

Prioritization Process

Schenectady County
Health Issue Ranking



Healthy Capital District Initiative
November 15, 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
Is this issue a major need in the community - Total number of cases	2	1.20
Is this issue worse in our region than throughout NY - Rates	2	0.99
Is this issue more common for some populations - Disparities	2	1.02
Is this issue getting better or worse - Trend	2	1.15
How seriously does this issue threaten mortality	2	1.00
Is this issue a priority for the community based on the survey	3	1.87
Other considerations about the data	2	
Community Partner considerations	3	
Total Need Score	18	7.23

Total Organization-based Score
 Total Data-based Score
 Total Community Partner-based Score
Total Priority Score

Max Score	Score	Contribution to Total Score
14		40%
10	5.36	29%
11	1.87	31%
35	7.23	

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

Health Issue & Measure Selection

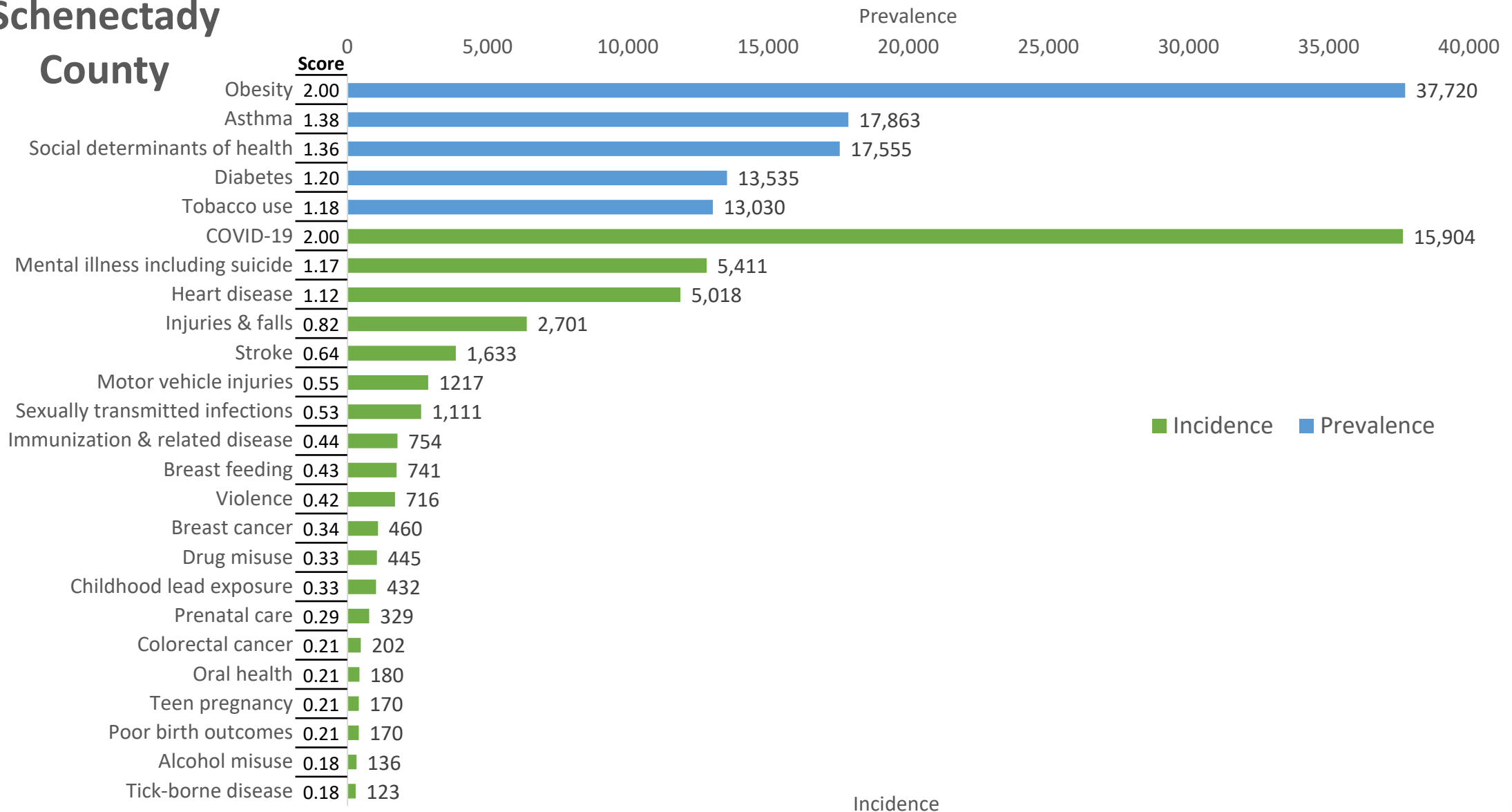
- **25 Health Issues** and around **140 Health Measures** were selected from over 700 health measures located in 8 New York State data collections:
 - Prevention Agenda Dashboard
 - Community Health Indicator Reports (CHIRS) Dashboard
 - County Health Indicators by Race/Ethnicity (CHIRE)
 - Opioid Data Dashboard
 - SPARCS data – via Common Ground Health Portal
 - Behavioral Risk Factor Surveillance Survey (BRFSS)
 - Division of Criminal Justice Services (DCJS) Index Crimes
 - DOH COVID-19 Tracker
 - Cancer Registry

#	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

#	Health Issue	Measures (n)					Survey Responses (n)
		Count	Rate	Disparities	Trend	Seriousness	Community Priority
1	COVID-19	1	2	1	0	2	788
2	Colorectal Cancer	1	3	2	3	3	782
3	Breast Cancer	1	4	2	4	4	782
4	Obesity	1	2	2	2	2	787
5	Asthma	1	7	4	6	7	774
6	Diabetes	1	5	4	5	5	777
7	Heart disease	1	7	6	6	7	779
8	Stroke	1	2	2	2	2	779
9	Violence	1	5	1	5	5	783
10	Injuries & falls	1	2	4	2	2	772
11	Motor vehicle injuries	1	2	1	3	3	772
12	Poor birth outcomes	1	3	3	3	3	762
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	781
16	Drug misuse	1	6	1	6	6	782
17	Alcohol misuse	1	4	2	4	4	782
18	Mental illness including suicide	1	6	1	6	6	784
19	Sexually transmitted infections	1	6	1	5	6	767
20	Teen pregnancy	1	2	1	2	2	767
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	803

Count

Schenectady County



Score $\propto \sqrt{\text{Count}}$

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

*Rate ratios (RR) are adjusted so that:

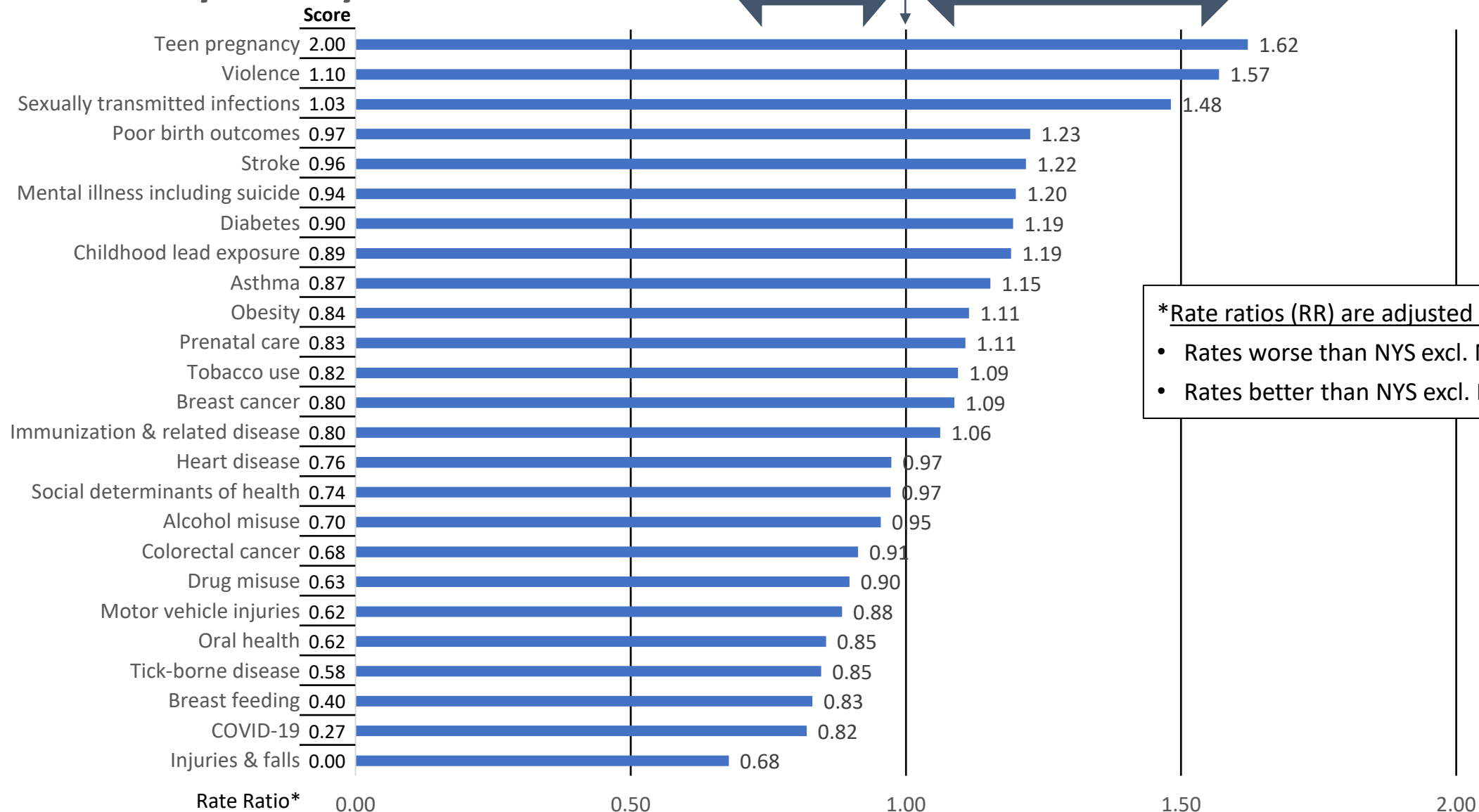
- Rates worse than NYS excl. NYC have a RR > 1
- Rates better than NYS excl. NYC have a RR < 1

• Example: Stroke

Health Measure	Year	Schenectady County	NYS excl. NYC	Rate Ratio	Average Rate Ratio
Age-adjusted cerebrovascular disease (stroke) hospitalization rate per 10,000	2016-2018	26.8	21.1	1.27	1.22
Age-adjusted cerebrovascular disease (stroke) mortality rate per 100,000	2016-2018	32.1	27.6	1.16	

Rate

Schenectady County



***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

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	Age-adjusted congestive heart failure mortality rate per 100,000	Heart disease	2016-2018	2.24
2	Violent crime rate per 100,000	Violence	2018	2.16
3	Teen pregnancy rate per 1,000 females aged <18 years	Teen pregnancy	2016-2018	1.98
4	Index crime rate per 100,000	Violence	2018	1.74
5	Gonorrhea diagnoses, age-adjusted rate per 100,000 population	Sexually transmitted infections	2018	1.70
6	Age-adjusted assault hospitalization rate per 10,000	Violence	2016-2018	1.62
7	Age-adjusted oral cavity and pharynx cancer mortality rate per 100,000	Tobacco use	2015-2017	1.52
8	Age-adjusted Newly diagnosed HIV case rate per 100,000	Sexually transmitted infections	2016-2018	1.52
9	Firearm assault-related hospitalizations , rate per 10,000 population	Violence	2017	1.50
10	Age-adj. mental disease/disorder primary dx hospitalization rate per 10,000	Mental illness including suicide	2016-2018	1.50

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

*Trends adjusted so that:

- Improving trends < 0
- Worsening trends > 0

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

• Example: Teen Pregnancy

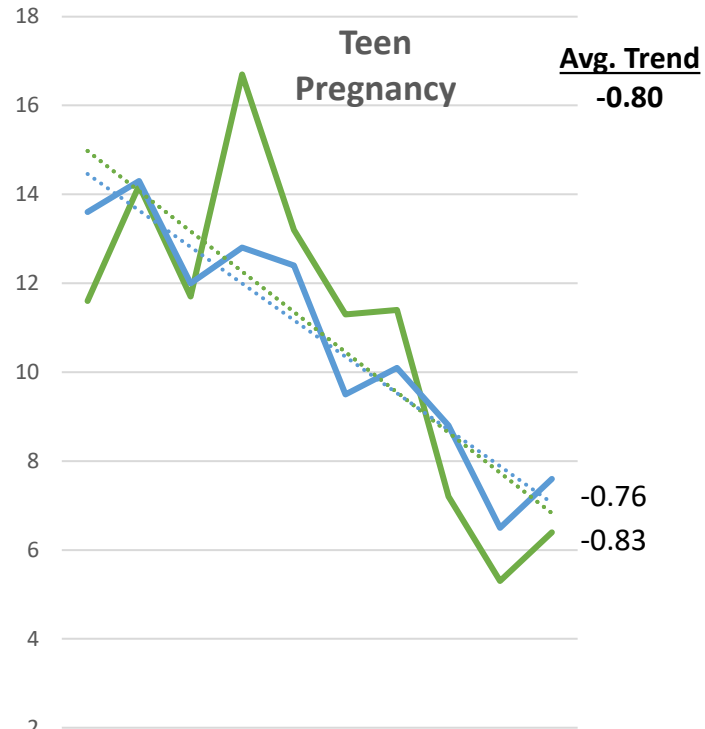
Health Measure	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Trend	Average Trend
Teen fertility rate per 1,000 (ages 15-17) (births/female population)	11.6	14.2	11.7	16.7	13.2	11.3	11.4	7.2	5.3	6.4	-0.83	-0.80
Teen pregnancy rate per 1,000 females aged <18 years	13.6	14.3	12	12.8	12.4	9.5	10.1	8.8	6.5	7.6	-0.76	

Trend Examples

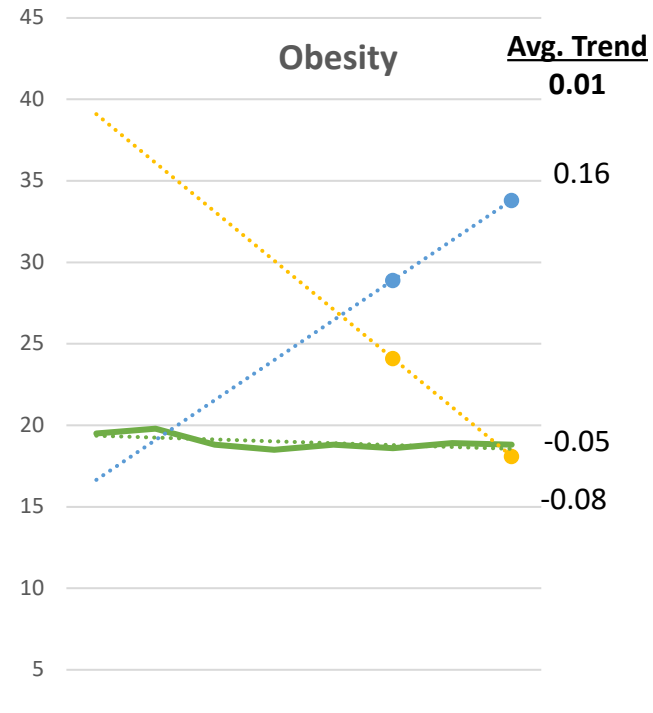
$$\left(\frac{\text{Slope} \times \text{Years of Data}}{\text{Average Value}} \right)^*$$

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

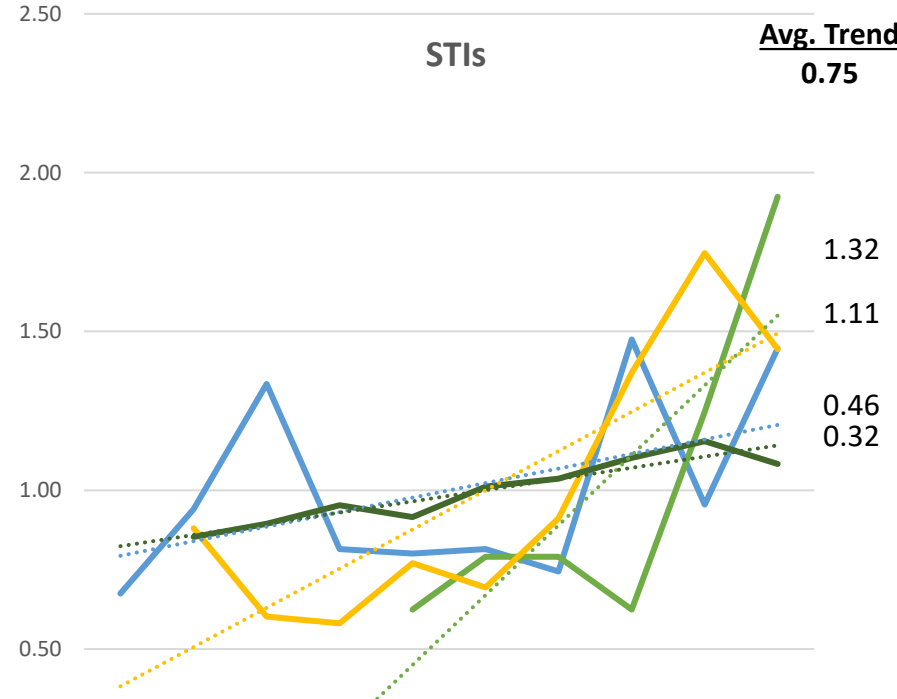
Slope is of linear regression line
(using least squares method)



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fertility rate	11.6	14.2	11.7	16.7	13.2	11.3	11.4	7.2	5.3	6.4
Pregnancy rate	13.6	14.3	12	12.8	12.4	9.5	10.1	8.8	6.5	7.6



	2011	2012	2013	2014	2015	2016	2017	2018
Obesity, children and adolescents	19.5	19.8	18.8	18.5	18.8	18.6	18.9	18.8
Obesity, adults						28.9		33.8
No leisure-time physical activity, adults						24.1		18.1



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
HIV	0.67	0.94	1.33	0.81	0.80	0.81	0.74	1.47	0.96	1.45
Syphilis					0.62	0.79	0.79	0.62	1.25	1.92
Gonorrhea		0.88	0.60	0.58	0.77	0.69	0.91	1.37	1.75	1.44
Chlamydia		0.85	0.89	0.95	0.92	1.01	1.04	1.10	1.15	1.08

