shared Language

*Ensure you have consensus with your audience regarding shared language.*



## Avoid Patronizing Language

*Use language that consider the patient's agency and the various factors impacting their situation.*



## Person-Centered Language

*Reflect the preferences of the individual or community. Name people's experiences rather than objectifying or calling them names.*

slido



**Of the information shared so far, was anything new to you?**

① Start presenting to display the poll results on this slide.

# Rates Vs Counts

## RATES VS. COUNTS

The usage of rates (e.g., percent or per 1000), instead or in addition to counts or raw numbers (i.e., # of patients), is needed to account for the smaller group sizes of historically marginalized groups compared to the non-Hispanic, White group. When possible, using rates instead of, or in addition to, counts is recommended.

Figures 6 and 7 demonstrate how using rates helps display disparities in maternal health outcomes compared to a simple count. Another option would be to include both the rate and count in a dashboard to account for both comparisons.

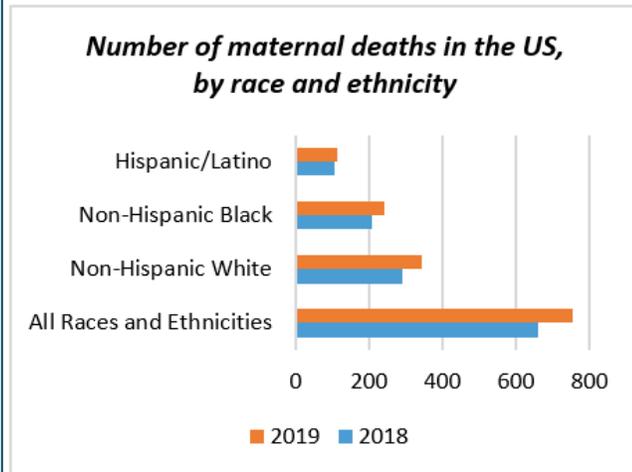


Figure 6 - (National Center for Health Statistics, 2019)

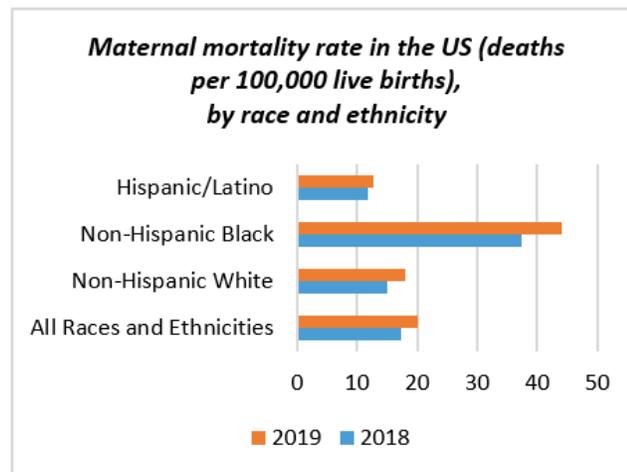


Figure 7 - (National Center for Health Statistics, 2019)



**Using counts can hide or disguise disparities.**



**Using rates (in place of or in addition to rates) can help account for the smaller group size of historically marginalized groups.**

# Layout Selection/Ordering



Ordering quantitatively avoids perpetuating cycles of advantaging or centering certain groups.



When in doubt – consider what is most relevant to the story you’re trying to tell?

## LAYOUT SELECTION

[RETURN TO TABLE OF CONTENTS](#)

Ordering data inherently implies a hierarchy across groups. When done incorrectly, ordering can perpetuate cycles of advantaging or centering certain communities while othering the rest.

### ORDERING

#### QUANTITATIVE ORDERING

When ordering data in a visualization, use quantitative ordering. This technique ensures the layout is based on a numerical pattern rather than unconscious bias, habit, or historical patterns of who typically gets centered. However, keep in mind that this practice best promotes equity when combined with the [recommendation to use rates over raw counts](#). Otherwise, quantitative ordering will continue to center the largest and more privileged group.

#### What To Do

✓ Quantitative Ordering – Example:

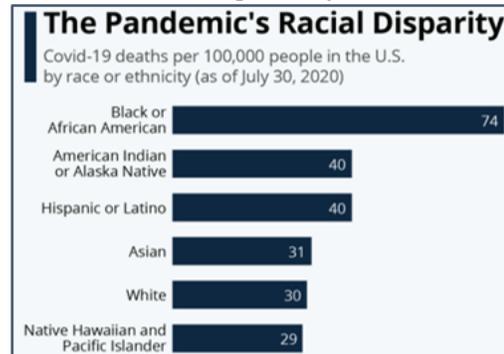


Figure 115 - (Statista, 2020)

#### What Not To Do

✗ Alphabetic Ordering – Example:

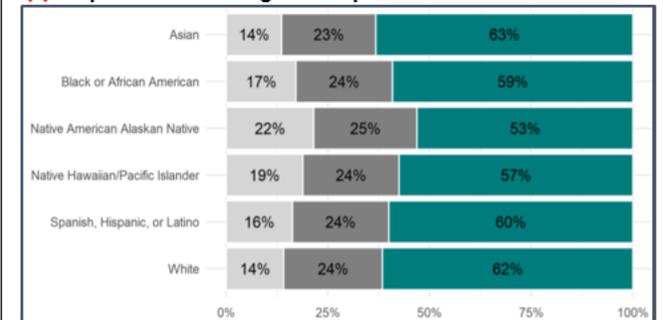
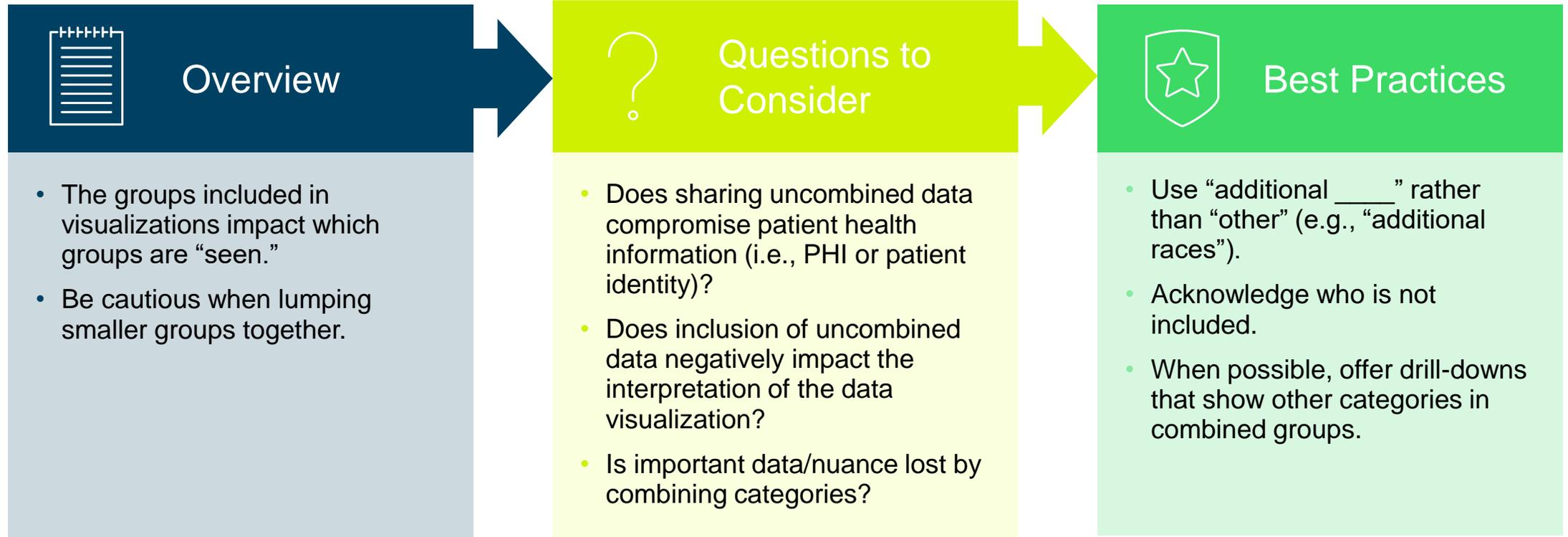


Figure 137 - (Press Ganey Associates LLC, 2021)

# Combining Groups



# Combining Groups (Cont.)

## Best Practices in Action



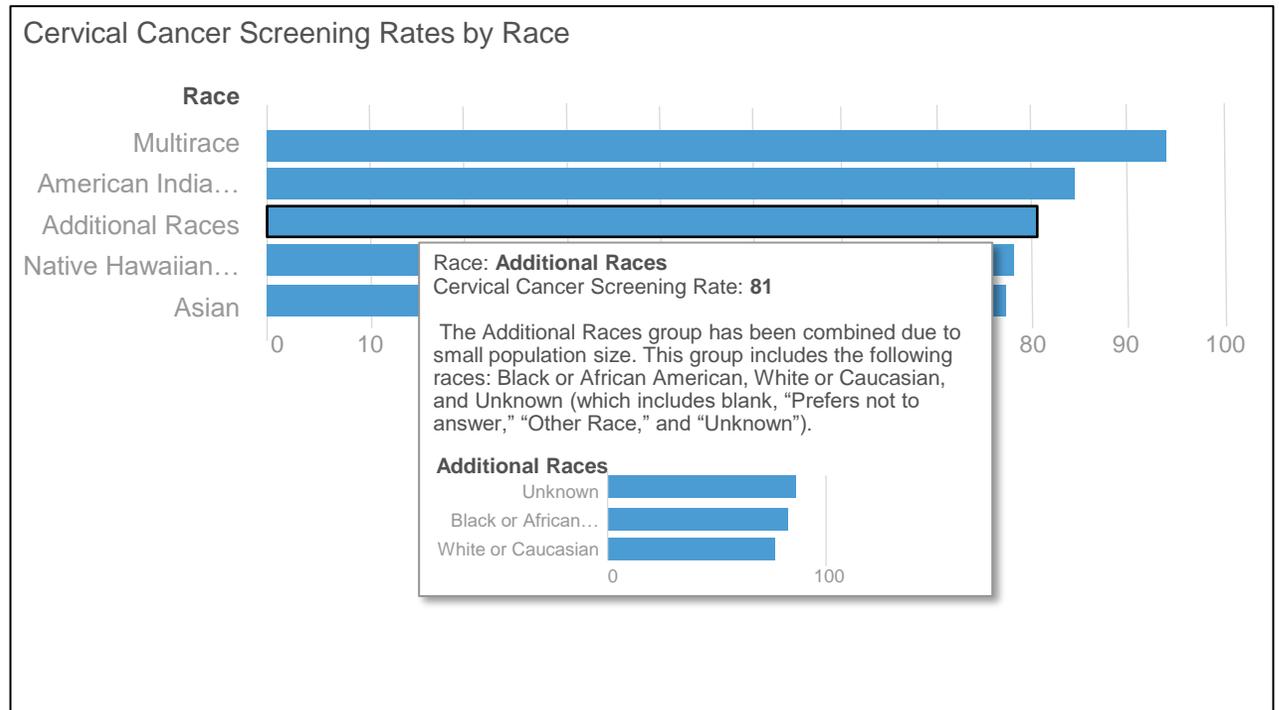
“Additional Races”



Acknowledge who was in the combined group.



Offered drill-downs that show other categories in combined group.



This example contain fabricated data created for the purpose of this presentation.

# Use of Color

## USE OF COLOR

[RETURN TO TABLE OF CONTENTS](#)

If not chosen intentionally, color palettes can perpetuate stereotypes and create a hierarchy across categories.

