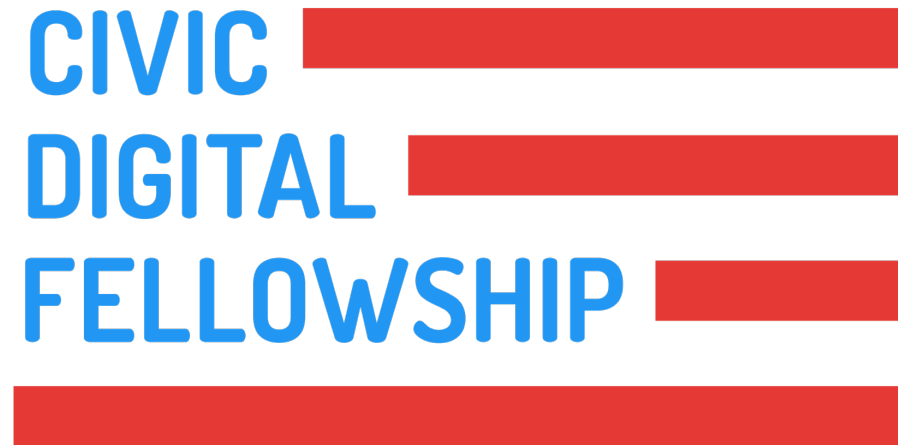


# Enhancing Health Data: Developing Dashboards of Social Health Indicators



**Fellow:** Maria Burzillo

**Supervisor:** Victoria Udalova

**Division:** Associate Director for Demographic Programs (ADDP), Enhancing Health Data (EHealth) Program

December 7<sup>th</sup>, 2020

Shape  
your future  
START HERE >

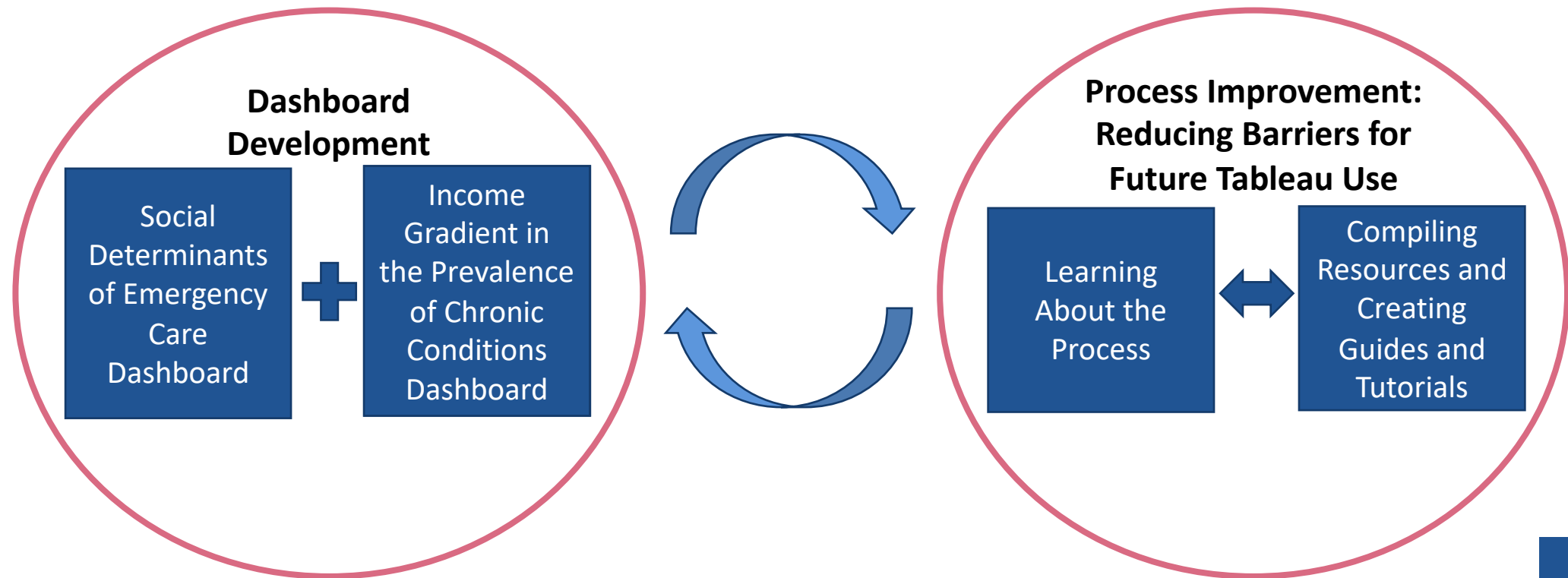
United States<sup>®</sup>  
**Census**  
**2020**

