



# JUST STREETS: THE INTERSECTION OF CRASHES, EQUITY, + HEALTH

September 28, 2018

#juststreetsdvrpc

# CRASHES AND COMMUNITIES OF CONCERN

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Marco Gorini, Transportation Planner, DVRPC





# CRASHES AND COMMUNITIES OF CONCERN IN THE PHILADELPHIA REGION



## PROJECT TEAM

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## STEERING COMMITTEE

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Alonzo South, CHOP, Public Participation Task Force Member

Charlotte Castle, City of Philadelphia

Donna Ferraro, PHMC

Valeria Galarza, Cooper Ferry Partnership

Heather Strassberger, City of Philadelphia



“Where you live affects your exposure to health risk.”

-Dr. Thomas LaVeist

**RACE**

(and other  
socioeconomic  
factors)



**PLACE**

(i.e. environmental  
factors)



**HEALTH**



## RESEARCH QUESTION

Do **communities of concern** in the region experience **severe traffic crashes** disproportionately and, if so, which **federally protected classes** are at the greatest risk?



# KEY CONCEPTS

## **communities of concern**

A diverse cross-section of populations and communities that could be considered disadvantaged or vulnerable in terms of both current conditions and potential impacts of future growth (*Plan Bay Area 2040*)

## **federally protected classes**

Populations identified under Title VI of the Civil Rights Act and the Executive Order on Environmental Justice (#12898) prohibiting discrimination or disproportionate adverse impacts on these groups

## **severe traffic crashes**

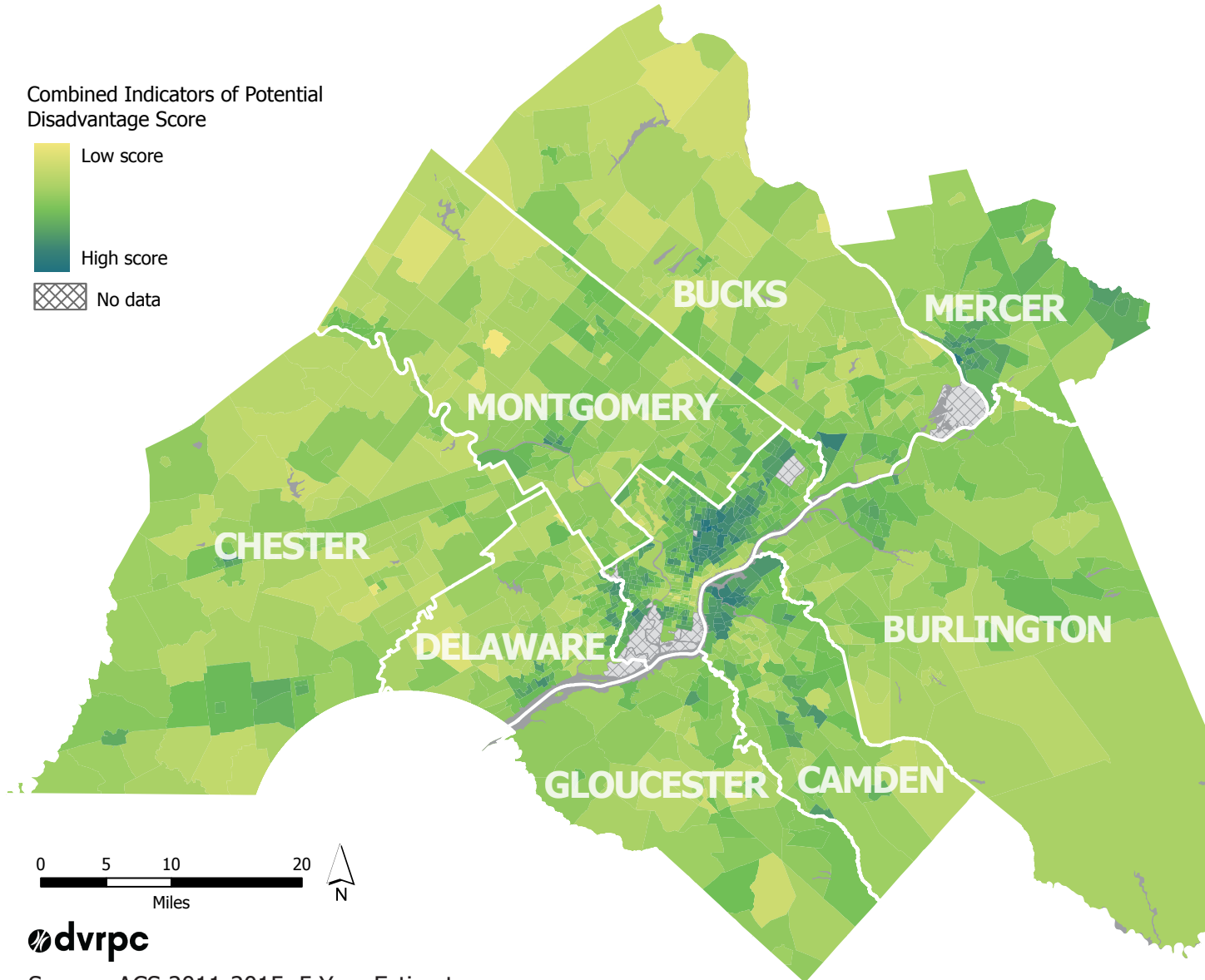
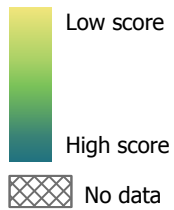
Following Federal and state guidance, these are roadway incidents involving a motor vehicle that result in someone killed or severely injured (abbreviated as “KSI”)



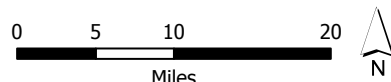


# INDICATORS OF POTENTIAL DISADVANTAGE

Combined Indicators of Potential Disadvantage Score



- Youth
- Older Adults
- Female
- Racial Minority
- Ethnic Minority
- Foreign Born
- Limited English Proficiency
- Disabled
- Low-Income



Source: ACS 2011-2015, 5-Year Estimates

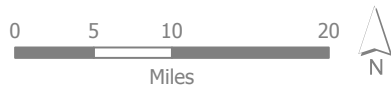
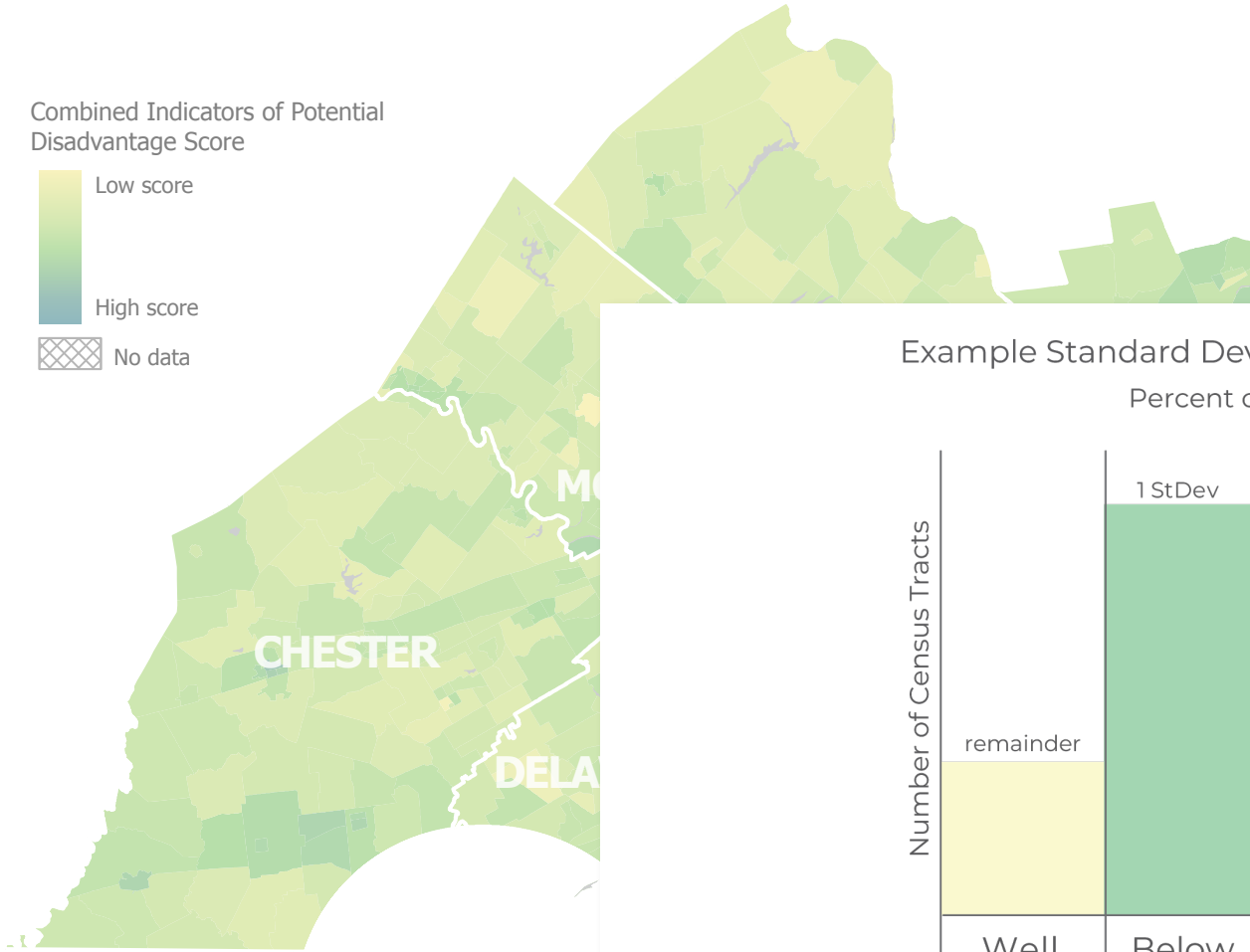


