Tidalhealth and Somerset & Wicomico Health Departments CHNA
Secondary Data Analysis

Presentation to
Wicomico County Local Health Improvement Coalition

October 1, 2021

agenda

- Secondary Data Overview
  - Demographics
  - Social Determinants of Health
  - SocioNeeds Index and Food Insecurity Index
  - Data Analysis
    - Data Scoring and IoD Methodology
    - Findings
- Q & A

Comprehensive Data Components

CONDUENT

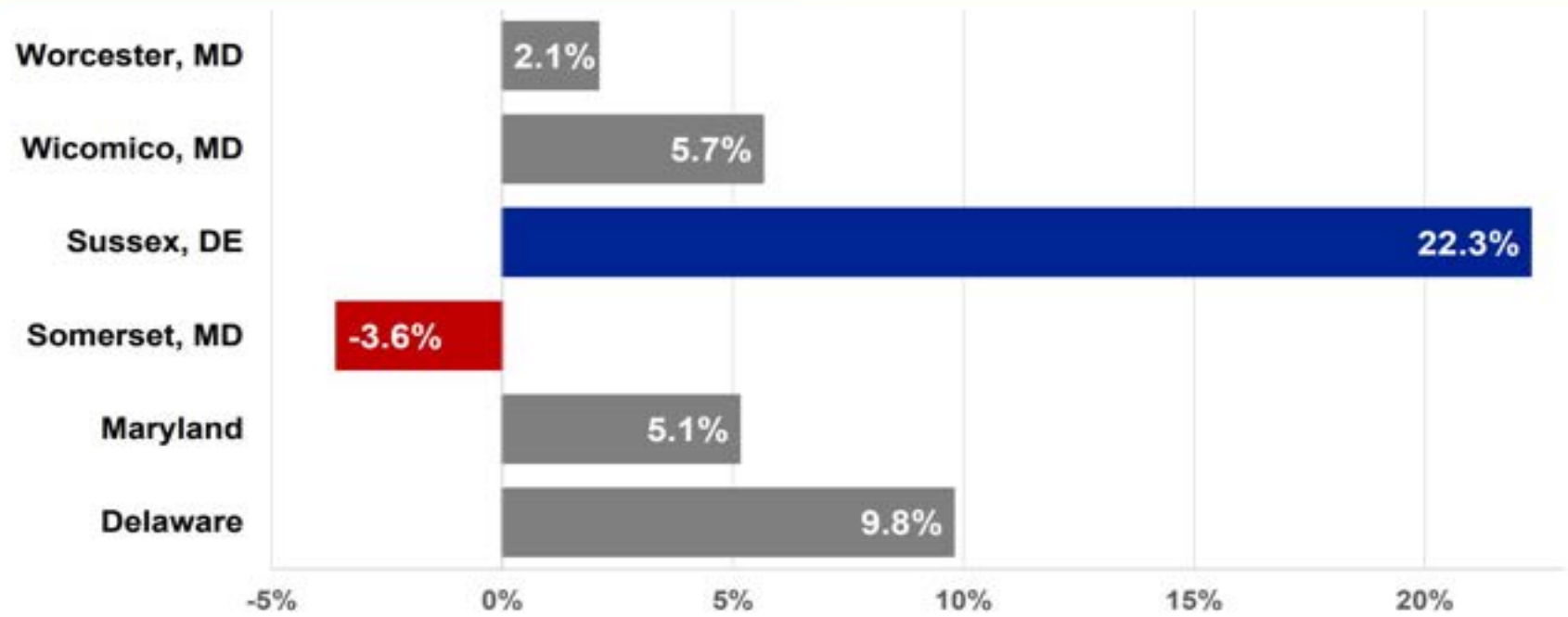|	
Demographic Data	• Economic, Education, Poverty, Language • HCI's Indices to identify zip codes with the greatest need
Secondary Data Scoring	• Systematic methodology to score and rank indicators and topic areas to identify those with the greatest need
Index of Disparity	• Review subpopulation data within indicators for disparities (among race/ethnicity, gender)

Demographics

Population Distribution

- Total Collaborative Service Area Population (2021): 423,437
  - Largest Zip Code by population: 21804 (Wicomico)
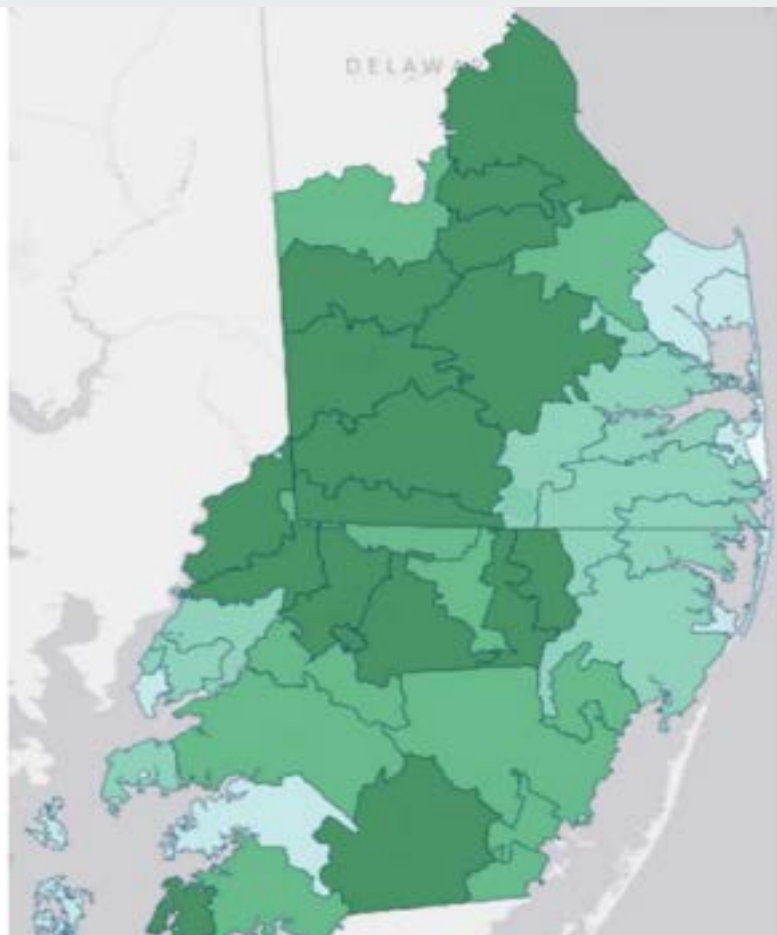 - Smallest Zip Code by population: 21824 (Somerset)
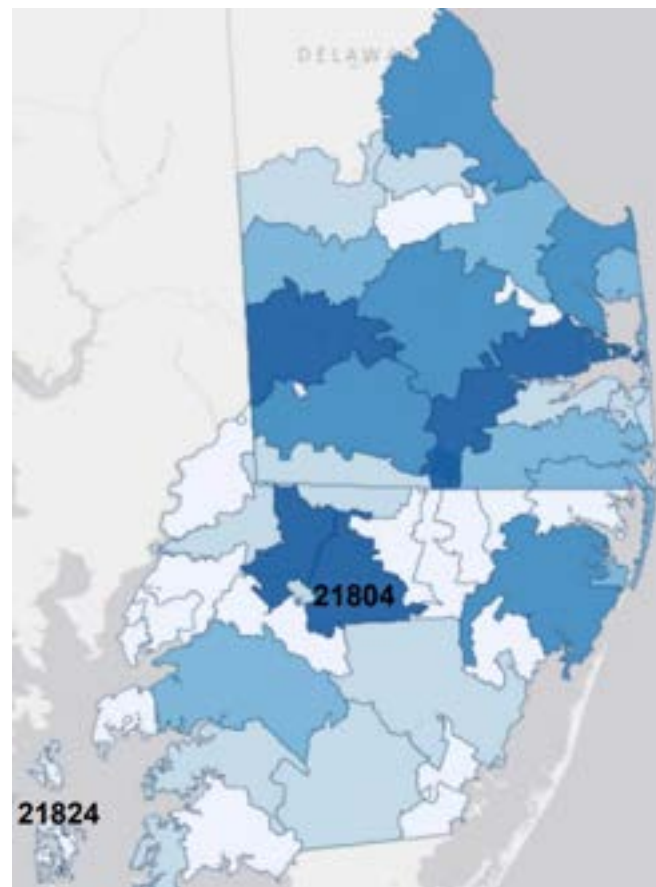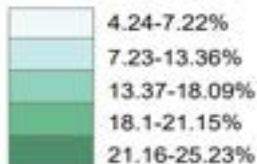
Somerset County's population has decreased from 2010-
2021. The population of Sussex, DE has increased 22.3%
over the same time period.