# The Problem: A Need for Data Visualization Tools and Processes in EHealth

## Why Might a Program Like EHealth Benefit From Interactive Data Visualization Tools?

- Powerful means of concisely sharing and summarizing large amounts of data currently living in reports
- Increasing the accessibility and digestibility of data
- Potential to reach and meaningfully engage more users
- Ability to showcase and share program's work to increase program awareness and impact

# The Problem-Solving Process: Creating Data Visualization Tools and Improving the Processes within EHealth



# Social Determinants of Emergency Care Dashboard

## Exploring Utah Emergency Care Utilization - Fake Data

Introduction

Explore

FAQ

Select an Age Category to View the Data By:

All Ages

Note: Our Analysis includes only a subset of emergency department visits. For more information, visit the FAQ page or hover over the note on the right of the visuals.

How do we Classify Emergency Department Visits?

A large percentage of Emergency Department (ED) visits in Utah between 2013 and 2017 were classified as preventable. Preventable ED visits represent a burden to healthcare systems, result in excess cost for providers, and can lower the quality of care for patients. This dashboard explores the relationships between Social Determinants of Health (SDOH) and ED visits. Our analysis includes only those visits falling into the Main 4 categories of ED visits as determined by the NYU Classification Algorithm (for more information on this, please hover over the note to th..

% of Visits by Preventability, All Ages

Avg. Number of Emergency Department Visits per 1000 People, All Ages

82.4%

17.6%

Not Preventable

Preventable

200.0

100.0

0.0

Preventable

Not Prevent..

Care Needed, Not Preventable

Care Needed, Preventable

Non-Emergent

Primary Care Treatable

Note: Hover here to learn more about the Main 4 ED Visit Classifications included in the analysis

Hover over the data for more information. Margins of Error are shown in the parentheses (+/- .2)

Filter the data by clicking on aspects of the visuals and select an age group to view data for by using the drop-down menu above.

Explore ED visits broken down specific social determinants of health (SDOH) by selecting the "Explore" button on the left-hand panel.

View Disclosure Statement

## Exploring Utah Emergency Care Utilization - Fake Data

Introduction

Explore

FAQ

Select an Age Category to View the Data By:

All Ages

Select a Demographic to View the Data by:

Household Inco...

Filter by Demographic Category. Hint: select "All" to see initial data if the screen is blank.

Categories

☒ (All)  
☒ 1st Decile  
☒ 2nd Decile  
☒ 3rd Decile  
☒ 4th Decile  
☒ 5th Decile  
☒ 6th Decile

How does Household Income Decile Affect Emergency Care Utilization in Utah?

Avg. Number of Emergency Department Visits per 1000 People, All Ages

Non-Emergent

Primary Care Treatable

Care Needed, Preventable

Care Needed, Not Preventable

300.0

200.0

100.0

0.0

2nd Decile

4th Decile

6th Decile

8th Decile

Highest Decile

2nd Decile

4th Decile

6th Decile

8th Decile

Highest Decile

2nd Decile

4th Decile

6th Decile

8th Decile

Highest Decile

Preventable Visits per 1000 People, All Ages

Household Income Decile

137.8

117.9

102.3

80.1

70.2

56.6

61.7

1st Decile

2nd Decile

3rd Decile

4th Decile

5th Decile

6th Decile

7th Decile

% of Visits by Preventability, All Ages

Household Income Decile

100.0%

0.0%

Not Preventa..

Preventable

1st Decile

2nd Decile

3rd Decile

4th Decile

5th Decile

# Income Gradient in Prevalence of Chronic Conditions Dashboard

## Incidence of Top Chronic Conditions by Income for Medicaid Beneficiaries: Fake Data

[Children's Conditions](#)[Adult Conditions](#)[Seniors' Conditions](#)[Age Comparison](#)