*CRASHES AND COMMUNITIES OF CONCERN*



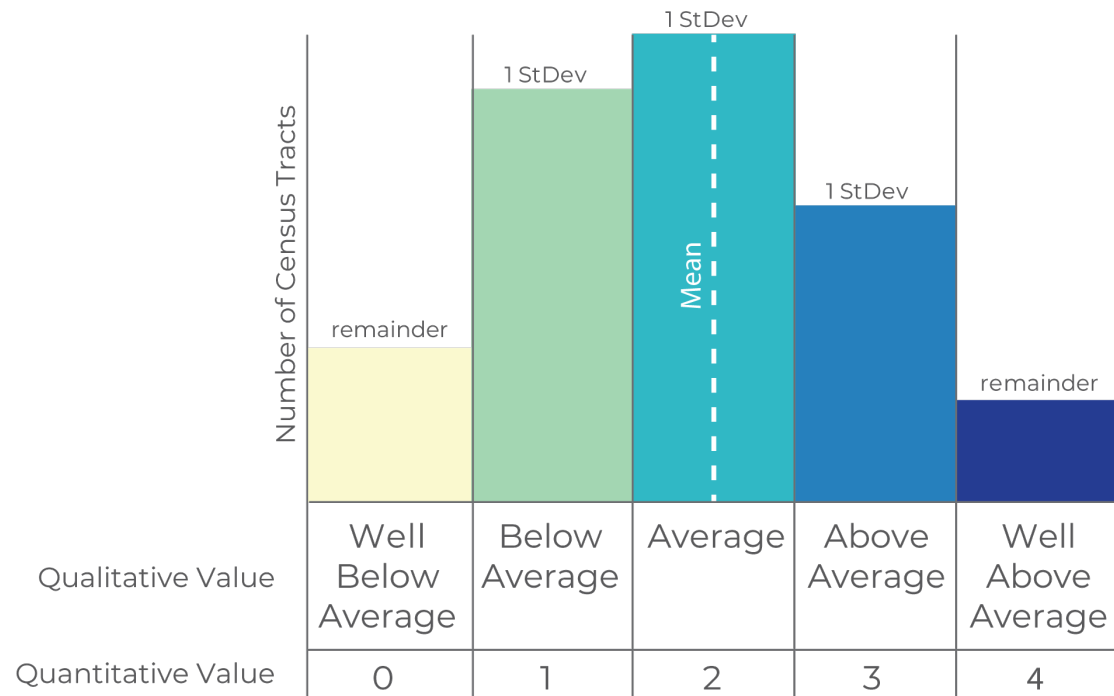
# INDICATORS OF POTENTIAL DISADVANTAGE

Combined Indicators of Potential Disadvantage Score



Example Standard Deviations and Corresponding Scores

Percent of Population by Indicator



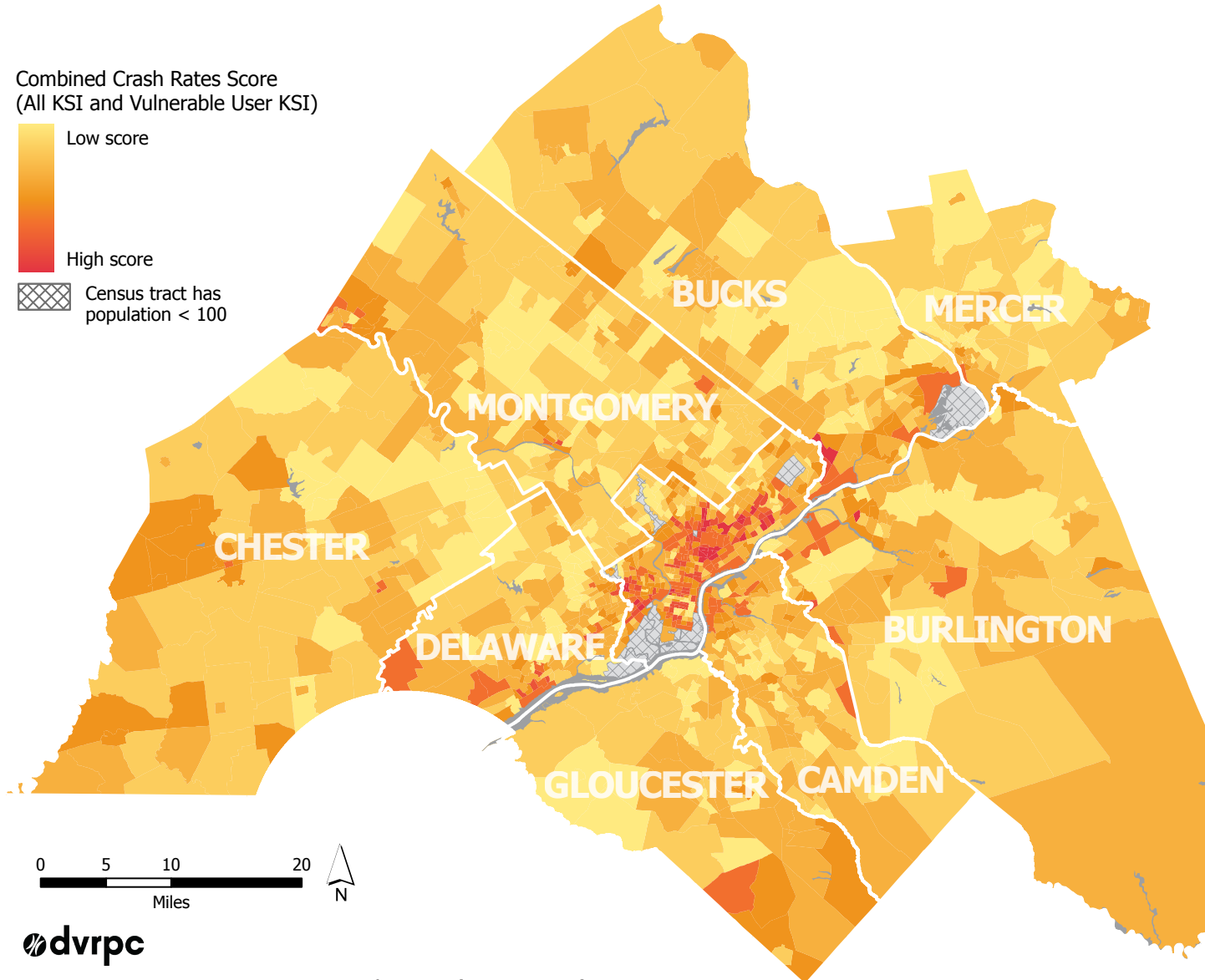
# CRASH RATES

Combined Crash Rates Score  
(All KSI and Vulnerable User KSI)

