

**VISION
ZERO**

nyc.gov/visionzero



NYC Vision Zero Research Accomplishments

Lawrence Fung

City Research Scientist

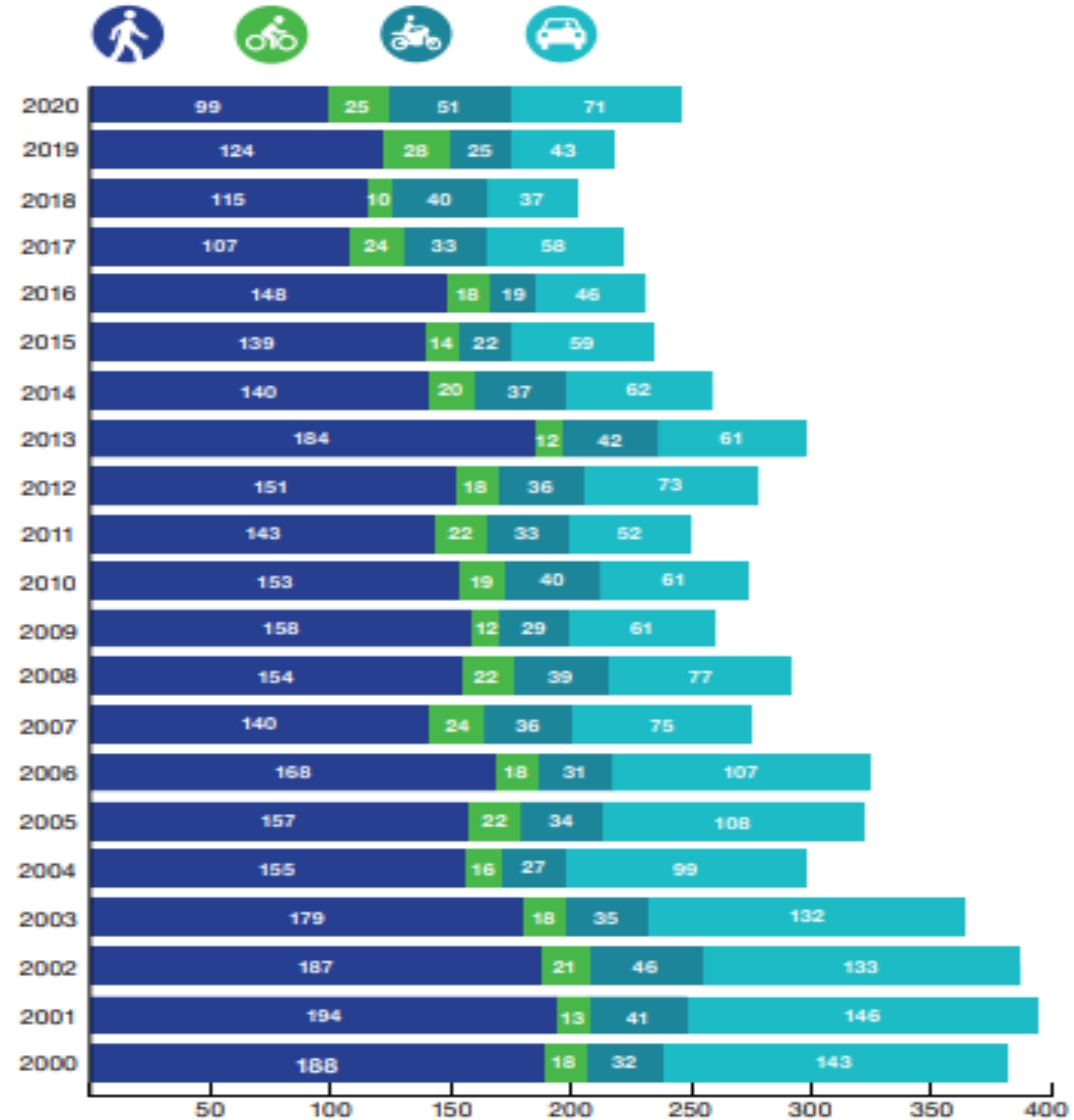
NYC Department of Health and Mental Hygiene

June 10, 2021

Injury Outcomes

- Have road deaths and severe injuries decreased under Vision Zero?

Traffic Fatalities by Mode



Source: NYC DOT & NYPD

Please note that, in 2019 NYPD reclassified the deaths of throttle-powered electric bicycle riders from motorcyclists to cyclists. While this definition applies to 2019 and future statistics, it is not being retroactively applied to 2018 and earlier, so motorcyclist and cyclist fatality numbers may not be directly comparable. In 2019, five of these "e-bike" riders were killed in New York City. Under the classification model used in previous years, this would add five to the motorcyclist total and subtract five from the cyclist total for 2019.