County	Percent
Worcester, MD	2.1%
Wicomico, MD	5.7%
Sussex, DE	22.3%
Somerset, MD	-3.6%
Maryland	5.1%
Delaware	9.8%

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

Population by Age Group: Percent Population <18

- Wicomico County has the largest % population <18 (22.1%)
- Worcester County has the smallest (16.8%)

Percent Population <18

- 4.24-7.22%
- 7.23-13.36%
- 13.37-18.09%
- 18.1-21.15%
- 21.16-25.23%

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.
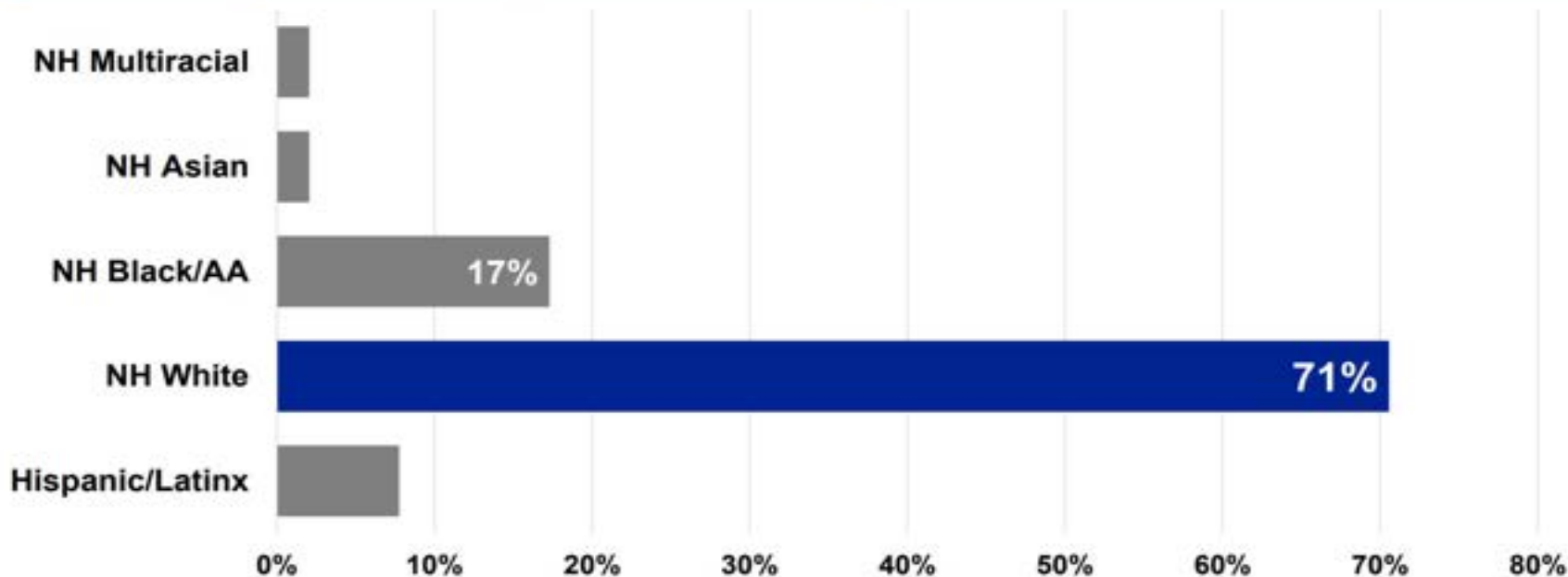
Population by Age Group: Percent Population 65+

- Worcester County has the largest % population over 65 (29.1%)
- Wicomico County has the smallest (17%)

Percent Population 65+

	10.9-19.08%
	19.9-24.06%
	24.07-32.81%
	32.82-44.41%
	44.42-59.35%
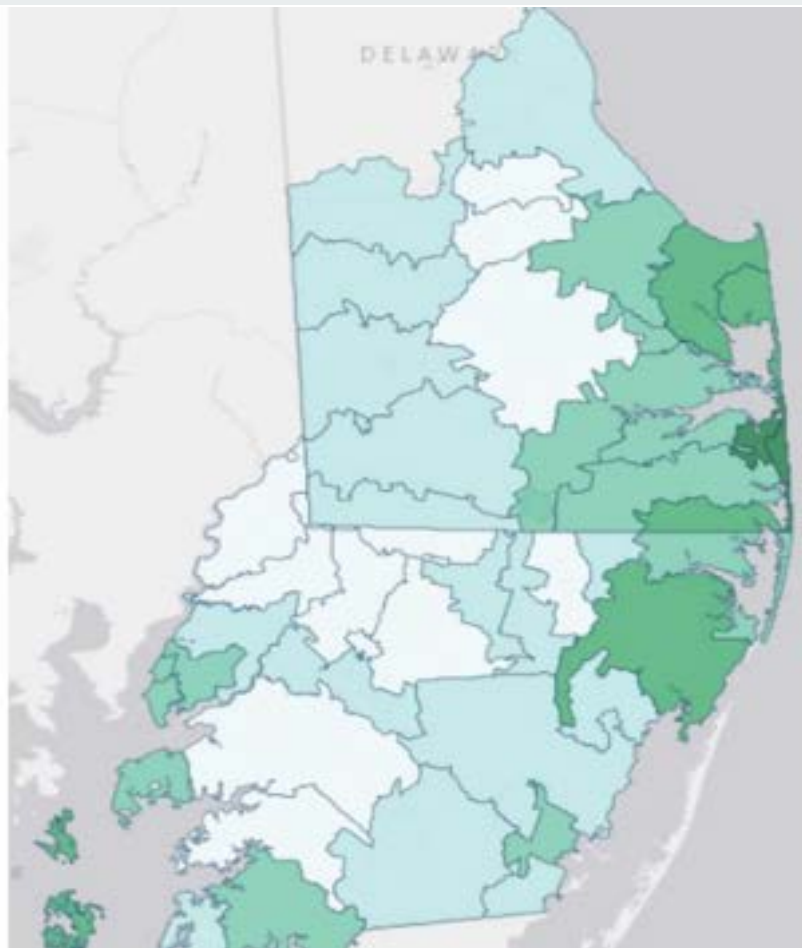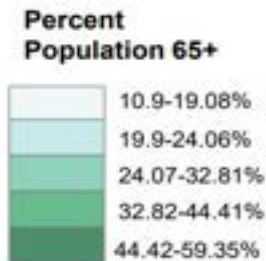
The Collaborative Service Area is majority White (Non-Hispanic/Latinx).

The Majority of the Population (5+) Speak Only English at Home.

Bar chart:
- Speak Only English: 88%
- Speak Spanish
- Speak Asian/Pac Islander Lang
- Speak Indo-European Lang

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
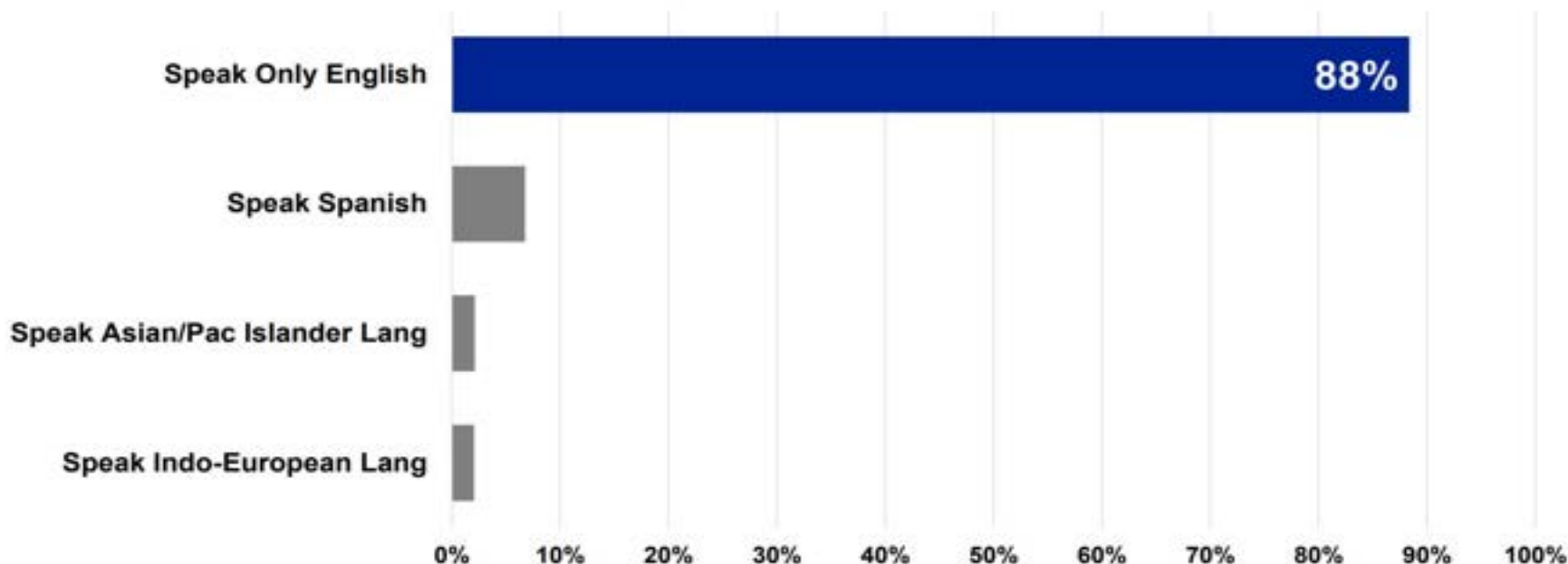
Social Determinants of Health

High Poverty Rate is both a Cause and a Consequence of Poor Economics

Percentage of Families Living Below Poverty

- MD: 6.1%
- DE: 7.9%
- Sussex: 7.4%
- Somerset: **17%**
- Wicomico: 8.6%
- Worcester: 6.3%