Low score

High score

Census tract has  
population < 100



All KSI\* Rate

Vulnerable User\*\*  
KSI Rate

\*Killed and severe injury  
crashes (non-interstate)

\*\*Pedestrian- or bicyclist-  
involved crashes



Source: PennDOT & NJDOT Crash Data (2012-2016)



*CRASHES AND COMMUNITIES OF CONCERN*

# CORRELATION: IPD + HIGH CRASH RATE

	ALL KSI CRASH RATE	VULNERABLE USER KSI CRASH RATE
<b>YOUTH</b>	None	None
<b>OLDER ADULTS</b>	None	None
<b>FEMALE</b>	None	None
<b>RACIAL MINORITY</b>	Low	Low
<b>ETHNIC MINORITY</b>	Low	Below Threshold*
<b>FOREIGN BORN</b>	None	None
<b>LIMITED ENGLISH PROFICIENCY</b>	None	None
<b>DISABLED</b>	Low	Below Threshold
<b>LOW-INCOME</b>	Moderate	Moderate
<b>CARLESS HOUSEHOLDS</b>	Low	Moderate
<b>COMBINED IPD SCORE</b>	Low	Low

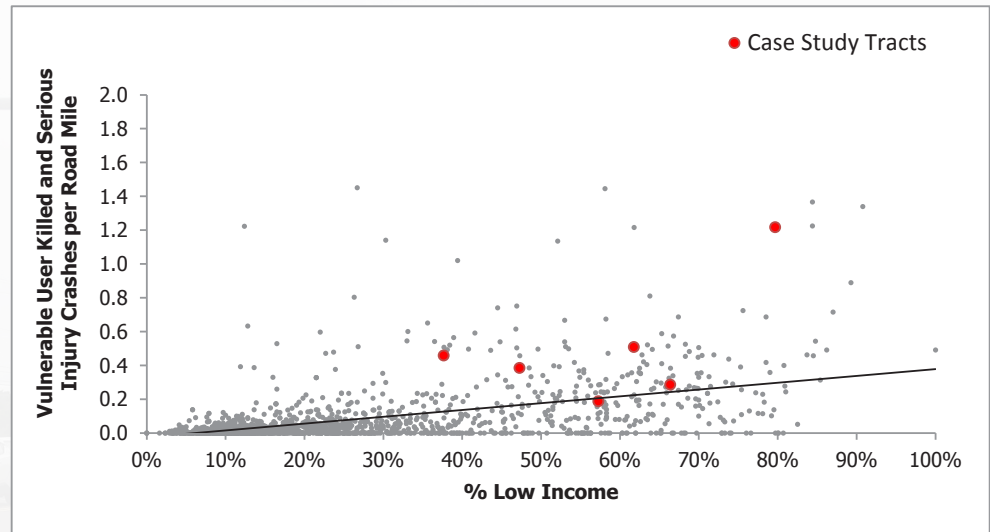
\*The threshold for showing a low correlation was a r-value of 0.3



# CORRELATION: IPD + HIGH CRASH RATE

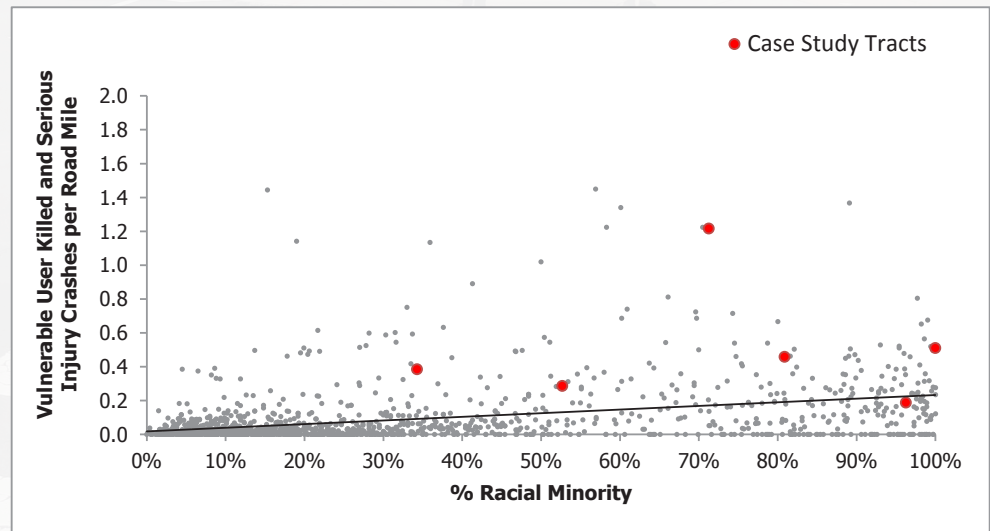
**Scatterplot:** Low Income Percent by Census Tract (x-axis) and Vulnerable User KSI Crash Rate (y-axis)

**r-value:** 0.49 (moderate positive correlation)



**Scatterplot:** Racial Minority Percent by Census Tract (x-axis) and Vulnerable User KSI Crash Rate (y-axis)

**r-value:** 0.38 (low positive correlation)





# In the DVRPC Region...

91% of census tracts where crash rates are above average are also above average for at least one correlated IPD



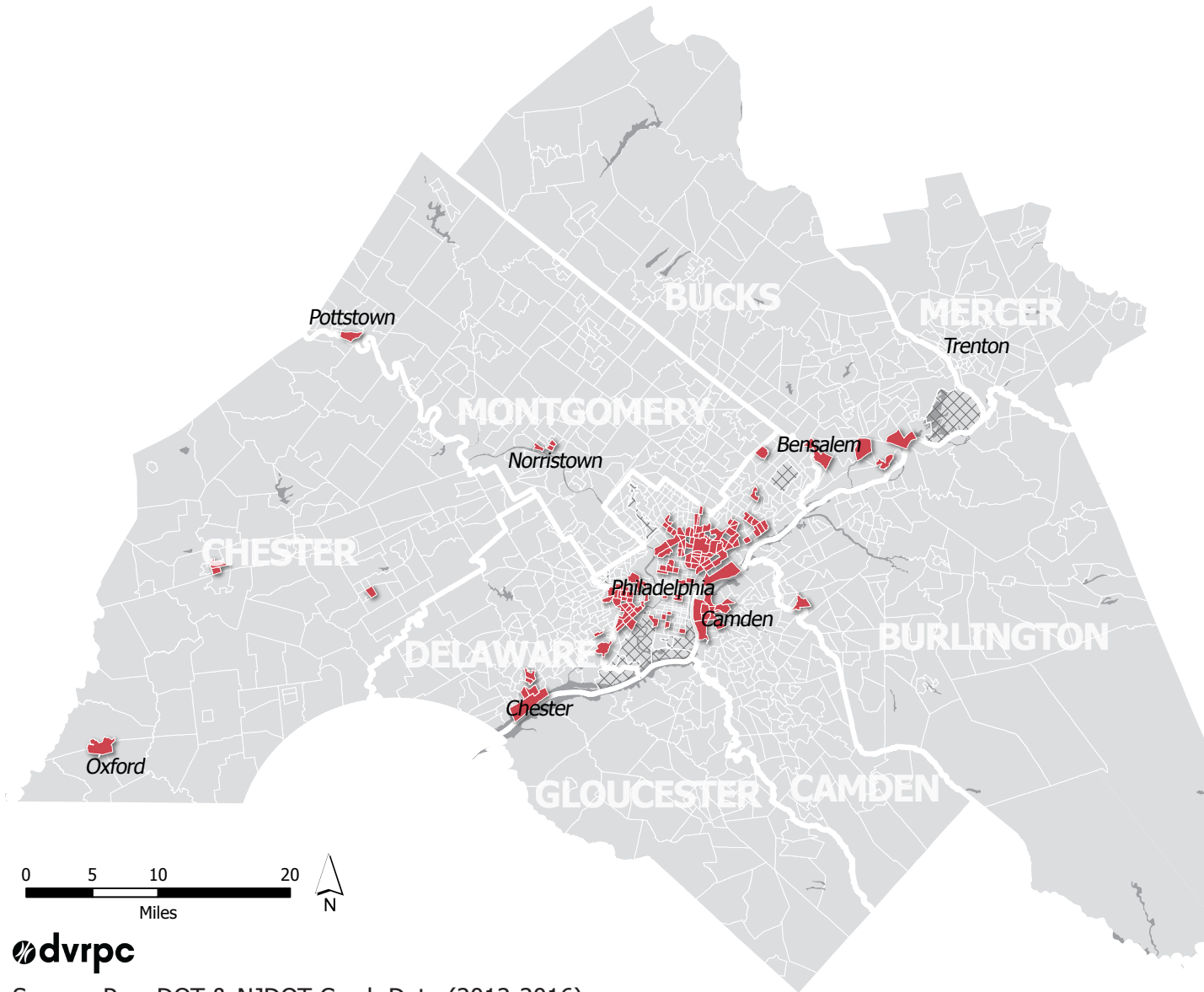
# In the DVRPC Region...

