

CRASHES AND COMMUNITIES OF CONCERN IN THE GREATER PHILADELPHIA REGION



KEY TERMS

KSI: killed and severe injury crashes

Vulnerable user: non-motorized road user

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)

Indicators of potential disadvantage (IPD): an equity analysis tool developed by DVRPC



RESEARCH QUESTION

Do **communities of concern** in the region experience **severe traffic crashes** disproportionately and, if so, which populations are at the greatest risk and further, **where** is the impact most critical?



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

*- Dr. Thomas LaVeist, Dean of the School of Public Health
and Tropical Medicine, Tulane University*



INDICATORS OF POTENTIAL DISADVANTAGE

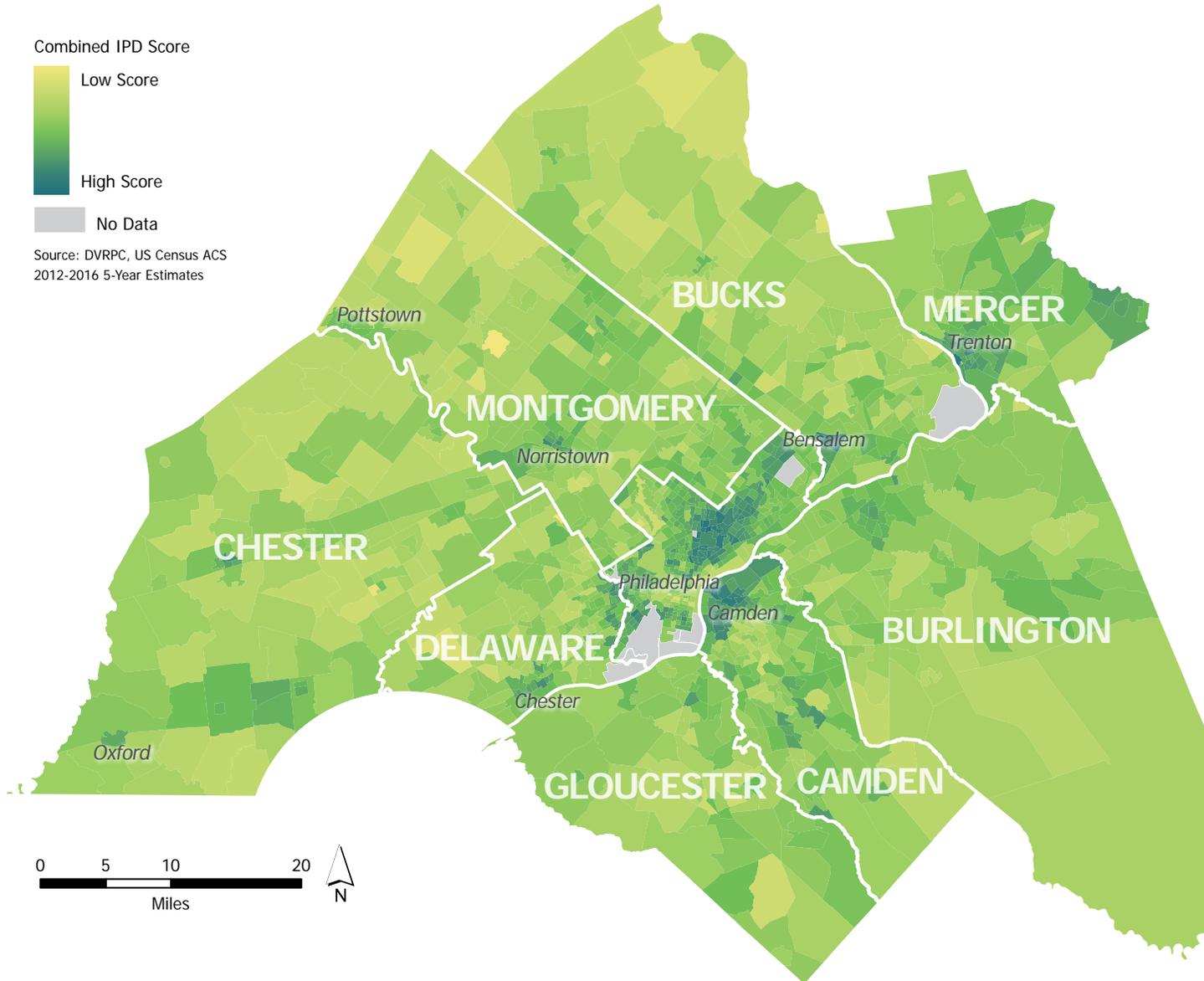
Combined IPD Score

Low Score

High Score

No Data

Source: DVRPC, US Census ACS
2012-2016 5-Year Estimates

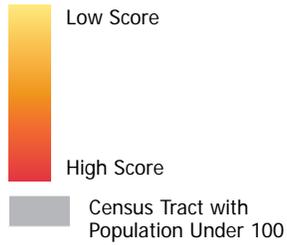


- Youth
- Older Adults
- Female
- Racial Minority
- Ethnic Minority
- Foreign-Born
- Limited English Proficiency
- Disabled
- Low-Income