Avg. Trend
-0.80

Avg. Trend
0.01

Avg. Trend
0.75

-0.76
-0.83

0.16

-0.05
-0.08

1.32
1.11
0.46
0.32

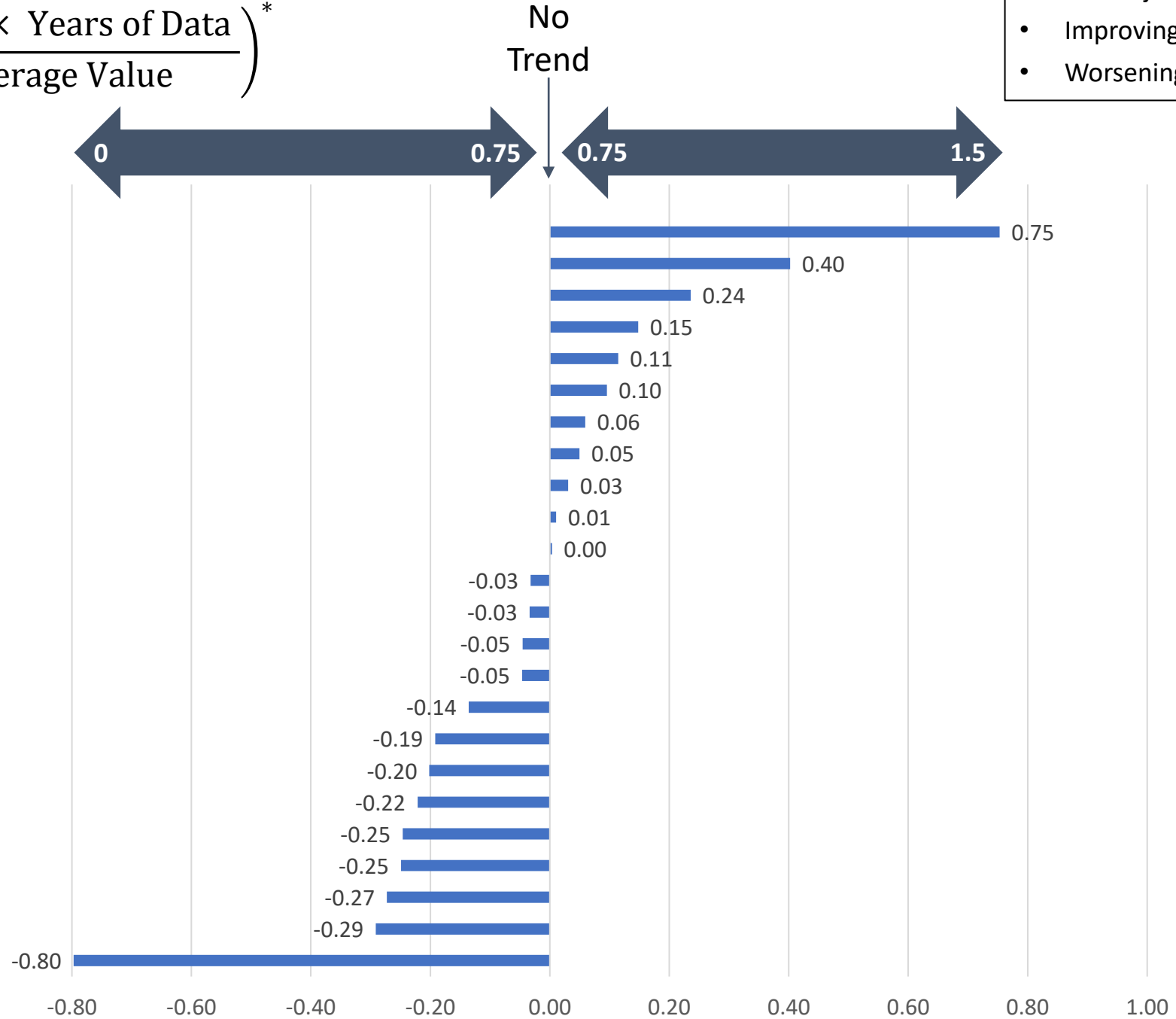
$$\text{Trend} = \left(\frac{\text{Slope} \times \text{Years of Data}}{\text{Average Value}} \right)^*$$

*Trends adjusted so that:

- Improving trends < 0
- Worsening trends > 0

Schenectady County

	<u>Score</u>
COVID-19**	2.00
Sexually transmitted infections	1.50
Diabetes	1.15
Tick-borne disease	0.98
Injuries & falls	0.90
Prenatal care	0.86
Stroke	0.85
Breast cancer	0.81
Motor vehicle injuries	0.80
Mental illness including suicide	0.78
Obesity	0.76
Oral health	0.75
Poor birth outcomes	0.72
Alcohol misuse	0.72
Childhood lead exposure	0.71
Breast feeding	0.71
Violence	0.62
Immunization & related disease	0.57
Asthma	0.56
Tobacco use	0.54
Heart disease	0.52
Social determinants of health	0.52
Drug misuse	0.49
Colorectal cancer	0.48
Teen pregnancy	0.00



** Less than 2 years of data available

Top 10 Worsening Trends

	Health Measure	Health Issue	Trend = $\left(\frac{\text{Slope} \times \text{Years of Data}}{\text{Average Value}} \right)^*$
1	Opioid overdose deaths (any opioid), crude rate per 100,000 population	Drug misuse	3.78
2	Early syphilis case rate per 100,000	Sexually transmitted infections	1.32
3	Suicide mortality among youth , rate per 100,000, aged 15-19 years	Mental illness including suicide	1.29
4	Potentially preventable diabetes short-term complications hospitalization rate per 10,000 - Aged 18 years and older	Diabetes	1.08
5	Gonorrhea diagnoses, age-adjusted rate per 100,000 population	Sexually transmitted infections	0.96
6	Anaplasmosis incidence	Tick-borne disease	0.89
7	Hospitalizations due to falls among adults, rate per 10,000 population, aged 65+ years	Injuries & falls	0.50
8	Caries (cavities) outpatient visit rate per 10,000 - Aged 3-5 years	Oral health	0.49
9	Age-adjusted diabetes hospitalization rate per 10,000 (primary diagnosis)	Diabetes	0.47
10	Age-adjusted cirrhosis hospitalization rate per 10,000	Alcohol misuse	0.36

* Trends adjusted so that:

- worsening trends > 0
- improving trends < 0

Health Measure also in Top 10 Worsening Trends for both Albany and Rensselaer counties

Index of Disparity

- Example: COVID-19

Health Indicator	Non-Hispanic			Hispanic	Total Population
	White	Black	Asian/PI		
Age-Adjusted COVID-19 Death Rate per 100,000 population	78.3	142.9	284.4	68.1	91.6