Source: VZ Year 7 Report, 2021, pg. 13

Injury Outcomes (cont.)

- What crash circumstances are associated with injury hospitalizations and emergency department visits?

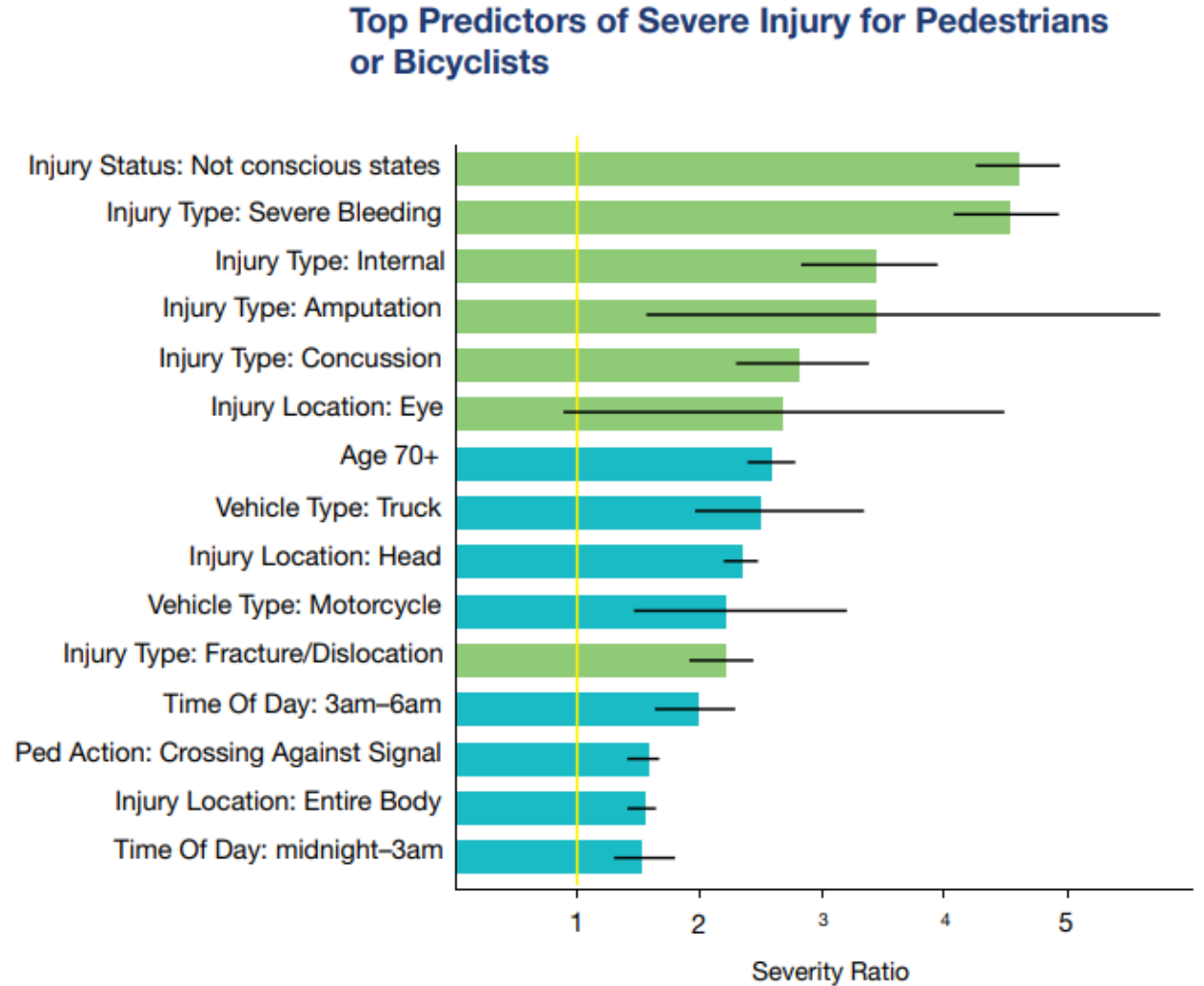
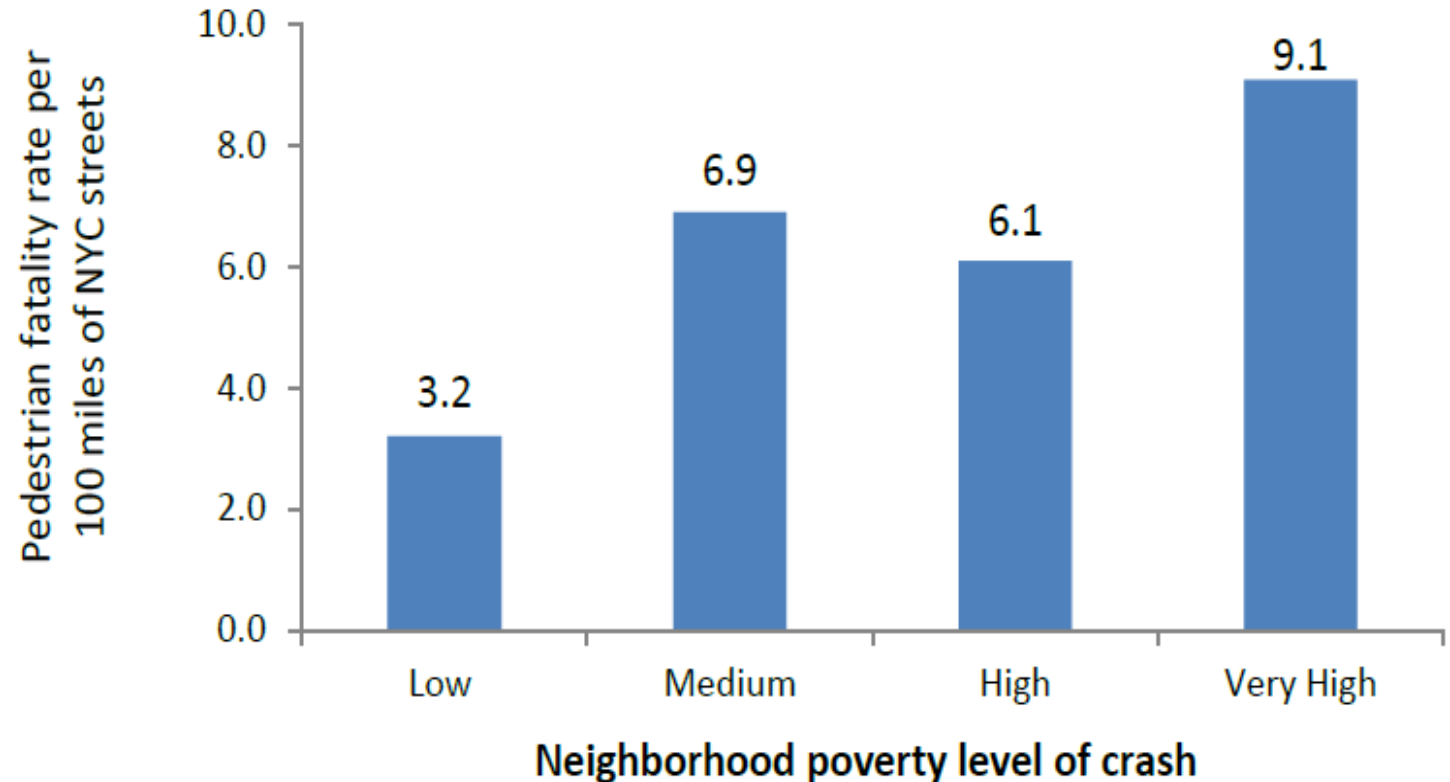