91% of census tracts where crash rates are above average are also above average for at least one correlated IPD

Of 154 census tracts where at least two correlated IPDs are well above average, just 10 have below average crash rates



# LOW-INCOME + ALL KSI RATE



Census tracts with above average all KSI rate and above average low-income rate

1,329 fatalities and serious injuries\* occurred in these 134 census tracts from 2012-2016

\*Excluding limited access highway crashes

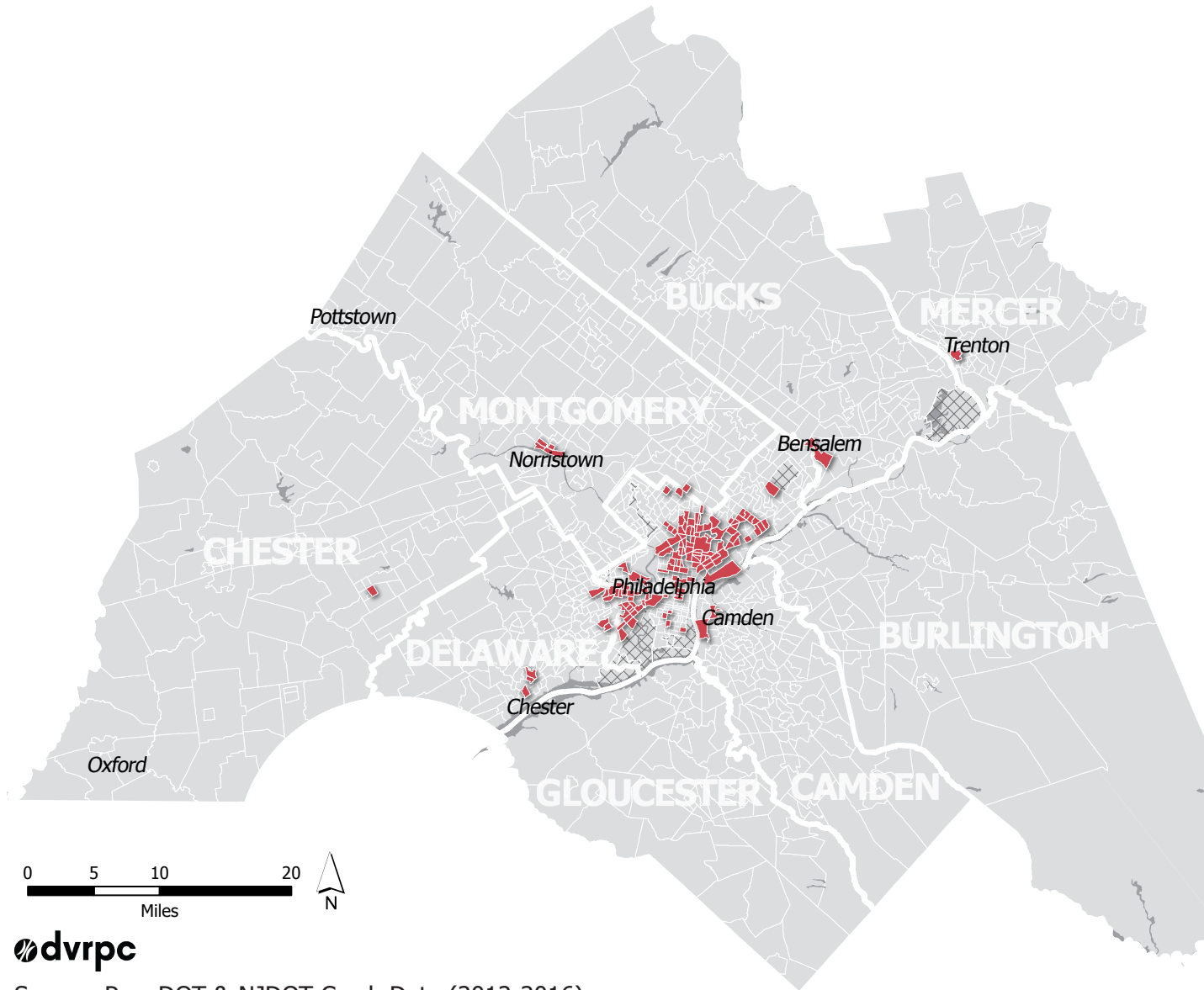


Source: PennDOT & NJDOT Crash Data (2012-2016)





# LOW-INCOME + VULNERABLE USER KSI RATE



Census tracts with above average vulnerable user KSI rate and above average low-income rate

1,323 fatalities and serious injuries\* occurred in these 134 census tracts from 2012-2016

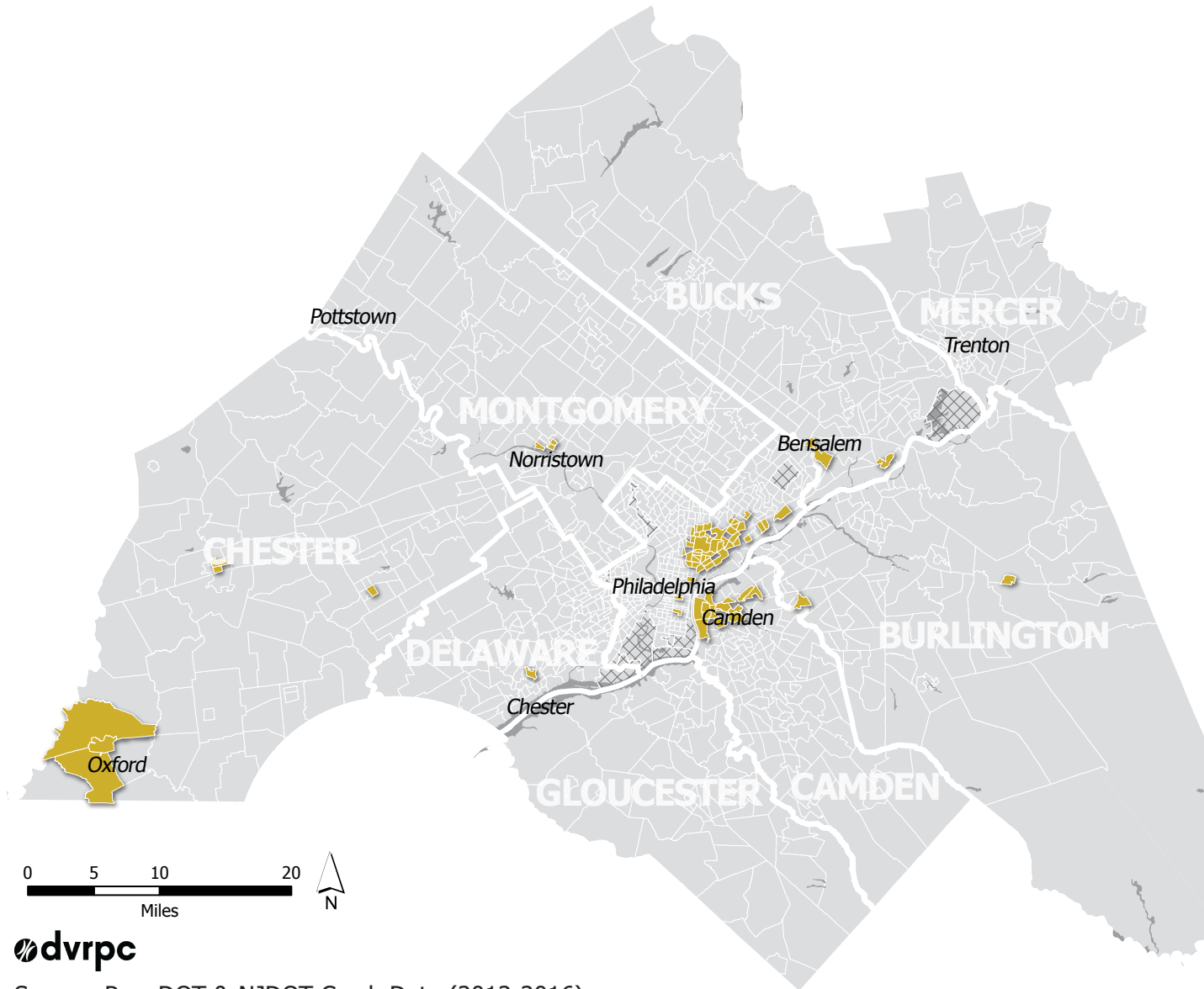


Source: PennDOT & NJDOT Crash Data (2012-2016)