Absolute Difference between rates in race/ethnicity groups and total population	13.3	51.3	192.8	23.5
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Average Absolute Difference – COVID-19 Death Rate	70.2			
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Index of Disparity – COVID-19 Death Rate	0.77			
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Index of Disparity

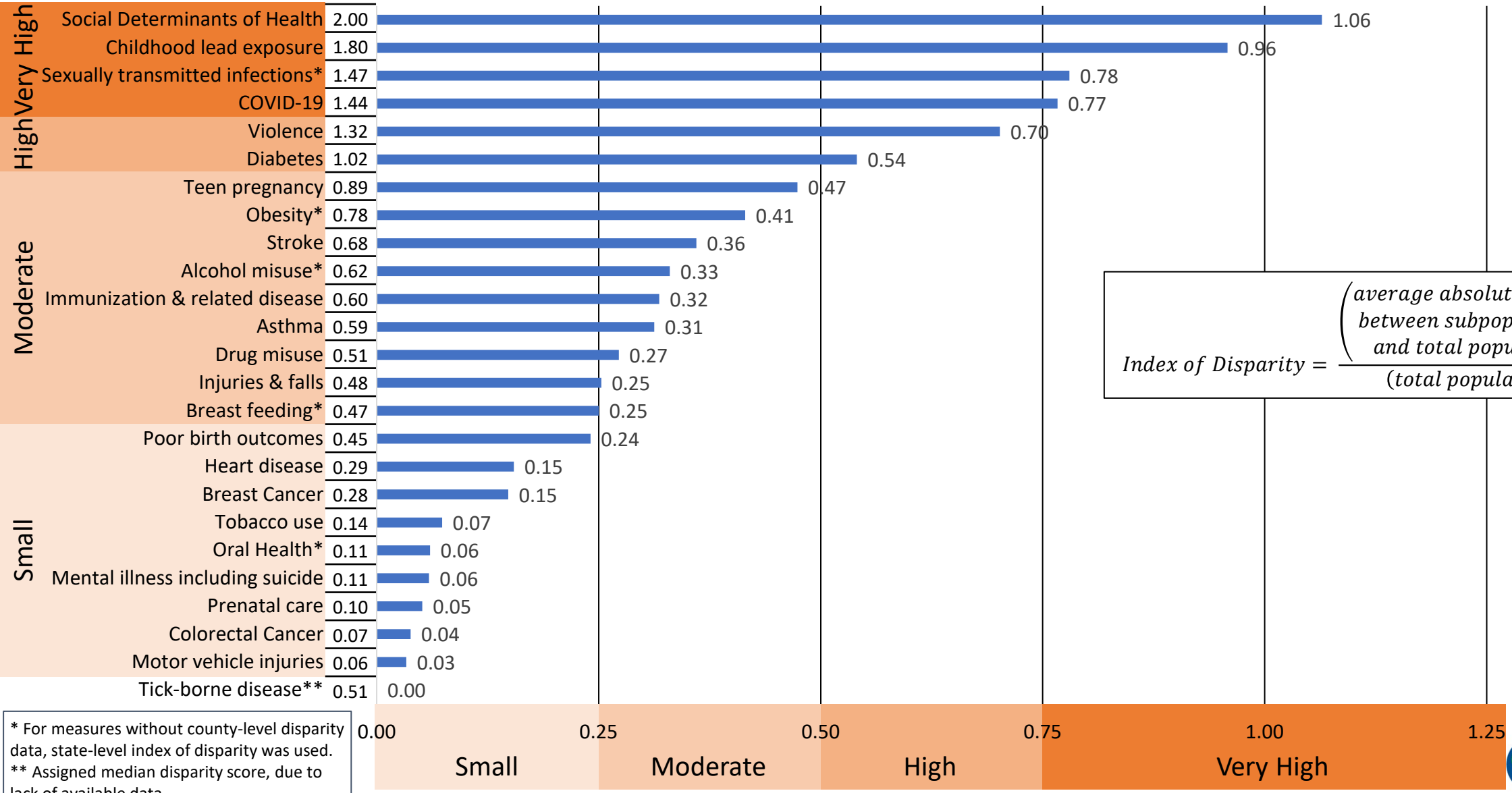
(average absolute difference between subpopulation rate and total population rate)

(total population rate)

$$\frac{70.2}{91.6} = 0.77$$

Disparity

Schenectady County



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

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


Top 10 Measures of Disparity

	Health Measure	Health Issue	Index of Disparity
1	Percentage of families below poverty (2014-2018)~	Social Determinants of Health	1.88
2	Potentially preventable diabetes short-term complications hospitalization rate per 10,000 population - Aged 18+ Years++	Diabetes	0.85
3	Age-Adjusted COVID-19 Death Rate per 100,000 population	COVID-19	0.82
4	Assault-related hospitalizations	Violence	0.70
5	Obesity	Obesity	0.63
6	Diabetes (primary diagnosis) hospitalizations per 10,000 population, age-adjusted++	Diabetes	0.62
7	Percentage of premature deaths (< 75 years)		0.55
8	Cirrhosis Hospitalizations	Alcohol misuse	0.49
9	Teen pregnancies per 1,000 females aged under 18 years	Teen pregnancy	0.47
10	Asthma hospitalizations per 10,000 population, aged 0-17 years++	Asthma	0.44