Percent Families Living in Poverty

- 0-3.5%
- 3.6-7.2%
- 7.3-10.6%
- 10.7-15.5%
- 15.6-52.6%
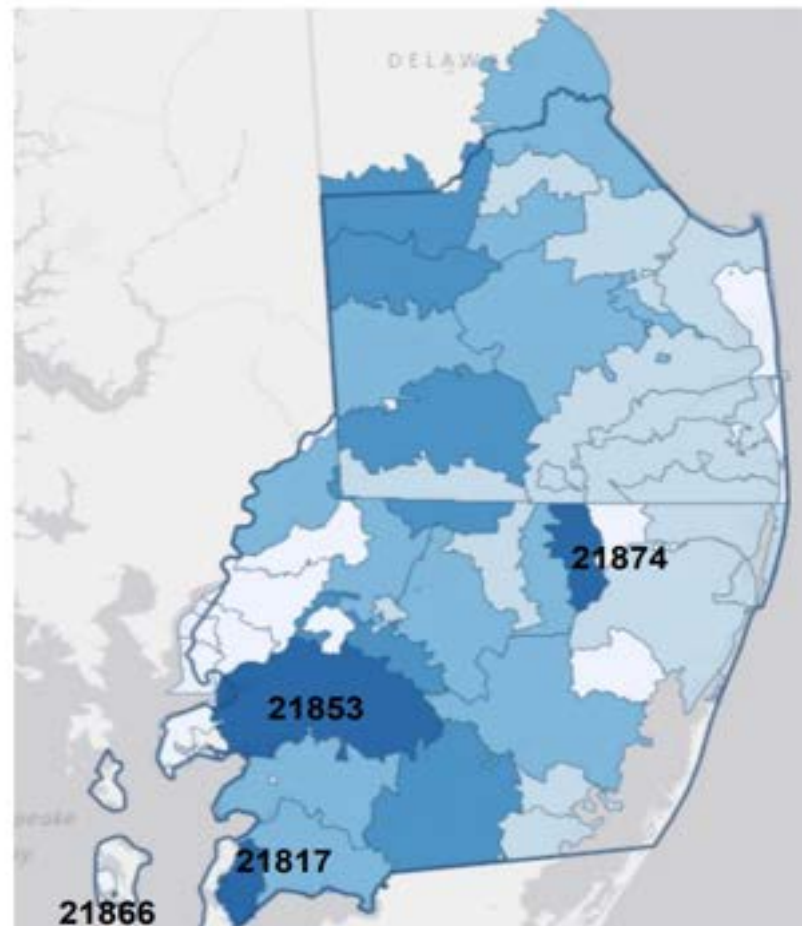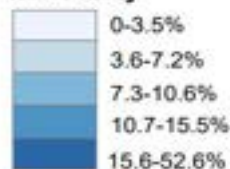
Residents of Somerset and Wicomico have Median Household Incomes below $60,000. This is lower than Maryland and Delaware overall Median Household Incomes.

Working women living in the Collaborative Service Area make less than their male counterparts. Wicomico has the largest wage gap (70.9%). Somerset has the smallest wage gap (87%)

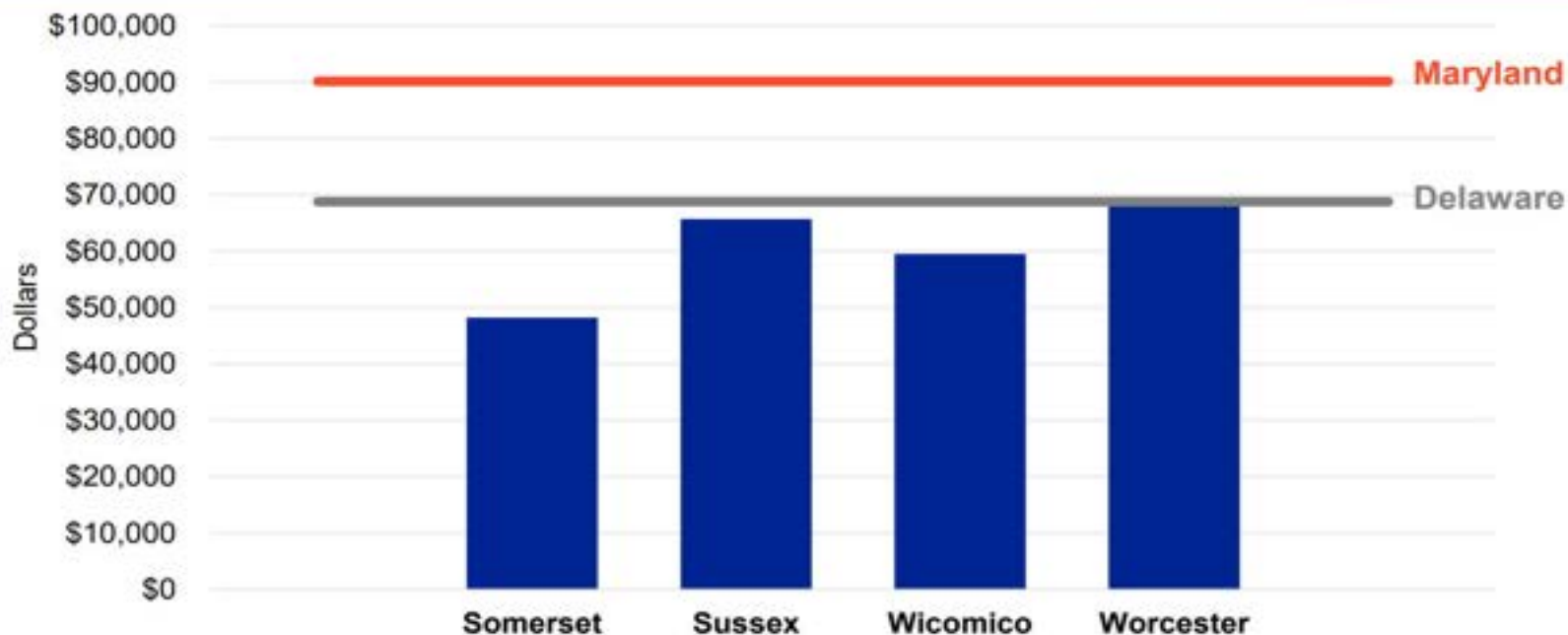Although data is not available by race/ethnicity from this source, national trends suggest that this wage gap persists (and is worsened) by race/ethnicity of women.

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Location	Women	Men
Delaware	$34,862	$46,004
Maryland	$42,293	$54,058
Sussex	$31,434	$41,468
Somerset	$26,934	$30,965
Wicomico	$28,450	$40,112
Worcester	$31,521	$42,586
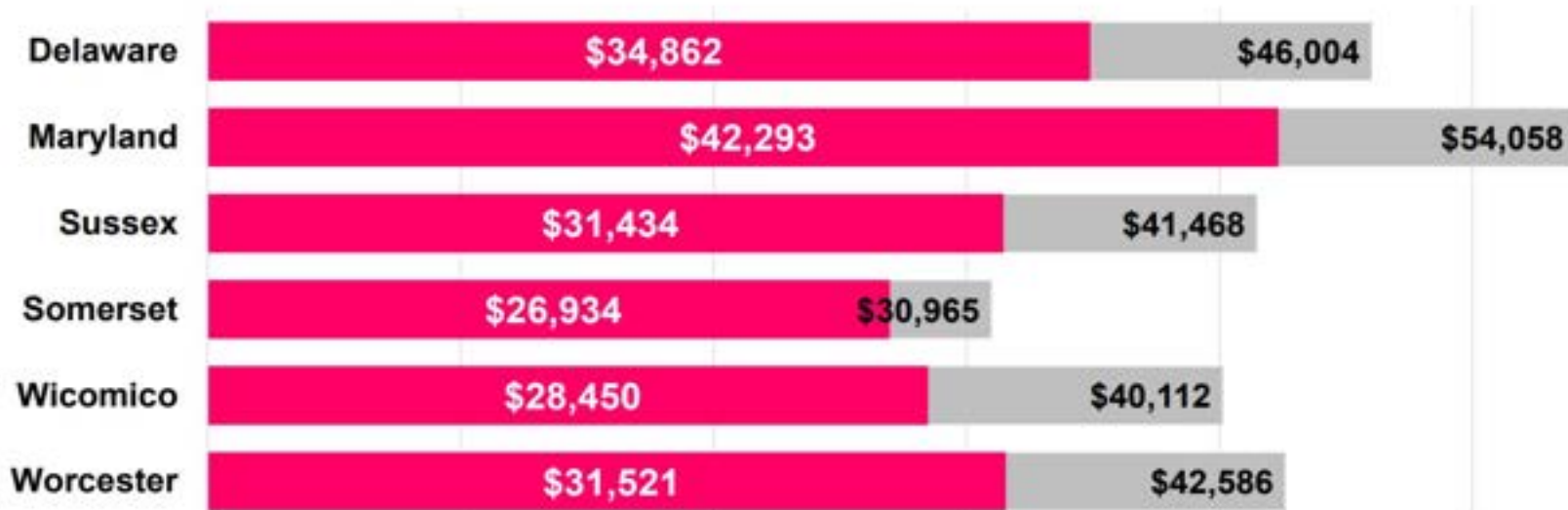
Somerset has the lowest Percent of Population 25+ with a Bachelor's Degree.