\*Excluding limited access highway crashes



# ETHNIC MINORITY + ALL KSI RATE



Census tracts with above average all KSI rate and above average ethnic minority rate

795 fatalities and serious injuries\* occurred in these 72 census tracts from 2012-2016



Source: PennDOT & NJDOT Crash Data (2012-2016)

\*Excluding limited access highway crashes



**CRASHES AND COMMUNITIES OF CONCERN**



# CASE STUDY SELECTION

Combined Crash Rates Score  
(All KSI and Vulnerable User KSI)

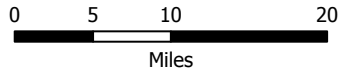
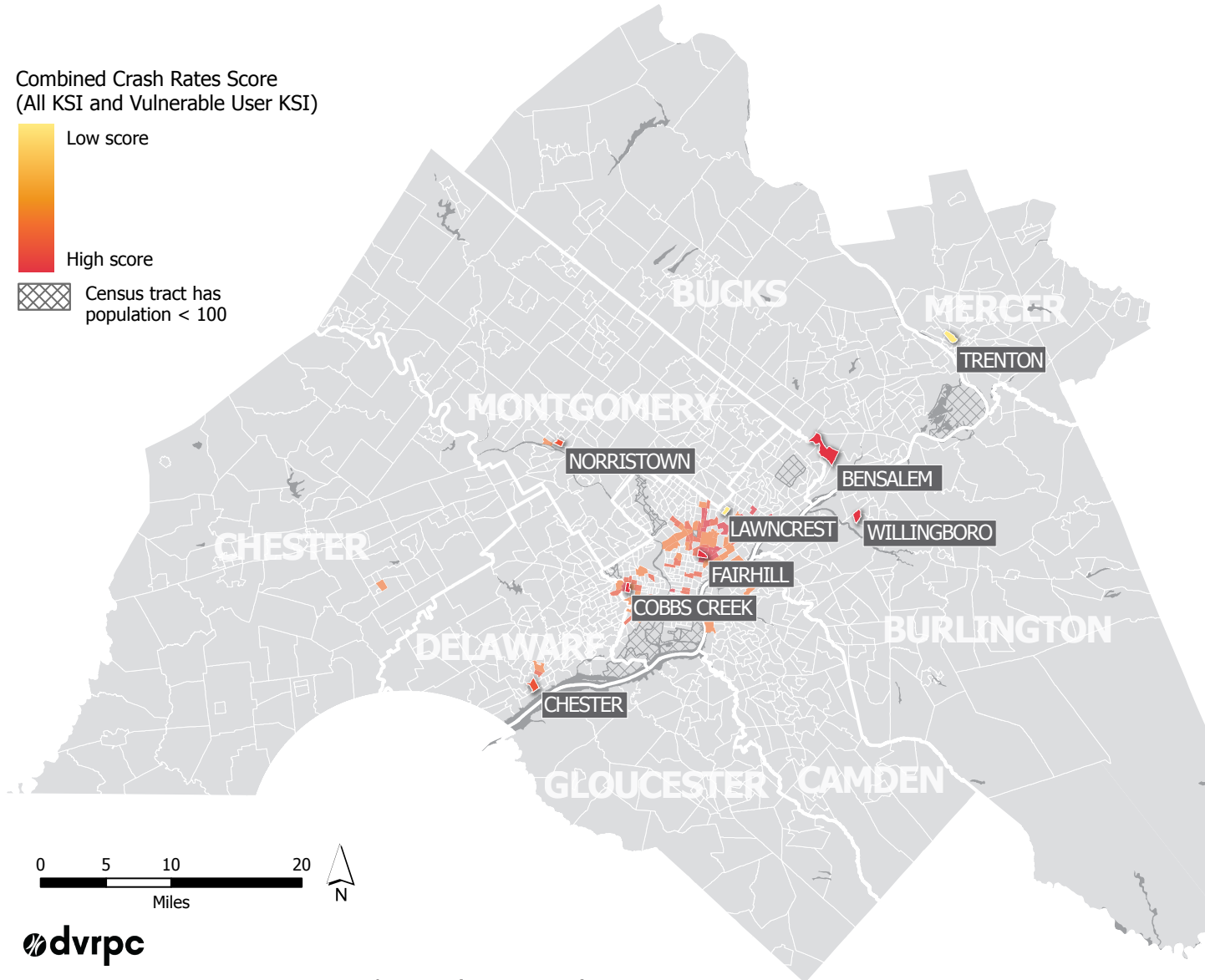
Low score



High score



Census tract has  
population < 100



Source: PennDOT & NJDOT Crash Data (2012-2016)

**6** census tracts  
with **well above**  
average IPD rates  
and **well above**  
average combined  
crash rates

**2** census tracts  
with **well above**  
average IPD  
rates and **below**  
average combined  
crash rates





# FAIRHILL

**Collision Type**

- Hit Fixed Object
- Angle
- Hit Pedestrian

**Functional Classification**

- ▬ Principal Arterial
- ▬ Minor Arterial
- ▬ Collector
- ▬ Local

**Land Use Category**

- Commercial
- Industrial
- Institutional
- Recreation
- Residential
- Undeveloped

Potter-Thomas Elementary School

W Indiana Ave

N 5th St

Pan American Academy Charter School

W Cambria St

Fairhill Community High School

N 2nd St

Issac A Sheppard Elementary School

Julia De Burgos Elementary School

W Somerset St

N Front St

Fairhill Square

W Lehigh Ave

Temple University Hospital

Visitation BVM Catholic School

Somerset Station

Huntingdon Station



dvrpc











2nd St

Lehigh Av

LUKOIL

189  
189  
189

DO NOT  
ENTER



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FINE FARE  
Supermarket

DO NOT  
ENTER

DO NOT  
ENTER



# WILLINGBORO



**Collision Type**

- Rear-End (Orange circle)
- Hit Fixed Object (Purple circle)
- Head-On (Yellow circle)
- Hit Pedestrian (Red circle)

**Functional Classification**

- Principal Arterial (Thick black line)
- Minor Arterial (Medium black line)
- Collector (Thin black line)
- Local (Dotted black line)

**Land Use Category**

- Commercial (Red)
- Industrial (Purple)
- Institutional (Light Blue)
- Recreation (Brown)
- Residential (Yellow)
- Undeveloped (Light Green)







Crump's  
LIQUORS  
BEER CAVE  
ICE COLD BEER  
MICRO BREW  
WINE CELLAR

Pennybacker St

Pennybacker St

NO TRUCK  
LEFT  
LANE







# LAWNCREST







← 400 E 300 →  
BENNER ST

16

BUS



**CONCLUSION**



# TRENDS AND RECOMMENDATIONS

**Key issue:** wide roads with fast moving traffic near residential areas where car ownership rates are lower, meaning people are more likely to walk

## **Recommendations:**

- Consider systemic safety measures to slow traffic in communities of concern
- Prioritize safety investments that benefit communities of concern with traffic safety challenges