Seriousness

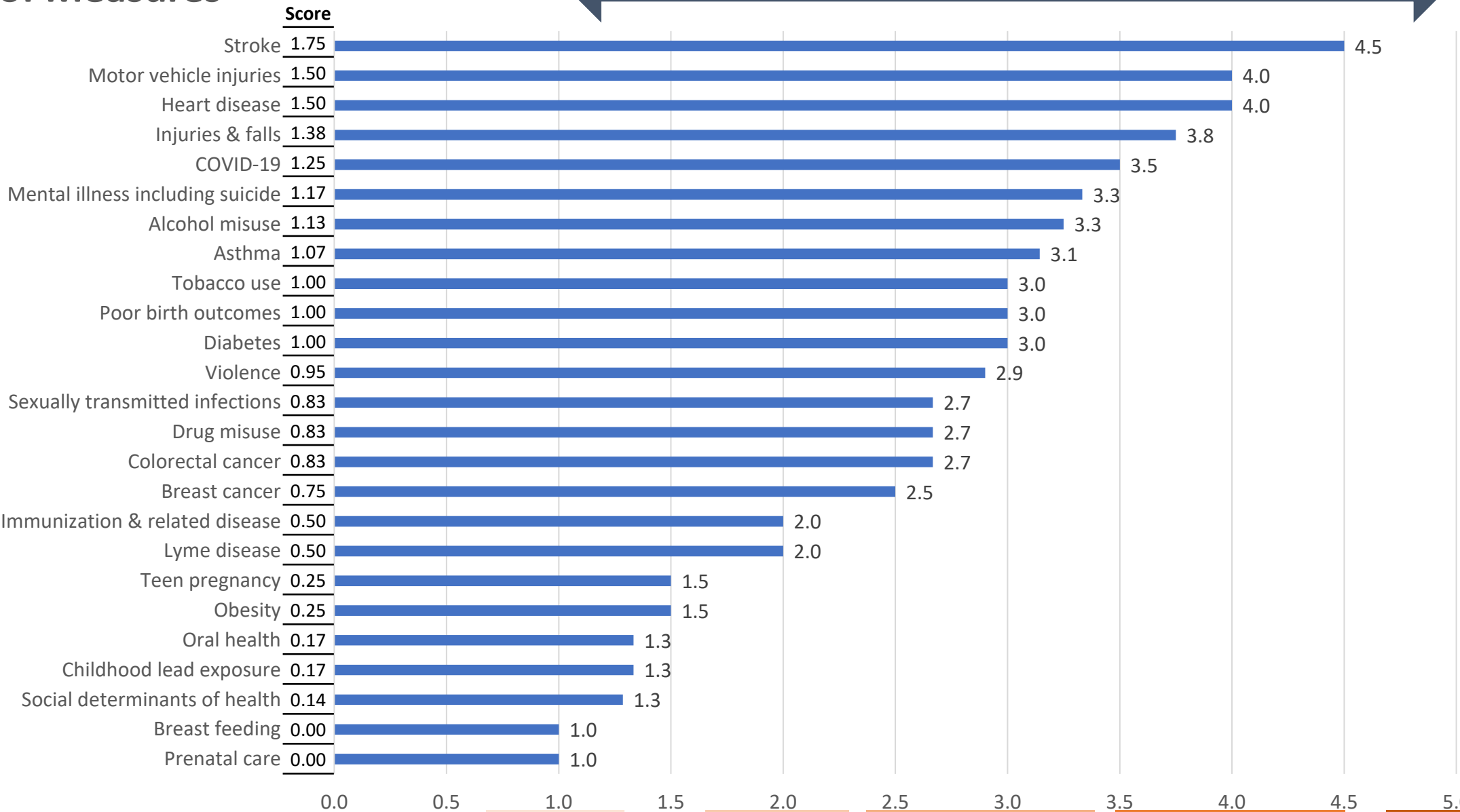
- Example: Stroke

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

Average Seriousness of Measures



Community Priority Scoring Example

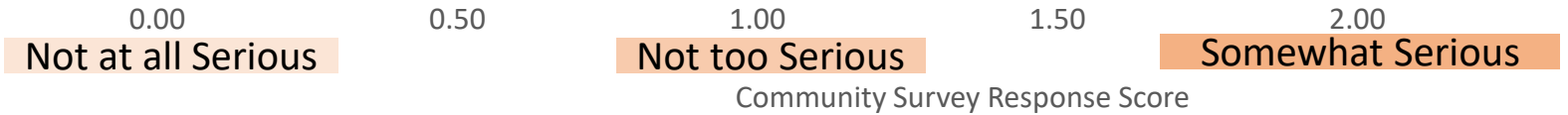
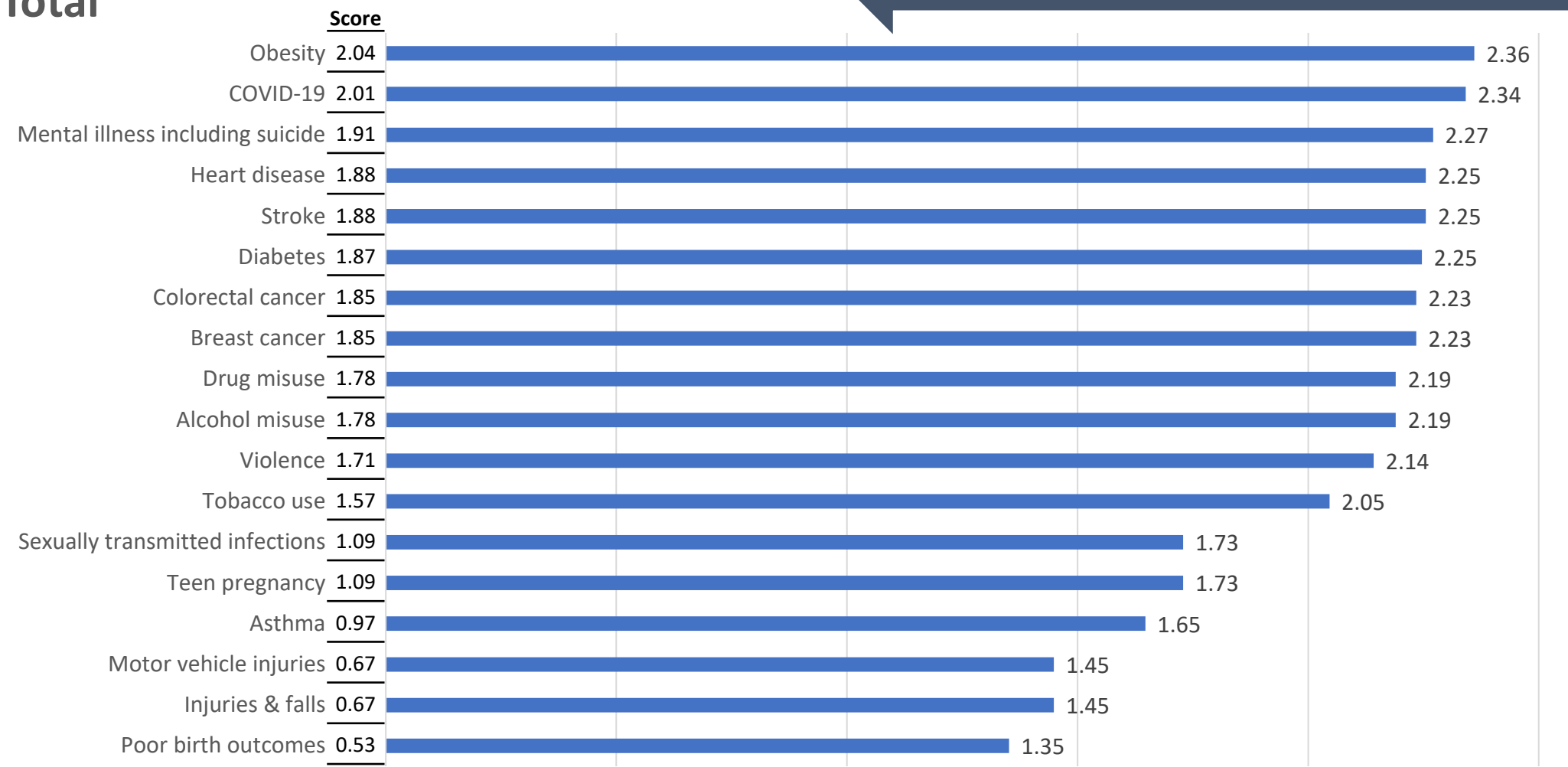
1. How serious a public health problem in your community is each of the following?