Examples for how to use color without differentiating between demographic groups:

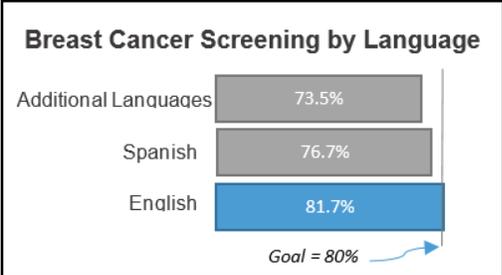
| Example  | Description          |       |         |       |         |       |   |
|--|----------------------|-------|---------|-------|---------|-------|---|
| <p>✓ Using Color to Highlight Disparities:</p>  <p><b>Breast Cancer Screening by Language</b></p> <table border="1"> <tr> <td>Additional Languages</td> <td>73.5%</td> </tr> <tr> <td>Spanish</td> <td>76.7%</td> </tr> <tr> <td>English</td> <td>81.7%</td> </tr> </table> <p>Goal = 80%</p> | Additional Languages | 73.5% | Spanish | 76.7% | English | 81.7% | <p>Figure 10 shows a graph that uses color to highlight groups that have met a set goal, as opposed to differentiating between groups. In this example (using fabricated data), the goal is for 80% of patients to be screened for breast cancer, and it is stratified by language.</p> |
| Additional Languages   | 73.5%                |       |         |       |         |       |   |
| Spanish  | 76.7%                |       |         |       |         |       |   |
| English  | 81.7%                |       |         |       |         |       |   |

Figure 10 - Example created for the purpose of these standards

Examples of how and how not to use color to differentiate between groups:

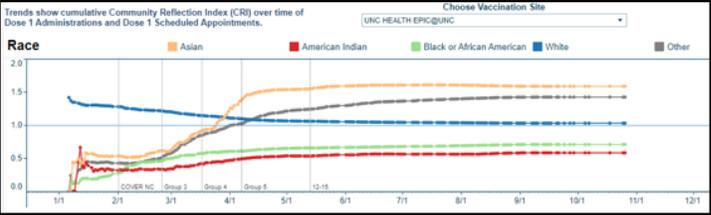
| Example  | Description   |
|--|---|
| <p>✓ Visualizations Where Color Is Necessary to Differentiate:</p>  <p><b>Trends show cumulative Community Reflection Index (CRI) over time of Dose 1 Administrations and Dose 1 Scheduled Appointments.</b></p> <p>Race: Asian, American Indian, Black or African American, White, Other</p> | <p>For example, line graphs can be challenging to read and interpret when there is no color variation between lines. For this reason it can be helpful to</p> |

Figure 13 - Community Reflection Index, COVID Vaccinations



Color should be used intentionally, and does not always need to be used to differentiate between demographic groups.

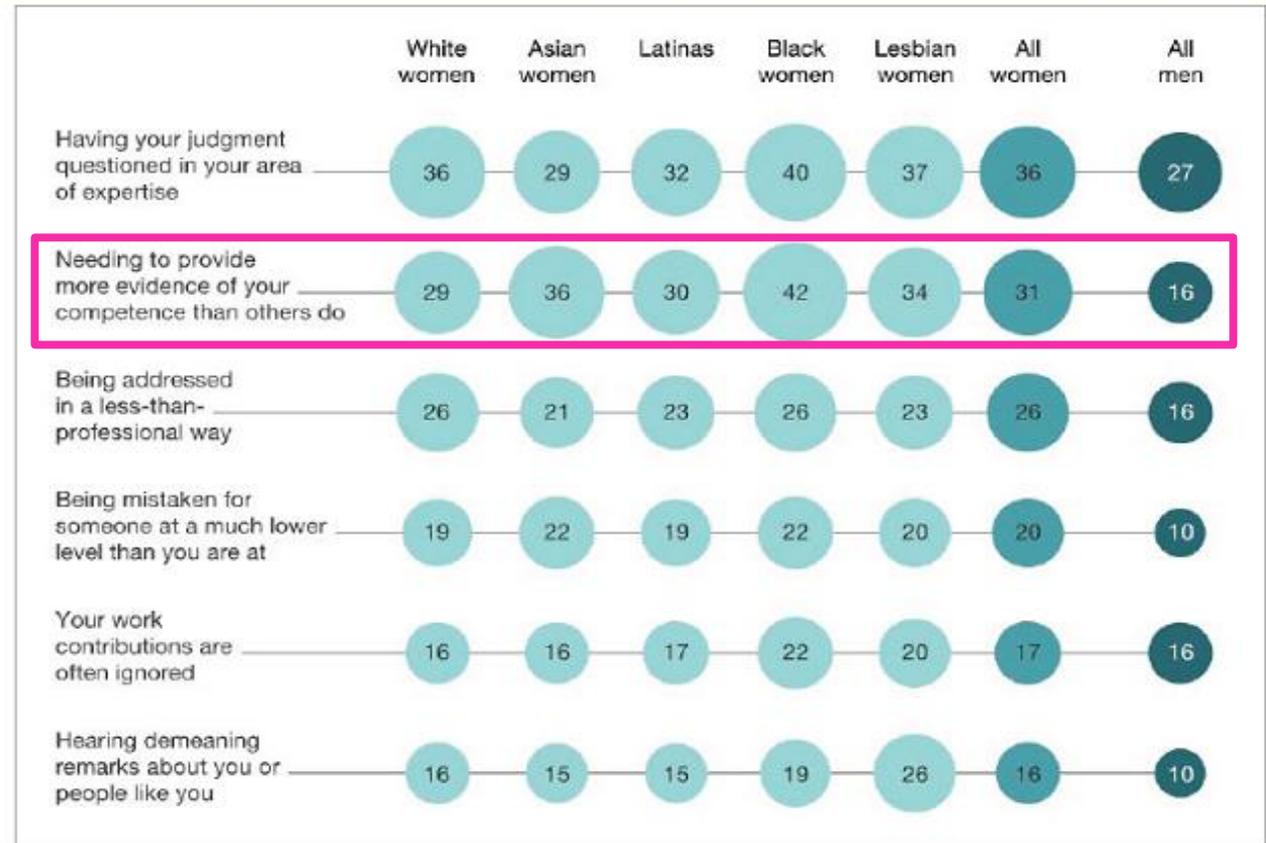


However, the standards provide an approved color palette for when color is needed to differentiate between demographic groups in a visualization.

