CMS Quality Conference 2023

Building Resilient Communities:

Having an Equitable Foundation for Quality Healthcare

Welcome

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TMF QIN-QIO’s Health Equity Dashboard

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Today we'll review:

- Steps used to identify disparities
- Elements of the health equity dashboard
- Use of health equity data for quality improvement

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TMF QIN-QIO Service Area

- Four states
- Two territories
- Close to 4 million Medicare beneficiaries

Health disparities persist

Health disparities of more than 1% were found across multiple populations in the TMF QIN-QIO community coalitions.

- African Americans experience health disparities in all 11 of the measures analyzed.
- North American Native people experience health disparities in eight of the 11 measures analyzed.
- Hispanic people experience health disparities in seven of the 11 measures analyzed.
- Asian/Pacific Islanders experience health disparities in three of the 11 measures analyzed.
- White people experience health disparities in one of the 11 measures analyzed.
- Males experience health disparities in six of the 11 measures analyzed.
- People with disabilities experience health disparities in all 11 of the measures analyzed.

Health disparities of more than 1% were found across multiple populations in TMF QIN-QIO nursing homes.

- African American nursing home residents experience health disparities in seven of the eight measures analyzed.
- Asian nursing home residents experience health disparities in five of the eight measures analyzed.
- American Indian/Alaskan Native and Hispanic nursing home residents experience health disparities in four of the eight measures analyzed.
- Native Hawaiian/Pacific Islander nursing home residents experience health disparities in three of the eight measures analyzed.
- White nursing home residents experience health disparities in two of the eight measures analyzed.
- Male nursing home residents experience health disparities in six of the eight measures analyzed.

Identifying disparities is a two-step process

- Numerical difference in rate

Race	Rate	Rate Difference
African American	18.1%	4.9%
Asian/Pacific Islander	18.0%	4.8%
Hispanic	16.7%	3.5%
North American Native	19.8%	6.6%
White (reference group)	13.2%	

Identifying disparities is a two-step process

- Percent difference in population

Race	% Num	% Den	Pop Disparity
African American	18.2%	14.3%	**3.9%**
Asian/Pacific Islander	0.7%	0.5%	0.2%
Hispanic	10.8%	9.2%	**1.6%**
North American Native	0.2%	0.1%	0.1%
White	66.0%	71.4%	-5.4%

e.g., AA numerator = 182, Total numerator = 1000, %Num = 18.2%

AA denominator = 286, Total denominator = 2000, %Den = 14.3%

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Elements of the TMF QIN-QIO’s health equity dashboard

- Outcomes data stratified by race/ethnicity, gender and disability status for all measures
- Displays both the numerical differences between rates (average rate difference) and the proportional difference in outcomes (population disparity)
- Allows for drill downs to state, community and nursing home level data
- Shows relative improvement rates stratified by patient demographics
- Identifies outcomes of significance (meaningful disparities) and sorts into “bins” to show the extent to which patient populations are experiencing health disparities

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12th SOW Task 2 Health Equity: State Comparison for Race