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.
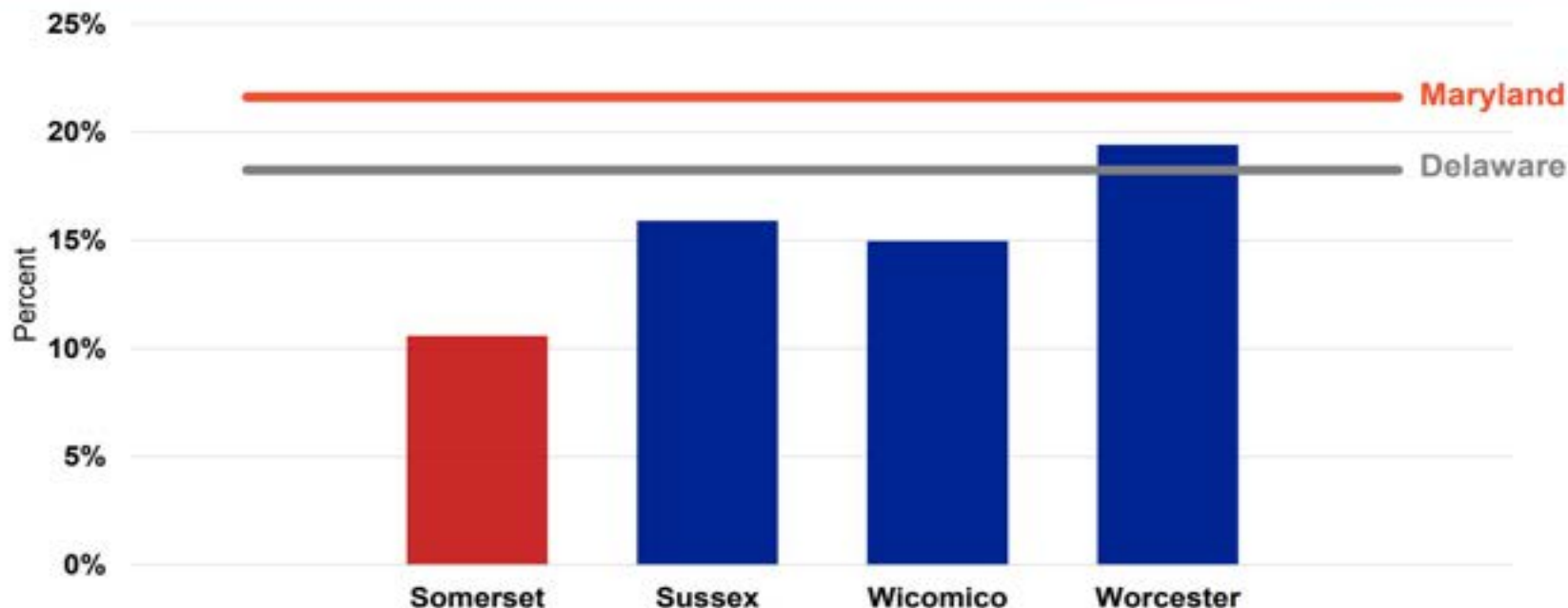
Unemployment Rate is a Key Indicator of the Local Economy

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Unemployment rates (population 16+) rose after the start of the COVID-19 pandemic. Rates have dropped since the beginning of the pandemic and are close to pre-pandemic rates.

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

SocioNeeds Index and Food Insecurity Index

SocioNeeds Index – Can We Estimate How a Person's Zip Code Affects Their Health?

Income
Poverty
Unemployment
Occupation
Education
Language

ZIP CODE

Index Value

This index incorporates estimates for six different social and economic determinants of health that are associated with poor health outcomes. The indicators were standardized and averaged to create one composite index value for each zip code. Zip codes with higher values are estimated to have higher socioeconomic need, which is correlated with poorer health.

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

Your Zip Code May be the Most Important Factor in Determining Life-Long Health

In high SNI zip codes, residents are expected to experience greater burdens related to preventable health issues. Below are the highest need zip codes for the Collaborative Service Area

Zip Code	Rank	SNI Value	County
21853	5	90.2	Somerset
21817	5	88.6	Somerset
19933	4	76.0	Sussex
21851	4	73.1	Worcester
19973	4	69.5	Sussex
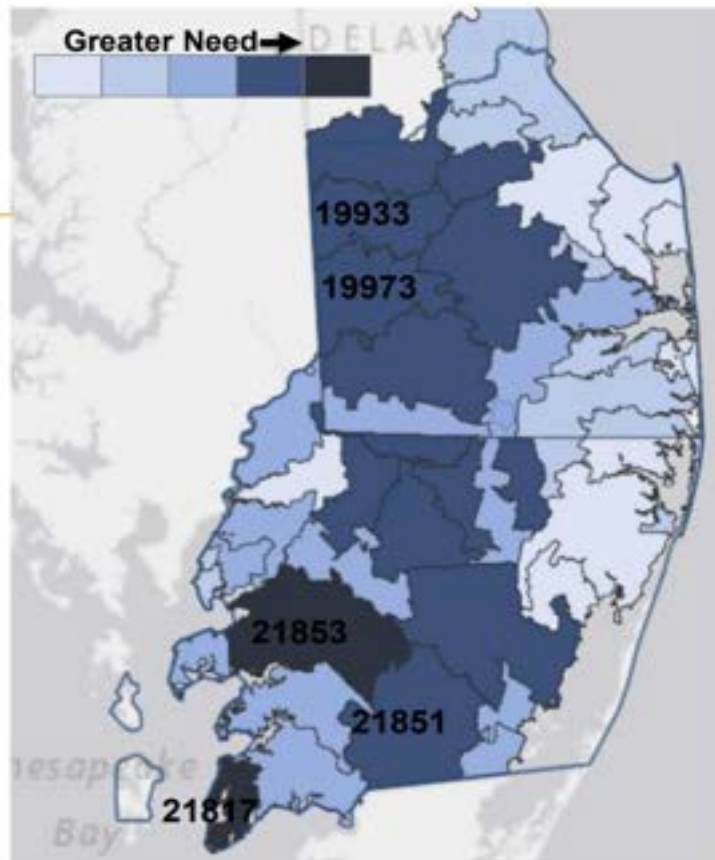
Food Insecurity Index: Assessing Food Accessibility and Economic Hardship

Household Characteristics

Population Characteristics

Behavior and Expenditures

ZIP CODE

Index Value

This index incorporates estimates of indicators for three topic areas that are associated with social and economic burden. The indicators were standardized and averaged to create one composite index value for each zip code. Zip codes with higher values are estimated to experience higher social and economic burden.

Food Insecurity

In high FII zip codes, residents are expected to experience greater social and economic hardships. Below are the highest need zip codes for the Collaborative Service Area

Zip Code	Rank	FII Value	County
21817	5	89.1	Somerset
21851	5	86.5	Worcester
21853	5	86.4	Somerset
21874	4	72.0	Wicomico
21804	4	69.4	Wicomico

Greater Need

21874
21804
21853
21851
21817

Bay
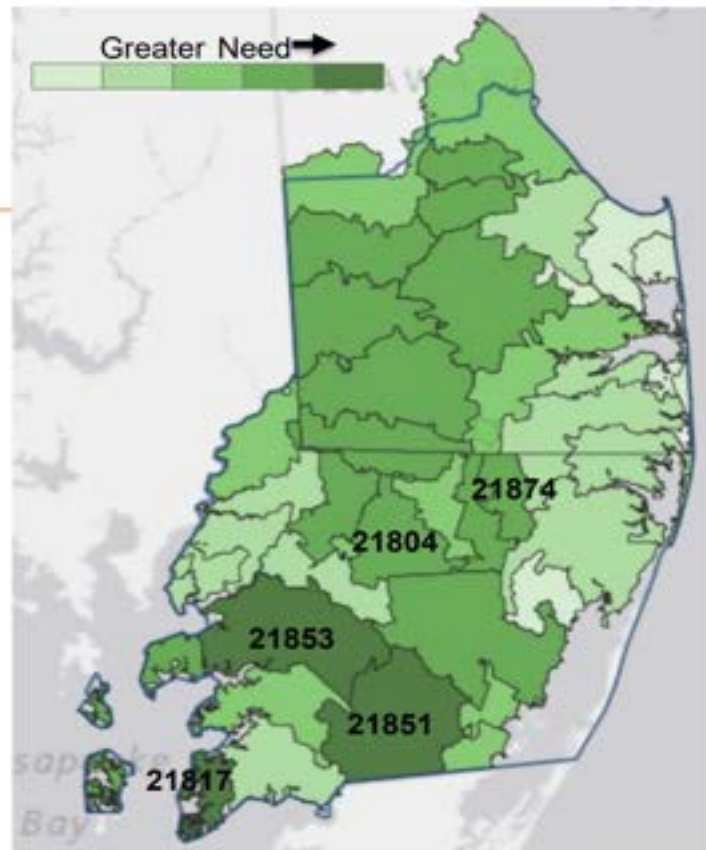
Data Analysis: *Secondary Data*

Secondary Data Methodology

COLLECTED DATA FROM OVER 25 SECONDARY DATA SOURCES INCLUDING THE AMERICAN COMMUNITY SURVEY AND CDC

OVER 200 DEMOGRAPHIC, SOCIAL, ECONOMIC, AND HEALTH INDICATORS

INDICATORS MAINTAINED FROM MOST RECENTLY AVAILABLE DATA BY CONDUENT, HEALTHY COMMUNITIES INSTITUTE

INDICATORS MEASURED AT THE COUNTY-LEVEL.