# SYSTEMIC SAFETY MEASURES

## Knights Road and Street Road Intersection, Before and After



Source: DVRPC





# SYSTEMIC SAFETY MEASURES



Chestnut Street Protected Bike Lane, Philadelphia, PA

Source: Bicycle Coalition of Greater Philadelphia

## Left Turning Vehicle Traffic Calming, Boston, MA



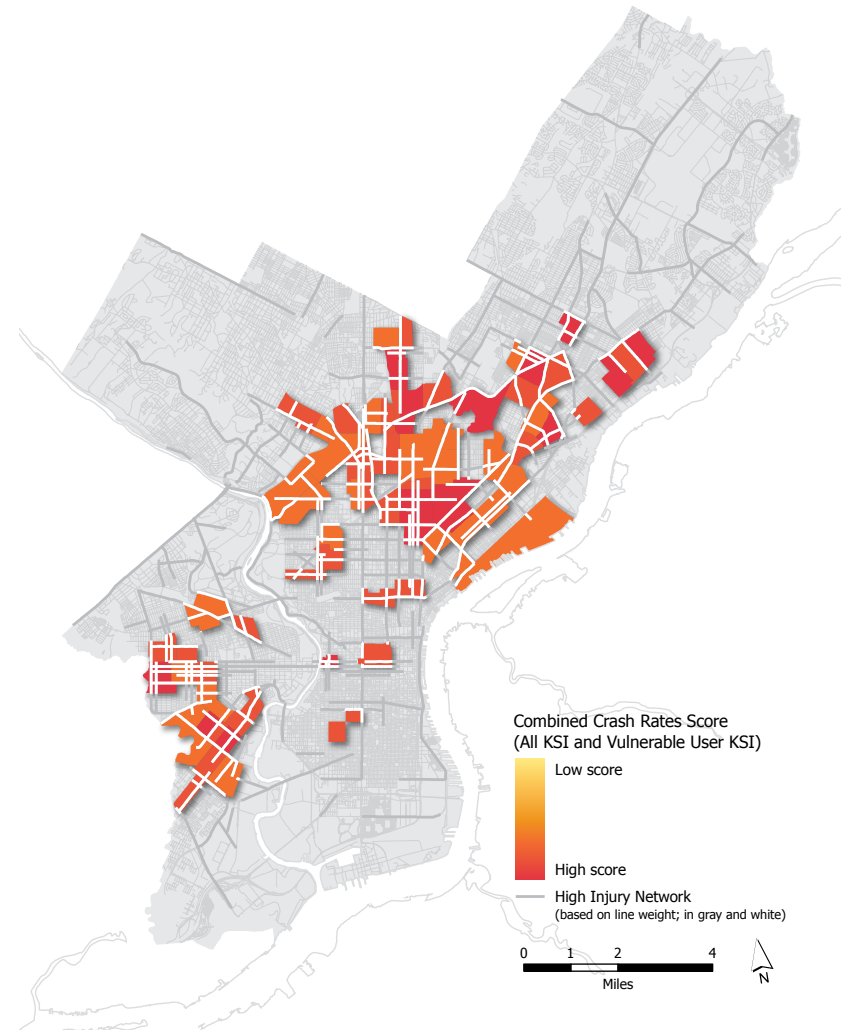
Source: DVRPC



# TARGET SAFETY INVESTMENTS

- Target safety investments to correlated **Communities of Concern** through score multipliers and similar strategies

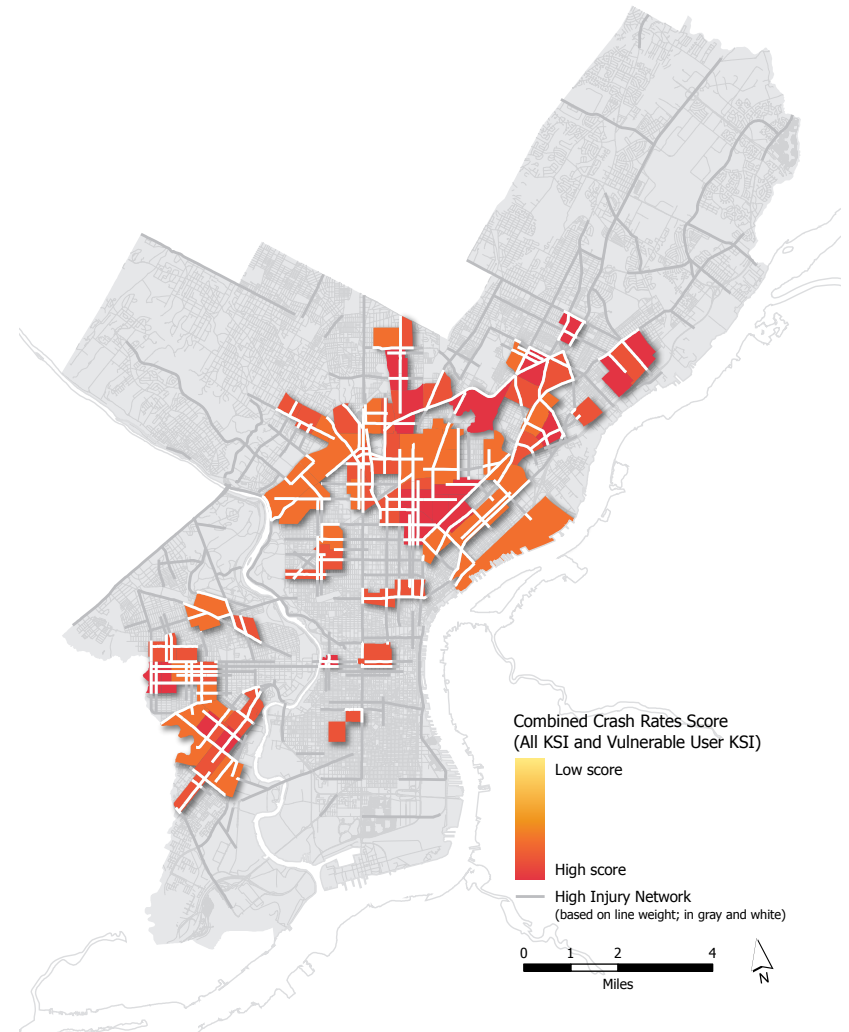
High Crash/High IPD Tracts and Philadelphia's High Injury Network



# TARGET SAFETY INVESTMENTS

- Target safety investments to correlated **Communities of Concern** through score multipliers and similar strategies
- Safety investment programs in the region include the **Highway Safety Improvement Program**, the **Transportation Improvement Program**, and **Vision Zero Philadelphia**

High Crash/High IPD Tracts and Philadelphia's High Injury Network



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Delaware Valley Regional Planning Commission  
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# ACTIVE BREAK

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Kelly McIntyre, Physical Activity Coordinator,  
Get Healthy Philly





# WHAT'S HAPPENING IN OUR AREA?



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Alan M. Voorhees Transportation Center & Rutgers University

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Pediatric Emergency Fellow  
St. Christopher's Hospital for Children

@stchrishospital



**ERWIN FIGUEROA**

Senior Organizer  
Transportation Alternatives

@TransitErwin  
@TransAlt



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# SMALL GROUP BREAKOUTS

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Kevin Murphy, Manager of Safety Programs, DVRPC



# SMALL GROUP BREAKOUTS

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**GOAL:** Go beyond identifying problems to identifying a solution. Groups should attempt to identify an action item that addresses the issues discussed today.

**TIME:** 30 minutes

## PROMPTS:

- Introductions
- What did you hear in the panel that was most interesting, concerning, and/or promising that you want to talk about or bring back to your community?
- Record your action on the worksheet provided.





# CLOSING REMARKS

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Christina Miller, Executive Director, Health Promotion Council  
HCTF Co-Chair



# NEXT STEPS

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- The next RSTF is scheduled for 12/13. Stay tuned for more details.
- The HCTF has selected a consultant to conduct a series of racial equity workshops. Stay tuned for dates!
- Please turn in your evaluations and recycle your name badges.
- AICP CM#: 9158509
- Continue the conversation over lunch!