Figure 1: Severity ratio is the probability an injured person will have a severe outcome if a crash attribute was present, divided by the overall probability an injured person will have a severe outcome. Attributes with green bars are included in DOT and DMV's definition of killed or severely injured (KSI). Black bars indicate 90 percent confidence intervals.

Sub-group Impacts

- Do motor vehicle crashes disproportionately affect individuals in low-income neighborhoods?
- Very high poverty neighborhoods had pedestrian fatality rates 3x as high as low poverty neighborhoods.

Pedestrian fatality rate by poverty level of neighborhood where crash occurred,¹ 2012–2014



Sub-group Impacts (cont.)

Cyclist Fatalities by Crash Type

Crash Type (Totals)	Cyclist Fatalities 2006-2016	
	#	% of Total Known
Traveling Adjacent	52	29%
Right Angle	48	27%
Motor Vehicle Turn	37	21%
Bicycle Turn	13	7%
Bicycle Crossing Midblock	13	7%
Head On	9	5%
Dooring	8	4%
Other/Unknown	19	
Total	199	

- What are the characteristics of crashes involving bicyclists?

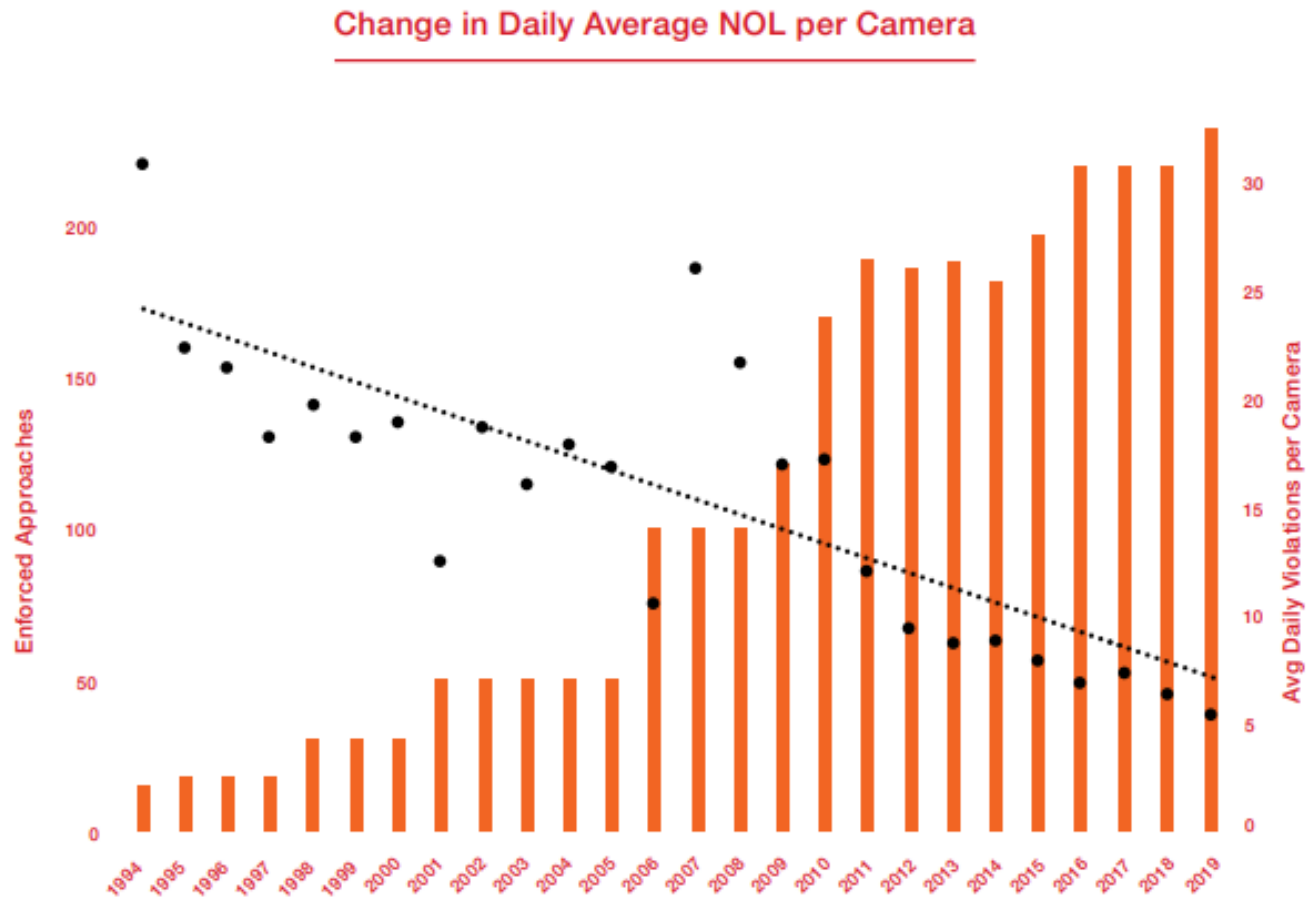
Street Re-engineering (Queens Blvd.)

Crashes and Injuries One-Year After Analysis, Queens Blvd (Roosevelt Ave to Eliot Ave)				
	Before Average (2012-2015)	After Average (2017-2018)	Change	
			Average	Percent
Total Crashes	798.7	648.0	-150.7	-19%
Crashes w/ Injuries	148.3	123.0	-25.3	-17%
Motor Vehicle Occupant	149.3	118.0	-31.3	-21%
Pedestrian	40.3	18.0	-22.3	-55%
Cyclist	14.0	18.0	4.0	29%
Total Injuries	203.7	154.0	-49.7	-24%

Each before year period is the 24-month period beginning July 1 and ending June 30.
The 1-yr after period is January 1, 2017 to December 31, 2017. The implementation period of July 1, 2015 to December 31, 2016 is excluded.
Source: NYPD AIS/TAMS Crash Database

- Has street re-engineering been effective in reducing injury collisions?

Enforcement Cameras



- Have red light cameras reduced crashes or the incidence of running red lights?

Source: [NYC Red Light Camera Program Review: 2020 Report](#), DOT, 2020, pg. 5.

Enforcement Cameras (cont.)