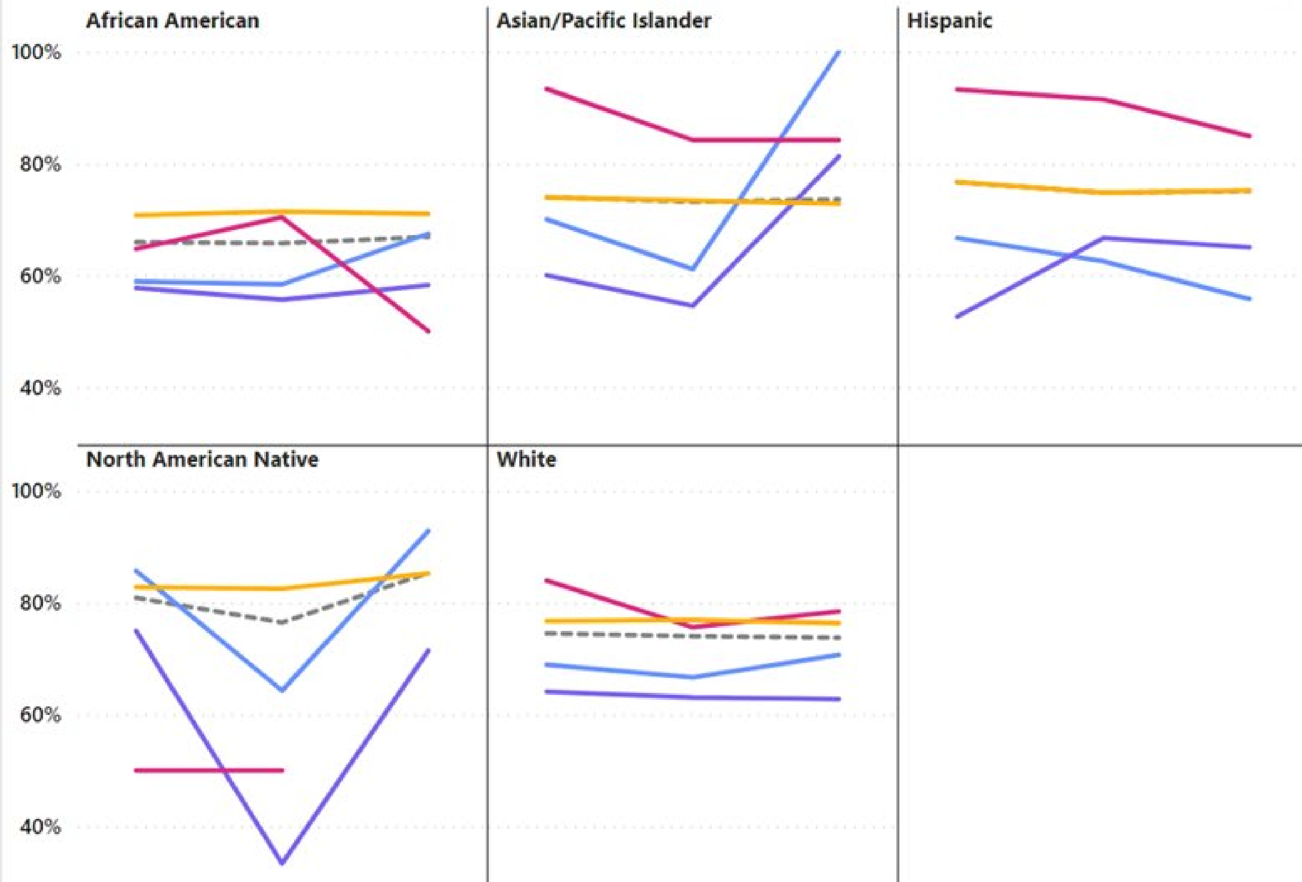
Hover here for Tips

For Internal Use Only.

Measure: 3.1 Hypertension

Community: All

Rates for Race by State and Time Period



Scrollable RIR by Race and State

Stratification/State	RIR	Average Difference	Population Disparity
African American			
	15.0%	-0.09	-0.6%
	2.6%	-0.07	-1.7%
	-26.7%	-0.01	-0.7%
	-0.1%	-0.04	-0.7%
Asian/Pacific Islander			
	52.0%	0.13	0.1%
	42.2%	0.05	0.1%
	-4.6%	0.05	0.1%
	-1.2%	-0.03	-0.1%
Hispanic			
	-13.5%	-0.06	-0.2%
	11.9%	0.04	0.0%
	-8.2%	0.04	0.5%
	-0.9%	-0.02	-0.0%
North American Native			
	30.0%	-0.02	0.1%
	42.9%	-0.21	0.0%
		-0.44	
	3.1%	0.03	0.0%
White			
	4.2%	0.00	0.6%
	-1.3%	0.00	1.6%
	-2.1%	0.00	0.1%
	-0.6%	0.00	0.8%

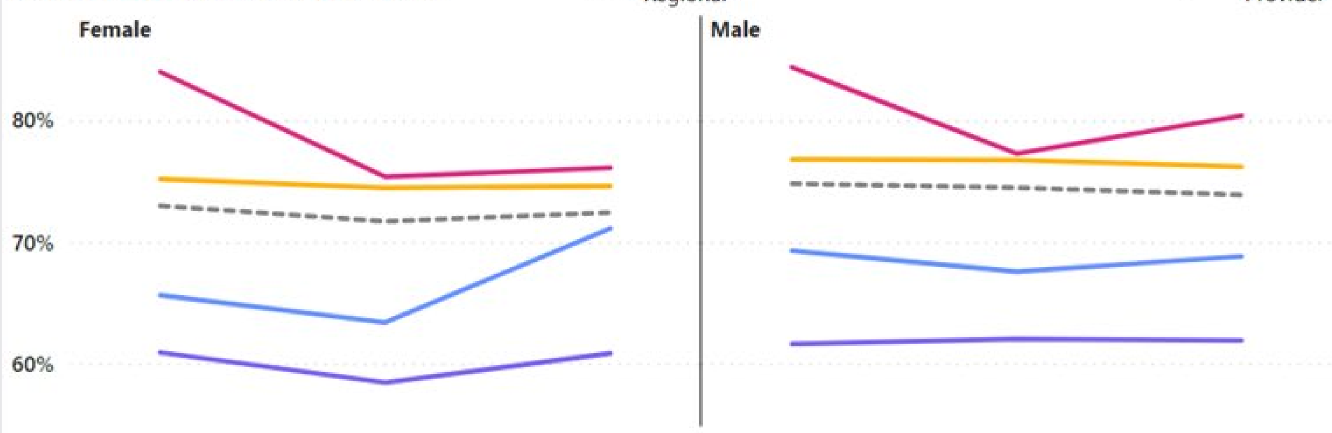
12th SOW Task 2 Health Equity: State Comparison for Gender/Disability

Hover here for Tips

For Internal Use Only.

