JUST STREETS: THE INTERSECTION OF CRASHES, EQUITY, + HEALTH
September 28, 2018
#juststreetsdvrpc
CRASHES AND COMMUNITIES OF CONCERN

Marco Gorini, Transportation Planner, DVRPC
CRASHES AND COMMUNITIES OF CONCERN IN THE PHILADELPHIA REGION
PROJECT TEAM

Kevin Murphy, DVRPC
Marco Gorini, DVRPC
Heike Jacob, DVRPC

STEERING COMMITTEE

Charles Brown, Rutgers University
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  \}
\)

PLACE  \}
\)

HEALTH

(and other socioeconomic factors)

(i.e. environmental factors)
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”)

Combined Indicators of Potential Disadvantage Score

- Low score
- High score
- No data

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

Source: ACS 2011-2015, 5-Year Estimates
**INDICATORS OF POTENTIAL DISADVANTAGE**

Combined Indicators of Potential Disadvantage Score
- Low score
- High score
- No data

Example Standard Deviations and Corresponding Scores
Percent of Population by Indicator

<table>
<thead>
<tr>
<th>Qualitative Value</th>
<th>Well Below Average</th>
<th>Below Average</th>
<th>Average</th>
<th>Above Average</th>
<th>Well Above Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Value</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Miles

CRASHES AND COMMUNITIES OF CONCERN
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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)
## Correlation: IPD + High Crash Rate

<table>
<thead>
<tr>
<th>Category</th>
<th>All KSI Crash Rate</th>
<th>Vulnerable User KSI Crash Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Youth</strong></td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Older Adults</strong></td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Racial Minority</strong></td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Ethnic Minority</strong></td>
<td>Low</td>
<td>Below Threshold*</td>
</tr>
<tr>
<td><strong>Foreign Born</strong></td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Limited English Proficiency</strong></td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Disabled</strong></td>
<td>Low</td>
<td>Below Threshold</td>
</tr>
<tr>
<td><strong>Low-Income</strong></td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Carless Households</strong></td>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Combined IPD Score</strong></td>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>

*The threshold for showing a low correlation was a r-value of 0.3*
**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 DVRRPC Region...

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

*Excluding limited access highway crashes

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

*Excluding limited access highway crashes

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

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

Kelly McIntyre, Physical Activity Coordinator, Get Healthy Philly
WHAT’S HAPPENING IN OUR AREA?

CHARLES BROWN
Senior Research Specialist
Alan M. Voorhees Transportation Center & Rutgers University
@ctbrown1911

MICHAEL CARROLL
Deputy Managing Director
City of Philadelphia OTIS
@PhillyOTIS

JANA HIRSH, PHD
Assistant Research Professor
Drexel University Dornsife School of Public Health
@Jana_Hirsch
@Drexel_UHC

ANGELA KIM, MD
Pediatric Emergency Fellow
St. Christopher’s Hospital for Children
@stchrishospital

ERWIN FIGUEROA
Senior Organizer
Transportation Alternatives
@TransitErwin
@TransAlt

#juststreetsdvrpc @dvrpc
SMALL GROUP BREAKOUTS

Kevin Murphy, Manager of Safety Programs, DVRPC
**SMALL GROUP BREAKOUTS**

**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

Christina Miller, Executive Director, Health Promotion Council
HCTF Co-Chiar
NEXT STEPS

• 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!
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Survey Results
September 28, 2018 Joint RSTF & HCTF Meeting
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.

- **Strongly Agree**: 20
- **Agree**: 11
- **Neutral**: 1
- **Disagree**: 0
- **Strongly Disagree**: 0
Question 3: The presenters were knowledgeable about the content.

- **Strongly Agree**: 26
- **Agree**: 6
- **Neutral**: 0
- **Disagree**: 0
- **Strongly Disagree**: 0
Question 4: The event better prepared me to do my job or perform my role.
What I liked best about the program was:

<table>
<thead>
<tr>
<th>Having a diverse panel and active break</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on equity and action DVRPC is taking</td>
</tr>
<tr>
<td>Keynote presentation</td>
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<tr>
<td>Small group discussion</td>
</tr>
<tr>
<td>The facilitation by Charles Brown</td>
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<tr>
<td>Collaboration between the two organizations; integration of techniques and norms from both</td>
</tr>
<tr>
<td>Range of perspectives, nicely balanced &amp; timed agenda</td>
</tr>
</tbody>
</table>
## Suggestions for improving this program:

<table>
<thead>
<tr>
<th>Suggestion</th>
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</thead>
<tbody>
<tr>
<td>Room setup – it was tough to see the panel</td>
</tr>
<tr>
<td>Bring staff from local/state legislatures to change or push policy</td>
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<tr>
<td>Do collaborative sessions more often</td>
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<tr>
<td>More discussion about how health professionals can/should include transportation instead of vice versa</td>
</tr>
<tr>
<td>Possibly allow more time for group discussion</td>
</tr>
<tr>
<td>More time for Q&amp;A</td>
</tr>
</tbody>
</table>
Topics I would be interested in learning about during future programs:

<table>
<thead>
<tr>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>How to influence behaviors like pedestrian crossing and proper bike</td>
</tr>
<tr>
<td>safety</td>
</tr>
<tr>
<td>More community organizing examples/perspectives</td>
</tr>
<tr>
<td>Young driver safety</td>
</tr>
<tr>
<td>Access to green space</td>
</tr>
<tr>
<td>Opioid epidemic responses in health and transportation</td>
</tr>
<tr>
<td>Safety in parks (esp. parks with roads through them)</td>
</tr>
</tbody>
</table>
**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
For more information, please contact:
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www.dvrpc.org/transportation/safety