	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		



Community Priority – Based on Survey Results

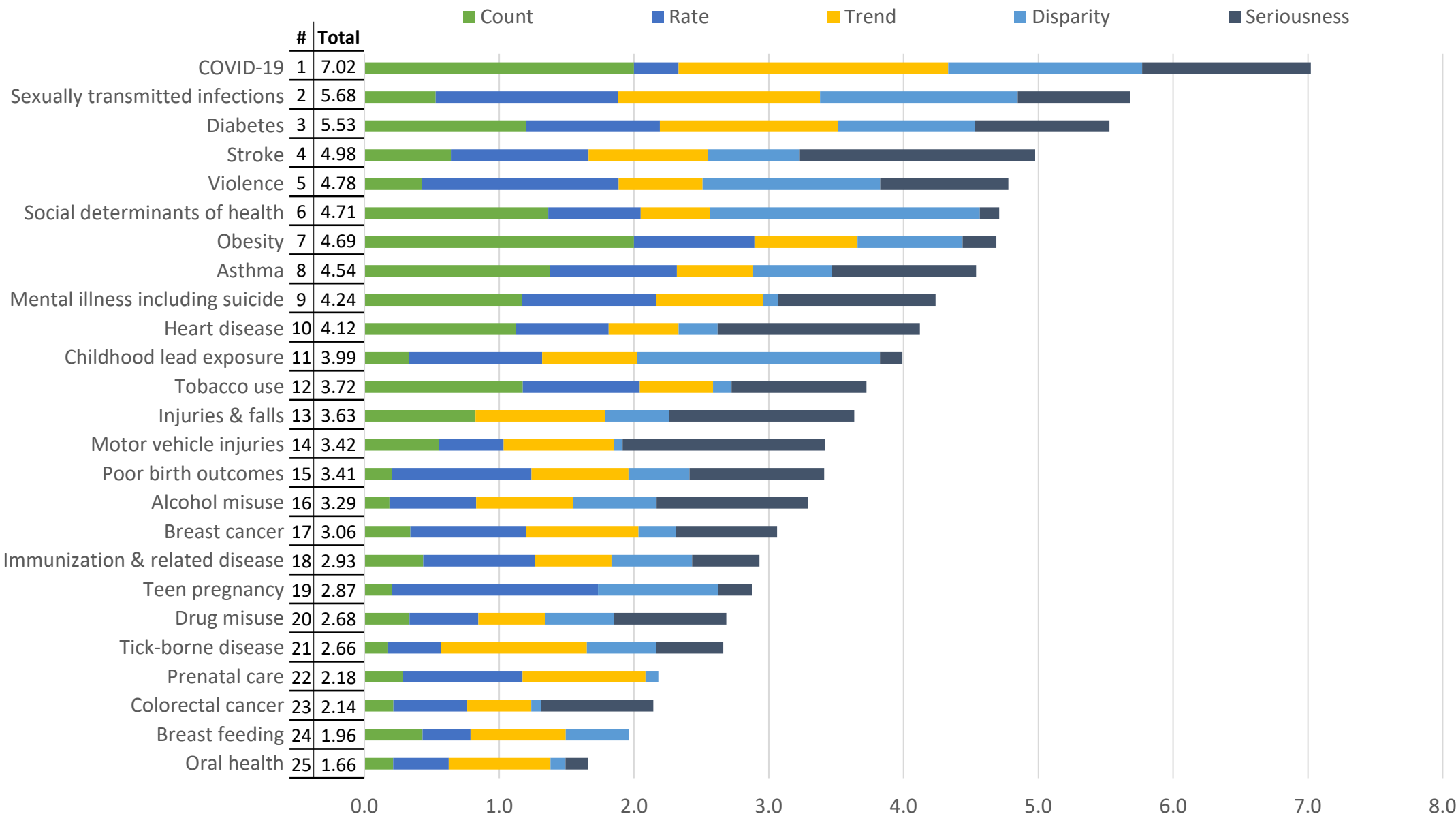
Total



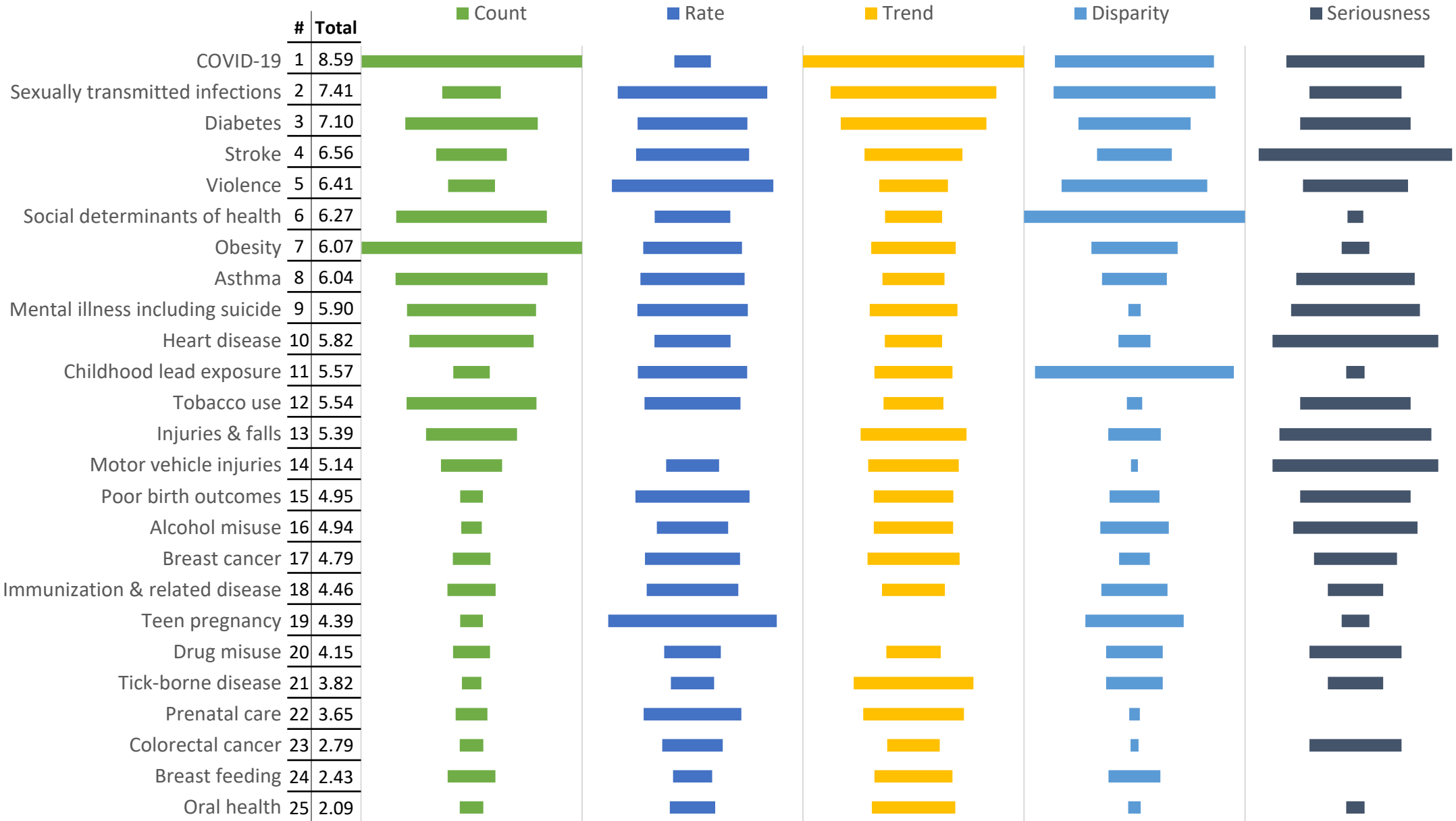
Community Priority data not available for: Prenatal care, Breast feeding, Childhood lead exposure, Lyme disease, Immunization & related disease, Social determinants of health, Oral health



Data-based Score (out of 10)