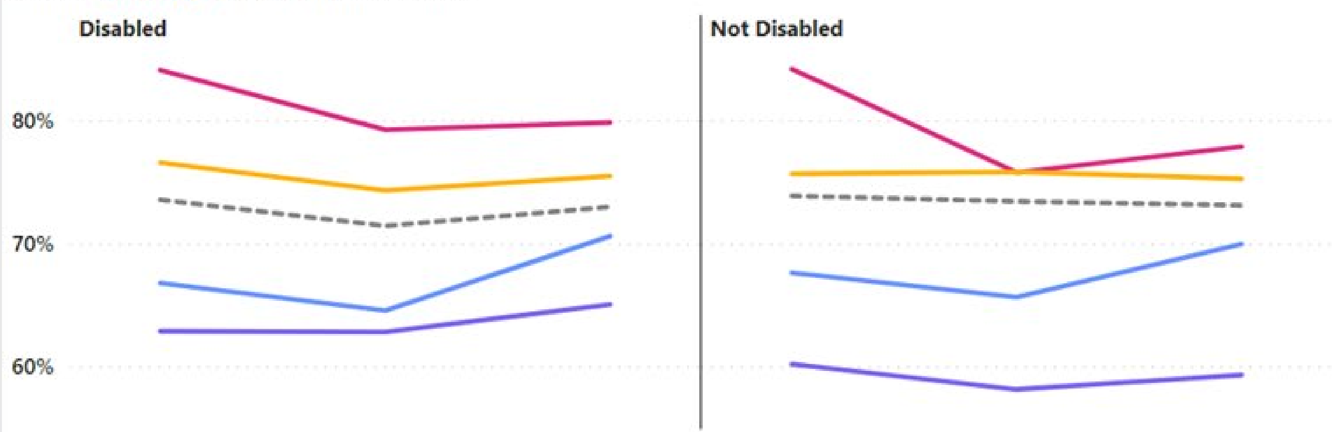
Measure: 3.1 Hypertension

Community: All



Scrollable RIR by Gender and State

Stratification/State	RIR	Average Difference	Population Disparity
Female			
	10.1%	-0.02	0.8%
	1.8%	0.00	-0.4%
	-4.9%	-0.01	-1.4%
	-0.3%	-0.02	-0.5%
Male			
	0.5%	0.00	-0.8%
	0.2%	0.00	0.4%
	-0.8%	0.00	1.4%
	-0.8%	0.00	0.5%



Scrollable RIR by Disability and State

Stratification/State	RIR	Average Diffrence	Population Disparity
Disabled			
	7.3%	0.15	0.2%
	3.5%	0.36	2.1%
	-2.5%	0.84	0.3%
	-0.1%	-0.72	0.0%
Not Disabled			
	4.9%	0.00	-0.2%
	0.2%	0.00	-2.1%
	-3.0%	0.00	-0.3%
	-0.6%	0.00	-0.0%

12th SOW Task 2 Health Equity: 3.1 Hypertension

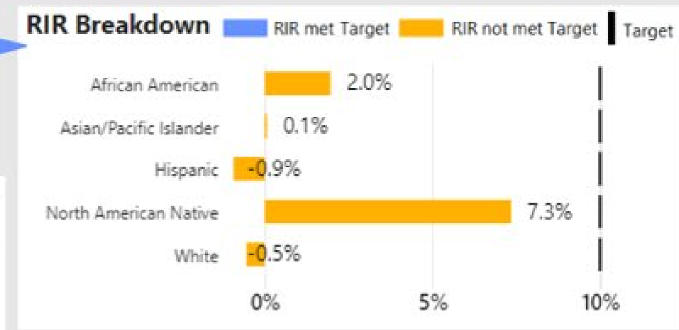
Hover here for Tips

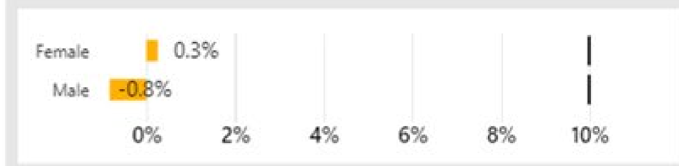
For Internal Use Only.

