Prioritization Process

Columbia & Greene Counties

Health Issue Ranking

Healthy Capital District
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Healthy Capital District Initiative

November 9, 2021

Health Issue: Diabetes

Opportunity	Max Score	Region's Score
Health issue aligns with organizations' strategic goals	3	
If already invested in addressing this need, are efforts working sustainably	2	
If not already working on this need, do we have resources and expertise to lead the effort	1	
Are there organizations that would be interested in supporting efforts to address this need	2	
Is it possible to make a measureable, positive impact	3	
Other considerations	3	
Community Partner considerations	3	
Total Opportunity Score	**17**	0

Need	Max Score	Score		
		Columbia	Greene	Average
Is this issue a major need in the community - **Total number** of cases	2	1.30	1.32	**1.31**
Is this issue worse in our region than throughout NY - **Rates**	2	0.59	0.81	**0.70**
Is this issue more common for some populations - **Disparities**	2	1.65	1.18	**1.41**
Is this issue getting better or worse - **Trend**	2	0.82	0.87	**0.85**
How **serious**ly does this issue threaten mortality	2	1.00	1.00	**1.00**
Is this issue a **priority for the community** based on the survey	3	2.29	2.31	**2.30**
Other considerations about the data	2			
Community Partner considerations	3			
Total Need Score	**18**	7.65	7.50	**7.57**

	Max Score	Score			Contribution to Total Score
		Columbia	Greene	Average	
Total Organization-based Score	14				40%
Total Data-based Score	10	5.36	5.19	**5.27**	29%
Total Community Partner-based Score	11	2.29	2.31	**2.30**	31%
Total Priority Score	**35**	7.65	7.50	**7.57**	

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Need Score

18 Total Points

13 Points based on data

2 – Count
- Absolute Number

2 – Rate
- Compared to NYS, excl. NYC, rate

2 – Trend
- $\frac{(Slope)\times(Years\ of\ Data)}{(Average\ Count\ or\ Rate)}$

2 – Disparity
- Disparity Index among sub-populations

2 – Seriousness
- From health behavior to mortality

3 – Community Priority
- Survey results-based

2 – Other Considerations
- More recent or local data

3 – Community Partner considerations

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Health Issue & Measure Selection

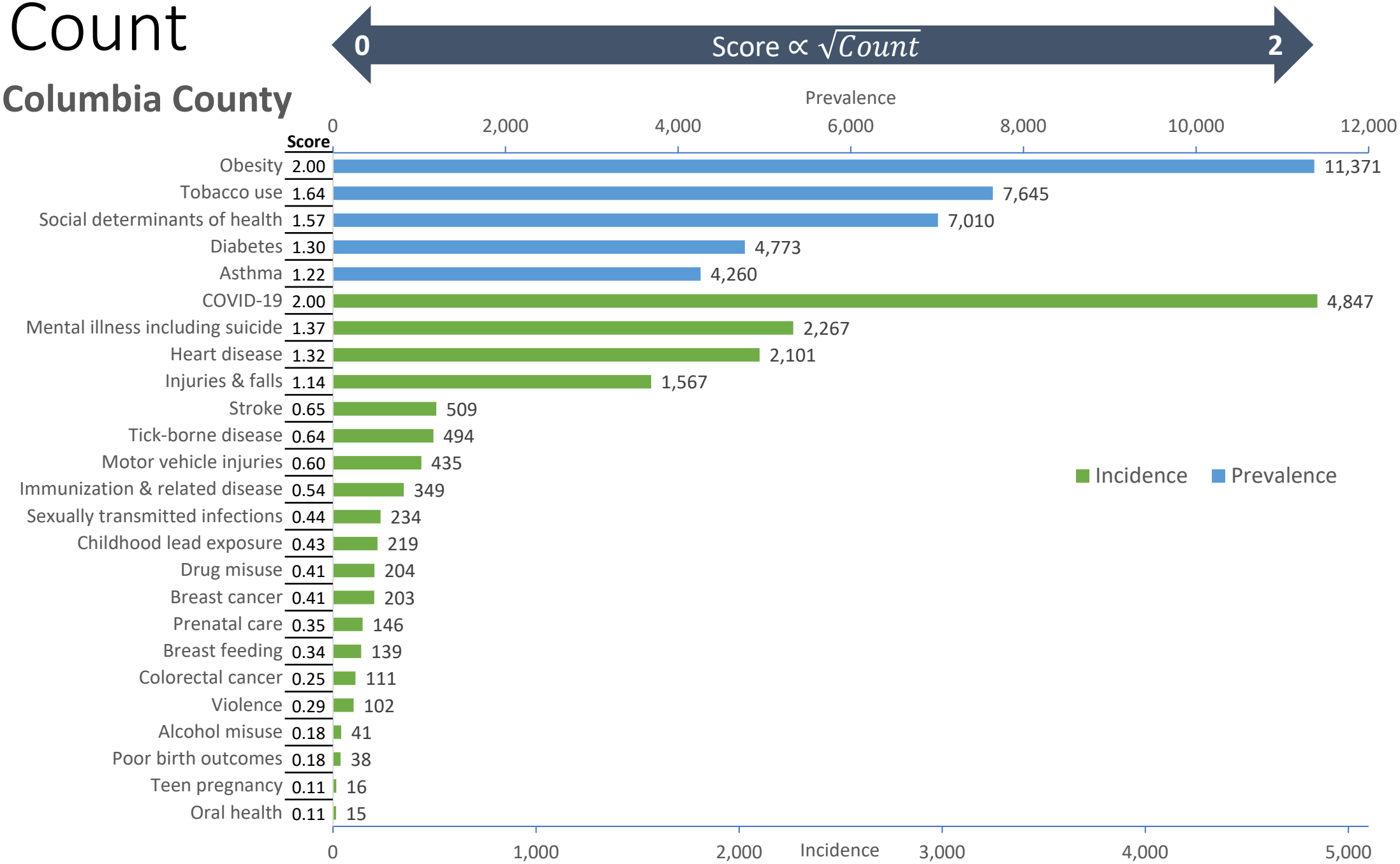
- **25 Health Issues** and around **140 Health Measures** were selected from over 700 health measures located in the following data collections:
  - Prevention Agenda Dashboard
  - Community Health Indicator Reports (CHIRS) Dashboard
  - County Health Indicators by Race/Ethnicity (CHIRE)
  - NYS Opioid Data Dashboard
  - SPARCS data – via Common Ground Health Portal
  - NYS Behavioral Risk Factor Surveillance Survey (BRFSS)
  - Division of Criminal Justice Services (DCJS) Index Crimes
  - NYS DOH COVID-19 Tracker
  - NYS DOH Cancer Registry
  - County Health Rankings and Roadmaps

#	Health Issue
1	COVID-19
2	Colorectal Cancer
3	Breast Cancer
4	Obesity
5	Asthma
6	Diabetes
7	Heart disease
8	Stroke
9	Violence
10	Injuries & falls
11	Motor vehicle injuries
12	Poor birth outcomes
13	Prenatal care
14	Breast feeding
15	Tobacco use
16	Drug misuse
17	Alcohol misuse
18	Mental illness including suicide
19	Sexually transmitted infections
20	Teen pregnancy
21	Childhood lead exposure
22	Tick-borne disease
23	Immunization & related disease
24	Social Determinants of Health
25	Oral Health

		Measures (n)					Survey Responses (n)
#	Health Issue	Count	Rate	Disparities	Trend	Seriousness	Community Priority
1	COVID-19	1	2	1	0	2	656
2	Colorectal Cancer	1	3	2	3	3	651
3	Breast Cancer	1	4	2	4	4	651
4	Obesity	1	2	2	2	2	656
5	Asthma	1	7	4	6	7	644
6	Diabetes	1	5	4	5	5	654
7	Heart disease	1	7	6	6	7	652
8	Stroke	1	2	2	2	2	652
9	Violence	1	5	1	5	5	653
10	Injuries & falls	1	2	4	2	2	648
11	Motor vehicle injuries	1	2	1	3	3	648
12	Poor birth outcomes	1	3	3	3	3	643
13	Prenatal care	1	3	2	3	3	0
14	Breast feeding	1	2	1	2	2	0
15	Tobacco use	1	5	2	4	5	651
16	Drug misuse	1	6	1	6	6	655
17	Alcohol misuse	1	4	2	4	4	655
18	Mental illness including suicide	1	6	1	6	6	654
19	Sexually transmitted infections	1	6	1	5	6	637
20	Teen pregnancy	1	2	1	2	2	637
21	Childhood lead exposure	1	3	1	3	3	0
22	Tick-borne disease	1	3	0	3	3	0
23	Immunization & related disease	1	3	1	3	3	0
24	Social Determinants of Health	1	7	2	6	7	0
25	Oral Health	1	3	1	3	3	0
	Total	25	97	40	93	98	665