# Intersectionality

Intersectionality is a framework that describes how multiple social and political identities within an individual overlap and interact to create greater oppression for some groups of people due to the combination of identities (e.g., being Black and a woman).\*

Figure 2 - Employees Who Have Experienced Micro-aggressions in the Workplace (%) \*\*



\*Crenshaw, K. (1989). *Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics*. University of Chicago Legal Forum.

\*\* Krivkovich, A., Nadeau, M.-C., Robinson, K., Robinson, N., Starikova, I., & Yee, L. (2018). *Women in the Workplace 2018*. McKinsey.

# Mapping

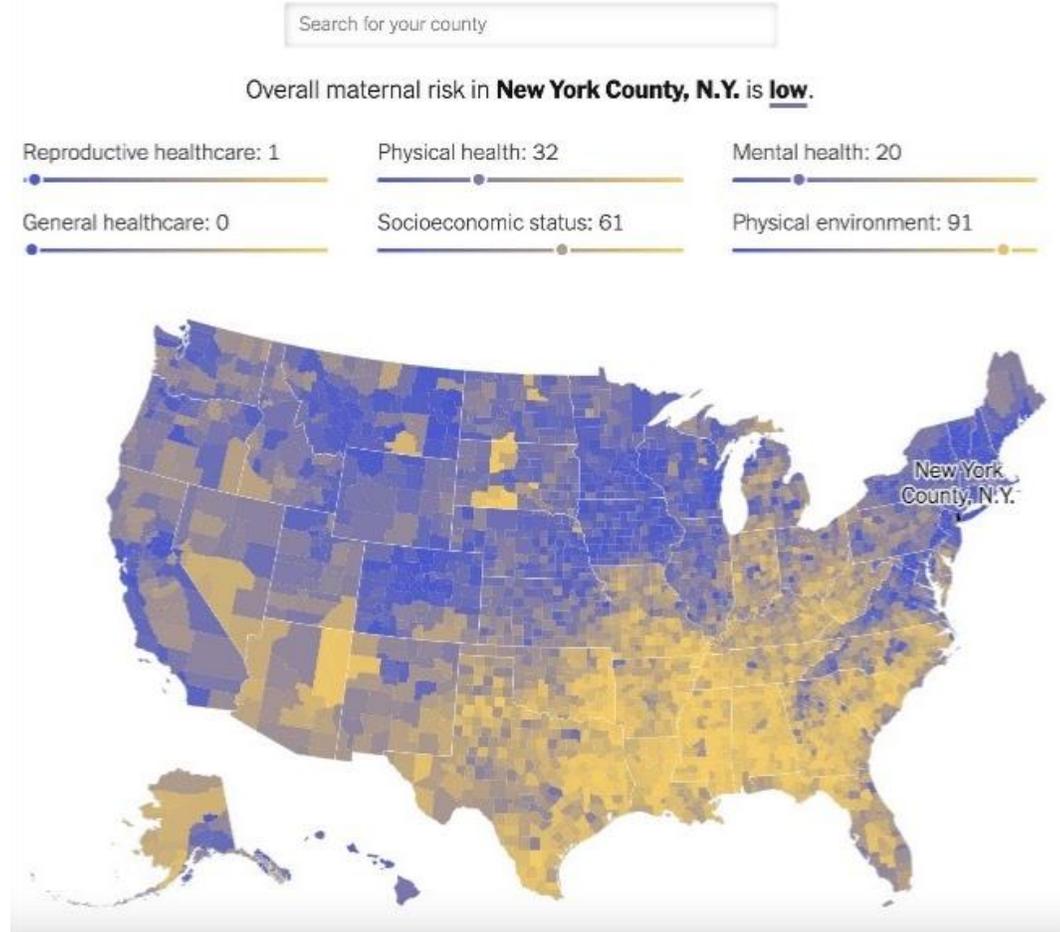


Figure 27 - (Sgaier, Downey, Nguyen, & Serkez, 2021)



**Be intentional with geography choice (i.e., zip code, county, census tract, etc.) and color choice**



**Use tooltips or footnotes to add additional context.**

# Deep Dive: Visualization Makeovers

# Makeover Data Sources

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## Tableau-ready data from the Nation Equity Atlas