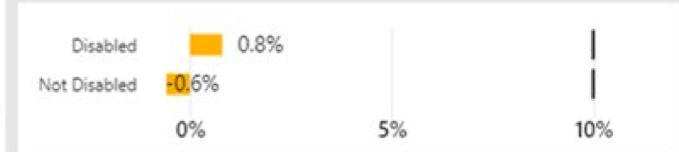
Community	State	Stratification Type
Multiple selections	All	All

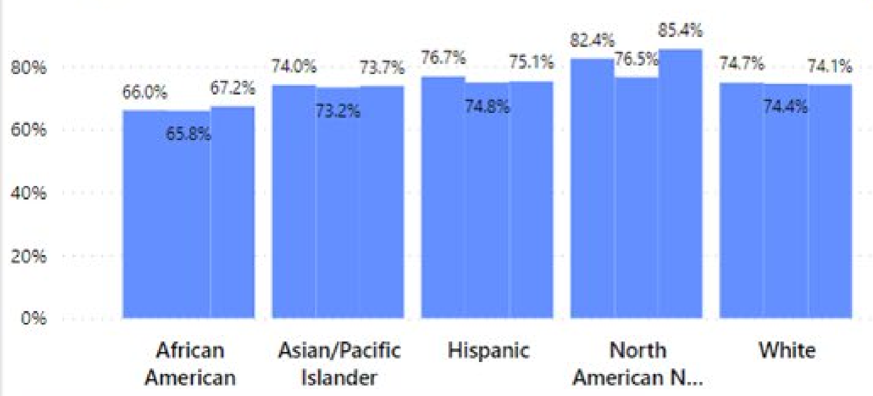
37 Communities

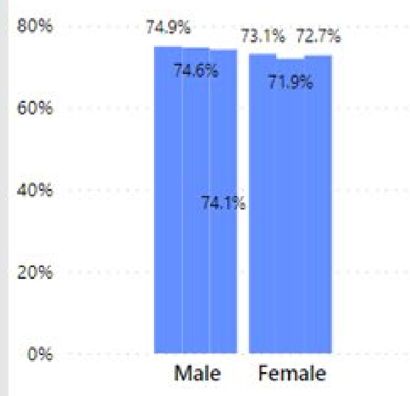
Community	Strat Type	Stratification	Num	Den	Rate	Population Disparity
	Disability	Not Disabled	510	702	72.6%	3.6%
	Gender	Male	255	333	76.6%	3.5%
	Disability	Not Disabled	41	55	74.5%	3.5%
	Race	White	1,973	3,145	62.7%	3.5%
	Gender	Female	109	177	61.6%	3.4%
	Race	White	45	58	77.6%	3.3%
	Gender	Male	28	40	70.0%	3.1%
	Race	White	195	254	76.8%	3.0%
	Disability	Disabled	924	1,429	64.7%	2.8%
	Gender	Male	61	105	58.1%	2.7%
	Gender	Female	78	105	74.3%	2.3%
	Disability	Not Disabled	587	711	82.6%	2.3%
	Disability	Disabled	83	100	83.0%	2.2%