Count

Columbia County



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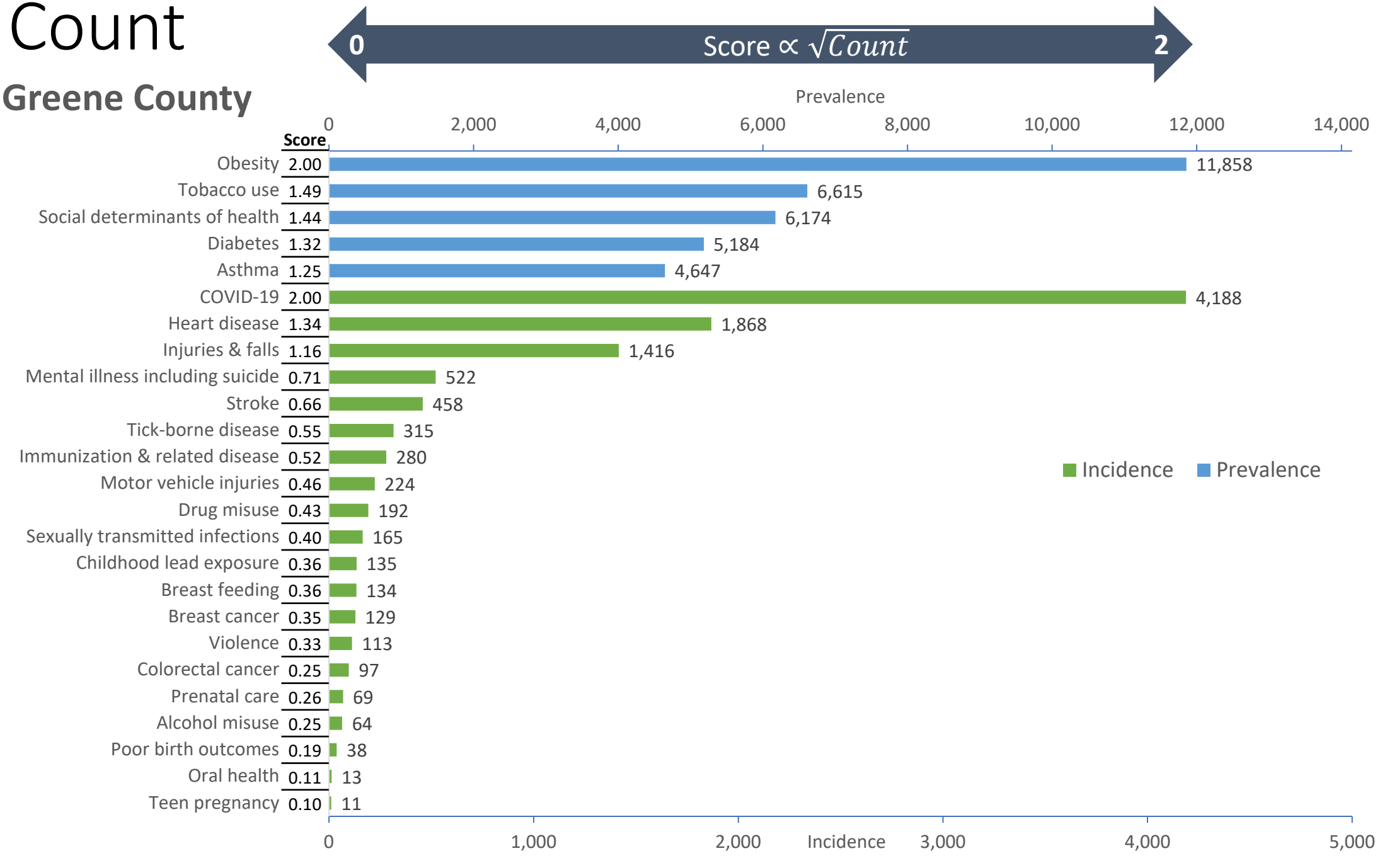
Count

Greene County



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$$\text{Rate} = \left(\frac{\text{County Rate}}{\text{NYS excl. NYC Rate}}\right)^{*}$$

*Rate ratios (RR) are adjusted so that:

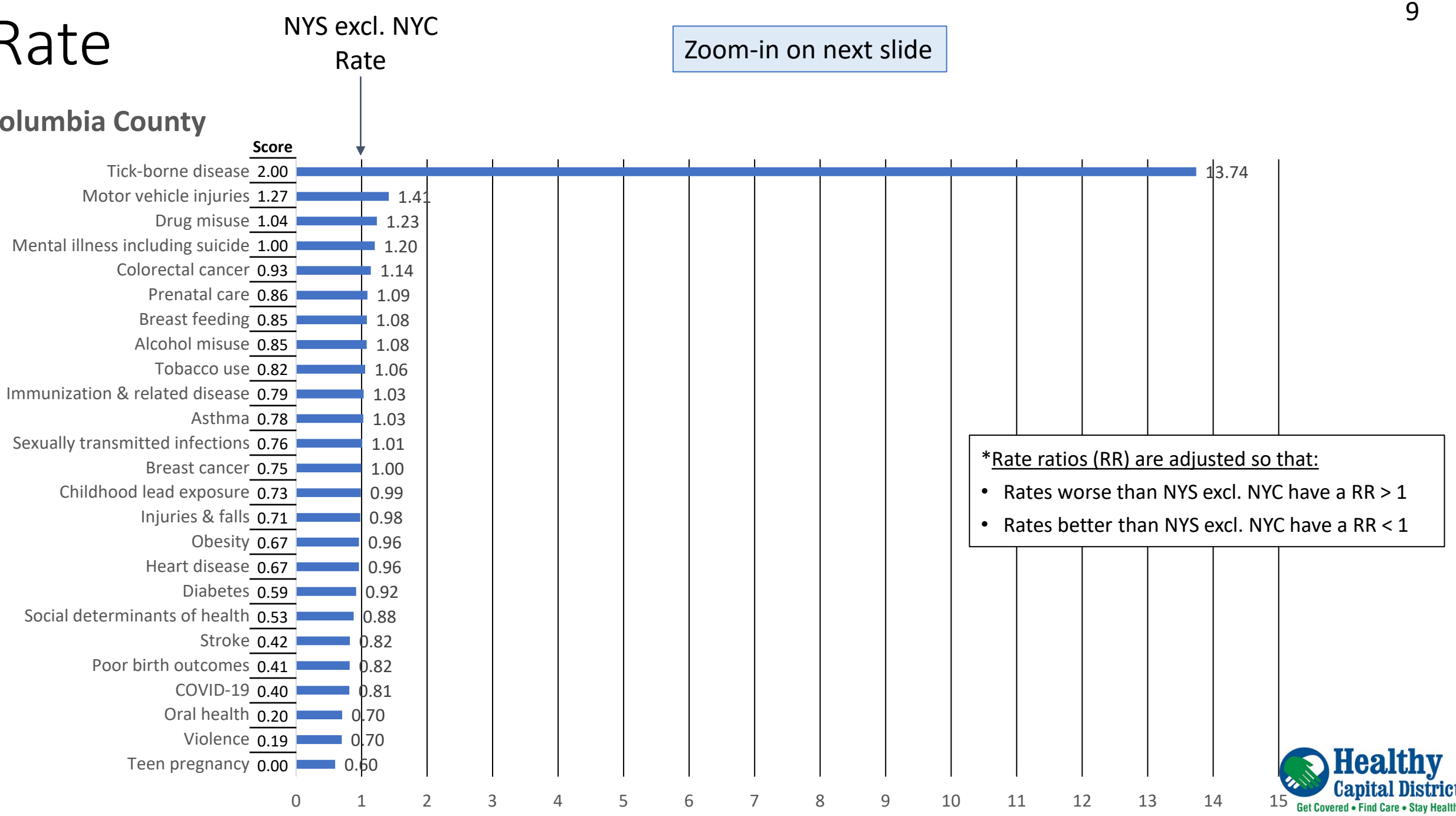
- Rates worse than NYS excl. NYC have a RR > 1
- Rates better than NYS excl. NYC have a RR < 1

- Example: Stroke in Greene County

Health Measure	Year	Greene County	NYS excl. NYC	Rate Ratio	Average Rate Ratio
Age-adjusted cerebrovascular disease (stroke) **hospitalization** rate per 10,000	2016-2018	21.5	21.1	**1.02**	**0.96**
Age-adjusted cerebrovascular disease (stroke) **mortality** rate per 100,000	2016-2018	24.9	27.6	**0.90**	

Rate

Columbia County



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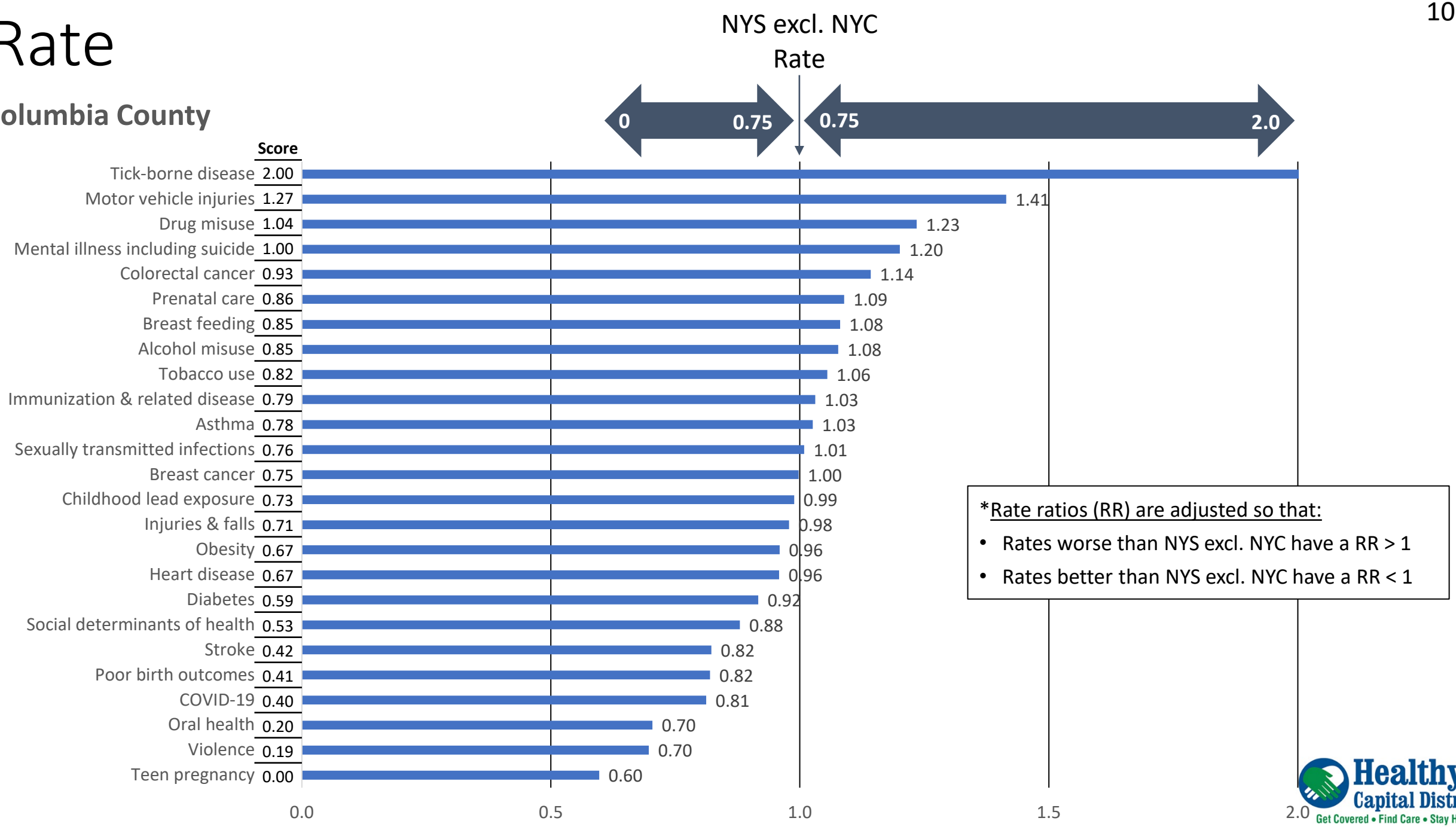
Rate