- <https://nationalequityatlas.org/lab/data>



## CDC Health E-Stats – Maternal Mortality Rates, 2018 - 2020

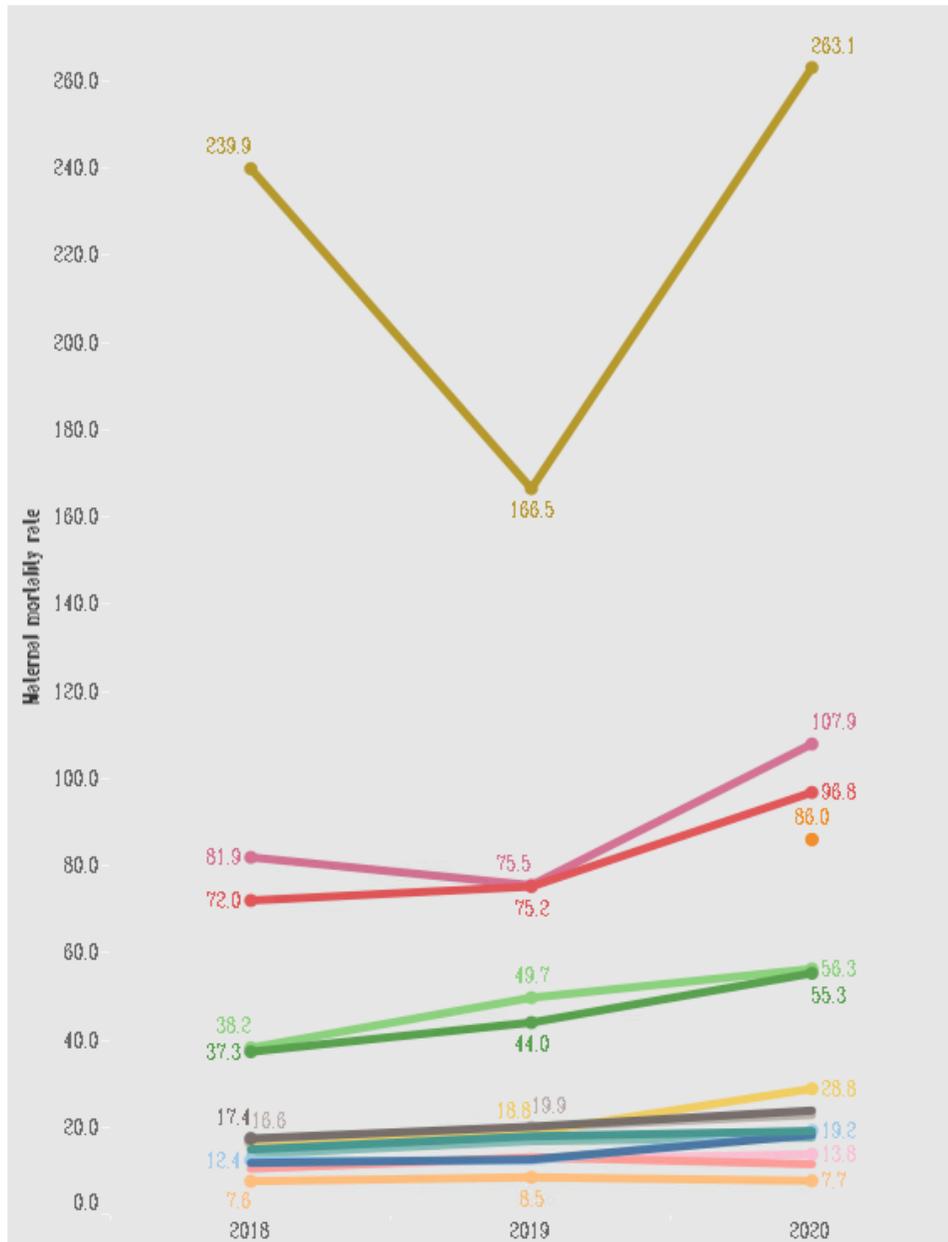
- [https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2020/maternal-mortality-rates-2020.htm#anchor\\_1559670130302](https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2020/maternal-mortality-rates-2020.htm#anchor_1559670130302)

# Thank you!

If you have any questions or comments, please contact [equityinclusion@unchealth.unc.edu](mailto:equityinclusion@unchealth.unc.edu).