Decline in Average Daily Speeding Violations
During Active Hours in Camera-Enforced School Speed Zones Along Key Corridors



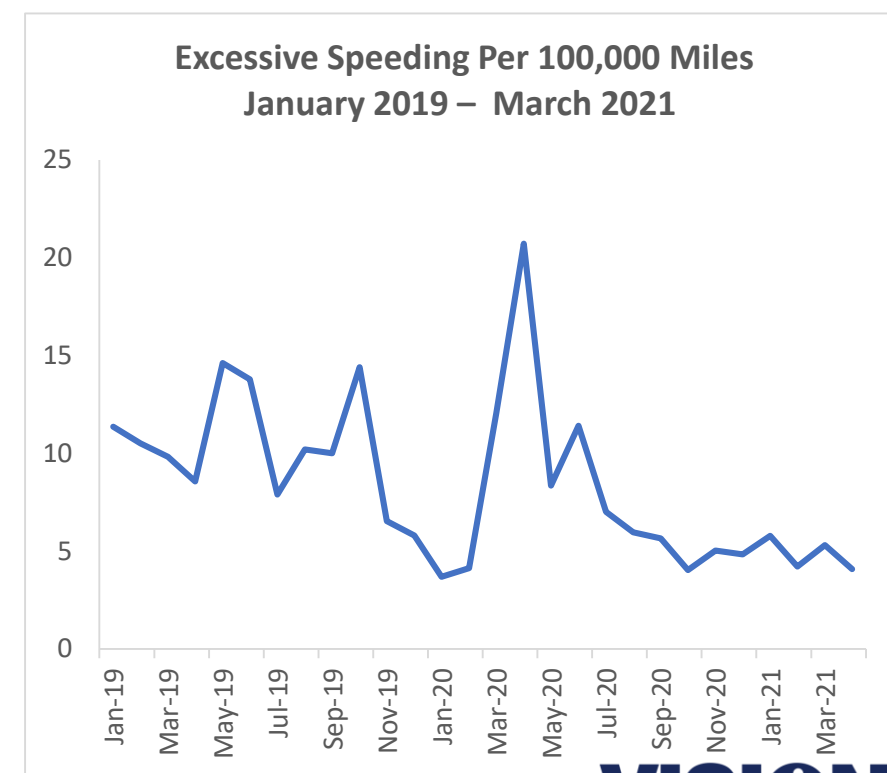
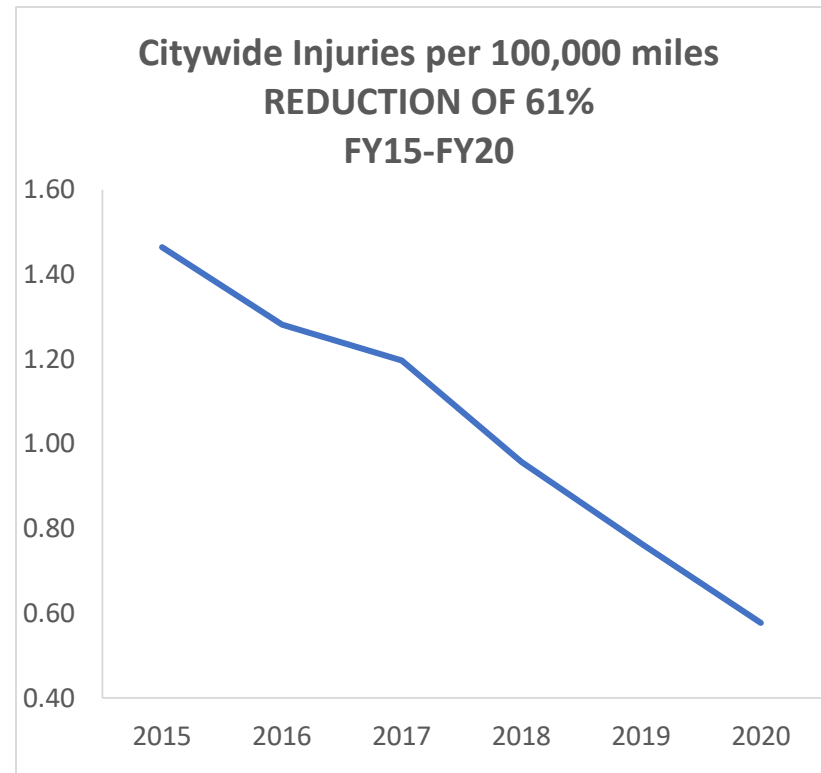
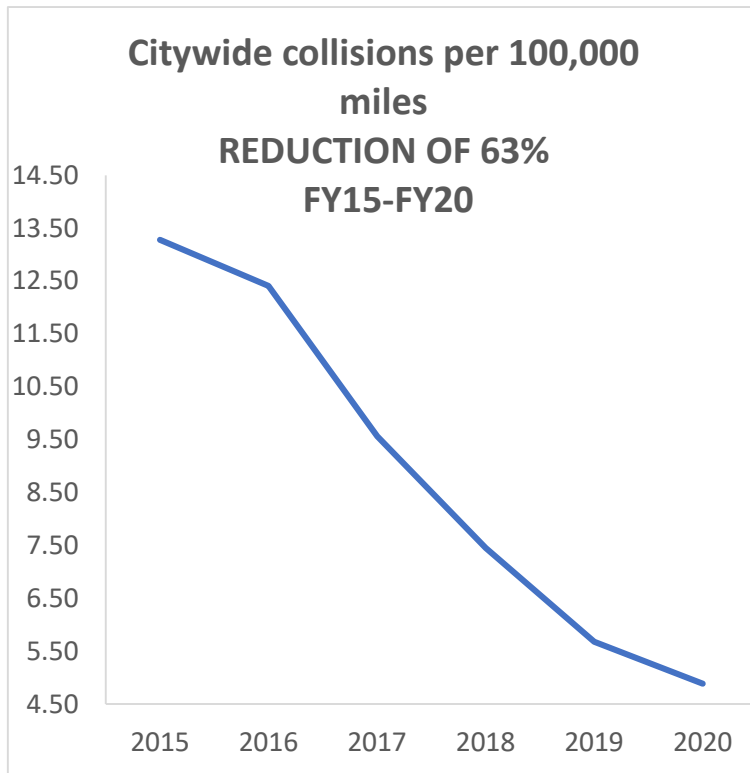
- Have speed cameras reduced crashes or the incidence of speeding?