Columbia County



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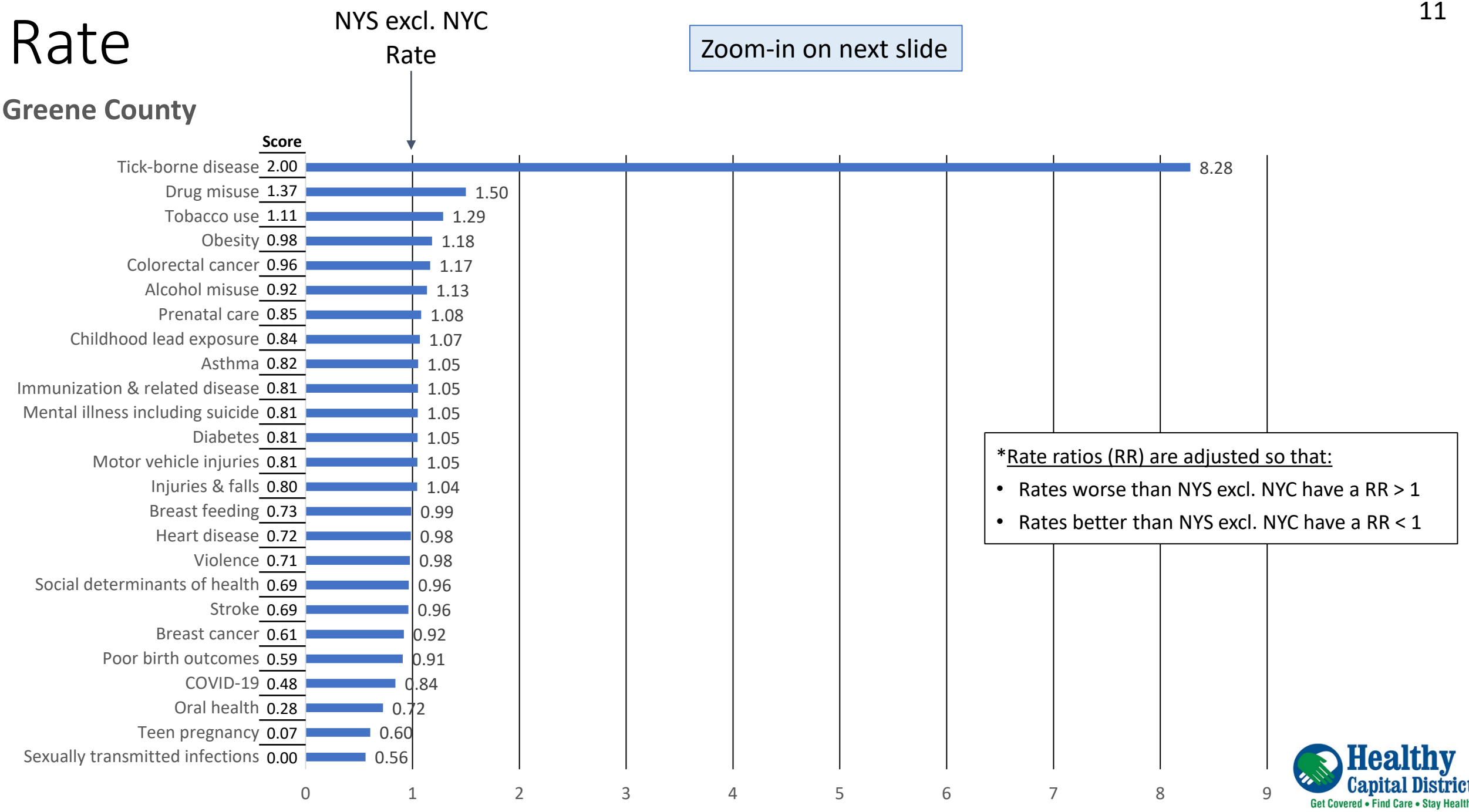
Rate

Greene County



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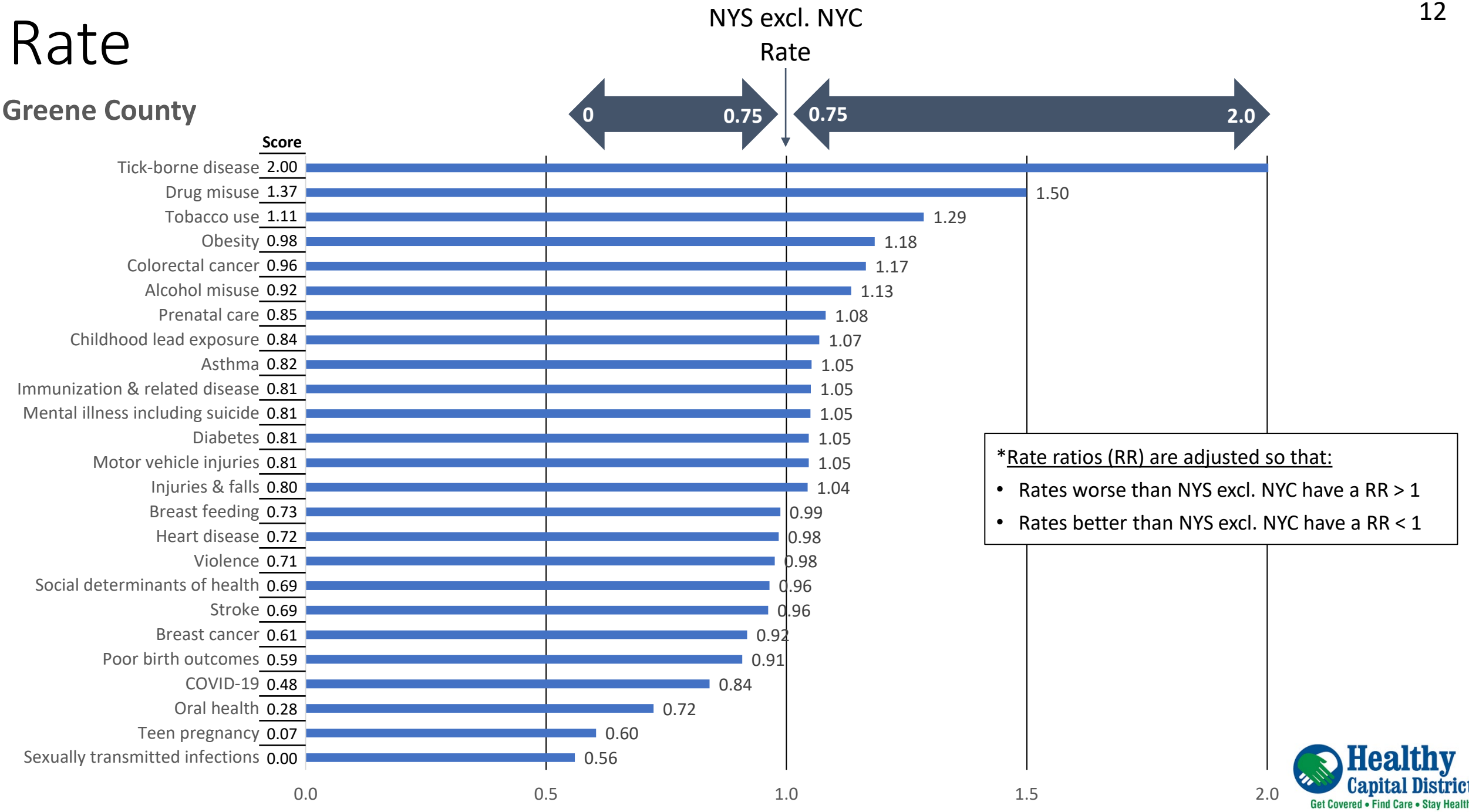
Rate

Greene County



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- Rates better than NYS excl. NYC have a RR < 1

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Columbia Top 10 Rates – Worse than NYS excl. NYC

$$\text{Rate Ratio} = \left(\frac{\text{County Rate}}{\text{NYS excl. NYC Rate}}\right)$$

	Health Measure	Health Issue	Data Years	Rate Ratio
1	**Anaplasmosis** incidence per 100,000	Tick-borne disease	2016-2018	**21.52**
2	**Babesiosis** incidence per 100,000	Tick-borne disease	2016-2018	**10.62**
3	**Lyme disease** incidence per 100,000	Tick-borne disease	2016-2018	**9.08**
4	Age-adjusted **congestive heart failure mortality** rate per 100,000	Heart disease	2016-2018	**2.13**
5	Infants born with **neonatal abstinence symptom** and/or affected by maternal use of **drugs of addiction**, rate per 1,000 newborn discharges	Drug misuse	2018	**1.99**
6	Age-adjusted **motor vehicle injury mortality** rate per 100,000	Motor vehicle injuries	2016-2018	**1.70**
7	Age-adjusted **suicide mortality** rate per 100,000	Mental illness including suicide	2016-2018	**1.61**
8	**Hospital discharges** involving **opioid use** (including abuse, poisoning, dependence and unspecified use), crude rate per 100,000 population	Drug misuse	2018	**1.43**
9	**Suicide mortality among youth**, rate per 100,000, aged 15-19 years	Mental illness including suicide	2016-2018	**1.39**
10	Age-adjusted **colon and rectum cancer mortality** rate per 100,000	Colorectal cancer	2015-2017	**1.39**

Health Measure in Top 10 Rates worse than NYS excl. NYC, for both Columbia and Greene counties

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Greene Top 10 Rates – Worse than NYS excl. NYC

	Health Measure	Health Issue	Data Years	Rate Ratio $= \left(\frac{\text{County Rate}}{\text{NYS excl. NYC Rate}}\right)$
1	**Anaplasmosis** incidence	Tick-borne disease	2016-2018	**10.78**
2	**Lyme disease** incidence per 100,000	Tick-borne disease	2016-2018	**8.42**
3	**Babesiosis** incidence	Tick-borne disease	2016-2018	**5.63**
4	Age-adjusted **congestive heart failure mortality** rate per 100,000	Heart disease	2016-2018	**2.14**
5	Age-adjusted **motor vehicle injury mortality** rate per 100,000	Motor vehicle injuries	2016-2018	**2.09**
6	**Hospital discharges** involving **opioid use** (including abuse, poisoning, dependence and unspecified use), crude rate per 100,000 population	Drug misuse	2018	**1.86**
7	Age-adjusted **suicide mortality** rate per 100,000	Mental illness including suicide	2016-2018	**1.59**
8	Age-adjusted **oral cavity and pharynx cancer mortality** rate per 100,000	Tobacco use	2015-2017	**1.52**
9	**Alcohol related motor vehicle injuries and deaths** per 100,000	Alcohol misuse	2016-2018	**1.48**
10	**Overdose deaths** involving **any opioid**, crude rate per 100,000 population	Drug misuse	2018	**1.47**