Data Sources

- American Community Survey
- Annie E. Casey Foundation
- CDC - PLACES
- Centers for Disease Control and Prevention
- Centers for Medicare & Medicaid Services
- County Health Rankings
- Feeding America
- Healthy Communities Institute
- Maryland Behavioral Risk Factor Surveillance System
- Maryland Department of Health
- Maryland Department of the Environment
- Maryland Governor's Office for Children
- Maryland Governor's Office of Crime Control & Prevention
- Maryland State Board of Elections
- Maryland State Department of Education
- Maryland Youth Risk Behavior Survey/Youth Tobacco Survey

- National Cancer Institute
- National Center for Education Statistics
- National Environmental Public Health Tracking Network
- U.S. Bureau of Labor Statistics
- U.S. Census - County Business Patterns
- U.S. Census Bureau - Small Area Health Insurance Estimates
- U.S. Department of Agriculture - Food Environment Atlas
- United For ALICE
- Delaware Department of Health and Social Services, Division of Public Health
- Delaware Office of the State Election Commissioner
- Delaware School Survey
- Delaware Youth Risk Behavior Survey
- Behavioral Risk Factor Surveillance System

Topic Areas

We leveraged the HCI database, with over 200 indicators in both health and quality of life topic areas for the Secondary Data Analysis of Sussex, Somerset, Wicomico, and Worcester Counties

Quality of Life	Health	
Economy	Mental Health & Mental Disorders	Respiratory Diseases
Community	Sexually Transmitted Infections	Children's Health
Environmental Health	Maternal, Fetal & Infant Health	Immunizations & Infectious Diseases
Health	Prevention & Safety	Cancer
Education	Older Adults	Women's Health
	Wellness & Lifestyle	Men's Health
	Diabetes	Tobacco Use
	Alcohol & Drug Use	Heart Disease & Stroke
	Health Care Access & Quality	Physical Activity
	Adolescent Health	Nutrition & Healthy Eating

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

Methodology

Data Scoring is done in 3 stages:

| MD & DE Counties |
| US Counties |
| MD & DE State Value |
| US Value |
| HP 2030 |
| Trend |

Comparisons
- Quantitatively score all possible comparisons

Score range:

Good ➜ Bad

| 0 | 1 | 2 | 3 |

Indicators
- Summarize comparison scores for each indicator

Topics
- Summarize indicator scores by topic area

Indicator Score

↓

Topic Score

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

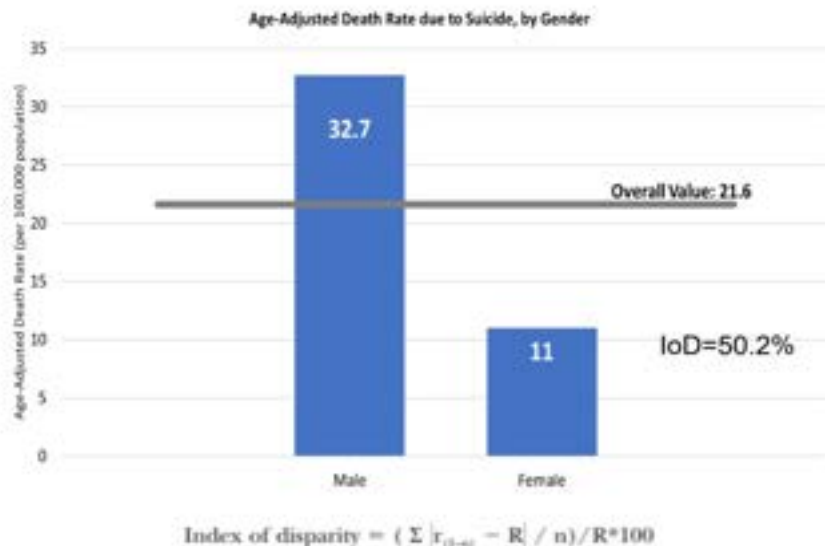# Index of Disparity: Methodology
Assessing Health Disparities

Index of Disparity (IoD): Identifies large disparities based on how far each subgroup (by race/ethnicity or gender) is from the overall county value.

Index of Disparity (IoD): Example

- Provides a % value, which is a summary of how different each subgroup is from the overall value
  - % based on absolute differences from the overall value for each breakout category in each subgroup.

- For this analysis, high disparities were identified based on most recent period of measure for each indicator and IoD values were shown overtime.

Age-Adjusted Death Rate due to Suicide, by Gender

Overall Value: 21.6

IoD=50.2%

Male 32.7
Female 11

Index of disparity = (Σ |r_(1-n) − R| / n)/R*100

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

Data Scoring and Index of Disparity Findings

County Level Analysis:
Secondary Data Scoring Results

Score range:
Good → Bad
0 1 2 3
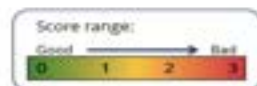
Somerset, MD

Health and Quality of Life Topics	Score
Diabetes	2.25
Weight Status	2.23
Wellness & Lifestyle	2.07
Economy	2.02
Maternal, Fetal & Infant Health	2.01
Prevention & Safety	1.97
Sexually Transmitted Infections	1.90
Heart Disease & Stroke	1.87
Respiratory Diseases	1.86
Older Adults	1.81
Education	1.80
Immunizations & Infectious Diseases	1.78
Other Conditions	1.77
Environmental Health	1.76
Physical Activity	1.73
Tobacco Use	1.70

Sussex, DE

Health and Quality of Life Topics	Score
Other Conditions	1.93
Prevention & Safety	1.86
Heart Disease & Stroke	1.78
Alcohol & Drug Use	1.72
Oral Health	1.69
Wellness & Lifestyle	1.67
Health Care Access & Quality	1.59
Adolescent Health	1.53
Physical Activity	1.47
Older Adults	1.47
Community	1.39
Environmental Health	1.34
Mental Health & Mental Disorders	1.32
Respiratory Diseases	1.30
Education	1.28
Children's Health	1.27

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County Level Analysis:
Secondary Data Scoring Results

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Score range:
Good ──────→ Bad
0   1   2   3

Wicomico, MD

Health and Quality of Life Topics	Score
Diabetes	2.07
Sexually Transmitted Infections	1.98
Wellness & Lifestyle	1.91
Cancer	1.86
Other Conditions	1.85
Prevention & Safety	1.85
Education	1.83
Older Adults	1.82
Oral Health	1.80
Weight Status	1.80
Heart Disease & Stroke	1.79
Community	1.77
Physical Activity	1.75
Mental Health & Mental Disorders	1.73
Environmental Health	1.71
Respiratory Diseases	1.68

Worcester, MD

Health and Quality of Life Topics	Score
Alcohol & Drug Use	1.93
Other Conditions	1.91
Oral Health	1.68
Children's Health	1.66
Heart Disease & Stroke	1.65
Women's Health	1.64
Cancer	1.63
Prevention & Safety	1.62
Environmental Health	1.53
Economy	1.49
Community	1.47
Older Adults	1.47
Diabetes	1.43
Maternal, Fetal & Infant Health	1.42
Physical Activity	1.42
Adolescent Health	1.40

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

Collaborative Service Area
Secondary Data Analysis-Topic Areas

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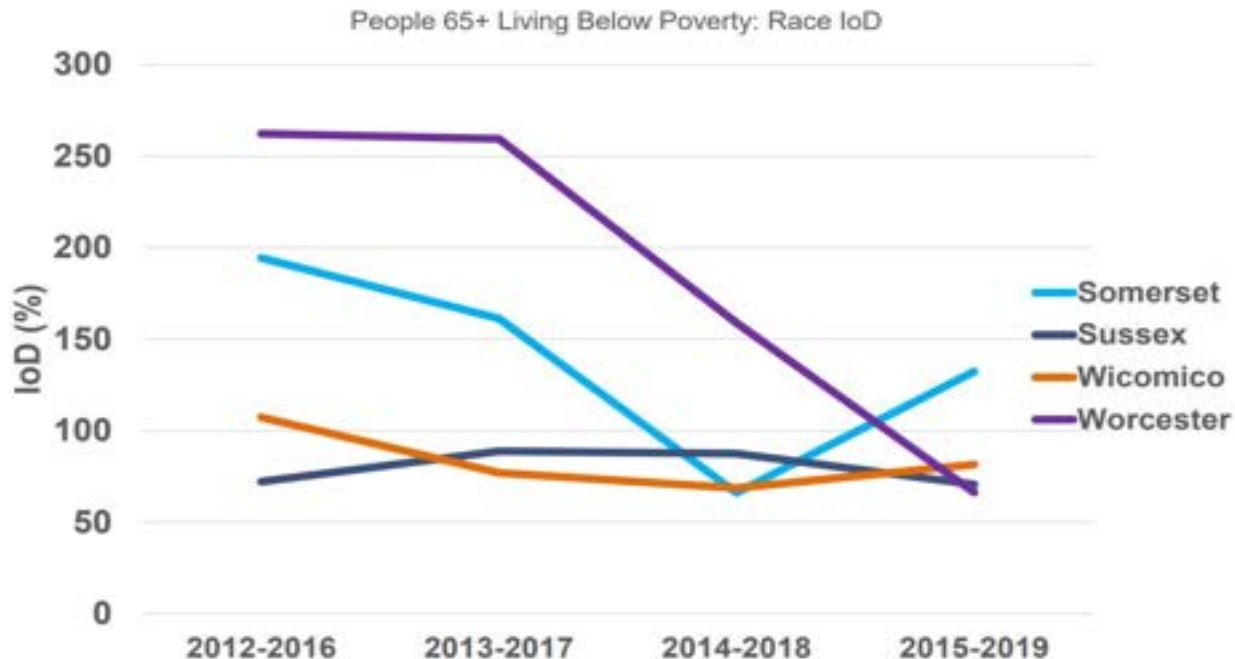| Data Scoring Results
Collaborative Service Area |
|:---:|
| Older Adults/Other Conditions |
| Prevention & Safety |
| Heart Disease & Stroke |
| Physical Activity |
| Wellness and Lifestyle |
| Oral Health |
| Diabetes |