# JUST STREETS: THE INTERSECTION OF CRASHES, EQUITY, + HEALTH

September 28, 2018

[#juststreetsdvrpc](https://twitter.com/juststreetsdvrpc)



# Survey Results

September 28, 2018 Joint RSTF & HCTF Meeting

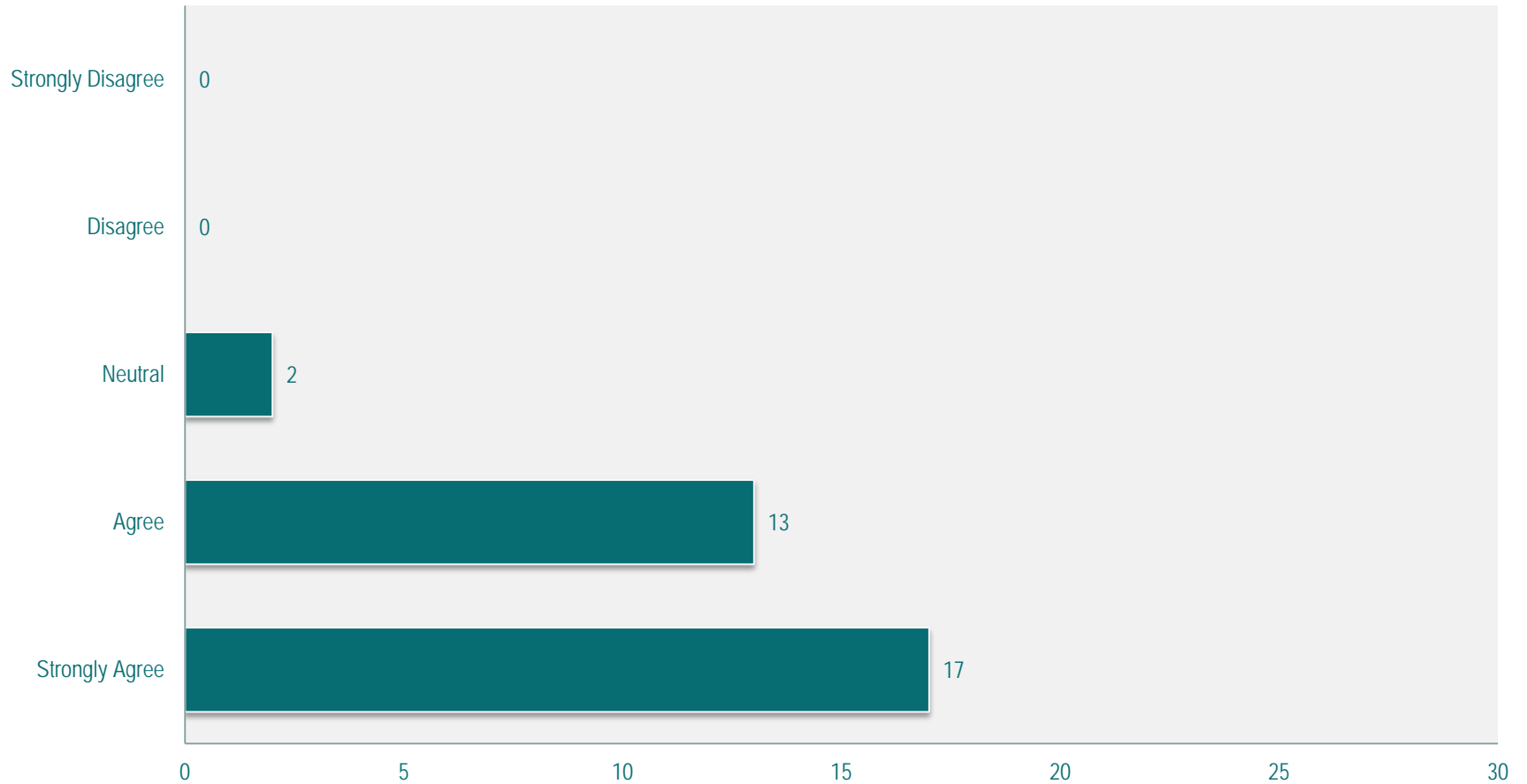


CONNECT WITH US! @DVRPC #RSTF #VISIONZERO

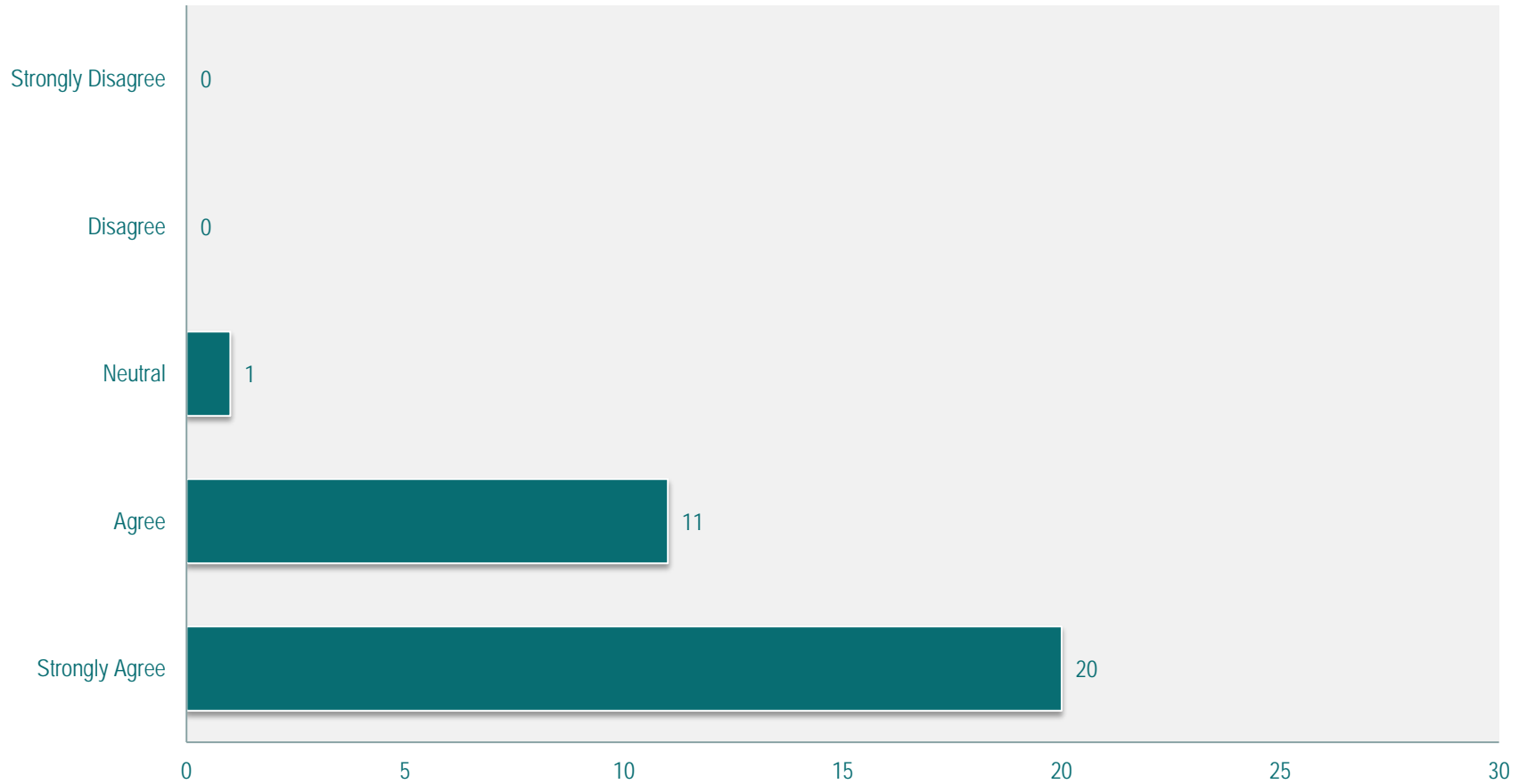
# Overall Survey Results

- 32 out of approx. 78 meeting attendees responded
- 94% agreed or strongly agreed that the event either met or exceeded their expectations
- Some write-in comments offered potential areas for improvement