Health Measure in Top 10 Rates worse than NYS excl. NYC, for both Columbia and Greene counties

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$$\text{Trend} = \left(\frac{\text{Slope} \times \text{Years of Data}}{\text{Average Value}}\right)^{*}$$

*Trends adjusted so that:
- Improving trends < 0
- Worsening trends > 0

Slope is of linear regression line (using least squares method)

- Example: Teen Pregnancy in Columbia County

Health Measure	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Trend	Average Trend
Teen fertility rate per 1,000 (ages 15-17) (births/female population)	10	10	5.4	6.6	4.9	4.8	3.9	3	4.1	2.1	**-1.47**	**-1.56**
Teen pregnancy rate per 1,000 females aged <18 years	7.9	8.9	8.2	5.5	4.1	4.1	3.9	2	2.9	1.7	**-1.65**	

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Trend Examples

Columbia County

$$\left(\frac{\text{Slope} \times \text{Years of Data}}{\text{Average Value}}\right)^{*}$$

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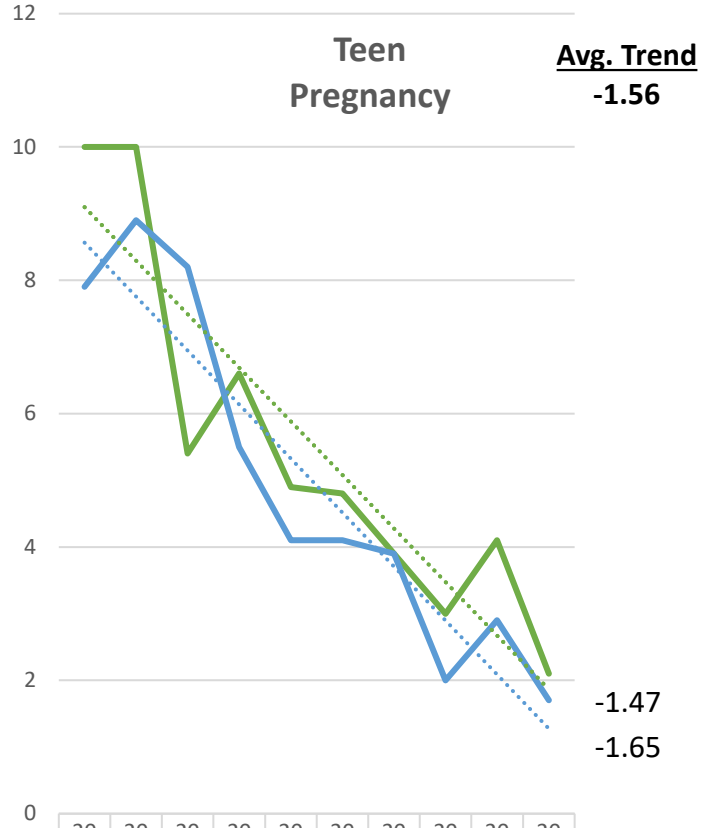
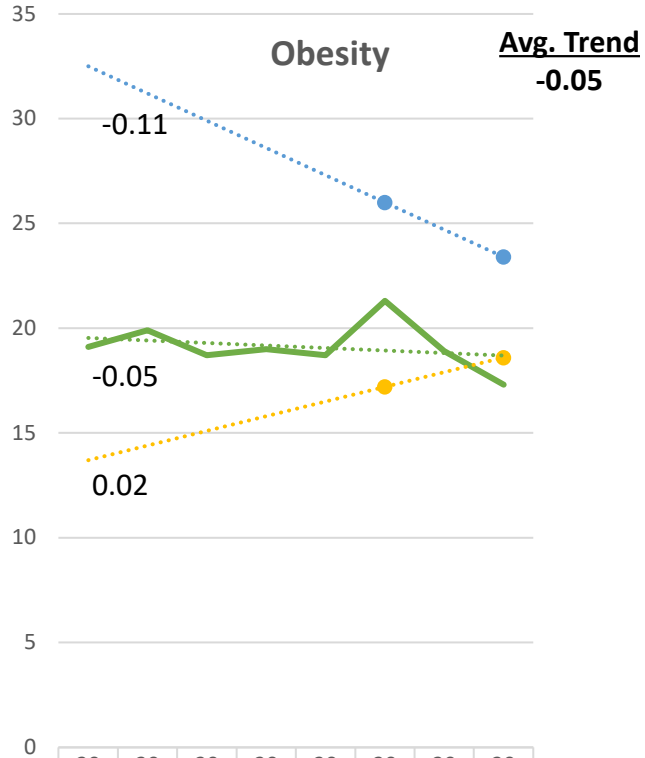
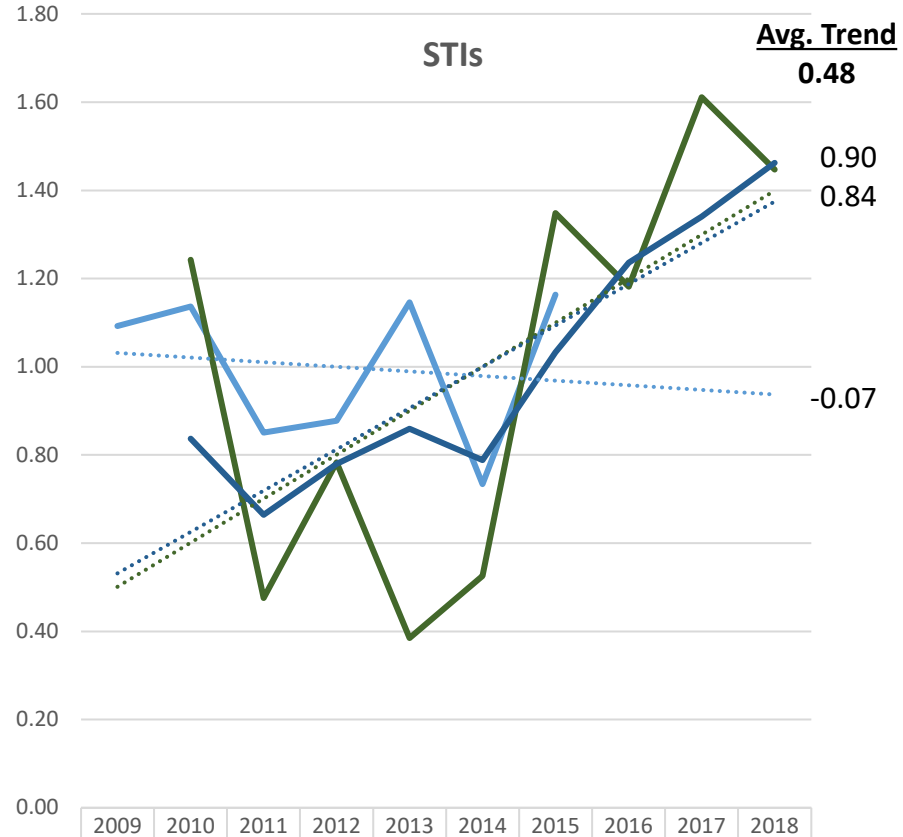


	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fertility rate	10	10	5.4	6.6	4.9	4.8	3.9	3	4.1	2.1
Pregnancy rate	7.9	8.9	8.2	5.5	4.1	4.1	3.9	2	2.9	1.7



	2011	2012	2013	2014	2015	2016	2017	2018
Obesity, children and adolescents	19.1	19.9	18.7	19	18.7	21.3	18.9	17.3
Obesity, adults						26		23.4
No leisure-time physical activity, adults						17.2		18.6



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
HIV	1.09	1.14	0.85	0.88	1.15	0.73	1.16			
Gonorrhea		1.24	0.48	0.78	0.38	0.53	1.35	1.18	1.61	1.45
Chlamydia		0.84	0.66	0.78	0.86	0.79	1.03	1.24	1.34	1.46

$$\text{Trend} = \left(\frac{\text{Slope} \times \text{Years of Data}}{\text{Average Value}}\right)^{*}$$

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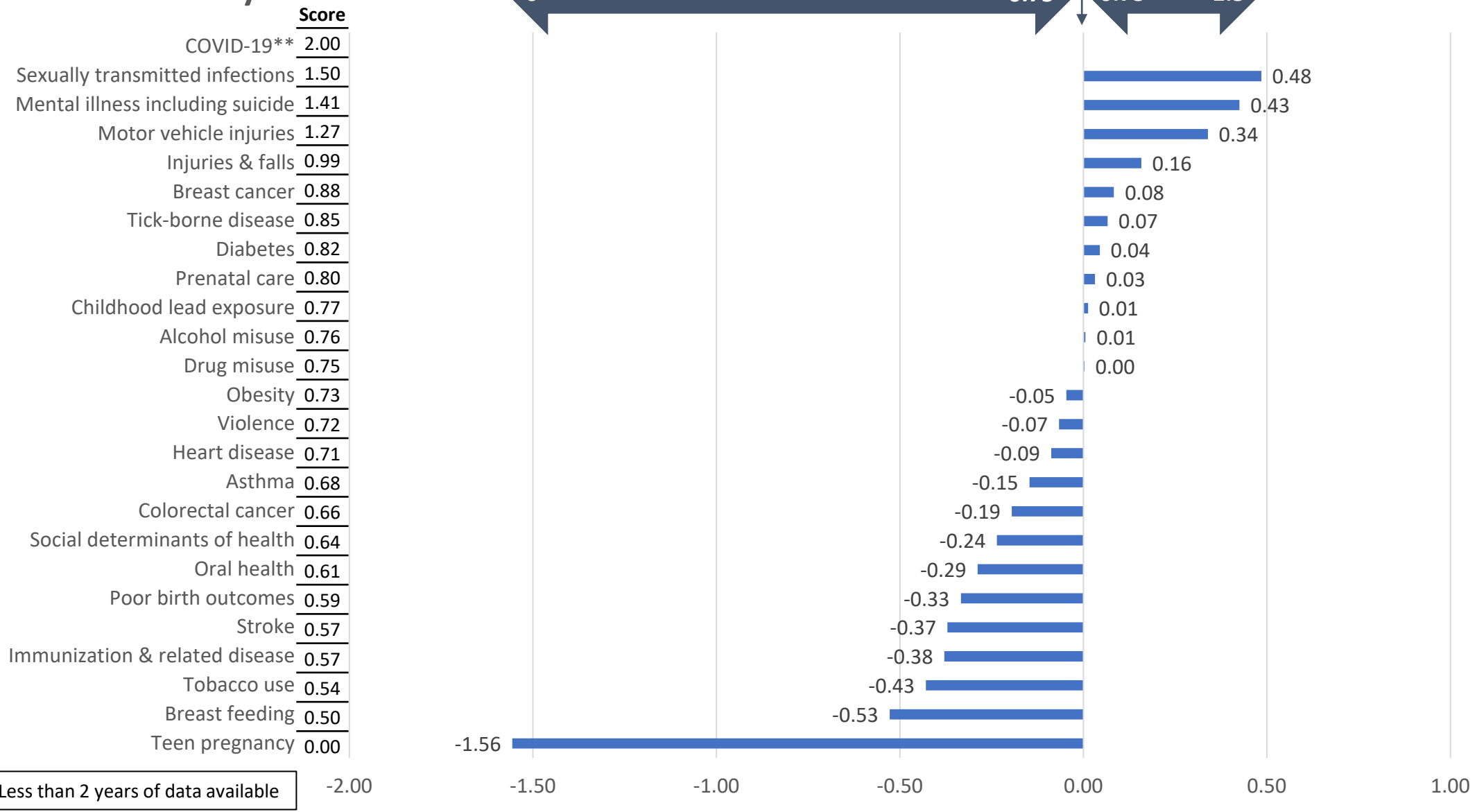
Columbia County