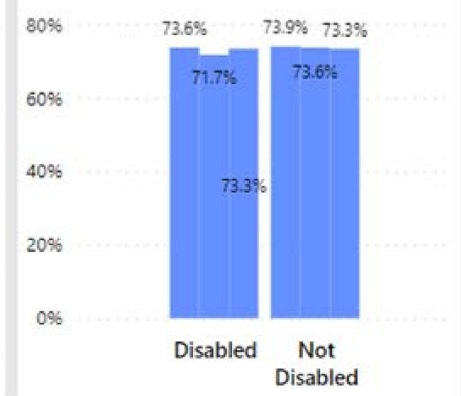










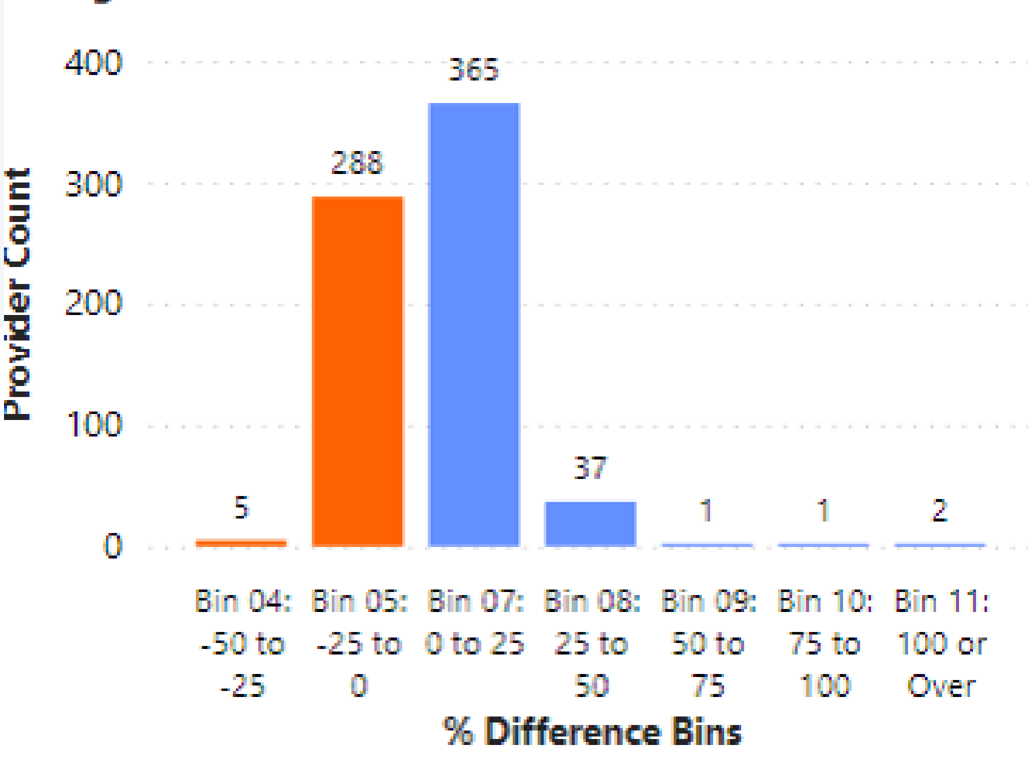


Time Periods

- 2018/10-2019/09
- 2019/10-2020/09
- 2021/03-2022/02

Outcomes of significance

The orange bar represents the number of nursing homes where the reference race (White) has a disparity in 30-day readmission rates compared to the stratified race (African American and Hispanic), and the blue bar represents nursing homes where the stratified race (African American and Hispanic) has a disparity in 30-day readmission rates compared to the reference race (White).



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Use of health equity data for quality improvement

Health disparities are multidimensional and should be our approach to data analysis.

- Rate differences
- Differences in burden of outcome on patient populations
- Intersectionality of patient demographic data
- Quantitative data and qualitative data

Data analysis focuses on quality improvement efforts on the patient populations who need it most; solutions can be scaled and spread to benefit all patients.

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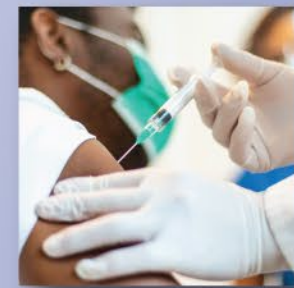
Monitoring & Addressing Relationships between Social Risk Factors & Health Outcomes



Presented by:

Quality Insights

- Key Contributors
- Background
- Methodology
- Interactive Tool
- Data to Action
- Closing

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Key Objective & Contributors

- Key Objective:
  - Assess relationships across Social Determinants of Health (SDOH) measures as they relate to nursing home health outcomes and put data into action.
  - Determine key partners and stakeholders within the community to address these relationships.
  - Implement interventions addressing these relationships.
- Key Contributors:
  - Jill Manna, BA, PMP: Director, Analytic Resources
  - Shikina Wills, MPA, RHIA: QIN-QIO Program Director
  - Sadiq Abdulai, PhD: Senior Data Analyst

Background

- Quality Insights Geographic Footprint:
  - Pennsylvania and West Virginia
  - Partnerships for Community Health are statewide
- Project Genesis:
  - Limited data sources correlating health outcomes to SDOH
  - Needed the ability to monitor health equity for CMS-specific metrics

Methodology

- Data Sources:
  - AHRQ’s 2020 Social Determinants of Health Database (https://www.ahrq.gov/sdoh/data-analytics/sdoh-data.html#download)
    - Domains: Social, Economic, Education, Physical Infrastructure, Healthcare, Geography
  - Medicare FFS Claims and Enrollment data via the Centralized Data Repository (CDR)
- Computed group rates and differences
- Plotted within-group bivariate choropleth maps to identify variations in the correlations between SDoH and health outcomes

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Interactive Tool

- Benefits:
  - Web-based
  - User-friendly
- Metrics:
  - Hospitalization due to C. difficile infection
  - Adverse drug events
  - Preventable emergency department visits
  - 30-day hospital readmissions
  - Immunizations