Indicators of Interest

Older Adults/Other Conditions
Indicators of Interest

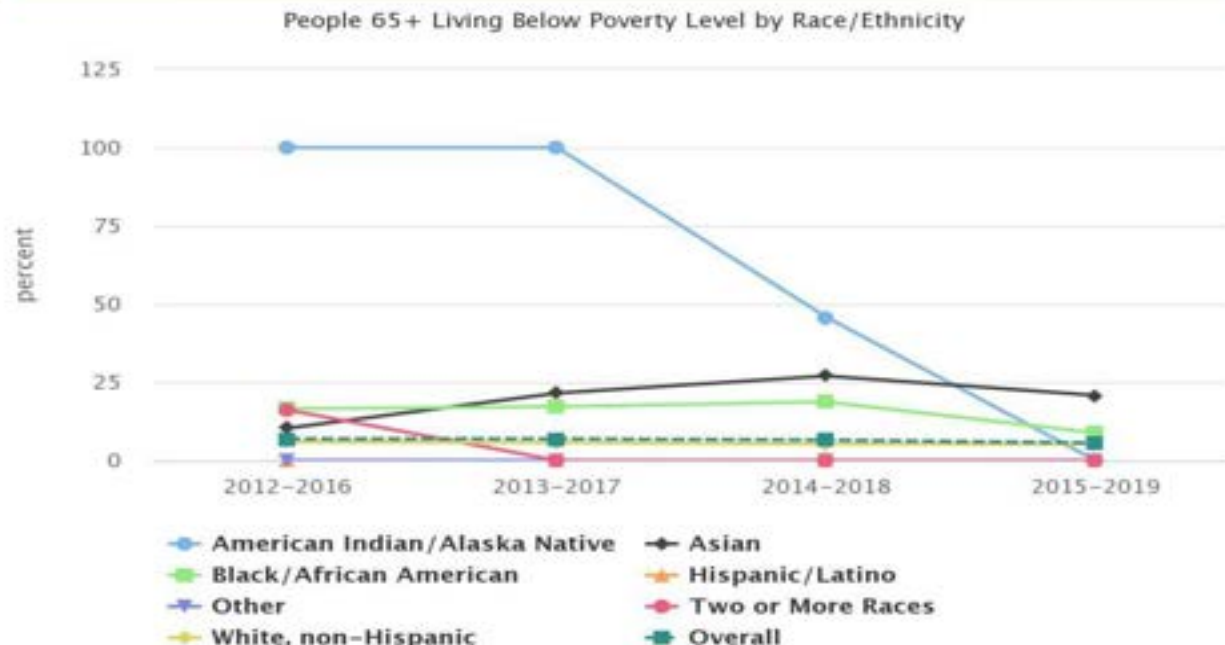| INDICATORS	SOMERSET	SUSSEX	WICOMICO	WORCESTER
Chronic Kidney Disease: Medicare Population (%)	2.78	1.58	2.78	1.73
Hypertension: Medicare Population (%)	2.78	2.42	2.38	2.23
Stroke: Medicare Population (%)	2.48	2.03	2.28	1.83
Atrial Fibrillation: Medicare Population (%)	2.18	2.31	2.23	2.53
Hyperlipidemia: Medicare Population (%)	2.08	2.33	2.53	2.40
Adults with Arthritis (%)	1.88	1.92	1.58	2.18
Adults with Kidney Disease (%)	1.88	1.92	1.13	2.03
Rheumatoid Arthritis or Osteoarthritis: Medicare Population (%)	1.43	2.08	1.88	2.18

Index of Disparity: People 65+ Living Below Poverty

- IoD values for Race/Ethnicity were much higher than Gender IoD for this indicator.

- Worcester County saw a decrease in IoD values overtime while Wicomico and Sussex remained relatively stable.

People 65+ Living Below Poverty: Race IoD

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Worcester County: People 65+ Living Below Poverty Level

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- Changes in IoD were most likely driven by the AIAN population estimates, which is a small population in Worcester.
- Poverty rates for Asian and Black/AA residents remain higher than the overall.

People 65+ Living Below Poverty Level by Race/Ethnicity

Legend:
- American Indian/Alaska Native
- Black/African American
- Other
- White, non-Hispanic
- Asian
- Hispanic/Latino
- Two or More Races
- Overall

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

Sussex County: People 65+ Living Below Poverty Level

- Sussex county had a more stable IoD value for Race/Ethnicity for people 65+ living below poverty
- White, Non-Hispanic, Asian, and NHPI populations have a lower or average rate of people 65+ living below poverty.

People 65+ Living Below Poverty Level by Race/Ethnicity

Legend:
- American Indian/Alaska Native
- Black/African American
- Native Hawaiian/Pacific Islander
- Two or More Races
- Overall
- Asian
- Hispanic/Latino
- Other
- White, non-Hispanic
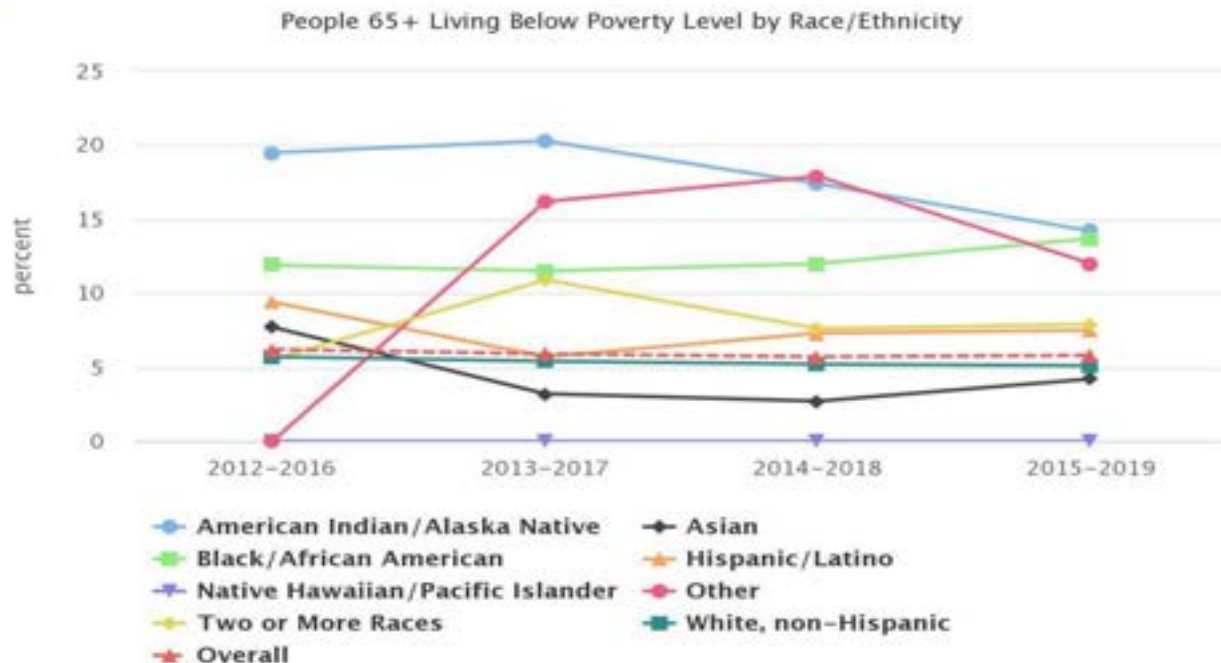
Prevention & Safety
Indicators of Interest

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INDICATORS	SOMERSET	SUSSEX	WICOMICO	WORCESTER
Severe Housing Problems (%)	2.53	0.75	2.28	1.93
Pedestrian Injuries (injuries/100,000 population)	2.23	(unavailable)	1.63	1.98
Death Rate due to Drug Poisoning (deaths/100,000 population)	1.63	2.42	1.78	1.53
Age-Adjusted Death Rate due to Unintentional Injuries (deaths/100,000 population)	1.50	2.42	1.55	1.05