** Less than 2 years of data available

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Trend = $\left(\frac{\text{Slope} \times \text{Years of Data}}{\text{Average Value}}\right)^{*}$

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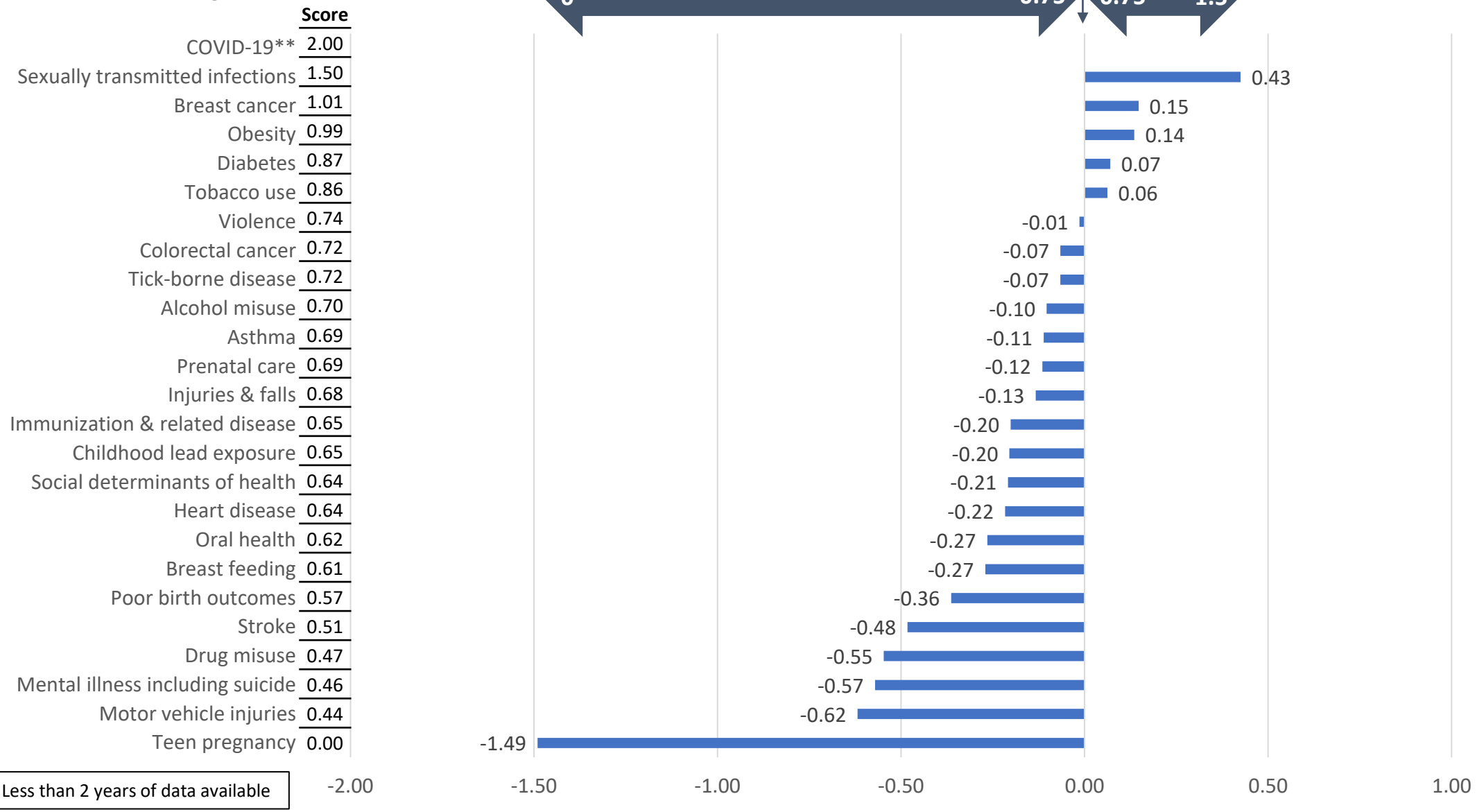
Greene County



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Columbia County Top 10 Trends - Worsening

	Health Measure	Health Issue	Trend $= \left(\frac{\text{Slope} \times \text{Years of Data}}{\text{Average Value}}\right)^{*}$
1	**Overdose deaths** involving **any opioid**, crude rate per 100,000 population	Drug misuse	**2.44**
2	**Suicide mortality among youth**, rate per 100,000, aged 15-19 years	Mental illness including suicide	**1.22**
3	**Motor Vehicle Accident ED Visits**	Motor vehicle injuries	**0.92**
4	**Mental Diseases and Disorders** Primary Dx **ED visits**	Mental illness including suicide	**0.90**
5	**Gonorrhea diagnoses**, age-adjusted rate per 100,000 population	Sexually transmitted infections	**0.81**
6	**Chlamydia diagnoses**, age-adjusted rate per 100,000 population	Sexually transmitted infections	**0.72**
7	**Mental Diseases and Disorders** Primary Dx **Hospitalizations**	Mental illness including suicide	**0.62**
8	**Anaplasmosis** incidence	Tick-borne disease	**0.42**
9	Age-adjusted **congestive heart failure hospitalization** rate per 100,000	Heart disease	**0.39**
10	Age-adjusted **female breast cancer incidence** rate per 100,000	Breast cancer	**0.37**

* Trends adjusted so that:

- worsening trends > 0
- improving trends < 0

Health Measure in Top 10 Worsening Trends for both Columbia and Greene counties

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Greene County Top 10 Trends - Worsening

	Health Measure	Health Issue	Trend $= \left(\frac{\text{Slope} \times \text{Years of Data}}{\text{Average Value}}\right)^*$
1	**Overdose deaths** involving **any opioid**, crude rate per 100,000 population	Drug misuse	**1.44**
2	**Gonorrhea diagnoses**, age-adjusted rate per 100,000 population	Sexually transmitted infections	**0.58**
3	Percentage of **cigarette smoking** among **adults** with income **less than $25,000**	Tobacco use	**0.53**
4	Age-adjusted **diabetes hospitalization** rate per 10,000 (primary diagnosis)	Diabetes	**0.50**
5	Age-adjusted **congestive heart failure mortality** rate per 100,000	Heart disease	**0.39**
6	Infants born with **neonatal abstinence symptom** and/or affected by maternal use of **drugs of addiction**, rate per 1,000 newborn discharges	Drug misuse	**0.38**
7	**Violent crime** rate per 100,000	Violence	**0.37**
8	Percentage of **adults with obesity**	Obesity	**0.28**
9	**Chlamydia diagnoses**, age-adjusted rate per 100,000 population	Sexually transmitted infections	**0.27**
10	Age-adjusted **cirrhosis hospitalization** rate per 10,000	Alcohol misuse	**0.20**

* Trends adjusted so that:

- worsening trends > 0
- improving trends < 0

Health Measure in Top 10 Worsening Trends for both Columbia and Greene counties

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Index of Disparity

- Example: Diabetes (primary diag.) hospitalizations in Columbia County

Health Indicator	Non-Hispanic		Hispanic	Total Population
	White	Black		
Diabetes (primary diagnosis) hospitalizations per 10,000 population, age-adjusted	12.7	30.6	21.1	**14.6**
Absolute Difference between Diabetes (1° Dx) hosp. in Race/Ethnicity Groups and Total Population	1.9	16.0	6.5	
Average Absolute Difference – Diabetes (1° Dx) hospitalizations	**8.1**			
Index of Disparity – Diabetes (1° Dx) hospitalizations	**0.56**			