Developing the Tool

1. Environmental Scan
2. Design & Refine
3. Deploy (internal)

Add new views and data; Improve

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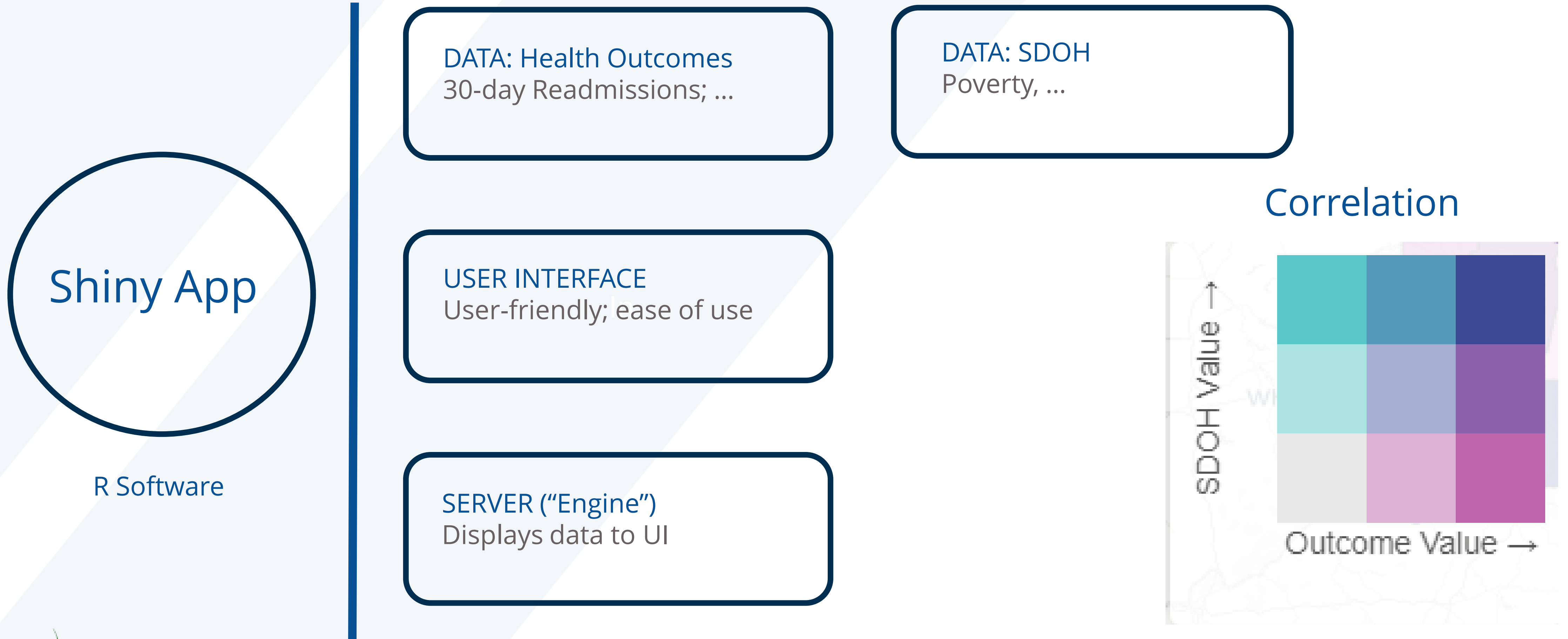
Linking Application to Data



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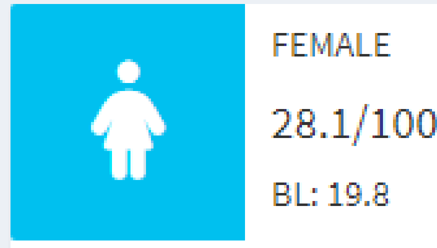
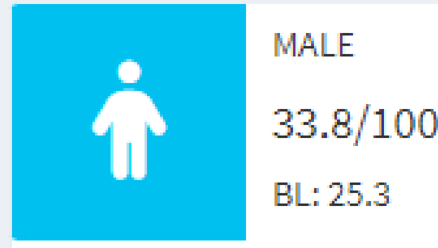
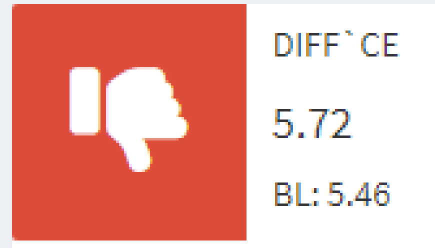
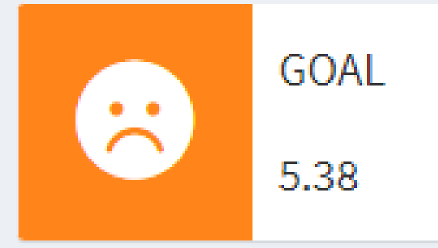
Data to Action: Health Equity