Heart Disease & Stroke
Indicators of Interest

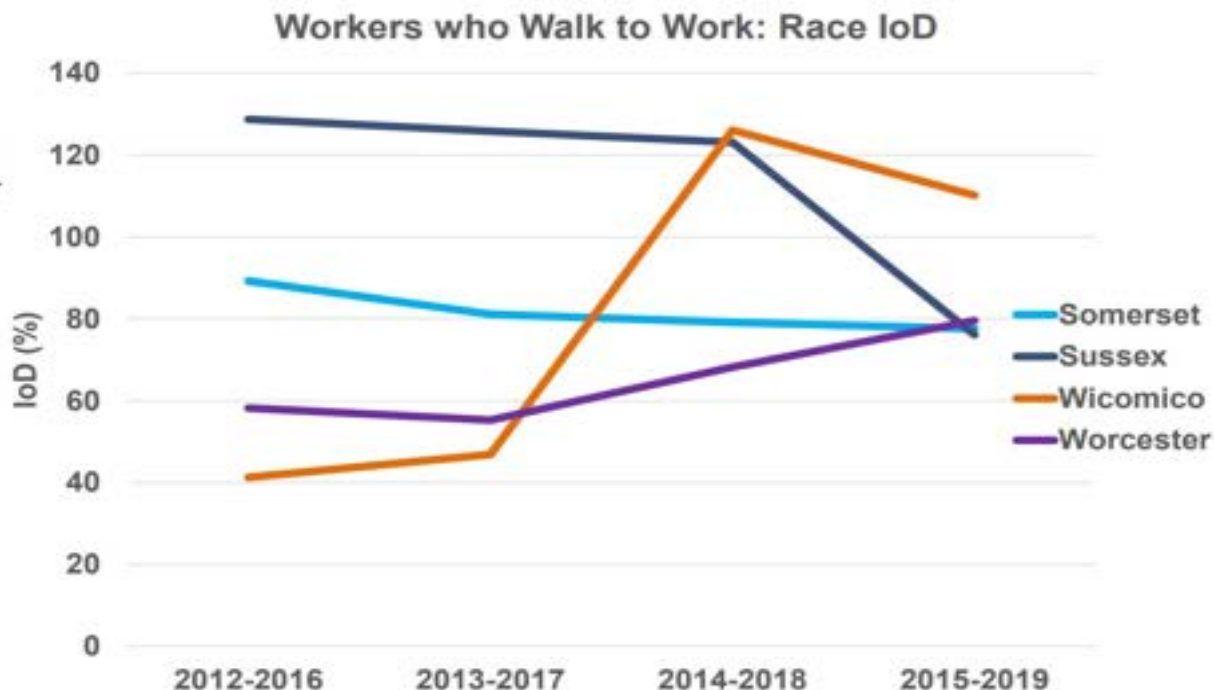| INDICATORS	SOMERSET	SUSSEX	WICOMICO	WORCESTER
Atrial Fibrillation: Medicare Population (%)	2.18	2.31	2.23	2.53
Hyperlipidemia: Medicare Population (%)	2.08	2.33	2.53	2.40
Hypertension: Medicare Population (%)	2.78	2.42	2.38	2.23
Age-Adjusted ER Rate due to Hypertension (ER visits/100,000 pop)	2.23	(unavailable)	2.23	2.08
Adults who Experienced a Stroke (%)	2.03	1.92	1.58	1.88
Stroke: Medicare Population (%)	2.48	2.03	2.28	1.83
Age-Adjusted Hospitalization Rate due to Heart Attack (hospitalizations/10,000 pop 35+)	1.80	(unavailable)	1.95	1.80
High Blood Pressure Prevalence (%)	2.13	2.17	2.13	1.08

Physical Activity
Indicators of Interest

INDICATORS	SOMERSET	SUSSEX	WICOMICO	WORCESTER
Adults with a Healthy Weight (%)	2.45	(unavailable)	2.05	1.30
Food Environment Index	2.28	0.97	1.98	1.78
Access to Exercise Opportunities (%)	2.25	1.83	1.80	1.20
Adults Who Are Obese (%)	2.18	1.72	2.15	1.15
Low-Income and Low Access to a Grocery Store (%)	2.10	1.50	1.95	1.35
Adolescents who are Obese (%)	1.98	(unavailable)	1.95	1.78
Households with No Car and Low Access to a Grocery Store (%)	1.95	1.67	1.50	1.50
WIC Certified Stores (stores/1,000 pop)	1.95	1.33	1.95	1.50
People 65+ with Low Access to a Grocery Store (%)	1.35	1.67	1.80	1.95
Workers who Walk to Work* (%)	0.23	2.75	1.93	2.03

Index of Disparity: Workers who Walk to Work
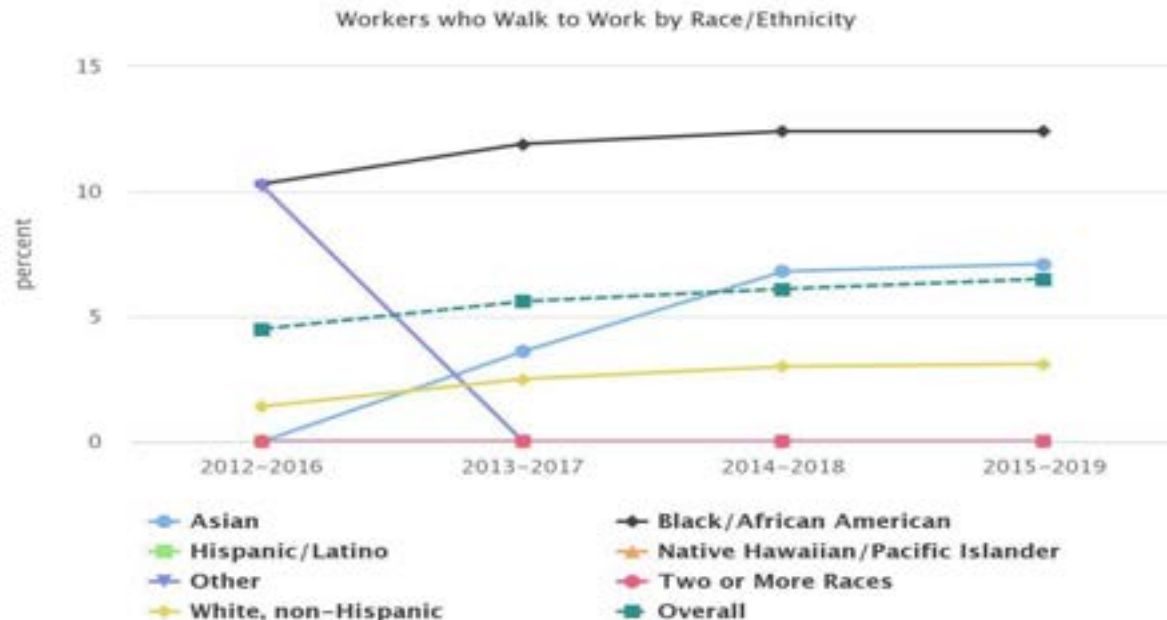
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- IoD values for Race/Ethnicity were much higher than Gender IoD for this indicator.

- Wicomico and Worcester values have increased overtime.

- Sussex and Somerset values have decreased.

Workers who Walk to Work: Race IoD

Legend: Somerset, Sussex, Wicomico, Worcester

Y-axis: IoD (%), ranging 0 to 140

X-axis: 2012-2016, 2013-2017, 2014-2018, 2015-2019

Somerset County: Workers who Walk to Work
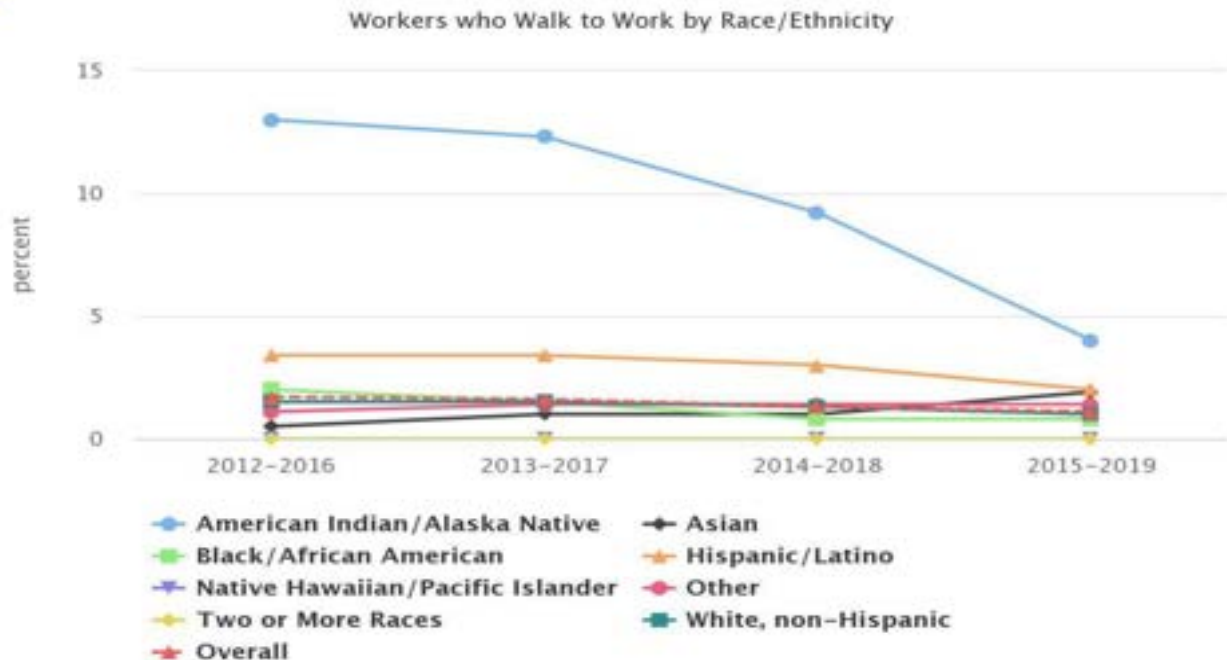
- Black/AA workers consistently have a higher percent of people who walk to work
- Rates have been increasing for Asian workers, which could have decreased the IoD value over time.