Index of Disparity

$$\frac{\left(\begin{array}{c}average\ absolute\ difference\\ between\ subpopulation\ rate\\ and\ total\ population\ rate\end{array}\right)}{(total\ population\ rate)}$$

$$\frac{8.1}{14.6} = 0.56$$

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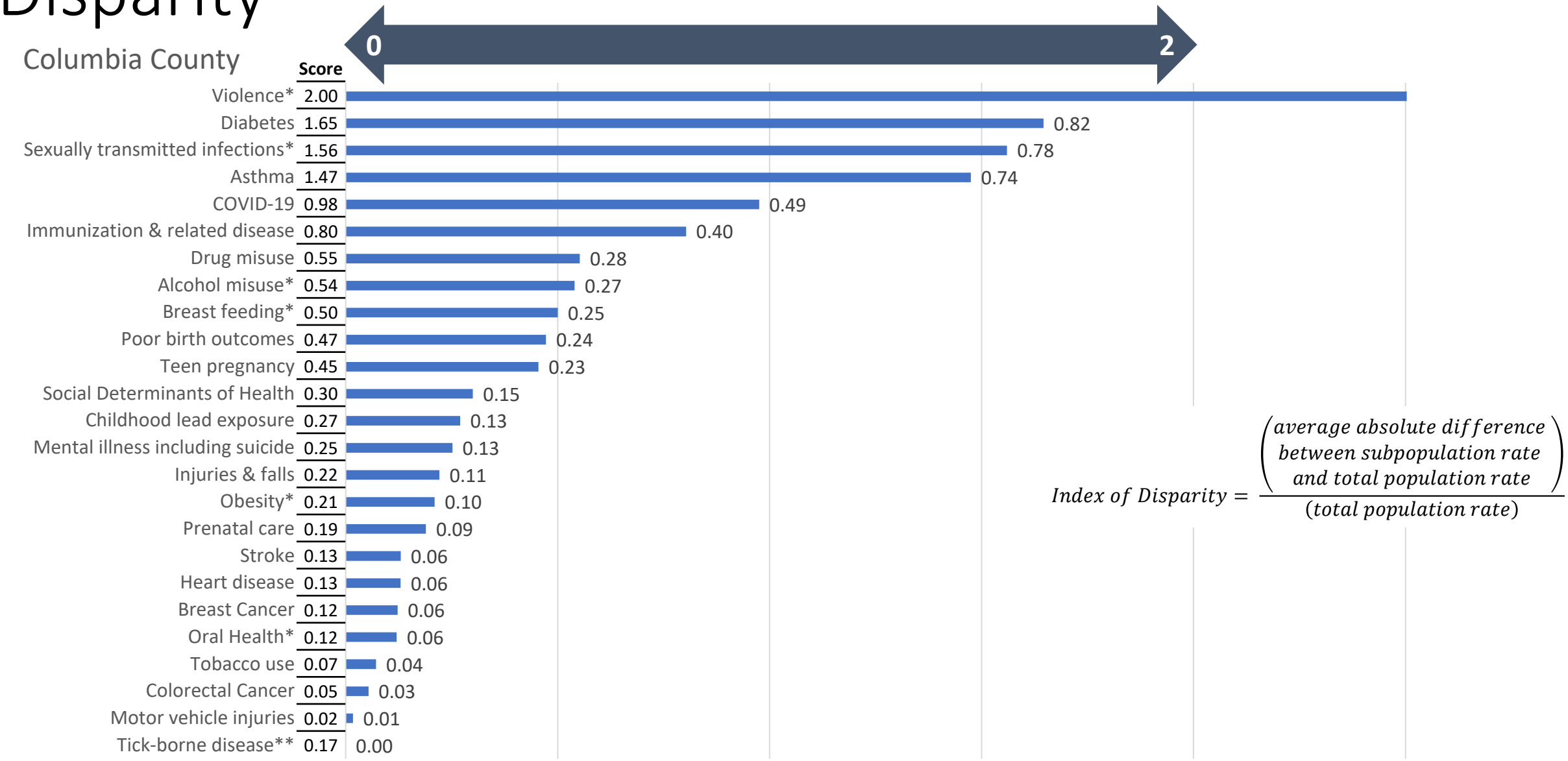
Average Index of Disparity

- Example: Diabetes in Columbia County

Health Indicator	Index of Disparity	
Index of Disparity – Diabetes (1° Dx) hosp.	**0.56**	Moderate-High
Index of Disparity – Diabetes (any Dx) hosp.	**0.52**	Moderate-High
Index of Disparity – Diabetes mortality	**0.90**	Very High
Index of Disparity – Potentially preventable diabetes short-term complications hospitalization	**1.32**	Very High
Average Index of Disparity – Diabetes	**0.82**	Very High

Disparity

Columbia County



$$Index\ of\ Disparity = \frac{\left(\begin{array}{c} average\ absolute\ difference \\ between\ subpopulation\ rate \\ and\ total\ population\ rate \end{array}\right)}{(total\ population\ rate)}$$

* For measures without county-level disparity data, state-level index of disparity was used.
** Tick-borne disease assigned median disparity score, due to lack of available data.

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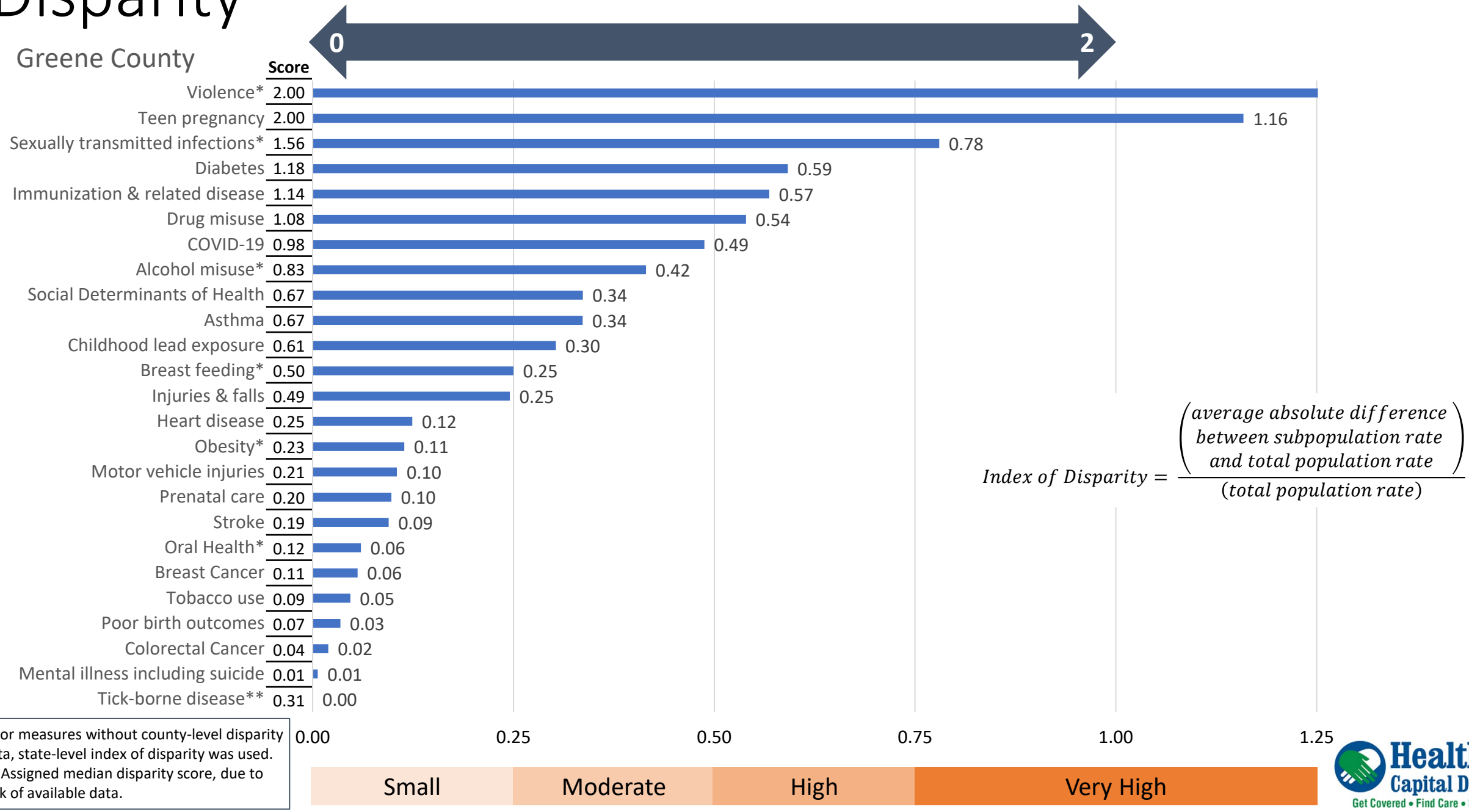
Disparity

Greene County



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** Assigned median disparity score, due to lack of available data.

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Columbia Top 10 Measures of Disparity

	Health Measure	Health Issue	Index of Disparity
1	**Asthma hospitalizations** per 10,000 population, age-adjusted	Asthma	**1.56**
2	Potentially preventable **diabetes short-term complications hospitalization** rate per 10,000 population - Aged 18+ Years	Diabetes	**1.32**
3	**Diabetes mortality** per 100,000 population, age-adjusted	Diabetes	**0.90**
4	**Chronic lower respiratory disease** hospitalizations per 10,000 population, age-adjusted	Asthma	**0.63**
5	**Diabetes (primary diagnosis) hospitalizations** per 10,000 population, age-adjusted	Diabetes	**0.56**
6	**Diabetes (any diagnosis) hospitalizations** per 10,000 population, age-adjusted	Diabetes	**0.52**
7	Percentage of **premature births** (< 37 weeks gestation - clinical estimate)	Poor birth outcomes	**0.42**
8	**Flu & Pneumonia Hospitalizations**	Immunization & related disease	**0.40**
9	**Cirrhosis Hospitalizations**	Alcohol misuse	**0.37**
10	Percentage of **premature deaths** (< 75 years)		**0.30**

Health Measure in Top 10 Measures of Disparity for both Columbia and Greene counties

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Greene Top 10 Measures of Disparity

	Health Measure	Health Issue	Index of Disparity
1	**Teen pregnancies** per 1,000 females aged under 18 years	Teen pregnancy	**1.16**
2	**Asthma hospitalizations** per 10,000 population, age-adjusted	Asthma	**1.09**
3	**Diabetes mortality** per 100,000 population, age-adjusted	Diabetes	**0.81**
4	**Cirrhosis Hospitalizations**	Alcohol misuse	**0.66**
5	**Poisoning hospitalizations** per 10,000 population, age-adjusted	Injuries & falls	**0.64**
6	**Diabetes (primary diagnosis) hospitalizations** per 10,000 population, age-adjusted	Diabetes	**0.62**
7	**Flu & Pneumonia Hospitalizations**	Immunization & related disease	**0.57**
8	**Substance abuse Primary Dx Hospitalizations**	Drug misuse	**0.54**
9	Percentage of **families below poverty** (2014-2018)	Social Determinants of Health	**0.53**
10	**Years of potential life lost** per 100,000 population, age-adjusted		**0.37**

Health Measure in Top 10 Measures of Disparity for both Columbia and Greene counties

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Seriousness

- Example: Stroke

Health Measure	Seriousness
Age-adjusted cerebrovascular disease (stroke) **hospitalization** rate per 10,000	**4**
Age-adjusted cerebrovascular disease (stroke) **mortality** rate per 100,000	**5**
Average Seriousness	**4.5**