**OFFICE HOURS – Thursday 6/15 @ 2 PM ET**

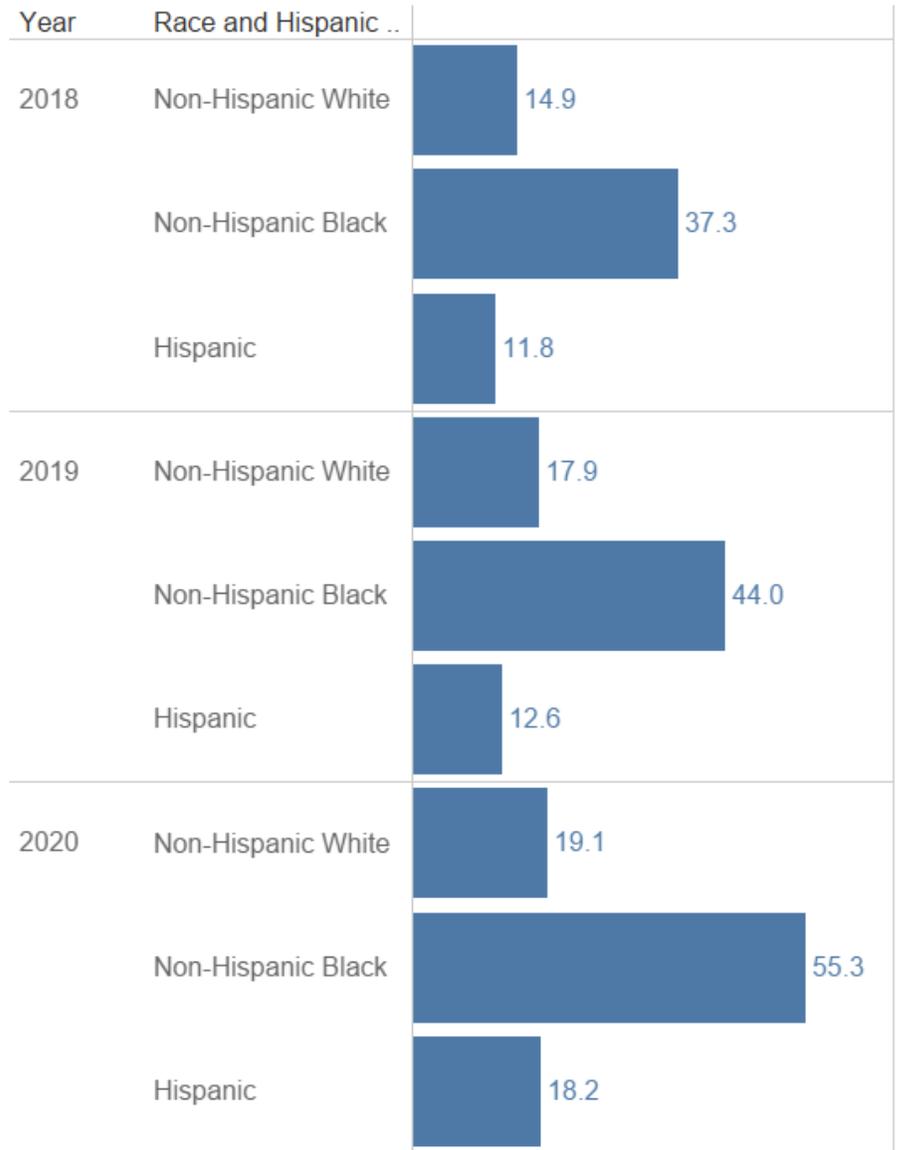
# Appendix – Makeover Images



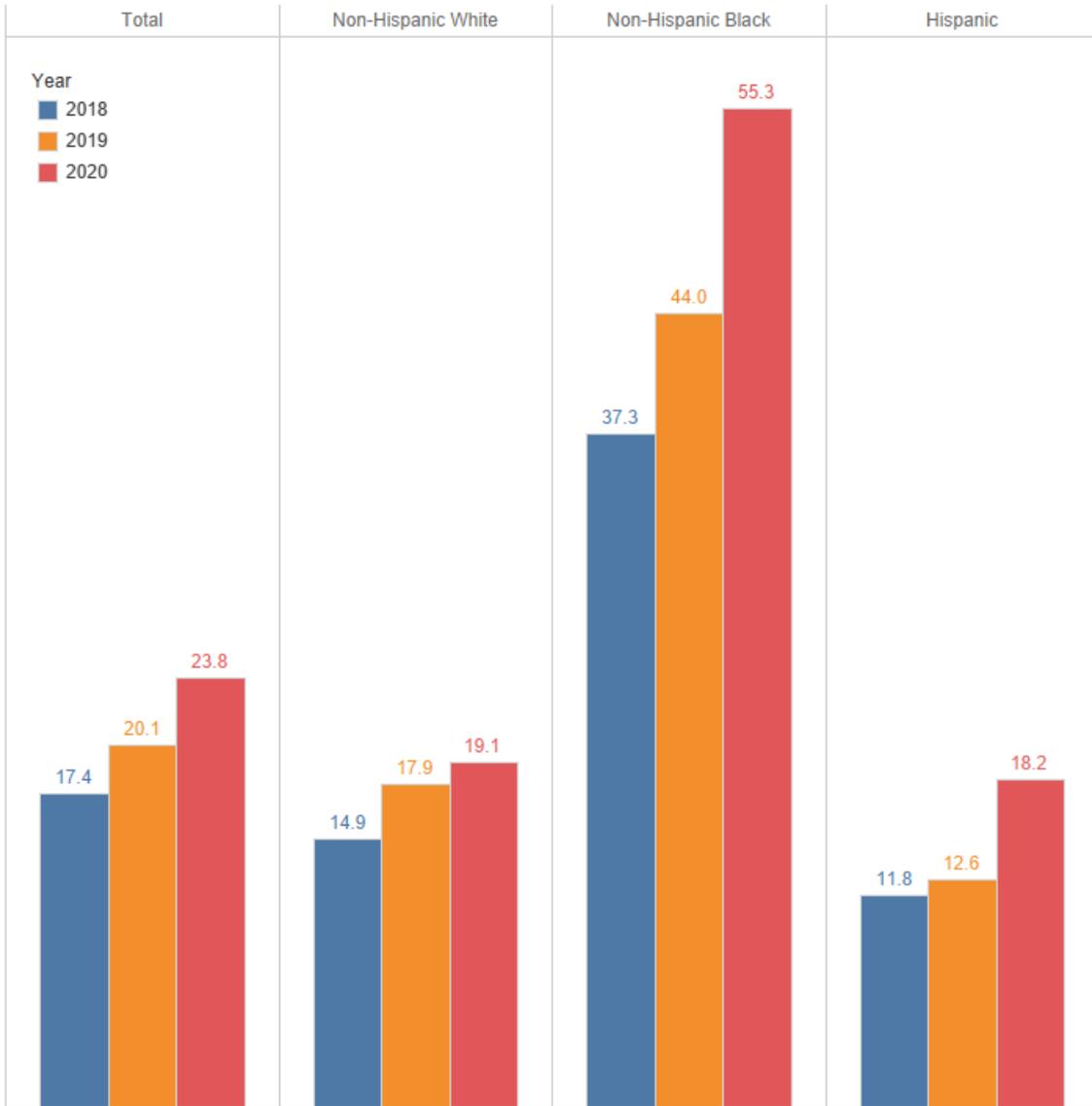
- Race and Hispanic origin and age
- Total
  - Non-Hispanic White
  - Non-Hispanic Black
  - Hispanic
  - Hispanic 25-39
  - Hispanic 40 and over
  - Hispanic Under 25
  - Non-Hispanic Black 25-39
  - Non-Hispanic Black 40 and over
  - Non-Hispanic Black Under 25
  - Non-Hispanic White 25-39
  - Non-Hispanic White 40 and over
  - Non-Hispanic White Under 25
  - Total 25-39
  - Total 40 and over
  - Total Under 25

- Race and Hispanic origin and a..
- (All)
  - Hispanic
  - Hispanic 25-39
  - Hispanic 40 and over
  - Hispanic Under 25
  - Non-Hispanic Black
  - Non-Hispanic Black 25-39
  - Non-Hispanic Black 40 an...
  - Non-Hispanic Black Unde...
  - Non-Hispanic White
  - Non-Hispanic White 25-39
  - Non-Hispanic White 40 a...
  - Non-Hispanic White Unde...
  - Total
  - Total 25-39
  - Total 40 and over
  - Total Under 25