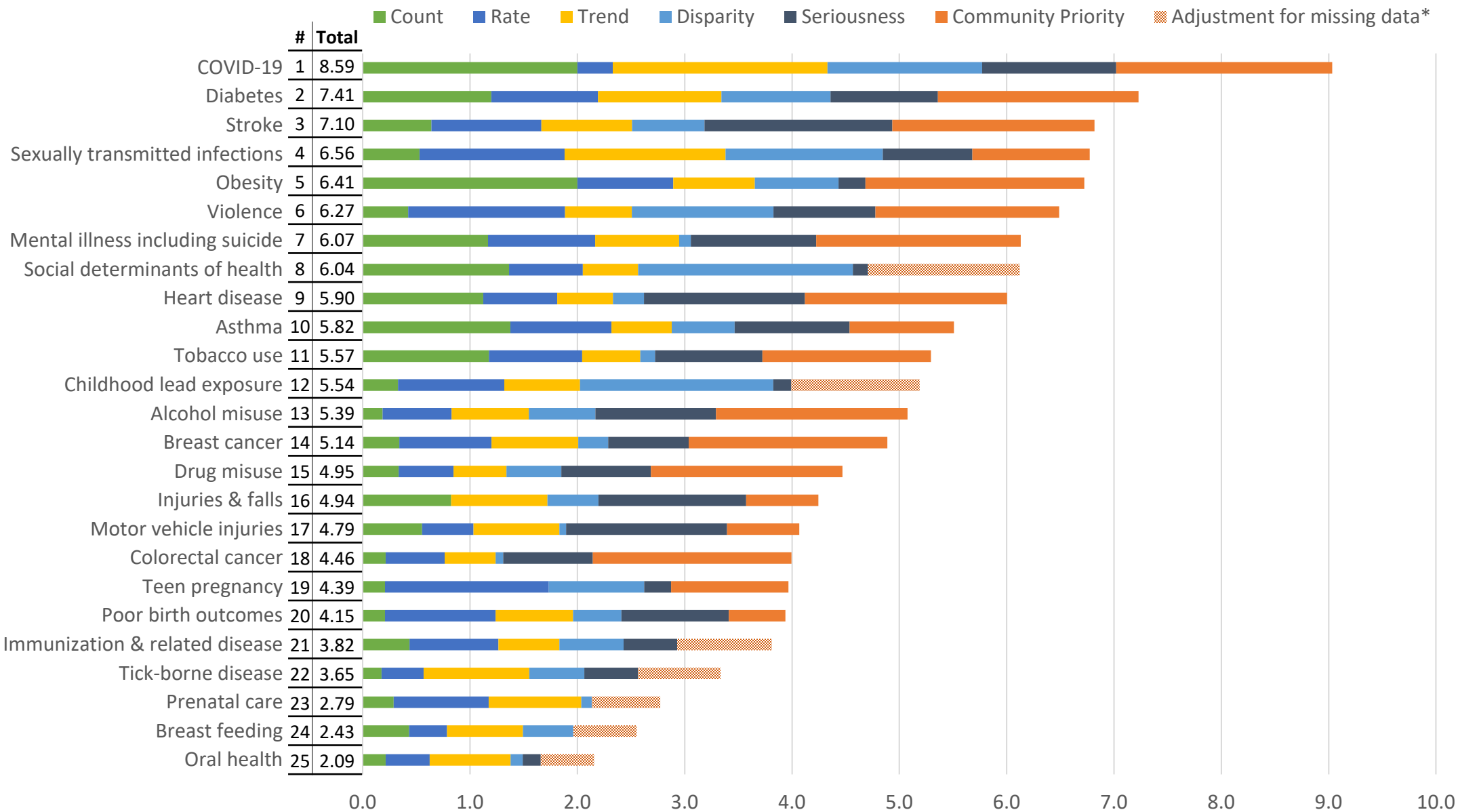


* Health issues without survey data were weighted for a total score out of 13



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

Data-based Need Score (including Community Priority, out of 13)



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

Data-Based Need Scores Incl. Community Priority



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