Health Measure Category	Seriousness
Mortality	5
Major Hospitalization	4
Minor Hospitalization	3
Major ED Visit	3
Minor ED Visit	2
Health Condition (e.g. asthma, diabetes)	2
Health Behavior (e.g. smoking, drinking) or screening/preventive care-related	1

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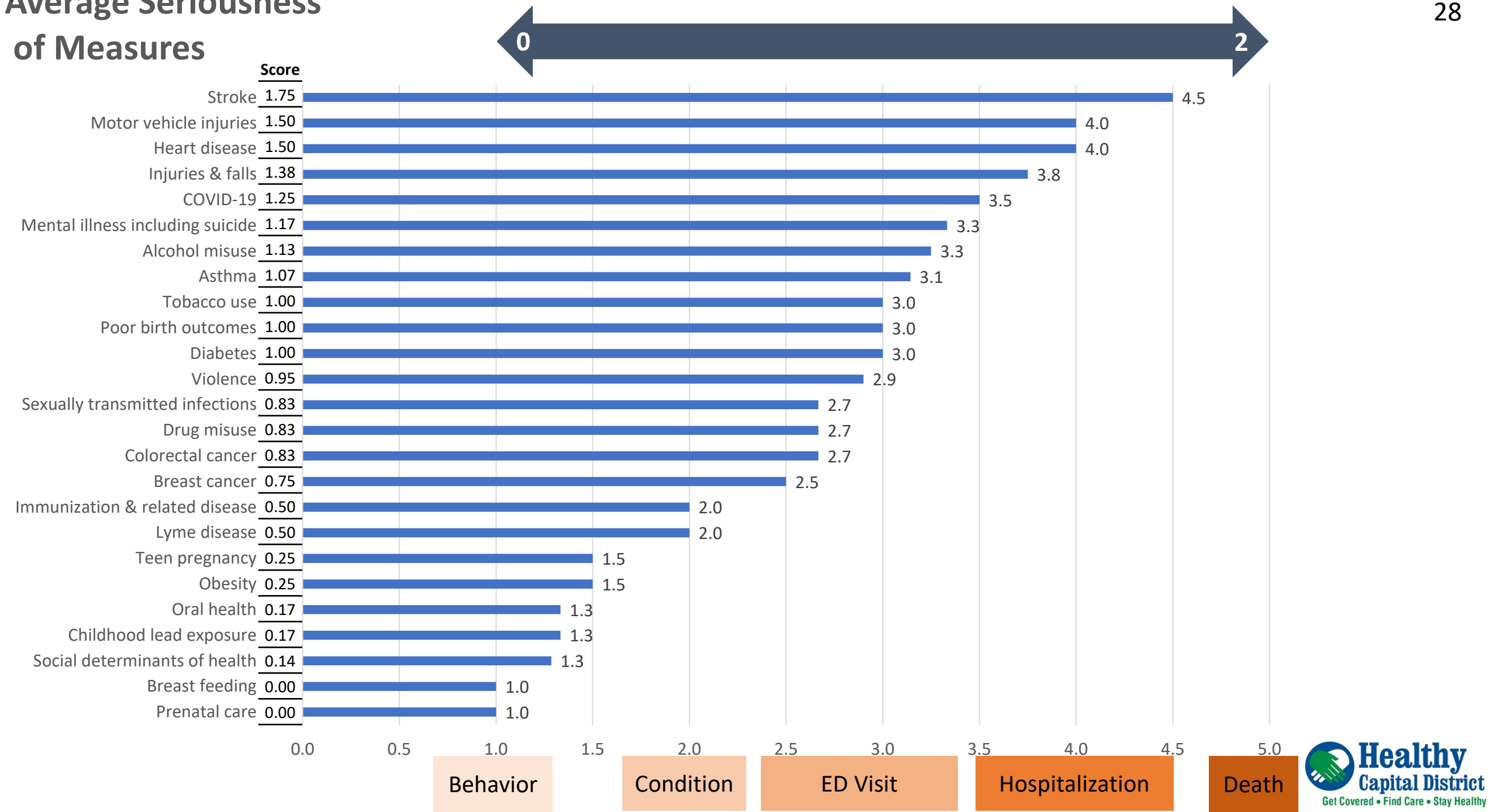
Average Seriousness of Measures



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Community Priority Scoring Example

1. How serious a public health problem in your community is each of the following?

	Not at all serious	Not too serious	Somewhat serious	Very serious	Responses	Score out of 3
Asthma Count Row %	129 9.6%	482 35.8%	587 43.6%	149 11.1%	1,347	1.56
Cancer Count Row %	40 2.9%	190 13.9%	599 43.9%	537 39.3%	1,366	2.20
COVID-19 Count Row %	62 4.5%	162 11.7%	474 34.4%	681 49.4%	1,379	2.29
	× 0	× 1	× 2	× 3		

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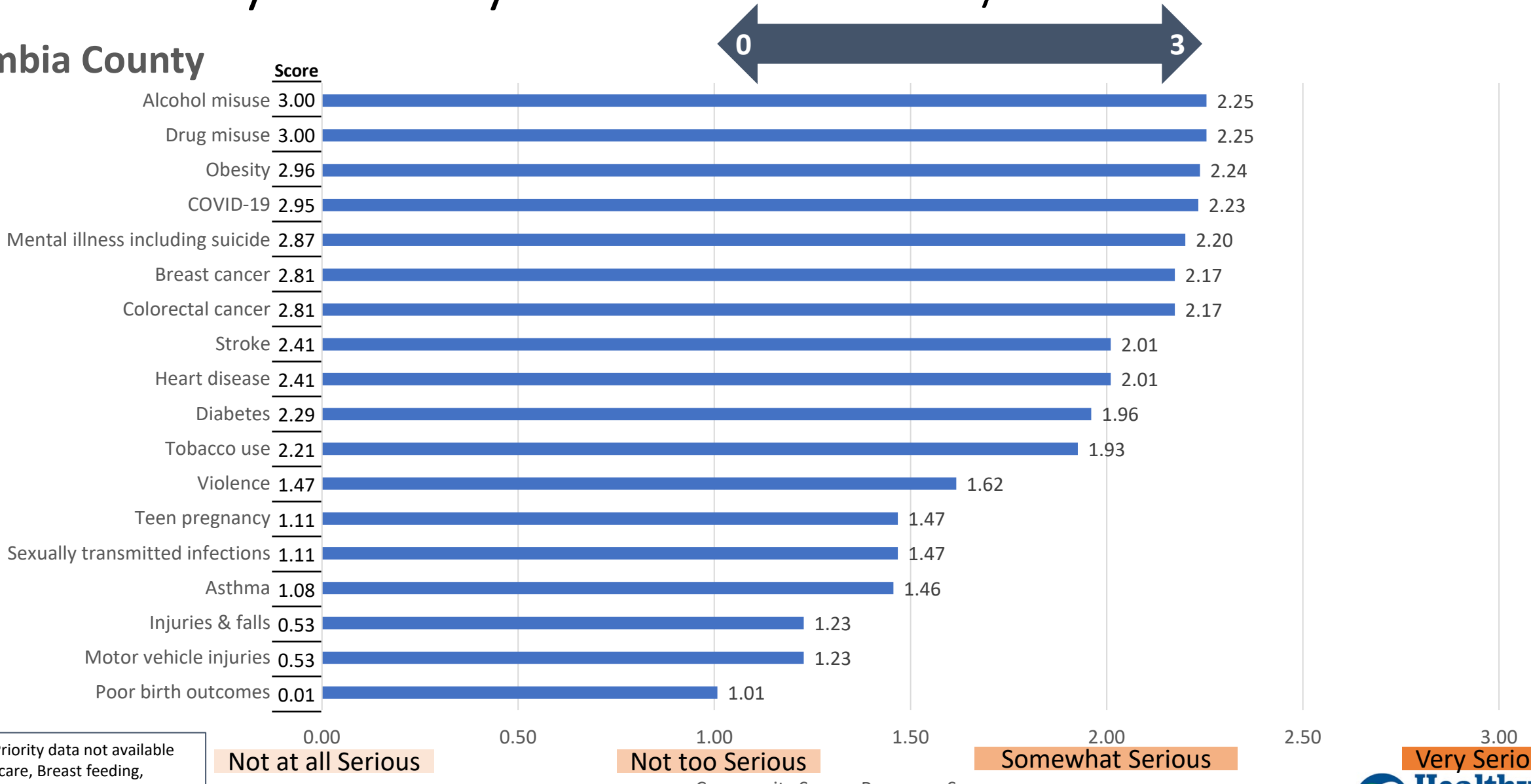
Community Priority – Based on Survey Results

Columbia County



Community Priority data not available for: Prenatal care, Breast feeding, Childhood lead exposure, Lyme disease, Immunization & related disease, Social determinants of health, Oral health