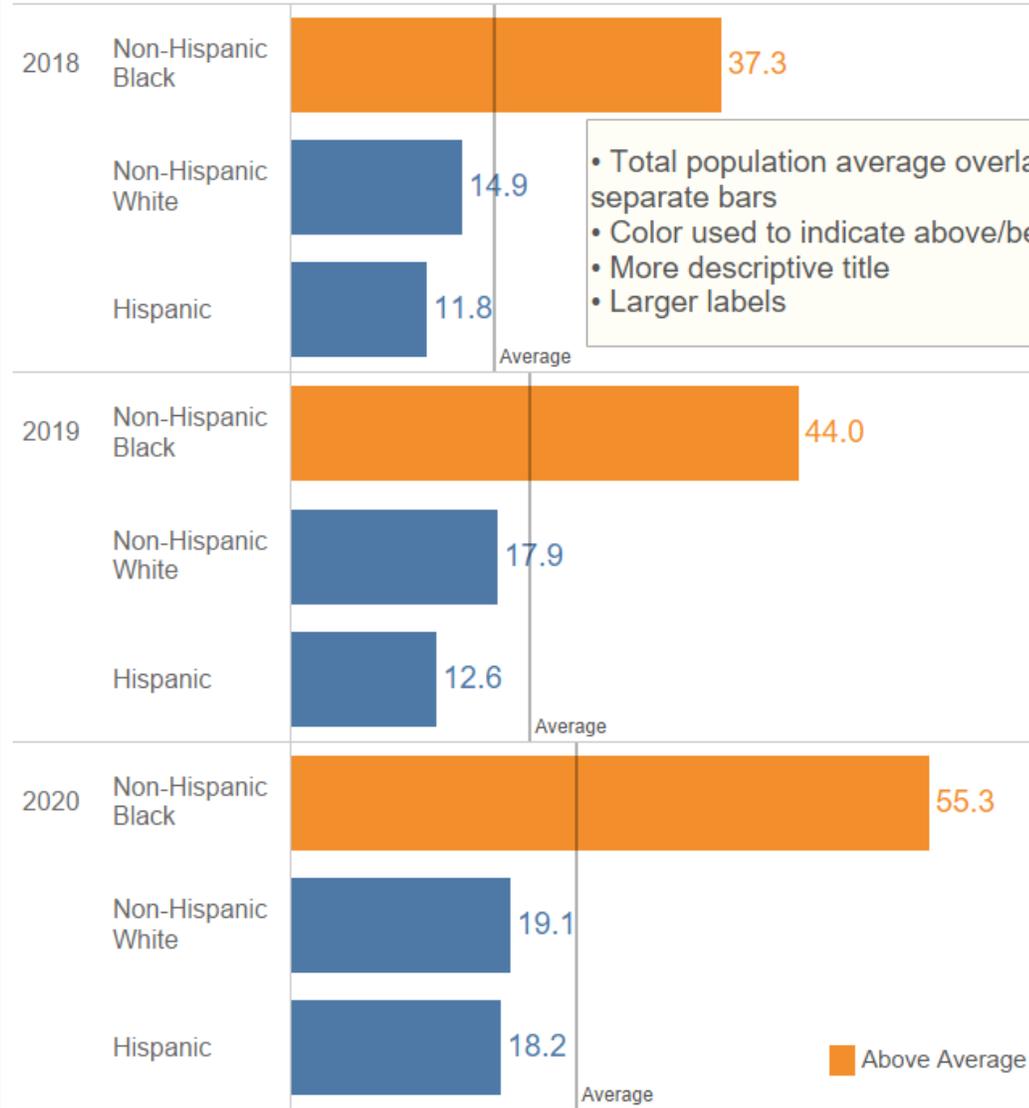
### Annual Maternal Mortality by Race/Ethnicity (deaths per 100,000 births)