Source: New York City Department of Transportation

Source: [Automated Speed Enforcement Program Report 2014-2019](#), DOT, 2020, pg. 9,10.

City Fleet

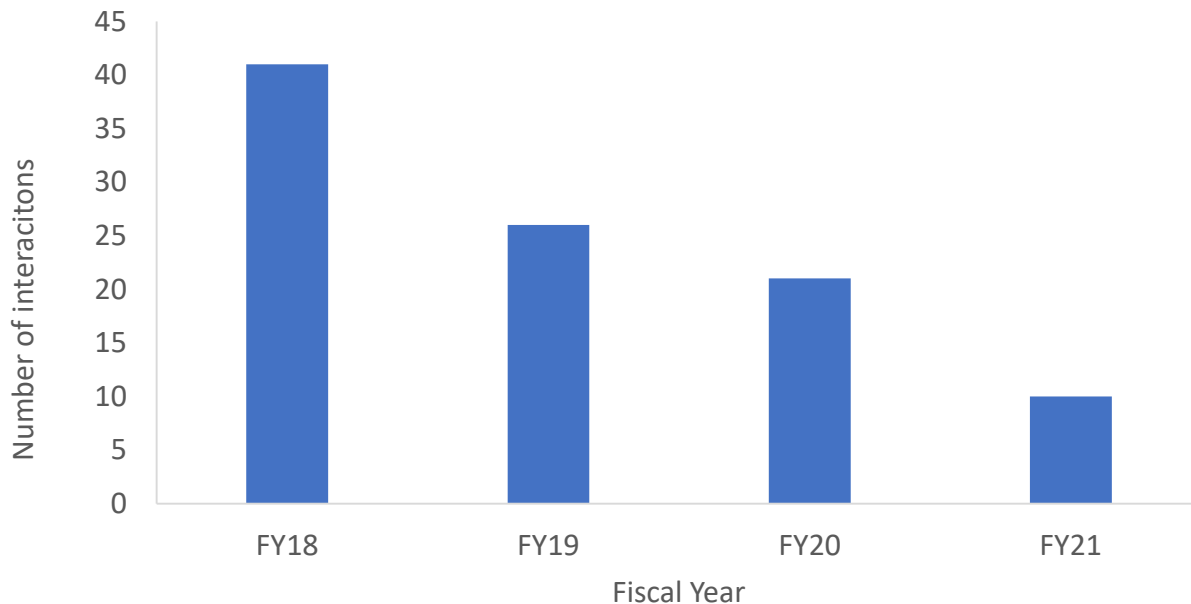
- Have City-employed drivers adopted safer driving practices since DCAS installed vehicle data recorders and instituted feedback reporting?