### Introduction

### FAQ

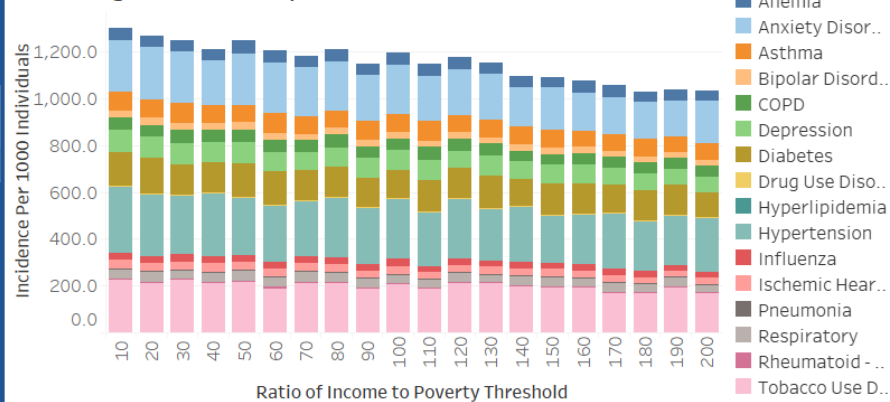
Select an age group to view the group's top chronic conditions:

- ☒ Adults  
☐ Children  
☐ Seniors

Note on selection of top chronic conditions.

[View Disclosure Statement](#)

### Breaking Down the Top Chronic Conditions for Adults



- Hover over the data for more information. Margins of Error are shown in the parentheses (+/- .2)
- Filter the data by clicking on aspects of the visuals and select specific chronic condition(s) or age groups to view using the buttons and menus in the left-hand panel when applicable.
- Explore the relationships between chronic condition incidence and income for children, adults, and seniors on Medicaid by selecting one of the tabs across the top of the dashboard.

## Incidence of Top Chronic Conditions by Income for Medicaid Beneficiaries: Fake Data

[Children's Conditions](#)[Adult Conditions](#)[Seniors' Conditions](#)[Age Comparison](#)

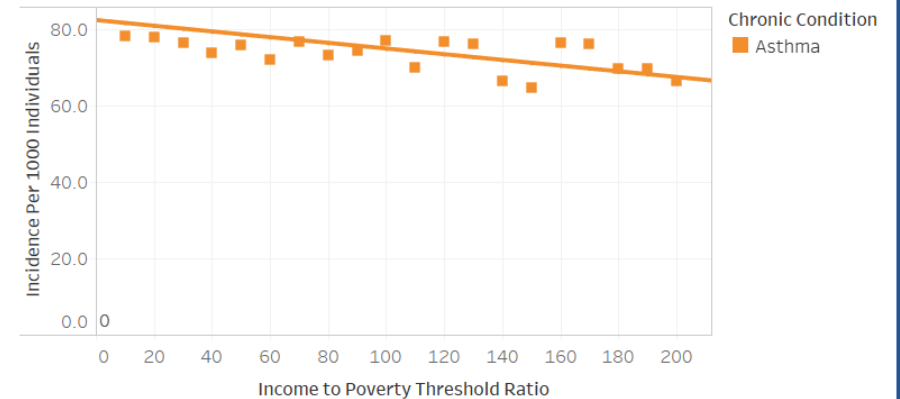
### Introduction

### FAQ

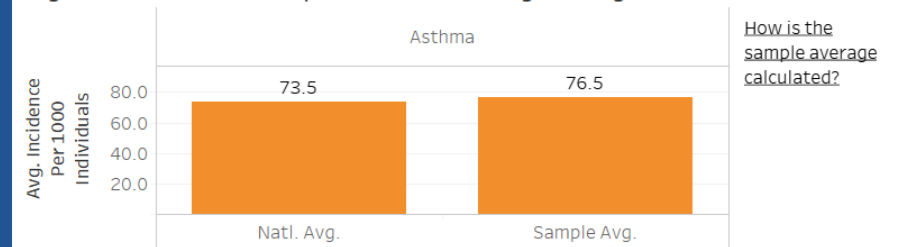
Select a top chronic condition(s) for children to view the children's data for:

Asthma

### Income Gradient of Asthma Among Children



### Avg. Incidence in Data Sample v. National Average Among Children



How is the sample average calculated?

# Deliverables and Next Steps

## Deliverables

- Social Determinants of Emergency Care Dashboard
- Income Gradient in Prevalence of Chronic Conditions Dashboard
- EHealth Tableau Starter Guide
- EHealth Tableau Dashboard Review and Publication Guide
- Step-by-step guides to recreate dashboards to aid in potential revisions

## Next Steps

- Project hand-off to new EHealth Tableau users to continue to expand data visualization capabilities within EHealth
- Continued refinement of dashboards and guides