Workers who Walk to Work by Race/Ethnicity

Legend:
- Asian
- Hispanic/Latino
- Other
- White, non-Hispanic
- Black/African American
- Native Hawaiian/Pacific Islander
- Two or More Races
- Overall

Sussex County: Workers who Walk to Work

- Hispanic/Latino and AIAN groups consistently have more workers who walk to work than the overall average.
- Decrease in percentage for AIAN has led to decrease in IoD

Workers who Walk to Work by Race/Ethnicity

Legend:
- American Indian/Alaska Native
- Black/African American
- Native Hawaiian/Pacific Islander
- Two or More Races
- Overall
- Asian
- Hispanic/Latino
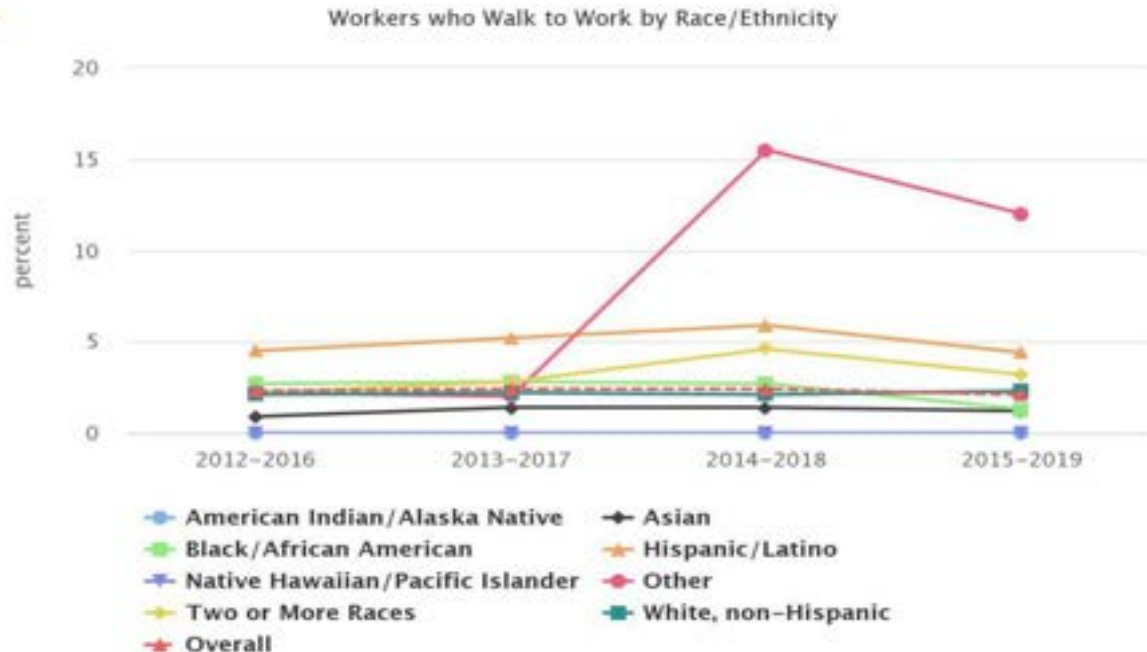- Other
- White, non-Hispanic

Wicomico County: Workers who Walk to Work

- Hispanic/Latino and Two or more races consistently have more workers who walk to work than the overall average.
- Increase in percentage for Other Race could contribute to increase in IoD

Workers who Walk to Work by Race/Ethnicity

Legend:
- American Indian/Alaska Native
- Black/African American
- Native Hawaiian/Pacific Islander
- Two or More Races
- Overall
- Asian
- Hispanic/Latino
- Other
- White, non-Hispanic

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

Worcester County: Workers who Walk to Work

- Percentage of workers identifying as Two or More races who walk to work has increased
- Percentage of Black/AA workers who walk to work has decreased over time

Workers who Walk to Work by Race/Ethnicity

Legend:
- American Indian/Alaska Native
- Asian
- Black/African American
- Hispanic/Latino
- Native Hawaiian/Pacific Islander
- Other
- Two or More Races
- White, non-Hispanic
- Overall

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.
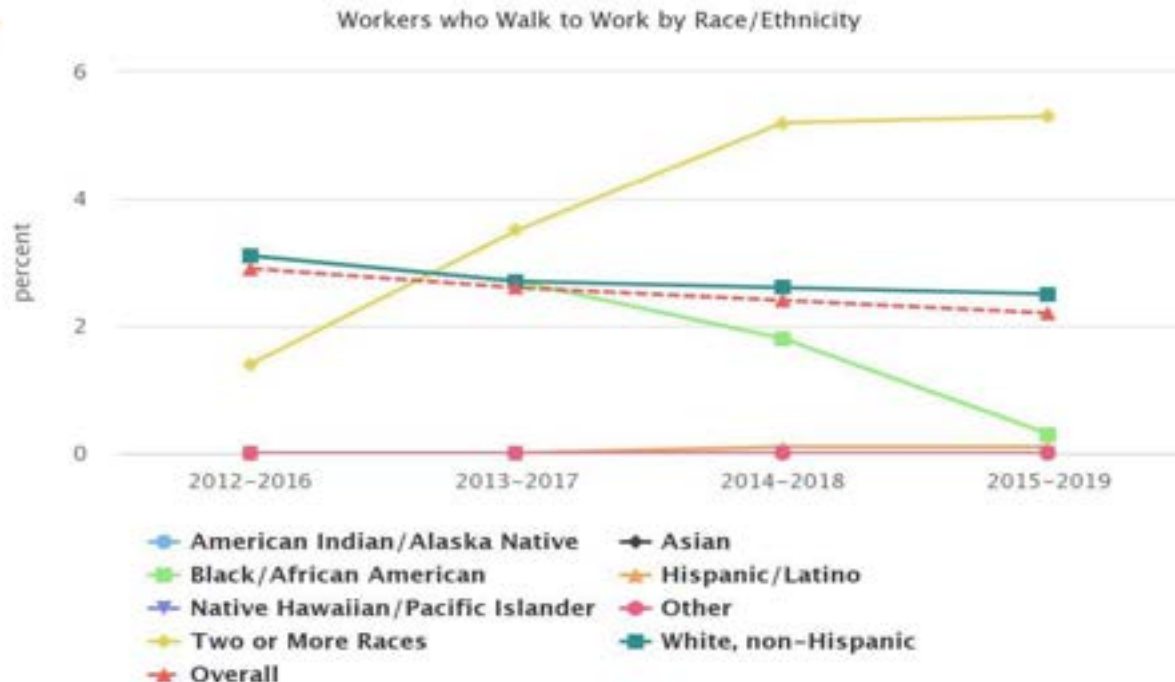
Wellness & Lifestyle
Indicators of Interest

INDICATORS	SOMERSET	SUSSEX	WICOMICO	WORCESTER
Insufficient Sleep (%)	2.48	1.25	2.03	0.93
Frequent Physical Distress (%)	2.25	1.83	1.95	1.65
Self-Reported General Health Assessment: Good or Better (%)	2.05	2.17	2.00	0.60
Life Expectancy (years)	1.95	1.17	1.95	0.90
Poor Physical Health: 14+ Days (%)	1.95	1.92	1.80	1.35
Self-Reported Good Physical Health (%)	1.93	(unavailable)	1.65	1.95
Average Life Expectancy (years)	1.85	(unavailable)	1.98	1.13

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

Oral Health
Indicators of Interest

INDICATORS	SOMERSET	SUSSEX	WICOMICO	WORCESTER
Adults who Visited a Dentist (%)	2.30	1.58	2.30	1.15
Adults with No Tooth Extractions (%)	2.30	(unavailable)	1.60	2.05
Oral Cavity and Pharynx Cancer Incidence Rate (cases/100,000 pop)	2.10	1.19	2.53	2.23
Adults 65+ with Total Tooth Loss (%)	2.03	1.75	1.58	1.13
Age-Adjusted ER Visit Rate due to Dental Problems (ER visits/100,000 pop)	1.98	(unavailable)	1.98	1.98
Children who Visited a Dentist (%)	0.53	(unavailable)	1.78	1.48
Dentist Rate (dentists/100,000 pop)	0.45	2.22	0.85	1.73

Diabetes
Indicators of Interest

INDICATORS

INDICATORS	SOMERSET	SUSSEX	WICOMICO	WORCESTER
Adults with Diabetes (%)	2.30	2.22	1.85	2.18
Diabetes: Medicare Population (%)	2.28	0.58	1.98	0.90
Age-Adjusted ER Rate due to Diabetes (ER Visits/100,000 pop)	2.23	(unavailable)	2.48	2.03
Age-Adjusted Death Rate due to Diabetes (Deaths/100,000 pop)	2.18	0.61	1.95	0.60

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

Appendix Examples

Data Scoring Appendix

Topic Area: Heart Disease and Stroke

CONDUENT

SCORE	HEART DISEASE & STROKE	UNITS	SUSSEX COUNTY	HP2030	DE	U.S.	MEASUREMENT PERIOD	HIGH DISPARITY*	Source
2.47	Ischemic Heart Disease: Medicare Population	percent	31.4		28.4	26.8	2018		6
2.42	Hypertension: Medicare Population	percent	65.2		63	57.2	2018		6
2.33	Hyperlipidemia: Medicare Population	percent	67.8		61.1	47.7	2018		6
2.31	Atrial Fibrillation: Medicare Population	percent	10.2		9.4	8.4	2018		6
2.17	High Blood Pressure Prevalence	percent	41.4	27.7	36.4	32.3	2019		3

Conduent Healthy Communities Institute. (September 2021). Secondary Data Analysis.

Questions?