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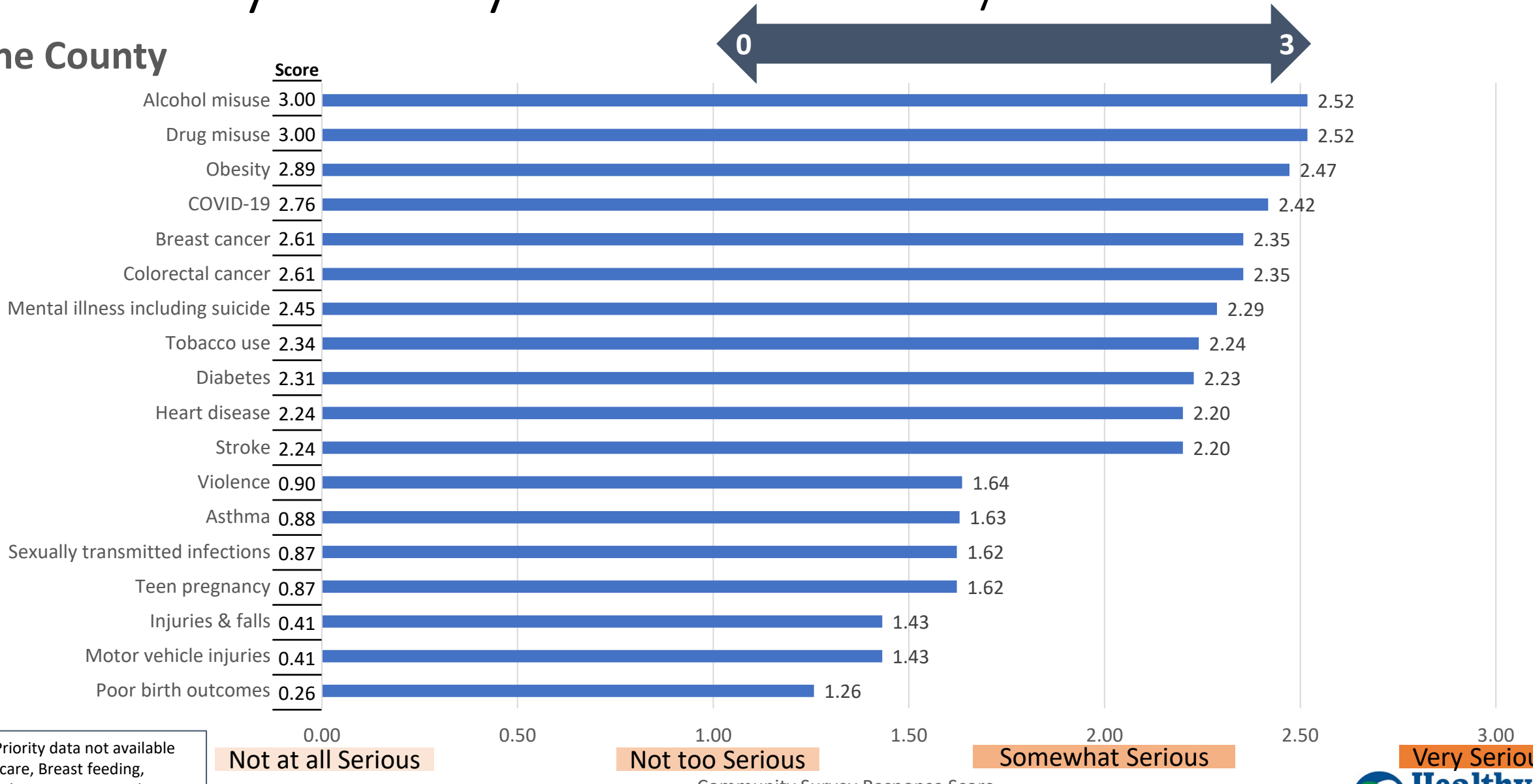
Community Priority – Based on Survey Results

Greene County



Community Priority data not available for: Prenatal care, Breast feeding, Childhood lead exposure, Lyme disease, Immunization & related disease, Social determinants of health, Oral health

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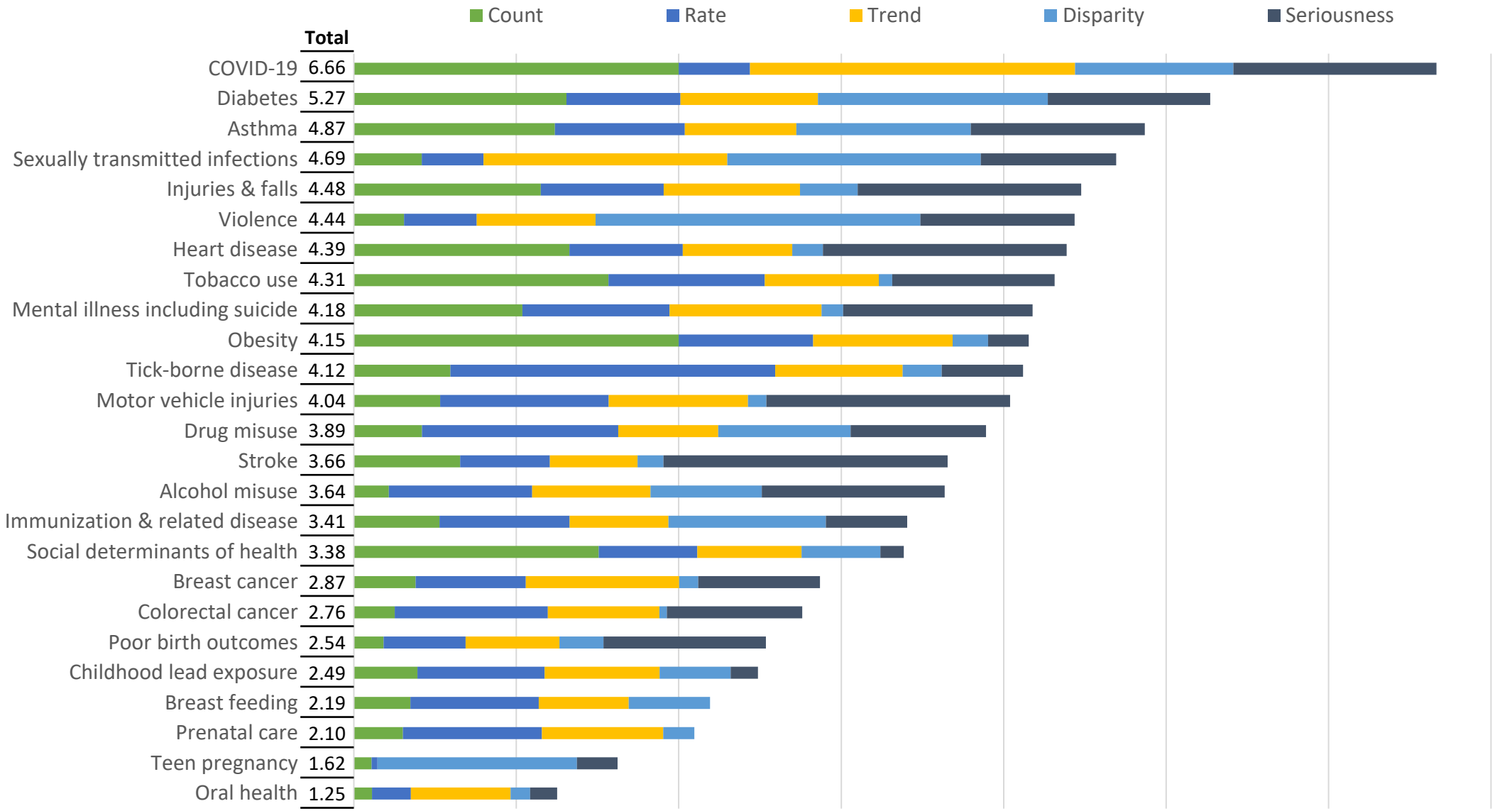
Columbia & Greene - Data-based Score (out of 10)

Community Priority (Survey)
Score included on next slide



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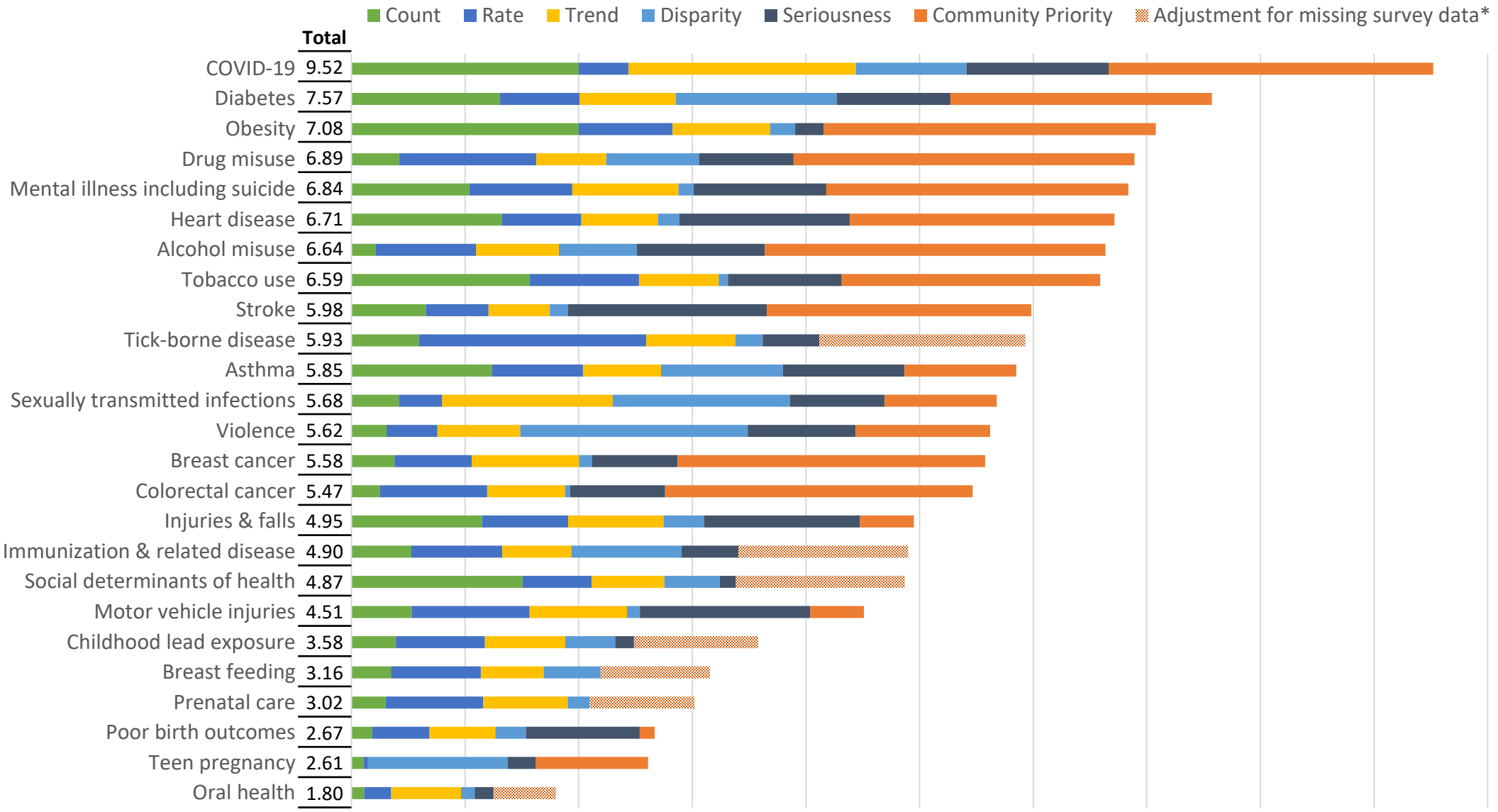
Columbia & Greene - Data-based Need Score (out of 13)



* Health issues without survey data were weighted for a total score out of 13

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Columbia & Greene Data-Based Need Scores

* Health issues without survey data weighted for a total score out of 13

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