Rates by GENDER

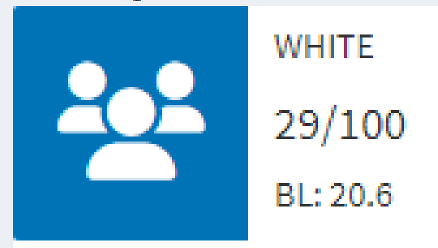


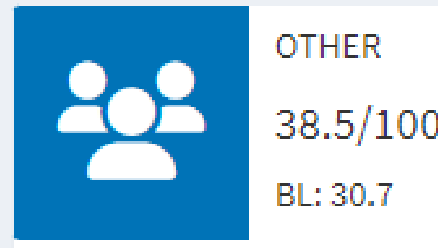


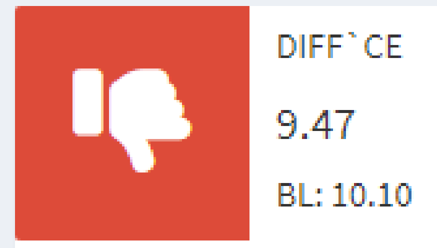


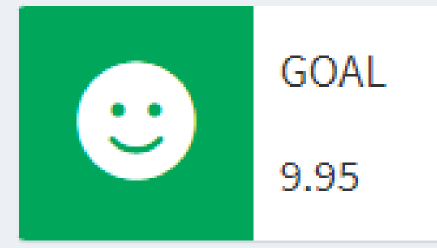


Rates by RACE









Data to Action: Measure Selection

Select Domain

Select SDOH

SDOH

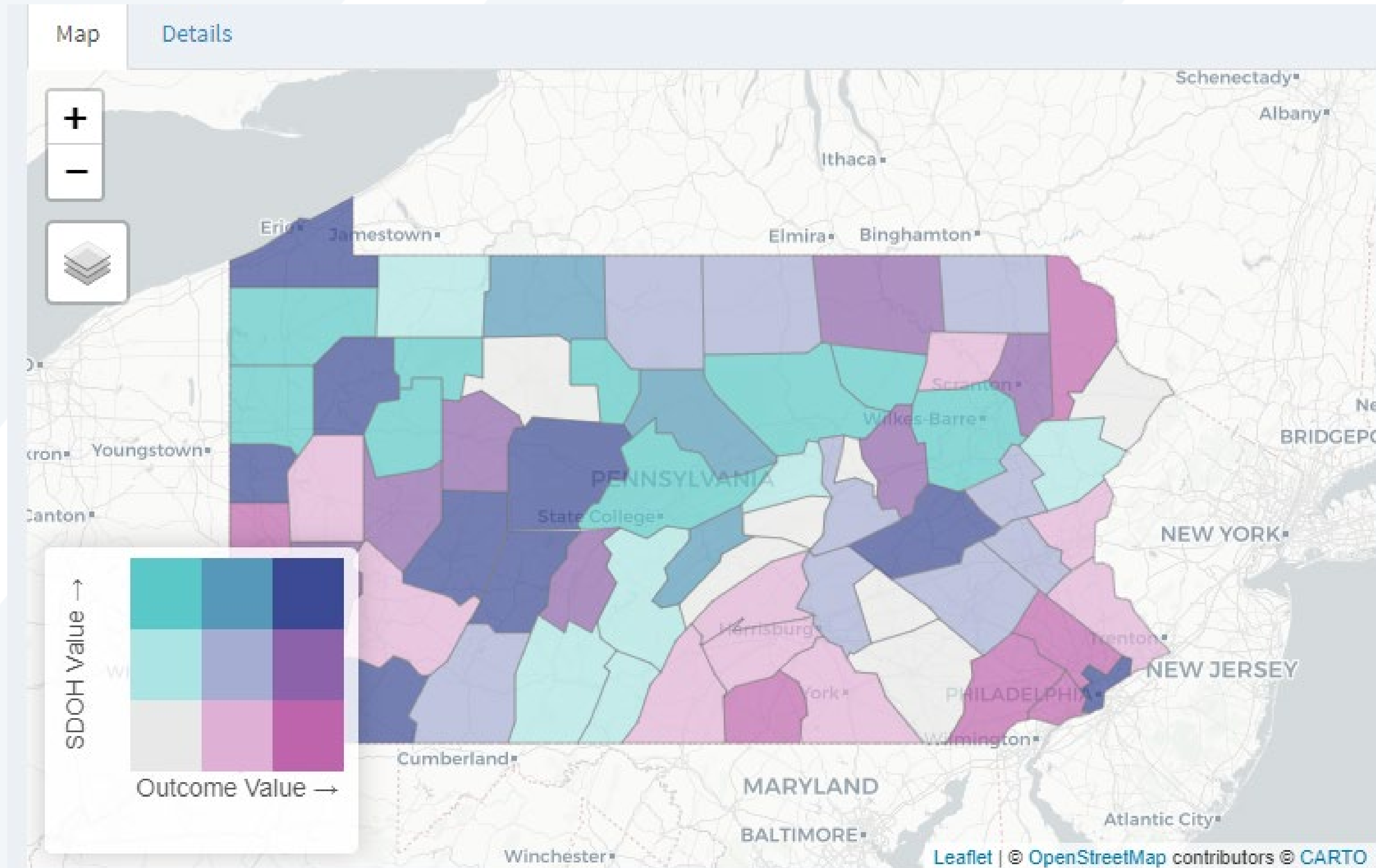
Estimated percentage of people of all ages in poverty