## Question 1: Overall, the event met or exceeded my expectations.

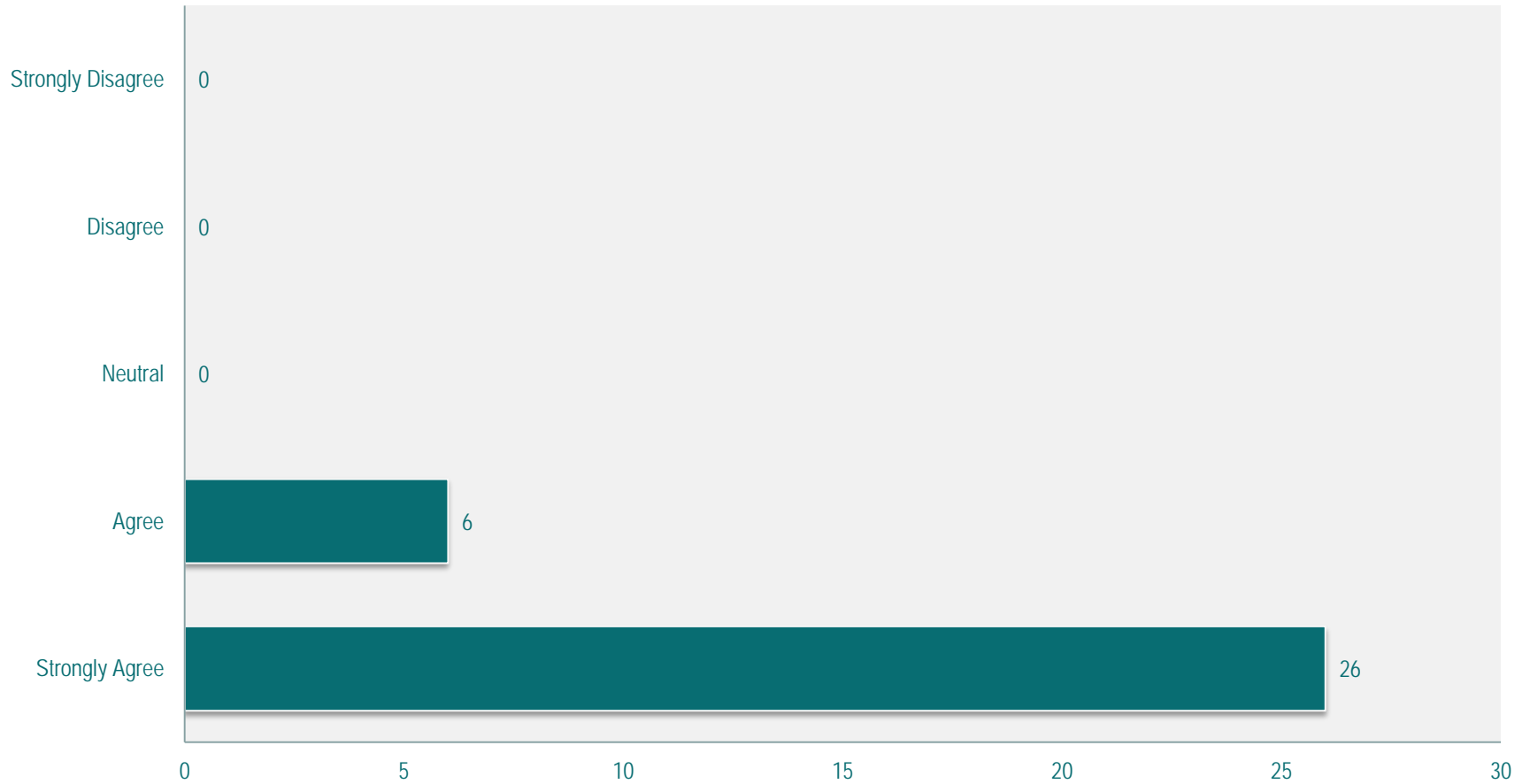


## Question 2: This event provided useful ideas or techniques.

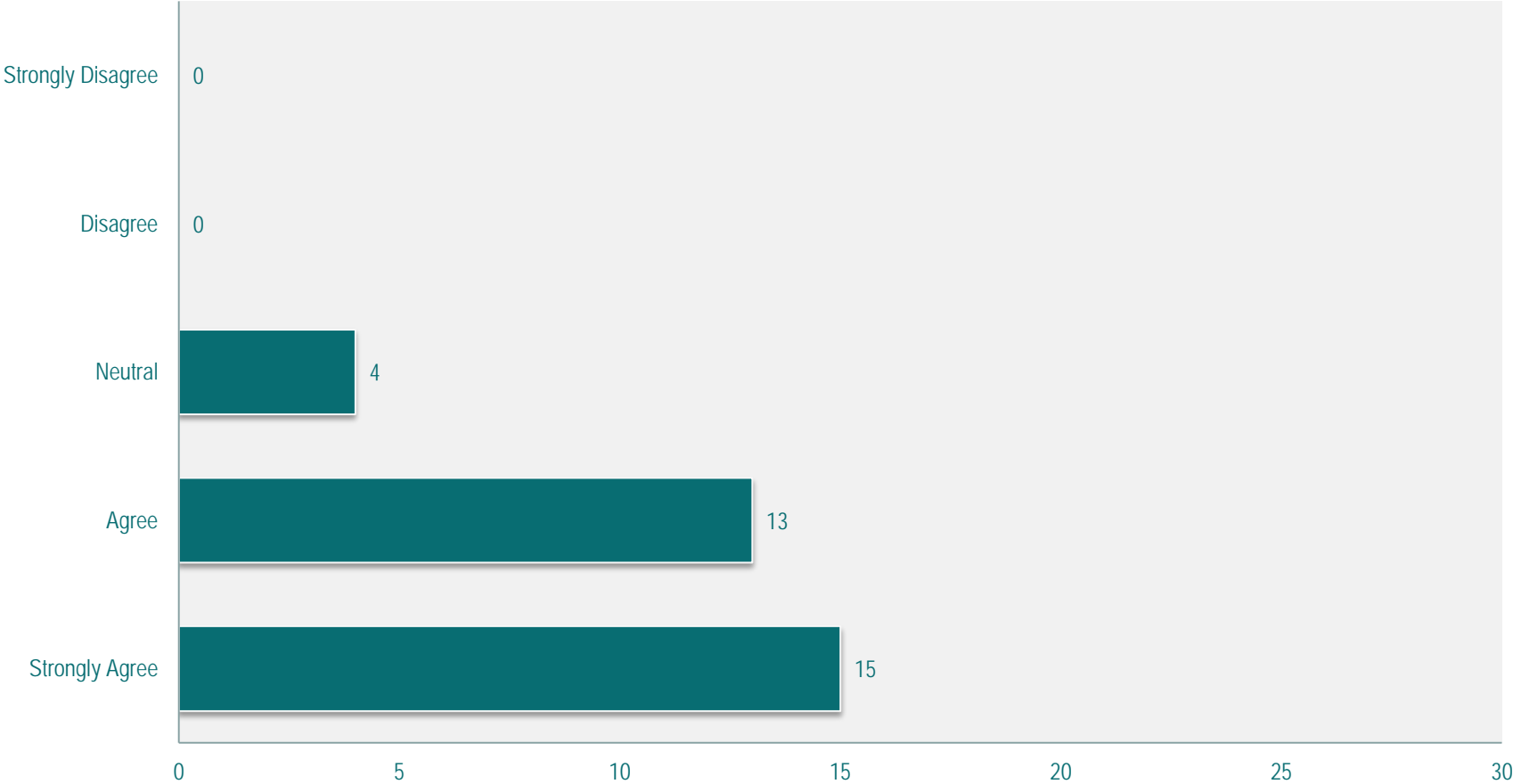




### Question 3: The presenters were knowledgeable about the content.



# Question 4: The event better prepared me to do my job or perform my role.



## What I liked best about the program was:

Having a diverse panel and active break

Focus on equity and action DVRPC is taking

Keynote presentation

Small group discussion

The facilitation by Charles Brown

Collaboration between the two organizations; integration of techniques and norms from both

Range of perspectives, nicely balanced & timed agenda



## Suggestions for improving this program:

Room setup – it was tough to see the panel

Bring staff from local/state legislatures to change or push policy

Do collaborative sessions more often

More discussion about how health professionals can/should include transportation instead of vice versa

Possibly allow more time for group discussion

More time for Q&A

## Topics I would be interested in learning about during future programs:

How to influence behaviors like pedestrian crossing and proper bike safety

More community organizing examples/perspectives

Young driver safety

Access to green space

Opioid epidemic responses in health and transportation

Safety in parks (esp. parks with roads through them)

## Additional Comments?

Looking forward to specifics about next steps/continuing the conversation

Need wireless mikes so everyone can hear questions during Q&A session

Well-executed

Loved the joint meeting and meeting new people/learning about new perspectives



# REGIONAL **SAFETY** TASK FORCE



For more information, please contact:  
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[www.dvrpc.org/transportation/safety](http://www.dvrpc.org/transportation/safety)



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