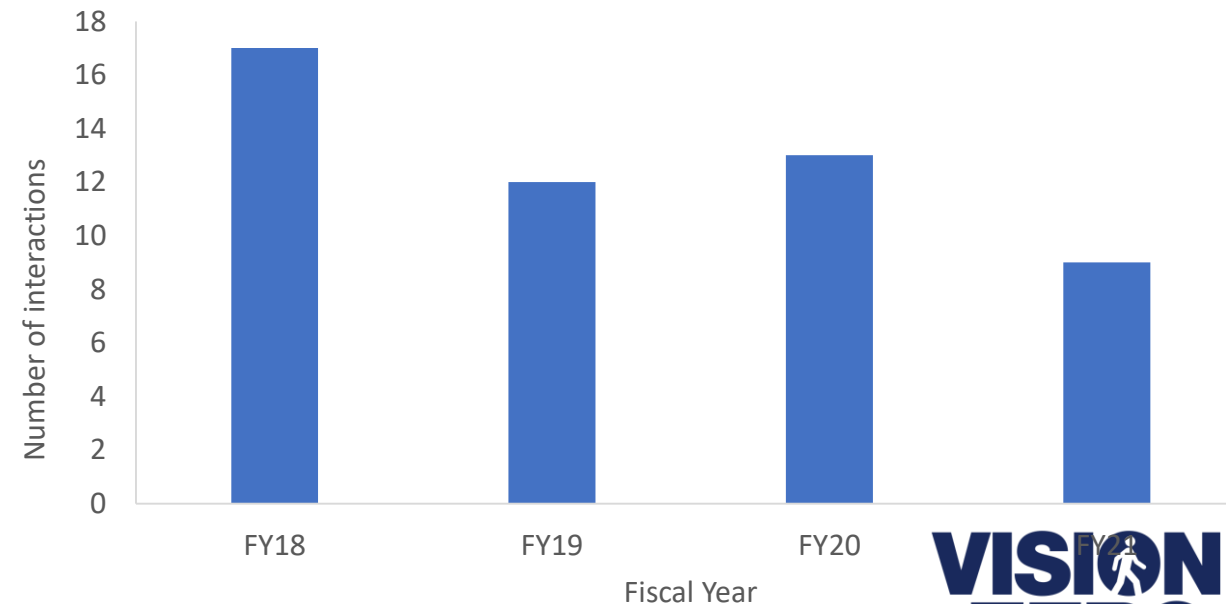
City Fleet

- Has there been a decrease in truck-involved pedestrian and bicyclist injuries, following the installation of side guards on city fleet vehicles?

City Trucks and Interactions with Pedestrians
FY18-FY21
Down 75%




City Trucks and Interactions with Bicyclists
FY18-FY21
Down 47%



Data on Crashes

- How will crash reporting patterns change in the shift from paper reporting to electronic reporting of traffic crashes?

**NYPD** Collision Report

Step 1:
Submit the following information to receive an email with your verification PIN #