Nursing Home Measure

Long Stay 30-day Hospital Readmission Rates

Select Measure

Data to Action: Choropleth Map



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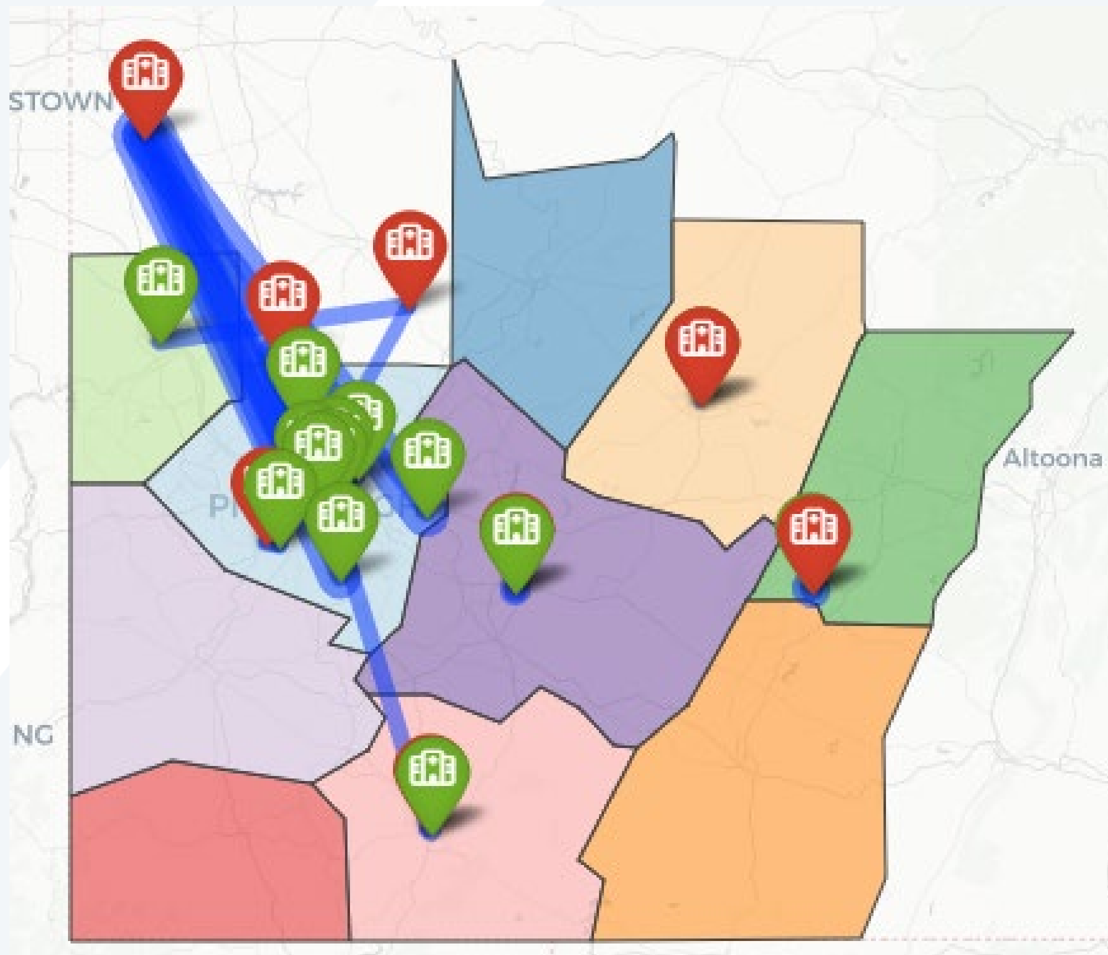
Data to Action: Social Networking Analysis



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Turning Data Into An Intervention

- Key points
  - We group facilities by county and identify counties with higher than expected rates.
  - We map those to identify geographic areas that require further root cause analysis.
    - Example: In Pennsylvania, data shows higher than expected rates in two separate areas – the urban southeastern region of the state as well as the rural southwestern region of the state. This analysis allows us to take into consideration health disparities impacting the metric rates.
      - We engage the healthcare systems identified in the social networking analyses to determine the root cause(s) of high rates while factoring in the SDOH influencing those rates.

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