VISION ZERO NEW YORK CITY

Identifying Risk and Safe Systems Approach

US DOT Summit on Pedestrian Safety 2020
Ann Marie Doherty, NYC DOT
What is risk-based safety planning?

• Not just targeted to specific crash sites and geographies
• Analyzes crash typology and trends (i.e., mode, contributing factors, demographics, time of day, etc.) to identify high risk behaviors and most vulnerable populations
• Deploys treatments broadly and systemically
VISION ZERO NEW YORK CITY

Safe Systems in Practice

NYC & NYC DOT Systematic Approach to:

• Research, Studies, Planning
• Programs, Projects and Treatments
• Safety & Operational Evaluation
VISION ZERO NYC

What does it involve?

- Mayoral Commitment
- Resourced
- Data-driven and evidence-based
- Shared public metric of success – lowering fatalities and injuries
- An ongoing process of cultural change – both public and institutional
- Laser-focus on SPEED (25MPH in 2014)
- A multi-agency effort
- Comprises Legislation, Engineering, Enforcement & Education
A FOCUS ON PRIORITY LOCATIONS

- Data 2012-2016, pedestrian deaths and serious injuries
- 7% of corridors were the site of 50% of ped KSI
- 1% of intersections see 15% of ped KSI
DUSK AND DARKNESS

- Data analysis showed spike in pedestrian casualties in early evening around the time clocks turned back
- Clock change resulted in evening rush hour being in darkness
- DOT, NYPD, TLC messaging to drivers: Small change in time leads to massive difference in visibility
- Increased enforcement of dangerous driving
- Sustained decreases since initiative began
FATALITIES DASHBOARD

Monthly crash analysis

- Track and analyze traffic fatalities by:
  - Mode
  - Age
  - Time of Day
  - Borough
  - Contributing factor
  - Vehicle Type
  - Gender
  - Mid-block / intersection / highway

Senior Pedestrians age 65+

NYC Senior Pedestrian Fatalities by Year and % of Ped Fatalities

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>% of Ped Fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>69</td>
<td>41%</td>
</tr>
<tr>
<td>2007</td>
<td>52</td>
<td>37%</td>
</tr>
<tr>
<td>2008</td>
<td>60</td>
<td>39%</td>
</tr>
<tr>
<td>2009</td>
<td>47</td>
<td>30%</td>
</tr>
<tr>
<td>2010</td>
<td>46</td>
<td>30%</td>
</tr>
<tr>
<td>2011</td>
<td>53</td>
<td>37%</td>
</tr>
<tr>
<td>2012</td>
<td>49</td>
<td>32%</td>
</tr>
<tr>
<td>2013*</td>
<td>69</td>
<td>38%</td>
</tr>
<tr>
<td>2014*</td>
<td>54</td>
<td>39%</td>
</tr>
<tr>
<td>2015</td>
<td>55</td>
<td>40%</td>
</tr>
<tr>
<td>2016</td>
<td>57</td>
<td>38%</td>
</tr>
<tr>
<td>2017</td>
<td>54</td>
<td>50%</td>
</tr>
<tr>
<td>2018</td>
<td>58</td>
<td>50%</td>
</tr>
<tr>
<td>2019*</td>
<td>52</td>
<td>42%</td>
</tr>
<tr>
<td>Last 12-Month Total</td>
<td>39</td>
<td>37%</td>
</tr>
</tbody>
</table>

Pedestrian Fatalities Per 100,000 Residents Ages 65+

Year to Date
1/1/2020 - 6/30/2020
6 months

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>Pct. of Ped Fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>24</td>
<td>51%</td>
</tr>
<tr>
<td>2018</td>
<td>19</td>
<td>39%</td>
</tr>
<tr>
<td>2019</td>
<td>28</td>
<td>50%</td>
</tr>
</tbody>
</table>

3-Year Avg. 23.7 47%

% Change in 2020 From 3-Year Average -37%
PROGRAMS, PROJECTS AND TREATMENTS

Systematic Deployment

Since the start of Vision Zero:

NYC DOT has made safety engineering improvements at more than 85% of Priority Intersections and more than 75% of the total length of Priority Corridors

- More than 450 safety engineering projects completed at Priority Locations
- Nearly 600 miles of corridors retimed for 25 MPH speed limit
- Over 400 intersections received Left Turn Traffic Calming
- Over 4,000 new Leading Pedestrian Intervals (LPIs)
- More than 7 million speed camera violations issued
- More than 70 signals & all-way stops approved via Proactive Warrant Analysis program (began in 2017)
SPEED MANAGEMENT

Possibly our most important tool

- Speed camera program
  - 750 locations by schools
  - Fixed and mobile
  - Speeding down 63% at locations with cameras
  - Hard-fought expansion
  - 2000 cameras planned
EVALUATION

- Holding ourselves accountable for initiatives
- Revisiting Priority Locations maps with new data
- Street Improvement Project Program evaluation – micro & macro
- Left turn speeds
- Before/after speeds from City telematics data
- TRAFFIC FATALITIES…
EVALUATION

• Between 2008 and 2017, pedestrian fatalities in urban areas nationwide increased by 46%.

• During that same time period, pedestrian fatalities in New York City dropped 31%.
PEDESTRIAN FATALITIES

Before / After Vision Zero

- 5 year average pre-VZ: 158
- 2019 vs pre VZ: -22%
COVID-19 PANDEMIC

Fatality & Injury Trends

• Traffic & pedestrian volumes down
• Injuries down
• Pedestrian fatalities down
• Motor vehicle occupant & motorcyclist fatalities up
• Increase in speed related fatalities & injuries
COVID-19 PANDEMIC

Current and Future Challenges

• Dramatic budget cuts
• Increase in traffic volume as New Yorkers avoid the subway – more exposure for vulnerable road users
• Implementing fewer safety projects
• Shifting paradigm on enforcement
THANK YOU!

Questions?