Accident Date

mm/dd/yyyy

Accident Borough

Select Borough

Driver License #

Driver License #

Date of Birth

Month

Day

Year

License Plate #


License Plate #

License Plate State

New York

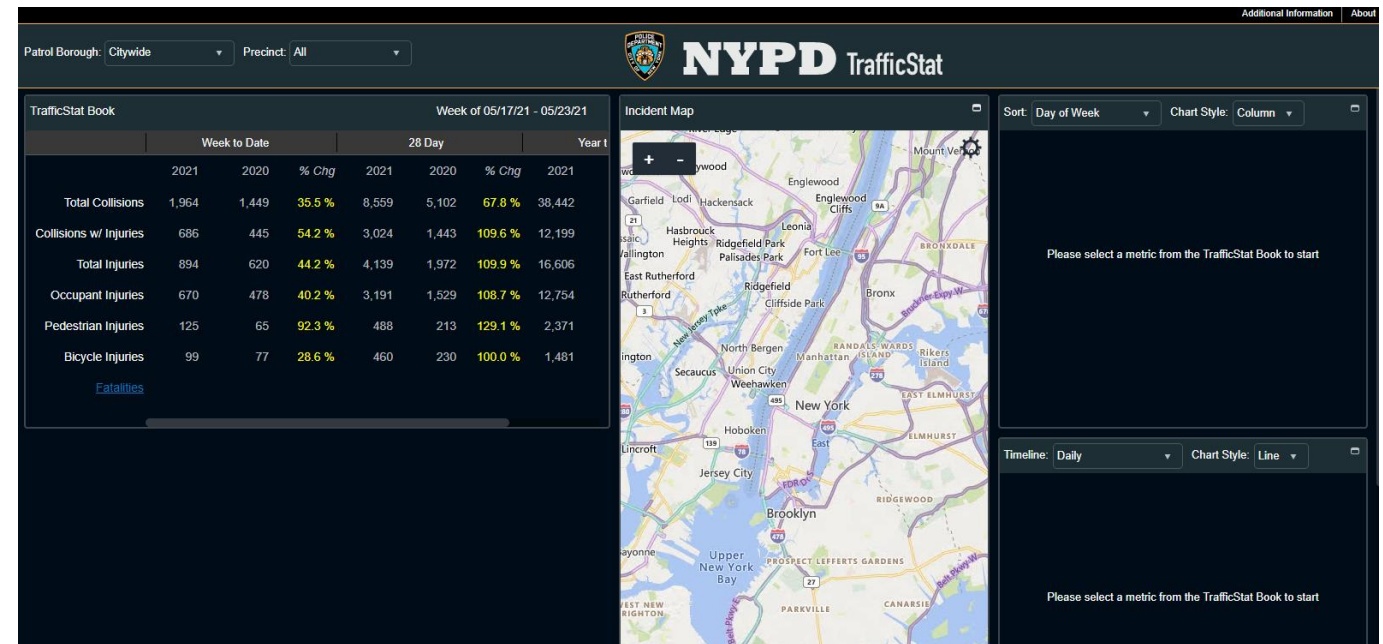
Email Address

Email



ENTER CODE

SUBMIT





New York City's Vision Zero: Priority Topics for Research & Evaluation

New York City's Vision Zero Initiative seeks to eliminate traffic-related fatalities and severe injuries. Vision Zero starts with the assumption that traffic crashes are not merely "accidents," but are preventable events. To achieve our goal, New York City's Vision Zero Initiative unites diverse stakeholders from multiple city agencies to address this challenging problem.

In New York City, the city agencies that are part of the Vision Zero Task Force have conducted – and continue to conduct – foundational surveillance on traffic crashes and contributing factors, gathering and analyzing data about where, when, how, why and among whom traffic collisions happen. Indeed, the Vision Zero Task Force monitors the ultimate Vision Zero outcome – traffic-related deaths – on a near-real-time basis. But to rise to the challenge of driving down traffic-related deaths and severe injuries, even more robust research and evaluation is needed. This document describes current projects and future research and evaluation questions that are most crucial to moving Vision Zero's efforts forward.

Collaboration Opportunities:

How City agencies and external researchers can build for the future

While we understand the basic circumstances of traffic crashes in New York City well, we need to advance research and evaluation to better inform policy and program initiatives. Vision Zero Task Force agencies welcome external research partners to join us in exploring priority questions for moving Vision Zero's efforts forward. Important questions such as:

The Vision Zero Task Force seeks to collaborate with external researchers on addressing these and other similar questions:



Does an increase in the volume of moving and parking summonses issued significantly change the number of injurious crashes in an area?



What is the economic cost of crashes to taxpayers? What is the economic benefit of safer streets?



Are drivers with multiple motor vehicle violations involved in more injury crashes than other drivers? Are there particular convictions or number of convictions that are predictive of injury crashes?



What data collection methods and sources can be used to better describe and capture crash characteristics?



What are population attitudes and perceptions of: speeding, impaired driving, use of mobile devices while driving, use of seat belts, and Vision Zero safety messaging?



Have road users changed traffic safety behaviors in accordance with Vision Zero messaging?



What traffic safety policies and practices are associated with reduction in traffic crashes involving fleet drivers?

Understanding the problem: City agency efforts to examine key questions

Prior to and during the first two years of the program, Vision Zero Task Force partners have worked diligently to monitor the burden of traffic-related fatalities and injuries in New York City. We study characteristics of collisions, analyze effectiveness of specific engineering interventions, and link different data sources to better describe crash risk factors and health outcomes.

Vision Zero Task Force agencies are addressing or will address the following questions:



Have traffic related deaths and severe injuries decreased since Vision Zero was implemented?



Has there been a decrease in severity of truck-involved pedestrian and bicyclist injuries, following the installation of side guards on city fleet vehicles?



Do motor vehicle crashes disproportionately affect individuals who live in low-income neighborhoods? Are motor vehicle crashes more likely to occur in low-income neighborhoods?



How will crash reporting patterns change in the shift from paper reporting to electronic reporting of traffic crashes?



What are the characteristics of fatal and non-fatal traffic crashes involving bicyclists?



Has the number of motor vehicle crashes or the incidence of speeding changed significantly in areas newly covered by speed cameras?



What crash circumstances are associated with injury hospitalizations and emergency department visits?



Has the number of motor vehicle crashes or the incidence of running red lights changed significantly in intersections newly covered by red light cameras?



Has NYC DOT's street re-engineering been effective in reducing collisions that involve injuries?



Have City-employed drivers adopted safer driving practices since DCAS installed vehicle event data recorders in fleet vehicles and instituted feedback reporting?

To learn more about New York City's Vision Zero Initiative, visit www.nyc.gov/visionzero.

Are you interested in conducting research or evaluation to move NYC's Vision Zero forward?

Contact acaffare@health.nyc.gov