## Race/Nationality Bars

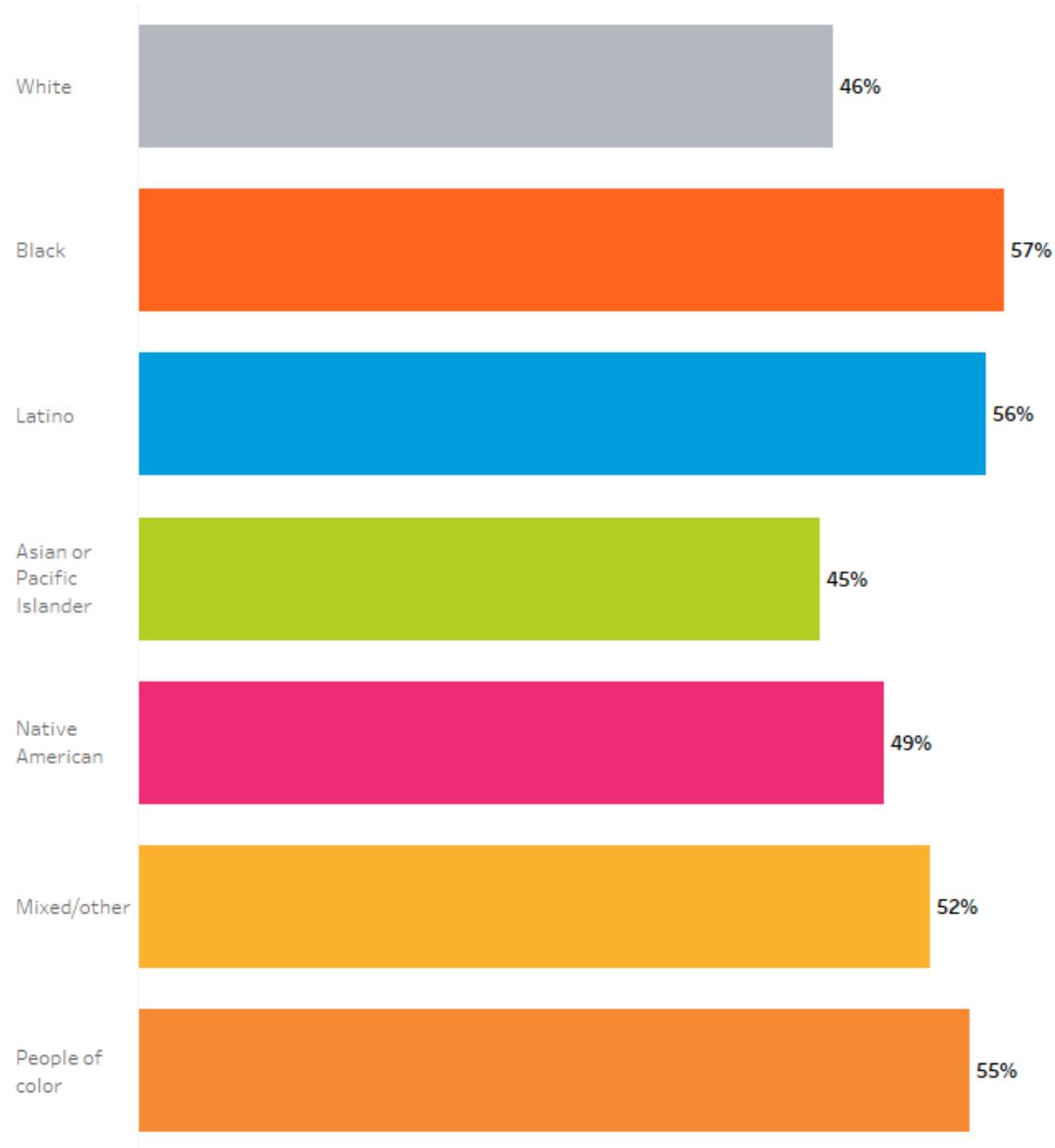


## Annual Maternal Mortality by Race/Ethnicity (deaths per 100,000 births)

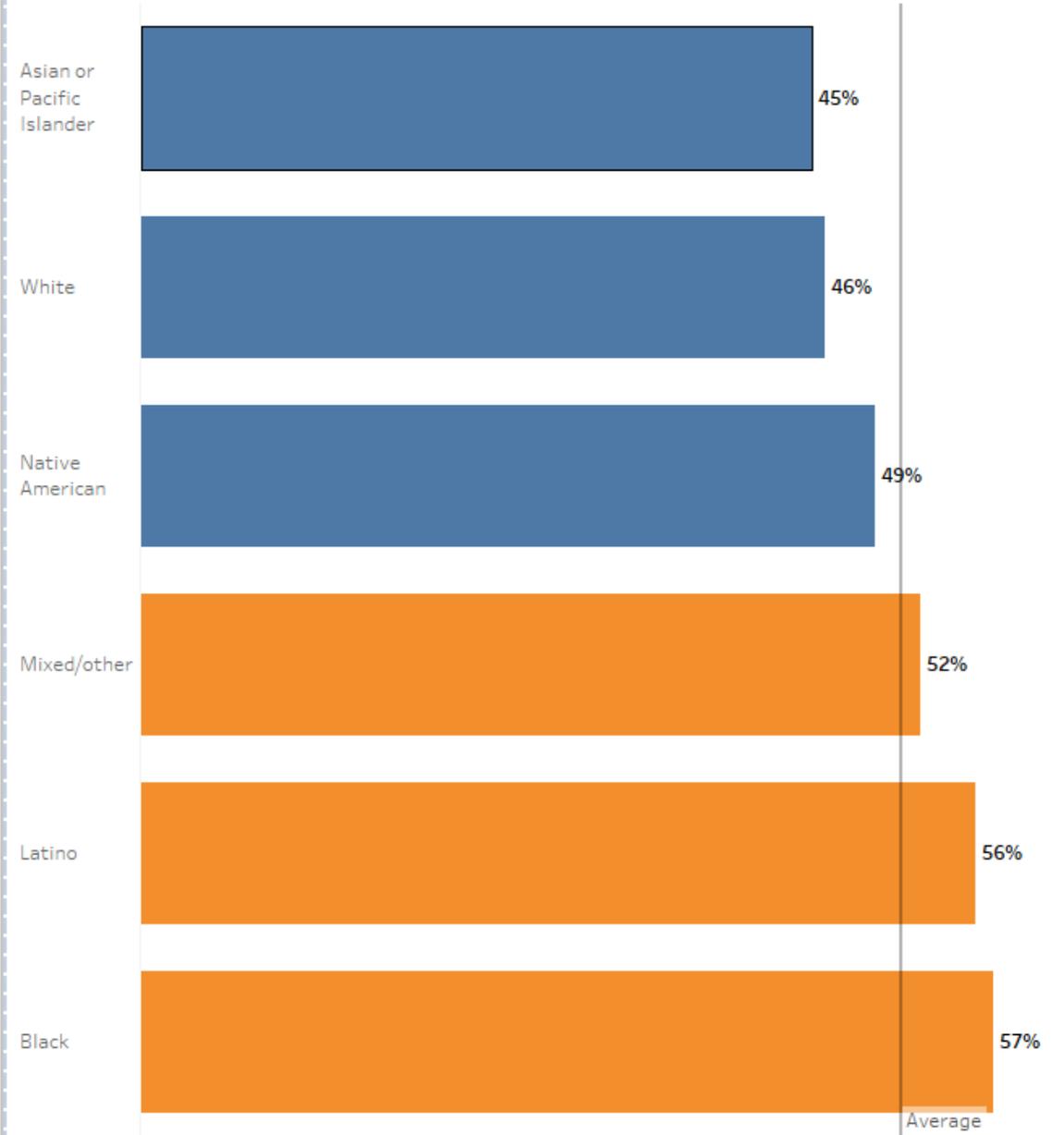


- Total population average overlay instead of separate bars
- Color used to indicate above/below average
- More descriptive title
- Larger labels

**BAR: By Race/Ethnicity**



**BAR: FIXED By Race/Ethnicity**



**Questions?**





**Thank you!**

The recording will be emailed to all attendees once ready

Any questions about this COL or the series can be sent to [aimdatasupport@acog.org](mailto:aimdatasupport@acog.org)

Be sure to complete the evaluation survey!  
It will pop up in your browser as you exit the session

Remember to sign up for office hours