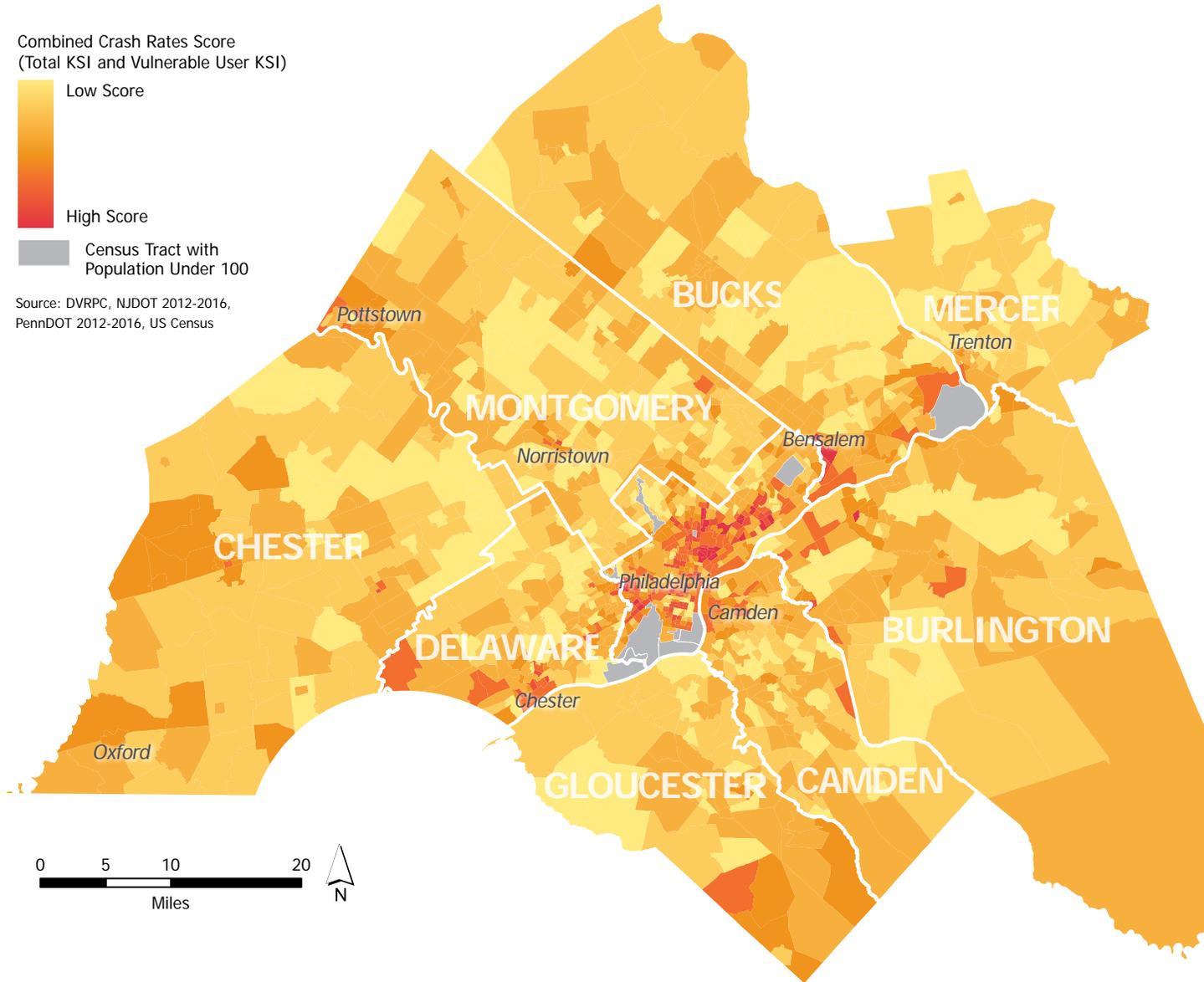


CRASH RATES

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



Source: DVRPC, NJDOT 2012-2016,
PennDOT 2012-2016, US Census



Total KSI
normalized by
non-interstate VMT

Vulnerable User KSI
normalized by road miles



CORRELATION: IPD + HIGH CRASH RATE

IPD	Total KSI Rate	Vulnerable User KSI Rate
LOW-INCOME	0.44	0.49
RACIAL MINORITY	0.35	0.38
ETHNIC MINORITY	0.35	0.29
DISABLED	0.33	0.28
LIMITED ENGLISH PROFICIENCY	0.23	0.29
YOUTH	0.16	-0.09
FOREIGN-BORN	0.03	0.16
FEMALE	-0.01	0.07
OLDER ADULTS	-0.20	0.18
COMBINED IPD SCORE	0.38	0.38

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 > 0.3

In the DVRPC Region...

43% of census tracts region-wide are above average for at least one correlated IPD



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



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

 SEPTA Station

Sources: PennDOT; DVRPC, 2015

Potter-Thomas Elementary School

N 5th St

W Indiana Ave

Pan American Academy Charter School

W Cambria St

Fairhill Community High School

N 2nd St

Tissac A Sheppard Elementary School

W Somerset St

Julia De Burgos Elementary School

N Front St

Fairhill Square

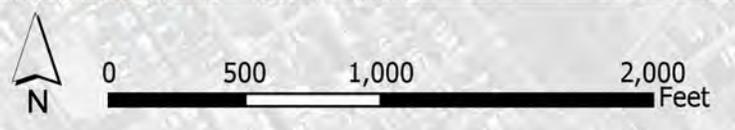
W Lehigh Ave

Temple University Hospital

Visitation BVM Catholic School

Huntingdon Station

Somerset Station



Aerial imagery: DVRPC, 2015







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**)



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



TARGET SAFETY INVESTMENTS

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



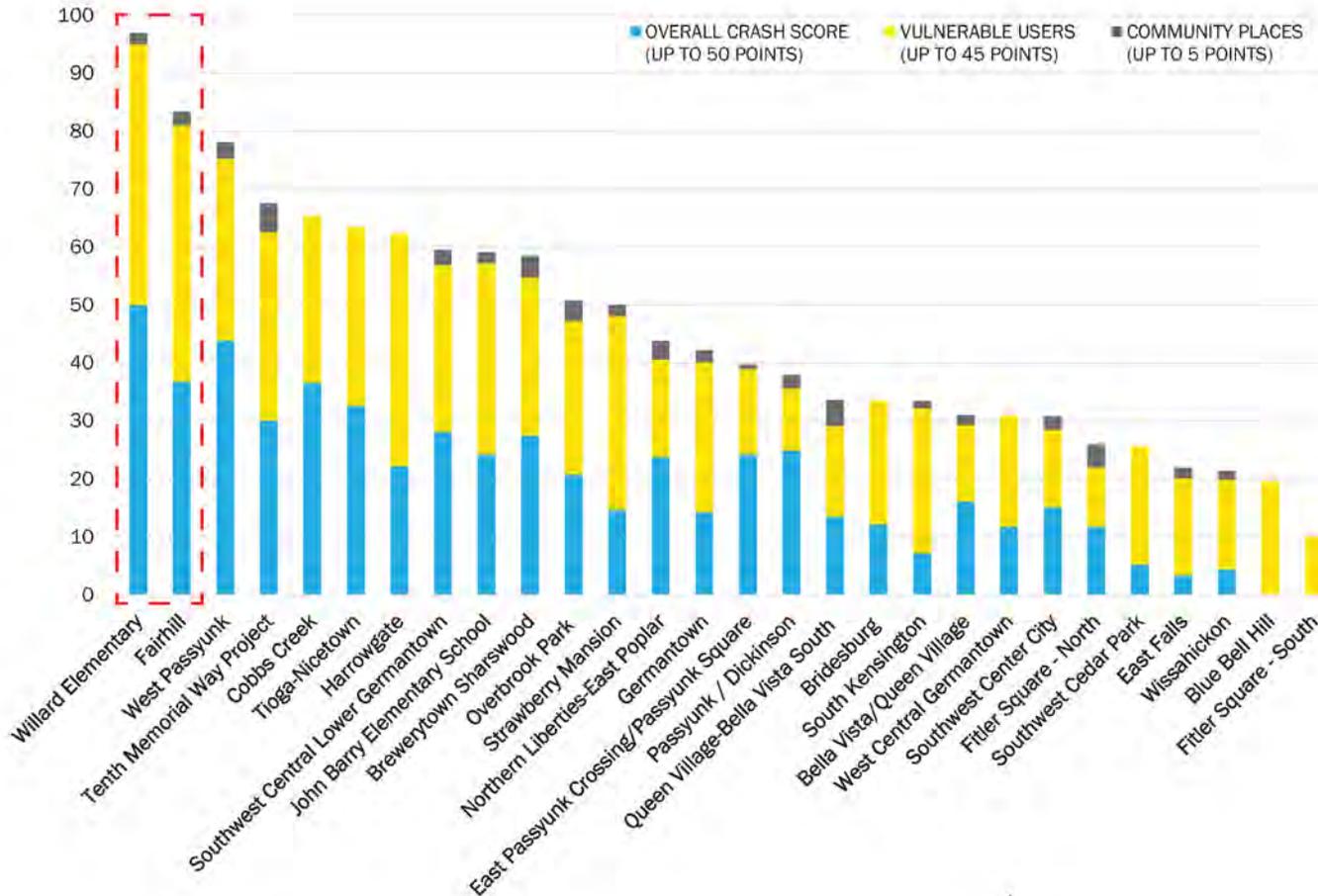
TARGET SAFETY INVESTMENTS

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 - » **Vision Zero Philadelphia**
 - » **Transportation Improvement Program (TIP)**



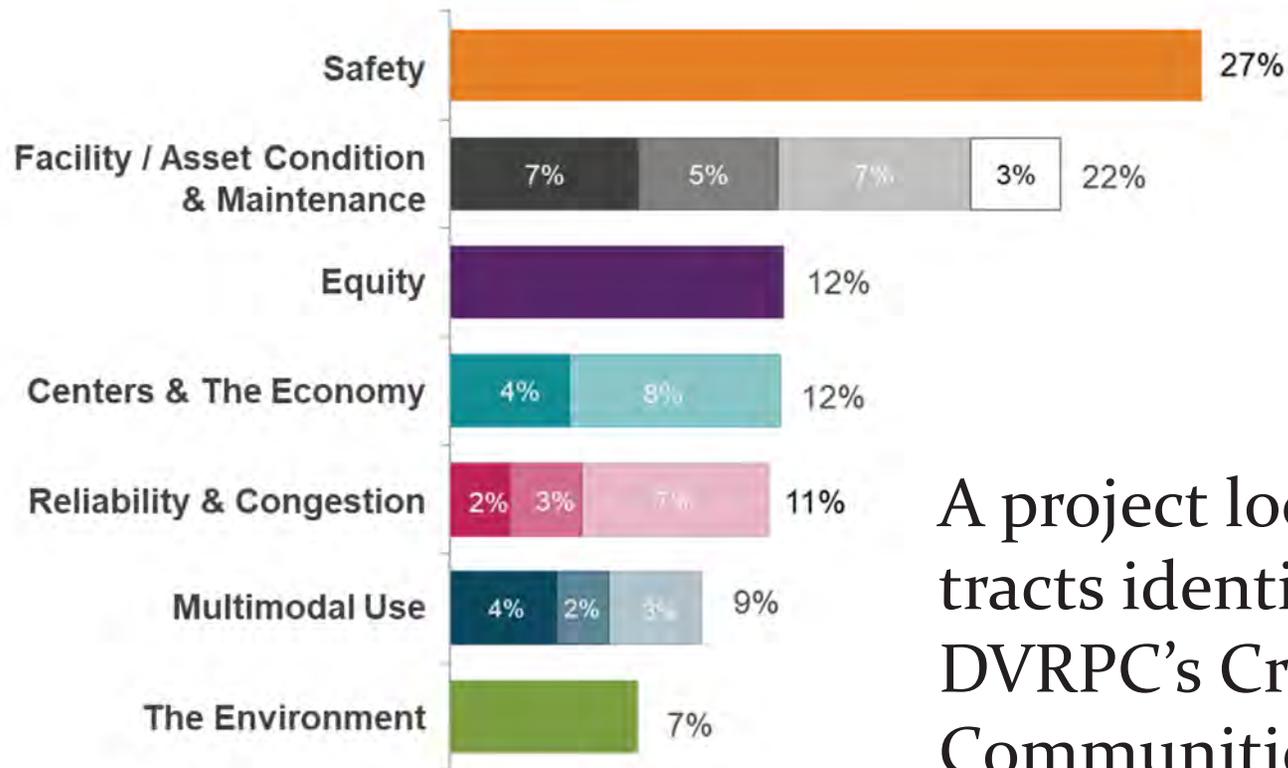
TARGET SAFETY INVESTMENTS

- **Vision Zero Philadelphia Slow Zone Program** scoring criteria



TARGET SAFETY INVESTMENTS

- **TIP** Project Benefit Evaluation Criteria



A project located in a census tracts identified through DVRPC's Crashes and Communities of Concern analysis = **0.4 points**



To download the full report, visit:
<https://www.dvrpc.org/Products/>

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COMBINED IPD SCORE	0.38	0.38
CARLESS HOUSEHOLDS	0.35	0.59

> 0.3
 > 0.4
 0.25-0.3